	Page 1 1
NATIONAL QUALITY FORUM	
+ + + + +	
REGIONALIZED EMERGENCY	
MEDICAL CARE SERVICES (REMCS)	
+ + + +	
EXPERT PANEL MEETING	
+ + + +	
WEDNESDAY OCTOBER 17, 2012	
+ + + + +	
The Expert Panel met at the	
National Quality Forum, 9th Floor Conference	
Room, 1030 15th Street, N.W., Washington,	
D.C., at 8:30 a.m., Stephen Pitts and Suzanne	
Stone-Griffith, Co-Chairs, presiding.	

2

#### PRESENT:

STEPHEN PITTS, Grady University, Co-Chair SUZANNE STONE-GRIFFITH, Co-Chair TERRY ADIRIM, HRSA

BRENDAN CARR, University of Pennsylvania Health System EMILY CARRIER, Center for Studying Health System Change GABRIEL EDWARD, Office of the Assistant Secretary Preparedness and Response WES FIELDS, CEP America

DAVID LEVINE, University Health System Consortium ANTHONY MACINTYRE, George Washington University Medical Center DAVID MARCOZZI, ASPR GREGG MARGOLIS, ASPR LINDA MCCAIG, CDC

MELISSA MCCARTHY, George Washington University RYAN MUTTER, AHRQ ANNMARIE PAPA, University of Pennsylvania SALLY PHILLIPS, Department of Homeland Security MICHAEL RAPP, Centers for Medicare and Medicaid Services (via telephone) KATHY ROBINSON, National Association of State EMS Officials JAY SCHUUR, American College of Emergency Physicians MANISH SHAH, University of Rochester Medical Center MIKE STOTO, Georgetown University SHELLY TIMMONS, Geisinger Medical Center (via telephone) ARJUN VENKATASH, Yale University ELLEN WEBER, University of California San Francisco Medical Center

3

NQF STAFF:

HELEN BURSTIN

ANGELA FRANKLIN

ANN HAMMERSMITH

ADEELA KHAN

JESSE PINES

4

		Pa
C-O-N-T-E-N-T-S		
Call to Order and Welcome	8	
Angela Franklin		
Senior Project Director		
NQF		
Welcome	8	
Steven Pitts	8	
Co-Chair		
Suzanne Stone-Griffith	9	
Co-Chair		
Introductions and Disclosures of	10, 42	
Interest		
Ann Hammersmith		
General Counsel		
NQF		
Project Introduction	24	
Angela Franklin	24	
Senior Project Director		
NQF		
Jesse Pines	27	
Consultant		
Overview of Proposed Paper and	30	
Framing Questions		
Helen Burstin		
Senior Vice President for		
Senior Vice President for Performance Measures		

5

```
C-O-N-T-E-N-T-S (CONTINUED)
Emergency Preparedness: Discussion of 43
                                         43
                                         44
                                         44
                                         58
                                         87
                                        104
 Reconciling Daily Crowding and 122, 188
Opportunity for Public Comment
                                        187
Crowding and Boarding: Discussion 190
                                        190
```

197

196

Questions and Comments

Concepts and Measures

Jesse Pines Consultant

Measurement Issues

Mike Stoto

Disaster Surge

of Concepts and Measures Jesse Pines

Consultant

Questions and Comments

David Marcozzi

Questions and Comments

Questions and Comments

"Quality measure developers should 196 ensure the validity and reliability of the data used for ED crowding and boarding measurement."

240

315

б

```
C-O-N-T-E-N-T-S (CONTINUED)
```

Crowding and Boarding: Discussion of Concepts and Measures (Continued)

"Developers should explicitly define	220
the timestamp."	
Questions and Comments	220

Risk Adjustments

Questions and Comments 243

"Quality measure developers should 267 consider setting time-specific recommendations for unadjusted or adjusted measures of ED crowding and boarding."

Questions and Comments	268
Recommendation 7, the same topic,	286
but with the added element of	
standardizing by triage acuity	
Questions and Comments	288

Measures of central tendency,297medians versus geometric means297Questions and Comments297Recommendation 9, structural300quality measures for crowding301Questions and Comments301Recommendation 10, measures of315ED outflow beyond boarding301

Questions and Comments

		Page 7 7
C-O-N-T-E-N-T-S (CONTINUED)		
Committee Discussion on Additional Recommendations	322	
Regionalization and Accountability	343	
Pathway from REMCS Concepts to REMCS-	371	
Based, NQF-Endorsed Performance Measures		
Arjun Venkatash		
Questions and Comments	374	
Measure Development Discussion	425	
Administrative Matters	431	
Opportunity for Public Comment	432	

	Page 8
1	P-R-O-C-E-E-D-I-N-G-S
2	8:44 a.m.
3	MS. FRANKLIN: Good morning,
4	everyone, and welcome to the Regionalized
5	Emergency Medical Care Measure Prioritization
6	Task Force.
7	We will start this morning to
8	discuss prioritization of measures for the
9	field.
10	Before we get started, let's just
11	go ahead and welcome our Co-Chairs, Dr. Steven
12	Pitts, Suzanne Stone-Griffith.
13	My name is Angela Franklin. I am
14	Senior Director for the Project.
15	I have with me Adeela Khan, our
16	Project Analyst and, also, Jesse Pines, our
17	consultant on this project.
18	With that, I will turn it over to
19	our Co-Chairs, who will start us off with
20	introductions.
21	CO-CHAIR PITTS: Hello. Am I on?
22	Okay. Great.

	Page 9
1	This is Steve Pitts.
2	Welcome to the meeting.
3	By way of introduction, I am an ER
4	doctor. Most of my career has been spent
5	working clinically in the emergency department
6	at Emory University in Atlanta. In the last
7	five or ten years, I have gotten involved with
8	statistics-type stuff and spent a year at the
9	National Center for Health Statistics, and
10	have just dipped my toe into this business of
11	crowding in emergency medicine. I apologize
12	in advance for not knowing lots of facts, but
13	I am going to do my job as a policeman.
14	Thank you.
15	CO-CHAIR STONE-GRIFFITH: Good
16	morning.
17	I am Suzanne Stone-Griffith. I am
18	delighted to be here, a bit of a departure
19	from other meetings that I have been a part
20	of. I am really looking forward to this
21	process.
22	I think with that, and in the

Page 10 1 spirit of time, Ann, I am going to turn it 2 over to you for full introductions and 3 disclosures. 4 MS. HAMMERSMITH: Okay. Good 5 morning, everyone. 6 I am Ann Hammersmith and NQF's 7 General Counsel. I am here to guide you 8 through the disclosures of interest. 9 As Suzanne said, we combine 10 introductions with disclosures of interest, 11 for the sake of time. It is a little bit 12 easier for everybody. 13 Several months ago, you received a 14 form from us, a rather lengthy form, which you 15 filled out. Thank you for doing that. This 16 morning what we are going to do is ask you to 17 go around the table and disclose anything that 18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do 22 that. We know that you are experts. That is		
over to you for full introductions and disclosures. MS. HAMMERSMITH: Okay. Good morning, everyone. I am Ann Hammersmith and NQF's General Counsel. I am here to guide you through the disclosures of interest. As Suzanne said, we combine introductions with disclosures of interest, for the sake of time. It is a little bit easier for everybody. Several months ago, you received a form from us, a rather lengthy form, which you filled out. Thank you for doing that. This morning what we are going to do is ask you to go around the table and disclose anything that you think is relevant that will be done by the Committee today. Please do not recount your CV. We will be here for a very long time if you do		Page 10
<ul> <li>disclosures.</li> <li>MS. HAMMERSMITH: Okay. Good</li> <li>morning, everyone.</li> <li>I am Ann Hammersmith and NQF's</li> <li>General Counsel. I am here to guide you</li> <li>through the disclosures of interest.</li> <li>As Suzanne said, we combine</li> <li>introductions with disclosures of interest,</li> <li>for the sake of time. It is a little bit</li> <li>easier for everybody.</li> <li>Several months ago, you received a</li> <li>form from us, a rather lengthy form, which you</li> <li>filled out. Thank you for doing that. This</li> <li>morning what we are going to do is ask you to</li> <li>go around the table and disclose anything that</li> <li>you think is relevant that will be done by the</li> <li>Committee today.</li> <li>Please do not recount your CV. We</li> <li>will be here for a very long time if you do</li> </ul>	1	spirit of time, Ann, I am going to turn it
4MS. HAMMERSMITH: Okay. Good5morning, everyone.6I am Ann Hammersmith and NQF's7General Counsel. I am here to guide you8through the disclosures of interest.9As Suzanne said, we combine10introductions with disclosures of interest,11for the sake of time. It is a little bit12easier for everybody.13Several months ago, you received a14form from us, a rather lengthy form, which you15filled out. Thank you for doing that. This16morning what we are going to do is ask you to17go around the table and disclose anything that18you think is relevant that will be done by the19Committee today.20Please do not recount your CV. We21will be here for a very long time if you do	2	over to you for full introductions and
5       morning, everyone.         6       I am Ann Hammersmith and NQF's         7       General Counsel. I am here to guide you         8       through the disclosures of interest.         9       As Suzanne said, we combine         10       introductions with disclosures of interest,         11       for the sake of time. It is a little bit         12       easier for everybody.         13       Several months ago, you received a         14       form from us, a rather lengthy form, which you         15       filled out. Thank you for doing that. This         16       morning what we are going to do is ask you to         17       go around the table and disclose anything that         18       you think is relevant that will be done by the         19       Committee today.         20       Please do not recount your CV. We         21       will be here for a very long time if you do	3	disclosures.
<ul> <li>I am Ann Hammersmith and NQF's</li> <li>General Counsel. I am here to guide you</li> <li>through the disclosures of interest.</li> <li>As Suzanne said, we combine</li> <li>introductions with disclosures of interest,</li> <li>for the sake of time. It is a little bit</li> <li>easier for everybody.</li> <li>Several months ago, you received a</li> <li>form from us, a rather lengthy form, which you</li> <li>filled out. Thank you for doing that. This</li> <li>morning what we are going to do is ask you to</li> <li>go around the table and disclose anything that</li> <li>you think is relevant that will be done by the</li> <li>Committee today.</li> <li>Please do not recount your CV. We</li> <li>will be here for a very long time if you do</li> </ul>	4	MS. HAMMERSMITH: Okay. Good
<ul> <li>General Counsel. I am here to guide you</li> <li>through the disclosures of interest.</li> <li>As Suzanne said, we combine</li> <li>introductions with disclosures of interest,</li> <li>for the sake of time. It is a little bit</li> <li>easier for everybody.</li> <li>Several months ago, you received a</li> <li>form from us, a rather lengthy form, which you</li> <li>filled out. Thank you for doing that. This</li> <li>morning what we are going to do is ask you to</li> <li>go around the table and disclose anything that</li> <li>you think is relevant that will be done by the</li> <li>Committee today.</li> <li>Please do not recount your CV. We</li> <li>will be here for a very long time if you do</li> </ul>	5	morning, everyone.
<ul> <li>8 through the disclosures of interest.</li> <li>9 As Suzanne said, we combine</li> <li>10 introductions with disclosures of interest,</li> <li>11 for the sake of time. It is a little bit</li> <li>12 easier for everybody.</li> <li>13 Several months ago, you received a</li> <li>14 form from us, a rather lengthy form, which you</li> <li>15 filled out. Thank you for doing that. This</li> <li>16 morning what we are going to do is ask you to</li> <li>17 go around the table and disclose anything that</li> <li>18 you think is relevant that will be done by the</li> <li>19 Committee today.</li> <li>20 Please do not recount your CV. We</li> <li>21 will be here for a very long time if you do</li> </ul>	6	I am Ann Hammersmith and NQF's
<ul> <li>As Suzanne said, we combine</li> <li>introductions with disclosures of interest,</li> <li>for the sake of time. It is a little bit</li> <li>easier for everybody.</li> <li>Several months ago, you received a</li> <li>form from us, a rather lengthy form, which you</li> <li>filled out. Thank you for doing that. This</li> <li>morning what we are going to do is ask you to</li> <li>go around the table and disclose anything that</li> <li>you think is relevant that will be done by the</li> <li>Committee today.</li> <li>Please do not recount your CV. We</li> <li>will be here for a very long time if you do</li> </ul>	7	General Counsel. I am here to guide you
10 introductions with disclosures of interest, 11 for the sake of time. It is a little bit 12 easier for everybody. 13 Several months ago, you received a 14 form from us, a rather lengthy form, which you 15 filled out. Thank you for doing that. This 16 morning what we are going to do is ask you to 17 go around the table and disclose anything that 18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do	8	through the disclosures of interest.
11 for the sake of time. It is a little bit 12 easier for everybody. 13 Several months ago, you received a 14 form from us, a rather lengthy form, which you 15 filled out. Thank you for doing that. This 16 morning what we are going to do is ask you to 17 go around the table and disclose anything that 18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do	9	As Suzanne said, we combine
<ul> <li>12 easier for everybody.</li> <li>13 Several months ago, you received a</li> <li>14 form from us, a rather lengthy form, which you</li> <li>15 filled out. Thank you for doing that. This</li> <li>16 morning what we are going to do is ask you to</li> <li>17 go around the table and disclose anything that</li> <li>18 you think is relevant that will be done by the</li> <li>19 Committee today.</li> <li>20 Please do not recount your CV. We</li> <li>21 will be here for a very long time if you do</li> </ul>	10	introductions with disclosures of interest,
13Several months ago, you received a14form from us, a rather lengthy form, which you15filled out. Thank you for doing that. This16morning what we are going to do is ask you to17go around the table and disclose anything that18you think is relevant that will be done by the19Committee today.20Please do not recount your CV. We21will be here for a very long time if you do	11	for the sake of time. It is a little bit
14 form from us, a rather lengthy form, which you 15 filled out. Thank you for doing that. This 16 morning what we are going to do is ask you to 17 go around the table and disclose anything that 18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do	12	easier for everybody.
15 filled out. Thank you for doing that. This 16 morning what we are going to do is ask you to 17 go around the table and disclose anything that 18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do	13	Several months ago, you received a
16 morning what we are going to do is ask you to 17 go around the table and disclose anything that 18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do	14	form from us, a rather lengthy form, which you
17go around the table and disclose anything that18you think is relevant that will be done by the19Committee today.20Please do not recount your CV. We21will be here for a very long time if you do	15	filled out. Thank you for doing that. This
<pre>18 you think is relevant that will be done by the 19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do</pre>	16	morning what we are going to do is ask you to
19 Committee today. 20 Please do not recount your CV. We 21 will be here for a very long time if you do	17	go around the table and disclose anything that
20 Please do not recount your CV. We 21 will be here for a very long time if you do	18	you think is relevant that will be done by the
21 will be here for a very long time if you do	19	Committee today.
	20	Please do not recount your CV. We
22 that. We know that you are experts. That is	21	will be here for a very long time if you do
	22	that. We know that you are experts. That is

	Page 11
1	why we selected you to serve on the Committee.
2	What we are interested in you
3	disclosing is any grant funding, but only if
4	it is relevant to the work that is being done
5	today with the Committee; research funding if
6	it is relevant to the topic today; speaking if
7	it is relevant to the topic today. Some of
8	you will have nothing to disclose, which is
9	perfectly fine. Just because you disclose it
10	does not mean it is a conflict of interest.
11	It is simply a disclosure.
12	I am going to remind you that you
13	sit as an individual on this Committee.
14	Sometimes we have members who perfectly
15	innocently will say, "I'm So-and-So, and I am
16	here representing the American Society of"
17	fill in the blank. Actually, you are not here
18	representing anybody. You are not
19	representing your employer. You are not
20	representing people who may have nominated you
21	to serve on the Committee. You sit as an
22	individual expert.

	Page 12
1	And then, finally, I am just going
2	to remind you that things that you disclose or
3	conflicts that members may have are not
4	necessarily financial. People often say, "I
5	don't have a financial conflict of interest,"
6	which is great. But because of the unique
7	nature of the work we do here, you could have
8	something to disclose it may or may not be
9	a conflict where no money has changed
10	hands.
11	For example, you served several
12	years on a Committee that looked at topics
13	relevant to what you are going to discuss
14	today, that would be something we would like
15	you to disclose to the ground.
16	So, with that, I am going to have
17	you go around the table, tell us who you are,
18	what your day job is when you are not here
19	laboring for NQF, and then tell us if you have
20	anything you would like to disclose.
21	So, I always pick on the Chairs
22	first to start us off.

	Page 13
1	CO-CHAIR PITTS: Steve Pitts. I
2	am currently working clinically at Emory
3	University Hospital in the emergency
4	department.
5	I do have some contract funding
6	through ASPR, the Emergency Care Coordinating
7	Committee, which is a small portion of my
8	salary. Otherwise, I spent one year as a
9	Fellow at the National Center for Health
10	Statistics. Other than that, I am pretty much
11	just a regular doctor.
12	Thank you.
13	CO-CHAIR STONE-GRIFFITH: Again,
14	Suzanne Stone-Griffith. I am the Vice
15	President of Emergency Services, EMS, and
16	Trauma for HCA in the Continental Division.
17	I am actually based out of Denver now,
18	although I think it says Nashville in some
19	documents.
20	I have served in previous times on
21	the consensus panels for the emergency
22	measures and ambulatory care measures. I have

	Page 14
1	also been part of the ENA Crowding Task Force.
2	I have worked with the emergency department of
3	Benchmark Alliance on some of the measure
4	definitions.
5	MEMBER WEBER: I am Ellen Weber.
6	I am a Professor of Emergency Medicine at the
7	University of California, San Francisco, where
8	I also work clinically.
9	The only grant funding I currently
10	have is a very small part as an expert
11	stakeholder for an AHRQ-funded grant that is
12	coming out of Stanford to talk about quality
13	indicators.
14	I have served with Suzanne at the
15	ED Benchmark Alliance. I am a member of the
16	SAEM Interest Group on Crowding in Emergency
17	Medicine.
18	And the other thing, I guess I
19	don't know if it is a conflict but I did
20	have a grant from the SAEM to study what they
21	did in England to solve their emergency
22	department crowding, and got that grant both

	Page 15
1	from SAEM as well as the Bupa Foundation. But
2	that is now finished.
3	MEMBER STOTO: Good morning,
4	everyone.
5	I am Mike Stoto, on the faculty at
6	Georgetown University. I am also an adjunct
7	faculty member at Harvard School of Public
8	Health and do most of my research at Harvard.
9	I am the co-PI there one of the CDC-funded
10	Preparedness and Emergency Response Research
11	Centers. There are nine of them. Two of the
12	Centers focus on measurement as a theme, and
13	ours is one of them.
14	A lot of the work that we have
15	been doing was summarized in a White Paper
16	that was cited in the background for this. I
17	will be saying a little more about that later
18	today.
19	The other thing is that I am also
20	the Chair of what is called the Model Design
21	Working Group for a group that is preparing
22	the National Health Security Preparedness

	Page 16
1	Index, which is obviously related to this as
2	well. That group is meeting again on Friday
3	to try to come up with some specifications for
4	that Preparedness Index.
5	MEMBER FIELDS: My name is Wes
6	Fields. My day jobs are as a Director of the
7	largest partnership of emergency medicine in
8	the country and part-time clinical faculty at
9	UC-Irvine.
10	I have spent a lot of time the
11	last few years doing policy development and
12	advocacy pieces with federal regulatory reform
13	and the AC rule-writing in mind. I am more of
14	a bundler to create new research projects,
15	which means I am very popular with a lot of
16	people in and out of the room who do research
17	in this sector. And I am very happy to be
18	here today.
19	MEMBER MARGOLIS: Good morning.
20	My name is Greg Margolis. I am
21	the Director of the Division of Health Systems
22	and Healthcare Policy in the Office of the

	Page 17
1	Assistant Secretary for Preparedness and
2	Response at HHS. And I don't have any other
3	conflicts to disclose.
4	MEMBER SHAH: Good morning.
5	My name is Manish Shah. I am
6	Associate Professor of Emergency Medicine at
7	the University of Rochester, where I work as
8	an emergency physician. And also, I work as
9	one of the County EMS Medical Directors.
10	Most of my work has revolved
11	around pre-hospital care, particularly of
12	older adults, and how to improve the care we
13	deliver. I have AHRQ, CDC, and other grants,
14	but nothing directly related to this.
15	MEMBER ASPLIN: Good morning.
16	My name is Brent Asplin. I
17	usually have a voice, but I don't. This will
18	be the best contribution so far to an NQF
19	committee. I will just sign it in.
20	(Laughter.)
21	I am President of Fairview Medical
22	Group in Minneapolis, part of Fairview, which

	Page 18
1	is an integrated system there, and emergency
2	physician and Immediate Past Chair of a
3	Quality Performance Committee. And I don't
4	have any relevant conflicts to disclose.
5	MEMBER ADIRIM: Good morning.
б	My name is Terry Adirim. I am a
7	pediatric emergency physician. In the past,
8	I have been in academic medicine work in pre-
9	hospital and EMS; currently, the Director of
10	the Office of Special Affairs of the Health
11	Resources and Services Administration. I
12	represent HRSA on the NQF Board. I don't
13	think that is a conflict, right? And that's
14	it.
15	MEMBER PAPA: Good morning.
16	AnnMarie Papa. My day job is the
17	Clinical Director of Emergency Nursing at the
18	University of Pennsylvania and Penn
19	Presbyterian, a medical center.
20	A couple of volunteer things: I
21	am the Immediate Past President of the
22	Emergency Nurses Association and have had the

	Page 19
1	opportunity to sit on the SAEM Regionalization
2	Task Force and a number of committees that
3	worked on crowding and throughput with ACEP
4	and ENA.
5	MEMBER ROBINSON: Good morning.
6	Kathy Robinson. I appreciate the
7	opportunity to participate today.
8	I am a Program Manager for the
9	National Association of State EMS Officials
10	and, also, a Past President of the Emergency
11	Nurses Association. I have had parallel
12	careers in EMS and emergency nursing.
13	With NASEMSO, we receive some
14	grant funding from HRSA and the National
15	Highway Traffic Safety Administration, but I
16	really don't have any relative interest
17	business to disclose.
18	MEMBER CARR: Good morning,
19	everybody.
20	I am Brendan Carr. I am sorry I
21	was late.
22	I am an emergency physician and a

	Page 20
1	policy researcher at the University of
2	Pennsylvania, and I work part-time a day a
3	week in Greg Margolis' office at ASPR.
4	Other than the fact that I have
5	had research funding for conference work
6	around regionalized emergency care systems and
7	a lot of my research funding from AHRQ and CDC
8	are tied to these issues, I don't think I have
9	pertinent disclosures.
10	MEMBER VENKATASH: Hi, everyone.
11	My name is Arjun Venkatash. I am
12	currently a Robert Wood Johnson Foundation
13	clinical scholar at Yale, trained in emergency
14	medicine at Harvard.
15	And the only conflicts I believe I
16	have are that I have serve on the ACEP
17	Clotting Performance Committee and last year
18	received support from ACEP to do a mini-
19	fellowship here at NQF. That included work on
20	the previous phase of this project.
21	MEMBER SCHUUR: Jay Schuur from
22	Brigham Young Women's Hospital. I am a
	-

	Page 21
1	practicing emergency physician. I also do
2	health services research.
3	And conflicts: I chair the
4	Quality Performance Committee for the American
5	College of Emergency Physicians, and I think
6	that is it.
7	MEMBER LEVINE: Good morning.
8	I am David Levine. I am an
9	emergency medicine physician. My day job is
10	I am Vice President of Informatics and Medical
11	Director at UHC, which is the University
12	Health System Consortium, the academic medical
13	membership organization.
14	My only conflicts, with UHC, we do
15	benchmarking and performance. And so,
16	obviously, emergency medicine is one of those
17	sets of measures that we present to our
18	membership, although we do not create the
19	metrics.
20	And then, in my previous life as
21	an emergency medicine department medical
22	director, I served on a number of SAM interest

	Page 22
1	group committees that dealt with crowding.
2	MEMBER McCAIG: I am Linda McCaig
3	with the National Center for Health
4	Statistics. I work on the National Hospital
5	Ambulatory Care Survey, and I have nothing to
6	disclose.
7	MEMBER CARRIER: Hi. I am Emily
8	Carrier. My clinical training is in emergency
9	medicine. My current day job is as a
10	researcher at the Center for Studying Health
11	System Change.
12	Relevant to this project, I have
13	current research funding from the CDC for a
14	study of regional healthcare preparedness
15	collaboratives and have had previous funding,
16	mostly a number of foundation grants,
17	primarily Robert Wood Johnson Foundation, for
18	a large, ongoing qualitative study that
19	touches on many of these issues.
20	MEMBER McCARTHY: Hi. I am
21	Melissa McCarthy. I am a faculty member at
22	George Washington University in health policy

Page 23 1 and emergency medicine. 2 And I guess the only relevant conflict is my career development work, but, 3 through AHRQ, it definitely touches on 4 5 crowding and its impact on quality emergency 6 care. 7 Hi. MEMBER MacINTYRE: Good 8 morning. 9 I am Anthony MacIntyre. I am also 10 an emergency physician at George Washington University. In fact, Jesse and I commiserate 11 12 frequently about our inadequate EHR that has 13 recently been implemented, but this isn't 14 about EHRs. 15 (Laughter.) My academic career is focused on 16 17 emergency preparedness and response at all levels, facility, state, federal, and 18 19 international. I guess I am not sure I really 20 understand the term "regionalized" in this 21 context. 22 But I guess the two things I have

ĺ	
	Page 24
1	to disclose that might be construed as
2	conflicts are: one, I was the coauthor of the
3	MSCC document, which HPP currently uses in its
4	funding grant cycles. And then, the other is
5	I recently stepped down, serving four years as
6	the Chair of the Emergency Management
7	Committee for D.C.'s Emergency Healthcare
8	Coalition.
9	MEMBER PHILLIPS: Good morning.
10	I am Sally Phillips. I am with
11	the Office of Health Affairs at the Department
12	of Homeland Security, Deputy Assistant
13	Secretary. I guess I would say in my previous
14	life I led the Public Health Emergency
15	Preparedness Research Portfolio at AHRQ in
16	support of HPP and ASPR, and nothing else to
17	disclose.
18	Thank you.
19	MS. HAMMERSMITH: Okay. I may
20	have some people on the phone. I am going to
21	call on you.
22	Is Mike Rapp on the phone?

	Page 25
1	(No response.)
2	Is Rebecca Katz on the phone?
3	(No response.)
4	No? Okay.
5	And then, a Committee member just
6	walked in. Two. Okay.
7	We are doing introductions and
8	disclosures. So, if you could tell us who you
9	are, who you are with, and if you have
10	anything relevant that you want to disclose to
11	the Committee in terms of research funding,
12	grant funding, speaking, et cetera. But only
13	if has to do with the topics before the
14	Committee.
15	MEMBER MARCOZZI: Dave Marcozzi
16	from the Department of Health and Human
17	Services, Assistant Secretary for Preparedness
18	and Response. No disclosures.
19	MEMBER MUTTER: Ryan Mutter,
20	Agency for Healthcare, Research, and Quality,
21	HHS. No disclosures.
22	MS. HAMMERSMITH: Thank you for

	Page 26
1	making those disclosures.
2	Do you have any questions of me or
3	anything that you want to discuss with each
4	other based on the disclosures this morning?
5	(No response.)
6	Okay. Thank you. Have a good
7	meeting.
8	MS. FRANKLIN: Thanks, Ann.
9	So, we will go quickly to the
10	project scope and activities, just quickly.
11	So, today I just want to highlight to everyone
12	that we are focused on methodological issues
13	and not endorsement of any particular
14	measures. We are looking to lay a groundwork
15	for development, testing, and endorsement and
16	implementation of measures in this topic area.
17	We want to review measures and measure
18	concepts that are available in ED crowding,
19	boarding, surge, and emergency preparedness
20	areas, and any other areas that the panel will
21	identify throughout today.
22	I want to note that we are going

Page 27 to look for gaps and barriers to fully-1 2 testable, implementable measures that could pass the NQF criteria. And we are looking for 3 this group to provide recommendations for how 4 5 measures could be aggregated at the higher 6 levels, such as regionalized and by 7 geographical unit. 8 The purpose of our final report is 9 going to be to tie together our concepts of 10 crowding, preparedness regionalization, and specifically to how we can report those 11 12 measures of quality at the regional level. And we also want to help inform and give 13 14 guidance to the field as to the path to 15 measure development that could be brought to 16 NQF. 17 This project is funded by HHS, as 18 you have heard earlier. 19 With that, I think I will turn it 20 over to our Co-Chairs. Or Jesse is next. I'm 21 sorry. Jesse is next. 22 MR. PINES: Great. Thank you.

1	
	Page 28
1	I think I know most everyone here.
2	For those who I don't know, very nice to meet
3	you.
4	Jesse Pines. In terms of my
5	background, I am an emergency physician and
6	health services researcher at GW, today
7	representing NQF on this project.
8	And I have had several grants
9	looking at the association between crowding
10	and quality of care from various
11	organizations, federal and university funding
12	and also foundation.
13	I would like to thank everyone for
14	coming today. Essentially, our goal today is
15	really to work on this report and really focus
16	on seeing what we can do to really provide a
17	guidance to measure developers who are
18	interested in developing crowding measures and
19	preparedness measures; also, seeing if we can
20	bring together those fields.
21	We have experts from the crowding
22	world and the preparedness world. Aside from

	Page 29
1	the calls that we had leading up to this
2	meeting, those worlds don't really come
3	together very much. Really, one of our goals
4	today is to really help reconcile the folks
5	who measure crowding and the folks who measure
6	preparedness in the NQF framework and, also,
7	think practically about how we basically get
8	from A to Z with measure development and
9	really provide some very concrete
10	recommendations to measure developers.
11	So, really, our goal today is,
12	again, to help us work on this report, come up
13	with specific recommendations, and basically
14	set up a runway for measure developers that
15	would, hopefully, happen in the coming years.
16	We don't have a specific plan. There is no
17	specific contract in place for measure
18	development in this field, but, essentially,
19	our hope is that, by setting up this runway
20	and by giving some real guidance to measure
21	developers, that we can figure out who the
22	players are, who are going to develop these

	Page 30
1	measures, and essentially what specific
2	guidance they would need, taking the
3	perspective of crowding and preparedness into
4	account.
5	So, with that, I wanted to maybe
6	turn it over to Helen. Did you want to talk
7	a little bit about the NQF process and the NQF $$
8	standards.
9	DR. BURSTIN: Sure. Good morning,
10	everybody.
11	I am Helen Burstin. I am the
12	Senior Vice President for Performance Measures
13	at NQF. I have actually always, as a health
14	services researcher, always loved emergency
15	departments and have always enjoyed doing
16	research in those settings.
17	I am happy Sally could be here,
18	since I was at AHRQ, and she oversaw our work
19	on emergency preparedness when I was
20	MEMBER PHILLIPS: She was the
21	mother of that.
22	DR. BURSTIN: I was the mother, I

	Page 31
1	guess. I don't know. I always felt like the
2	child.
3	(Laughter.)
4	But, essentially, we would love
5	to, we are really pleased to engage again in
6	this topic area. I think that what we are
7	trying to do in this project, unlike I think
8	a couple of the ones that preceded it around
9	more of an approach around regionalized
10	emergency care services, is really be very
11	definitive about what is the pathway toward
12	saying, how do we get to a set of measures
13	that would really allow us as a nation to
14	measure issues around crowded and
15	preparedness.
16	So, we thought it might be helpful
17	just to give a little bit of a backdrop about
18	how NQF evaluates measures, as you are
19	beginning to think through what measures might
20	look like.
21	Next, please.
22	So, why NQF endorsement? For

1	
	Page 32
1	those of you who don't know, obviously, from
2	where we sit, an important piece of this is
3	the fact that, if you have standardized
4	performance measures, there are tools that
5	allow us to assess quality in a way that
6	allows us to have comparable information to
7	really be able to compare providers and
8	others.
9	As many of you know who have sat
10	through our panels and many of you have
11	the NQF endorsement is intended to really
12	reflect rigorous scientific and evidence-based
13	review, input from patients, families, a whole
14	wide range of stakeholders, and people really
15	across the entire industry.
16	Next.
17	So, these are our evaluation
18	criteria. I won't do a deep dive, as we often
19	do before committees start working, because
20	you don't have any measures before you today,
21	but we thought, again, just as a backdrop,
22	just to give you a sense of it.

	Page 33
1	So, NQF has always used the top
2	four criteria, but over the years they have
3	gotten more and more precise and, in fact, a
4	higher bar in certainly the last five years
5	that I have been at NQF. And they are also
6	hierarchical.
7	So, the first one around
8	importance to measure and report is a must-
9	pass criterion. If it doesn't pass that first
10	one, we just stop our assessment.
11	And probably the cornerstone of
12	that one is the level of evidence for the
13	measure focus. We really focus there in on
14	the quality, the quantity, and the consistency
15	of the evidence, and consistency tends to be
16	very important for both guidelines as well as
17	measures.
18	We also want to see if there is an
19	opportunity for improvement. We don't want to
20	be measuring things that are topped-out or
21	things where variation is not going to be seen
22	across providers.

	Page 34
1	And finally, we do anchor
2	ourselves to the National Quality Strategy and
3	other high-impact areas. We want to make sure
4	we are really looking at an area that makes a
5	difference. I often describe this to groups
6	as, you know, is the juice worth the squeeze?
7	It is a lot of work to get these measures. Is
8	it really worth it? Will it drive improvement
9	at the end of the day?
10	Scientific acceptability is the
11	second one, and I have got another slide
12	following up on validity, because it is such
13	a major concern. But, essentially, are the
14	measure specifications precise enough that
15	comparisons are possible? Is there
16	reliability and validity testing of the
17	measures at either the data element level or
18	the score level?
19	Usability and use was recently
20	updated. The idea here is to really ensure
21	that audiences who want to use those measures,
22	whoever they may be and in this particular

	Page 35
1	project, it is a very wide lens of who may
2	look at these measures, from the community
3	folks to regional folks, to people in EDs, and
4	others can they use those results for both
5	accountability as well as performance
б	improvement?
7	Feasibility. Can the measure be
8	implemented without a lot of burden? Can you
9	capture it increasingly, in this day and age,
10	with electronic data and moving towards
11	electronic health records?
12	And finally, not so much in this
13	space because there are so few measures, but
14	if you look at areas like cardiovascular care
15	or diabetes, for example, a lot of our efforts
16	now are really focusing-in on trying to select
17	the superior measure among competing measures
18	or at least harmonizing measures across
19	different sites of care. This may be relevant
20	in this field; for example, if we want to be
21	able to cascade up and down, to have measures
22	that work at an emergency department, but also

	Page 36
1	could roll up to give you more regional or
2	local assessments of services. So, something
3	we will talk about as we get further.
4	Next.
5	We also over the years have been
6	doing additional work on evidence and have
7	moved towards really a significant
8	hierarchical preference for outcomes.
9	Outcomes, particularly those linked to
10	evidence-based processes and structure, is
11	really the place we would most like to go. We
12	want to ensure there is at least a plausible
13	relationship to process and/or structure. And
14	if we are going to have process measures, in
15	particular, they have got to be the ones as
16	close as possible to the outcomes. The ones
17	that are really distal and so far away that
18	you could measure them and measure them and
19	measure them and never move the outcome is not
20	where we want to be anymore. We have really
21	started eliminating many of those measures
22	from our portfolio.
	Page 37
----	--
1	Next.
2	I mention this just briefly. I
3	will leave it up here in a bit more detail.
4	Again, we do require testing of the measures
5	for reliability and validity. We allow that
6	either to be done at the score level, which is
7	often used for claims data or things we have
8	just a lot of data, just to look for signal-
9	to-noise, for example, or at the data element
10	level. If there is one particular element you
11	really want to be able to capture, can you
12	test it and show you can reliably collect it?
13	The rest of it here, we won't go
14	through.
15	Next.
16	Threats to validity is a major
17	part of what our Committee spent a lot of time
18	on. This just goes through some of them.
19	Again, conceptually, is it related to an
20	important area of care or strongly linked to
21	an outcome? Again, a measure that is
22	unreliable can't be valid. So, that is a

Page 38 1 starting point for us. 2 We want to make sure that patients aren't inappropriately excluded from 3 measurement. Some of the most complex 4 5 patients, we always complained, are left out 6 of research studies and sometimes they are 7 left out of guidelines. And so, sometimes 8 they are left out of measures. So, we really 9 prefer that those approaches be stratified rather than excluded. 10 We also want to, whenever 11 12 appropriate, measures, if they are outcome, should be risk-adjusted. We increasingly are 13 14 in this world of measure scores being 15 generated with multiple data sources and methods. We want to make sure there is some 16 17 comparability if people are going to be using different data sources. And we want to avoid 18 19 systematic missing or incorrect data. 20 Next. 21 Usability and use, I mentioned 22 briefly. Just two quick points on this. The

Page 391last bullet there is we have updated this.2So, we look at it to see whether the measures3have actually made a difference, not just if4they are being used. Are they driving5improvement?6And here, the idea is are we7actually making progress towards improvement,8but also is there any evidence of unintended9consequences. Many of you in the ED space,10for example, lived through the pneumonia11measure, antibiotics within four hours, which12I think we heard pretty clear indications from13the field that was just when I came to NQF14 that this was actually causing harm in15emergency departments. We quickly did what we16call an ad hoc review, re-reviewed the17measure. The measure was changed.18But we really want to get a handle19as much as possible, as you think through20these measures, of what is really important to21measure going forward. It is also important22to think about, if we systematically measure		
<ul> <li>So, we look at it to see whether the measures</li> <li>have actually made a difference, not just if</li> <li>they are being used. Are they driving</li> <li>improvement?</li> <li>And here, the idea is are we</li> <li>actually making progress towards improvement,</li> <li>but also is there any evidence of unintended</li> <li>consequences. Many of you in the ED space,</li> <li>for example, lived through the pneumonia</li> <li>measure, antibiotics within four hours, which</li> <li>I think we heard pretty clear indications from</li> <li>the field that was just when I came to NQF</li> <li> that this was actually causing harm in</li> <li>emergency departments. We quickly did what we</li> <li>call an ad hoc review, re-reviewed the</li> <li>measure. The measure was changed.</li> <li>But we really want to get a handle</li> <li>as much as possible, as you think through</li> <li>these measures, of what is really important to</li> <li>measure going forward. It is also important</li> </ul>		Page 39
<ul> <li>have actually made a difference, not just if</li> <li>they are being used. Are they driving</li> <li>improvement?</li> <li>And here, the idea is are we</li> <li>actually making progress towards improvement,</li> <li>but also is there any evidence of unintended</li> <li>consequences. Many of you in the ED space,</li> <li>for example, lived through the pneumonia</li> <li>measure, antibiotics within four hours, which</li> <li>I think we heard pretty clear indications from</li> <li>the field that was just when I came to NQF</li> <li> that this was actually causing harm in</li> <li>emergency departments. We quickly did what we</li> <li>call an ad hoc review, re-reviewed the</li> <li>measure. The measure was changed.</li> <li>But we really want to get a handle</li> <li>as much as possible, as you think through</li> <li>these measures, of what is really important to</li> <li>measure going forward. It is also important</li> </ul>	1	last bullet there is we have updated this.
<ul> <li>they are being used. Are they driving</li> <li>improvement?</li> <li>And here, the idea is are we</li> <li>actually making progress towards improvement,</li> <li>but also is there any evidence of unintended</li> <li>consequences. Many of you in the ED space,</li> <li>for example, lived through the pneumonia</li> <li>measure, antibiotics within four hours, which</li> <li>I think we heard pretty clear indications from</li> <li>the field that was just when I came to NQF</li> <li> that this was actually causing harm in</li> <li>emergency departments. We quickly did what we</li> <li>call an ad hoc review, re-reviewed the</li> <li>measure. The measure was changed.</li> <li>But we really want to get a handle</li> <li>as much as possible, as you think through</li> <li>these measures, of what is really important to</li> <li>measure going forward. It is also important</li> </ul>	2	So, we look at it to see whether the measures
5       improvement?         6       And here, the idea is are we         7       actually making progress towards improvement,         8       but also is there any evidence of unintended         9       consequences. Many of you in the ED space,         10       for example, lived through the pneumonia         11       measure, antibiotics within four hours, which         12       I think we heard pretty clear indications from         13       the field that was just when I came to NQF         14       that this was actually causing harm in         15       emergency departments. We quickly did what we         16       call an ad hoc review, re-reviewed the         17       measure. The measure was changed.         18       But we really want to get a handle         19       as much as possible, as you think through         20       these measures, of what is really important to         21       measure going forward. It is also important	3	have actually made a difference, not just if
6 And here, the idea is are we 7 actually making progress towards improvement, 8 but also is there any evidence of unintended 9 consequences. Many of you in the ED space, 10 for example, lived through the pneumonia 11 measure, antibiotics within four hours, which 12 I think we heard pretty clear indications from 13 the field that was just when I came to NQF 14 that this was actually causing harm in 15 emergency departments. We quickly did what we 16 call an ad hoc review, re-reviewed the 17 measure. The measure was changed. 18 But we really want to get a handle 19 as much as possible, as you think through 20 these measures, of what is really important to 21 measure going forward. It is also important	4	they are being used. Are they driving
actually making progress towards improvement, but also is there any evidence of unintended consequences. Many of you in the ED space, for example, lived through the pneumonia measure, antibiotics within four hours, which I think we heard pretty clear indications from the field that was just when I came to NQF that this was actually causing harm in emergency departments. We quickly did what we call an ad hoc review, re-reviewed the measure. The measure was changed. But we really want to get a handle as much as possible, as you think through these measures, of what is really important to measure going forward. It is also important	5	improvement?
8but also is there any evidence of unintended9consequences. Many of you in the ED space,10for example, lived through the pneumonia11measure, antibiotics within four hours, which12I think we heard pretty clear indications from13the field that was just when I came to NQF14 that this was actually causing harm in15emergency departments. We quickly did what we16call an ad hoc review, re-reviewed the17measure. The measure was changed.18But we really want to get a handle19as much as possible, as you think through20these measures, of what is really important to21measure going forward. It is also important	6	And here, the idea is are we
9consequences. Many of you in the ED space,10for example, lived through the pneumonia11measure, antibiotics within four hours, which12I think we heard pretty clear indications from13the field that was just when I came to NQF14 that this was actually causing harm in15emergency departments. We quickly did what we16call an ad hoc review, re-reviewed the17measure. The measure was changed.18But we really want to get a handle19as much as possible, as you think through20these measures, of what is really important to21measure going forward. It is also important	7	actually making progress towards improvement,
10for example, lived through the pneumonia11measure, antibiotics within four hours, which12I think we heard pretty clear indications from13the field that was just when I came to NQF14 that this was actually causing harm in15emergency departments. We quickly did what we16call an ad hoc review, re-reviewed the17measure. The measure was changed.18But we really want to get a handle19as much as possible, as you think through20these measures, of what is really important to21measure going forward. It is also important	8	but also is there any evidence of unintended
measure, antibiotics within four hours, which I think we heard pretty clear indications from the field that was just when I came to NQF that this was actually causing harm in emergency departments. We quickly did what we call an ad hoc review, re-reviewed the measure. The measure was changed. But we really want to get a handle as much as possible, as you think through these measures, of what is really important to measure going forward. It is also important	9	consequences. Many of you in the ED space,
12I think we heard pretty clear indications from13the field that was just when I came to NQF14 that this was actually causing harm in15emergency departments. We quickly did what we16call an ad hoc review, re-reviewed the17measure. The measure was changed.18But we really want to get a handle19as much as possible, as you think through20these measures, of what is really important to21measure going forward. It is also important	10	for example, lived through the pneumonia
13 the field that was just when I came to NQF 14 that this was actually causing harm in 15 emergency departments. We quickly did what we 16 call an ad hoc review, re-reviewed the 17 measure. The measure was changed. 18 But we really want to get a handle 19 as much as possible, as you think through 20 these measures, of what is really important to 21 measure going forward. It is also important	11	measure, antibiotics within four hours, which
<ul> <li>14 that this was actually causing harm in</li> <li>15 emergency departments. We quickly did what we</li> <li>16 call an ad hoc review, re-reviewed the</li> <li>17 measure. The measure was changed.</li> <li>18 But we really want to get a handle</li> <li>19 as much as possible, as you think through</li> <li>20 these measures, of what is really important to</li> <li>21 measure going forward. It is also important</li> </ul>	12	I think we heard pretty clear indications from
emergency departments. We quickly did what we call an ad hoc review, re-reviewed the measure. The measure was changed. But we really want to get a handle as much as possible, as you think through these measures, of what is really important to measure going forward. It is also important	13	the field that was just when I came to NQF
16 call an ad hoc review, re-reviewed the 17 measure. The measure was changed. 18 But we really want to get a handle 19 as much as possible, as you think through 20 these measures, of what is really important to 21 measure going forward. It is also important	14	that this was actually causing harm in
17 measure. The measure was changed. 18 But we really want to get a handle 19 as much as possible, as you think through 20 these measures, of what is really important to 21 measure going forward. It is also important	15	emergency departments. We quickly did what we
But we really want to get a handle as much as possible, as you think through these measures, of what is really important to measure going forward. It is also important	16	call an ad hoc review, re-reviewed the
19 as much as possible, as you think through 20 these measures, of what is really important to 21 measure going forward. It is also important	17	measure. The measure was changed.
20 these measures, of what is really important to 21 measure going forward. It is also important	18	But we really want to get a handle
21 measure going forward. It is also important	19	as much as possible, as you think through
	20	these measures, of what is really important to
22 to think about, if we systematically measure	21	measure going forward. It is also important
	22	to think about, if we systematically measure

	Page 40
1	that and it may be adopted for an
2	accountability application, are there any
3	likely responses that may result in unintended
4	consequences, I think is something we want to
5	just make the case of.
6	Next.
7	We oftentimes talk about
8	measurement, measurement, measurement. We are
9	NQF. But, again, the end goal here is
10	improvement in either healthcare, provider-
11	based healthcare, or population health,
12	obviously, given the focus today.
13	This was some work initially Don
14	Berwick had done, recently updated. Really
15	just making the case we understand measurement
16	has lots of uses for both improvement but also
17	selection. It is important to remember that
18	we want to try to get to a set of measures
19	that can both drive improvement, but also be
20	useful for accountability.
21	Next.
22	Feasibility we have talked about a

	Page 41
1	bit. Again, try to get the data elements in
2	a way that is easily retrievable or collected
3	as part of routine care. I have heard about
4	Jesse's pain points on the EHR and EDs. So,
5	I won't go there. But, again, is there a way
6	to capture some of these data moving forward?
7	Next, and I think probably last.
8	This was some work, RWJ's project
9	on Aligning Forces for Quality it put forward.
10	I thought it was useful for today, in
11	particular. Even if we begin thinking about
12	eMeasures, the reality is there are so many
13	different sources of data that we are going to
14	want to pull into these that go way beyond
15	what you are going to get just out of the EHR
16	on your desk. Just a reminder for us.
17	Next.
18	And I always end with this slide
19	because I think it is important for us to
20	remember that we are in sort of a difficult
21	place at the moment of lots of things we
22	really want to measure that we can't quite

Page 42 measure yet, but we also know we can't improve 1 2 what we don't measure. 3 So, with that, I will stop and turn it back over to Jesse. 4 5 MR. PINES: Great. Thanks so much, Helen. 6 7 So, any questions for Helen? 8 MS. FRANKLIN: Dr. Gabriel, did 9 you want to introduce yourself quickly? 10 I am, fortunately MEMBER GABRIEL: or unfortunately, not a physician, but Ed 11 12 Gabriel, the Principal Deputy Assistant Secretary from ASPR. I am glad to be here and 13 14 participating in the group. 15 MS. FRANKLIN: And I just have one more question. 16 17 Arnika, are you there? 18 THE OPERATOR: Yes, I am here. 19 MS. FRANKLIN: I wanted to check 20 to see if we had a Michael Rapp or a Rebecca 21 Katz on the line, and if their lines could be 22 opened, if so.

Page 43 THE OPERATOR: Okay. Not at this 1 2 time. 3 MS. FRANKLIN: Okay. Great. Thanks. 4 5 MR. PINES: Great. Thanks so much. 6 7 So, essentially, what I wanted to 8 do is get the discussion started this morning. 9 We have people from a lot of different 10 backgrounds, a lot of different areas of 11 expertise. One of the issues that I think 12 came up on our earlier conference calls was 13 14 sort of making sure that everyone was on the same page in terms of understanding what we 15 16 were trying to do with preparedness 17 measurement and crowding measurement. So, essentially, one of the things 18 19 we had talked about was having two really 20 short presentations this morning from Dave 21 Marcozzi and, also, from Mike Stoto to give us 22 an overview of some of their work on

	Page 44
1	preparedness measurement. Really, our hope is
2	in the next half hour or so to really get on
3	the same page in terms of the goals of
4	preparedness measurement, some of the major
5	issues, so we can start getting into the major
6	meat of this, which is going to be specific
7	recommendations for measure developers.
8	So, at this time I am going to go
9	ahead and turn it over to Dr. Marcozzi.
10	MEMBER MARCOZZI: Thanks, Jesse.
11	I appreciate it.
12	I first just want to recognize two
13	staff members in the back who are part of
14	ASPR, Peggy Sparr, who is actually in charge
15	of evaluation for ASPR, and Dr. Rick Hunt,
16	newly brought on from CDC to ASPR. Certainly,
17	their expertise with regard to this
18	discussion, we would solicit their advice if
19	we break up to ask them any questions that
20	further the discussion that I am going to
21	present here today.
22	Let's just kind of couch where we

	Page 45
1	were with preparedness before 2012 and where
2	we are heading for preparedness for the next
3	five years.
4	As a result of a Presidential
5	Directive and that was Presidential
6	Directive 8 there was a shift from a
7	planning-based scenario to a capability-based
8	scenario or capability-based planning. That
9	was an important change. You can't make plans
10	for every type of event. There was
11	recognition within the Administration that you
12	have to establish some core capabilities,
13	apply those capabilities to, hopefully, any
14	event, and have an 80 to 90 percent answer.
15	Certainly, there has to be some vectoring
16	right or left for a chemical event versus a
17	large-scale biological event versus a
18	pandemic. Those are all different types of
19	specific events. But the response and the
20	preparedness response activities are some
21	foundational core capabilities that we can
22	project to any type of those events.

	Page 46
1	And that was a key shift from
2	where we were before to where we are now. To
3	that end, the release of the healthcare
4	preparedness capabilities which are in line
5	with the public health capabilities so, CDC
6	in 2011 released 15 public health
7	capabilities, and then we, subsequently
8	ASPR, "we" but this was a consensus-driven
9	capabilities document that was released in the
10	beginning of this year that looked and spoke
11	to eight specific capabilities.
12	I think we will have probably
13	significant interest in two of the
14	capabilities. And then, I am going to jump
15	over to what we are going to discuss here
16	today. It is in and around performance
17	measures.
18	The eight capabilities are through
19	coalition development, emergency operations
20	center, the ability to mobilize volunteers, so
21	a volunteer capability, a fatality-management
22	capability, and what I think will have

	Page 47
1	importance here will be the medical surge
2	capability.
3	So, there are eight capabilities,
4	and I certainly didn't list them all, that we,
5	then, had to think about how are we planning
6	on measuring. One of the challenges we face
7	in preparedness is, when we stand in front of
8	the press or stand in front of the Hill with
9	regard to testimony, is: are we better
10	prepared than we were before?
11	In an effort to try to establish
12	some sort of markers and marks on the wall
13	with regard to preparedness, there were
14	measures put forth for each capability. The
15	first capability is community or coalition
16	development. And previously, our measures had
17	spoken to, do you have plans in place? Do you
18	have people, and you count noses, who come to
19	the table?
20	But, unfortunately, we found that
21	that really does not establish a true
22	performance measure because counting how many

	Page 48
1	people are at the table or counting how people
2	were involved in the exercise does not
3	necessarily translate into better
4	preparedness.
5	What we found was that, actually,
6	established some better preparedness were
7	formalized coalitions that allowed for IAAs,
8	MOUs, charters, business development plans, in
9	conjunction with different healthcare
10	entities. Let me just speak to healthcare
11	entities for one moment.
12	When I speak to coalitions and
13	healthcare entities, the Hospital Preparedness
14	Program is misnamed. The Hospital
15	Preparedness Program provides monies to
16	awardees, then gives monies to coalitions.
17	Coalitions are subsequently defined as
18	hospitals, long-term care, primary care, EMS,
19	emergency management, public health.
20	All of that nexus, that core
21	group, is what we define as a healthcare
22	coalition. And certainly, within this

	Page 49
1	document, there are others defined.
2	So, now you understand where we
3	are with regard to coalitions and the
4	development of coalitions. And there are some
5	synergies certainly within the Affordable Care
6	Act and the Accountable Care Organizations
7	that are standing up. We are looking at how
8	to blend our efforts with regard to what the
9	ACOs are going to be doing, and looking to
10	leverage some of the efforts with regard to
11	that work.
12	However, in its simplest form, we
13	are trying to put money forth to have partners
14	come together to work better to effect a
15	response. And when we describe "partners," we
16	are only not describing hospitals; we are
17	describing other healthcare partners,
18	truthfully, a health community, to come to
19	bring to bear to effect a response.
20	So, that is the unit of measure.
21	The next step, and I think where we have
22	interest in this discussion, is really a

	Page 50
1	paradigm shift for what we describe as medical
2	surge today.
3	Classically, medical surge has the
4	pick a percentage 20 percent, it is
5	approximately 20 percent above whatever the
б	typical capacity is of what previously were
7	hospitals. And we have changed that paradigm.
8	We have done that for specific reasons.
9	The first is we had to put a
10	performance measure out there that allowed it
11	to be independent of an evolving healthcare
12	system. As our healthcare system changes and
13	adapts and becomes more modern and evolves,
14	the measure we put out there we hope lasts for
15	the next five years. That is the grant cycle,
16	and that is the high-water mark on the wall
17	that our awardees look to as to actually
18	establish success and define success.
19	The second was we had to allow
20	these capabilities, we had to approach it from
21	a sustainable model. And this is irrespective
22	of finances. This echos the door-to-balloon

time of 90 minutes, in essence. 1 It is 2 irrespective of size. It is irrespective of It is irrespective of capabilities 3 scope. 4 that you have. You know your end goal. You 5 know your deliverable, and that is what the 6 expectations are for the Hospital Preparedness 7 Program.

Page 51

8 So, let me just speak to what that 9 performance measure is and how the paradigm 10 has shifted from the 20 percent above on a system of healthcare that is trying to get 11 12 leaner and meaner every day with just-in-time supply chains and staffing that is trying to 13 14 just right-size-fit the number of patients we 15 have within facilities. So, there is no new staff that are waiting to receive patients. 16 17 There is no new space that is awaiting 18 patients to just be received. And a just-in-19 time, as-lean-as-it-can-get healthcare 20 delivery system, which is what the Hospital 21 Preparedness Program stands on, this 22 performance measure integrates within that.

	Page 52
1	So, what we are describing is the
2	ability, and it is evidence-based. And I am
3	forgetting that part. It is evidenced, and it
4	is operationally-tenable, this new performance
5	measure.
6	We call it IBA, Immediate Bed
7	Availability. But, truthfully, it is
8	immediate care availability. It is the
9	ability to accept 20-percent higher acuity
10	patients within your facility within four
11	hours.
12	Now that is irrespective of the
13	disaster. That is all-comers. So, the MI
14	that just hit the door, vice, the explosive
15	event that just occurred. Notice I did not
16	caveat that. It is all-comers presenting to
17	your facility pardon me to your
18	coalition. That is the unit of measure. You
19	have to have the ability to accept 20-percent
20	higher acuity patients within four hours. We
21	build it into the system. The tagline is:
22	this is medical surge with no new staff, no

	Page 53
1	new stuff, and no new space.
2	The evidence base on which we
3	stand, Gab Kelen out of Hopkins, a 2006 Lancet
4	article talked about reverse triage and talked
5	about the ability of our healthcare system to
6	be able to accept higher-acuity patients with
7	no adverse outcomes.
8	So, standing on that evidence
9	base, we then shifted to an operational
10	construct. What is the average discharge rate
11	currently within our healthcare systems today?
12	Our average length of stay is approximately
13	4.9 days, plus or minus. You can figure that
14	out.
15	So, we average slightly less than
16	approximately 20-percent discharge per day;
17	again, slightly less than that because we know
18	that there are more. But if we have a 4.9
19	length of stay, then we can kind of start to
20	think that this is an operationally-tenable
21	goal. And then, we had to put a mark on the
22	wall within four hours.

1	
	Page 54
1	Without four hours is a large
2	stretch, and we think about three pillars to
3	be able to establish our coalitions need to
4	be able to establish this performance measure.
5	The first is the ability to throughout the
6	time assess acuity. Now that could be done
7	from an evidence-based standpoint or the truth
8	is, when the internist on the floor writes
9	"Out of bed ad lib" or "Tolerate PO ad lib,"
10	that is a potential triage, surrogate triage
11	marker, because those patients or at least
12	that internist is assessing that they have the
13	ability to walk around on their own and they
14	have the ability to tolerate PO.
15	So, whether or not this has an
16	evidence base and we can certainly cite
17	different types of triage methodologies, and
18	Dr. Hunt could speak to this much more than I
19	or operationally and with a logic model
20	behind it, but it is the ability to assess
21	through time the acuity throughout their
22	healthcare coalition.

1	Page 55
1	Second, the second pillar of this
2	is the ability to rapidly offload patients.
3	So, just as we would do onsite in a disaster,
4	we would ask, "Anybody who can stand up and
5	hear my voice, please move over to Mr.
6	Gabriel. He will be glad to help you with any
7	of your concerns or issues." And all those
8	walking-wounded would then get up and move
9	over to providers.
10	The higher-acuity patients would,
11	obviously, then, need to be subsequently
12	triaged. We are kind of, in essence, doing
13	the same thing and providing the same
14	principles that we do within responding to an
15	event, but within a healthcare coalition.
16	And that healthcare coalition
17	then, if you think about it, this is not done
18	ad hoc. This is done, when you sign and you
19	come on and you are admitted to our facility,
20	you are signing paperwork. Your first piece
21	of paperwork is a HIPAA form. Your second is
22	a "you are going to pay us" form.

	Page 56
1	The third is you are part of a
2	National Healthcare Coalition. In the event
3	of a disaster and that you are deemed a lower-
4	acuity patient, we will make appropriate plan
5	of care for you as an outpatient, so that your
6	outcome is the same, or as close to the same
7	as it can be.
8	And if you need to be retriaged,
9	then this is a constant flow and back into the
10	system. So, triage is not static, as we all
11	know who have done operations. This is a
12	continuous flow through the event.
13	Then, during the event that the
14	trigger goes off and you hit the button and we
15	have to execute, those patients already are
16	understanding that they are deemed lower
17	acuity. We have rapid discharge plans in
18	place, and within four hours a Greyhound bus
19	is pulling up, and that ankle fracture you
20	were planning on pinning tomorrow doesn't get
21	pinned, goes home with crutches and a splint,
22	and gets pinned in a week. Or that soft-call

	Page 57
1	chest-pain ruleout that is awaiting the stress
2	gets discharged and gets his stress in a week.
3	And they get on their Greyhound bus or they
4	have their family members coming to the door,
5	and they get offloaded rapidly.
6	The third pillar of the execution
7	of this performance measure is the ability to
8	accept higher-acuity patients to lower-acuity
9	beds. This is a difficult road to walk.
10	However, it is consistent with what we saw the
11	Institute of Medicine speak to with regard to
12	crisis standards of care. We move from
13	conventional delivery of care today to
14	contingency, to crisis.
15	IBA is the ability to execute
16	contingency care and to give the healthcare
17	coalition greater depth to provide appropriate
18	levels of care before they have to shift to
19	crisis standards of care. So, those three
20	pillars are what is needed to execute IBA.
21	That is the performance measure
22	that the Hospital Preparedness Program is

	Page 58
1	going to be focusing on over the next five
2	years. It has an evidence foundation. It is
3	operationally-tenable. And we think that this
4	will be achievable, and we hope that we can
5	stand 200 coalitions across the nation or 400
б	coalitions across the nation, with 1,000 beds
7	per coalition, that can get the job done
8	within four hours.
9	That is establishing local
10	resilience, regional resilience, and national
11	resilience. And that is the target we are
12	trying to achieve.
13	I would be glad to take any
14	questions.
15	CO-CHAIR PITTS: I lost you a
16	little bit at one point. What are the three
17	pillars again
18	MEMBER MARCOZZI: Sure.
19	CO-CHAIR PITTS: for my
20	concrete thinking.
21	MEMBER MARCOZZI: The ability to
22	continuously monitor care across your

1	
	Page 59
1	coalition, that is the first goal. Monitor
2	acuity, not care really, acuity. The second
3	is the ability to rapidly offload, and the
4	third is the ability to rapidly onload. In
5	short, those are the three pillars.
6	Jay?
7	MEMBER SCHUUR: How are you
8	defining coalitions? And is it sort of self-
9	defined? Can a group of hospitals that may be
10	an ACO or private group do that? Is it going
11	to be a governmental function?
12	MEMBER MARCOZZI: A great
13	question, Jay. We don't have any defined
14	we have no definition with regard to
15	coalitions. We know what the measures are.
16	We know what the partners must be. But, as
17	the awardee, we tell the awardee we want a
18	hard-boiled egg, but we don't tell them how to
19	boil the egg.
20	So, we know that they have
21	deliverables and expectations. We don't tell
22	them you know, some places may have five

Page 601long-term care facilities involved. Some may2have one. Some may have seven primary care.3Some have five.4And we are seeing different5coalitions are established per our awardees.6Fifty states are awardees. For instance, we7can't project that. One of our awardees is8Guam. Well, defining a coalition for Suam is9much different than the coalition for New York10City. So, you have to be very careful what11the feds project out on what defining12coalition is.13Will it blend with ACOs? We are14hopeful it does, Jay. I think it needs to.15MEMBER ADIRIM: Thank you. I16wasn't sure how you were identifying people to17speak.18This was very interesting. I19think you brought up a good number of concepts20that are helpful in moving forward and looking21at how to measure preparedness or integrate22preparedness into the work with regionalized		
2       have one. Some may have seven primary care.         3       Some have five.         4       And we are seeing different         5       coalitions are established per our awardees.         6       Fifty states are awardees. For instance, we         7       can't project that. One of our awardees is         8       Guam. Well, defining a coalition for Guam is         9       much different than the coalition for New York         10       City. So, you have to be very careful what         11       the feds project out on what defining         12       coalition is.         13       Will it blend with ACOs? We are         14       hopeful it does, Jay. I think it needs to.         15       MEMBER ADIRIM: Thank you. I         16       wasn't sure how you were identifying people to         17       speak.         18       This was very interesting. I         19       think you brought up a good number of concepts         20       that are helpful in moving forward and looking         21       at how to measure preparedness or integrate		Page 60
3       Some have five.         4       And we are seeing different         5       coalitions are established per our awardees.         6       Fifty states are awardees. For instance, we         7       can't project that. One of our awardees is         8       Guam. Well, defining a coalition for Guam is         9       much different than the coalition for New York         10       City. So, you have to be very careful what         11       the feds project out on what defining         12       coalition is.         13       Will it blend with ACOs? We are         14       hopeful it does, Jay. I think it needs to.         15       MEMBER ADIRIM: Thank you. I         16       wasn't sure how you were identifying people to         17       speak.         18       This was very interesting. I         19       think you brought up a good number of concepts         20       that are helpful in moving forward and looking         21       at how to measure preparedness or integrate	1	long-term care facilities involved. Some may
4And we are seeing different5coalitions are established per our awardees.6Fifty states are awardees. For instance, we7can't project that. One of our awardees is8Guam. Well, defining a coalition for Guam is9much different than the coalition for New York10City. So, you have to be very careful what11the feds project out on what defining12coalition is.13Will it blend with ACOS? We are14hopeful it does, Jay. I think it needs to.15MEMBER ADIRIM: Thank you. I16wasn't sure how you were identifying people to17speak.18This was very interesting. I19think you brought up a good number of concepts20that are helpful in moving forward and looking21at how to measure preparedness or integrate	2	have one. Some may have seven primary care.
<ul> <li>coalitions are established per our awardees.</li> <li>Fifty states are awardees. For instance, we</li> <li>can't project that. One of our awardees is</li> <li>Guam. Well, defining a coalition for Guam is</li> <li>much different than the coalition for New York</li> <li>City. So, you have to be very careful what</li> <li>the feds project out on what defining</li> <li>coalition is.</li> <li>Will it blend with ACOs? We are</li> <li>hopeful it does, Jay. I think it needs to.</li> <li>MEMBER ADIRIM: Thank you. I</li> <li>wasn't sure how you were identifying people to</li> <li>speak.</li> <li>This was very interesting. I</li> <li>think you brought up a good number of concepts</li> <li>that are helpful in moving forward and looking</li> <li>at how to measure preparedness or integrate</li> </ul>	3	Some have five.
<ul> <li>Fifty states are awardees. For instance, we</li> <li>can't project that. One of our awardees is</li> <li>Guam. Well, defining a coalition for Guam is</li> <li>much different than the coalition for New York</li> <li>City. So, you have to be very careful what</li> <li>the feds project out on what defining</li> <li>coalition is.</li> <li>Will it blend with ACOs? We are</li> <li>hopeful it does, Jay. I think it needs to.</li> <li>MEMBER ADIRIM: Thank you. I</li> <li>wasn't sure how you were identifying people to</li> <li>speak.</li> <li>This was very interesting. I</li> <li>think you brought up a good number of concepts</li> <li>that are helpful in moving forward and looking</li> <li>at how to measure preparedness or integrate</li> </ul>	4	And we are seeing different
<pre>can't project that. One of our awardees is Guam. Well, defining a coalition for Guam is much different than the coalition for New York City. So, you have to be very careful what the feds project out on what defining coalition is. Guaming Mill it blend with ACOS? We are hopeful it does, Jay. I think it needs to. MEMBER ADIRIM: Thank you. I wasn't sure how you were identifying people to speak. This was very interesting. I think you brought up a good number of concepts that are helpful in moving forward and looking at how to measure preparedness or integrate</pre>	5	coalitions are established per our awardees.
<ul> <li>8 Guam. Well, defining a coalition for Guam is</li> <li>9 much different than the coalition for New York</li> <li>10 City. So, you have to be very careful what</li> <li>11 the feds project out on what defining</li> <li>12 coalition is.</li> <li>13 Will it blend with ACOs? We are</li> <li>14 hopeful it does, Jay. I think it needs to.</li> <li>15 MEMBER ADIRIM: Thank you. I</li> <li>16 wasn't sure how you were identifying people to</li> <li>17 speak.</li> <li>18 This was very interesting. I</li> <li>19 think you brought up a good number of concepts</li> <li>20 that are helpful in moving forward and looking</li> <li>21 at how to measure preparedness or integrate</li> </ul>	6	Fifty states are awardees. For instance, we
9 much different than the coalition for New York City. So, you have to be very careful what the feds project out on what defining coalition is. 13 Will it blend with ACOS? We are hopeful it does, Jay. I think it needs to. 15 MEMBER ADIRIM: Thank you. I wasn't sure how you were identifying people to speak. 18 This was very interesting. I 19 think you brought up a good number of concepts that are helpful in moving forward and looking at how to measure preparedness or integrate	7	can't project that. One of our awardees is
10 City. So, you have to be very careful what 11 the feds project out on what defining 12 coalition is. 13 Will it blend with ACOs? We are 14 hopeful it does, Jay. I think it needs to. 15 MEMBER ADIRIM: Thank you. I 16 wasn't sure how you were identifying people to 17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 14 that are helpful in moving forward and looking 15 at how to measure preparedness or integrate	8	Guam. Well, defining a coalition for Guam is
11 the feds project out on what defining 12 coalition is. 13 Will it blend with ACOs? We are 14 hopeful it does, Jay. I think it needs to. 15 MEMBER ADIRIM: Thank you. I 16 wasn't sure how you were identifying people to 17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 19 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	9	much different than the coalition for New York
<pre>12 coalition is. 13 Will it blend with ACOs? We are 14 hopeful it does, Jay. I think it needs to. 15 MEMBER ADIRIM: Thank you. I 16 wasn't sure how you were identifying people to 17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate</pre>	10	City. So, you have to be very careful what
13 Will it blend with ACOs? We are 14 hopeful it does, Jay. I think it needs to. 15 MEMBER ADIRIM: Thank you. I 16 wasn't sure how you were identifying people to 17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	11	the feds project out on what defining
14 hopeful it does, Jay. I think it needs to. 15 MEMBER ADIRIM: Thank you. I 16 wasn't sure how you were identifying people to 17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	12	coalition is.
MEMBER ADIRIM: Thank you. I Wasn't sure how you were identifying people to speak. This was very interesting. I think you brought up a good number of concepts that are helpful in moving forward and looking at how to measure preparedness or integrate	13	Will it blend with ACOs? We are
16 wasn't sure how you were identifying people to 17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	14	hopeful it does, Jay. I think it needs to.
17 speak. 18 This was very interesting. I 19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	15	MEMBER ADIRIM: Thank you. I
18 This was very interesting. I 19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	16	wasn't sure how you were identifying people to
19 think you brought up a good number of concepts 20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	17	speak.
20 that are helpful in moving forward and looking 21 at how to measure preparedness or integrate	18	This was very interesting. I
21 at how to measure preparedness or integrate	19	think you brought up a good number of concepts
	20	that are helpful in moving forward and looking
22 preparedness into the work with regionalized	21	at how to measure preparedness or integrate
	22	preparedness into the work with regionalized

Page 61

emergency care.

1

2	I think some of the concepts that
3	I am hearing you are talking about that could
4	be a challenge in measuring these things is
5	that most of what you are describing really is
6	process. You stated that there was evidence
7	for your particular measure, the 20 percent of
8	increased bed availability. I think, though,
9	I would like to think more about outcomes.
10	Like what are you trying to accomplish? That
11	would be something that I think would be
12	interesting to look at.
13	The other thing, too, is whether
14	or not that measure that you are developing
15	can be tested, which is a challenge, of
16	course, in preparedness because, you know,
17	disasters don't happen every day. So, those
18	are a couple of things that I thought you may
19	want to think about.
20	And the other thing, too, is I
21	heard you talk about performance measures.
22	So, I think a little bit of clarity on

performance measures versus quality measures
 would be useful as well. I mean, I have other
 comments, but those were some of the main
 things that kind of came to mind as you were
 speaking.

Yes, I tell you, 6 MEMBER MARCOZZI: 7 you hit the nail on the head with regard to 8 the ability to test this. We are looking 9 right now at exercising what IBA is and how to 10 do it. Actually, this is the first year out of the gates. So, everyone needs to know this 11 12 is a crawl, walk, run approach. If we deluge our awardees too much too fast, the cart is 13 broken and the wheels come off the wagon. 14 15 So, this is incremental and 16 staged. Everyone is trying to figure out 17 their coalitions look like and how to execute 18 those performance measures. 19 So, with regard to exercises, we 20 have some mandatory -- certainly, the Joint 21 Commission has their mandatory exercise and 22 drills, requirements, and we have our own.

> Neal R. Gross & Co., Inc. 202-234-4433

## Page 62

	Page 63
1	Our exercises are actually large-scale, but we
2	have not been able yet to test, and we plan on
3	testing, IBA as it evolves.
4	It is integrated within the daily
5	delivery of healthcare today. It is process-
6	oriented and not as outcome-oriented as we
7	would love to drive to eventually an outcome-
8	oriented approach where we look at the effect
9	of mortality and morbidity on this on this
10	process that we are trying to put in place.
11	But, in essence, the ability to care for
12	higher-acuity patients we hope, then,
13	translates into better outcomes for those
14	affected by disasters.
15	Brendan?
16	MEMBER CARR: I have two
17	questions. The first is I am wondering about
18	white space. I am wondering if there is
19	anything as part of the HPP that suggests to
20	the country that there should not be a lot of
21	space that is left without membership in the
22	coalition.

	Page 64
1	And the second is, if you can give
2	it, your opinion about whether or not, as
3	these develop, if they become appropriate
4	denominators for boarding. You know, one of
5	your pieces here, piece two or piece three is
6	the ability to onboard patients. That is
7	dependent upon whether or not you just
8	effectively reverse triage in pillar two. But
9	is piece three tied to boarding measures at a
10	coalition level, at a regional level?
11	MEMBER MARCOZZI: Our hope is
12	and is really a grant discussion but our
13	hope is, unfortunately, we have a \$350 million
14	program and a \$2.5 trillion industry. So, we
15	have to figure out how to do this very smartly
16	and most economically.
17	One of the things we are trying to
18	if you spread that \$350 million out too
19	diffusely, then we actually don't have the
20	ability to move the needle and affect an
21	outcome or affect a process. In essence, if
22	we spread it out, and some of our awardees are

1 considering doing this and now changing, had 2 previously spread it out to every hospital 3 within their state. That is about \$60,000 per 4 hospital. If the average budget is about \$200 5 million, plus or minus, \$60,000 is really not 6 going to be able to move the needle too much.

7 This is a grant discussion, but 8 one of the things we are thinking about is our awardees should think about consolidating for 9 10 effect and trying to address a white-space question is I am all right if we have more 11 12 white space. What I am not all right with is our awardees and our coalitions can't get the 13 14 job. So, I would much rather stand on 100 or 15 200 coalitions that can get the job with done with slightly more white space and maybe some 16 17 hospitals that fall out because they are not 18 as engaged, and they are not prepared. This 19 is not something they would like to be 20 involved in. 21 That said, any hospital can be

22 involved with a coalition. They just may not

Neal R. Gross & Co., Inc. 202-234-4433

## Page 65

	Page 6
1	be getting the funding to be able to support.
2	We are looking to try to get funds to each
3	coalition, \$1.5, \$1.8, \$2.1 million, so we can
4	affect the ability for them to execute the
5	capabilities in the performance measures. So,
6	consolidating for effect is something we are
7	looking at.
8	With regard to white space, one of
9	the discussions that we have had is we are
10	trying to look at covering about 80 percent of
11	the nation with regard to our grants. That is
12	our hope. That is what we are trying to
13	achieve. And hopefully, we are trying to get
14	those measures and get our coalition input in.
15	What is your geographic region? Who are your
16	partners? Who do you cover? What is your
17	population size that you have the breadth to
18	be able to affect? And with that data coming
19	in, we will at least have some idea on how
20	close we are to the 80 percent and whether or
21	not we need to revector.
22	The second question was

6

	Page 67
1	MEMBER CARR: The second question
2	is about synergy with this initiative, synergy
3	with boarding.
4	MEMBER MARCOZZI: Oh, yes,
5	boarding. Sorry.
6	MEMBER CARR: You know, the
7	synergy to add your \$350 million to someday a
8	metric that pushes coalitions to think
9	strategically about their capacity.
10	MEMBER MARCOZZI: So, in truth, I
11	am heartened at the fact that we are having
12	this discussion today and trying to bridge and
13	weave. Truthfully, what we need to do id we
14	need to weave a thread of healthcare pardon
15	me we need to weave a thread of
16	preparedness within healthcare. That has to
17	be done. Preparedness can't stand alone.
18	The opportunity to have
19	discussions on crowding and preparedness need
20	to happen. The truth is, Brendan, to that
21	end, our measures did not specifically target
22	and think about crowding as much because, if

	Page 68
1	there is crowding tomorrow and we address some
2	of the issues and it gets better, still our
3	mark on the wall is you can accept 20 percent
4	irrespective of places that have the ability
5	to accept and don't have a crowding issue and
6	places that do. So, we try to be independent
7	of operational constructs and crowding. So,
8	that was the prism we looked through when we
9	tried to establish the measure.
10	CO-CHAIR PITTS: Arjun?
11	MEMBER VENKATASH: I guess my
12	question kind of gets back to a little bit of
13	what Brendan was just asking about white
14	space, in a sense that I think there are two
15	ways to think about it.
16	One is in terms of what areas are
17	just not covered by coalitions. But what I am
18	thinking about is, when we think about
19	performance measure, validity. The question
20	I would have is, when a coalition comes
21	together locally, if it doesn't include all
22	the relevant players within that locality, you

	Page 69
1	could see a situation where an IBA-type
2	measure looks really good for that coalition,
3	but misses the mark because they just haven't
4	included all the relevant hospitals, long-term
5	care facilities, whatever else it is.
6	So, is there any capture within
7	the system to ensure that a coalition actually
8	has adequate coverage within however they
9	define that locality, be it state, county,
10	whatever, local?
11	MEMBER MARCOZZI: I don't know if
12	I have my arms around your question. You are
13	describing a coalition let me just see if
14	I can break it down you are describing a
15	coalition, then, for a large city that is only
16	affecting 20 percent of the city, and the
17	other 80 percent is left in this white space,
18	in essence? That is what you are describing?
19	So, you are saying that they could establish
20	the IBA, but not actually have the ability to
21	respond to their large-scale area?
22	MEMBER VENKATASH: Right. So,

1	
	Page 70
1	they could form it. They could report
2	performance. We could do an exercise, and it
3	would look great, right? They would show that
4	they are able to offload/onload both, meet all
5	three pillars for their system or the
6	coalition as it is defined, but it misses the
7	target because the general population is
8	missed.
9	MEMBER MARCOZZI: Yes, I follow
10	you. I have to tell you, it is interesting.
11	We have not had that posed at all, only
12	because we have come from the construct that
13	100 percent of our population is covered by
14	the Hospital Preparedness Program. We haven't
15	shifted that pendulum way right.
16	Now it may, with coalitions, and
17	that would be something we might have to
18	revise this measure to say we revised the
19	coalition measure, the first capability, that
20	your coalition needs to cover 80 percent or
21	each coalition within your awardee's region
22	has to cover 80 percent of your population.

	Page 71
1	But, right now, I will be honest
2	with you, there is blanket cover. The
3	Hospital Preparedness Program is diffuse and
4	touches the entire nation. We think that that
5	may be depending on which way we have look,
6	because we have paper tigers out there. A guy
7	coming into a meeting and then leaving, that
8	is not prepared; that is just a guy coming to
9	a meeting, yes.
10	CO-CHAIR PITTS: AnnMarie?
11	MEMBER PAPA: Thank you.
12	At the risk of being shortsighted,
13	and just again to I guess dovetail onto what
14	you said, Arjun, I wonder as I look around the
15	room do we have all the right players in the
16	room. We can talk about this ability to 20
17	percent uptake, and to take all of this
18	additional surge, but, again, we always are
19	looking at the mirror at the emergency
20	department, the one that really needs to
21	manage this.
22	What we have to do is look at how

Page 72 can we coordinate with our inpatient partners 1 2 and our outpatient partners and the ability for us to offload those patients that we need 3 to offload. So, how do we really coordinate 4 5 that and then what is that 20 percent that you are talking about, that inpatient offload, 6 7 that outpatient coming in? 8 Because, yes, the coalition would Great. We'll do it." What we end 9 say, "Yes. 10 up, having to have people in bunk beds in the 11 emergency department. 12 So, I just wonder if having some 13 inpatient partners and processes, even some 14 type of research or measure that you partner 15 with an inpatient unit and that is your babe, 16 so to speak. 17 MEMBER MARCOZZI: Yes, so in the 18 interest of transparency, I am an ER doc. So, 19 I get it. I hear you. And I would always be 20 challenged when I would have door patients 21 boarding, and I would say, "Well, this is not 22 a bolus of patients to the ER. This is a
	Page 73
1	bolus of patients to the hospital." For some
2	reason, if you keep those doors closed, that
3	conversation typically does not happen.
4	So, this effort and this measure
5	is actually to affect the entire actually,
6	the truth is I have actually had discussions
7	with our critical-care colleagues around this.
8	So, what is the MICU's and what is what is the
9	SICU's perspective on this measure?
10	So, the guy who we are planning on
11	weaning from the vent, and he has been on the
12	vent for two weeks and is stable, and we have
13	got to start to wean. And all of a sudden, we
14	have an event. Well, in their MICU that
15	patient is potentially is a lower-acuity
16	patient. So, then, that patient potentially
17	you keep on the vent; you just keep sedated,
18	move to a floor, so that the nurses can manage
19	that. So that, then, you can accept higher-
20	acuity patients.
21	So, the 20 percent is not just for
22	the emergency department. It is across the
	Neel P. Cross & Co. Inc.

Page 74 spectrum of care. Now one key thing about the 1 2 20 percent, which this may be a wordy discussion and not for all those in the room, 3 but if a coalition has five long-term care 4 5 facilities at 200 beds per, and you have a 6 couple of hospitals, the measure for the 20 7 percent is not for the entirety of the number of beds within their coalition. 8 It is the number of acute beds within their coalition. 9 10 So, it is not every long-term care, the 200 beds within every long-term facility. Their 11 12 measure to get from an operationally-tenable goal is only for their acute care beds. 13 And 14 that is different. We had to let our awardees 15 know that, that that was the expectation. But, to address it, it is not only 16 and the intent is not only to be for the 17 18 emergency department. It is to be systemwide. 19 CO-CHAIR PITTS: Okay. Anthony, 20 actually you were next. And then, Melissa. 21 MEMBER MacINTYRE: Thanks. 22 Dave, you bring up a lot of points

	Page 75
1	sort of all within 10 minutes. For me, it is
2	kind of confusing the picture in relation to
3	this project.
4	I think several of the points you
5	made bring up several questions for the
6	project managers. One is David is obviously
7	focused at the healthcare coalition level.
8	What is you unit of measure? Where are these
9	measures going to be applied? I think that
10	should be very carefully articulated because
11	it could be at the healthcare coalition level,
12	as I read it in your paper. It could be at
13	the individual facility level. And quite
14	clearly, there are going to be different
15	measures, I think, we are looking at as you
16	move forward.
17	I think another important thing to
18	articulate and I think your paper touches
19	on it is the extreme difference between
20	preparedness and response. In fact, it is so
21	important, I would recommend you change the
22	title. It isn't just about preparedness; it

	Page 76
1	is about preparedness and response. And you
2	do cite how it is much more difficult to
3	develop measures for a response, but we still
4	need to get there to have measures for that as
5	well.
6	The third thing is, when we look
7	at response, much of the conversation is
8	dominated on surge. Quite clearly, that is an
9	important thing for any healthcare system to
10	be able to do. But I would encourage you to
11	look at some other work out there, including
12	some that the Veterans' Administration has
13	done, where response and surge surge
14	actually takes sort of a tertiary priority to
15	two other things, the first being safety and
16	security. If you can't keep your facility
17	safe and secure, then you can't surge.
18	And the secondary sort of priority
19	is continuity of operations. If you can't
20	keep your operations going, then you can't
21	surge.
22	So, there is sort of a tiered

i	
	Page 77
1	approach to this: safety/security, continuity
2	of the operations, and then surge. And I
3	think some of that might help shape this
4	framework.
5	MEMBER McCARTHY: I think I was
6	thinking on a very similar vein because I was
7	going to ask about these capabilities needing
8	to be prioritized. Because you can't have any
9	medical surge until you have a coalition
10	developed, and I am not sure we do have strong
11	coalitions developed. So, it seems to me that
12	you do have to kind of prioritize and start
13	there, and then increase the competency.
14	MEMBER MARCOZZI: Yes, that is
15	exactly what we are seeing. We are at step
16	one out of the gates. We are seeing forming
17	coalitions currently. Some places, I will be
18	honest with you, are already well-formed and
19	mature coalitions. In fact, Virginia already
20	has a very well-formed coalition. Seattle has
21	a very well-formed coalition. So, they are
22	actually moving beyond and now trying to

Page 78 accomplish some of the other capabilities in 1 2 and around medical surge. But we go from literally some of 3 our awardees have no coalitions to some of our 4 5 awardees are trying to actually to be the exemplary, the A-plus students. 6 7 CO-CHAIR PITTS: Wes? 8 MEMBER FIELDS: I am really 9 intrigued in a couple of ways. One of the few 10 good things about a disaster response is that it is one of the few times in a metropolitan 11 12 service area where market forces are 13 suspended. 14 And one of the interesting corollaries on the public safety side is it is 15 also one of the few times when Medicare-16 provider hospitals see EMTALA suspended. 17 And thirdly, a lot of the surge 18 19 capacity you might need within an area of 20 impact, I am concerned, as Arjun has implied, 21 might be in the part of town that is not part 22 of a coalition.

	Page 79
1	So, I am kind of wondering if the
2	best investment for the resources you have for
3	this is to look at a different set of rules of
4	engagement for Medicare-participating
5	hospitals in these scenarios and essentially
6	a different kind of EMTALA that wasn't focused
7	on the needs of the patient, but of a
8	population that was in harm's way.
9	Because it may be that that is
10	what you need to begin to try to create and
11	measure and promote, is the ability of all
12	providers within a service area to respond and
13	how that fits together.
14	I think there are some attractive
15	alignment between EMS agencies and hospital
16	systems in highly-consolidated markets like
17	Seattle that might make that doable.
18	So, speaking in favor of using the
19	resources to think about what all providers
20	within an area, whether it was rural or metro,
21	how they would collectively respond. I think
22	that could be useful.

	Page 80
1	CO-CHAIR PITTS: Okay. I think we
2	can take a break here and proceed to the next
3	step, which is Mike Stoto, to give a
4	presentation. Okay? Am I missing something?
5	Ellen? I'm sorry. Ellen, I
6	didn't mean to cut you out.
7	MEMBER WEBER: Maybe this is
8	stating something people are thinking about or
9	inadvertently saying, but it seems to me that
10	this is a totally scalable idea. And I think
11	Brendan was kind of getting at this earlier,
12	which is, why not have a 3-percent or a 5-
13	percent, and could that be at the hospital
14	level? So that, in terms of getting together
15	our two ideas about crowding, boarding, and
16	preparedness because, first of all, you
17	could potentially measure that for real
18	because there is not going to be a disaster,
19	but there are going to be 3-percent, 5-percent
20	surges. So, does the hospital have a way to
21	deal with that?
22	It is kind of one of the things I

	Page 81
1	think we need in this report, is how does this
2	connect? How does your ability to handle a
3	daily surge connect to your ability to handle
4	a disaster? Although I think that there could
5	be complete separations on that, I think the
6	adaptability, the accountability, the
7	flexibility of any organization to be able to
8	do what you are talking about at a lower scale
9	would at least start those conversations
10	between the inpatient, the outpatient, and
11	between perhaps a neighboring hospital when
12	you have no more beds, the primary care
13	clinics when you need to offload some of the
14	lesser acute patients. So, it does seem to me
15	that everything you are talking about would
16	totally apply to the crowding issue.
17	MEMBER MARCOZZI: Can I jump off
18	of that? Sorry.
19	CO-CHAIR PITTS: Sure. Yes, go
20	ahead.
21	MEMBER MARCOZZI: So, yes, I think
22	that, again, I am hopeful that we can actually

	Page 82
1	jump right off of that and try to figure out
2	how we could blend our efforts here with the
3	performance measures that we are trying to
4	shoot for. So, that is great feedback.
5	The second thing I would talk
6	about from EMTALA's standpoint for one second.
7	So, I mean, here are the triggers for EMTALA,
8	right? So, the hospital has to declare a
9	disaster. Then, the Secretary of HHS needs to
10	declare a public health emergency. Then, the
11	President of the United States need to declare
12	a Stafford Act to execute an 1135 waiver,
13	which is what you are speaking about, about
14	patient dispersal and EMTALA waivers. So, you
15	are talking about high bars.
16	Now, and again, transparency, that
17	is an "and," right, public health emergency
18	and Stafford Act. There is actually floating
19	out there a law that actually makes it an
20	"or". So, even if we make it an "or," public
21	health emergency or Stafford Act, we still
22	have a high measure. The Secretary still has

Page 83 1 to come in front of everyone and say, "We are 2 declaring a public health emergency." And she will look to the Assistant Secretary for 3 4 Preparedness Response for that advice on an 5 event. But this speaks to what I tried to 6 7 hint at with regard to local, regional, and 8 national resiliency. But I think that this 9 measure speaks and tries to accomplish, that 10 if we have a 50-car pileup and there are 100 patients presenting, the region has the 11 12 ability to respond, and it creates regional resilience. But the Secretary of HHS does not 13 14 have to stand up and say, "We are declaring a 15 public health emergency to be able to execute IBA." 16 17 Now IBA allows -- pardon me --PHEs and 1135 waivers allow the dispersal of 18 19 those patients appropriately to affect that 20 care, and EMTALA and allowing those 1135 21 waivers, if they give bolus to the closest 22 facility, which we saw certainly in Madrid,

	Page 84
1	events like that, to be able to push those
2	patients back out to other facilities if we
3	allowed those 1135 waivers.
4	But the truth is IBA works if an
5	1135 waiver is accomplished or even if it is
б	not accomplished. So, it is integral within
7	the system, and it can be used in either way.
8	Thanks for the 1135 comment. I am
9	all about 1135 waivers.
10	CO-CHAIR PITTS: We can do a
11	couple of short things.
12	MEMBER ADIRIM: I just didn't want
13	Dr. Weber's point to be lost because I think
14	it is really probably one of the best points
15	that was made, that a way to integrate these
16	concepts into the work that is being done
17	here, I would imagine would be to develop
18	measures that could help you measure whether
19	or not you are prepared, but also are related
20	to other everyday measures. So, I just
21	thought that her point was right on target.
22	CO-CHAIR PITTS: Sally, do you

	Page 85
1	want to get your fair share?
2	MEMBER PHILLIPS: Yes, I mean, it
3	will come up again. I think one of the
4	things, as we are trying to develop this sort
5	of a measure complex is, having worked in this
6	area for a long time, we are sort of leaving
7	the individual clinician out of this. As we
8	discussed in many ways, these are performance
9	measures for a program and for a system. But
10	one of the things is we are potentially asking
11	them to go in a way that is contrary to a lot
12	of the quality measures we have developed as
13	far as quality of care and ED delivery and
14	timing.
15	When we talk about, well, we will
16	delay that treatment or that surgery, then
17	that reflects back on their quality measures
18	of how they sort of set up their practices and
19	how hospitals are being measured. So,
20	somewhere in the middle there is a culture
21	change of getting people to understand under
22	extraordinary times those quality measures.

	Page 86
1	So, it sort of puts this
2	juxtaposed. It is a little bit of where you
3	were going with the systemwide. But if you
4	bring it down to the clinician level, full
5	participation in what we are talking about is
б	going to require a little bit of tweaking
7	because we finally have gotten people to start
8	instituting quality measures into their care
9	and measuring performance, and in many ways
10	asking them in this first step of, when you
11	are surging, sort of making these alternative
12	decisions, it puts them in conflict with a
13	culture of measures that they have had in
14	place. We get kind of ratcheted up around the
15	system and forgetting that the system is made
16	up of a lot of clinicians who have just kind
17	of come onboard really well with this.
18	CO-CHAIR PITTS: Okay. We shall
19	proceed with Mike Stoto then. Thank you.
20	MEMBER STOTO: Okay. Thank you.
21	Do someone have the slides?
22	The things I say really come from

Page 87 1 some work that I have been doing with my 2 colleagues at Harvard through our CDC Preparedness Research Center, and it really 3 reflects the work of a lot of people and 4 5 conversations we have had with a number of 6 people, including people like Anthony, who was 7 on our advisory panel. I will try to sum up 8 some of the things, the thinking that we have been doing -- if you could just go to the next 9 10 one? -- that I think has some importance for 11 what we are here today. 12 So, I think it is important to 13 begin, and I am also happy, if we have time as 14 we go along to do that, that might be a more efficient way to do it. 15 I think it is important to 16 17 recognize some of the challenges -- public 18 Health Emergency Preparedness is what PHEP 19 stands in our lingo -- that are somewhat different from a lot of the work that NQF 20 21 does. One of them is that public health 22 emergencies are rare. That has two important

	Page 88
1	factors. One is that you can't measure
2	outcomes directly. If you don't have a stream
3	of heart attack patients coming into the
4	emergency department, then you can't measure
5	what fraction of them get asked.
6	Secondly, because they don't
7	happen very often, also, it is hard to study
8	what works. So, the evidence base is somewhat
9	thin.
10	Second is that an effective
11	response we know is complex and multi-
12	factorial, and it is hard to know what is the
13	right way to respond to any given response.
14	And we usually don't have the counter
15	factuals. We don't know what would have
16	happened if we had responded some other way.
17	What we do know is that we need to
18	have system-level measures. So, this is a
19	point of contact with Dave's point about the
20	unit of measurement has to be bigger than the
21	patient or the emergency department, and so
22	on.

	Page 89
1	That really gets us into the third
2	point, this idea that the public health system
3	is fragmented. We use that term "public
4	health system," it really draws on the
5	Institute of Medicine report that set up the
6	the PHEP research programs that think about
7	not only the official governmental public
8	health agencies, but also the healthcare
9	delivery system and Homeland Security,
10	employers and businesses, education, and so
11	on. That is the whole system that we needed
12	to get to work together.
13	Well, that varies quite a bit. It
14	works at the city, the county, and the state,
15	and the national level. Sometimes there are
16	regional structures embedded in that across
17	state lines like we have in the Washington
18	area. And basically, it is different almost
19	every place you look in the country.
20	And then, the partners to public
21	health vary quite a bit. Clearly, healthcare
22	is in there, EMS, and so on.

Page 90 1 I think that this concept of 2 regionalized emergency care systems obviously 3 comes into play there. But, again, building on what Dave said, that is the unit, but you 4 5 also have to think about who they relate to 6 outside of the healthcare delivery system as 7 part here. 8 Another complication that comes up 9 that I have seen in my work is that, 10 increasingly, hospitals and healthcare delivery in the U.S. are parts of chains. 11 So, 12 our Georgetown Hospital is part of MedStar 13 that has about a dozen hospitals and a lot of 14 other healthcare facilities between here and 15 Baltimore. A lot of those hospitals will think about coordinating first with the people 16 17 in their chain, rather than the other hospitals in D.C. So, that is another 18 19 complication. 20 Ultimately, you have, who is 21 responsible for what? You need to think about 22 that before you can come up with different

1 measures. 2 So, our goal in this paper, it was cited in the Draft Report. 3 There is a slightly more updated version of it online at 4 5 that URL. Our goal was really to kind of 6 think about how do we apply the science of 7 assessment, the kind of stuff that NQF does so 8 well, so this area of public health emergency 9 preparedness. 10 We think in terms of a measurement development cycle that involves, first of all, 11 12 clarifying the purpose of the measurement, the accountability, QI, or is it for research? 13 14 Identifying the concepts to be measured, and then developing specific indicators, and then 15 assessing validity, reliability, practicality, 16 17 and utility. I think if you go back to the 18 19 points that Helen made about the criteria, 20 that is all embedded, but represented in a 21 slightly different way. 22 And there is often a tension, in

	Page 92
1	particular, between accountability and quality
2	improvement, the kind of measure you want for
3	both. For one, maybe it is not the best for
4	the other, and I will come back to that point
5	in a moment.
6	So, let's think about the second
7	step, identify the concepts to be measured.
8	You have to begin by, first of all, thinking
9	about what do we mean by preparedness.
10	Anthony, this gets at your point about
11	preparedness versus response. And I am going
12	to say a bit about that as well.
13	We start with a consensus
14	statement developed by Chris Nelson and others
15	five years ago. The capability of public
16	health and healthcare systems, communities,
17	individuals to prevent, protect against,
18	respond. You can read all of that.
19	I think that implicit in that is
20	the goal that in a public health emergency we
21	can do things to mitigate the mortality,
22	morbidity, psychological, and social

Page 93 1 consequences, but 100 percent prevention is 2 impossible. But particularly when you are 3 talking about a contagious, infectious 4 5 disease, there are things that can be done to 6 really reduce the consequences across the 7 board with an effective response. 8 So, then, the question is, what 9 does it take to do that response? So, on the 10 next slide we talk about outcomes, capacities, and capabilities. 11 12 Because emergency is rare, we typically can't measure outcomes, which NQF 13 likes to do, but we can't do that in general, 14 15 particularly at the system level. 16 So, it is important to think 17 through the capacities and capabilities, and this reflects the thinking that Dave mentioned 18 19 about moving from capacities to capabilities. 20 And I think, Anthony, this is what I think 21 gets to your point here, is that the 22 capacities are what I think of as what

1	
	Page 94
1	preparedness people do now to get ready, so
2	that when the time comes, they have the
3	capability to respond as needed.
4	Most of the effort we do is in
5	preparedness, in getting those capabilities
6	excuse me getting those capacities in
7	place, so that we will have the capabilities
8	to do what we need to do to respond when the
9	time comes.
10	That is a point that I think is
11	easy to say, and it is a lot harder to
12	operationalize because, when you actually see
13	what people do, what is the capacity, what is
14	the capability, there is sometimes not a lot
15	of consensus there.
16	You know, we see it in the
17	assessment world when we talk about what is
18	the structure and what is the process and what
19	is an outcome. And everyone knows exactly
20	where things fall, but that problem is a lot
21	more complex in this realm here.
22	So, what it takes, we think, is

	Page 95
1	building a logic model that really connects up
2	what we do now in terms of building capacity
3	to what we can do during an emergency, to have
4	the capability to respond, and how does that
5	meet the goals that we are trying to reach?
6	So, the common ground preparedness
7	framework that is in the background document
8	is one example of this. On the next slide, we
9	have a model that we have been using that
10	thinks about this.
11	There are different ways of
12	thinking about this, different ways of
13	categorizing this. But this idea that you
14	have to think about how these capacities lead
15	to capabilities and help you meet your
16	objectives I think is fundamental because we
17	are not going to be able to measure the
18	objectives or the outcomes. What we want to
19	do is make sure of the capabilities, and
20	oftentimes we are reduced to measuring the
21	capacities. So, I don't want to go into the
22	detail of this, but I think that that is the

fundamental point.

1

2	So, on the next slide, we review
3	in our paper some of the things that have been
4	done. In fact, if you look back over the last
5	decade or so, where people have been worried
б	about preparedness and response, a lot of what
7	has been done really falls into the capacity
8	world, inventories, capacity assessments, and
9	so on. I have got a list of all these things
10	that we have seen before that fall in there.
11	And in fact, if we just hit
12	there we go. Most of the Joint Commission
13	standards that are referred to here are for
14	hospitals, but they actually fit into this
15	capacity assessment as well.
16	So, on the next slide, we talk
17	about some of the strengths and the
18	weaknesses. One of the strengths and this
19	was really an important one early on when no
20	one really knew what to do is that these
21	capacity assessments communicate standards and
22	expert guidance. They tell hospitals, they

	Page 97
1	tell health departments what the experts think
2	need to be done. If you have done that, well,
3	that is good.
4	But the problem is that the
5	evidence to support this guidance is often
6	lacking, and there may be other ways to
7	achieve the goals than the ones that the
8	funding agencies actually put forward.
9	In addition to that, many of these
10	capacity assessment in practice aren't clearly
11	operationalized or consistent in the kind of
12	way that NQF likes to see things done. They
13	are hard to summarize across place and time.
14	And a lot of the question about who is
15	responsible for what in these things is
16	unclear.
17	So, on the next slide, what I have
18	done here, this really draws on the work that
19	CDC has done, what Dave mentioned about the
20	CDC's public health emergency preparedness
21	capabilities. These 15 are the capabilities
22	that the public health world is coalescing

	Page 98
1	against as the critical things, the critical
2	capabilities that we need to have in place
3	here.
4	I have marked in red and with an
5	asterisk the ones that also are in the
6	Hospital Preparedness Program. So, there are
7	some conversions there as well, which is a
8	good thing. They really reflect the latest
9	collaborative thinking about what should be
10	done with preparedness on funding.
11	And another thing I think about
12	capabilities that is important is, if you say,
13	"Here is what we want the system to do," that
14	allows different localities, different
15	hospital systems, different health
16	departments, and so on, to figure out what is
17	the best way to do it in their location to
18	achieve that capability.
19	Part of the problem with the
20	capacity approach is it tells you should do it
21	this way. And I think that it makes sense.
22	I think that this is reflected in the kind of

Page 99 1 things that Dave was saying as well. We need 2 to allow these different systems and localities, and so on, to figure out what is 3 the best way to do things, given the resources 4 5 and the structures, and so on, that they have, to achieve comparable capabilities across 6 7 jurisdictions. Again, that is an easy thing 8 to say and a lot harder to actually 9 operationalize, but we have been thinking about that. 10 So, on the next slide, I have got 11 12 this is the way that these things are structured, these capabilities. They have a 13 14 definition. They say what are the critical elements and the functions, the performance 15 measures. As it turns out, so far, many of 16 17 them don't yet have performance measures. 18 And then, these response elements 19 -- if you just click one more time -- what 20 they really do, I think these are the things 21 that build the links between the capacities in 22 the left column of the logical model to the

	Page 100
1	capabilities. They say, what do we need to do
2	now that is going to get us to those
3	capabilities?
4	So, this document, which is a very
5	useful document, and the same thing for the
б	HPP document, is useful in communicating
7	consensus about what we think we need to do
8	now, so we have those capabilities.
9	The challenge in many of these
10	things and I think this is true for the HPP
11	is how do you actually measure those
12	performance measures. So, on the next slide
13	I have got some definitions here.
14	Two of these CDC capabilities deal
15	with the general area of biosurveillance, and
16	they have to do with Capability 12 is
17	public health lab testing and 13 is epi and
18	surveillance.
19	And what they really have to do
20	with, if you look at those things, is how long
21	does it take before people can get together?
22	Have you passed proficiency tests in your

	Page 101
1	labs? How many infectious disease outbreaks
2	have been reported? Have you done after-
3	action reports and learned from them?
4	Those are all useful things, but
5	in the last couple of years we have actually
б	been looking at the public health system
7	response locally up to globally, to H1N1, the
8	2009 H1N1 outbreak. It turns out that these
9	things really don't predict what was
10	necessary. What was really necessary during
11	that point, during that outbreak, was, could
12	you figure out that you have all these things
13	going on in different parts of Mexico and in
14	California and New York, all part of the same
15	phenomena? That is a critical capability, the
16	ability to really integrate this information
17	and think about it and understand what it
18	means.
19	I think that is fundamentally what
20	we mean when we talk about biosurveillance
21	capabilities. But a lot of these measures
22	that we have really represent capacities, and

	Page 102
1	how do we go from those capacities and
2	capabilities is a challenge that we are
3	struggling with in the public health work.
4	And I think it is also true in the health
5	system world as well.
6	So, I have just put up here the
7	preparedness capabilities for mass care and
8	medical surge, which I think are the ones in
9	public health that most directly relate to the
10	stuff we are talking about here today, just so
11	you see what is there.
12	I guess I have too many words
13	here. But one thing you see in both of those,
14	and underlined and in italics, is that there
15	are no performance measures available for
16	these at this time. That really is the state
17	of the world that we have to wrestle with.
18	So, one think that I would offer
19	as an alternative to think about going forward
20	is using exercises and actual events as a way
21	of measuring capabilities. We have had some
22	experience with this.

	Page 103
1	The first part of this deals with
2	the work that Paul Biddinger, in particular,
3	my colleague at Harvard I am sure you know
4	him, Jay has done to develop this exercise
5	program. They have now done about, I think,
6	30 or 40 different exercises where, rather
7	than using the exercises as a training
8	opportunity, we use it as an assessment
9	opportunity to measure how well different kind
10	of systems some of them were hospital
11	systems; some of them were public health
12	systems; some were combinations, and so on
13	can respond to certain kinds of events.
14	We do that by asking not only the
15	participants to evaluate how well they did,
16	but having some trained external evaluators.
17	We have studied this carefully and developed
18	checklists and scores. So, we think that we
19	actually have some valid and reliable measures
20	that can be used in this setting, to get a
21	sense of how would the system respond during
22	a particular kind of emergency.

	Page 104
1	Coming back to what Dave was
2	saying about the measurement, about your
3	ability to expand acuity beds by 20 percent,
4	well, how would you actually measure that?
5	This is a possible way of measuring that,
6	where we can say, well, here is a particular
7	scenario; what actually would you do? I mean,
8	who actually would you move, bump to next
9	week, and so on? How would you share
10	resources across these different hospitals and
11	in other parts of the healthcare system within
12	a region? What actually would you do to see
13	whether or not you can meet that goal?
14	The other thing that we have
15	discovered along the way is that sometimes for
16	some purposes it is more useful to have
17	qualitative rather than quantitative measures,
18	and particularly because I think so little is
19	known about what works in this area. Some of
20	the qualitative analysis about what went
21	wrong, what could have been done differently,
22	what would have gotten a better result

	Page 10
1	actually is a more useful thing that comes out
2	for some of these quality improvement
3	purposes. Now, for accountability, you need
4	something like these quantitative measures, I
5	think, but some of these qualitative things
6	can work best for that.
7	And then, the other thing I want
8	to mention is something that we are just
9	working on now as part of our CDC Preparedness
10	Center grant, is the idea about learning from
11	actual events. We are trying to develop a
12	registry where health departments and public
13	health systems can do something like the kind
14	of root-cause analyses that are now relatively
15	common in the healthcare system and learn in
16	a deep way about what happened, what could be
17	done better, and to share that with others, so
18	that others who have similar circumstances can
19	learn from that, and so that researchers can
20	look across similar incidents and see what
21	patterns there are.
22	As part of that, we are trying to

5

i	
	Page 106
1	develop a kind of peer assessment model where
2	we take some of the approaches that we do from
3	this exercise program and use them to look
4	back at critical events and have valid and
5	reliable measures that come out of that.
6	But I think that, again, this is a
7	potential model to look at for assessing how
8	well the system might respond to future
9	events, by seeing how well it responded to the
10	current events.
11	So, to wrap up, I would like to
12	say there is no assessment approach without
13	problems, but I think that everything has
14	something to contribute here in the PHEP work,
15	and I think in the emergency response world as
16	well.
17	What we think we need is a
18	portfolio of measures that are useful for both
19	accountability and for quality assurance, that
20	address both capacities and capabilities, and
21	that balance the detail-specific quantitative
22	measures with more holistic qualitative

Page 107 measures, and balancing objectivity and 1 2 professional judgment, and perhaps varying as the needs, what we are looking, changes. 3 4 We need measure systems. It is 5 not just going out there and sort of doing this ad hoc. We need to sort of think about 6 7 a systematic approach to measurement and 8 developing measures. So, the fact that we are 9 having this meeting is a big part of exactly what we are talking about. 10 11 Thank you. 12 CO-CHAIR PITTS: Thanks a lot. 13 We are making up the agenda a 14 little bit as we go. I know it is almost time for a bathroom break. 15 So, let's have a couple of rounds 16 of comments. It is a complex subject. 17 18 Being a relative newcomer, it is 19 intriguing to me to see how people come from 20 their separate spheres and have different 21 approaches and looking at the same thing from 22 a different direction. We will eventually try

Page 108
to reconcile all this stuff and put it in the
NQF framework.
For now, does anybody want to say
anything about the presentation, any comments
specifically?
Yes, go ahead.
MEMBER CARRIER: Well, this may
cross over a little bit into the NQF
framework. But just thinking about both of
the presentations, and wondering how they
would translate, if we were providing guidance
to measure developers, how they might
translate into quality measures in terms of
things like feasibility and what the data
sources that could be used to measure these
things.
So, thinking about the capability.
And I think we heard in the beginning about
the importance of outcomes measures, and you
were mentioning the challenges of measuring
outcomes and how we may have to go back to
capabilities.
1
----
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

Page 110 1 if that would be sufficient, or if people 2 think that it is worth trying to develop a 3 novel data collection system. MEMBER STOTO: We would be stuck 4 5 with what? 6 MEMBER CARRIER: Attestation. You 7 know, I check a box "yes". 8 MEMBER STOTO: Thanks. "Yes," I 9 can do that, right. yes. 10 MEMBER CARRIER: I can move this 20 percent of patients. 11 12 MEMBER STOTO: Yes. 13 MEMBER CARRIER: Which is 14 sometimes easier to do than actually doing it. 15 (Laughter.) 16 MEMBER STOTO: Right. 17 MEMBER CARRIER: And then, we 18 talked about measuring at the coalition level, 19 which would require a whole novel data 20 collection effort, the development of 21 instruments, the validation of instruments. 22 I mean, which do people think is the path

Page 1111forward, going with measuring at the2individual hospital level, hoping that some3integrated systems will have the capacity to4give us a clearer picture, or pushing for5novel data collection that can truly capture6regional efforts?7MEMBER STOTO: No, I think that is8a real important problem. I would say two9things. One is I think that these exercises10they are required for Joint Commission12accreditation, and so on, are an opportunity13to not just use them for the basic purpose,14but actually use them as a measuring purpose.15But there needs to be an infrastructure built16around them.17And then, secondly, I think that18you actually can do more than attestation.19So, I will give two examples.20One is we used this approach early21on. I worked on RAND, and this was, I think,222003. We did tabletop exercises in California		
<ul> <li>individual hospital level, hoping that some</li> <li>integrated systems will have the capacity to</li> <li>give us a clearer picture, or pushing for</li> <li>novel data collection that can truly capture</li> <li>regional efforts?</li> <li>MEMBER STOTO: No, I think that is</li> <li>a real important problem. I would say two</li> <li>things. One is I think that these exercises</li> <li>that actually are done quite a lot, because</li> <li>they are required for Joint Commission</li> <li>accreditation, and so on, are an opportunity</li> <li>to not just use them for the basic purpose,</li> <li>but actually use them as a measuring purpose.</li> <li>But there needs to be an infrastructure built</li> <li>around them.</li> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>		Page 111
<ul> <li>integrated systems will have the capacity to</li> <li>give us a clearer picture, or pushing for</li> <li>novel data collection that can truly capture</li> <li>regional efforts?</li> <li>MEMBER STOTO: No, I think that is</li> <li>a real important problem. I would say two</li> <li>things. One is I think that these exercises</li> <li>that actually are done quite a lot, because</li> <li>they are required for Joint Commission</li> <li>accreditation, and so on, are an opportunity</li> <li>to not just use them for the basic purpose,</li> <li>but actually use them as a measuring purpose.</li> <li>But there needs to be an infrastructure built</li> <li>around them.</li> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>	1	forward, going with measuring at the
4give us a clearer picture, or pushing for5novel data collection that can truly capture6regional efforts?7MEMBER STOTO: No, I think that is8a real important problem. I would say two9things. One is I think that these exercises10that actually are done quite a lot, because11they are required for Joint Commission12accreditation, and so on, are an opportunity13to not just use them for the basic purpose,14but actually use them as a measuring purpose.15But there needs to be an infrastructure built16around them.17And then, secondly, I think that18you actually can do more than attestation.19So, I will give two examples.20One is we used this approach early21on. I worked on RAND, and this was, I think,	2	individual hospital level, hoping that some
5novel data collection that can truly capture6regional efforts?7MEMBER STOTO: No, I think that is8a real important problem. I would say two9things. One is I think that these exercises10that actually are done quite a lot, because11they are required for Joint Commission12accreditation, and so on, are an opportunity13to not just use them for the basic purpose,14but actually use them as a measuring purpose.15But there needs to be an infrastructure built16around them.17And then, secondly, I think that18you actually can do more than attestation.19So, I will give two examples.20One is we used this approach early21on. I worked on RAND, and this was, I think,	3	integrated systems will have the capacity to
<ul> <li>regional efforts?</li> <li>MEMBER STOTO: No, I think that is</li> <li>a real important problem. I would say two</li> <li>things. One is I think that these exercises</li> <li>that actually are done quite a lot, because</li> <li>they are required for Joint Commission</li> <li>accreditation, and so on, are an opportunity</li> <li>to not just use them for the basic purpose,</li> <li>but actually use them as a measuring purpose.</li> <li>But there needs to be an infrastructure built</li> <li>around them.</li> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>	4	give us a clearer picture, or pushing for
<ul> <li>MEMBER STOTO: No, I think that is</li> <li>a real important problem. I would say two</li> <li>things. One is I think that these exercises</li> <li>that actually are done quite a lot, because</li> <li>they are required for Joint Commission</li> <li>accreditation, and so on, are an opportunity</li> <li>to not just use them for the basic purpose,</li> <li>but actually use them as a measuring purpose.</li> <li>But there needs to be an infrastructure built</li> <li>around them.</li> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>	5	novel data collection that can truly capture
<ul> <li>a real important problem. I would say two</li> <li>things. One is I think that these exercises</li> <li>that actually are done quite a lot, because</li> <li>they are required for Joint Commission</li> <li>accreditation, and so on, are an opportunity</li> <li>to not just use them for the basic purpose,</li> <li>but actually use them as a measuring purpose.</li> <li>But there needs to be an infrastructure built</li> <li>around them.</li> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>	6	regional efforts?
<ul> <li>9 things. One is I think that these exercises</li> <li>10 that actually are done quite a lot, because</li> <li>11 they are required for Joint Commission</li> <li>12 accreditation, and so on, are an opportunity</li> <li>13 to not just use them for the basic purpose,</li> <li>14 but actually use them as a measuring purpose.</li> <li>15 But there needs to be an infrastructure built</li> <li>16 around them.</li> <li>17 And then, secondly, I think that</li> <li>18 you actually can do more than attestation.</li> <li>19 So, I will give two examples.</li> <li>20 One is we used this approach early</li> <li>21 on. I worked on RAND, and this was, I think,</li> </ul>	7	MEMBER STOTO: No, I think that is
<ul> <li>10 that actually are done quite a lot, because</li> <li>11 they are required for Joint Commission</li> <li>12 accreditation, and so on, are an opportunity</li> <li>13 to not just use them for the basic purpose,</li> <li>14 but actually use them as a measuring purpose.</li> <li>15 But there needs to be an infrastructure built</li> <li>16 around them.</li> <li>17 And then, secondly, I think that</li> <li>18 you actually can do more than attestation.</li> <li>19 So, I will give two examples.</li> <li>20 One is we used this approach early</li> <li>21 on. I worked on RAND, and this was, I think,</li> </ul>	8	a real important problem. I would say two
11they are required for Joint Commission12accreditation, and so on, are an opportunity13to not just use them for the basic purpose,14but actually use them as a measuring purpose.15But there needs to be an infrastructure built16around them.17And then, secondly, I think that18you actually can do more than attestation.19So, I will give two examples.20One is we used this approach early21on. I worked on RAND, and this was, I think,	9	things. One is I think that these exercises
12 accreditation, and so on, are an opportunity 13 to not just use them for the basic purpose, 14 but actually use them as a measuring purpose. 15 But there needs to be an infrastructure built 16 around them. 17 And then, secondly, I think that 18 you actually can do more than attestation. 19 So, I will give two examples. 20 One is we used this approach early 21 on. I worked on RAND, and this was, I think,	10	that actually are done quite a lot, because
<ul> <li>to not just use them for the basic purpose,</li> <li>but actually use them as a measuring purpose.</li> <li>But there needs to be an infrastructure built</li> <li>around them.</li> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>	11	they are required for Joint Commission
14 but actually use them as a measuring purpose. 15 But there needs to be an infrastructure built 16 around them. 17 And then, secondly, I think that 18 you actually can do more than attestation. 19 So, I will give two examples. 20 One is we used this approach early 21 on. I worked on RAND, and this was, I think,	12	accreditation, and so on, are an opportunity
But there needs to be an infrastructure built around them. And then, secondly, I think that you actually can do more than attestation. So, I will give two examples. One is we used this approach early on. I worked on RAND, and this was, I think,	13	to not just use them for the basic purpose,
<pre>16 around them. 17 And then, secondly, I think that 18 you actually can do more than attestation. 19 So, I will give two examples. 20 One is we used this approach early 21 on. I worked on RAND, and this was, I think,</pre>	14	but actually use them as a measuring purpose.
<ul> <li>And then, secondly, I think that</li> <li>you actually can do more than attestation.</li> <li>So, I will give two examples.</li> <li>One is we used this approach early</li> <li>on. I worked on RAND, and this was, I think,</li> </ul>	15	But there needs to be an infrastructure built
18 you actually can do more than attestation. 19 So, I will give two examples. 20 One is we used this approach early 21 on. I worked on RAND, and this was, I think,	16	around them.
19 So, I will give two examples. 20 One is we used this approach early 21 on. I worked on RAND, and this was, I think,	17	And then, secondly, I think that
20 One is we used this approach early 21 on. I worked on RAND, and this was, I think,	18	you actually can do more than attestation.
21 on. I worked on RAND, and this was, I think,	19	So, I will give two examples.
	20	One is we used this approach early
22 2003. We did tabletop exercises in California	21	on. I worked on RAND, and this was, I think,
	22	2003. We did tabletop exercises in California

	Page 112
1	to see how they would respond to a smallpox
2	outbreak.
3	But what we did beforehand was we
4	went out there and we interviewed them,
5	understood what their resources were. So, if
6	they during a tabletop said, "We do" so-and-
7	so, we knew enough to say, "No, no, you don't
8	have that." And so, we can actually have some
9	judgment about this.
10	The other thing is that I was
11	involved in evaluating, Anthony knows, the DC
12	Healthcare Coalition, and some of the work in
13	Boston. A lot of that really involves doing
14	these exercises and asking the participants to
15	evaluate how well it worked.
16	But I think we can add on to that.
17	So, for instance, when you are doing a drill
18	that involves communications, they often say,
19	"Here's how many beds we have" and report that
20	in, for instance.
21	One thing that you can do is have
22	somebody receive it and see whether or not the

Page 113 1 people who received that information 2 understood it the same way that the people sending the information did. And I don't 3 think that that is always the case. I think 4 5 that just because you can say we have got this many beds, it may be understood in a different 6 7 way. Sometimes they say this is how many beds 8 we need or it is confused with how many we 9 have available. 10 So, I think you can look at fidelity in that way. But, again, that takes 11 12 an effort. It is more than just doing exercises. It is really developing a 13 14 measurement infrastructure to go with them. 15 CO-CHAIR PITTS: All right. Wes? 16 MEMBER FIELDS: Yes, I want to 17 sort of extend Ellen's analogy here. One way 18 to get to 20 percent is showing how 10 19 hospitals can pick up 2 percent. I think that 20 is truly valuable. In this context, in terms 21 of measurement, if we could connect everyday 22 problems, or not everyday problems with

	Page 114
1	crowding, but somewhat more dramatic problems
2	with crowding on a particular day, especially
3	if it is related to, say, things that are
4	predictable like flu season and that, I would
5	far prefer to measure how real hospitals
6	respond to real surges in demand as a preview
7	of their ability to respond in a
8	logarithmically-larger event. I would much
9	rather use the present-day response of
10	hospitals within a community or a metro area
11	than to measure what happens on a benchtop
12	exercise.
13	I acknowledge there are probably a
14	lot of things that are unique to your work
15	that probably have to be done on a tabletop.
16	But I think if we are really trying to connect
17	the dots between crowding and the real-world
18	capacity of hospitals and emergency
19	departments and EMS agencies, it would be
20	useful for our measures to look at what
21	happens when you get a 10-to-20-percent pop in
22	demand at a particular department or within a

Page 115 particular healthcare system. 1 2 MEMBER STOTO: No, I agree, and I probably was misleading when I talked about 3 those real events by referring to H1N1. 4 In 5 fact, there are things that happen all the time that stress emergency response systems, 6 7 And we should learn from them. and so on. 8 The problem is that they don't 9 stress quite the same way, the big ones we are 10 really worried about. So, I think it has got to be a combination of evaluating these kind 11 12 of day-to-day big events and doing some of these exercises. 13 14 CO-CHAIR STONE-GRIFFITH: I know that I would like to sort of speak from a 15 recent event that has been in the news and 16 been talked about a lot, the Aurora incident. 17 18 One of those was our hospital; the other one 19 was the University. We have heard the 20 statistics. 21 During ACEP, right before the Dark 22 Knight presentation, ENA was there, and we

	Page 116
1	happened to do a debrief at Aurora and
2	included the folks at the Children's Hospital
3	and the University, which many of you heard in
4	a different light. We also had their disaster
5	preparedness folks and security folks and plan
6	ops folks there.
7	It was fascinating what came out
8	of that discussion. Our hospital, half of the
9	hospital was under construction and closed,
10	the ED, and so, all of our trauma rooms and
11	all of our code rooms. So, we had to deal
12	with that. We received 18 folks.
13	The University, what we did not
14	know, which was very interesting, or wasn't
15	really illuminated at the time, was that they
16	were only divert. They had 25 inpatients
17	holding at the time. They received 23
18	patients.
19	Now, when we said, "Well, gee,
20	what happened to those inpatients that were
21	boarding," within 45 minutes all of those
22	patients were out of the ED and they had been

	Page 117
1	effectively moved and absorbed and taken care
2	of.
3	My question was, "How did your
4	leadership respond after this incident to the
5	day-to-day diversion and holding that you all
6	are doing?" And their answer to me was
7	stunning. It was, well, they have really put
8	on fast track the new building tower and the
9	expansion of the ED.
10	(Laughter.)
11	And I thought to myself, we have
12	just completely missed the boat. Because that
13	incident was over in four hours. People ask
14	me all the time, "Gee, what did you do?" I
15	said, "I didn't even know about it. It was
16	the middle of the night. I was asleep." By
17	the time 4:30 came, I mean, both hospitals
18	will tell you it was over. People who came on
19	for day shift didn't even feel that. It was
20	business as usual.
21	So, I am struggling with this
22	issue of it is not just about a big disaster.

	Page 118
1	It is about the little day-to-day disasters on
2	top of this surge. I think we have to look at
3	it across the system. We are competitors. We
4	are an exit away from each other. We did not
5	have good communication between each other.
б	And I have heard a lot about EMS,
7	but you all know that EMS did not bring those
8	patients. They came in the back of swat cars
9	and police cars.
10	So, I think we need to think about
11	it in the context of those kinds of situations
12	because I think they are so much more common.
13	We could learn a lot about that. We have had
14	brief after brief after debrief and community
15	responses, but are we really getting to what
16	happens when that happens next?
17	It will be a different incident.
18	We won't know what it will be. But are we
19	going to respond any different? Are we going
20	to be in any different circumstance?
21	MEMBER STOTO: Well, you know that
22	is an issue in the public health world as

Page 1191well. One of the things that we have2suggested is that one measure could be, did3you learn from this incident? Did you4actually do a deep analysis that got beyond5what? Did you make changes based on that6learning?7That is a capacity measure.8Excuse me. That is a capability measure.9That really is a structure measure. But I10think, given the state of the field, that is11important, that we learn from these things.12That is something we should consider as a13performance measure.14CO-CHAIR PITTS: Just to pile on,15when we had the Olympic Park bombing in16Atlanta way back when, it was very similar.17By the time morning shifts got there, the 20-18odd people that had rolled in were gone. It19was pretty amazing.20Jesse wanted to say a couple of21things before we take our next break.22MR. PINES: Great. Thanks.		
<ul> <li>suggested is that one measure could be, did</li> <li>you learn from this incident? Did you</li> <li>actually do a deep analysis that got beyond</li> <li>what? Did you make changes based on that</li> <li>learning?</li> <li>That is a capacity measure.</li> <li>Excuse me. That is a capability measure.</li> <li>That really is a structure measure. But I</li> <li>think, given the state of the field, that is</li> <li>important, that we learn from these things.</li> <li>That is something we should consider as a</li> <li>performance measure.</li> <li>CO-CHAIR PITTS: Just to pile on,</li> <li>when we had the Olympic Park bombing in</li> <li>Atlanta way back when, it was very similar.</li> <li>By the time morning shifts got there, the 20-</li> <li>odd people that had rolled in were gone. It</li> <li>was pretty amazing.</li> <li>Jesse wanted to say a couple of</li> <li>things before we take our next break.</li> </ul>		Page 119
<ul> <li>you learn from this incident? Did you</li> <li>actually do a deep analysis that got beyond</li> <li>what? Did you make changes based on that</li> <li>learning?</li> <li>That is a capacity measure.</li> <li>Excuse me. That is a capability measure.</li> <li>That really is a structure measure. But I</li> <li>think, given the state of the field, that is</li> <li>important, that we learn from these things.</li> <li>That is something we should consider as a</li> <li>performance measure.</li> <li>CO-CHAIR PITTS: Just to pile on,</li> <li>when we had the Olympic Park bombing in</li> <li>Atlanta way back when, it was very similar.</li> <li>By the time morning shifts got there, the 20-</li> <li>odd people that had rolled in were gone. It</li> <li>was pretty amazing.</li> <li>Jesse wanted to say a couple of</li> <li>things before we take our next break.</li> </ul>	1	well. One of the things that we have
4       actually do a deep analysis that got beyond         5       what? Did you make changes based on that         6       learning?         7       That is a capacity measure.         8       Excuse me. That is a capability measure.         9       That really is a structure measure. But I         10       think, given the state of the field, that is         11       important, that we learn from these things.         12       That is something we should consider as a         13       performance measure.         14       CO-CHAIR PITTS: Just to pile on,         15       when we had the Olympic Park bombing in         16       Atlanta way back when, it was very similar.         17       By the time morning shifts got there, the 20-         18       odd people that had rolled in were gone. It         19       was pretty amazing.         20       Jesse wanted to say a couple of         21       things before we take our next break.	2	suggested is that one measure could be, did
5       what? Did you make changes based on that         6       learning?         7       That is a capacity measure.         8       Excuse me. That is a capability measure.         9       That really is a structure measure. But I         10       think, given the state of the field, that is         11       important, that we learn from these things.         12       That is something we should consider as a         13       performance measure.         14       CO-CHAIR PITTS: Just to pile on,         15       when we had the Olympic Park bombing in         16       Atlanta way back when, it was very similar.         17       By the time morning shifts got there, the 20-         18       odd people that had rolled in were gone. It         19       was pretty amazing.         20       Jesse wanted to say a couple of         21       things before we take our next break.	3	you learn from this incident? Did you
<ul> <li>6 learning?</li> <li>7 That is a capacity measure.</li> <li>8 Excuse me. That is a capability measure.</li> <li>9 That really is a structure measure. But I</li> <li>10 think, given the state of the field, that is</li> <li>11 important, that we learn from these things.</li> <li>12 That is something we should consider as a</li> <li>13 performance measure.</li> <li>14 CO-CHAIR PITTS: Just to pile on,</li> <li>15 when we had the Olympic Park bombing in</li> <li>16 Atlanta way back when, it was very similar.</li> <li>17 By the time morning shifts got there, the 20-</li> <li>18 odd people that had rolled in were gone. It</li> <li>19 was pretty amazing.</li> <li>20 Jesse wanted to say a couple of</li> <li>21 things before we take our next break.</li> </ul>	4	actually do a deep analysis that got beyond
<ul> <li>That is a capacity measure.</li> <li>Excuse me. That is a capability measure.</li> <li>That really is a structure measure. But I</li> <li>think, given the state of the field, that is</li> <li>important, that we learn from these things.</li> <li>That is something we should consider as a</li> <li>performance measure.</li> <li>CO-CHAIR PITTS: Just to pile on,</li> <li>when we had the Olympic Park bombing in</li> <li>Atlanta way back when, it was very similar.</li> <li>By the time morning shifts got there, the 20-</li> <li>odd people that had rolled in were gone. It</li> <li>was pretty amazing.</li> <li>Jesse wanted to say a couple of</li> <li>things before we take our next break.</li> </ul>	5	what? Did you make changes based on that
<ul> <li>8 Excuse me. That is a capability measure.</li> <li>9 That really is a structure measure. But I</li> <li>10 think, given the state of the field, that is</li> <li>11 important, that we learn from these things.</li> <li>12 That is something we should consider as a</li> <li>13 performance measure.</li> <li>14 CO-CHAIR PITTS: Just to pile on,</li> <li>15 when we had the Olympic Park bombing in</li> <li>16 Atlanta way back when, it was very similar.</li> <li>17 By the time morning shifts got there, the 20-</li> <li>18 odd people that had rolled in were gone. It</li> <li>19 was pretty amazing.</li> <li>20 Jesse wanted to say a couple of</li> <li>21 things before we take our next break.</li> </ul>	6	learning?
<ul> <li>9 That really is a structure measure. But I</li> <li>10 think, given the state of the field, that is</li> <li>11 important, that we learn from these things.</li> <li>12 That is something we should consider as a</li> <li>13 performance measure.</li> <li>14 CO-CHAIR PITTS: Just to pile on,</li> <li>15 when we had the Olympic Park bombing in</li> <li>16 Atlanta way back when, it was very similar.</li> <li>17 By the time morning shifts got there, the 20-</li> <li>18 odd people that had rolled in were gone. It</li> <li>19 was pretty amazing.</li> <li>20 Jesse wanted to say a couple of</li> <li>21 things before we take our next break.</li> </ul>	7	That is a capacity measure.
<ul> <li>think, given the state of the field, that is</li> <li>important, that we learn from these things.</li> <li>That is something we should consider as a</li> <li>performance measure.</li> <li>CO-CHAIR PITTS: Just to pile on,</li> <li>when we had the Olympic Park bombing in</li> <li>Atlanta way back when, it was very similar.</li> <li>By the time morning shifts got there, the 20-</li> <li>odd people that had rolled in were gone. It</li> <li>was pretty amazing.</li> <li>Jesse wanted to say a couple of</li> <li>things before we take our next break.</li> </ul>	8	Excuse me. That is a capability measure.
11 important, that we learn from these things. 12 That is something we should consider as a 13 performance measure. 14 CO-CHAIR PITTS: Just to pile on, 15 when we had the Olympic Park bombing in 16 Atlanta way back when, it was very similar. 17 By the time morning shifts got there, the 20- 18 odd people that had rolled in were gone. It 19 was pretty amazing. 20 Jesse wanted to say a couple of 21 things before we take our next break.	9	That really is a structure measure. But I
12 That is something we should consider as a 13 performance measure. 14 CO-CHAIR PITTS: Just to pile on, 15 when we had the Olympic Park bombing in 16 Atlanta way back when, it was very similar. 17 By the time morning shifts got there, the 20- 18 odd people that had rolled in were gone. It 19 was pretty amazing. 20 Jesse wanted to say a couple of 21 things before we take our next break.	10	think, given the state of the field, that is
performance measure. CO-CHAIR PITTS: Just to pile on, when we had the Olympic Park bombing in Atlanta way back when, it was very similar. By the time morning shifts got there, the 20- odd people that had rolled in were gone. It was pretty amazing. Jesse wanted to say a couple of things before we take our next break.	11	important, that we learn from these things.
14 CO-CHAIR PITTS: Just to pile on, 15 when we had the Olympic Park bombing in 16 Atlanta way back when, it was very similar. 17 By the time morning shifts got there, the 20- 18 odd people that had rolled in were gone. It 19 was pretty amazing. 20 Jesse wanted to say a couple of 21 things before we take our next break.	12	That is something we should consider as a
<ul> <li>15 when we had the Olympic Park bombing in</li> <li>16 Atlanta way back when, it was very similar.</li> <li>17 By the time morning shifts got there, the 20-</li> <li>18 odd people that had rolled in were gone. It</li> <li>19 was pretty amazing.</li> <li>20 Jesse wanted to say a couple of</li> <li>21 things before we take our next break.</li> </ul>	13	performance measure.
16Atlanta way back when, it was very similar.17By the time morning shifts got there, the 20-18odd people that had rolled in were gone. It19was pretty amazing.20Jesse wanted to say a couple of21things before we take our next break.	14	CO-CHAIR PITTS: Just to pile on,
<ul> <li>By the time morning shifts got there, the 20-</li> <li>odd people that had rolled in were gone. It</li> <li>was pretty amazing.</li> <li>Jesse wanted to say a couple of</li> <li>things before we take our next break.</li> </ul>	15	when we had the Olympic Park bombing in
18 odd people that had rolled in were gone. It 19 was pretty amazing. 20 Jesse wanted to say a couple of 21 things before we take our next break.	16	Atlanta way back when, it was very similar.
<ul> <li>19 was pretty amazing.</li> <li>20 Jesse wanted to say a couple of</li> <li>21 things before we take our next break.</li> </ul>	17	By the time morning shifts got there, the 20-
20 Jesse wanted to say a couple of 21 things before we take our next break.	18	odd people that had rolled in were gone. It
21 things before we take our next break.	19	was pretty amazing.
	20	Jesse wanted to say a couple of
22 MR. PINES: Great. Thanks.	21	things before we take our next break.
	22	MR. PINES: Great. Thanks.

	Page 120
1	I just wanted to thank everyone.
2	I know, sort of looking around the room, and
3	what has happened in this first hour and a
4	half here, and I can see a lot of people
5	squirming. This is really the goal of this,
6	really to bring these two worlds who speak
7	completely different languages together and
8	really get onto the same page.
9	You know, I think we have made a
10	lot of progress, sort of thinking about
11	linking daily crowding to disaster surge. I
12	do want to continue that discussion and, also,
13	hone in on something that Emily said just a
14	few minutes ago, that really our goal here is
15	to guide measure developers and to have
16	practical recommendations for people who want
17	to do measure development in this area. What
18	do they actually need to get some of these
19	preparedness measures through the NQF process?
20	And finally, I wanted to make a
21	clarification on Mike Stoto's presentation
22	and, also, to clarify a question that Anthony

Page 121
had about the level of measurement
specifically for this report. Our goal is
really to look at the health system and
potentially healthcare coalition level, as
essentially there is a whole world of public
health emergency preparedness that really sort
of is outside of our scope, you know, managing
casualties, managing bodies and things that
really fall under the bailiwick of a local
public health or under true public health.
Really, our focus today, what sort
of data do we need in order to get some of
these healthcare system measures potentially
which would go up to the healthcare coalition
level or hospital-level measures through the
NQF process?
I do want to make sure that we are
able to take a break. But, essentially, one
of the things that I wanted you to think about
is, after the break, I want to see if we can
take some of these preparedness measures for
a little test drive, and maybe we can think a

Page 122
little bit about the IBA measure and
essentially what it would take to get the IBA
measure through the NQF criteria.
Thank you.
CO-CHAIR PITTS: Fifteen minutes.
(Whereupon, the foregoing matter
went off the record at 10:30 a.m. and went
back on the record at 10:54 a.m.)
CO-CHAIR STONE-GRIFFITH: Hi, all.
We would like to get started again and move on
to reconciling daily surge and disaster surge.
So, if folks could take their seats? Thanks.
CO-CHAIR PITTS: All right. We
shall continue here. We have a couple of
nominations for topics to discuss.
The first topic, it has already
been discussed a bit. A couple of people
thought about this, and I think it is an
important issue because daily surge is meant
to be different from disaster surge. The
question is, does good performance with daily
surge translate into good performance with

	Page 123
1	disaster surge? I think, obviously, most of
2	it is speculation because we don't have enough
3	disasters to have a sample size.
4	But Melissa McCarthy sort of has
5	some opinions about that, I think, and has
б	written a paper about it.
7	(Laughter.)
8	So, I will let her start the
9	discussion.
10	MEMBER McCARTHY: I think they are
11	not completely different animals, but they are
12	really quite different. I think it a little
13	bit goes back to Sally's comment about just
14	very different mindsets. You might be able to
15	handle daily surge quite well, but not handle
16	a SARS patient that comes in. I mean, we have
17	talked about trauma. That is really kind of
18	doing what we already do, you know, just
19	adding a few more trauma patients. But the
20	kind of threats that we are likely to face,
21	you know, we could face, and these different
22	kinds of disasters, I don't know that

Page 124 hospitals that do a good job with daily would 1 2 do a good job at all with those kinds of disasters. 3 I think Sally's point that you 4 5 want in a disaster, the personnel to respond in a completely different manner. It kind of 6 7 goes back, I think, to Wes' point about now we 8 are thinking about the population as a whole, 9 where in daily surge we are talking about 10 fighting for each individual patient, right? So, I don't think they do actually have a lot 11 12 in common. So, I am a little uncomfortable this morning about this. That is my own bias. 13 14 CO-CHAIR PITTS: Feel free to think some of questions here. 15 16 As a professed ignoramus on the topic, does anybody know of any studies in 17 18 which that has been looked at in peered data? 19 I mean, it would be hard to imagine the 20 scenario where you might have done that, but 21 no? 22 MEMBER McCARTHY: Actually, one

	Page 125
1	other comment about it. I was actually
2	thinking about, from Harvard, there is a
3	business person, a famous MBA, who talks about
4	kind of different corporations and sustaining,
5	how they sustain their operations versus they
6	face kind of emerging and novel situations.
7	The way he has described this is
8	the best way to do this is to have like a
9	separate group that handles these emerging and
10	novel situations because what you need to
11	sustain, and the way you need to think about
12	sustaining and handling daily operations, is
13	very, very different than the kind of
14	creativity and mindset that you need in these.
15	And it is totally different area, but I think
16	it applies here.
17	Frank, do you have any thoughts on
18	this, too? I know you are sick, but
19	MEMBER ASPLIN: I pretty much need
20	to go home. I apologize.
21	(Laughter.)
22	And will be as soon as I think I

Page 126 1 can make the plane. 2 I think there is overlap in the What I am struggling with a 3 Venn diagram. little bit is, even if operationally they 4 5 would be very different, would some of the 6 measurement framework still apply in kind of 7 a cascading fashion, like Ellen alluded to earlier? 8 9 I think that I agree that the 10 operational approach is going to be different. There might be components of a measurement 11 12 framework, though, that could scale up and still apply, depending on how it is 13 14 constructed. 15 CO-CHAIR PITTS: Everybody here knows about black swans? I mean, it is kind 16 17 of the way these things happen, nobody ever 18 thought of this happening before. It is tough 19 to prepare for something you have never even 20 thought of happening. 21 Mike? MEMBER STOTO: Well, I think that 22

	Page 127
1	the possible answer is to think, what are the
2	common response capabilities in both the day-
3	to-day and the emergency setting?
4	So, in the public health world, we
5	need to, whether it is a routine food-borne
6	disease outbreak or a smallpox outbreak, we
7	need to be able to have people identify cases,
8	report them to the health department, track
9	the numbers, and so on. Those are kind of
10	core capabilities that are tested on these
11	routine events and in these bigger events.
12	I don't know enough about
13	emergency medicine to know what they are, but
14	I suspect there are some core things that are
15	tested in these routine events that also would
16	be critical in the more extreme ones. That
17	may be a way to structure making the bridge
18	between the two.
19	CO-CHAIR PITTS: Melissa, I know
20	you have done, you and your collaborators have
21	done a lot of work looking at individual
22	institutions and their day-to-day variation.

Page 128 1 I wonder if it is possible to look at 2 performance during those peak days? Has somebody done that kind of stuff? You know, 3 there must be days when the school bus arrived 4 5 or when there was some event of that sort that led to a huge surplus of patients. I wonder 6 7 if that has been studied as to how do we 8 perform in those days compared to other days. 9 MEMBER McCARTHY: Yes, we have 10 looked at when acuity increases, but they are so rarely really, you know. You figure you 11 12 have 60,000 visits in ED, and the one day that you might have a couple of extra school buses 13 14 arrive, you know, we just don't -- I tried very hard when we were looking at crowding on 15 length of stay and stuff to see whether like 16 an uptake in acuity would matter and just 17 could not show it at all. 18 19 I know, Brendan, you have done a 20 little work, right, in this area around like 21 trauma and its effect, if you do have a couple 22 of additional trauma patients, how it is

Page 129 1 affecting emergency care, right? But I 2 haven't seen it. MEMBER CARR: You know, it strikes 3 4 me that we are, it feels to me like we are 5 talking about the distinction between capacity and operations, though. I don't know if that 6 7 is right or not. But, in my mind, the day-to-8 day is different because it is operationally 9 different, but maybe what Brent was suggesting is that we can find a common ground that says 10 2 percent is still 2 percent; 20 percent is 11 12 still 20 percent. Whether you do it right, once you can make room is an operational 13 14 issue, not a capacity issue. 15 I mean, do the boarding folks 16 think about it in those two separate silos? 17 CO-CHAIR PITTS: Anybody here boarding folks? 18 19 MEMBER CARR: Yes, I am looking at 20 them, and they are all looking at me. 21 MEMBER WEBER: I will jump in. We 22 have, and I think that has been one of the

Page 130 1 problems I was just seeing. You know, when I 2 think about disaster preparedness, it is like somebody else; it is not me. 3 I don't participate in the disaster drills because I 4 5 see myself as the person that is going to be 6 in the emergency department taking care of the 7 people that eventually somebody sorts out and 8 says need to be in the emergency department. 9 But, yet, when I think about it, 10 there is a lot of parallels. I mean, what you were describing earlier about some people are 11 12 going to have to get sent home and not get their stress test today. We do that every 13 14 day. We triage every -- we don't send people home, but we make people wait a long time 15 16 because their problems are not as, using our clinical judgment and our ESI scale, we have 17 18 decided that this person has lower likelihood 19 of a bad outcome if they wait than another 20 person waits. 21 So, the concept of triage and 22 prioritizing patients, and figuring out who

	Page 131
1	needs to move, and making capacity, you know,
2	is exactly the same, it seems to me. I don't
3	know if it would actually improve your
4	preparedness, but I would think that sort of
5	couching that, couching the two together would
6	increase the interest in preparedness and
7	possibly have some bearing on improving the
8	boarding issue. It just seems to me that they
9	are both kind of one is kind of sexy, but
10	a lot of us aren't involved in it, and the
11	other group is like, oh, that is day-to-day
12	operations. But we need to get more people
13	involved in that.
14	CO-CHAIR PITTS: So, I had a great
15	experience for six months working as an ER doc
16	in New Zealand. Just to illustrate this
17	plasticity of one's thinking, when I got off
18	the plane in New Zealand, I discharged all my
19	chest pain patients, regardless. When I got
20	off the plane in the U.S., I admitted all of
21	them to the obs unit.
22	(Laughter.)

	Page 132
1	So, what you do in a disaster, you
2	just change your moral compass, basically, and
3	you do things differently because it is a
4	disaster. I think every individual working
5	doc would do that, regardless of what you told
6	them to do, once people started to pile up.
7	MR. PINES: Just to extend a
8	little bit on what Melissa said, I think one
9	way to think about this is in terms of
10	flexibility. So, essentially, I think that
11	the way to bring this together from the
12	crowding side and the preparedness side,
13	essentially, what both are asking for is a
14	health systems flexibility to maintain the
15	same quality of care, not actually changing
16	those standards of care on days when you have,
17	like Brendan said, 20 percent more versus 2
18	percent.
19	So, essentially, when you have
20	this really abnormal day, can you maintain the
21	same level of service in the hospital? I
22	mean, I think that sort of brings it together.

	Page 133
1	What we know, I think,
2	empirically, and I think most of you in a lot
3	of your work you have shown this, there are
4	days when there are more people in the
5	emergency department. As there are more
6	people there, the length of stay for everyone
7	goes up. Essentially, that is an example of
8	a system that is not flexible; that,
9	essentially, on those busy days we
10	consistently can't flex-up our services to
11	basically maintain the same level of service,
12	which would be length of stay in the emergency
13	department or quality of care.
14	I mean, I think that is a lot of
15	what we have shown, is that during those
16	really busy days, that quality of care
17	suffers. Essentially, extending that to
18	disasters, what we are trying to do is on one
19	of those ultra-busy days, when a disaster
20	happens where we actually need external
21	resources to really help us, can we maintain
22	the same level of service.

Page 134 I think, conceptually, that is 1 2 what we are trying to do, is really link these concepts together. How do we maintain the 3 same quality during a surge of patients? 4 Ι 5 mean, basically, it works on a micro-level where you may have the bus crash, and also at 6 7 a macro-level when the Aurora happens. 8 MEMBER FIELDS: To your point, I 9 think you are probably right to be 10 uncomfortable about the way parts of the 11 hospital system would break down that are used 12 to being very efficient. I am thinking about scheduled surgeries, acute rehab. Anything 13 14 that is predictable and probably happens during business hours in the hospital, I think 15 16 that part of healthcare breaks down very 17 rapidly in these extraordinary black swan 18 situations. And probably a lot of those resources and those providers become 19 20 irrelevant. 21 But I think, at the risk of being 22 political about this, emergency nurses and

emergency physicians and the people that back them up, and acute hospitals participating in Medicare, have basically been working with a profound capacity problem, a profound mismatch of resources and services since at least 1986, if not a lot longer. So, one of the parts of the Venn

8 diagram where you will have overlap is I have absolute confidence, just thinking about who 9 10 is around the table, that when you have an extraordinary event, the people who will most 11 12 predictably be there to help with the response at the grassroots level will be emergency 13 14 nurses, emergency physicians, pre-hospital personnel, the rest of public safety, and a 15 coalition of the willing from medical staffs 16 in the community, using whatever they can 17 18 bring to bear in terms of resources. 19 I think the part that is probably 20 political about this is I think that, since it 21 is pretty well-established that crowding is 22 sort of a weird metric that demonstrates the

> Neal R. Gross & Co., Inc. 202-234-4433

## Page 135

	Page 136
1	lack of equity and smoothness about the way
2	services get provided in the acute care
3	sector, I think if you acknowledge that and
4	you can see how delays in treatment result in
5	bad outcomes, and that is also a metaphor for
6	lack of access to coverage, I think what we
7	are asking for is to recognize that there is
8	a kind of calculus here, and that if you are
9	willing to look at some of these kind of
10	ordinary, everyday disasters in both rural and
11	metropolitan areas, that the summation of
12	those represents what the society has to do to
13	respond to a black swan event.
14	One of the things that is
15	universal about that is that the people around
16	the table and the people in the emergency
17	department will be the interface between the
18	event and the response, along with pre-
19	hospital personnel. And I feel really good
20	about that. But I would feel better if we
21	could use the high priority society has given
22	to disaster response for extraordinary events

Page 137         1       to help solve everyday problems in hospitals         2       operating in marketplaces with mandates to do         3       better for their own populations of the         4       communities.         5       CO-CHAIR PITTS: Yes, Mike?         6       MEMBER STOTO: I don't like the         7       black swan analogy.         8       (Laughter.)         9       I think that the author mixes up         10       black swans and black squirrels.         11       (Laughter.)         12       Black swans are totally different         13       from everything that has happened before.         14       Black squirrels are just a little bit grayer         15       or maybe a lot grayer than normal squirrels.         16       I think that a lot of the kind of         17       emergencies that we are concerned about are         18       more like black squirrels. They are just a         19       big version of some of the things that we see.         20       If we think about it that way,         21       then we really can build on the day-to-day		
2       operating in marketplaces with mandates to do         3       better for their own populations of the         4       communities.         5       CO-CHAIR PITTS: Yes, Mike?         6       MEMBER STOTO: I don't like the         7       black swan analogy.         8       (Laughter.)         9       I think that the author mixes up         10       black swans and black squirrels.         11       (Laughter.)         12       Black swans are totally different         13       from everything that has happened before.         14       Black squirrels are just a little bit grayer         15       or maybe a lot grayer than normal squirrels.         16       I think that a lot of the kind of         17       emergencies that we are concerned about are         18       more like black squirrels. They are just a         19       big version of some of the things that we see.         20       If we think about it that way,		Page 137
<ul> <li>better for their own populations of the</li> <li>communities.</li> <li>CO-CHAIR PITTS: Yes, Mike?</li> <li>MEMBER STOTO: I don't like the</li> <li>black swan analogy.</li> <li>(Laughter.)</li> <li>I think that the author mixes up</li> <li>black swans and black squirrels.</li> <li>(Laughter.)</li> <li>Black swans are totally different</li> <li>from everything that has happened before.</li> <li>Black squirrels are just a little bit grayer</li> <li>or maybe a lot grayer than normal squirrels.</li> <li>I think that a lot of the kind of</li> <li>emergencies that we are concerned about are</li> <li>more like black squirrels. They are just a</li> <li>big version of some of the things that we see.</li> <li>If we think about it that way,</li> </ul>	1	to help solve everyday problems in hospitals
<ul> <li>4 communities.</li> <li>5 CO-CHAIR PITTS: Yes, Mike?</li> <li>6 MEMBER STOTO: I don't like the</li> <li>7 black swan analogy.</li> <li>8 (Laughter.)</li> <li>9 I think that the author mixes up</li> <li>10 black swans and black squirrels.</li> <li>11 (Laughter.)</li> <li>12 Black swans are totally different</li> <li>13 from everything that has happened before.</li> <li>14 Black squirrels are just a little bit grayer</li> <li>15 or maybe a lot grayer than normal squirrels.</li> <li>16 I think that a lot of the kind of</li> <li>17 emergencies that we are concerned about are</li> <li>18 more like black squirrels. They are just a</li> <li>19 big version of some of the things that we see.</li> <li>20 If we think about it that way,</li> </ul>	2	operating in marketplaces with mandates to do
5CO-CHAIR PITTS: Yes, Mike?6MEMBER STOTO: I don't like the7black swan analogy.8(Laughter.)9I think that the author mixes up10black swans and black squirrels.11(Laughter.)12Black swans are totally different13from everything that has happened before.14Black squirrels are just a little bit grayer15or maybe a lot grayer than normal squirrels.16I think that a lot of the kind of17emergencies that we are concerned about are18more like black squirrels. They are just a19big version of some of the things that we see.20If we think about it that way,	3	better for their own populations of the
<ul> <li>MEMBER STOTO: I don't like the</li> <li>black swan analogy.</li> <li>(Laughter.)</li> <li>I think that the author mixes up</li> <li>black swans and black squirrels.</li> <li>(Laughter.)</li> <li>Black swans are totally different</li> <li>from everything that has happened before.</li> <li>Black squirrels are just a little bit grayer</li> <li>or maybe a lot grayer than normal squirrels.</li> <li>I think that a lot of the kind of</li> <li>emergencies that we are concerned about are</li> <li>more like black squirrels. They are just a</li> <li>big version of some of the things that we see.</li> <li>If we think about it that way,</li> </ul>	4	communities.
<ul> <li>black swan analogy.</li> <li>(Laughter.)</li> <li>I think that the author mixes up</li> <li>black swans and black squirrels.</li> <li>(Laughter.)</li> <li>Black swans are totally different</li> <li>from everything that has happened before.</li> <li>Black squirrels are just a little bit grayer</li> <li>or maybe a lot grayer than normal squirrels.</li> <li>I think that a lot of the kind of</li> <li>emergencies that we are concerned about are</li> <li>more like black squirrels. They are just a</li> <li>big version of some of the things that we see.</li> <li>If we think about it that way,</li> </ul>	5	CO-CHAIR PITTS: Yes, Mike?
<ul> <li>8 (Laughter.)</li> <li>9 I think that the author mixes up</li> <li>10 black swans and black squirrels.</li> <li>11 (Laughter.)</li> <li>12 Black swans are totally different</li> <li>13 from everything that has happened before.</li> <li>14 Black squirrels are just a little bit grayer</li> <li>15 or maybe a lot grayer than normal squirrels.</li> <li>16 I think that a lot of the kind of</li> <li>17 emergencies that we are concerned about are</li> <li>18 more like black squirrels. They are just a</li> <li>19 big version of some of the things that we see.</li> <li>20 If we think about it that way,</li> </ul>	6	MEMBER STOTO: I don't like the
<ul> <li>9 I think that the author mixes up</li> <li>10 black swans and black squirrels.</li> <li>11 (Laughter.)</li> <li>12 Black swans are totally different</li> <li>13 from everything that has happened before.</li> <li>14 Black squirrels are just a little bit grayer</li> <li>15 or maybe a lot grayer than normal squirrels.</li> <li>16 I think that a lot of the kind of</li> <li>17 emergencies that we are concerned about are</li> <li>18 more like black squirrels. They are just a</li> <li>19 big version of some of the things that we see.</li> <li>20 If we think about it that way,</li> </ul>	7	black swan analogy.
<ul> <li>black swans and black squirrels.</li> <li>(Laughter.)</li> <li>Black swans are totally different</li> <li>from everything that has happened before.</li> <li>Black squirrels are just a little bit grayer</li> <li>or maybe a lot grayer than normal squirrels.</li> <li>I think that a lot of the kind of</li> <li>emergencies that we are concerned about are</li> <li>more like black squirrels. They are just a</li> <li>big version of some of the things that we see.</li> <li>If we think about it that way,</li> </ul>	8	(Laughter.)
<ul> <li>11 (Laughter.)</li> <li>12 Black swans are totally different</li> <li>13 from everything that has happened before.</li> <li>14 Black squirrels are just a little bit grayer</li> <li>15 or maybe a lot grayer than normal squirrels.</li> <li>16 I think that a lot of the kind of</li> <li>17 emergencies that we are concerned about are</li> <li>18 more like black squirrels. They are just a</li> <li>19 big version of some of the things that we see.</li> <li>20 If we think about it that way,</li> </ul>	9	I think that the author mixes up
<ul> <li>Black swans are totally different</li> <li>from everything that has happened before.</li> <li>Black squirrels are just a little bit grayer</li> <li>or maybe a lot grayer than normal squirrels.</li> <li>I think that a lot of the kind of</li> <li>emergencies that we are concerned about are</li> <li>more like black squirrels. They are just a</li> <li>big version of some of the things that we see.</li> <li>If we think about it that way,</li> </ul>	10	black swans and black squirrels.
13 from everything that has happened before. 14 Black squirrels are just a little bit grayer 15 or maybe a lot grayer than normal squirrels. 16 I think that a lot of the kind of 17 emergencies that we are concerned about are 18 more like black squirrels. They are just a 19 big version of some of the things that we see. 20 If we think about it that way,	11	(Laughter.)
<ul> <li>Black squirrels are just a little bit grayer</li> <li>or maybe a lot grayer than normal squirrels.</li> <li>I think that a lot of the kind of</li> <li>emergencies that we are concerned about are</li> <li>more like black squirrels. They are just a</li> <li>big version of some of the things that we see.</li> <li>If we think about it that way,</li> </ul>	12	Black swans are totally different
15 or maybe a lot grayer than normal squirrels. 16 I think that a lot of the kind of 17 emergencies that we are concerned about are 18 more like black squirrels. They are just a 19 big version of some of the things that we see. 20 If we think about it that way,	13	from everything that has happened before.
I think that a lot of the kind of emergencies that we are concerned about are more like black squirrels. They are just a big version of some of the things that we see. If we think about it that way,	14	Black squirrels are just a little bit grayer
17 emergencies that we are concerned about are 18 more like black squirrels. They are just a 19 big version of some of the things that we see. 20 If we think about it that way,	15	or maybe a lot grayer than normal squirrels.
18 more like black squirrels. They are just a 19 big version of some of the things that we see. 20 If we think about it that way,	16	I think that a lot of the kind of
19 big version of some of the things that we see. 20 If we think about it that way,	17	emergencies that we are concerned about are
20 If we think about it that way,	18	more like black squirrels. They are just a
	19	big version of some of the things that we see.
21 then we really can build on the day-to-day	20	If we think about it that way,
	21	then we really can build on the day-to-day
22 lessons. If we think about it and there is a	22	lessons. If we think about it and there is a

	Page 138
1	black swan that is just totally different from
2	anything we have ever seen, there really is no
3	way to learn from that. I think that the only
4	hope we have is thinking about these things as
5	black squirrels.
6	CO-CHAIR PITTS: So, squirrels are
7	smaller than swans. Is that the difference?
8	MEMBER STOTO: No, no, squirrels
9	are gray, but black is an extreme form of
10	gray.
11	(Laughter.)
12	CO-CHAIR PITTS: Would you
13	consider Aurora a squirrel or a swan?
14	MEMBER STOTO: A squirrel, yes. I
15	mean, unfortunately, people are shot all the
16	time. It is just that a lot of people were
17	shot.
18	CO-CHAIR PITTS: What are some of
19	the scenarios I know there are a number of
20	scenarios that you are interested in that
21	are not squirrels, that are big things? You
22	are talking about influenza?

	Page 139
1	MEMBER McCARTHY: SARS.
2	CO-CHAIR PITTS: SARS?
3	MEMBER McCARTHY: SARS is a
4	perfect example of we had a lot of resources,
5	but we couldn't contain. They could not train
б	personnel to contain an infection. They
7	actually had to set up one hospital to treat
8	all SARS patients because they couldn't have
9	all hospitals treating SARS patients because
10	they kept getting infected.
11	So, we learned from that, that
12	even though we had resources, we didn't have
13	the processes in place to handle that kind of
14	thing that we weren't used to doing. So, that
15	is what I worry about a little bit here.
16	Trauma is our easiest-case
17	scenario, but what happens if it was
18	infectious or it was some kind of chemical
19	hazard or radiation?
20	CO-CHAIR PITTS: Something that
21	can hurt the providers themselves.
22	MEMBER McCARTHY: Hurt the

Page 140 1 providers themselves. We don't deal with 2 those situations. MEMBER STOTO: That is not unheard 3 of or unusual. To deal with SARS, they did 4 5 surveillance. They did infection control 6 procedures. They did it at an extreme level, 7 by setting up extra hospitals. But the 8 fundamentals they did were the same kinds of fundamentals we deal with in any kind of 9 infectious disease. 10 MEMBER MacINTYRE: But these 11 12 fundamentals changed the way in which the 13 healthcare organizations operated completely. 14 MEMBER STOTO: Yes. 15 MEMBER MacINTYRE: They changed 16 the ways in which these healthcare 17 organizations operated completely versus a bus 18 accident or the Aurora shooting; you heard it 19 was over in four hours. So, it is a much 20 different animal. 21 MEMBER McCARTHY: But it took 22 months for us to get SARS. We were lucky that

	Page 141
1	it wasn't highly infectious. Had it been
2	MEMBER CARRIER: Maybe it would be
3	helpful, because disasters can present in such
4	diverse ways, maybe it would be helpful to
5	think sort of generically. Like if you
6	imagined a plot where you are X-axis was the
7	level of surge and your Y-axis was, let's call
8	it not just acuity, but maybe level of threat
9	to take into account. You know people are
10	shot. It is obviously tragic, but it is over,
11	versus something that could spiral and spread.
12	There are definitely disasters
13	that are high on both axes. In that case,
14	maybe, yes, all bets are off. You really want
15	to think you know, you may need to abandon
16	processes you thought would be useful. Maybe
17	the only benefit that the kind of coalition-
18	building we are talking about would have in
19	these situations is to build strong
20	relationships, creating a framework where
21	people could think creatively.
22	But there is a lot of stuff done

i	
	Page 142
1	on this end of the axis, high surge, low
2	acuity. You know, I trained in New York City.
3	Anthrax in New York City was three incredibly-
4	sick people and a million people wanting
5	Cipro. I mean, to me, the overlap there
6	between disaster and surge is very strong, and
7	I could definitely see a validity to combining
8	measures or thinking about measures in the
9	same framework.
10	But maybe in other areas of this
11	plot maybe trying to measure preparedness
12	through the lens of surge is not such an
13	effective approach. Or maybe we need to think
14	about different ways, measuring the strengths
15	of the relationships generally, rather than
16	the creation of particular structures or
17	processes that may be less relevant, given how
18	weird things can actually get.
19	CO-CHAIR PITTS: I think that is
20	really a cool observation. I wonder, it is so
21	cool, that I wonder if it hasn't already been
22	thought of. Has somebody

Page 143 1 MEMBER CARRIER: It is very 2 possible. 3 (Laughter.) 4 CO-CHAIR PITTS: Has somebody not 5 qot a classification of disaster that looks at multiple dimensions? 6 No? Yes? Okay. 7 Brendan? 8 MEMBER CARR: So, I don't know if 9 this will help or hurt. But I continue to be 10 intriqued about whether or not it is crowding/boarding that we think doesn't fit 11 12 into some sort of larger, summed-up to the 13 level of we still sort of don't know geography 14 coalition or if it is everything about 15 measurement of emergency care outcomes that we think doesn't fit. 16 17 So, I guess I would say, to move 18 this into a totally different space -- and I 19 get that we are not talking about this today 20 -- but to maybe take us outside of where we 21 are to say, do we instantly say that doesn't 22 apply, either?

	Page 144
1	What if I looked at I am from
2	Philadelphia what if I look at the City of
3	Philadelphia. Right now, I care about my
4	outcomes at the level of the hospital. If I
5	were to now say, well, you know, I travel all
6	over Philadelphia. Sometimes I am up north;
7	sometimes I am in the center of the City;
8	sometimes I am in the west, and sometimes I am
9	just on the outskirts, you know, in the sort
10	of southeast.
11	I would like to believe that there
12	is some coordination across that region, so
13	that if I have unplanned critical illness, my
14	outcomes are similar. I would like to think
15	that the hospitals work together to make sure
16	that, if I show up at a hospital that can't
17	take care of me, that they have thought of a
18	plan to transfer me or that they have thought
19	of a plan to bring resources to me in some
20	capacity, so that I do okay.
21	So, I guess what I am saying is,
22	are we totally uncomfortable with the idea
	Page 145
----	--
1	that we should be measuring outcomes at the
2	population level? Or are we saying, okay,
3	that might be okay; it is okay to measure
4	things at a population level, to make
5	hospitals in a region mutually-accountable for
6	my outcome, but boarding is different?
7	Maybe that complicated things, in
8	which case we could just go on and pretend I
9	didn't speak.
10	(Laughter.)
11	But, to me, it feels like we are
12	sort of saying we understand that it is a
13	competitive market. We also think that there
14	are times where you need to cooperate. And
15	hanging up a billboard that says, "Best cancer
16	care anywhere at our place. Come to our
17	place" is different than unplanned disease.
18	CO-CHAIR PITTS: I heard you and I
19	understand you, I think, but I am not sure
20	what the answer is.
21	David?
22	MEMBER MARCOZZI: Yes, I mean, I

	Page 146
1	just want to echo, in the interest of
2	transparency, Brendan and I have had this
3	discussion before. I mean, the concept that
4	he just promoted in and around trying to
5	figure out a regionalized system and trying to
6	get to the measure for unplanned acute
7	illness, so that the measure affects that
8	community, that health community, and that
9	they can respond appropriately, deliver the
10	right care at the right time to the right
11	patient, that I think is one of the pivotal
12	pieces.
13	Because, I will be honest with
14	you, we stand on, what preparedness stands on
15	is the ability to deliver you know, STEMI
16	care is now, we know where we are going to
17	transport, the closest cath place. So, we
18	stand on, the preparedness folks stand on that
19	ability, that system of care of delivery
20	today. If we get that piece right that
21	Brendan just spoke to, our job gets a lot
22	easier.

	Page 147
1	Because you don't all of a sudden
2	pull the plan off the shelf, turn to page 4
3	and go, okay, now that we are in disaster
4	mode, these are the things that I need to do.
5	You would stand on what you do today right now
6	when we are responding to a disaster, likely.
7	I mean, granted, there are shades of gray or
8	squirrels of gray or black. But, to get that
9	right, that is the foundation of what
10	preparedness stands on.
11	CO-CHAIR PITTS: Am I missing
12	somebody? Yes, Anthony?
13	CO-CHAIR STONE-GRIFFITH: I think
14	there is a temptation to look at this as sort
15	of two ends of a spectrum, daily crowding
16	surge versus disaster surge. I am falling
17	into the camp of they are very much different
18	beasts.
19	The assumptions, the motivators,
20	the willingness to bend the rules, if you
21	will, are completely different during a
22	disaster, however you are going to define

	Page 148
1	that, than day-to-day surge. The motivators
2	during day-to-day surge are, quite frankly,
3	very often economic. I am sure Jesse can
4	speak to that more elegantly than any of us
5	can, and we will hear about this this
6	afternoon.
7	But when you had your Aurora
8	incident, you bent the rules. And suddenly,
9	it was magically okay to have patients in the
10	hallway on the floor as opposed to in the
11	hallway in the ED.
12	I think when we look at those
13	assumptions and motivators and willingness to
14	comply with regulations, it is going to be
15	very hard to have measures that equally
16	reflect preparedness versus daily surge.
17	The other piece that is
18	interesting to me and it gets to your gray
19	squirrel concept is if we are responding to
20	these smaller disasters adequately, we should
21	have that different management team that
22	somebody was talking about. It would be awful

	Page 149
1	for me in my hospital if I had a mild power
2	outage, which we did have two years ago, and
3	I tried to manage that through our usual
4	committee method, where we are all going to
5	get together and sort of causally discuss
6	things, and we will have an answer in a week's
7	time. That doesn't work. You have to have
8	different methods of managing those types of
9	incidents.
10	And so, for me, the real
11	interesting, almost academic, somewhat
12	operational question is, at what point does
13	daily surge become a disaster? And there are
14	some interesting stories out there of people,
15	not a big bus rollover, not a plane crash, but
16	just a high-volume; they activate their EOP.
17	They have a different management team in
18	place, and they start to bend the rules and
19	they start to put people in hallways upstairs.
20	I think that, for me, is an interesting point
21	worthy of further investigation.
22	CO-CHAIR PITTS: Terry?

1	Page 150 MEMBER ADIRIM: Yes, great. Thank
2	you.
3	I actually agree with my
4	colleagues, Anthony and Emily, about the whole
5	gray squirrel. I don't even know what those
6	mean, but that these may be separate issues
7	and it may be useful to think of them
8	differently.
9	But, to get back to a little bit
10	of what Brendan was saying, because, actually
11	you brought up a couple of interesting points
12	when thinking about how we measure whatever it
13	is that we want to measure, I am just
14	wondering the two things that I got out of
15	what you were saying perhaps is maybe we need
16	to look at some of the previous work done in
17	coordination of care, seeing if there are any
18	measures that may be applicable or can be
19	adapted for this particular use.
20	And then, the other concept, too,
21	is determining quality across a region. You
22	know, I would imagine that you would want the

	Page 151
1	same quality of care across the region, which
2	is what I thought I heard you saying.
3	I am wondering if we are going
4	about this the wrong way. It may be better to
5	think of it as, what are we trying to
б	accomplish? What is the outcome? What is the
7	goal that you are trying to accomplish, and
8	kind of work backwards. I don't know if that
9	makes any sense, but that is sort of how I
10	would approach it.
11	CO-CHAIR PITTS: Are you talking
12	about looking at disaster responses that
13	failed?
14	MEMBER ADIRIM: Well, no. I mean,
15	well, there are two separate issues here. I
16	am talking more about the crowding and the
17	type of care that you are expecting within
18	region, either during a disaster or with high
19	numbers of patients or just every day. What
20	is it that you are trying to accomplish? What
21	are the outcomes? These would go to
22	population kind of measures. So, kind of

1	
	Page 152
1	applying the same standard, for lack of a
2	better word, across healthcare institutions
3	and kind of looking at it from what are you
4	trying to accomplish, you know, coming to
5	outcomes, as opposed to looking just
6	distinctly at the processes to some outcome
7	that you haven't defined yet.
8	Does that make sense?
9	MEMBER MacINTYRE: At least it
10	does to me.
11	MEMBER ADIRIM: Yes.
12	MEMBER MacINTYRE: And I would
13	piggyback on that and say, what are you
14	anticipating to respond to? Again, I think
15	much of the conversation trends towards surge.
16	Our facility where Jesse and I
17	work is much more likely to experience a power
18	outage, for those of you from Montgomery
19	County and the surrounding area, than it is to
20	have a surge. I am sorry, Jesse, but you are
21	not going to be able to order that CAT scan
22	when we don't have power because our CAT scan

	Page 153
1	is not hooked up to backup power.
2	So, I think we need to broaden
3	this conversation because there are things
4	that are much more likely than the bus
5	rollover and they are just as, if not more,
6	important to address.
7	CO-CHAIR PITTS: Brendan?
8	MEMBER CARR: I am tempted to sort
9	of respond to that because I do think that we
10	have to work within the confines of what we
11	been asked and funded to do, which is to think
12	about whether or not there is intersection in
13	this space. There are lots of important
14	things to address. I am not sure that we can
15	change the mandate of what NQF has been asked
16	to do here.
17	But I guess the other piece, to
18	talk to Terry, that I wanted to say, was I
19	think that we all agree that we want quality
20	for the region, quality for the U.S. to
21	improve. The way that we have gone about that
22	is by looking at the thing that was easiest to

	Page 154
1	look at, to some things at the level of the
2	hospital. That is where the data comes from.
3	It is where the accountability is. It is
4	where you can set some sort of financial
5	incentive or financial penalty.
6	But we believe that the rising
7	tide will rise all ships. So, we are trying
8	to incentivize regional health, national
9	health, community health, by incentivizing
10	hospital-based performance.
11	It is unclear to me why it feels
12	so Herculean, not from an operations
13	standpoint. I agree, as Dave said, telling
14	you how to boil the egg is not the game plan
15	here. The game plan is to sort of say, at the
16	end of the day we would like you to please
17	produce a boiled egg.
18	So, operationally, day-to-day
19	disaster, day-to-day crowding is very
20	different than I am now going to bend the
21	rules. Crisis standards of care exist for a
22	reason.

	Page 155
1	I am still stuck on why it feels
2	so different to say, "I want all the hospitals
3	in my city to have good performance metrics on
4	X" versus "I want my whole city to have good
5	performance on X."
6	CO-CHAIR PITTS: Jay?
7	MEMBER SCHUUR: I guess I am going
8	to comment on Terry's comment, which I really
9	agree with. I think we are going to talk
10	about a number of these issues.
11	I think it is very interesting to
12	think about outcomes for regionalization
13	because I think we will probably find things
14	that are very different if we look at outcomes
15	than if we look at processes.
16	And so, just thinking about my own
17	health system in the region where I practice,
18	I think there are a lot of things we are doing
19	because of market forces, because of hospital
20	integration, which are quite costly and add
21	very little value, and if looked at at a
22	regional level, at an outcome level, would

Page 156 1 sort of change the perspective. And I am 2 thinking about transferring patients, even the way we transfer patients for STEMI, 3 transferring certain patients and things like 4 5 that. 6 So, I think if it is within the 7 scope of our charge, thinking about measures 8 for regionalization, about population health, 9 but particularly thinking about value and 10 making sure that we are measuring outcomes as opposed to processes, because if there are 11 12 process measures, that is what a lot of these systems are doing right now, is responding to 13 14 the process measures that hospitals have and doing things that may shorten the door-to-15 balloon time, for example, by using 16 helicopters, send a patient a few miles to get 17 to a cath lab, where from a regional 18 19 perspective for the outcomes for that patient, 20 there are different processes that would be 21 set up and probably have the same outcomes at 22 lower cost.

	Page 157
1	CO-CHAIR PITTS: So, you are
2	saying that from the standpoint of
3	performance, I mean preparedness, the
4	performance measures ought to look at
5	integration issues and not individual hospital
б	issues?
7	MEMBER SCHUUR: This is very much
8	about Brendan's frame of sort of regionalized
9	health. Those sorts of measures, I would
10	emphasize measuring outcomes and thinking
11	about value.
12	I fall into the camp that I think
13	the preparedness issues and the measures for
14	preparedness are going to be different than
15	those for regionalized care. I think for lots
16	of us who practice in the emergency department
17	that comes from personal experience.
18	I was working the night of the
19	Station nightclub fire in Rhode Island. If
20	you had gone to the hospital the day before,
21	even earlier that day, it would be very low on
22	the level of operational efficiency, surge

Page 158 1 capacity, all of those things, and the 2 outcomes were remarkable. Of the 50 or 60 patients who showed up critically ill, one 3 patient died, essentially, who wasn't dead 4 5 when they arrived. 6 And that had to do with the people 7 who happened to be working that night, in 8 particular, the emergency department attending 9 and the trauma surgeon who sort of organized 10 everything, and there was a lot of luck involved. But I think the measures to capture 11 12 that are going to be different than the 13 operational performance measures. 14 CO-CHAIR PITTS: Arjun? 15 I think this MEMBER VENKATASH: distinction in the measures between 16 17 preparedness and some of the operational 18 performance measures that Jay just alluded to 19 and what Brendan just said, which was our goal 20 is to think about this intersection here, I 21 think one of the things that is making that 22 challenging is the directionality of the

	Page 159
1	issue.
2	So, if we took the STEMI example,
3	we could measure some sort of regionalized
4	ability to have transfer agreements. And
5	then, we can measure at a hospital level their
6	door-to-balloon time. And then, we have this
7	outcome of mortality. All of these things
8	kind of go in the same direction.
9	In the same way, we have been
10	talking about how, when crowding becomes surge
11	as a spectrum, and that goes in one direction.
12	When Jesse says, well, we should think about
13	how much flex we have, I think what becomes
14	challenging is that the operational measures
15	may not go in the same way of direction of
16	performance as the preparedness measures.
17	By that, I mean if we think of
18	whatever the unit is, be it hospital, be it
19	collaborative, be it region, that is high-
20	performing on some of the process measures we
21	have for crowding or boarding, that doesn't
22	necessarily mean that they are high-performing

	Page 160
1	for preparedness. In fact, high performance
2	for something like boarding or crowding could
3	just mean that you have got all your just-in-
4	time processes down to a point where you have
5	maximized where you want length of stay; you
6	have minimized your amount of boarding time,
7	but you actually have no flex in the system.
8	And that is a system that doesn't have a high
9	degree of performance on the preparedness
10	side.
11	And I think getting at some of
12	that tension of whether or not these measures
13	are actually going in the same direction or
14	against each other is important in thinking
15	about how measures get developed kind of down
16	the line from this.
17	CO-CHAIR PITTS: Brent?
18	MEMBER ASPLIN: I wonder if one of
19	the reasons we are struggling at the low end
20	of emergency or disasters, kind of low-level
21	disasters and daily surge is just the whole
22	fact that we have accepted boarding as a fact

	Page 161
1	of life in the country. We are talking about
2	bending the rules for low-level disasters.
3	There are no rules that prevent boarding. So,
4	I think that is why it is just such a
5	different mindset for us, because we have
6	accepted this, I think, deviant system
7	response, that it is okay to just stack
8	patients in the ER. I think if there was a
9	different mindset about that not being
10	acceptable, we would not be struggling with
11	the overlap of daily surge and lower-level-
12	volume disasters.
13	CO-CHAIR PITTS: Suzanne?
14	CO-CHAIR STONE-GRIFFITH: Yes, I
15	can't help but agree with you on that, Brent.
16	I mean, we have been measuring this for a long
17	time. Over the last two years, our number of
18	holding hours or boarding hours has really
19	risen, this last year, potentially on track
20	for a 25-percent increase, where right before
21	2009 we had a 16-percent decrease.
22	So, we are actually back where we

	Page 162
1	started. And yet, operationally, we have
2	sustained some pretty incredible improvements
3	in things like length of stay and door-to-doc
4	and volumes and things like that. So, there
5	is some day-to-day acceptance that we board.
6	And, oh, by the way, it is not just the
7	emergency department; it is throughout the
8	hospital.
9	MEMBER ASPLIN: Yes, imagine the
10	overlap
11	CO-CHAIR STONE-GRIFFITH: Right.
12	MEMBER ASPLIN: if, as part of
13	its daily operations, hospitals always had to
14	do some form of surge to prevent people from
15	staying in the ED.
16	Now Ellen can point out the
17	unintended consequences of that policy in the
18	UK, but it certainly did affect operations.
19	And from that standpoint, you would be using
20	a lot of the surge capabilities on a daily
21	basis to respond to folks in the emergency
22	department, which just doesn't occur today.

	Page 163
1	CO-CHAIR PITTS: David Levine?
2	There are two Davids, and I was looking at
3	Levine. Sorry. You're next.
4	MEMBER LEVINE: Thanks.
5	I just wanted to echo what Jay and
6	Arjun and the piece of what we are looking at,
7	these right metrics that we are looking at.
8	The difference between like the day-to-day and
9	the disaster, the patient population also
10	changes. So, we are looking to pick those
11	metrics and some of those door-to-doc times,
12	or whatever.
13	We have to be very cautious
14	because some of those less-urgent patients
15	that are crowding our waiting rooms that we
16	have deemed are okay to wait, actually, when
17	things are going on, like possibly an Aurora
18	definitely it has happened in Chicago when
19	we have had bad shoots, and whatnot is, all
20	of a sudden, the waiting room is relatively
21	empty of the non-acute patients. They have
22	already self-selected not coming to the ED.

Page 164 We have to factor that into the 1 2 care provision metrics that we are going to be using or be very cognizant of especially those 3 4 lower-acuity patients that may self-select and 5 not come when a disaster is happening. CO-CHAIR PITTS: Jesse? 6 7 MR. PINES: I just wanted to make 8 quick comment. Just to sort of refocus us, 9 again, the task today is really to come up with tangible recommendations for measure 10 developers. Essentially, what I am hearing 11 12 is, you know, I think that we are not totally there, thinking that crowding and preparedness 13 14 are not really the same. But I think there is 15 sort of broad agreement that they are related. 16 So, as you start formulating a lot of these comments, also think about, after 17 this discussion for the last hour, what sort 18 of recommendations can we make to measure 19 20 developers who are thinking about making these 21 measures, specifically in the context of 22 really linking these concepts quantitatively?

	Page 165
1	CO-CHAIR PITTS: David Marcozzi?
2	MEMBER MARCOZZI: Yes, I mean, I
3	guess that jumps right off of what Jesse just
4	spoke to around tangible recommendations for
5	measure developers. I think I am hearing
б	three different areas of interest within the
7	group.
8	The first is really what Brent had
9	spoken to around regionalized accountable
10	care. Let me just echo what Brent said. I
11	think that there is a Venn diagram here and at
12	the least they are associated; at the most
13	they are interrelated with regard to
14	overcrowding from regionalized care to
15	crowding issues to emergency preparedness
16	issues.
17	But let's speak to one very
18	tangible or try to bring a very practical
19	example. Let's do a man-down drill right now.
20	So, who owns that patient right now on the
21	street of D.C.?
22	The reason why I think we are

	Page 166
1	challenged with this discussion around
2	regionalized care, regionalized acute care, is
3	because there are so many parties involved
4	with that. The public owns a piece of that.
5	How fast? Law enforcement owns a piece of
6	that. Is there an AED close by and are they
7	in the rigs. EMS owns it, and EMS is not
8	engaged as much as it should be with regard to
9	this. And EMS really owns a majority of the
10	man-down drill issues.
11	Then, lastly, the piece of the
12	man-down drill is our healthcare facilities.
13	So, that speaks to the audience or the
14	potential components in and around those
15	regionalized care systems.
16	And then, where is the data?
17	Because if you want to develop what Jesse just
18	spoke to, tangible recommendations for measure
19	developers, well, then, where is the data? We
20	are close. We certainly have a lot of and
21	Ryan could speak to this better than I a
22	lot of hospital-associated data that could

	Page 167
1	potentially look at outcomes. We are there.
2	We are close. We could probably improve, but
3	we have got some good data there.
4	The EMS piece we actually have,
5	and no one has really had a discussion. It
6	speaks to what Jesse rolled out in his
7	NEMSIS is already there. We can, and we have
8	the ability to, start to collect data from the
9	pre-hospital environment. So, we actually
10	have to make probably NEMSIS more robust and
11	right-size-fit-it and ask the right questions
12	to it, but if you link the NEMSIS data with
13	the outcomes data that Ryan has got visibility
14	on or that we all have visibility on, then we
15	can actually speak to that regionalized
16	accountable care regionalized accountable
17	care? regionalized acute care, providing
18	acute care in a regionalized format. So, that
19	is first.
20	The second is crowding and the
21	linkage between crowding and preparedness. As
22	I said, I think there is a Venn diagram here.

	Page 168
1	But I don't necessarily, not entirely,
2	although I am hearing, I am not entirely in
3	the camp that they are two separate and
4	distinct things. I think that they are
5	interrelated, but what I think Jay just spoke
б	to on a busy day and the ability to transition
7	from a busy day in the ER to a disaster that
8	he just spoke to and responded to, I think
9	speaks to the change that we are having
10	trouble grappling with. And that is a change
11	from individual-based healthcare systems and
12	conventional delivery of care today to
13	population-based systems.
14	And you have a bunch of clinicians
15	in the room. It is very difficult
16	historically for that conversation to figure
17	out really, in essence, that is what we are
18	talking about. The tipping point of when we
19	go from individual-based healthcare and
20	overcrowding, and the pneumonia who is on the
21	floor who could have gone home, but he is
22	going to keep the bed, and the ER still is

Page 169 overcrowded, and we potentially even have a 1 2 sicker patient in the ER who still can't get 3 the bed because the pneumonia could go home, but he is up on the floor, and the doc hasn't 4 5 written the discharge instructions yet, versus breakpoint, trigger point, population-based 6 7 care where that patient immediately gets 8 discharged. Change in care, the sicker 9 patient then goes upstairs and deserves the bed. 10 And that is why we are having such 11 12 a challenge in this discussion, I think. We are waxing and waning from really the 13 14 fundamental issue here of a paradigm shift. 15 CO-CHAIR PITTS: So, we are going 16 to sort of migrate back to Jesse. He had a 17 couple of comments before we -- I quess we are breaking at noon, right? That is my 18 19 understanding. So, let's a little bit more 20 about this topic, and then we will let Jesse 21 take over for a few minutes. I was going to 22 let everybody put in their two bits and then

	Page 170
1	we will sort of fade out toward Jesse.
2	MEMBER ADIRIM: I just have a
3	quick question, going to what
4	CO-CHAIR PITTS: Yes.
5	MEMBER ADIRIM: not a question,
6	a comment with regard to what Jesse has asked
7	for, ideas for how to frame the
8	recommendations.
9	You may want to consider more than
10	one set of measures for regionalized emergency
11	care because what is coming out of this to me,
12	what it sounds like to me is that there is
13	multiple different sets that you could create
14	for this issue. So, that would be No. 1.
15	No. 2, I would encourage a look
16	at, with regard to those sets, specific
17	emergency department sets with regard to
18	coordination of care, whether or not you
19	include preparedness response in that
20	coordination-of-care set. You know, you can
21	kind of think through that. But it would be
22	coordination of care.

Page 1711And then, also, really, again,2repeat looking at this from kind of an3intermediate outcome or outcome-based-type4measure. So, that would be across a system,5as opposed to just institutions. So, those6would be a couple.7And then, I don't want Brent's8point to be lost on the boarding issue, not9that I think that should be a separate set,10but that point shouldn't be lost and that11there should be a development of measures that12go to the patient's experience. Because I13know NQF is also concerned about patient14experience from their point of view, and15boarding may not be in really good emergency16departments an issue with regard to the17quality of care because we do excellent care18for those that board, but it really is a bad19so, I think it is something that20So, I think it is something that21is definitely worth measuring, and if it is22measured, may affect changes in how hospitals		
repeat looking at this from kind of an intermediate outcome or outcome-based-type measure. So, that would be across a system, as opposed to just institutions. So, those would be a couple. And then, I don't want Brent's point to be lost on the boarding issue, not that I think that should be a separate set, but that point shouldn't be lost and that there should be a development of measures that go to the patient's experience. Because I know NQF is also concerned about patient experience from their point of view, and boarding may not be in really good emergency departments an issue with regard to the quality of care because we do excellent care for those that board, but it really is a bad experience for the patient. So, I think it is something that is definitely worth measuring, and if it is		Page 171
<ul> <li>intermediate outcome or outcome-based-type</li> <li>measure. So, that would be across a system,</li> <li>as opposed to just institutions. So, those</li> <li>would be a couple.</li> <li>7 And then, I don't want Brent's</li> <li>point to be lost on the boarding issue, not</li> <li>that I think that should be a separate set,</li> <li>but that point shouldn't be lost and that</li> <li>there should be a development of measures that</li> <li>go to the patient's experience. Because I</li> <li>know NQF is also concerned about patient</li> <li>experience from their point of view, and</li> <li>boarding may not be in really good emergency</li> <li>departments an issue with regard to the</li> <li>quality of care because we do excellent care</li> <li>for those that board, but it really is a bad</li> <li>experience for the patient.</li> <li>So, I think it is something that</li> <li>is definitely worth measuring, and if it is</li> </ul>	1	And then, also, really, again,
<ul> <li>measure. So, that would be across a system,</li> <li>as opposed to just institutions. So, those</li> <li>would be a couple.</li> <li>7 And then, I don't want Brent's</li> <li>point to be lost on the boarding issue, not</li> <li>that I think that should be a separate set,</li> <li>but that point shouldn't be lost and that</li> <li>there should be a development of measures that</li> <li>go to the patient's experience. Because I</li> <li>know NQF is also concerned about patient</li> <li>experience from their point of view, and</li> <li>boarding may not be in really good emergency</li> <li>departments an issue with regard to the</li> <li>quality of care because we do excellent care</li> <li>for those that board, but it really is a bad</li> <li>experience for the patient.</li> </ul>	2	repeat looking at this from kind of an
<ul> <li>as opposed to just institutions. So, those</li> <li>would be a couple.</li> <li>7 And then, I don't want Brent's</li> <li>point to be lost on the boarding issue, not</li> <li>that I think that should be a separate set,</li> <li>but that point shouldn't be lost and that</li> <li>there should be a development of measures that</li> <li>go to the patient's experience. Because I</li> <li>know NQF is also concerned about patient</li> <li>experience from their point of view, and</li> <li>boarding may not be in really good emergency</li> <li>departments an issue with regard to the</li> <li>quality of care because we do excellent care</li> <li>for those that board, but it really is a bad</li> <li>experience for the patient.</li> <li>So, I think it is something that</li> <li>is definitely worth measuring, and if it is</li> </ul>	3	intermediate outcome or outcome-based-type
6would be a couple.7And then, I don't want Brent's8point to be lost on the boarding issue, not9that I think that should be a separate set,10but that point shouldn't be lost and that11there should be a development of measures that12go to the patient's experience. Because I13know NQF is also concerned about patient14experience from their point of view, and15boarding may not be in really good emergency16departments an issue with regard to the17quality of care because we do excellent care18for those that board, but it really is a bad19experience for the patient.20So, I think it is something that21is definitely worth measuring, and if it is	4	measure. So, that would be across a system,
7And then, I don't want Brent's8point to be lost on the boarding issue, not9that I think that should be a separate set,10but that point shouldn't be lost and that11there should be a development of measures that12go to the patient's experience. Because I13know NQF is also concerned about patient14experience from their point of view, and15boarding may not be in really good emergency16departments an issue with regard to the17quality of care because we do excellent care18for those that board, but it really is a bad19experience for the patient.20So, I think it is something that21is definitely worth measuring, and if it is	5	as opposed to just institutions. So, those
8 point to be lost on the boarding issue, not 9 that I think that should be a separate set, 10 but that point shouldn't be lost and that 11 there should be a development of measures that 12 go to the patient's experience. Because I 13 know NQF is also concerned about patient 14 experience from their point of view, and 15 boarding may not be in really good emergency 16 departments an issue with regard to the 17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	6	would be a couple.
9 that I think that should be a separate set, 10 but that point shouldn't be lost and that 11 there should be a development of measures that 12 go to the patient's experience. Because I 13 know NQF is also concerned about patient 14 experience from their point of view, and 15 boarding may not be in really good emergency 16 departments an issue with regard to the 17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	7	And then, I don't want Brent's
10but that point shouldn't be lost and that11there should be a development of measures that12go to the patient's experience. Because I13know NQF is also concerned about patient14experience from their point of view, and15boarding may not be in really good emergency16departments an issue with regard to the17quality of care because we do excellent care18for those that board, but it really is a bad19experience for the patient.20So, I think it is something that21is definitely worth measuring, and if it is	8	point to be lost on the boarding issue, not
11there should be a development of measures that12go to the patient's experience. Because I13know NQF is also concerned about patient14experience from their point of view, and15boarding may not be in really good emergency16departments an issue with regard to the17quality of care because we do excellent care18for those that board, but it really is a bad19experience for the patient.20So, I think it is something that21is definitely worth measuring, and if it is	9	that I think that should be a separate set,
12go to the patient's experience. Because I13know NQF is also concerned about patient14experience from their point of view, and15boarding may not be in really good emergency16departments an issue with regard to the17quality of care because we do excellent care18for those that board, but it really is a bad19experience for the patient.20So, I think it is something that21is definitely worth measuring, and if it is	10	but that point shouldn't be lost and that
13 know NQF is also concerned about patient 14 experience from their point of view, and 15 boarding may not be in really good emergency 16 departments an issue with regard to the 17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	11	there should be a development of measures that
14 experience from their point of view, and 15 boarding may not be in really good emergency 16 departments an issue with regard to the 17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	12	go to the patient's experience. Because I
15 boarding may not be in really good emergency 16 departments an issue with regard to the 17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	13	know NQF is also concerned about patient
16 departments an issue with regard to the 17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	14	experience from their point of view, and
<pre>17 quality of care because we do excellent care 18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is</pre>	15	boarding may not be in really good emergency
18 for those that board, but it really is a bad 19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is	16	departments an issue with regard to the
<pre>19 experience for the patient. 20 So, I think it is something that 21 is definitely worth measuring, and if it is</pre>	17	quality of care because we do excellent care
20 So, I think it is something that 21 is definitely worth measuring, and if it is	18	for those that board, but it really is a bad
21 is definitely worth measuring, and if it is	19	experience for the patient.
	20	So, I think it is something that
22 measured, may affect changes in how hospitals	21	is definitely worth measuring, and if it is
	22	measured, may affect changes in how hospitals

	Page 172
1	operate if there are carrots and sticks
2	associated with it. So, I didn't want that
3	point to be lost.
4	CO-CHAIR PITTS: Ryan?
5	MEMBER MUTTER: So, I have been
6	thinking about Jesse's question about
7	recommendations sort of in the context of the
8	Einstein and Deming quotes at the very
9	beginning.
10	Something I am not clear on is,
11	should we recommend that developers have a
12	path to incentivize improvement in the things
13	that they measure? So, for example, I am
14	thinking about unplanned critical illness and
15	sort of care at an area level, not just how
16	good this hospital does, but how good the area
17	does, including hospitals in that area who are
18	competitors and may question why should they
19	take steps to improve care at the area level,
20	which is going to make their competitor look
21	better and make them look better, but it will
22	make their competitor look better. It may not

Page 173 1 be worth it. 2 And so, I don't know important in terms of recommending -- are we okay 3 4 recommending measures that are important, but 5 where an incentive to improve may be hard to get to, hard to identify, or do we feel that 6 7 it is important that there is an identifiable incentive that can be used to effect 8 9 improvement in that thing we measure? 10 CO-CHAIR PITTS: Helen? DR. BURSTIN: Okay. Thank you. 11 12 So, I may be the token primary care/general internist in the room, and just 13 14 a thought off of Terry's comment about integration. I think there is a real 15 opportunity to think very broadly about some 16 of the measures we already have and bring them 17 up a level in terms of level analysis. 18 So, 19 just a few thoughts on that. 20 There are a set of transfer 21 measures that were submitted years ago looking 22 at transfers for patients with STEMI. I mean,

Page 174 those might be very good measures to think 1 2 about going up a level in terms of analysis to community or region. They already exist. 3 Again, thinking about that as a starting 4 5 point. 6 You know, all the measures -- and 7 Ryan may be able to speak to some of the newer 8 work on the avoidable ED measures, if that is 9 still happening. But there are avoidable 10 hospitalization and avoidable ED measures I hope in development at AHRQ that are 11 12 community-level indicators. Again, those are not necessarily something -- I think we have 13 14 heard lots from providers who feel that that is not directly something for which they are 15 accountable solely. It has got to be a 16 community-level indicator of access. 17 18 So, those are the kinds of 19 measures I think would also be useful both for 20 just day-to-day operations, but also surge. 21 Because if you are in a community that is 22 doing a better job of not having patients who

	Page 175
1	don't need to be in the ED in the ED in the
2	first place, then you potentially have more
3	room on a regular basis to bring in other
4	patients.
5	The other thing is those ED
6	throughput measures, which I am sure many of
7	you don't terribly love, that were endorsed by
8	NQF as well, about time in the ED to admit
9	decision, but there is a piece of that puzzle
10	that is missing, which was we don't have the
11	second part of it from admit decision to being
12	on the floor. I mean, those are very logical
13	ways to get at some of the boarding issues.
14	Just one analogy, that the folks
15	at the Office of the National Coordinator have
16	been working on a measure looking at closing
17	the referral loop. So, you refer a patient.
18	Did they get a note? Did they send a note
19	back, et cetera? It just seems like there is
20	a lot of the sort of missing pieces of the
21	loop here that we haven't yet factored in that
22	we could take existing measures and build off

	Page 176
1	of them, and perhaps get that admit time to
2	boarding time.
3	And then, lastly, you know, going
4	back to Terry's point about patient
5	experience, admission through the ED is a
6	variable on HCAHPS. So, there is a real
7	opportunity and a nice research study there
8	even as well just looking at, if you can
9	actually figure out from a hospital level
10	patients who came from the ED, are there
11	variable impressions for them overall in terms
12	of their impression of the hospital, based on
13	admission through the ED, another way to
14	potentially get at some of those issues?
15	So, I think the issue of
16	integration and thinking broadly about
17	measures we already have that could be adapted
18	and modified to help satisfy these issues, and
19	perhaps not always assume they have to be at
20	the provider level of analysis, which gives
21	people hives sometimes, but think about
22	bringing them up a level, where I think you

	Page 177
1	won't have perhaps as much of the pushback
2	that we get about the issues of shared
3	accountability.
4	CO-CHAIR PITTS: HCAHPS, what is
5	HCAHPS?
6	DR. BURSTIN: Oh, I'm sorry. It
7	is the hospital experience-of-care survey that
8	is mandated.
9	CO-CHAIR PITTS: Okay.
10	DR. BURSTIN: It is actually now
11	incentivized for every hospital.
12	CO-CHAIR PITTS: Right. I have
13	heard about it.
14	Let's finish these things, and
15	then I will let Jesse take over and say a few
16	things.
17	Ellen? Mike? Sorry.
18	MEMBER STOTO: Okay. Thanks.
19	Two points. One is that most of
20	the NQF-endorsed measures really have to do
21	with, are defined in terms of some proportion
22	of patients having a good thing happen to

	Page 178
1	them. That works fine in most cases.
2	But I think that Dave is right.
3	When we talk about regional preparedness, the
4	unit really has to be at a higher level than
5	that. I think it is a different paradigm that
6	we really need to come to grips with.
7	The other point goes back to the
8	question about developing measures. We have
9	to think both in terms of what to measure and
10	opportunities to measure. When we have lots
11	of patients, we don't worry too much about
12	opportunities to measure. We focus on what is
13	the right thing to measure. But when we are
14	talking about emergencies, we don't have a lot
15	of opportunities to measure things.
16	So, that is why I think, to the
17	extent possible, that we can measure things in
18	more routine settings that have a bearing on
19	how the systems respond in emergencies, that
20	would be helpful, because there are more
21	opportunities there.
22	CO-CHAIR PITTS: You didn't want

	Page 179
1	to talk, Terry? Okay.
2	Ellen?
3	MEMBER WEBER: This is not
4	specifically to recommend particular measures,
5	but I did want to say something about the idea
6	of the individual versus population-based
7	care, because I actually think in many ways
8	many emergency physicians and probably others
9	would like to be able to think that way.
10	Having some kind of measures that allow you to
11	say, "This person really doesn't need to be in
12	the hospital, and the government stands behind
13	me and the cardiologists stand behind me"
14	(laughter) and everybody is saying that
15	this is not an indication for a
16	hospitalization, would take a lot of onus off
17	that individual physician.
18	I mean, when I was in England,
19	there was a lot of, in the emergency
20	department, is this a good use of NHS dollars?
21	Okay? The people actually thought about the
22	fact that, when you have like this four-hour

	Page 180
1	target, that actually one way to deal with
2	getting patients out of the emergency
3	department within four hours was just to admit
4	everybody, and then the hospital has to deal
5	with it.
6	But they realized, one, that was a
7	really bad use of resources and, secondly, in
8	the end it would wind up blocking their beds.
9	So, they didn't go that cynical route.
10	I think that idea is, you know,
11	one of the things that I think the American
12	healthcare system if I may wax poetic for
13	a minute we always think we have unlimited
14	resources. We are always dealing with limited
15	resources, and we are always letting somebody
16	wait, so somebody else who is sicker can go
17	forward.
18	I think we actually have to agree
19	I don't think in a disaster we are going to
20	be able give the same level of care to
21	absolutely everybody the way we do when there
22	is no disaster. But, nevertheless, I think
Page 181 1 the principles are the same, that we should be 2 having more mindset all the time about what does the admission have to do with the surge 3 capacity that I might need any day. So, I 4 5 think there is a relationship there that we 6 should be sort of maybe thinking about in our 7 measures. 8 And getting to the issue of 9 process versus outcome, I completely agree that the outcome measures might be different 10 for preparedness and for boarding. I believe 11 12 a lot of the process measures, what do you 13 have in place to anticipate a problem, goes 14 for all of this. And so, that may be where the distinction is. 15 16 CO-CHAIR PITTS: Okay. Last 17 comment, Ryan? 18 MEMBER MUTTER: I think Helen 19 invited me to give a very brief update on some 20 of AHRO's work in this area under our Quality 21 Indicators mechanism. 22 So, we completed a project where

	Page 182
1	we took AHRQ's inpatient prevention quality
2	indicators, which is basically a measure set
3	that uses what is going on in the hospital to
4	get a sense of what is happening in the
5	ambulatory care setting. We took sort of
6	those inpatient-oriented Quality Indicators
7	and tried to see if we could expand them to be
8	applied to ED data. When I say "ED data" in
9	talking about AHRQ, what I am talking about is
10	sort of administrative data based on bills.
11	That work has been completed. We are going to
12	have a working paper that we are going to post
13	on our Quality Indicators website very soon.
14	AHRQ has just begun a second
15	project the contract has been awarded to
16	Stanford to do some more measure
17	development work looking at community. It is
18	ED Quality Indicators, but, again, it is not
19	looking at individual hospitals and looking to
20	assess care in the ED. It is basically using
21	the ED as a window into the healthcare system
22	to basically look at what is going on inside

	Page 183
1	of the ED as an indicator of what is happening
2	outside of the ED.
3	As I am sure many of us do, I
4	really like Brent's model here, which is on
5	figure 1, page 7, of the Draft Report. As I
6	think about the work that we are about to be
7	doing is it about to magically appear on
8	the screen? That would be amazing.
9	(Laughter.)
10	Page 7. Scroll up just a little
11	bit, a little bit more. Oh, too far. Okay.
12	This contract has just been
13	awarded. We have only just had our first
14	preliminary meeting. So, what I am saying now
15	is preliminary and should be taken as such.
16	But my take is that our focus is
17	mostly going to be, if you look under the
18	input column, is mostly going to be in that
19	safety-net care and unscheduled urgent care
20	space, is probably what we will be doing. And
21	again, it is going to be community measures.
22	So, that is the update.

	Page 184
1	CO-CHAIR PITTS: Okay. And,
2	Jesse, did you want to be last before lunch?
3	MR. PINES: Sure. Just some brief
4	comments, and I never want to stand between a
5	big group and lunch.
6	But, again, I just wanted to thank
7	everyone. I mean, just such a great
8	discussion, and I think we have really a lot
9	of very tangible recommendations that are
10	going to come out of this.
11	What I think I have heard so far
12	is, thinking about preparedness from a
13	measurement perspective, there are some
14	potential ways to measure whether or not we
15	are prepared. Potentially, tabletop
16	exercises, thinking about some structural
17	measures of what kind of stuff that we have in
18	the event of a disaster, and, also, thinking
19	about, what Anthony said before, this is sort
20	of measuring response, which I think really,
21	from a crowding perspective and a preparedness
22	perspective, is really very different and

ſ

	Page 185
1	actually may use very different methodologies.
2	From a preparedness perspective,
3	the measurement of a response may be actually
4	very similar to a lot of the ways that we
5	would actually measure preparedness; for
6	example, using validated survey instruments,
7	you know, sort of after an event happened.
8	Because, like Mike Stoto was saying, we really
9	have no counterfactual, we never really have
10	a control group for that. So, really, you do
11	need some sort of a qualitative or rigorous
12	qualitative assessment that can be calculated
13	in a quantitative way, and that would be
14	potentially through some sort of a survey
15	methodology to make an assessment of that.
16	And then, on the crowding side,
17	really thinking about our crowding measures in
18	the context of preparedness. So, the
19	afternoon is going to be about thinking about
20	crowding measures, but, also, I don't want to
21	stop the discussion of preparedness, you know,
22	thinking about how we could potentially link

	Page 186
1	the existing measures of crowding to the
2	extent of what Helen said, I think, which is
3	fantastic, thinking about current measures
4	that NQF has that could potentially be taken
5	to a different level that would start to think
6	about like transfers at a higher level and
7	really linking the concepts together from a
8	measurement point of view.
9	And then, I think those were my
10	basic comments. Essentially, I just wanted to
11	say that I do want to continue this discussion
12	in the afternoon, really talking about
13	specifically boarding and crowding with a
14	preparedness lens, which sort of the morning
15	was preparedness in a boarding and crowding
16	lens.
17	And without any final questions,
18	final comments
19	MS. FRANKLIN: No, I just wanted
20	to pick up on Dr. Adirim's comments about the
21	framing questions. As we continue to think
22	about this through the day, what are the

Page 187 1 outcomes? What does good look like that we 2 expect to see from the measures that we are 3 going to be making recommendations about? So, just keeping that in mind as we continue our 4 5 discussion. 6 CO-CHAIR PITTS: I think you are 7 okay to go to lunch now. 8 MS. FRANKLIN: Lunch has not quite 9 appeared. 10 I'm sorry. CO-CHAIR PITTS: Ι noticed there is a public comment. 11 12 MS. FRANKLIN: Yes. I'm sorry. 13 If we have members on the call or public on the call, now we would like to hear some 14 15 comments from them. 16 THE OPERATOR: At this time, in 17 order to ask a question, press \*, then the 18 number 1 on your telephone keypad. 19 We will pause for just a moment to 20 compile the Q&A roster. 21 (Pause.) 22 At this time, there are no

	Page 188
1	questions.
2	MS. FRANKLIN: With that, I guess
3	we can go ahead and break for oh, sorry,
4	Terry.
5	CO-CHAIR PITTS: Yes, go ahead,
6	Terry.
7	MEMBER ADIRIM: Very quickly, with
8	regard to framing, I would encourage somewhere
9	in this document that, whatever measures are
10	developed or whatever sets are measured, that
11	they do keep children in mind because we are
12	so used to having to be retrofitting with
13	regard to these kinds of things. I just want
14	to make sure that, especially when it comes to
15	capabilities and measuring stuff, it is
16	different in kids. So, that is all for me.
17	CO-CHAIR PITTS: Okay. Lunch will
18	be here soon.
19	(Whereupon, the foregoing matter
20	went off the record for lunch at 11:57 a.m.
21	and went back on the record at 12:48 p.m.)
22	

	Page 189
1	A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N
2	12:48 p.m.
3	MS. FRANKLIN: Before we get
4	started, I would like to check the line.
5	Arnika, I wanted to check to see
б	if we have a Dr. Timmons on the line.
7	MEMBER TIMMONS: Yes, I am here.
8	MS. FRANKLIN: Oh, great.
9	Dr. Rapp on the line?
10	MEMBER RAPP: Yes, I am, Angela.
11	MS. FRANKLIN: Okay.
12	MEMBER RAPP: How are you?
13	MS. FRANKLIN: Great. Thank you.
14	I just wanted to make sure.
15	If either of you want to weigh-in,
16	please feel free to do so.
17	MEMBER TIMMONS: Thank you.
18	MEMBER RAPP: Sure.
19	MS. FRANKLIN: Okay. Thanks.
20	CO-CHAIR PITTS: I think Jesse
21	will start off talking about a subject he has
22	already got prepared. Thank you.

	Page 190
1	MR. PINES: Great. Thanks.
2	So, essentially, what I would like
3	to do for the next few hours here is talk a
4	little bit about some of the measurement
5	issues in crowding and boarding, but also
6	really not lose the frame of preparedness.
7	Essentially, we are going to basically go
8	through some of the current measures that are
9	out there, talk a little bit about what
10	happened back in 2008 and the measures that
11	were not endorsed.
12	We did have a fairly robust
13	discussion around Brent's
14	input/throughput/output model. Actually, I
15	think it is fantastic that AHRQ is actually
16	planning on looking at the input side,
17	specifically the unscheduled urgent care and
18	safety net, and developing some measures
19	around there.
20	And then, finally, what we are
21	going to do is, and I think really the bulk of
22	this, is going to go through each of the

	Page 191
1	recommendations in the current draft and
2	essentially think, are these the
3	recommendations we really want to have for
4	measure developers? In the context of the
5	discussion this morning, is there any way we
6	want to modify that, modify those
7	recommendations?
8	And also, at the end I do want to
9	spend some time going around the room and
10	thinking about other recommendations. And
11	other recommendations can be in the context of
12	this morning, and are other recommendations
13	that we didn't think of for the preparedness
14	section? Or are there other recommendations
15	specifically on crowding and boarding and
16	things we would want to develop for measure
17	developers?
18	So, with that, I would like to
19	basically start with thinking about crowding
20	measurement in general. This is something
21	that I have spent many years thinking about
22	and studying.

	Page 192
1	There are basically two different
2	ways to measure crowding. One is from the
3	perspective of the emergency department
4	looking at measures such as occupancy. We all
5	know, coming into an ED shift, that if you
6	come to the waiting room and there are 25
7	people in the waiting room, that it is going
8	to be crowded in the ED. That is A, and there
9	are going to probably be potentially issues
10	getting patients out of the emergency
11	department.
12	But the issue with measures like
13	that is it is difficult to generalize across
14	hospitals. And really, those are point-in-
15	time measures. A lot of the work that Melissa
16	has done has really looked at the association
17	between various levels of census and length of
18	stay. Essentially, what the literature shows
19	is that at different censuses between
20	different hospitals that is associated with
21	highly-variable differences in length of stay
22	and sort of gets at the ultimate question:

	Page 193
1	what is crowding?
2	My opinion on that is that,
3	really, the best way to measure that is really
4	looking at it from the patient perspective and
5	looking at issues of, basically, the
6	timestamps, potentially time to provider, but
7	also looking at broader timestamps such as
8	overall length of stay and the boarding time,
9	and the other measures that actually were
10	previously endorsed in 2008. Really take it
11	from the patient's perspective as opposed to
12	from the hospital's perspective in a point in
13	time.
14	Really, I think that is where the
15	future of measure development should go. It
16	would be to look at potentially re-endorsing
17	those measures; like Helen said earlier,
18	potentially thinking about where the gaps
19	exist. And do we want to start thinking about
20	other intermediate timestamps such as when a
21	patient was seen by a provider, when the
22	decision was made to admit a patient, and

think about time intervals. Some of the work that we have done has actually looked at specifically to admit to departure time across hospitals. And actually, as it turns out, a lot of hospitals will have a very long length of stay but a very short decision to admit to departure time, and also vice versa. So, I think we have also got to think about making recommendations to measure developers that really prevent gaming and really thinking carefully about what boarding actually means. I think we are going to be having a discussion about the definition of boarding, which is really if you ask the Joint

Page 194

16 Commission, which is very different if you ask 17 the stakeholders in the emergency care 18 community. So, I think coming up with a 19 uniform definition for that and a specific 20 recommendation for that will be important. 21 With that, any questions or any

22 other issues?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

	Page 195
1	(No response.)
2	So, essentially, why don't we go
3	ahead, then, and I would like to again sort of
4	review Brent's input/throughput/output model.
5	Maybe, Adeela, you could go ahead
6	and put it up.
7	So, this is really our framework
8	for this section, which is basically using
9	this conceptual framework to think about, from
10	a measurement perspective, what measures we
11	have and in an ideal world what measures we
12	would want to have.
13	On the input side, Ryan had
14	mentioned a number of measures that AHRQ is
15	developing on the input side. Actually, that
16	was one of the recommendations that came from
17	the conference call. I don't think Ryan was
18	actually on that.
19	I don't think, Ryan, you were on
20	that conference call, but that was actually
21	one of the recommendations, to think more
22	broadly about input measures and output

Page 196 measures, some of the measures that Helen had 1 2 mentioned regarding transferring patients. And I think that one of the major things we 3 could think about would be taking some of the 4 5 existing measures and trying to fit it into this framework, thinking about taking some of 6 7 the transfer measures and potentially 8 aggregating that at the level of the region. 9 Later on, we are going to be talking a little bit about accountability and regionalization. 10 So, next, what I wanted to do is 11 12 talk a little bit about the recommendations and start really opening up for discussion 13 14 around looking at the recommendations sort of one-by-one, going through the document. 15 We 16 are on page 9 here. 17 So, essentially, the first recommendation we have is that: "Quality 18 19 measure developers should ensure the validity 20 and reliability of the data used for ED 21 crowding and boarding measurement." I guess 22 the broader question is, should we add

	Page 197
1	preparedness into that recommendation? And
2	how should we frame that in a way that is
3	understandable to measure developers? I mean,
4	I guess that is sort of a general
5	recommendation.
6	Go ahead.
7	MEMBER ADIRIM: I have a question
8	about that. When you develop a measure, I
9	mean, is it required that, before putting it
10	through any kind of process, don't you have to
11	ensure validity and reliability a priori? So,
12	I am just wondering about this as a
13	recommendation.
14	MR. PINES: I think that is true,
15	but I guess for this recommendation, I mean,
16	this is sort of a general recommendation that,
17	in order to go through the NQF criteria, all
18	measures would have to be reliable and valid.
19	Are there any sort of crowding-specific ways
20	we would want to modify that recommendation or
21	just sort of leave it?
22	Yes?

Page 198 1 MEMBER STOTO: I mean, I don't 2 know the field, but what I get out of that is the sense that there are measures there that 3 no one has looked at this yet, validity and 4 5 reliability yet. So, is that right? I mean, 6 is your sense that there are potential 7 measures there that just can't get through the 8 process because they haven't been studied with 9 respect to validity and reliability? That is the implication of this to me. 10 So, actually, in the 11 MR. PINES: 12 2008 process -- and I wasn't a part of that --13 several measures actually did get through the 14 I am not exactly sure, Helen, if the process. standards have changed so dramatically since 15 16 then. 17 DR. BURSTIN: They are probably a bit more specific, a bit more precise. 18 Ι 19 don't think they have changed much. Actually, 20 Suzanne was the Co-Chair of that project. So, 21 if you have questions there --22 MEMBER ADIRIM: Speaking more to

Page 199
the measure developers should identify
already-existing measures that could be
improved and validated, to be ready for NQF,
I mean, something like that.
MEMBER MUTTER: Yes, see, I was
thinking maybe sort of along the same lines.
I was thinking what I think is along the same
line, which is sort of quality measures should
use data that is valid and reliable. So, it
doesn't sound like that you are sort of
part of the process is do this big data
validation, but use data that is valid and
reliable.
CO-CHAIR PITTS: I will continue
my policeman role here.
(Laughter.)
Arjun?
MEMBER VENKATASH: Brent I think
is actually the coauthor on a paper that
looked at timestamped data, comparing actual
charts within the ED and a tracking system.
I think that actually follows this section

	Page 200
1	well, which is probably the guidance we do
2	need to give measure developers, which is that
3	some reliability testing needs to be done
4	between the data source used for measure
5	development and the intended data sources for
6	application. Meaning that if it is developed
7	out of chart review or if it is developed from
8	an electronic tracking system that they use,
9	we have to know that there is some fidelity of
10	that in comparison to claims in which it could
11	be derived from or another data system or
12	manual abstraction. I think that is probably
13	a more specific recommendation for a
14	developer, and there is evidence base to
15	suggest that it is not always reliable.
16	CO-CHAIR PITTS: Emily?
17	MEMBER CARRIER: I had a question
18	maybe for Brent, or maybe for others, about
19	the literature on timestamps. Have the
20	timestamped chart data been studied in the
21	setting of a quality measurement or is it more
22	a study in general, just looking at process in

	Page 201
1	the absence of an ongoing quality measurement
2	and incentive program?
3	MEMBER ASPLIN: The paper Arjun is
4	referring to is the latter.
5	MEMBER CARRIER: Okay.
6	MEMBER ASPLIN: It is really
7	around process improvement and not a quality
8	measure per se. We just looked at active-
9	versus-passive timestamps, and there is a lot
10	of error in our active stamps that we have to
11	do by signing up or doing something on the
12	electronic record, and the gap between when we
13	do that and when it actually happens, if you
14	are using various active steps as proxies as
15	seeing a patient, for example.
16	I don't know how we comment on
17	this, and Mike is on the phone, but one of the
18	issues on the admin decision time to
19	departure, that a number of different parties,
20	and most recently the Measures Application
21	Partnership, had questions about was the
22	ability to game that admin decision time. I

	Page 202
1	don't want to relive this is an
2	approximately 55-minute discussion. But we
3	could get into this. I don't know that we
4	really want to go down this whole pathway.
5	But there was a specific CMS
б	directive that asked them not to use the order
7	for a bed request as the admin decision time.
8	Not universally, but by the time we grind out
9	every last ounce of energy in the room every
10	time I have had this conversation
11	(laughter) people kind of begrudgingly come
12	around to that probably is the closest we are
13	going to get, is the actual order, because
14	there is no way to quantify when a decision is
15	made in our heads. And so, that might be one
16	other piece.
17	If we look at reliability as part
18	of a directive, and a recommendation from this
19	project is to look at, compare alternative
20	methodologies for determining when the admin
21	decision time is for purposes of that
22	particular measure.

Page 203 I do believe that, because it is a 1 2 nested measure within the overall ED length of stay for admitted patients, it is a subset of 3 that larger measure, to me, the gaming is a 4 5 little less of a serious problem. Nevertheless, if we are going to have people 6 7 have some confidence in these measures, we are 8 going to have to have better data and 9 understanding of how they perform. 10 CO-CHAIR STONE-GRIFFITH: So. Brent, if I could add to that, I recall that 11 12 our group talked a great deal about the order to admit being a very specific time; whereas, 13 decision is much broader. Bed management can 14 be very specific and measured, but the bed 15 16 management process and the process in the ED 17 is not always in parallel. 18 I guess I would agree with you; 19 you talk about it being nested. And yet, we 20 are measuring these as individual things as 21 opposed to looking at them in the context of 22 that continuum. So, the length of stay, to

Helen's point, from the time I make that decision until they actually get to their bed or their place where they are going next, wherever "next" is. I mean, we don't have the whole continuum. We have really focused on the ED and not the entire hospital process in	
<pre>3 or their place where they are going next, 4 wherever "next" is. I mean, we don't have the 5 whole continuum. We have really focused on</pre>	
4 wherever "next" is. I mean, we don't have the 5 whole continuum. We have really focused on	
5 whole continuum. We have really focused on	
6 the ED and not the entire hospital process in	
7 that as well.	
8 So, those would be my thoughts.	
9 CO-CHAIR PITTS: Wes?	
10 MEMBER FIELDS: Yes, I want to	
11 follow on what Suzanne just said. I think all	
12 of us understand that crowding at best is a	
13 trailing measure of hospital capacity. If we	
14 really want to connect the dots between the	
15 discussion this morning and your ability to	
16 actually more effectively use the resources in	
17 the hospital, you probably need this framework	
18 of measurements to be inside of something that	
19 is hospital-wide, whether it is in eDocs or	
20 something else.	
21 We had a really entertaining	
22 experience. We passed a bill through the	

	Page 205
1	legislature in California three years in a row
2	asking hospitals to use the eDocs because it
3	has been established as one methodology you
4	can use to dynamically manage system status
5	and bed status. And two different Governors
6	have vetoed that bill.
7	So, I am just speaking to the fact
8	that, as long as you are looking at ED-based
9	measurements, in a way you are misrepresenting
10	the management challenge as something which
11	exists inside that department.
12	CO-CHAIR PITTS: Brendan?
13	MEMBER CARR: I was wondering
14	again, I will call them the "crowding folks"
15	because I am not really one of them to help
16	me understand what we missed with the three
17	endorsed ones. Because I feel like we could
18	get very far into the weeds on what
19	recommendations they need to make crowding
20	better, crowding measurement better, but these
21	three, to me, you know, they feel like we are
22	80 percent of the way there.

	Page 206
1	Help me to understand why we
2	need
3	CO-CHAIR PITTS: Of the three
4	different measures that CMS is proposing or is
5	using?
6	MEMBER CARR: Using, right?
7	CO-CHAIR PITTS: Yes. Yes, using.
8	MEMBER CARR: 495, 496, 497. Do
9	we need 10 more recommendations about crowding
10	measures or should we move towards crowding to
11	disaster, crowding to population?
12	CO-CHAIR PITTS: Yes, I will bow
13	to the people who are expert.
14	Yes, Helen?
15	DR. BURSTIN: I was going to just
16	reiterate what I said this morning, that I
17	think what is missing there is admit decision
18	to being in a bed upstairs, because that is
19	the other piece of the bottleneck that we are
20	never looking at. We only looking at the ED,
21	when, in fact, a lot of those patients are
22	staying in the ED because we can't make room

Page 207
for you upstairs. So, I think without that
piece of the puzzle, it is hard to get the
full picture.
I also think it would be
interesting to see what we can learn about
taking these metrics and actually trying to
look at them at a regional level. Can those
data do well at a level that is beyond the
individual provider level, which I think is
really important as well?
MEMBER CARR: The latter I agree
is critical, but I am still sort of not
understanding why my decision matters that
much if I know ED arrival time and ED
departure time.
MEMBER McCARTHY: Well, it is the

hospital, what Wes is speaking to, I think, about it is really like Ryan's idea of these primary care access. You are measuring in the ED, but you are really measuring primary care access. The boarding time is measuring hospital access, right? We are capturing it

	Page 208
1	in the ED, but it is all about the hospital
2	side. So, I think we do need that
3	information.
4	MEMBER ASPLIN: Helen, what about
5	497
б	DR. BURSTIN: Because the admit
7	time oftentimes doesn't necessarily translate.
8	I think you mean the decision to I am not
9	sure I know what "admitted" is admitted
10	time when you are in a room upstairs in a bed
11	or not? I think that is not clear to me.
12	MEMBER ASPLIN: I know the intent
13	was the departure time to
14	DR. BURSTIN: The proxy.
15	MEMBER ASPLIN: The proxy of being
16	in a bed. The delta would just be whatever
17	transit time that you had. We wouldn't call
18	them depart from the ED until they are
19	actually on their way to the bed.
20	MEMBER CARR: Can I have one more?
21	CO-CHAIR PITTS: Sure.
22	MEMBER CARR: Is the intent, then,
	Nool P. Grogg & Co. Ing

Page 209 1 to tease out what is me, right, as a 2 practicing emergency physician, ordering too many tests, ordering too many labs, being too 3 slow to make a decision versus tease out the 4 5 hospital, and the hospital not making capacity 6 for me to admit my patients? 7 And I guess, if that is the 8 intent, is that the right message? Are we all 9 in this together or should we be splitting to decide who is at fault? 10 CO-CHAIR STONE-GRIFFITH: 11 T would 12 say our original intent was really to try to understand at the point where the ED has done 13 14 everything that they can now what part is owned by really a variety of leadership forces 15 16 within the hospital and that hospital capacity 17 management. I think what has changed sort of 18 19 between the time we started this work to now 20 is where holding and boarding was so 21 significant in the emergency department, now 22 it is in a variety of places. It is more than

Page 210 1 just about the ED. It is about the PACU. It 2 is about the cath lab recovery unit. It is about the interventional radiology. 3 It is about wherever we can find a nook and cranny 4 5 and put patients. If this really needs to transcend 6 7 to being patient-centered and about the 8 availability of resources on the hospital 9 side, should this even be broadened? Because 10 now the ED is to some extent competing with boarding patients in the PACU or in some other 11 12 place. So, then, there is another pecking 13 order in play here a bit. 14 CO-CHAIR PITTS: Terry? Or, okay, AnnMarie. 15 16 MEMBER PAPA: It is no problem. Ι think it is also, too, about the coordination 17 18 of care, Brendan. We do have to own the piece 19 in the emergency department where, if the 20 physician or the provider or the nurses aren't 21 coordinating their care, so that you can get 22 it done in a timely manner -- and that piece

	Page 211
1	takes a long time, as you said earlier; some
2	hospitals have a long time from the time they
3	see the provider until the time the decision
4	is made, and others, the other way around.
5	How do you coordinate that? And
6	who does own it, so that you know exactly what
7	you are measuring and what you are going to
8	improve? Because there are ways to game the
9	system. You make a decision to admit, and
10	your decision is made at two o'clock. By the
11	time you get somebody to accept the patient,
12	it could be two hours later.
13	So, who owns that? Does the ED
14	own that because that two hours was a struggle
15	for you to find a service that wasn't capped
16	or didn't have this, or whatever, until they
17	have to leave?
18	So, I think it is really a
19	combination of the two and how we can best
20	coordinate it, so that for the patient the
21	experience that they have is the best that we
22	can give. And then, of course, the outcome.

1	
	Page 212
1	CO-CHAIR PITTS: It sounds like we
2	are having that 55-minute
3	(Laughter.)
4	MEMBER ADIRIM: Well, what I was
5	going to say, I was going to get back to what
6	Brent was saying because I was struggling like
7	Brendan was about why it has to be when the
8	physician makes the decision. So, it sounds
9	like that what you have moved to is that you
10	want to look at it from an institution
11	standpoint.
12	Then, it gets back to what Brent
13	was saying; it is when the bed was ordered.
14	I mean, right?
15	CO-CHAIR PITTS: I can tell you,
16	from pouring through the NHAMCS database,
17	which we have talked about HCUP NHAMCS, for
18	those of you who might not know, is a sample
19	it is not a sort of census of all ER
20	visits. It is a sample that is nicely
21	representative. As a consequence, it is a
22	much narrower database, not as many cases, but

	Page 213
1	a much deeper database in terms of the amount
2	of information per case.
3	It includes time intervals. Among
4	other things, it includes time of arrival,
5	time of departure, and, in theory, time seen.
6	Time seen is very difficult to get at, as you
7	can imagine, if you are looking at a true
8	national sample, not people who report to you,
9	but an actual sample of all ER visits.
10	Because in a fair number of ERs, you have a
11	hard time getting that data.
12	I think we decided on the time of
13	bed ordering. Yes, bed ordering was the
14	instruction to the surveyors. It is present;
15	you can find in about 80 percent of the cases.
16	So, that means 20 percent of the time you
17	can't, and that means it is probably hard to
18	find. That is what the national level of
19	compliance might be with that item, if it is
20	defined as the time the bed was ordered.
21	MEMBER ADIRIM: You know, not to
22	keep hammering this in, but, again, if we are

	Page 214
1	looking at it from the patient perspective,
2	then the other two measures are more
3	important. It is when they get there, when
4	they see the doctor and when they get
5	dispositioned. So, I don't think they are
6	cognizant of when the decisions are made, when
7	beds were ordered. So, I think the other two
8	measures kind of right? I mean, wrong? I
9	don't know. Does it kind of capture what we
10	are looking
11	CO-CHAIR PITTS: I will leave that
12	for the record, I am sure.
13	Okay. Jesse?
14	MR. PINES: So, I think one of the
15	reasons why CMS thought that the boarding time
16	was potentially game-able is based on some of
17	the data that we actually showed them where we
18	did a field test of these measures and
19	actually found that some hospitals will have
20	an average length of stay for admitted
21	patients, essentially, which is what the
22	patient sees, of six hours, but will have a

	Page 215
1	boarding time of two hours; whereas, some
2	places will have an average length of stay of
3	10 hours and will have a boarding time of one
4	hour.
5	So, really, it is sort of an
6	artificial number in the middle. I think that
7	it is actually very useful for hospital QA to
8	see where the delay is. Really, the purpose
9	of NQF-endorsed measures is for public
10	reporting. I guess the broader question is,
11	how meaningful is that internal QA measure,
12	really comparing between hospitals? Because
13	if you compare the hospital with two hours
14	versus one hour, it looks like the hospital
15	with the 10-hour length of stay is actually
16	performing better.
17	CO-CHAIR PITTS: Sorry, I am
18	blind. Wes?
19	MEMBER FIELDS: I just want to ask
20	a dumb question that we can sort of answer
21	later, but it relates to observation status,
22	which I also think is something which has

	Page 216
1	changed a lot since 2008. Heavy pushback on
2	appropriateness for admission from CMS for
3	Medicare patients, in particular. So, it is
4	not really clear to me whether or not the 495
5	and 497 are really only be used for patients
6	being admitted to inpatient status or if there
7	is an intention around observation services.
8	Because, potentially, I think
9	there is a lot of good things that could be
10	done both in longer-term observation units as
11	well as short-term observation units in the
12	ED. But I am really not sure how they fit
13	with the measure and with the reporting.
14	CO-CHAIR PITTS: Ellen?
15	MEMBER WEBER: Yes, I just sort of
16	wanted to speak to the value of this 497
17	because, although it may be sort of not what
18	the patient sees, it is very important to
19	changing the process. I think if you have to
20	report it, and it looks like in our hospital
21	three hours to evaluate a patient and another
22	three to four hours to get them to a bed, that
1 looks pretty crazy. 2 Actually, Australia has a three, two, one rule, which is three hours in the ED 3 and two hours for a consultant, and one hour 4 5 from the time of admission to a bed. So, they just came up with it. I have no idea if it is 6 7 evidence-based. 8 But it does suggest that, if you 9 are doing 50 percent as the workup and 50 10 percent is getting to a bed, your internal processes are really messed up. I think there 11 12 is a value to not just reporting them, but just identifying. Because, otherwise, what 13 14 will happen is people will try to shorten the whole visit, and that is not what we want to 15 16 do. We don't necessarily want to make the 17 time in the ED where you getting the workup less valuable. So, I think it is important to 18 19 say this is a bureaucratic part, and that is 20 the part that also should be measured. 21 CO-CHAIR PITTS: Kathy? Kathy, 22 yes.

	Page 218
1	MEMBER ROBINSON: Thank you.
2	I guess in thinking about this
3	particular recommendation, I am struggling to
4	think about crowding and boarding when there
5	really has not been any discussion about
6	another piece of that, which to me is
7	ambulance diversion, the amount of time that
8	it takes to offload patients from an EMS
9	stretcher to an ED stretcher sometimes. And
10	if we are talking about patient experience, a
11	greater picture really encompasses those other
12	elements.
13	CO-CHAIR STONE-GRIFFITH: Yes, so
14	very true.
15	Brent?
16	MEMBER ASPLIN: This is a little
17	response to Jesse's question. I mean, to me,
18	if we could figure out a way that we were more
19	confident about the reliability of the admin
20	decision time, that would help us sort out
21	trends over time in output-related factors, in
22	hospital access, boarding, et cetera, and this

	Page 219
1	growing phenomenon that you and Steve and
2	others just nicely pointed out in the new
3	paper this year around how the throughput
4	section of the model is starting to drive a
5	lot of our congestion and problems. And that
6	is probably growing at least as fast, in many
7	settings faster, over the last six years,
8	three to six years, than the boarding piece of
9	it, with all the imaging, intensity of
10	workups.
11	I think that bucket is actually
12	going to have tremendous pressure on it with
13	the readmissions reduction program and with
14	the move towards global payments. Because I
15	can tell you that, as a Pioneer ACO, we are
16	going to try to work as hard as we can to
17	create alternative pathways to
18	hospitalization, kind of like we talked about
19	at our conference a couple of years ago.
20	I think this whole diagnostic
21	phase is going to go faster than the boarding
22	problem over the next 10 years. And knowing

Page 220 admin decision time and having both 95 and 97 1 2 helps you sort out, because that is the pendulum, as Ellen points out, or the marker 3 at which point there is a transition between 4 5 the diagnostic pieces and the waiting-for-thebed pieces. There might be some value in 6 seeing that over time. That is my best guess 7 8 as an answer to your question. 9 CO-CHAIR PITTS: Okay. So, that was about -- I am trying to get my own mind 10 organized here -- that was about validity and 11 12 reliability of these measures, or the data, I 13 suppose. 14 And Recommendation 2 was that: "Developers should explicitly define the 15 timestamp." So, which exact interval should 16 we be talking about? And we actually talked 17 on it already, I think. 18 19 Suzanne, I know I have heard you 20 talk about that, that within HCA you have a 21 fairly-uniform way of defining that, that is 22 not the time that bed was ordered. Is that

1	
	Page 221
1	right?
2	CO-CHAIR STONE-GRIFFITH: We
3	actually separate it from bed-ordering time
4	because we would like to encourage bed
5	notification in the system. So, if I say,
6	"Hey, don't tell anybody upstairs that we are
7	going to need four ICU beds until the patient
8	is wrapped up with a bow and I am allowed to
9	put that order in," how do we commission
10	resources upstairs? Back to that just-in-
11	time, I might need to call a nurse in or not
12	let a nurse go home early or think about other
13	factors.
14	So, we think of them as very
15	interdependent but running on a parallel path.
16	So, as opposed to ordering a bed, we use an
17	order to admission or an order to admit, which
18	is what we think of as a complete statused
19	order. I have to have a date and a time. I
20	have to have an accepting provider. I have
21	got to have a bed type and the status of that
22	patient. When I have that, then I put in the

Page 222 bed order. 1 2 But that is not what is everywhere or what is being used. And I would even say 3 in our own company it is a nine-step process 4 5 to make this happen. So, it is by no means 6 easy. 7 CO-CHAIR PITTS: Right. 8 Helen, how exactly is that defined 9 in the NQF -- or you are looking for it? 10 Okay. 11 DR. BURSTIN: I have got the specs 12 open right now. 13 CO-CHAIR PITTS: Okay. 14 DR. BURSTIN: It is very unclear, 15 but we will share them with folks. There is an entire algorithm that is associated with 16 the measure, but we will see if we can figure 17 18 it out. 19 CO-CHAIR PITTS: So, I mean, it is 20 really hard, if you are doing a national 21 survey like NHAMCS, to instruct the surveyors 22 on what to look for. It could lead to pretty

Page 223 radically-different results. 1 2 I think there is a time that you decide to admit. There is a time the bed was 3 requested. There is a time that a bed was 4 5 received. And there is also the time when you have got hold them and intending to admit the 6 7 patient. 8 So, the one that we have actually tried to use is the time when the bed was 9 requested, right? Right. 10 And keep in mind, you know, this 11 12 is not the UK or it is not Australia. We have a million different ways of documenting stuff 13 14 in the U.S. And so, which thing is most likely to be found in a chart? I think in a 15 paper chart, the old paper chart, we used to 16 write "admit to," you know, time it. 17 18 What is everybody's feeling about 19 There are quite a few people who still that? 20 use paper charts. I mean, typically, nurses, 21 the documentation is better than the doctors. 22 You know, doctor in the room, doctor out of

	Page 224
1	the room with a timestamp there.
2	What is your impression about the
3	best way to get universal responses, given our
4	current system?
5	MR. PINES: So, also, just to
6	clarify, in the current version we did mention
7	two consensus groups that did actually come up
8	with consensus measures for a lot of these
9	timestamps, one of which was convened through
10	the ENA and actually a separate one through
11	EDBA. That will be included as part of this.
12	But, essentially, I think it is
13	important to have explicit definitions. I
14	think there is no disagreement there. I think
15	in the 2008 measures it is not totally clear
16	exactly what the decision to admit is, whether
17	that is the administrative bed or you see
18	someone, an 80-year-old with chest pain pops
19	up on the tracking screen, and you sort of
20	know that you are going to admit him. What
21	does that actually mean?
22	And also, just to expand the

	Page 225
1	discussion a little bit, I want to talk a
2	little bit about the boarding time because
3	this has been something that has been very
4	controversial. Specifically, when does
5	boarding start and when does this group really
6	want to start boarding?
7	There have been a number of
8	definitions out there. The Joint Commission
9	Patient Flow Standard, the definition is four
10	hours after the decision to admit. And that
11	is also varied between these other documents
12	from two hours to some of the documentation
13	says that it is right after the decision to
14	admit.
15	CO-CHAIR STONE-GRIFFITH: Jay?
16	MEMBER SCHUUR: So, just as a
17	point of information, I think what 497, the
18	current CMS specs are essentially that the
19	timestamp for decision to admit represents the
20	physician's decisions and actions thereof, but
21	it is not the admit order. If you read the
22	definitions, it is inherently difficult. It

Page 226 1 is inherently subjective. 2 So, my specific comment would be, could the recommendation be that the NOF or 3 some organization comes up with consensus 4 5 standards around this? Because I think if we 6 leave it up to measure developers, the issue 7 is there are these two papers. I was on one 8 of them. A number of people here were on one 9 or the other. 10 We came up with different standards for a couple of timestamps. And so, 11 12 if it left up to measure developers, are we going to have a whole bunch of well-designed 13 14 measures, but still not agreement on the actual timestamps? 15 DR. BURSTIN: And that could be 16 17 one output of this group. I mean, if you 18 think that is appropriate to try to put in 19 this report for ASPR, we would be delighted to 20 try to use this group to try to hone-in on 21 those definitions. 22 CO-CHAIR PITTS: Okay. Great.

	Page 227
1	MEMBER McCARTHY: I think it is
2	worth it, even though it may not be as precise
3	as we want it. We should just try to come up
4	with it. Boarding is really important.
5	DR. BURSTIN: And keep in mind,
6	these things could be subject to change. As
7	something changes in the environment, we can
8	do it. We did it probably about three or four
9	years ago around definitions and calculations
10	of medication adherence because there are so
11	many different definitions. We just had our
12	mid-management committee spend hours, and they
13	just put it out there. At least for now, we
14	seem to be getting all the measures in the
15	same format, which does help at least reduce
16	the noise in the measurement system, as
17	opposed to trying to get the real quality
18	signal.
19	MR. PINES: And also, I think one
20	of the things that we are planning as part of
21	this document is to do a side-by-side of the
22	two systems that are out there, the ENA and

	Page 228
1	the EDBA documents. We can potentially come
2	up with some recommendations about reconciling
3	those documents.
4	CO-CHAIR PITTS: Well, just a
5	quick question. What were the pros and cons
6	of the four hours versus the two hours? I
7	think NQF does have some input on that. Was
8	there a recommendation by NQF at all to do
9	that? No? It is just JCAHO? Okay, yes.
10	Then, I won't get into that. Thank you.
11	Brent, do you have something?
12	MEMBER ASPLIN: Well, along that
13	line, I mean, to me, if we could get the admin
14	decision time figured out, that is the beauty
15	of 497, which is you are just measuring it.
16	Because, again, taking it from a
17	patient's perspective, you know, once you are
18	told you are being admitted, as far as you are
19	concerned you are waiting to be admitted.
20	There is nothing magical that is going to
21	happen at two hours, that you are suddenly
22	going to go, "Wow, I was waiting for a bed,

	Page 229
1	but now I am boarding."
2	(Laughter.)
3	So, that is where I have always
4	been in the you know, there is going to be
5	a certain amount of boarding with each
6	admission. "Boarding" doesn't have to be a
7	bad word. I mean, we just want to track it,
8	record it, and really long times aren't good.
9	If you are thinking about it from a patient's
10	standpoint, as soon as you start waiting, that
11	is when it starts.
12	But I don't know; that has
13	fluctuated depending on group, and various
14	groups have chewed on it. Some people really
15	want to have the boarding term itself
16	connotate something bad. And the folks that
17	are in that camp and several people in the
18	room may be, so that is fine that is where
19	the drive has been to you can't have it
20	start at zero because, then, everybody will
21	have a boarding for transition time. I just
22	have not gotten caught up in that personally.

1	
	Page 230
1	CO-CHAIR STONE-GRIFFITH: I think
2	the Joint Commission has stated on several
3	occasions that they are worried about the
4	negative consequences of the transition in
5	care from, let's say, the emergency department
6	to the floor. But we really haven't wrapped
7	any quality around that handoff or that
8	transition. We haven't said, if you are I
9	don't know an abdominal pain and you
10	boarded four hours in the ED to go to a
11	telemetry floor, what is the downstream
12	consequence of that versus two hours? We
13	really haven't wrapped anything from a quality
14	around that.
15	I mean, we have in some patient
16	types, like getting someone quickly to a cath
17	lab or some of the impacts of long boarding.
18	But, in terms of putting a timestamp on it, I
19	am with you, Brent; I would say let's just
20	look at it and see what that looks like over
21	time. I don't know how magical four hours or
22	two hours or one hour is.

	Page 231
1	MEMBER ASPLIN: Well,
2	theoretically, for any given condition and
3	the shape of the curve will be different
4	but you could see an optimal outcome,
5	transition time, to allow for transition of
6	information and exchange and all that, where
7	transitions that occur prior to that time
8	could have adverse outcomes because there
9	wasn't enough time to prepare or exchange
10	information.
11	And then, obviously, we have seen
12	data around really extended time periods
13	before they move up, where, again, quality
14	starts to fall. So, it is sort of an arc of
15	outcomes, which is going to depend on
16	diagnosis as to what the optimal shape is.
17	CO-CHAIR PITTS: I think that the
18	pharma criteria also had subsets for mental or
19	behavioral categories. I will just note this
20	as an aside, and based on analysis I have
21	done, that it looks to me like almost that the
22	entire anomaly with psych disorders has to do

Page 232 with transfer rather than admission. 1 The way 2 it is phrased right now, it looks like transfer is not a consideration. 3 In fact. there is no difference between admitted 4 5 patients with psych disorders and regular patients without psych disorders. But if you 6 7 look at transfer, there is no admission, so 8 you don't think of boarding. That is where all the difference is. 9 10 DR. BURSTIN: Just one more point of information. It turns out that this was a 11 12 measure that was endorsed as time-limited. They actually had additional time to test the 13 14 We are actually expecting the measure. results any day now. So, it might be really 15 useful to share back with this group those 16 testing results and see if, in fact, there is 17 18 an opportunity to see whether they are getting 19 it right. 20 I did, actually, pull up the 21 detailed specs. You are absolutely right, it 22 does have strata, one of which is the global

	Page 233
1	score, one of which is the psychiatric
2	population, one of which is patients formally
3	admitted to observation, and all those. So,
4	there was those strata. Again, we will have
5	to see how that plays out in testing.
6	CO-CHAIR PITTS: Okay. So, the
7	next topic here would be about risk
8	adjustment.
9	MEMBER STOTO: Can I
10	CO-CHAIR PITTS: Oh, sure, yes.
11	Sorry.
12	MEMBER STOTO: Sorry. As you
13	know, I am an outsider to this field, but I am
14	sitting here thinking, what does the
15	discussion have to do with regionalization,
16	which I understand to be and maybe it
17	doesn't. But, then, the last comments here
18	you made about transfer, it sounds like maybe
19	it is. So, I think it would be helpful to be
20	more explicit about these issues.
21	CO-CHAIR PITTS: Well, yes, it is
22	certainly related to our ability to transfer
	Nool P. Grogg & Co. Ing

	Page 234
1	patients within communities. I mean, the
2	community capacity for handling psych problems
3	determines to a great extent the amount of
4	boarding in my hospital.
5	Wes?
6	MEMBER FIELDS: Yes, I just want
7	to follow without perseveration here. But I
8	really think we are, in 2012 and looking
9	forward, probably in jeopardy of measuring
10	things we shouldn't be measuring or putting
11	out metrics which people will respond to in
12	the hospital industry that they probably
13	should ignore.
14	For example, I think there are
15	probably three components of crowding that
16	have been pretty well-established. One is the
17	low-acuity patient who potentially could be
18	seen in a community setting. The other is the
19	patient who is typically a Medicare
20	beneficiary waiting for an inpatient bed.
21	But the third, which I think we
22	really need to be encouraging researchers to

	Page 235
1	look at, is other dispositions within the
2	community. I think in my practice, whether or
3	not a senior is capable of going to assisted
4	living who previously was living independently
5	but failing, that is a pretty big deal.
6	Working through that transition of care takes
7	time.
8	I think that it is instructive
9	that England has pulled back from the four-
10	hour rule. I think trying to tell hospitals
11	to hurry up to make their decision is not
12	necessarily the right incentive.
13	There is a substantial
14	entrepreneurial hospital operator in
15	California whose name will go unmentioned, who
16	OIG is currently investigating, because he
17	does such a great job of admitting a whole lot
18	of patients who meet InterQual criteria within
19	two hours. It just turns out that the gaming
20	is on the inpatient documentation about the
21	medical necessity for the admission.
22	So, I just feel like there are

	Page 236
1	other dispositions which are valuable and
2	which would actually reduce cost that we are
3	not measuring. I think that any population,
4	and the behavioral health population is
5	another great example, really what Brent and
6	others need to work on is the reiteration of
7	the throughput model that looks at population
8	subsets and looks at payer classes. Because
9	what the appropriate transition of care is
10	really depends on both where they fit in a
11	subpopulation by diagnostic category or
12	disease or degree of comorbidity, but it also
13	depends on their payer class.
14	I just feel like these are not
15	adequate measures for a complex problem. I
16	also feel like potentially, even if it in the
17	short-term aggravates the crowding problem, we
18	may be able to add value substantially by
19	doing a lot of services in the emergency
20	department or in an observation area that were
21	previously done in inpatient status. I think
22	that is worth a really hard look.

	Page 237
1	CO-CHAIR PITTS: Ellen?
2	MEMBER WEBER: I was just going to
3	say, regarding the question of boarding, I
4	wanted to make sure I understood, we are
5	talking about when does boarding start, not
6	what the harms of boarding are. And I think
7	that we need to keep that distinction clear.
8	I think, actually, the greater
9	harm is the lack of clarity about who is in
10	charge of the patient during that transition.
11	That is why the four hours is just awful,
12	because it is like, well, if you are not
13	boarding until four hours, who is in charge of
14	you?
15	We actually, I think, several
16	years ago had a Joint Commission inspection,
17	and they said, "Well, who is in charge of the
18	patient during that first couple hours?" We
19	really had to kind of sit down and decide at
20	what point does the admitting doctor actually
21	take over the care. So that, if there is a
22	problem, someone is in charge.

	Page 238
1	So, I think it is an argument for
2	making the time to begin the definition of
3	boarding short. It doesn't mean that boarding
4	for three hours is bad. It probably is, but
5	it is probably like, well, okay. But we
6	shouldn't allow a four-hour because we
7	don't want to penalize somebody on the other
8	end. Because the lack of clarity at the
9	beginning of the transition is the highest
10	quality risk.
11	And I would totally agree, I mean,
12	one other way to think about it is that, if
13	you are going to be put in the hospital, it is
14	true that there might be an alternative and we
15	get you home. Great. But that time could be
16	short because you are going to be in the
17	hospital; we don't have to do a whole lot of
18	stuff right now. Whereas, if you are going
19	home, you know, that might be a longer period
20	of time, and that is where our value-added is.
21	So, let's figure out where we can do something
22	versus where the hospital can do something.

Page 239 1 CO-CHAIR PITTS: Emily? 2 So, I think this MEMBER CARRIER: 3 is just taking what Wes and I have been saying one step further. I mean, what we have been 4 5 talking about in these matters today are 6 So, are there outcomes that we processes. 7 could identify that would capture what is bad 8 about boarding, what is bad about being stuck 9 in the ED for a long time, when the length of 10 stay is not being driven by specific clinical issues that are being addressed as efficiently 11 12 as possible? Are there outcomes that could capture this, so we are not stuck with this 13 14 blunt instrument of processes? 15 CO-CHAIR PITTS: Patient 16 satisfaction? 17 Jay? 18 So, a quick MEMBER SCHUUR: 19 response to Wes, I think the answer is not to 20 not measure these processes because, still, at 21 many hospitals the performance on these, it is 22 not where we think it should be, and it is

	Page 240
1	just not visible within the hospital
2	administration.
3	I think the answer is to develop
4	measures for the examples you give. So, if
5	there are measures for how we care for
6	transitioning older adults to home, and have
7	measures around that, then we can measure
8	those important pieces of care.
9	MEMBER FIELDS: I actually think
10	that is also the outcome question answer that
11	Emily raised. Ultimately, this stuff makes a
12	lot more sense in terms of actually improving
13	the quality of population health and reducing
14	cost if it is diagnosis-specific or condition-
15	driven. I don't think it is one-size-fits-all
16	anymore.
17	CO-CHAIR PITTS: Okay. Jesse says
18	he knows something about risk adjustments.
19	MR. PINES: Great discussion on
20	boarding.
21	Next, I want to talk a little bit
22	about risk adjustment and really how the data

1	
	Page 241
1	should be reported. We did a paper a couple
2	of months ago in Annals that basically looked
3	at the previous NQF-endorsed measures in the
4	NHAMCS data and actually found that at the
5	hospital level there were actually a number of
6	exogenous factors that really went beyond ED
7	volume. For example, the case mix in the
8	emergency department and many other factors
9	were directly associated with the length of
10	the stay and the waiting time and a number of
11	other measures.
12	So, really, the question here is,
13	how should these data be reported? In the
14	current version of Hospital Compare and the
15	2008 measures, they recommended unadjusted
16	median as a way to report the data.
17	So, what I want to talk about next
18	is what sort of risk-adjustment methodology
19	should potentially be developed. Can we use
20	existing data? For example, one of the things
21	that they do in Canada, Canada reports data
22	using stratified by the CTAS score, which is

Page 242
Canada, it
e uses CTAS,
. There is
ge systems.
end five
Regardless
, tertiary
ural
length of
r may be
that is why
as written.
unadjusted
ed. In
ever, there
f some
ogy, which
ly,
about maybe
iage

	Page 243
1	CO-CHAIR PITTS: Suzanne, you are
2	fixing to hit the button? Do you have
3	something to say? No? Oh, I'm sorry.
4	Yes, Jay?
5	MEMBER SCHUUR: So, I would
6	suggest, my comment here is I would suggest,
7	rather than risk-adjusting, just reporting
8	stratified data. It is maybe just sort of
9	semantics, but rather than adjusting the
10	actual numbers, just make people report it
11	based on whatever metric you are going to
12	stratify by, because I think it is going to be
13	very difficult to truly risk-adjust.
14	And the second comment is I would
15	not recommend using a triage criteria to do
16	that because I think there are a lot of
17	operational improvements that have essentially
18	gotten rid of triage. Either it means people
19	have to use traditional triage or the data you
20	are going to get is actually not particularly
21	important.
22	MR. PINES: Yes, and also, just to

	Page 244
1	clarify the stratification, we actually tried
2	to create a simple stratification system.
3	What EDBA uses is just is it volume-stratified
4	in like 20,000-visits-per-year categories.
5	And essentially, what we found was that that
6	is predictive of length of stay in other
7	measures, but actually doesn't capture even a
8	fraction of the variation. Actually, the case
9	mix was more important.
10	CO-CHAIR PITTS: Yes. So, I was
11	really excited by that. What might you use
12	instead of triage category? Have you
13	considered actual potential things?
14	MEMBER SCHUUR: I would suggest
15	visit volume and case mix index or some
16	measure of disease acuity. I think it is
17	going to be tough to get, from the datasets we
18	have now, to get severity.
19	But I wouldn't want to overadjust
20	because I think this whole issue with hospital
21	readmission or all these things, how much do
22	is the hospital on the hook for these

	Page 245
1	processes? My personal bias is that hospitals
2	should be more on the hook than we should
3	risk-adjust for patient factors.
4	CO-CHAIR PITTS: I'm sorry. Case
5	mix index, is that a formal term? I don't
б	know what it means. Or what is that?
7	MEMBER SCHUUR: I mean, there is a
8	formal CMI classification that is used in
9	calculating Medicare rates and other things.
10	So, that is one method that can be used.
11	CO-CHAIR PITTS: AnnMarie?
12	MEMBER PAPA: And I was going to
13	ask you about that as well because the CMI for
14	the hospital is the hospital CMI. Depending
15	on what your admission rate is from the ED, it
16	could really fall through.
17	How about your facility code,
18	which is really how your facility is billing
19	for the acuity of care that you are providing
20	in the emergency department as opposed to your
21	triage rate? That probably is a better
22	measure of exactly what resources that the

Page 246 patient used. 1 2 I mean, I think CMI is fine, but 3 in a hospital like ours at Penn we have a high CMI, but we have a lot of cardiac surgery. I 4 5 rarely see those cardiac surgery patients in the ED. So, just a thought. 6 7 CO-CHAIR PITTS: And it is only 8 CMS patients, right, or everybody? MEMBER PAPA: Only CMS patients 9 for -- CMI is your Medicare reimbursement. 10 That is how Medicare --11 12 CO-CHAIR PITTS: So, it is only calculated from the Medicate patients? 13 14 MEMBER PAPA: For that. But your 15 facility codes, every patient in the emergency department has a facility code. 16 17 CO-CHAIR STONE-GRIFFITH: I think 18 in some places now the facility code is 19 probably only -- while it may be consistently 20 applied, it is probably only 40 percent of the 21 story. I think some of the other folks have 22 used the physician E&M code for that very

Page 247 1 reason, because the hospital is only 60 2 percent of the HCPC. But you can't get to 3 that. 4 CO-CHAIR PITTS: Ryan? 5 MEMBER MUTTER: One thing you have 6 got to watch out with CMI, too, is that 7 critical access hospitals, of which there are 8 1200, don't have it. So, you may end up 9 having to be a bit more blunt and use hospital 10 characteristics, sort of teaching status and 11 things like that. 12 CO-CHAIR PITTS: Jay? Oh, I'm 13 sorry. Brent? 14 MEMBER ASPLIN: So, is this recent 15 thread in an effort to do a stratified cohort, 16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to 22 create a simple stratification system with		
2       percent of the HCPC. But you can't get to         3       that.         4       CO-CHAIR PITTS: Ryan?         5       MEMBER MUTTER: One thing you have         6       got to watch out with CMI, too, is that         7       critical access hospitals, of which there are         8       1200, don't have it. So, you may end up         9       having to be a bit more blunt and use hospital         10       characteristics, sort of teaching status and         11       things like that.         12       CO-CHAIR PITTS: Jay? Oh, I'm         13       sorry. Brent?         14       MEMBER ASPLIN: So, is this recent         15       thread in an effort to do a stratified cohort,         16       use cohorts to report the data? Or is this         17       thread to actually stratify it at an         18       individual patient level? Because I agree         19       with Jay.         20       MR. PINES: So, again, just to         21       clarify what we did, we actually tried to		Page 247
3       that.         4       CO-CHAIR PITTS: Ryan?         5       MEMBER MUTTER: One thing you have         6       got to watch out with CMI, too, is that         7       critical access hospitals, of which there are         8       1200, don't have it. So, you may end up         9       having to be a bit more blunt and use hospital         10       characteristics, sort of teaching status and         11       things like that.         12       CO-CHAIR PITTS: Jay? Oh, I'm         13       sorry. Brent?         14       MEMBER ASPLIN: So, is this recent         15       thread in an effort to do a stratified cohort,         16       use cohorts to report the data? Or is this         17       thread to actually stratify it at an         18       individual patient level? Because I agree         19       with Jay.         20       MR. PINES: So, again, just to         21       clarify what we did, we actually tried to	1	reason, because the hospital is only 60
<ul> <li>CO-CHAIR PITTS: Ryan?</li> <li>MEMBER MUTTER: One thing you have</li> <li>got to watch out with CMI, too, is that</li> <li>critical access hospitals, of which there are</li> <li>1200, don't have it. So, you may end up</li> <li>having to be a bit more blunt and use hospital</li> <li>characteristics, sort of teaching status and</li> <li>things like that.</li> <li>CO-CHAIR PITTS: Jay? Oh, I'm</li> <li>sorry. Brent?</li> <li>MEMBER ASPLIN: So, is this recent</li> <li>thread in an effort to do a stratified cohort,</li> <li>use cohorts to report the data? Or is this</li> <li>thread to actually stratify it at an</li> <li>individual patient level? Because I agree</li> <li>with Jay.</li> <li>MR. PINES: So, again, just to</li> <li>clarify what we did, we actually tried to</li> </ul>	2	percent of the HCPC. But you can't get to
5       MEMBER MUTTER: One thing you have         6       got to watch out with CMI, too, is that         7       critical access hospitals, of which there are         8       1200, don't have it. So, you may end up         9       having to be a bit more blunt and use hospital         10       characteristics, sort of teaching status and         11       things like that.         12       CO-CHAIR PITTS: Jay? Oh, I'm         13       sorry. Brent?         14       MEMBER ASPLIN: So, is this recent         15       thread in an effort to do a stratified cohort,         16       use cohorts to report the data? Or is this         17       thread to actually stratify it at an         18       individual patient level? Because I agree         19       with Jay.         20       MR. PINES: So, again, just to         21       clarify what we did, we actually tried to	3	that.
6       got to watch out with CMI, too, is that         7       critical access hospitals, of which there are         8       1200, don't have it. So, you may end up         9       having to be a bit more blunt and use hospital         10       characteristics, sort of teaching status and         11       things like that.         12       CO-CHAIR PITTS: Jay? Oh, I'm         13       sorry. Brent?         14       MEMBER ASPLIN: So, is this recent         15       thread in an effort to do a stratified cohort,         16       use cohorts to report the data? Or is this         17       thread to actually stratify it at an         18       individual patient level? Because I agree         19       with Jay.         20       MR. PINES: So, again, just to         21       clarify what we did, we actually tried to	4	CO-CHAIR PITTS: Ryan?
<pre>critical access hospitals, of which there are l200, don't have it. So, you may end up having to be a bit more blunt and use hospital characteristics, sort of teaching status and things like that. CO-CHAIR PITTS: Jay? Oh, I'm sorry. Brent? MEMBER ASPLIN: So, is this recent thread in an effort to do a stratified cohort, use cohorts to report the data? Or is this thread to actually stratify it at an individual patient level? Because I agree with Jay. MR. PINES: So, again, just to clarify what we did, we actually tried to</pre>	5	MEMBER MUTTER: One thing you have
<ul> <li>8</li> <li>1200, don't have it. So, you may end up</li> <li>9</li> <li>9 having to be a bit more blunt and use hospital</li> <li>10 characteristics, sort of teaching status and</li> <li>11 things like that.</li> <li>12 CO-CHAIR PITTS: Jay? Oh, I'm</li> <li>13 sorry. Brent?</li> <li>14 MEMBER ASPLIN: So, is this recent</li> <li>15 thread in an effort to do a stratified cohort,</li> <li>16 use cohorts to report the data? Or is this</li> <li>17 thread to actually stratify it at an</li> <li>18 individual patient level? Because I agree</li> <li>19 with Jay.</li> <li>20 MR. PINES: So, again, just to</li> <li>21 clarify what we did, we actually tried to</li> </ul>	6	got to watch out with CMI, too, is that
<ul> <li>having to be a bit more blunt and use hospital</li> <li>characteristics, sort of teaching status and</li> <li>things like that.</li> <li>CO-CHAIR PITTS: Jay? Oh, I'm</li> <li>sorry. Brent?</li> <li>MEMBER ASPLIN: So, is this recent</li> <li>thread in an effort to do a stratified cohort,</li> <li>use cohorts to report the data? Or is this</li> <li>thread to actually stratify it at an</li> <li>individual patient level? Because I agree</li> <li>with Jay.</li> <li>MR. PINES: So, again, just to</li> <li>clarify what we did, we actually tried to</li> </ul>	7	critical access hospitals, of which there are
<pre>10 characteristics, sort of teaching status and 11 things like that. 12 CO-CHAIR PITTS: Jay? Oh, I'm 13 sorry. Brent? 14 MEMBER ASPLIN: So, is this recent 15 thread in an effort to do a stratified cohort, 16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to</pre>	8	1200, don't have it. So, you may end up
11 things like that. 12 CO-CHAIR PITTS: Jay? Oh, I'm 13 sorry. Brent? 14 MEMBER ASPLIN: So, is this recent 15 thread in an effort to do a stratified cohort, 16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to	9	having to be a bit more blunt and use hospital
12 CO-CHAIR PITTS: Jay? Oh, I'm 13 sorry. Brent? 14 MEMBER ASPLIN: So, is this recent 15 thread in an effort to do a stratified cohort, 16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to	10	characteristics, sort of teaching status and
<pre>13 sorry. Brent? 14 MEMBER ASPLIN: So, is this recent 15 thread in an effort to do a stratified cohort, 16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to</pre>	11	things like that.
<ul> <li>MEMBER ASPLIN: So, is this recent</li> <li>thread in an effort to do a stratified cohort,</li> <li>use cohorts to report the data? Or is this</li> <li>thread to actually stratify it at an</li> <li>individual patient level? Because I agree</li> <li>with Jay.</li> <li>MR. PINES: So, again, just to</li> <li>clarify what we did, we actually tried to</li> </ul>	12	CO-CHAIR PITTS: Jay? Oh, I'm
15 thread in an effort to do a stratified cohort, 16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to	13	sorry. Brent?
16 use cohorts to report the data? Or is this 17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to	14	MEMBER ASPLIN: So, is this recent
17 thread to actually stratify it at an 18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to	15	thread in an effort to do a stratified cohort,
<pre>18 individual patient level? Because I agree 19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to</pre>	16	use cohorts to report the data? Or is this
<pre>19 with Jay. 20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to</pre>	17	thread to actually stratify it at an
20 MR. PINES: So, again, just to 21 clarify what we did, we actually tried to	18	individual patient level? Because I agree
21 clarify what we did, we actually tried to	19	with Jay.
	20	MR. PINES: So, again, just to
22 create a simple stratification system with	21	clarify what we did, we actually tried to
	22	create a simple stratification system with

1	
	Page 248
1	NHAMCS data that actually had and actually
2	used the reason for visit, common reason for
3	visit classifications as proportions to
4	basically see what really drove performance on
5	these measures, and actually found that there
6	were so many factors that were independently
7	predictive that, unless we made the strata
8	tiny, there was really no simple
9	stratification system, which is sort of the
10	reason why I think really the next step is to
11	come up with some sort of a valid risk
12	adjustment methodology that really takes into
13	account factors that the hospitals can't
14	control.
15	One of the things that we have in
16	the report that is predictive of performance
17	is things like percent Medicaid and percent
18	Black and other minorities. Essentially, in
19	our recommendation, those would not be
20	actually in there. It would be more issues
21	like a case mix, the MSA, ED volume, and
22	things like that.

Page 249
But that, in the final reporting,
just to make it understandable for patients
and consumers, that you would both see the
adjusted and the unadjusted data.
MEMBER RAPP: This is Mike Rapp.
Could I just make a couple of points about the
risk adjustment of these?
Hello? Can you hear me?
CO-CHAIR PITTS: Yes, go ahead.
MEMBER RAPP: Oh, I'm sorry.
Well, I guess there are a couple
of points. We are talking here more about the
regional aspect or the system aspect. So,
when you talk about risk-adjusting, I think
one of the points we made on a preliminary
conference call for this was, if there are
factors that are, quote, "predictive," it
would seem it is the hospital's job to try to
deal with those factors. In other words, you
put on more resources to deal with patients or
particular types of patients and that sort of
thing.

1	
	Page 250
1	To risk-adjust it, so to speak,
2	means that you basically will disguise the
3	results of what is the amount of time that it
4	takes to accomplish one thing or another. So,
5	studies, and so forth, that connect up worse
6	outcomes with crowded situations, it is not a
7	risk factor for the patient. You don't think
8	in those terms. You think of do whatever is
9	necessary to be able to expeditiously take
10	care of things. So, I am just generally
11	opposed to the idea of this.
12	And secondly, when you do that, if
13	you are talking about at a regional level, I
14	think where you risk-adjust like this, you
15	think in terms of, well, the hospital, and so
16	forth. Although these are hospital measures,
17	we are trying to think about how do you roll
18	them up, but at a system level.
19	So, I just wanted to make those
20	points. And then, I heard the discussion
21	about how do you define what the decision to
22	admit is, and I haven't necessarily followed

	Page 251
1	this. But, generally speaking, when CMS
2	implements measures, the specifications of the
3	measure make clear what the factor should be.
4	Now, apparently, it may not be clear enough,
5	and that could be worked on. To me, it would
б	be the admission order, but somebody said
7	that, apparently, some CMS documents may
8	suggest that it shouldn't be that. But I
9	think it is worthwhile to try to pin that
10	down.
11	Certainly, in the hospital
12	measures in general, CMS has meetings with the
13	Joint Commission virtually every week. When
14	people raise questions about this, they make
15	an effort to answer them and, ultimately, come
16	up with more specifics as to how you should
17	approach those sort of definitional problems.
18	CO-CHAIR PITTS: Ellen?
19	MEMBER WEBER: What I thought, I
20	see risk adjustment as sort of
21	counterproductive to do what we are trying to
22	do here, which is to make sure that everybody

	Page 252	
1	gets the same level of care. Although I	
2	believe there are a lot of things out of the	
3	hospital's control, this is actually a way	
4	potentially for them to get resources. So, I	
5	don't know what we would really be	
6	accomplishing by risk-adjusting.	
7	Of course, I am at a teaching	
8	hospital, and part of me would like to say,	
9	well, it is going to take us longer, but,	
10	okay, maybe is there value to that? I don't	
11	know. If there is no value to that, to the	
12	patient, they should know that. Maybe they	
13	want to be at a teaching hospital, and it is	
14	going to take longer. But if they don't want	
15	to be at a teaching hospital, maybe they	
16	should go somewhere else. But don't tell my	
17	CEO I said that.	
18	CO-CHAIR PITTS: Yes, Brendan?	
19	MEMBER CARR: And isn't there also	
20	a distinction I mean, it seems to me that	
21	risk, I echo what Mike and Ellen are saying	
22	about the diagnostic side, right? But the	
Page 2531administrative delay to boarding that you2described before seems to me like absolutely3it shouldn't be risk-adjusted. We are4proposing risk-adjusting the entire length of5stay, right? But we all think that it takes6longer to work up a sick person. Are we okay7with the fact that it takes longer to find a8bed for a sick person? I mean, that feels to9me like a different animal. I get risk-10adjusted workup. I don't at all get risk-11adjusting placement.12MR. PINES: All right. So, I13think the broader question is, should a 10-bed14rural emergency department be compared to a15100-bed innercity public emergency department16as apples to apples? That is, I think, really17the question that we are talking about here.18And it is good that we are hearing a lot of19different opinions on that.20So, what I am hearing, is the21group thinking that we should not make a22recommendation for risk adjustment. Can we		
--	----	--
2described before seems to me like absolutely3it shouldn't be risk-adjusted. We are4proposing risk-adjusting the entire length of5stay, right? But we all think that it takes6longer to work up a sick person. Are we okay7with the fact that it takes longer to find a8bed for a sick person? I mean, that feels to9me like a different animal. I get risk-10adjusted workup. I don't at all get risk-11adjusting placement.12MR. PINES: All right. So, I13think the broader question is, should a 10-bed14rural emergency department be compared to a15100-bed innercity public emergency department16as apples to apples? That is, I think, really17the question that we are talking about here.18And it is good that we are hearing a lot of19different opinions on that.20So, what I am hearing, is the21group thinking that we should not make a		Page 253
it shouldn't be risk-adjusted. We areproposing risk-adjusting the entire length ofstay, right? But we all think that it takeslonger to work up a sick person. Are we okaywith the fact that it takes longer to find abed for a sick person? I mean, that feels tome like a different animal. I get risk-adjusted workup. I don't at all get risk-adjusting placement.MR. PINES: All right. So, Ithink the broader question is, should a 10-bedrural emergency department be compared to a10bed innercity public emergency departmentas apples to apples? That is, I think, reallythe question that we are hearing a lot ofdifferent opinions on that.So, what I am hearing, is thegroup thinking that we should not make a	1	administrative delay to boarding that you
4 proposing risk-adjusting the entire length of 5 stay, right? But we all think that it takes 6 longer to work up a sick person. Are we okay 7 with the fact that it takes longer to find a 8 bed for a sick person? I mean, that feels to 9 me like a different animal. I get risk- adjusted workup. I don't at all get risk- adjusting placement. 12 MR. PINES: All right. So, I 13 think the broader question is, should a 10-bed 14 rural emergency department be compared to a 15 lo0-bed innercity public emergency department 16 as apples to apples? That is, I think, really 17 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	2	described before seems to me like absolutely
<pre>5 stay, right? But we all think that it takes 6 longer to work up a sick person. Are we okay 7 with the fact that it takes longer to find a 8 bed for a sick person? I mean, that feels to 9 me like a different animal. I get risk- 10 adjusted workup. I don't at all get risk- 11 adjusting placement. 12 MR. PINES: All right. So, I 13 think the broader question is, should a 10-bed 14 rural emergency department be compared to a 15 100-bed innercity public emergency department 16 as apples to apples? That is, I think, really 17 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a</pre>	3	it shouldn't be risk-adjusted. We are
<ul> <li>longer to work up a sick person. Are we okay</li> <li>with the fact that it takes longer to find a</li> <li>bed for a sick person? I mean, that feels to</li> <li>me like a different animal. I get risk-</li> <li>adjusted workup. I don't at all get risk-</li> <li>adjusting placement.</li> <li>MR. PINES: All right. So, I</li> <li>think the broader question is, should a 10-bed</li> <li>rural emergency department be compared to a</li> <li>100-bed innercity public emergency department</li> <li>as apples to apples? That is, I think, really</li> <li>the question that we are talking about here.</li> <li>And it is good that we are hearing a lot of</li> <li>different opinions on that.</li> <li>So, what I am hearing, is the</li> <li>group thinking that we should not make a</li> </ul>	4	proposing risk-adjusting the entire length of
with the fact that it takes longer to find a bed for a sick person? I mean, that feels to me like a different animal. I get risk- adjusted workup. I don't at all get risk- adjusting placement. MR. PINES: All right. So, I think the broader question is, should a 10-bed rural emergency department be compared to a 100-bed innercity public emergency department as apples to apples? That is, I think, really the question that we are talking about here. And it is good that we are hearing a lot of different opinions on that. So, what I am hearing, is the group thinking that we should not make a	5	stay, right? But we all think that it takes
<ul> <li>bed for a sick person? I mean, that feels to</li> <li>me like a different animal. I get risk-</li> <li>adjusted workup. I don't at all get risk-</li> <li>adjusting placement.</li> <li>MR. PINES: All right. So, I</li> <li>think the broader question is, should a 10-bed</li> <li>rural emergency department be compared to a</li> <li>100-bed innercity public emergency department</li> <li>as apples to apples? That is, I think, really</li> <li>the question that we are talking about here.</li> <li>And it is good that we are hearing a lot of</li> <li>different opinions on that.</li> <li>So, what I am hearing, is the</li> <li>group thinking that we should not make a</li> </ul>	6	longer to work up a sick person. Are we okay
9 me like a different animal. I get risk- adjusted workup. I don't at all get risk- adjusting placement. 12 MR. PINES: All right. So, I 13 think the broader question is, should a 10-bed 14 rural emergency department be compared to a 15 100-bed innercity public emergency department 16 as apples to apples? That is, I think, really 17 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	7	with the fact that it takes longer to find a
10adjusted workup. I don't at all get risk- adjusting placement.11adjusting placement.12MR. PINES: All right. So, I13think the broader question is, should a 10-bed14rural emergency department be compared to a15100-bed innercity public emergency department16as apples to apples? That is, I think, really17the question that we are talking about here.18And it is good that we are hearing a lot of19different opinions on that.20So, what I am hearing, is the21group thinking that we should not make a	8	bed for a sick person? I mean, that feels to
11adjusting placement.12MR. PINES: All right. So, I13think the broader question is, should a 10-bed14rural emergency department be compared to a15100-bed innercity public emergency department16as apples to apples? That is, I think, really17the question that we are talking about here.18And it is good that we are hearing a lot of19different opinions on that.20So, what I am hearing, is the21group thinking that we should not make a	9	me like a different animal. I get risk-
MR. PINES: All right. So, I think the broader question is, should a 10-bed rural emergency department be compared to a 100-bed innercity public emergency department as apples to apples? That is, I think, really the question that we are talking about here. And it is good that we are hearing a lot of different opinions on that. So, what I am hearing, is the group thinking that we should not make a	10	adjusted workup. I don't at all get risk-
13 think the broader question is, should a 10-bed 14 rural emergency department be compared to a 15 100-bed innercity public emergency department 16 as apples to apples? That is, I think, really 17 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	11	adjusting placement.
14 rural emergency department be compared to a 15 100-bed innercity public emergency department as apples to apples? That is, I think, really 16 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	12	MR. PINES: All right. So, I
<ul> <li>15 100-bed innercity public emergency department</li> <li>16 as apples to apples? That is, I think, really</li> <li>17 the question that we are talking about here.</li> <li>18 And it is good that we are hearing a lot of</li> <li>19 different opinions on that.</li> <li>20 So, what I am hearing, is the</li> <li>21 group thinking that we should not make a</li> </ul>	13	think the broader question is, should a 10-bed
16 as apples to apples? That is, I think, really 17 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	14	rural emergency department be compared to a
17 the question that we are talking about here. 18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	15	100-bed innercity public emergency department
18 And it is good that we are hearing a lot of 19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a	16	as apples to apples? That is, I think, really
<pre>19 different opinions on that. 20 So, what I am hearing, is the 21 group thinking that we should not make a</pre>	17	the question that we are talking about here.
20 So, what I am hearing, is the 21 group thinking that we should not make a	18	And it is good that we are hearing a lot of
21 group thinking that we should not make a	19	different opinions on that.
	20	So, what I am hearing, is the
22 recommendation for risk adjustment. Can we	21	group thinking that we should not make a
	22	recommendation for risk adjustment. Can we

	Page 254
1	take maybe a straw poll on how many people
2	don't want to recommend risk adjustment?
3	MEMBER CARR: Can I just ask, when
4	you say risk adjustment, it feels like a very
5	loaded word. So, that means comorbidities to
6	those of us who live in that world, how sick
7	the patient is.
8	You just gave an example of the
9	size of a facility, which is a different
10	animal, I think.
11	MR. PINES: Right. So,
12	essentially, in that risk-adjustment model it
13	could be something like ED volume; it could be
14	something like the case mix. If you have a
15	higher proportion, for example, of trauma
16	cases, maybe your overall length of stay would
17	be longer or shorter.
18	Essentially, what risk adjustment
19	does, it basically allows you to really
20	compare apples to apples. So, let's say you
21	a Penn would be compared to a Jefferson as
22	opposed to Penn being compared to a tiny,

	Page 255
1	little, rural hospital.
2	MEMBER CARR: Yes, but you don't
3	have to have them all in the model. You can
4	put in hospital factors and leave out patient
5	factors.
6	MR. PINES: So, essentially, we
7	are not making any recommendation about what
8	actually would go into the model, except for
9	in the current version of the report we think
10	that socioeconomic factors should not be in
11	that model. But, essentially, we would
12	recommend that some validated risk-adjustment
13	methodology in the current version would be
14	developed. But, essentially, the group could
15	make a recommendation about what actually
16	should go in there.
17	CO-CHAIR PITTS: Okay. This is
18	important. I think we should let everybody
19	speak.
20	So, Emily?
21	MEMBER CARRIER: I mean, this
22	might go into the process of developing a

	Page 256
1	validated risk-adjustment model, but the only
2	data point I have seen was the paper that I am
3	sure everyone is familiar with that came out
4	in JAMA a year or so ago, looking at length of
5	stay and comparing safety-net to non-safety-
6	net hospitals. And that didn't find a
7	difference.
8	So, although I agree, Jesse, that,
9	intuitively, comparing an urban hospital with
10	crazy sick patients and volume and lots of
11	issues versus a much smaller, suburban or
12	rural hospital intuitively seems wrong, the
13	only data point I have seen doesn't show that
14	there is actually a difference to be risk-
15	adjusted for.
16	MR. PINES: Yes, we published a
17	paper a couple of months ago in Annals that
18	used the NHAMCS nationally, tried to create a
19	simple stratification system. We were
20	actually not able to do it because there were
21	so many exogenous factors that did impact
22	length of stay significantly. It was a

Page 257 different paper, yes. 1 2 MEMBER CARRIER: But, I mean, was 3 the outcome that certain classes of hospitals 4 had systematically longer lengths of stay that 5 you felt like --MR. PINES: Yes. Yes, basically, 6 7 ED volume, MSA, teaching status, and, 8 actually, even more importantly, the case mix 9 based on the reason-for-visit classification 10 was a big factor. 11 MEMBER CARRIER: Okay. So, I 12 understand from your conversation before that that those were lots of little factors. 13 Ι 14 mean, for me to risk adjust for something, I want to see something that applies very 15 broadly. I was understanding lots of little 16 factors contributing in different ways at 17 different levels to different hospitals. 18 19 MR. PINES: So, essentially, what 20 we initially wanted to do is basically take 21 the stratification system that is used by 22 Our hypothesis was that it was all EDBA.

1	
	Page 258
1	going to come down something like visit
2	volume. So, essentially, you could do a
3	stratification system. But, essentially, what
4	we found was in the adjusted model, having all
5	those things in the model together were all
6	independent predictors. So, even after
7	adjusting for ED visit volume, case mix and
8	all these other factors were still very
9	significant.
10	MEMBER CARRIER: I mean, is there
11	anything unique about that data or
12	MR. PINES: Yes. Yes, they were
13	very, very significant. So, essentially, even
14	adjusting for other factors we can send out
15	the paper but that, actually, case mix,
16	some of the case-mix variables were actually
17	a lot more important than ED volume.
18	CO-CHAIR PITTS: All right. So,
19	on the one hand, there is should we adjust at
20	all in principle, and the second, if we think
21	that you should adjust, is it even possible to
22	do so? So, you are saying, basically, it is

	Page 259
1	possible to do so. But another question is,
2	should we do it at all? Did I get that right?
3	Yes?
4	MEMBER WEBER: To Brendan's point,
5	which I think is a good one, do we do it for
6	all the measures or do we do it for some of
7	them? Because the issue of complexity, that
8	is a value-added. If I can do that and send
9	the patient home, that may be better than
10	having a short length of stay and admitting
11	them.
12	So, I think we have to think about
13	that is a real unintended consequence. So, I
14	back off a little bit on what I said. But I
15	think there are some measures, like the admit
16	time to bed, should be not risk-adjusted. But
17	the length of stay before that decision may be
18	risk-adjusted. But the time to providers
19	should not be risk-adjusted, because if you
20	just have that kind of caseload, you have just
21	got to get more providers or figure out your
22	system better.

1	
	Page 260
1	MR. PINES: And just as a quick
2	comment, also, next we are going to talk about
3	time targets. The way that Canada does time
4	targets is actually by CTAS. They basically
5	have specifically time targets for specific
6	classes of patients. We don't have the
7	benefit of CTAS. So, I think if we did want
8	to do time targets, if we didn't one time
9	target like they had in the UK, we would need
10	some sort of risk-adjustment system.
11	CO-CHAIR PITTS: Arjun? And then,
12	Jay.
13	MEMBER VENKATASH: I know Michael
14	alluded to this earlier, but I am going to go
15	back to it for one second, which is the task
16	at hand to some degree was to think about the
17	implications of these measures for
18	understanding preparedness in regionalized
19	emergency care and that intersection. From
20	the perspective of that intersection, what we
21	are thinking about and what we are discussing
22	at hospital-level operational measures may not

Page 261
necessarily inform that to the same degree.
What I am almost thinking is it is
very different thing to say what is unadjusted
boarding measured at a regional level. I
could see how that is a window into capacity
that we have on the inpatient side within some
form of community. And that could be very
helpful for understanding preparedness.
Understanding hospital-level
adjusted or unadjusted boarding may not really
inform that regional side at all and the
preparedness part of this equation at all.
So, I would almost say that, to some degree,
perhaps the recommendation is that you don't
measure at the hospital level, that it needs
to be measured at a regional level unadjusted,
because, then, you actually can say, okay,
within this community, we know that we have
long length of stay or we have high amounts of
boarding. And then, that community can use
that in terms of actually have something to
track.

	Page 262
1	Because I think if you adjust it
2	away, if you adjust away the characteristics,
3	you have lost the whole concept of what you
4	are trying to capture within a region, which
5	is the variability in terms of what kind of
6	capacity exists.
7	MEMBER SCHUUR: I agree with what
8	Arjun just said, and then I have one other
9	comment, which is I think it is important to
10	think about what the measures are used for,
11	for either public reporting or for
12	accountability and payment.
13	While I tend to think that we
14	shouldn't adjust away, definitely shouldn't
15	adjust away hospital factors, I also wouldn't
16	want to punish safety-net hospitals and under-
17	resourced hospitals, which may have the worst
18	outcomes, by implementing a measure that is
19	going to punish them for having long length of
20	stay. It would be the exact opposite
21	consequence than you would want from this, I
22	think.

	Page 263
1	CO-CHAIR PITTS: And being
2	relatively new to this, the NQF ultimately
3	attaches to CMS and becomes a there is a
4	sanction that applies, 1 percent of Medicare
5	reimbursement or something of that sort? No?
6	DR. BURSTIN: It is not nearly
7	that direct.
8	CO-CHAIR PITTS: Okay.
9	DR. BURSTIN: Not really.
10	Basically, all measures that are endorsed by
11	NQF, you know, the committees have deemed them
12	as being appropriate for a full range of
13	accountability applications, whether that is
14	public reporting or pay for performance. So,
15	there is a wide range of groups of
16	applications.
17	There is another group called the
18	Measures Application Partnership that also
19	works that helps say which measures are
20	appropriate for which program. But, again, we
21	do want to make sure that it is appropriate
22	for any of those accountability applications.

	Page 264
1	And again, this is where level of
2	analysis might be important. It is really
3	also endorsed measures for specific levels of
4	analysis. So, there may be some of these that
5	are at the provider level, and there are some
6	of these that may be at the system level.
7	Those are considerations that I think it would
8	be helpful for this group to think about as
9	well, if the bigger systems issues are really
10	what you are trying to drive to.
11	MEMBER TIMMONS: This is Shelly
12	Timmons on the phone. May I make a comment?
13	CO-CHAIR PITTS: Yes, go ahead.
14	MEMBER TIMMONS: I just wanted to
15	say, about the hospital-specific length-of-
16	stay issues with socioeconomics, and so forth,
17	it really does have a major downstream effect
18	on throughput from the ED and beyond, because
19	patient resources used in a given region are
20	going to necessarily affect a length of stay.
21	If you have a large population of
22	patients who don't have resources for home

	Page 265
1	care, rehab, or even family support in the
2	large trauma system, for example, the length
3	of stay is adversely affected. And that,
4	then, backs up the whole entire hospital and
5	system from a preparedness standpoint.
6	So, I don't necessarily think we
7	should completely discount hospital-based,
8	safety-net-hospital-type data because those
9	things do impact the care and preparedness of
10	the region.
11	CO-CHAIR PITTS: Thanks a lot.
12	Wes?
13	MEMBER FIELDS: Yes, if we are
14	working on the straw poll, I would not be in
15	favor of risk-adjusting for consumers. I
16	think, in that case, raw data about length of
17	stays, it has got to be something that they
18	deserve see unfiltered or unadjusted.
19	I think I agree very much with
20	Arjun that the same thing is true if we are
21	really serious about trying to move towards
22	status of a region, and how well all hospitals

Page 266 1 perform collectively within the region. 2 And then, the final sort of thumbs-down would be that, if this is a matter 3 of reimbursing hospitals, you don't want to 4 5 disadvantage safety-net facilities, although I am not sure what that means anymore in our 6 7 Brave New World, but I am quite sure you don't 8 need to protect rural hospitals because they 9 will almost always look great on HCUPS and great on length of stay. And that is the only 10 real benefit of having low volume through 11 12 their emergency departments. MR. PINES: So, just to clarify, 13 14 the current way that the recommendations are written is that both unadjusted and adjusted 15 16 data would be reported. So, at the level of 17 the region, I agree that I think in the later discussion on regionalization, I think taking 18 19 these measures to the regional level and 20 creating some incentive for hospitals to 21 cooperate, to reduce systemwide boarding and 22 crowding, I think are important.

	Page 267
1	But I think that we do lose a lot
2	of information just by reporting unadjusted
3	data. Particularly, certainly from the
4	perspective of knowing how a hospital is
5	doing, you are sort of are able to better
6	compare apples to apples, and it doesn't
7	uniformly make the small hospitals, rural
8	hospitals look better. Because, just by the
9	nature of their size and the way they are set
10	up, it is a lot easier to have a shorter
11	boarding time when you have got five or ten
12	beds in the ED and 20 beds in the hospital.
13	And also, when we move on to talk
14	about time targets, I think that without that
15	risk-adjustment methodology, we would not
16	really be able to any sort of stratification.
17	CO-CHAIR PITTS: Great. It looks
18	like we have exhausted the risk
19	stratification.
20	So, let's go on to time targets.
21	Ellen is the received expert here.
22	The recommendation states,

	Page 268
1	"Quality measure developers should consider
2	setting time-specific recommendations for
3	unadjusted or adjusted measures of ED crowding
4	and boarding." Pros and cons of that?
5	I think it has been abandoned in
6	the UK. No?
7	MEMBER WEBER: I will speak to
8	both the pros and the cons, I guess, because
9	I am fairly familiar with it.
10	So, the four-hour target went in
11	2004, kind of graduated to the point that 98
12	percent of patients needed to be out of the
13	emergency department in four hours. The 98-
14	percent figure came from the government.
15	Actually, the emergency physicians wanted it
16	to be 95 percent. So, the idea is that 5
17	percent of patients would be exempted from
18	this. So, the sicker people, or whatever, you
19	would have 5 percent of those patients did not
20	need to meet those targets.
21	Just sort of in the background,
22	what this really did for the emergency

Page 269 departments was they created clinical decision 1 2 units. So, the patients they wanted to keep longer who had sort of a clear-cut diagnostic 3 pathway, like chest pain or cellulitis, or 4 5 whatever, they kept them in the clinical 6 decision unit. They were off the clock; they 7 went home. So, what it really did was force 8 the hospitals to find beds for the patients that needed to be admitted. 9 10 In 2010, when the Labor government was voted out of office, the new government 11 12 came in. And part of this was to undue what That is the UK way. 13 Labor had done. 14 But, also, they were concerned that the focus on time was taking away focus 15 from quality. So, what they did was they said 16 we are going to have a dashboard of measures. 17 One of them will be the time in the 18 19 department, and the four-hour target was 20 reduced to 95 percent. But it is not the kind 21 of cutoff it was where everybody comes 22 charging into your department and says, "We

	Page 270
1	are not going to meet it this quarter," and so
2	forth. So, it is one of their quality
3	measures now.
4	And there really wasn't a lot of
5	evidence one way or the other for whether it
6	was bad. In fact, we are about to release a
7	paper that shows, at least from the
8	administrative data, that there was not an
9	increase in admissions, not an increase in
10	resources.
11	But one of the things we weren't
12	able to do is follow like the patients who got
13	admitted and have been just sent to some ward
14	because it was the only available place.
15	The upside was that the admitted
16	patients got beds. The EDs were far less
17	crowded. They also got a lot of resources, as
18	the hospital did, to either redo their
19	processes or build, or whatever. So, there
20	was some money involved, at least at the
21	beginning, although not later on.
22	The patients for the most part

	Page 271
1	have really liked it and have said, "This is
2	great." In fact, there was some concern that
3	patients would like it so much that they
4	wouldn't go to see their GPs.
5	The downside was, the potential
б	tension from the emergency care was having a
7	sick patient who really shouldn't go upstairs
8	and kind of thinking, well, is this going to
9	be my 99th-percent patient that I really can't
10	allow to stay down here? So, there was a lot
11	of pressure, and the physicians were able to
12	kind of say, "You know, this is more important
13	than the target, and I am going to keep the
14	patient here."
15	But that did create a lot of
16	stress in the departments, a little bit, not
17	a lot, but there was some degree of the rest
18	of the wards were resentful of the emergency
19	departments because they thought they were
20	getting all this money, and they had their own
21	targets, and so forth.
22	But, for the most part, I would

	Page 272
1	say it worked to get rid of crowding, and it
2	doesn't seem to have been a negative effect.
3	It is a very blunt instrument, but, on the
4	other hand, it is an instrument that is pretty
5	easy to put in, and people manage to make it
б	work. And I think they made it work to the
7	benefit of the patient.
8	CO-CHAIR PITTS: So, I think I may
9	have created a scenario in my head that
10	explains how it happened, and it is probably
11	incorrect. And that is that they massively
12	expanded the obs capacity. Did that happen at
13	all?
14	MEMBER WEBER: Yes. Actually,
15	that is a good point. Many departments had
16	these, but those who didn't started to expand
17	what they called their clinical decision
18	units. So, they basically kind of did what we
19	are talking about doing here anyway, which is,
20	for other reasons, to expand your observation
21	capacity, so that people don't have to be in
22	the hospital. Their observation units were

	Page 273
1	mostly ED-run, but some of them were run by
2	their internists to move people in and out
3	fairly quickly.
4	CO-CHAIR PITTS: Don't they have a
5	specialty called acute care medicine which
6	is
7	MEMBER WEBER: Yes, they do, yes.
8	Well, it is sort of a fledgling it is a
9	little bit different. The clinical decision
10	units were largely run by the emergency
11	physicians, and they would take the chest
12	those were the people who they said had a low
13	risk of a high-risk condition. Okay? So,
14	that is where they would observe their head
15	traumas, and so forth.
16	The acute physicians work in
17	something called the admission assessment, no,
18	the admission unit or, no, I forget what it
19	is called the admission assessment unit.
20	It was a medical assessment unit and a
21	surgical assessment unit, but they are
22	actually admission units where there are acute

Page 274 1 physicians whose job is to sort them out, get 2 them through all the testing, figure out whether they can go home in 23 to 48 hours, or 3 whether they need an "ology". You know, do 4 5 they need a specialist now and need to move upstairs to one of those wards? 6 7 CO-CHAIR PITTS: Brent? 8 MEMBER ASPLIN: So, I would 9 suggest one intermediate step to having a 10 static target would be just going back to the measures from 2008, and I think you talked 11 12 about it on the call that I was not on, and reporting not only median, but 90th 13 14 percentile. And the data would really start to shine a light on how skewed the data are 15 and where the performance is when the wheels 16 are coming off versus just the median. 17 18 If I had it to do over again --19 that suggestion was made about a week after 20 our meeting -- I wish we had done that. Ι 21 think median is helpful, but just median and 22 90th rather than a static target. Plus, I

	Page 275
1	mean, who are we kidding? Politically, there
2	is not going to be a static target in this
3	country anytime soon.
4	MR. PINES: Just to clarify, in
5	the next section, I think Recommendation 8
6	does talk about the median and the 90th
7	percentile. But let's make sure we also talk
8	about time targets and beyond the politics.
9	Is this something that we want to recommend to
10	measure developers?
11	CO-CHAIR PITTS: Emily?
12	MEMBER CARRIER: I just had a
13	question for Ellen, thinking about how the UK
14	experience might not bond to the U.S. When
15	patients were admitted to the clinical
16	decision unit like let's say I was a
17	patient who, prior to four-hour time target,
18	would have spent a really long time in the ED
19	having various things done, and now I am sent
20	to the clinical decision unit at 3 hours 30
21	minutes. Is there an additional charge in the
22	same way an obs admission would carry an

1	Page 276 additional charge for the patient?
2	MEMBER WEBER: Because it is the
3	NHS, I don't think there is any specific
4	charge. What I understood, the way it works
5	is the acute care hospitals contract with the
6	primary care trusts, and they basically
7	classify their patients as either simple or
8	complex. If they are complex, the hospital
9	gets a certain payment for them. If they are
10	simple, they get a different payment.
11	So, anybody, basically, who went
12	into the CDU was likely to be a complex, but
13	so would be an admission. Or it would be
14	somebody who got everything done in the first
15	three hours, who had a fairly complicated
16	history of abdominal pain, had a consultant,
17	went home.
18	MEMBER CARRIER: Okay. So,
19	sending someone to obs in the U.S. would have
20	different implications in terms of resource
21	use than, it sounds like, in the UK in terms
22	of

Page 277

1 MEMBER WEBER: Well, it is an 2 interesting question. I guess, yes, I mean, sending somebody to obs rather than just 3 keeping them in the ED might, if you have an 4 5 observation unit set up with separate billing. 6 The question is, there are a lot 7 of issues there because you have to be there a certain amount of time. You have to be 8 9 there overnight for anybody to make any extra 10 money. So, it would really be more likely that a hospital might want to do that to avoid 11 12 the readmission issue, to avoid unnecessary 13 admissions they are not going to get paid for, 14 where they would sort of provide strategic support, shall we say, for that observation 15 unit, even though they couldn't bill 16 17 separately for it. But a lot of places do bill 18 19 separately. They have figured out how to do 20 It is still much less expensive overall it. 21 for the healthcare system, yes. 22 CO-CHAIR PITTS: So, in the U.S.,

Page 278 1 if you have obs patient, they don't generate 2 a second H&P to the ER obs? They just generate a discharge fee, basically, I think. 3 Whereas, when I was in New Zealand they had an 4 5 obs unit, and all the medicine obs patients got a second H&P the next morning when they 6 7 It was nice to be on that made rounds. 8 service because it was always morning rounds. 9 Whereas, in an ER obs situation, you might 10 discharge somebody at night. So, there was a little bit of 11 12 qualitative difference between an ED admission to obs versus the UK model obs admission, at 13 14 least in my brief experience. 15 MEMBER WEBER: Well, you are talking about the UK obs admission where the 16 17 ED kept the patient was different than the obs 18 where you were on a separate service that 19 rounded on them the next day, right? 20 CO-CHAIR PITTS: Although where I 21 was, it was mixed together geographically, 22 yes.

Page 279 1 MEMBER WEBER: Yes. Well, who was 2 in charge is the question. 3 CO-CHAIR PITTS: Five beds for ER, 15 for the inpatients. 4 5 MEMBER WEBER: Yes. Okay. So, 6 when you have a single payer, it is very 7 confusing. 8 (Laughter.) 9 CO-CHAIR PITTS: Yes. And we were 10 always trying to get one of their beds for our patients. 11 12 Wes? 13 MEMBER FIELDS: Yes, I think this 14 is more like measure development, but I think 15 it is worth trying to think through what the crosswalk would be. I think it would be 16 17 fairly straightforward, but a lot of it does require measurement in terms of what is most 18 19 cost-effective and what is going to do the 20 best in terms of outcomes for patients by 21 diagnostic category. 22 But I think the ED-oriented

Page 280

1 observation would figure to be shorter stay, 2 more intensive, probably more imaging or more 3 ancillary. But what is the right length of 4 stay for that category? What are the right 5 set of diagnoses?

The thing that I think is maybe 6 7 the most nuanced about this is what they call 8 acute care medicine in the UK, we would call 9 a hospitalist service. What is interesting to me about that, thinking about the whole first 10 contact care/primary care debate in terms of 11 12 acute care continuum problems, is that it would be an internist by training, but it is 13 14 certainly not the primary care physician and it is certainly not a provider who is based in 15 the community. They likely practice full time 16 in the hospital. I think the argument would 17 18 go in the American system that makes them more efficient and probably a little bit more 19 20 rapid. 21 But I think it is worth beginning to figure out the measurements, both in terms

> Neal R. Gross & Co., Inc. 202-234-4433

22

	Page 281
1	of cost and outcomes, about when aggressive
2	short-stay observation that is ED-oriented is
3	appropriate and when that 24-hour-plus thing
4	comes into play, that it is more likely to be
5	done in an inpatient setting where the
6	hospitalist is the primary provider.
7	And I see both of those things as
8	an important part of that gray scale that
9	falls short of the statutory three-day stay
10	for a Medicare inpatient. I think these are
11	really worth understanding and measuring, even
12	though they are probably a little bit beyond
13	the scope of what we are doing today.
14	CO-CHAIR STONE-GRIFFITH: Ellen, I
15	remember you speaking about this before. In
16	my mind's eye, I almost see a third door that
17	people are now coming through that is not the
18	emergency department. It is a place where
19	they get those fact-track services. They get
20	treated and assessed rapidly, but it is not
21	always the ED.
22	So, it speaks to who gets observed

	Page 282
1	out of the ED as someone who comes through
2	that ED, and we need to spend that time,
3	versus now a different portal altogether.
4	MEMBER WEBER: Just to speak to
5	that, that is somewhat what happened there.
6	This acute assessment unit that was run by the
7	internists, hospitalists, whatever, was
8	another entry into the hospital. Some places
9	a GP could call up and send their patient to
10	actually a unit that was nurse-run. They
11	would say, "I want you to do this test and
12	this test and this test, and then I want you
13	to call this consultant." And that was even
14	separate from this other.
15	But it was a way of bypassing in a
16	good way the emergency department when a
17	doctor wanted to keep control of what was
18	happening with the patient, wanted to hear
19	directly back from the consultant, didn't just
20	turn them loose over to the emergency
21	department. And then, if they needed to be
22	admitted, they didn't go to the emergency

	Page 283
1	department to then get admitted. They got
2	admitted through the acute assessment unit.
3	And that is a big issue, I think,
4	that we haven't talked too much about here in
5	terms of the input, is the difficulty now that
б	a lot of people are having figuring out a way
7	to directly admit patients to the hospital
8	without using the ED, because our systems are
9	so dysfunctional.
10	MR. PINES: Also, I just want to
11	clarify and I want to make sure I am getting
12	the right read on this particular
13	recommendation, because it sounds like there
14	could be some unintended consequences of using
15	time-based standards.
16	I think there are a lot of
17	different ways to do time-based standards.
18	And we wouldn't be really saying that we would
19	have to follow the UK model, you know, four
20	hours and 98 percent, but that, broadly, we
21	would make a recommendation that time-based
22	standards could be potentially meaningful.

	Page 284
1	I think that we could write that
2	in the reports in such a way that we could
3	recommend time-based standards, but say that
4	that would be basically up to the measure
5	developer.
6	MEMBER WEBER: I would agree. I
7	think even though the UK took away the four
8	hours, they would have been happy, the ED
9	physicians would have been just keeping it at
10	four with the 95 percent. And we clearly know
11	now New Zealand and Canada are picking this
12	up. So, I think the trend right now is
13	towards people having these targets, not
14	shying away from them. And those are more
15	nuanced.
16	CO-CHAIR PITTS: Brent?
17	MEMBER ASPLIN: Yes, if we were
18	going to move in time-based standards, I would
19	be more open to it on just the boarding time,
20	the 497 measure, given the changing role of
21	what we are doing from a diagnostic
22	standpoint, the time we are going to be

	Page 285
1	spending looking at alternatives to admission,
2	et cetera. That might be a place to start, is
3	in that aspect of the overall measure,
4	provided the gaming issue could be addressed,
5	to the extent there is one.
6	CO-CHAIR PITTS: Was there a lot
7	of use of the obs unit for getting a CT scan?
8	MEMBER WEBER: Actually, no,
9	because they do very few CT scans.
10	(Laughter.)
11	They do zero abdominal CT scans.
12	MEMBER ASPLIN: I think they
13	observe instead of scan.
14	MEMBER WEBER: Actually, the thing
15	about resource utilization, including obs unit
16	patients did not go up. In other words, they
17	didn't throw them into the obs unit and then
18	order a CT scan. They threw into the obs unit
19	truly to observe.
20	They actually are very anti-labs.
21	You know, you don't go into the abs unit just
22	to get your labs back. You do it to get your

Page 286 1 treatment for your cellulitis, for your 2 Tylenol overdose, or whatever. You follow an algorithm, and so forth. 3 4 So, yes, there was not quite so 5 much what you were going forward with. CO-CHAIR PITTS: So, boarding 6 7 sounds like a good interval. 8 MEMBER WEBER: And I agree, I 9 think boarding is a great way to start this 10 because it is exactly what we were getting at earlier, which is we don't want to penalize 11 12 the complex workup. That is what these CDUs in England did. They just gave the EDs an 13 14 opportunity to do the complex workups they were doing anyway. But what we do want to 15 penalize is the long evaluation period after 16 the ED has now done a three-hour workup. 17 18 CO-CHAIR PITTS: Recommendation 7 19 touches really on the same topic, but putting 20 in the added element of standardizing by 21 triage acuity. I assume that what that means 22 is that it is four hours, depending on your

Page 287 circumstances. I am not sure I understand the 1 2 intend of that recommendation. MR. PINES: 3 Sure. So, this was 4 actually something that came up on one of the 5 first Work Group calls, where the Canadian system basically stratifies by triage acuity, 6 7 where the more serious patients should stay 8 longer. I think it is eight hours versus the 9 more minor patients can stay four hours. 10 In order to do something similar here, we would need either our own risk-11 12 adjustment system or, alternatively, to recommend a standardized triage system. 13 We 14 know that ESI triage is the triage scale that is most commonly used. That is not used 15 16 everywhere. 17 In order to truly standardize by 18 triage scale in this country, we would have to 19 make a recommendation that hospitals that are 20 not on ESI, or whatever triage scale we 21 recommend, would move to that. So, that was the source of this recommendation. 22

	Page 288
1	CO-CHAIR PITTS: AnnMarie?
2	MEMBER PAPA: You know, I agree on
3	a standardized triage score, absolutely. But
4	I can say, from a nursing perspective
5	please don't shoot me but some nurses, when
6	we are triaging, we consider who the provider
7	is in the back.
8	(Laughter.)
9	And we know Dr. Smith is going to
10	order two tests and move the patient, and Dr.
11	Jones is going to keep them there for eight
12	hours and do Q one-hour testing and get serum
13	porcelain levels on every patient. So, we
14	take that into consideration. There is a lot
15	of subjectivity with that.
16	Plus, within the nursing and we
17	have to own this as well some of the nurses
18	are much better at making that prediction
19	because they have got a little bit more
20	experience. Certain hospitals you can triage
21	after being there for six months. Our place,
22	you have got to be there two years before you
	Page 289
----	---
1	triage. So, there is a lot of that
2	interrelated piece with the nurses as well.
3	So, I would really tend to look
4	more at another score. I don't know. Prefer
5	the other nurses in the room to speak up. But
6	sorry.
7	CO-CHAIR PITTS: It is a real
8	issue. In Australia, I think everybody gets
9	a score, right, and they actually tally that
10	and see how compliant you are with those time
11	intervals.
12	But I agree with you. And I guess
13	it was you, Jay, who was saying that, who
14	needs to triage? Wasn't that you? I think it
15	was.
16	(Laughter.)
17	On the other hand, we would love
18	to have some sort of national standard of
19	severity classification. It would be really
20	important to compare.
21	But, anyway, Ryan, you have
22	something?

	D
1	Page 290 MEMBER MUTTER: I am not a nurse,
2	but the economist's perspective, ESI tends to
3	take on an institution-specific meaning. A
4	lot of times what you see happen is the
5	average severity in an institution is a 3.
6	But a 3 in one institution is not comparable
7	to a 3 in another. So, just something to
8	watch out for.
9	CO-CHAIR PITTS: Yes, I have
10	looked at heart rates. You know, that is
11	objective. It varies a bit.
12	Yes?
13	MEMBER PAPA: And I just wanted to
14	say, I don't know, I don't have as much
15	experience with the CTAS method, so I am not
16	sure that that is quite as subjective, for
17	those of you who may have had the opportunity
18	to work with it, I don't think that is quite
19	as subjective as the ESI, just from my limited
20	experience with it. I don't know.
21	MR. PINES: There actually have
22	been some studies looking, comparing ESI to

i	
	Page 291
1	other time-based triage systems. And
2	actually, ESI is the most reliable system, but
3	that doesn't get at Ryan's issue, which is the
4	between-hospital differences. But, basically,
5	within a hospital, when they tested, ESI is
6	more reliable than other triage scales in
7	terms of just inter-rater reliability, one
8	person saying what is a 3 or a 2.
9	CO-CHAIR STONE-GRIFFITH: Wes?
10	MEMBER FIELDS: Just something
11	quick and obvious. Acuity and length of stay
12	don't always correlate. A patient walks
13	through the front door with chest pain, and
14	EKG data is obtained within five minutes. A
15	STEMI is present. The patient is in the cath
16	lab in less than 30 minutes.
17	So, I don't think you want to feel
18	good about that patient being in the
19	department for three hours because somebody
20	forgot to do the EKG or they thought it was a
21	stomachache.
22	MR. PINES: Well, you know, I

Page 292 think the other that would dependent in this, 1 2 if we do recommend time-based measures and do want to have some sort of a stratification 3 4 system, the benefit of having that by triage 5 level, and essentially why I think that is by triage level in Canada, is that the physicians 6 7 and providers actively taking care of the 8 patient sort of know what the target is for 9 that individual upfront rather than after the fact. 10 So, if we did some sort of a risk-11 12 adjustment model and we said you should have been in the ED six hours, the providers may 13 14 not know that until later. So, I think the benefit of having some sort of triage 15 classification, actually, there is sort of 16 active knowledge, when that patient is in the 17 18 ED, how long they should be there. 19 CO-CHAIR PITTS: Jay? 20 MEMBER SCHUUR: The first concern 21 I have about the triage as a standardization 22 is just the fact that a lot of operational

	Page 293
1	improvements in many EDs are sort of getting
2	rid of it. So, I think it is sort of already
3	outdated, the idea that everyone is using it.
4	But second is I am all for finding
5	a risk stratification mechanism to look at an
б	accurate thing. I think that is in the
7	research realm right now. There is not a good
8	one for the ED with datasets we have
9	available.
10	But I would be concerned, if you
11	think about value and cost, which we all
12	should be thinking about, that it will bake,
13	if you use the triage example, it will bake in
14	the overuse we are all doing. And so, if we
15	are doing way too many CT scans already, and
16	you build in the adjustment for abdominal
17	pain, and say abdominal pain patients should
18	be there for "X" number of hours, it sort of
19	adjusts that into the system. And so, I would
20	not encourage that.
21	CO-CHAIR PITTS: Okay. There is
22	another? I'm sorry. Ellen?

Page 294 MEMBER WEBER: I would like to 1 2 just reiterate again about the boarding thing is really what the time target dealt with. 3 4 And so, we would not need to use any kind of 5 risk adjustment for a boarding time target. That is the thing I agree with Brent, that 6 7 that would be a very good recommendation 8 because it is really what all of these targets 9 have been about. It is not about getting the 10 ED physicians to work faster, and they will become that if we don't make it very clear as 11 12 to what part of the system we are really doing. Yes, there is a lot of overuse, and we 13 need to work on that, but I am not sure that 14 is the issue we can address this way with a 15 16 time target. 17 CO-CHAIR PITTS: Okay. Oh, more? 18 Yes. Arjun? 19 I think one of MEMBER VENKATASH: 20 the challenges I have with this concept of 21 adjustment is, if it is meant to either 22 describe capacity on the preparedness side or

Page 295
if it meant to drive a lot of improvements,
the problem with adjustment is you can improve
adjusted times, but those aren't real minutes.
So, it only helps, I think, with
an institution-to-institution comparison,
which I think is right now kind of, as I
alluded to, much more of interest from a
research perspective, understanding patterns
of utilization and care like that, but from a
perspective of, what do I do with those
numbers?
A patient certainly can't use an
adjusted time. I don't think even a
department itself knows what to do with our
adjusted length of stay is or our adjusted
boarding time is two hours and four minutes
versus our unadjusted time is two hours and 40
minutes. What does that mean?
What do you know is, if your
unadjusted time is two hours and 40 minutes,
you could put in place certain improvements or
try to understand how that changes with

i	
	Page 296
1	certain improvements, but understanding how
2	adjusted time improves in the setting of
3	improvement I think is pretty useless at an
4	operational level right now.
5	So, I think from that perspective,
6	for all of these, leaving them unadjusted to
7	me just seems to make more sense for actually
8	being able to track this and make it
9	meaningful over time.
10	And I think the other thing I was
11	going to say is that this, to some degree,
12	kind of wraps into the discussion we were
13	having above. So, I don't know if maybe
14	combining the recommendations or putting them
15	somehow together just smooths it out. That
16	was Brendan's idea.
17	CO-CHAIR PITTS: Okay. Actually,
18	the adjustment bit, I mean, the way I have
19	encountered that problem is when my hospital
20	says, "Oh, we are at the bottom of this
21	ranking. We don't want to be here. It is
22	because we have sicker patients." I mean, I

1	Page 297
1	
	am sure that UHC has that problem. That is
2	where we always are compared to other
3	hospitals within UHC. The answer to our
4	failures is always it wasn't properly
5	adjusted.
6	MEMBER VENKATASH: But even when
7	it is adjusted, you will still say it is not
8	properly adjusted.
9	(Laughter.)
10	CO-CHAIR PITTS: That's true.
11	Okay. Was there another? Okay.
12	Let's go on to the next one. That is measures
13	of central tendency, median versus et cetera.
14	We have already heard that the 90th percentile
15	was maybe a better choice.
16	Anybody have any comments about
17	that?
18	I will just have a pointy-headed
19	comment and apologize for making it. If you
20	are in a small ER like when we used to work at
21	Emory University Hospital, it was a tiny
22	place. It used to be called "treatment room".

	Page 298
1	And you know that you didn't sleep all night
2	or you would have a disastrous night.
3	So, if you have a very small
4	volume, your chances of getting that to the
5	90th percentile are higher than they are at
6	Grady, which is tons of patients and the 90th
7	percentile won't bother you at all.
8	So, there is a difference, that
9	P9-to-the-P50 ratio will vary depending on
10	your sample size. I don't know if that is
11	really important clinically, and I am not sure
12	it has been looked at. I don't think it has.
13	It is just one thought that came to mind as I
14	was looking at the data and thought maybe HCUP
15	could address that at some point. But that is
16	truly a pointy-headed comment. Sorry.
17	Any other comments about medians
18	versus geometric means versus any other
19	measure of central tendency?
20	MEMBER McCARTHY: Is that what you
21	mean, Steve
22	CO-CHAIR PITTS: I am not sure

	Page 299
1	what I mean. I think that it is pretty
2	obvious why you shouldn't use the mean,
3	because of extreme values on the right side of
4	the distribution. So, the median would be
5	more reasonable.
6	But Brent was making the comment
7	that the place where you struggle might be
8	when you are really crowded. So, the P90
9	would be, the 90th percentile would be a more
10	useful value for you to report.
11	Did I get that right, Brent?
12	MR. PINES: Right. Sort of the
13	thinking is that just the median value. So,
14	meaning the hospital on their average day is
15	very different than this whole flexibility
16	issue; measuring the hospital on their worst
17	day, how do they perform?
18	MEMBER McCARTHY: And I think it
19	is true, Steve, that smaller hospitals have
20	less ability to absorb surge, because they are
21	smaller, than large hospitals do. That is
22	just kind of naturally that has been shown

	Page 300
1	statistically.
2	CO-CHAIR PITTS: Any other
3	thoughts about central tendencies?
4	(No response.)
5	Okay. I am sorry, I don't know
6	what the next point, Recommendation 9, exactly
7	means. Maybe, Jesse, you can talk about that.
8	MR. PINES: Sure. So, the
9	thinking behind Recommendation 9, there have
10	been some specific ways to structure the
11	emergency department that have been associated
12	with differences in length of stay.
13	For example, having a fast track,
14	physician in triage, there is a fair amount of
15	literature around that. And there are some
16	other things that some hospitals would call
17	best practices.
18	And our recommendation here would
19	be for those structural elements that have
20	been associated with differences in length of
21	stay or performance or quality, that those
22	could potentially serve as structural quality

MEMBER FIELDS: So, the concept would be voluntary reporting if they are participating in one of these alternatives? MR. PINES: Right. So that, if there could be some specific structural things

7 like having a full-capacity protocol in place 8 -- I think Anthony mentioned having some 9 protocol in place where, when you get to a 10 certain point, that your hospital actually does something different. That could 11 12 potentially serve as a quality measure if in multiple studies that has been associated with 13 differences in performance. 14

15 MEMBER ADIRIM: What are you 16 measuring?

17 MR. PINES: So, I quess the 18 easiest example would be the presence of, 19 let's say, a fast track. There is emerging 20 literature looking at different structural 21 elements in the emergency department and the 22 association with length of stay and other

> Neal R. Gross & Co., Inc. 202-234-4433

measures for crowding.

1

2

3

4

5

6

	Page 302
1	outcomes.
2	The recommendation here is just to
3	say that those could be considered as
4	potential quality measures, as structural
5	measures.
6	CO-CHAIR PITTS: Emily? I'm
7	sorry.
8	MEMBER CARRIER: Maybe others here
9	are much more familiar with the literature in
10	this area than I am. Jesse, you said that
11	there is a lot of it.
12	The few studies that I have read
13	that have looked at things like that, I
14	wouldn't describe them as of sufficient
15	quality that I would say quality measure. It
16	is more like our center was motivated to do
17	this, and we did it, and our pre/post data
18	shows that things have improved.
19	MR. PINES: So, the literature on
20	this currently is pretty sparse, but,
21	essentially, this recommendation would be, if
22	in the future there is some sort of best

	Page 303
1	practice that is evidence-based, that that
2	could potentially be a structural measure for
3	crowding.
4	CO-CHAIR PITTS: Jay?
5	MEMBER SCHUUR: Sort of to follow
б	up Emily's comment, I would disagree with the
7	recommendation as written. I wouldn't want
8	structural measures that were associated with
9	improved flow. I would want structural
10	measures that were associated with improved
11	patient outcomes.
12	And I think about structural
13	measures as helpful if you don't have good
14	outcome measures or good process measures.
15	But we think we have pretty good process
16	measures for flow. So, why not just measure
17	the flow and people can implement whatever
18	strategies they want, unless the specific
19	strategies have been tied to outcomes?
20	CO-CHAIR PITTS: AnnMarie?
21	MEMBER PAPA: Yes, I would kind of
22	agree with that as well because it is not just

ſ

	Page 304
1	having the strategy. It is effectively
2	implementing it. Because many people have a
3	capacity management protocol, but how many
4	people, how many hospitals really utilize it,
5	and utilize it effectively every time?
6	And some people have a fast track,
7	but they can only get it staffed between these
8	hours and these hours. That may not go with
9	your flow. So, I don't know how we would tie
10	that in.
11	MEMBER FIELDS: I really want to
12	try to have some continuity with the morning
13	discussion because I think it was potentially
14	really powerful. I think the idea of looking
15	at populations and looking at regional
16	services, and those kinds of outcomes, is a
17	way we can lead.
18	And so, in that context, I think
19	if Recommendation 9 was strategies that are
20	deployed within a service area or across
21	hospital systems, I think that is really what
22	you would want to encourage. To the extent it

Page 305 1 might help you with surge capacity or gray 2 squirrels, I think you would like to know if they are doing it. 3 And also, thinking 4 MR. PINES: 5 more broadly about structural measures, I know that the literature on specific structural 6 7 measures in the ED and length of stay is not 8 particularly robust right now. But when you 9 think about structural measures, that could be specific protocols in place. It could be 10 transfer agreements between hospitals. 11 12 Essentially, the purpose of having this Draft Recommendation in there is just to say that 13 14 these should be considered, that structural measures should also be considered. 15 16 CO-CHAIR PITTS: Mike? 17 MEMBER STOTO: Actually, my 18 comment follows up on that. I think the 19 reason that I like this one is because I think 20 that some of these measures will also help 21 with the preparedness aspect of things. Well, 22 particularly if they can be associated with

Page 3061outcomes, but even if only with flow, I think2that would be the kind of thing that would be3useful for preparedness, too.4CO-CHAIR PITTS: Gregg?5MEMBER MARGOLIS: Actually, I was6waiting for my comment until after we got to7Recommendation 10, but looking at time and8following up on my colleagues here, what I9would really like to emphasize here is to make10the connection between our morning discussion11and this one.12That is really, while I think that13boarding and crowding measures at a facility14level are very important, also are boarding15and crowding measures at a regional level. It16gives us a sense of a communities emergency17department capacity overall.18And I would suggest that perhaps a19Recommendation No. 10, or I'm sorry, No. 1120might be something to the effect of figuring21out ways that facility boarding and crowding22variables could be aggregated in a way that is		
2that would be the kind of thing that would be useful for preparedness, too.3CO-CHAIR PITTS: Gregg?5MEMBER MARGOLIS: Actually, I was6waiting for my comment until after we got to7Recommendation 10, but looking at time and8following up on my colleagues here, what I9would really like to emphasize here is to make10the connection between our morning discussion11and this one.12That is really, while I think that13boarding and crowding measures at a facility14level are very important, also are boarding15and crowding measures at a regional level. It16gives us a sense of a communities emergency17department capacity overall.18And I would suggest that perhaps a19Recommendation No. 10, or I'm sorry, No. 1120might be something to the effect of figuring21out ways that facility boarding and crowding		Page 306
<ul> <li>useful for preparedness, too.</li> <li>CO-CHAIR PITTS: Gregg?</li> <li>MEMBER MARGOLIS: Actually, I was</li> <li>waiting for my comment until after we got to</li> <li>Recommendation 10, but looking at time and</li> <li>following up on my colleagues here, what I</li> <li>would really like to emphasize here is to make</li> <li>the connection between our morning discussion</li> <li>and this one.</li> <li>That is really, while I think that</li> <li>boarding and crowding measures at a facility</li> <li>level are very important, also are boarding</li> <li>and crowding measures at a regional level. It</li> <li>gives us a sense of a communities emergency</li> <li>department capacity overall.</li> <li>And I would suggest that perhaps a</li> <li>Recommendation No. 10, or I'm sorry, No. 11</li> <li>might be something to the effect of figuring</li> <li>out ways that facility boarding and crowding</li> </ul>	1	outcomes, but even if only with flow, I think
4CO-CHAIR PITTS: Gregg?5MEMBER MARGOLIS: Actually, I was6waiting for my comment until after we got to7Recommendation 10, but looking at time and8following up on my colleagues here, what I9would really like to emphasize here is to make10the connection between our morning discussion11and this one.12That is really, while I think that13boarding and crowding measures at a facility14level are very important, also are boarding15and crowding measures at a regional level. It16gives us a sense of a communities emergency17department capacity overall.18And I would suggest that perhaps a19Recommendation No. 10, or I'm sorry, No. 1120might be something to the effect of figuring21out ways that facility boarding and crowding	2	that would be the kind of thing that would be
5 MEMBER MARGOLIS: Actually, I was 6 waiting for my comment until after we got to 7 Recommendation 10, but looking at time and 8 following up on my colleagues here, what I 9 would really like to emphasize here is to make 10 the connection between our morning discussion 11 and this one. 12 That is really, while I think that 13 boarding and crowding measures at a facility 14 level are very important, also are boarding 15 and crowding measures at a regional level. It 16 gives us a sense of a communities emergency 17 department capacity overall. 18 And I would suggest that perhaps a 19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	3	useful for preparedness, too.
<ul> <li>waiting for my comment until after we got to</li> <li>Recommendation 10, but looking at time and</li> <li>following up on my colleagues here, what I</li> <li>would really like to emphasize here is to make</li> <li>the connection between our morning discussion</li> <li>and this one.</li> <li>That is really, while I think that</li> <li>boarding and crowding measures at a facility</li> <li>level are very important, also are boarding</li> <li>and crowding measures at a regional level. It</li> <li>gives us a sense of a communities emergency</li> <li>department capacity overall.</li> <li>And I would suggest that perhaps a</li> <li>Recommendation No. 10, or I'm sorry, No. 11</li> <li>might be something to the effect of figuring</li> <li>out ways that facility boarding and crowding</li> </ul>	4	CO-CHAIR PITTS: Gregg?
Recommendation 10, but looking at time and following up on my colleagues here, what I would really like to emphasize here is to make the connection between our morning discussion and this one. That is really, while I think that boarding and crowding measures at a facility level are very important, also are boarding and crowding measures at a regional level. It gives us a sense of a communities emergency department capacity overall. And I would suggest that perhaps a Recommendation No. 10, or I'm sorry, No. 11 might be something to the effect of figuring out ways that facility boarding and crowding	5	MEMBER MARGOLIS: Actually, I was
<ul> <li>8 following up on my colleagues here, what I</li> <li>9 would really like to emphasize here is to make</li> <li>10 the connection between our morning discussion</li> <li>11 and this one.</li> <li>12 That is really, while I think that</li> <li>13 boarding and crowding measures at a facility</li> <li>14 level are very important, also are boarding</li> <li>15 and crowding measures at a regional level. It</li> <li>16 gives us a sense of a communities emergency</li> <li>17 department capacity overall.</li> <li>18 And I would suggest that perhaps a</li> <li>19 Recommendation No. 10, or I'm sorry, No. 11</li> <li>10 might be something to the effect of figuring</li> <li>21 out ways that facility boarding and crowding</li> </ul>	6	waiting for my comment until after we got to
<ul> <li>9 would really like to emphasize here is to make</li> <li>10 the connection between our morning discussion</li> <li>11 and this one.</li> <li>12 That is really, while I think that</li> <li>13 boarding and crowding measures at a facility</li> <li>14 level are very important, also are boarding</li> <li>15 and crowding measures at a regional level. It</li> <li>16 gives us a sense of a communities emergency</li> <li>17 department capacity overall.</li> <li>18 And I would suggest that perhaps a</li> <li>19 Recommendation No. 10, or I'm sorry, No. 11</li> <li>20 might be something to the effect of figuring</li> <li>21 out ways that facility boarding and crowding</li> </ul>	7	Recommendation 10, but looking at time and
10the connection between our morning discussion11and this one.12That is really, while I think that13boarding and crowding measures at a facility14level are very important, also are boarding15and crowding measures at a regional level. It16gives us a sense of a communities emergency17department capacity overall.18And I would suggest that perhaps a19Recommendation No. 10, or I'm sorry, No. 1120might be something to the effect of figuring21out ways that facility boarding and crowding	8	following up on my colleagues here, what I
11 and this one. 12 That is really, while I think that 13 boarding and crowding measures at a facility 14 level are very important, also are boarding 15 and crowding measures at a regional level. It 16 gives us a sense of a communities emergency 17 department capacity overall. 18 And I would suggest that perhaps a 19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	9	would really like to emphasize here is to make
12That is really, while I think that13boarding and crowding measures at a facility14level are very important, also are boarding15and crowding measures at a regional level. It16gives us a sense of a communities emergency17department capacity overall.18And I would suggest that perhaps a19Recommendation No. 10, or I'm sorry, No. 1120might be something to the effect of figuring21out ways that facility boarding and crowding	10	the connection between our morning discussion
boarding and crowding measures at a facility level are very important, also are boarding and crowding measures at a regional level. It gives us a sense of a communities emergency department capacity overall. And I would suggest that perhaps a Recommendation No. 10, or I'm sorry, No. 11 might be something to the effect of figuring out ways that facility boarding and crowding	11	and this one.
14 level are very important, also are boarding 15 and crowding measures at a regional level. It 16 gives us a sense of a communities emergency 17 department capacity overall. 18 And I would suggest that perhaps a 19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	12	That is really, while I think that
15 and crowding measures at a regional level. It 16 gives us a sense of a communities emergency 17 department capacity overall. 18 And I would suggest that perhaps a 19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	13	boarding and crowding measures at a facility
<pre>16 gives us a sense of a communities emergency 17 department capacity overall. 18 And I would suggest that perhaps a 19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding</pre>	14	level are very important, also are boarding
17 department capacity overall. 18 And I would suggest that perhaps a 19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	15	and crowding measures at a regional level. It
And I would suggest that perhaps a Recommendation No. 10, or I'm sorry, No. 11 might be something to the effect of figuring out ways that facility boarding and crowding	16	gives us a sense of a communities emergency
19 Recommendation No. 10, or I'm sorry, No. 11 20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	17	department capacity overall.
20 might be something to the effect of figuring 21 out ways that facility boarding and crowding	18	And I would suggest that perhaps a
21 out ways that facility boarding and crowding	19	Recommendation No. 10, or I'm sorry, No. 11
	20	might be something to the effect of figuring
22 variables could be aggregated in a way that is	21	out ways that facility boarding and crowding
	22	variables could be aggregated in a way that is

	Page 307
1	meaningful to provide information as to the
2	capacity of emergency care in a given
3	community.
4	I am not sure whether that is a
5	regionalization question or a boarding and
6	crowding issue, but I wanted to make sure that
7	it was brought up in this context, especially
8	in the light of the Chairman's comments.
9	MR. PINES: Sure, and just to
10	comment on that, I think we are going to have
11	that discussion after the next section.
12	CO-CHAIR PITTS: Okay. All right.
13	Well, Recommendation 10 then. I'm sorry, one
14	more comment. Ellen, yes, go ahead.
15	MEMBER WEBER: This is kind of
16	related to both 9 and 10. I wrote in here
17	some notes to myself.
18	Should we have some kind of
19	recommendation about what the hospital does in
20	this planning thing about high ED census?
21	Because we are talking about very specific
22	implementations of certain things that people

1	
	Page 308
1	are talking about, but it kind of was a little
2	bit like the JCAHO flow thing.
3	But since we are talking about
4	this this morning in terms of the surge,
5	should we specifically say a plan for daily
б	response to surges and capacity responses to
7	overcrowding per se as opposed to the
8	throughput measures? But what do you have in
9	place? What is kind of your early-warning
10	system and that sort of thing? And actually,
11	really make it very clear what the connection
12	is here between this and the continuum to a
13	disaster.
14	CO-CHAIR PITTS: Okay. Gregg, are
15	you still up for a question? Or no? Brent?
16	MEMBER ASPLIN: I would support
17	what Ellen just proposed if it was tied to a
18	boarding standard or some outcome measure
19	where we are actually going to do something
20	about it. If it is just a plan, I am not too
21	excited. But if we are going to couple that
22	together with you have to meet this standard,

	Page 309
1	so how are you going to plan to meet it, then
2	it would be I think more helpful.
3	CO-CHAIR PITTS: Jay? Wes?
4	MEMBER FIELDS: I am just going to
5	keep pounding this nail because it seems like
6	somebody gave me a hammer.
7	(Laughter.)
8	But I really do think, if there is
9	a way to serve communities and be able to
10	quantitize surge capacity, it is because we
11	can find a way to agree that on a regular
12	basis hospitals, individually and
13	collectively, have to actually have measurable
14	impact on ED crowding as their daily fire
15	drill that prepares them collectively for the
16	black swan.
17	You know, I really think there has
18	got to be a way for you to create a
19	measurement that demonstrates not that they
20	have strategy, but that they can implement it
21	and that they can do it in real time. I think
22	that is exactly why the JCAHO measure that

	Page 310
1	begins at four hours for boarding is
2	inadequate for this purpose. Because, as we
3	have heard I think three times I can remember
4	during the day, there have been a number of
5	very significant events for communities that
6	come and go like the tides or a tsunami in
7	four hours.
8	So, I think the metric needs to
9	put some level of accountability around the
10	ability of facilities within a region to
11	respond and for this to be viewed finally, and
12	hopefully forever, as something other than an
13	emergency department problem.
14	CO-CHAIR PITTS: Arjun?
15	MEMBER VENKATASH: I guess the
16	only thing I am thinking about when we think
17	about structural measures is I really agree
18	with what Jay said, which is when you have
19	process or certainly outcome measures, the
20	utility of the incremental value for that
21	process measure is very little.
22	So, when I think about structural

Page 311 measures, I think about what are either areas 1 2 that we can't measure via the other mechanisms, and so structural measures have 3 4 added value, or is it necessary to help 5 balance the measure, that you need to have the process measure with the structural measure? 6 7 In this case, I think Emily 8 mentioned earlier about thinking about what we have done in care coordination. 9 I was 10 thinking about this during the break. There was only one structural measure I have seen 11 12 recently go through an NQF process that was sort of interesting. And that was the NCOA 13 14 measure to tier medical home levels as NCOA Level 1, Level 2, Level 3 medical homes. 15 That 16 was a massive structural measure, right? Ιt 17 included a ton of structural elements with some research that was done that looked at how 18 19 well that tied to qualitative assessments of 20 patients feeling that they were part of 21 medical homes. 22 And I think thinking of that model

Page 312
as a way for some of these boarding/crowding
structures, as well as some of the
preparedness structures, to fit into a list of
multiple structures that, when done in
concert, could be associated with this
perception within a health system of either
preparedness or being able to manage flow, and
would allude to some of these ideas of, does
that system have for flex, may be a way of
doing it.
Because, in isolation, any one
structural measure is going to look really
weak, and it is going to be tremendous I
can never see it getting through a consensus-
development process. But, coupled together
with some qualitative assessment that says
that those structural measures in concert make
sense, I think it is good guidance for
developers, and that is probably the way we
would want them to develop it.
And then, it gets at a process,
again, like I was saying before, we are not

Page 313 1 going to be able to measure outcomes, right, 2 for preparedness? So, maybe this fits later in the discussion later the afternoon, but my 3 4 guess is that this structure map includes 5 boarding, crowding, traditional preparedness processes all in one. 6 7 CO-CHAIR PITTS: Great. That is 8 actually interesting. 9 I'm sorry. Brent? 10 MEMBER ASPLIN: Well, what Arjun just said triggered in my mind this might be 11 12 our opportunity to sunset the whole term "ED crowding," to begin to sunset it, because that 13 14 was probably our biggest strategic mistake way 15 back whenever. 16 CO-CHAIR PITTS: Call it something else? 17 18 (Laughter.) 19 MEMBER ASPLIN: Well, what we are 20 really talking about -- and this does combine 21 the two topics -- is system capacity and 22 response, right? From a regionalized

Page 3141emergency care standpoint, we are looking at2system capacity and response, and forms of3that involve daily operations and how we4manage daily surge. That is where flow,5delays, targets around boarding become6important. And then, that morphs into the7larger capacity and response issues of8emergency preparedness. That might be a way9to kind of tie this together and stop talking10about crowding. Just a thought.11MEMBER PAPA: And just to dovetail12off that, the biggest mistake we ever made was13to put that first patient in the hallway many14years back when we were trying to fix things,15because no other unit does that.16Unfortunately, we are the victim of our own17success. I agree with you, it is not ED. It18is not an ED issue, and this will help move us19forward.20CO-CHAIR PITTS: Yes, we did a lot21of things for a lot of people in the old days.22(Laughter.)		
2       system capacity and response, and forms of         3       that involve daily operations and how we         4       manage daily surge. That is where flow,         5       delays, targets around boarding become         6       important. And then, that morphs into the         7       larger capacity and response issues of         8       emergency preparedness. That might be a way         9       to kind of tie this together and stop talking         10       about crowding. Just a thought.         11       MEMBER PAPA: And just to dovetail         12       off that, the biggest mistake we ever made was         13       to put that first patient in the hallway many         14       years back when we were trying to fix things,         15       because no other unit does that.         16       Unfortunately, we are the victim of our own         17       success. I agree with you, it is not ED. It         18       is not an ED issue, and this will help move us         19       forward.         20       CO-CHAIR PITTS: Yes, we did a lot         21       of things for a lot of people in the old days.		Page 314
3       that involve daily operations and how we         4       manage daily surge. That is where flow,         5       delays, targets around boarding become         6       important. And then, that morphs into the         7       larger capacity and response issues of         8       emergency preparedness. That might be a way         9       to kind of tie this together and stop talking         10       about crowding. Just a thought.         11       MEMBER PAPA: And just to dovetail         12       off that, the biggest mistake we ever made was         13       to put that first patient in the hallway many         14       years back when we were trying to fix things,         15       because no other unit does that.         16       Unfortunately, we are the victim of our own         17       success. I agree with you, it is not ED. It         18       is not an ED issue, and this will help move us         19       forward.         20       CO-CHAIR PITTS: Yes, we did a lot         21       of things for a lot of people in the old days.	1	emergency care standpoint, we are looking at
<ul> <li>manage daily surge. That is where flow,</li> <li>delays, targets around boarding become</li> <li>important. And then, that morphs into the</li> <li>larger capacity and response issues of</li> <li>emergency preparedness. That might be a way</li> <li>to kind of tie this together and stop talking</li> <li>about crowding. Just a thought.</li> <li>MEMBER PAPA: And just to dovetail</li> <li>off that, the biggest mistake we ever made was</li> <li>to put that first patient in the hallway many</li> <li>years back when we were trying to fix things,</li> <li>because no other unit does that.</li> <li>Unfortunately, we are the victim of our own</li> <li>success. I agree with you, it is not ED. It</li> <li>is not an ED issue, and this will help move us</li> <li>forward.</li> <li>CO-CHAIR PITTS: Yes, we did a lot</li> <li>of things for a lot of people in the old days.</li> </ul>	2	system capacity and response, and forms of
<ul> <li>delays, targets around boarding become</li> <li>important. And then, that morphs into the</li> <li>larger capacity and response issues of</li> <li>emergency preparedness. That might be a way</li> <li>to kind of tie this together and stop talking</li> <li>about crowding. Just a thought.</li> <li>MEMBER PAPA: And just to dovetail</li> <li>off that, the biggest mistake we ever made was</li> <li>to put that first patient in the hallway many</li> <li>years back when we were trying to fix things,</li> <li>because no other unit does that.</li> <li>Unfortunately, we are the victim of our own</li> <li>success. I agree with you, it is not ED. It</li> <li>is not an ED issue, and this will help move us</li> <li>forward.</li> <li>CO-CHAIR PITTS: Yes, we did a lot</li> <li>of things for a lot of people in the old days.</li> </ul>	3	that involve daily operations and how we
<ul> <li>important. And then, that morphs into the</li> <li>larger capacity and response issues of</li> <li>emergency preparedness. That might be a way</li> <li>to kind of tie this together and stop talking</li> <li>about crowding. Just a thought.</li> <li>MEMBER PAPA: And just to dovetail</li> <li>off that, the biggest mistake we ever made was</li> <li>to put that first patient in the hallway many</li> <li>years back when we were trying to fix things,</li> <li>because no other unit does that.</li> <li>Unfortunately, we are the victim of our own</li> <li>success. I agree with you, it is not ED. It</li> <li>is not an ED issue, and this will help move us</li> <li>forward.</li> <li>CO-CHAIR PITTS: Yes, we did a lot</li> <li>of things for a lot of people in the old days.</li> </ul>	4	manage daily surge. That is where flow,
<ul> <li>7 larger capacity and response issues of</li> <li>8 emergency preparedness. That might be a way</li> <li>9 to kind of tie this together and stop talking</li> <li>10 about crowding. Just a thought.</li> <li>11 MEMBER PAPA: And just to dovetail</li> <li>12 off that, the biggest mistake we ever made was</li> <li>13 to put that first patient in the hallway many</li> <li>14 years back when we were trying to fix things,</li> <li>15 because no other unit does that.</li> <li>16 Unfortunately, we are the victim of our own</li> <li>17 success. I agree with you, it is not ED. It</li> <li>18 is not an ED issue, and this will help move us</li> <li>19 forward.</li> <li>20 CO-CHAIR PITTS: Yes, we did a lot</li> <li>21 of things for a lot of people in the old days.</li> </ul>	5	delays, targets around boarding become
<ul> <li>8 emergency preparedness. That might be a way</li> <li>9 to kind of tie this together and stop talking</li> <li>10 about crowding. Just a thought.</li> <li>11 MEMBER PAPA: And just to dovetail</li> <li>12 off that, the biggest mistake we ever made was</li> <li>13 to put that first patient in the hallway many</li> <li>14 years back when we were trying to fix things,</li> <li>15 because no other unit does that.</li> <li>16 Unfortunately, we are the victim of our own</li> <li>17 success. I agree with you, it is not ED. It</li> <li>18 is not an ED issue, and this will help move us</li> <li>19 forward.</li> <li>20 CO-CHAIR PITTS: Yes, we did a lot</li> <li>21 of things for a lot of people in the old days.</li> </ul>	6	important. And then, that morphs into the
<ul> <li>to kind of tie this together and stop talking</li> <li>about crowding. Just a thought.</li> <li>MEMBER PAPA: And just to dovetail</li> <li>off that, the biggest mistake we ever made was</li> <li>to put that first patient in the hallway many</li> <li>years back when we were trying to fix things,</li> <li>because no other unit does that.</li> <li>Unfortunately, we are the victim of our own</li> <li>success. I agree with you, it is not ED. It</li> <li>is not an ED issue, and this will help move us</li> <li>forward.</li> <li>CO-CHAIR PITTS: Yes, we did a lot</li> <li>of things for a lot of people in the old days.</li> </ul>	7	larger capacity and response issues of
10about crowding. Just a thought.11MEMBER PAPA: And just to dovetail12off that, the biggest mistake we ever made was13to put that first patient in the hallway many14years back when we were trying to fix things,15because no other unit does that.16Unfortunately, we are the victim of our own17success. I agree with you, it is not ED. It18is not an ED issue, and this will help move us19forward.20CO-CHAIR PITTS: Yes, we did a lot21of things for a lot of people in the old days.	8	emergency preparedness. That might be a way
11MEMBER PAPA: And just to dovetail12off that, the biggest mistake we ever made was13to put that first patient in the hallway many14years back when we were trying to fix things,15because no other unit does that.16Unfortunately, we are the victim of our own17success. I agree with you, it is not ED. It18is not an ED issue, and this will help move us19forward.20CO-CHAIR PITTS: Yes, we did a lot21of things for a lot of people in the old days.	9	to kind of tie this together and stop talking
<ul> <li>off that, the biggest mistake we ever made was</li> <li>to put that first patient in the hallway many</li> <li>years back when we were trying to fix things,</li> <li>because no other unit does that.</li> <li>Unfortunately, we are the victim of our own</li> <li>success. I agree with you, it is not ED. It</li> <li>is not an ED issue, and this will help move us</li> <li>forward.</li> <li>CO-CHAIR PITTS: Yes, we did a lot</li> <li>of things for a lot of people in the old days.</li> </ul>	10	about crowding. Just a thought.
<ul> <li>to put that first patient in the hallway many</li> <li>years back when we were trying to fix things,</li> <li>because no other unit does that.</li> <li>Unfortunately, we are the victim of our own</li> <li>success. I agree with you, it is not ED. It</li> <li>is not an ED issue, and this will help move us</li> <li>forward.</li> <li>CO-CHAIR PITTS: Yes, we did a lot</li> <li>of things for a lot of people in the old days.</li> </ul>	11	MEMBER PAPA: And just to dovetail
14 years back when we were trying to fix things, 15 because no other unit does that. 16 Unfortunately, we are the victim of our own 17 success. I agree with you, it is not ED. It 18 is not an ED issue, and this will help move us 19 forward. 20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.	12	off that, the biggest mistake we ever made was
15 because no other unit does that. 16 Unfortunately, we are the victim of our own 17 success. I agree with you, it is not ED. It 18 is not an ED issue, and this will help move us 19 forward. 20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.	13	to put that first patient in the hallway many
16 Unfortunately, we are the victim of our own 17 success. I agree with you, it is not ED. It 18 is not an ED issue, and this will help move us 19 forward. 20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.	14	years back when we were trying to fix things,
<pre>17 success. I agree with you, it is not ED. It 18 is not an ED issue, and this will help move us 19 forward. 20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.</pre>	15	because no other unit does that.
18 is not an ED issue, and this will help move us 19 forward. 20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.	16	Unfortunately, we are the victim of our own
<pre>19 forward. 20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.</pre>	17	success. I agree with you, it is not ED. It
20 CO-CHAIR PITTS: Yes, we did a lot 21 of things for a lot of people in the old days.	18	is not an ED issue, and this will help move us
21 of things for a lot of people in the old days.	19	forward.
	20	CO-CHAIR PITTS: Yes, we did a lot
22 (Laughter.)	21	of things for a lot of people in the old days.
	22	(Laughter.)

Page 315 All right. This is the last 1 2 recommendation before our break. So, then, Recommendation 10, measures of ED -- we have 3 discussed this a bit -- measures of ED outflow 4 5 beyond boarding. For example, hospital length of stay for specific conditions may be 6 7 considered by quality developers to impact ED 8 flow. I quess one question is, how easy would 9 it be to get this kind of information? 10 CO-CHAIR STONE-GRIFFITH: Well, I will start off by saying we didn't think it 11 12 would be that easy to get the information out of the emergency department once upon a time. 13 14 But I think if we don't contextually look at it across the entire hospital continuum, then 15 we are really going to miss the other patients 16 that are being boarded elsewhere or not being 17 18 managed as effectively and as efficiently as 19 they can be. So, I would certainly support at 20 least some guidance around that entire 21 hospital experience. 22 CO-CHAIR PITTS: Brent, are you

	Dece 216
1	Page 316 up?
2	MEMBER ASPLIN: Yes. I like this
3	one. I think most hospital administrators
4	will know more about this than they will about
5	their ED length of stay. So, these data are
6	out there, and it kind of ties back into the
7	same concept of system capacity and response.
8	CO-CHAIR PITTS: Ellen?
9	MEMBER WEBER: Yes, actually, I am
10	going to steal this idea from Peter Marcello.
11	But one of the things that he mentioned at our
12	crowding interest group was something that you
13	could track was how long it takes to get an
14	order to put in for a needed study when a
15	patient is admitted or to get the neuro
16	consult for the patient who isn't going to get
17	the TPA.
18	Also, bed days, how efficient are
19	you with your beds? Of course, then you would
20	need some risk adjustment.
21	So, beyond just the length of stay
22	for specific conditions, there are probably

	Page 317
1	some other process measures of hospital
2	efficiency that ought to be being tracked, not
3	just for economic reasons.
4	CO-CHAIR PITTS: There is also
5	just a simple, how do you schedule your
6	surgery at this particular hospital?
7	AnnMarie?
8	MEMBER PAPA: Thank you.
9	The other thing you can look at is
10	your discharge time and your discharge order.
11	Your discharge order happens maybe at 11
12	o'clock. The patient doesn't leave until six
13	o'clock at night, and we all know that because
14	we feel it. You can't get a bed all day long,
15	and then, all of a sudden, at six or seven
16	o'clock at night you take a bolus of patients
17	upstairs. The upstairs nurses are
18	complaining. They can't take them all at the
19	same time.
20	So, what is that process from
21	beginning that discharge order being written
22	to the patient leaving? Because that is a

	Page 318
1	huge issue as well.
2	CO-CHAIR PITTS: Brendan?
3	MEMBER CARR: Yes, I guess I just
4	wanted to echo that I think this one is also
5	really important. It starts to get at the
6	systemness of this. I think it also sort of
7	builds on pillar we are trying to cut clean
8	lines between this session and the next couple
9	of sessions. But I think, in part, the point
10	is to not. This builds on the first pillar
11	that Marco was talking about earlier today:
12	is there a way to bake into here some
13	awareness about whether or not this person can
14	be reverse-triaged, should they need to be?
15	And I don't know that the
16	literature is going to support anything
17	getting through the process yet, but it does
18	seem like we could start to increase some sort
19	of awareness about our inpatient triage
20	system.
21	CO-CHAIR PITTS: Terry?
22	MEMBER ADIRIM: Yes, what I like

	Page 319
1	about this measure, I agree with my
2	colleagues, is that it is an integrative
3	measure. I think it puts accountability, just
4	so that everybody is concerned about it away
5	from the ER when it is not the ER's fault.
6	So, one of the recommendations I
7	would suggest or somehow put in here, that
8	measure developers should move towards
9	developing measures that are integrative.
10	Because each one of the issues that you have
11	brought up, you know, really not just at the
12	isolated ED part, the one thing that I have
13	always been concerned about is like, why are
14	we, the ED, always considered separate from
15	the rest of the healthcare system?
16	CO-CHAIR PITTS: Manish?
17	MEMBER SHAH: This may be a little
18	bit on a tangent to this, but one of the
19	things that always concerned me, and I think
20	is also a potential to measure how the region
21	is doing, is the EMS offload time. I mean,
22	that has been a big issue in our area, you

Page 320
know, with EMS having to stay at the hospital
for an hour and a half trying to offload the
patients. And that is something that is
measured within them, so it can potentially
give a fair amount of information. And so,
that might be useful to somewhere integrate,
whether it is, whether it is expanding this
recommendation a little to include maybe input
for in-flow measures also.
CO-CHAIR PITTS: Arjun?
MEMBER VENKATASH: I was just
going to say, for the EMS offload time, I
think that is a good measure, and it is one
that in the previous phase of this project,
when we were speaking to David Cone, he spent
some time in Australia and did a lot of
assessment of their EMS systems. And that is
standardly reported in Australia. So, it
would be worth reconnecting with him in
thinking about that.
CO-CHAIR PITTS: Oh, I am sorry.
I didn't see you there.

Page 321 MEMBER LEVINE: I just wanted to 1 2 add that I like this one as well, but this is one that we could also add in, if we wanted to 3 or felt the need to have a risk-adjustment 4 5 piece in it to really get at the acuity of the patients in the hospital, that there is a lot 6 7 of established risk-adjustment methodology 8 already out there versus the iffy-ness that we 9 had for the ED patients. So, that is an 10 opportunity to throw that in as we make this more systemwide or hospital-based. 11 12 So, I do want MR. PINES: Great. to take about a 15-minute break in a minute 13 14 here. One of the things I did want to 15 16 have people think about is other recommendations. We have 10 recommendations 17 18 So, maybe what we could do is, before here. 19 the next session starts on accountability and 20 regionalization, we can just do a quick around 21 the room and see if anyone has any other 22 recommendations that they want to bring up for

	5
1	Page 322 the crowding and boarding. Or if you came up
<u> </u>	the crowdring and boardring. Or ir you came up
2	with something from this morning, please let
3	us know then.
4	So, let's reconvene here at 3:15.
5	(Whereupon, the foregoing matter
6	went off the record at 2:56 p.m. and went back
7	on the record at 3:18 p.m.)
8	CO-CHAIR PITTS: We are just
9	slightly out of sequence. No problem.
10	For this next step here, we will
11	talk about accountability and regionalization.
12	Since we have already touched on a lot of
13	issues on that topic and, subsequently,
14	recommendations, right?
15	MR. PINES: Yes, why don't we just
16	do a round robin of recommendations?
17	CO-CHAIR STONE-GRIFFITH: Are
18	there any other recommendations we should add?
19	CO-CHAIR PITTS: So, we are
20	thinking of round-robining that. I know Mike
21	has got some stuff to say. After that, we
22	will go on to Arjun's presentation.

	Page 323
1	MEMBER STOTO: So, I have got a
2	couple of suggestions about the preparedness
3	area. There is some text in the draft report,
4	but not made specifically into
5	recommendations.
6	Angela, did you get the email yet?
7	I did it on my iPad, so it may not look that
8	great when it comes up.
9	So, anyway, I thought there really
10	were three things that encapsulate some of the
11	discussion that we had this morning.
12	One is to identify some of the
13	capabilities that are important on a daily
14	basis in small-scale emergencies and large-
15	scale emergencies, basically across the whole
16	spectrum of things, and then find ways to
17	measure those things.
18	I am saying that because I think
19	that we don't have many opportunities to
20	measure in large-scale emergencies. But if we
21	can find capabilities that are useful across
22	the board, then as much as possible measure

	Page 324
1	that in these small-scale events, and so on.
2	The second one is to develop
3	approaches to measures these capabilities at
4	the regional and the system level for two
5	different opportunities. One is in actual
6	emergencies, and two is in exercises and
7	simulations. I think both of those cases, it
8	would involve developing it is the last one
9	on there a protocol and a measurement tool
10	like an instrument that would be used to do
11	this. And, of course, you would need to
12	assess its validity and reliability through
13	standard methods.
14	And the third one, which is not on
15	there yet for some reason, is to consider sets
16	of measures. I think that a lot of these
17	measures really don't work all that well by
18	themselves, but we really need to think about,
19	if we had a set of these things, we maybe
20	could get a good picture.
21	Typically, NQF endorses one
22	measure at a time. But I think we are really
	Page 325
----	---
1	talking to developers at this stage. If we
2	talk about developing a set of measures, they
3	could be put forward in a package, and that
4	would be useful.
5	MS. FRANKLIN: Yes, we do endorse
6	one measure at a time, but we do, also, look
7	at measures that are expected to be reported
8	together as well and composites.
9	MEMBER STOTO: Okay. That is the
10	concept I have in mind, yes. So, that is the
11	idea.
12	CO-CHAIR PITTS: You have,
13	hopefully, had a chance to think a little bit
14	about the topic. We are going to go around
15	the room, hoping that somebody will have an
16	idea on the topic of accountability and
17	regionalization.
18	MR. PINES: So, essentially, for
19	the next section, if we could just go around
20	the room, and if you have any recommendations
21	that we didn't think of that haven't been
22	mentioned, sort of other ideas that came to

	Page 326
1	your mind during a break or that you wanted to
2	mention that we could integrate into the
3	document as draft recommendations when we send
4	it back out to the group?
5	CO-CHAIR PITTS: Yes, go ahead,
6	Ellen. You are first.
7	MEMBER WEBER: I am going to throw
8	out three things. Just getting back to the
9	one that was the England experience, one of
10	the other measures they had was a maximum
11	length-of-stay measure. So, that might be
12	worth considering, where sort of all the roof
13	falls in on you, and the health minister comes
14	and sees you. They have what was called the
15	12-hour trolley wait. If you were admitted
16	for 12 hours and still in the department,
17	literally, that was like a failed institution.
18	(Laughter.)
19	So, it is kind of one of those
20	things where I would say most emergency
21	physicians would agree that 12 hours is beyond
22	the pale of what you really should be doing in

Page 32
1 the ED. A lot of times that is a service
2 issue where no one will take the patient, and
3 so forth, or there is no bed. So, that might
4 be just another, when you are talking about
5 time targets, we are going into sort of the
6 semi-non-controversial.
7 The other thing, because we have
8 talked about this, actually, the experience of
9 the patient and the experience of the staff.
10 This is not my area, but just to think about
11 whether there ought to be measures of that
12 because so much of the crowding issue is a
13 stress issue, a burnout issue.
14 And then, depending on how it goes
15 for the patient and what your ED is like, do
16 they feel whatever you know, some
17 assessment of their experience in the ED I
18 think is important. That sort of goes beyond
19 "Was the doctor nice to you?"
20 CO-CHAIR PITTS: Do you want to
21 add anything, Mike?
22 MEMBER STOTO: Yes, I have a

	Page 328
1	comment, and I am not sure it is quite a
2	recommendation, about accountability. This is
3	something we are struggling with on this I
4	mentioned this National Health Security
5	Preparedness Index that I am working on.
6	The issue is this: when you look
7	at the Institute of Medicine model about
8	preparedness, it talks about what the whole
9	system, broadly defined, has to do together
10	for a community to be prepared.
11	On the other hand, CDC gives money
12	to health departments and ASPR gives money to
13	mostly state health departments or other
14	organizations at the state level. You really
15	can't hold those organizations who have
16	received the money accountable for what the
17	others do or don't do in the community.
18	So, although we really would like
19	to think about the contributions of all these
20	different organizations, I think, quite
21	appropriately, the groups that receive the
22	federal funds say, "Well, we can't be

	Page 329
1	accountable for them. We can only be
2	accountable for what we do."
3	Coming up with a way to deal with
4	that I think is a big challenge. So, maybe I
5	have articulated the challenge, as opposed to
6	solving it. But, hopefully, that is helpful.
7	CO-CHAIR PITTS: Wes, any
8	additional insights?
9	MEMBER FIELDS: I just want to
10	quickly reiterate the two things that I think
11	would be most valuable to the system. The
12	first is somewhere within the first three
13	recommendations. And it is just that, even if
14	it is reported as something which allows the
15	hospital to opt out of a door-to-admit time,
16	I think beginning to track what is happening
17	with observation services, both in the
18	emergency department and in the hospital, is
19	tremendously valuable in terms of its
20	potential to show how we could reduce both the
21	number of hospitalizations and have a positive
22	impact on length of stay. So, that is one.

Page 330 1 And then, the other, which I 2 really think we probably are pretty close to on nine, is this concept that, if you really 3 want to get to the population orientation of 4 5 responses at the community level, I think 6 Recommendation 9 looks more like structural 7 measures that demonstrate how hospitals and 8 hospital systems interact to improve the 9 capacity at the community level in terms of 10 potentially having a way to manage or predict surge capacity for disaster response. 11 12 CO-CHAIR PITTS: Gregg, would you like to contribute something? 13 14 MEMBER MARGOLIS: It is in a 15 different line. So, does anyone have any 16 response to the last comment? 17 (No response.) 18 I would like to ask the group to 19 think about, why is it accountability and 20 regionalization? Those two things are very 21 different to me, I think. So, I am just 22 curious if they make sense lumping them

I	
	Page 331
1	together.
2	MEMBER STOTO: Can I just jump in
3	on that a minute? I don't think we need
4	measures of accountability. I think that
5	accountability is something we need to
6	consider as we develop all these measures.
7	So, I am uncomfortable with that phrasing as
8	well.
9	MR. PINES: So, the thinking
10	behind putting those together was based on
11	basically taking a lot of these measures and
12	actually aggregating them up higher levels.
13	So, for example, the hospital across town, you
14	would actually care if there length of stay
15	was long if you were being measured on how
16	they were doing. And essentially, you know,
17	the whole notion of competition, that we know
18	that places will continue to compete, but to
19	have some incentive to cooperate. So, that
20	was the thinking there. But if you wanted to
21	separate those out, we could certainly do
22	that.

Page 332 1 MEMBER MARGOLIS: For the record, 2 I have no advocacy position on it. I am just curious what everybody's thought is about it. 3 To me, that might be an issue of how do we 4 5 incentivize cooperation or "coopetition" in 6 regionalization and that sort of stuff as 7 opposed to who is accountable for it. But I 8 am just curious what everybody else's thought is about the notion of accountability being 9 10 lumped together with regionalization, and I have an open mind. 11 12 Jesse, hearing what MEMBER STOTO: 13 you said, it strikes me that that is just a 14 different way of articulating the point that 15 I made just a moment ago. Is that it? Okay. 16 CO-CHAIR PITTS: Manish, have you 17 got anything you would want to mention? 18 MEMBER SHAH: So, I will just 19 reiterate kind of the question I brought up 20 earlier, which is where EMS metrics and EMS 21 falls within this, whether it should be a 22 separate recommendation, talking about whether

	Page 333
1	it is offload timing at the regional level or
2	even potentially at the individual hospital
3	level. And are there other things, as much as
4	I hate attestation-type things, are there
5	cooperative-type protocols/policies in place
6	to address various levels of issues around
7	preparedness, around crowding?
8	I hate diversion. We have gotten
9	rid of it in our system. Is that something
10	that should be in that list of things we
11	consider?
12	And the other thing, over break,
13	just kind of we were talking about it a little
14	bit, I don't know where to go with this. But
15	sometimes within regions, however you define
16	that, or within groups, you are going to have
17	a wide variation, right? You are going to
18	have those hospitals that are massively
19	crowded, boarding, running at 110-percent
20	capacity, and then you have the other ones
21	that are running at 60-percent capacity or 70
22	percent and don't have boarding.

Page 334 1 Somewhere around there, is it 2 worth thinking about that as a metric of how the region is working together to optimize the 3 care of all the patients in the community? 4 Ι 5 don't know where to go with that, but it was 6 just something that flew in, and maybe it 7 should just fly right back out. 8 CO-CHAIR PITTS: I think it is 9 really important. I am not sure how it fits 10 into the NQF measures, but there is a huge difference that has not been investigated 11 12 scientifically because it is really almost impossible to get ED-level information either 13 14 in HCUP or in NHAMCS. It is possible, but you have to go through a bunch of steps. 15 So, you just don't see much research on that topic. 16 17 I think it is really important. 18 Brent? 19 MEMBER ASPLIN: Can I just 20 highlight things that I and others have 21 mentioned earlier? One is the rollup of 22 institutional-directed measures to a region.

	Page 335
1	I think that is an important concept that we
2	really should stress. And then, taking the
3	opportunity to move beyond crowding and really
4	just purposely call that we want to change the
5	nomenclature.
6	CO-CHAIR PITTS: Arjun, I'm sorry,
7	I skipped over you. Did you have something to
8	say?
9	MEMBER VENKATASH: I guess it is
10	another measure concept. I don't know where
11	that fits. Maybe it was just in the previous
12	concept.
13	But, as we were talking about
14	this, a lot of what we have talked about
15	considers surge on top of a system that is
16	already crowded as a problem. But I actually
17	think that if we want to get at some of the
18	issues we were discussing before, which is how
19	much flex the system has or knowing what a
20	high-performing system, perhaps the measure
21	should be surge recovery. Maybe the measure
22	is something along the lines of number of days

	Page 336
1	or number of hours of sustained boarding at
2	whatever I am not going obviously raise the
3	discussion of whether that is two hours, four
4	hours, or three hours.
5	But, to me, it seems like if we
б	want to understand how systems respond to
7	these types of things, then, actually, their
8	ability to recover in minor surge, be it the
9	bus or the day at 105 percent, the 106
10	percent, whatever it is. And whichever
11	systems and that could be hospital or
12	regionally measured recover the quickest
13	are probably high performance from a
14	perspective of preparedness. That is
15	something you could measure at the hospital
16	level and aggregate up at the regional level,
17	and get an idea for preparedness out of that.
18	CO-CHAIR PITTS: Brendan?
19	MEMBER CARR: I have two. The
20	first we touched on, but I just want to make
21	sure that it doesn't get lost. I think that
22	there is an ability to use that inpatient

1	
	Page 337
1	triage measurement or to sort of make that a
2	firmer piece, both at the hospital level to
3	relieve boarding, but also at the aggregated
4	level to get a sense of what proportion of
5	patients, how many beds you could create,
6	given the inpatient I am using the words
7	"inpatient triage". We have called it
8	reverse-triage, sending them home. I don't
9	know what the criteria are.
10	But if everybody was flagged in
11	some way, it strikes me that you would then
12	know something about the hospital's ability to
13	absorb a punch, and you also know, then,
14	something about the region's ability to absorb
15	one.
16	And the second piece is I think
17	that there is a lot of story that could be
18	told in transfers, because that speaks to how
19	efficiently you get people out. So, I don't
20	know what happens in boarding-speak when
21	someone gets transferred to another hospital.
22	Do we follow it? Do you know?

	Page 338
1	CO-CHAIR PITTS: Yes, I can tell
2	you that NHAMCS, which has time intervals,
3	does not consider psych transfers boarding.
4	You can try to get at that by identifying a
5	psych diagnosis and seeing whether they were
6	transferred or not. And you can actually do
7	interesting analysis that way. But census
8	field reps have not called that "boarding".
9	MEMBER CARR: And what about the
10	way that they get reported to CMS? What do we
11	do with them? We just throw them out?
12	Because they are the window, I think, to the
13	region or the regional-ness or to the
14	coalition-ness, I think, right? There is
15	something. The transfers are telling us the
16	story about how well I can offload my patients
17	I can't take care of.
18	CO-CHAIR STONE-GRIFFITH: Yes, in
19	the measure there are just strata, but if they
20	are transferred, I mean, they are essentially
21	a discharge.
22	MEMBER CARR: What happens in

	Page 339
1	hospital two, presuming they go to a floor?
2	I am not talking about psych. I am talking
3	about medical patients.
4	CO-CHAIR PITTS: Yes, but there is
5	no transfer criterion in the NQF criteria, I
6	don't think.
7	CO-CHAIR STONE-GRIFFITH: No, no.
8	CO-CHAIR PITTS: Transfer doesn't
9	come up.
10	CO-CHAIR STONE-GRIFFITH: Right.
11	MEMBER CARR: I am talking
12	specifically about boarding metrics that have
13	been accepted by CMS.
14	CO-CHAIR STONE-GRIFFITH: If you
15	are discharged from the hospital through a
16	transfer mechanism, you would not be in that
17	boarding
18	MEMBER CARR: I understand.
19	Sorry. I get it now. Because you are not
20	considered admitted.
21	CO-CHAIR STONE-GRIFFITH: Correct.
22	MEMBER CARR: You are being sent
	Neal R Gross & Co Inc

	Page 340
1	to my hospital to be admitted.
2	CO-CHAIR STONE-GRIFFITH: Whoever
3	receives them will likely admit them, but they
4	are not in that measure yet.
5	MEMBER CARR: So, yes, I don't
6	know what the metric is, but I do think that
7	that tells the story of how well-connected my
8	hospital is.
9	MR. PINES: So, just to clarify a
10	recommendation for measure developers, how
11	would you frame it for measure developers?
12	MEMBER CARR: I thought the "I
13	don't know" part was clear.
14	(Laughter.)
15	Yes, I will get back to you. I
16	will write something and email it to you.
17	CO-CHAIR PITTS: All right.
18	Manish, Brent; that leaves Terry.
19	MEMBER ADIRIM: Thank you.
20	I have three points that I wanted
21	to make, the first one with regard to any
22	recommendation that you have with regard to

	Page 341
1	regionalization. I would encourage you to
2	incorporate the concepts or actually just
3	straight-out within your recommendation to
4	measure developers to consider the capability
5	for special populations.
6	I am here because I am a
7	pediatrician, but my colleague, Dr. Shah,
8	points out that in Katrina most of the people
9	affected were elderly. But I think
10	considering those populations is a very
11	important capability to have. So, I would
12	like that to be included.
13	The second is that kind of goes to
14	what Jesse was talking about with structural
15	measures. I think any recommendation with
16	regard to structural measures that may at
17	least indirectly go to throughput would be
18	with regard to designation of the institution,
19	what type of trauma center designation,
20	whether it is pediatric designated. So, I
21	kind of thought that may be and I could be
22	wrong but that may be something to

	Page 342
1	consider, as well as the training of the
2	staff.
3	So, in some departments you have
4	to be a Board-certified general emergency
5	physician. If it is a pediatric institution,
6	you have to so, that kind of indirectly
7	goes to quality well, not indirectly; I
8	think directly but it may have an impact on
9	patient outcomes.
10	And No. 3, we were discussing
11	earlier amongst ourselves that we would
12	encourage measure developers to look at the
13	existing care-coordination measures, to look
14	to adapt them for applicability to ED. I
15	think it is already done; you already have
16	them. And you could either respecify them or
17	whatever you can do to them to make them
18	applicable to regionalization or any of the
19	other issues we have discussed, would be good.
20	CO-CHAIR PITTS: Emily?
21	MEMBER CARRIER: So, are these
22	only recommendations to measure developers or

	Page 343
1	can some of them be recommendations about a
2	research agenda or overall larger policy
3	changes that could facilitate measure
4	development?
5	I just wanted to say I feel like
6	talking about regionalization and
7	accountability, it is really important to note
8	that certainly currently, and even most likely
9	under future generations of Meaningful Use, as
10	I am aware of it, it may still be impossible
11	to track the clinical course of a patient from
12	EHR to EHR if they are transferred from one
13	hospital to another. So, you couldn't follow
14	the patient who arrives in the ED and is
15	transferred for cath, for example.
16	And in many markets, those
17	patients will stay within a hospital system
18	with a single EHR, a single shared EHR. So,
19	a unified record may be possible in those
20	cases. But not all markets are going to have
21	those systems.
22	Understanding regional dynamics,

	Page 344
1	like in some markets it gets really
2	complicated how a community works together
3	versus surge. Like in some of the market, in
4	one of the markets we study, it is quite
5	possible that one hospital's ED could be
б	overflowing and a neighboring hospital could
7	be accepting transfers from out of state for
8	a high-cost surgical procedure. And there are
9	a lot of other markets like that.
10	So, the more that we can really
11	follow individual patients from system to
12	system, I think that would help get a good
13	understanding, a better understanding of these
14	three quality measures.
15	CO-CHAIR PITTS: Great.
16	AnnMarie?
17	MEMBER PAPA: I will echo what
18	Terry said about the continuum in the care
19	coordination. We did have that conversation.
20	I think, to your point, Ellen,
21	with regard to the experience of the patient,
22	absolutely. But the experience of the

	Page 345
1	caregivers. And I know in ICU there is a lot
2	of work done with moral distress and futility
3	and things like that. So, I don't know if
4	there are other measures out there that would
5	be similar or transferrable for us as well.
6	CO-CHAIR PITTS: I am sorry. Is
7	it Emily? Kathy? Kathy, my apologies.
8	MEMBER ROBINSON: Thank you.
9	I just want to support some of the
10	comments that have been previously made about
11	there needing to be a recommendation in
12	regards to system evaluation. We have talked
13	a little bit about diversion and offload
14	times. But if there isn't any coordination
15	between hospitals and the individuals that you
16	expect to transport patients to other
17	locations, such as long-term care facilities,
18	such as rehab facilities, to move them from
19	one clinic to another, or whatever that is,
20	ambulance services don't have unlimited
21	resources. So, to staff up for that from a
22	vehicle or manpower standpoint is something

	Page 346
1	that they need to plan for.
2	So, I guess I would like to
3	advocate for that kind of consideration. When
4	you are talking about regionalization, it
5	doesn't just mean hospitals.
6	CO-CHAIR PITTS: Wes, did you want
7	to go back?
8	MEMBER FIELDS: I just want to
9	elaborate on what Brendan raised and what
10	others have sort of touched on. I really
11	think there are more and more reasons, as you
12	regionalize care, you should expect more
13	transfers. I think you need to begin to
14	measure the difference between a move inside
15	of a hospital system and a transfer across
16	hospital systems because I think both of those
17	things are likely to occur more and more.
18	And then, I just wanted to make
19	sure I qualified something I said about
20	observation services. I feel the same way
21	about what is increasingly understood to be a
22	transition of care. There, too, moving a

Page 347 1 patient from independent living to assisted 2 living is just as significant a transaction or a transfer as any other. And especially, that 3 is true in terms of population management and 4 5 trying to improve outcomes. So, I just feel like, as we let go 6 7 of the idea that crowding is an emergency 8 department problem, I think we need to embrace 9 the idea that there are many transitions of 10 care and/or transfers which potentially can add value to the system, improve the patient 11 12 experience, and reduce cost. But if we are not finding ways to track them, we will lose 13 14 our ability to really understand them. 15 CO-CHAIR PITTS: Ryan? 16 MEMBER MUTTER: Just a few points. 17 First, to Emily's point about transfers moving 18 in and out of system and being lost, 19 administrative data like HCUP increasingly has 20 the capacity to track a patient across time 21 and settings with an encrypted unique patient 22 identifier. And that capacity has started to

	Page 348
1	be used and the development of some
2	experimental indicators. So, that could
3	potentially get at some of the issue that you
4	raised.
5	Second, just thinking about this
6	sort of "coopetition" and the incentives and
7	all that, I think it is potentially important
8	to think about. I don't quite know what the
9	solution is. On the one hand, developing,
10	say, coalition-level measures is interesting.
11	We could see variation. We could get sort of
12	a sense of capacity and capability and all
13	that. But what if you see bad performance?
14	Then, what? What do you do? Say, "Do
15	something about it."
16	You know, basically, we represent
17	Hospital A and Hospital B and we are
18	competitors, and our area looks bad. I mean,
19	our incentive is to say, "Do something about
20	it" to them, and theirs is the same thing.
21	And we have every little incentive to do
22	something that is going to make them look

Page 349 1 better. 2 So, there is something to think I don't know what the solution is. 3 about. 4 But if we are going to invest in measure 5 development, we might want to be thinking about, well, to what end and can we 6 7 incentivize improvement? 8 And then, I quess third and 9 finally, I think the observation services 10 angle is really interesting. I mean, observation services is increasingly used, 11 12 although there is variation in its use and how it is used. 13 14 In the event of a disaster, those In some facilities, for example, 15 are beds. there are a lot of prolonged observation stays 16 17 which CMS seems increasingly concerned about. That could be something potentially to 18 19 consider as something that is going on that is 20 sort of in daily operations, but could 21 potentially impact disaster preparedness. 22 So, I don't quite know what the

	Page 350
1	angle is, but it has sort of come up and it is
2	interesting to think about.
3	CO-CHAIR PITTS: AnnMarie?
4	MEMBER PAPA: There was one thing
5	that popped in my head as you were talking,
6	Ryan. What measures does the VA use? I mean,
7	they have that one system and there are things
8	that they may already have in place that we
9	might be able to piggyback off of. I think
10	Terry said you are working with them on some
11	things, right?
12	CO-CHAIR PITTS: Wes?
13	MEMBER FIELDS: Yes, I actually
14	forgot the most important one of all. This is
15	a joke, but it is that time of the day. Every
16	emergency department should have different
17	color of socks for the patients they discharge
18	home. This would allow you to get beyond the
19	Meaningful Use problem because you would be
20	able to know where the patient most recently
21	was treated by the color of their socks.
22	MEMBER ADIRIM: How do you measure

	Page 351
1	that?
2	(Laughter.)
3	CO-CHAIR PITTS: Ellen? I'm
4	sorry.
5	MEMBER WEBER: I just want to
6	reiterate what a couple of people have said.
7	I just want to make sure. To me, the more I
8	think about it, the diversion measure would be
9	really important, both in terms of crowding
10	and in terms of regionalization. Because,
11	basically, there has to be some level of
12	agreement. Well, I can't say that for sure.
13	But if there is no diversion in an area, that
14	generally suggests people have become
15	enlightened in some way, and perhaps there has
16	been some work around how do we avoid
17	overloading one hospital versus another
18	hospital. Is there better communication as a
19	result of it?
20	And time on diversion would be
21	sort of like a bad thing. So, that could be
22	another push towards either cooperation or at

	Page 352
1	least improving your flow.
2	So, I see it as kind of bridging
3	both of the areas. Actually, the more I think
4	about it, I think it is worth looking at.
5	CO-CHAIR PITTS: Is there any
6	formal diversion national-level sort of
7	criteria? I mean, I remember there used to be
8	in the old days certainly the nurse could
9	decide to go on diversion for the next five
10	patients and then go back. In some places,
11	diversion is a formal process involving
12	multiple layers of the hospital, and in others
13	it is sort of an ad-hoc kind of a decision.
14	I wonder if there is any standardization at
15	all. I am sort of not up on that.
16	No? The answer is no? Okay.
17	MEMBER WEBER: I thought there was
18	something I just read in here, that each
19	hospital is supposed to have a plan in place,
20	you know, criteria for going on diversion.
21	MR. PINES: Right. I think that
22	is part of the Joint Commission Flow Standard.

	Page 353
1	MEMBER WEBER: Yes.
2	MR. PINES: But I don't think
3	there is any like national criteria.
4	Essentially, the hospital has to have their
5	own criteria.
6	CO-CHAIR PITTS: Manish?
7	MEMBER SHAH: I was going to say,
8	I mean, I think diversion the way we are
9	talking about it, because you are crowded,
10	because you are boarding a lot of patients, or
11	whatever, my sense of at least the environment
12	is people are moving away from it in
13	Massachusetts, in San Diego, and we have done
14	it in Rochester.
15	Diversion because, you know, the
16	plane just crashed into your hospital is a
17	completely different thing. I think that is
18	usually what most of us write into our JCAHO
19	or the Joint Commission requirements, that
20	there are going to be instances where you have
21	to divert.
22	CO-CHAIR PITTS: Were you going to

Page 354 say something, Brent? 1 2 MEMBER ASPLIN: Real quick, there is no national standard, but some regions have 3 done pretty clear quantitative criteria before 4 5 you can go and divert. I don't know how much 6 enforcement there is. 7 CO-CHAIR PITTS: All right. Ryan, 8 are you still vertical? Okay. 9 I am sorry I haven't got to you 10 guys. DR. HUNT: A couple of quick 11 observations from the discussion. 12 The 13 discussion surrounding the gross measures 14 versus granular measures of crowding, 15 specifically around the admit order piece, a long discussion about that. As I listened to 16 17 that, I flashed back to the discussions a long 18 time ago about an EMS measure of dispatch 19 time, and it took a long time to figure out 20 about how many calls there were to make that 21 happen, when the wheels of the ambulance 22 actually moved. I mean, there were a lot of

	Page 355
1	cuts to that.
2	And I thought about it and said,
3	well, you know, the system, the system itself,
4	that just needs a gross measure, but to really
5	do problem-solving, not just at a facility
6	level, not just at an EMS level, but also at
7	a system level, at some juncture this will
8	need to evolve to a much more granular level
9	than this sort of like gross measure. So, I
10	would encourage getting to the granularity
11	sooner than later.
12	I am really sensitive that, while
13	we don't have definitions around that, start
14	making marks in the sand. That would be my
15	encouragement about measure.
16	And then, the other one that I had
17	a sidebar conversation about, I was charged a
18	while back with being the Chair of the
19	Crowding and Surge Committee for the hospital.
20	The most surprising thing, the aha moment,
21	when we got down to granularity of data, it
22	wasn't discharge from the hospital orders

ĺ	
	Page 356
1	written; it was the time from discharge orders
2	written by the resident, and the nurse signed
3	off, to actually having the bed vacated,
4	cleaned, and staffed by staff. So, that
5	interval from discharge orders, hospital
6	discharge orders, to actually vacating the bed
7	and having it cleaned, et cetera, et cetera,
8	we were just stunned. That was the
9	bottleneck. It wasn't the discharge order
10	issue.
11	So, again, that is granular, but I
12	think at some juncture this is going to have
13	to move toward granularity to do the problem-
14	solving to improve it. That may mean you have
15	got to gross first, but you have got to go
16	granular to be able to do the problem-solving.
17	CO-CHAIR PITTS: Okay. Brendan?
18	MEMBER CARR: So, I wanted to
19	respond what Ryan said because I think that he
20	was asking about why people wouldn't cooperate
21	within a coalition, within a region. I mean,
22	I guess I am wondering if we need to be more

Page 357 explicit in the report, then, to suggest that 1 2 the reason to develop metrics at that level is to create incentives and/or the opposite of 3 4 incentives, so that people do cooperate. Ι 5 wonder if we need to be more explicit in the report, if that is not clear. I mean, I think 6 7 that is the reason that we are having this 8 conversation, is to be able to benchmark my 9 region versus yours versus someone else's. 10 And then, with respect to the transfer thing, I wanted to offer this: 11 Т think that time from decision to transfer to 12 leaving the department might be an okay 13 benchmark, but decision to transfer is going 14 to be very difficult. I wonder if there isn't 15 some utility in just knowing time from 16 17 presentation to the emergency department or triage or doc, or whatever you pick, to time 18 19 to be transferred for all transfer patients. 20 On some level, shouldn't there be 21 some awareness that we can't take care of this 22 patient? Right? Arjun sort of said to me,

Page 358 1 maybe you pick a couple of diseases, and if it 2 is intracranial hemorrhage and you are transferred to a neurosurgical service, it is 3 time from CT scan. So, it is essentially when 4 5 you got the diagnosis. 6 But, on some levels, I can't 7 manage this patient. How long should it take 8 me to figure out that I can't manage this 9 patient? Isn't just time from presentation to 10 time from leaving the door telling? CO-CHAIR PITTS: I think it is 11 12 telling. It certainly is telling with respect to behavioral problems. That time clearly 13 14 distinguishes psych illness from other illness. 15 16 So, you are saying that maybe we 17 could limit ourselves to time-in versus time-18 out plus a marker for transfer or not 19 transfer, essentially. 20 MEMBER CARR: Not as a marker. 21 Just within transferred patients, for 22 transferred patients.

	Page 359
1	CO-CHAIR PITTS: So, if you can
2	identify who is transferred, all you are going
3	to do is time-in and time-out, basically, if
4	I understand you.
5	MEMBER CARR: You do understand
6	me, and I think those are going to be short
7	numbers in places that have a game plan ahead
8	of time and long numbers in places that have
9	a hard time offloading patients, either
10	because their neighbors are overwhelmed or
11	because they didn't belong to a coalition or
12	they didn't participate in something.
13	CO-CHAIR PITTS: AnnMarie?
14	MEMBER PAPA: But to that point,
15	Brendan, what about the extenuating
16	circumstances? Suppose you are a small
17	hospital on an island, a critical-access
18	hospital on an island, and the only way you
19	get a patient off is by boat or by helicopter,
20	and you can't fly and you can't get the boat
21	out. I mean, that is going to affect your
22	transfer time. So, there are things that have

i	
	Page 360
1	to go into play when you are looking at that,
2	I think.
3	In our area, in Philadelphia, it
4	shouldn't be a big issue. But, you know,
5	sometimes we can't fly them by PennSTAR. So,
6	we have to go by land. You can't go by land
7	on some of these places. So, just something
8	to consider. I mean, I am not saying that it
9	is a bad measure. I just think it is
10	something we have to consider.
11	CO-CHAIR PITTS: Kathy?
12	MEMBER ROBINSON: The comments
13	that Dr. Hunt made really resounded with me
14	from the standpoint that we have been talking
15	about crowding and boarding and preparedness,
16	and the need to perhaps consider some of the
17	greater detail in that regard.
18	And I just think of the example of
19	EMS and fire agencies that might be charged to
20	evacuate a community at the same time that a
21	hospital is implementing their plan to
22	discharge patients, and those personnel, those
Page 361 resources can't be in two places at the same 1 2 time. Without those sorts of discussions 3 4 ahead of time, or someone suggesting to them 5 that that might be a consideration, that is going to get lost. 6 7 CO-CHAIR PITTS: Jay, do you have 8 something to say? 9 MEMBER SCHUUR: Sure, around 10 transfers. One thing comes to mind around that idea, which is there is an NQF measure in 11 12 the chest pain set around time to transfer for patients with ACS. And so, that might be a 13 14 good model for the sort of disease-specific 15 measures. 16 And I think it probably is worth, 17 if we are going to really hold people accountable for times, thinking about diseases 18 19 where there is a clear time-to-outcomes 20 relationship, whether it is sepsis, ACS, or 21 something like that. 22 I think there is also a role for

Page 362 transfer measures in the capacity piece, 1 2 looking at what institutions are transferring. 3 Because one aspect is the sick patient you can't care for. The other type of transfer is 4 the patient that you should be able to 5 transfer, the hand injury, but you are 6 7 transferring them because your orthopedist 8 won't come in after hours, insurance issues, 9 this, that, or the other thing. That also is a measure of system capacity resilience. 10 Ι would recommend exploring that also. 11 12 CO-CHAIR PITTS: I guess, Arjun, 13 you are next. Nothing to add? Okay. 14 Jay, do you want to say anything more general that you have been thinking 15 16 about? Okay. 17 You're good? David? 18 Linda? No? 19 Emily? No? 20 Melissa? 21 MEMBER McCARTHY: Just that I love 22 the idea of the sunsetting with crowding.

	Page 363
1	(Laughter.)
2	It is brilliant, Brent.
3	And the idea, too, of just daily
4	operations kind of at a facility level or a
5	healthcare system level to me is very
6	different from a regional level. Because if
7	we just even take maybe length of stay, I
8	mean, it works at the facility level or maybe
9	even within a healthcare system. But what
10	does it mean at a regional level? You have
11	eight different hospitals. So, their average
12	either length of stay or their median or their
13	90th, or whatever, is so variable within those
14	eight hospitals. I don't know what we get
15	from a summary.
16	But once you start thinking about
17	them as separate concepts, what are measures
18	of regional systems of care, then I think they
19	have to be thought of differently? So, that
20	is one recommendation I would make.
21	CO-CHAIR PITTS: Anthony?
22	MEMBER MacINTYRE: Yes, I would
	Neel D. Green G. Ge. Ing

	Page 364
1	just echo that. I am still struggling with
2	the conversation this morning about whether
3	this is really two ends of the spectrum or two
4	different things with interrelated components.
5	I am still in the camp of two different
6	things.
7	Two specific comments. Some of
8	the recommendations that are very specific
9	under the crowding piece really seemed to
10	arise from the facilities-specific world. I
11	don't know what the validity is when they are
12	suddenly scaled-up to a regional level.
13	Now, if their intent is to compare
14	facilities within a region, maybe there is
15	something there. But, as Melissa said, at a
16	regional level, I don't know what we are
17	looking at with some of those numbers.
18	The second comment with respect to
19	the preparedness side, I like where Mike was
20	headed. He is trying to give you some
21	specificity to the recommendations there.
22	I would just reiterate two points.

	Page 365
1	One is preparedness and response are two
2	different beasts. If you are going to have
3	measures, you are going to have measures for
4	both.
5	And the second is that surge does
6	not exist in isolation. I mean, that is an
7	antiquated thought that many clinicians,
8	primarily, still hang their hat on. Surge
9	exists within the construct of how you manage
10	your organization during a time of duress.
11	And those management systems apply whether it
12	is surge, a resiliency issue, or a safety and
13	security issue.
14	The way in which I communicate
15	with my staff during a surge event, an
16	evacuation event, an active shooter in my
17	hospital should be very similar. And if they
18	are not, then you are missing the boat with
19	all-hazards emergency preparedness and
20	response.
21	So, I think examining surge in
22	isolation is a bit shortsighted.

	Page 366
1	CO-CHAIR PITTS: Emily?
2	MEMBER CARRIER: I am sorry, I did
3	remember one thing. I think it would be
4	great, I guess going back to what you are
5	saying about examining surgeon isolation, it
6	would be great not to examine what we no
7	longer call crowding in isolation.
8	(Laughter.)
9	It would be great to see suites of
10	measures that look not only at performance in
11	length of stay or meeting time targets, but
12	also paired them with things like rates of 72-
13	hour revisits, rates of discharge within 24
14	hours from inpatient admission, to get a whole
15	picture of how the system is functioning, and
16	not just how this one track is doing.
17	CO-CHAIR PITTS: So, Melissa, what
18	are we going to call the crowding interest
19	group? I thought about operations maybe.
20	(Laughter.)
21	Suzanne?
22	CO-CHAIR STONE-GRIFFITH: Well, as

	Page 367
1	I have been listening to several of the
2	comments, one of the things that has resonated
3	with me suddenly is sort of, what about
4	freestanding emergency departments? When you
5	brought up the movement transfer in both the
6	context of transfers and in the context of
7	movements from one department to another, and
8	the proliferation of freestanding emergency
9	departments that is occurring in our
10	communities, what role do they play in terms
11	of I don't know just the population that
12	they serve, the surge, the EMS? They become
13	part of it.
14	I think whether that is a strata
15	or a way to look at those in aggregate or
16	separated, I would like to sort of put that
17	one in the mix.
18	CO-CHAIR PITTS: Okay. Helen, did
19	you want to say anything in particular about
20	this whole business? No?
21	All right. Jesse?
22	MR. PINES: So, I just also wanted

1	
	Page 368
1	to make sure that I think we have had a pretty
2	robust discussion about regionalization and
3	accountability, but I wanted to make sure that
4	if there are any other comments on that topic.
5	Essentially, the way it is going to be framed
6	in the report is, basically, what we talked
7	about before, which essentially is taking
8	these current measures and essentially
9	aggregating them to different levels, regional
10	levels, hospital and coalition level.
11	Is there any other discussion
12	around that or other comments that we should
13	get into that section of the paper?
14	CO-CHAIR PITTS: I'm sorry? Yes?
15	Peggy?
16	MS. SPARR: One that hasn't really
17	been discussed very much, but it would seem
18	appropriate if you are talking about it at a
19	regional level, is just revenue. I think that
20	it is unrealistic just to take the numbers
21	from individual facilities and work their way
22	up. I think there has to be, at least from

	Page 369
1	our experience in big disasters, there has to
2	be some way to make sure that people are made
3	whole by cooperating with each other and by
4	doing what they need to do.
5	I think that within some sort of a
6	context that that can be done. I don't know
7	that it can all be done under existing
8	authorities, under CMS, or different insurer
9	plans, or whatever. But, unless there is some
10	way to make sure that people are made whole,
11	it is a lot less likelihood that they are
12	going to be working together.
13	Whereas, I think people are very
14	motivated during disasters and during
15	emergency events, but they also need to know
16	that, when they do this, at the end of it all
17	there is going to be some way that things will
18	go back to normal, and they are going to start
19	working their way back down to normal amounts
20	of delivery of care.
21	It is not something that has been
22	really said very much. And yet, I think it

Page 1 does affect the ability of these measures to 2 actually work or not. 3 CO-CHAIR PITTS: Sure, Terry? 4 MEMBER ADIRIM: Yes, I just wanted 5 to ask a question, to go to what Jesse was	
<pre>2 actually work or not. 3 CO-CHAIR PITTS: Sure, Terry? 4 MEMBER ADIRIM: Yes, I just wanted</pre>	
3 CO-CHAIR PITTS: Sure, Terry? 4 MEMBER ADIRIM: Yes, I just wanted	
4 MEMBER ADIRIM: Yes, I just wanted	
5 to ask a question, to go to what Jesse was	
6 saying about kind of tying up this section.	
7 It may just be the time of day, but did you	
8 clearly hone-in on what you are going to write	
9 about accountability?	
10 MR. PINES: So, we do have a draft	
11 of that section in the report. We can take a	
12 look at that. But, essentially, what is	
13 currently in there is that the measures are	
14 going to be aggregated at different levels.	
15 So, essentially, a lot of these crowding	
16 measures and preparedness measures would be	
17 basically taken from the facility level to the	
18 regional level or to the hospital/coalition	
19 level to promote the "coopetition".	
20 So, next, we are going to go ahead	
21 and move to the discussion of the NQF	
22 criteria. Arjun Venkatash had a short	

Page 371 presentation he was going to give for us. 1 2 MEMBER VENKATASH: It is not as 3 much of a presentation, I think, as it is a valuable exercise for this process, which is 4 5 that a good handful of people in the room have served on NQF Steering Committees in the past 6 7 through a consensus-development process, but 8 some haven't as well. I think there is 9 probably value for those who have not served 10 to look at the NQF measure evaluation criteria when thinking about these concepts, because 11 12 that helps set the bar of understanding what it would take for any of these concepts to 13 14 actually turn into something that would be endorsed. 15 And for those who have been 16 17 through the process before, I think it would 18 be valuable to add those insights to this 19 discussion, because the criteria have not 20 necessarily evolved over time, but have been 21 specified over time. And I think probably the 22 two things that happened, most importantly,

	Page 372
1	were two reports about a year ago on the
2	evidence expectations regarding measure
3	evaluation, and then the second being around
4	testing.
5	I think probably the easiest thing
6	to do is oh, you have got them right there?
7	Good.
8	Helen presented this morning the
9	four general categories by which measures are
10	evaluated. I think where this group can
11	provide some value here in terms of what the
12	final report looks like is thinking about
13	places where you think either an exception
14	needs to be made to the current NQF measure
15	evaluation criteria in order for a measure
16	around crowding, boarding, and preparedness to
17	make it through the process or, secondly,
18	places where there are clear inadequacies that
19	measure developers need to be aware of before
20	they go through the measure development
21	process.
22	So, if we start at the very top of

	Page 373
1	the measure evaluation process, No. 1 is a
2	must-past criteria that is the importance of
3	the measure.
4	Angela, do you have that other
5	table?
б	So, for the purposes of this, I
7	don't know what everybody here thinks, but my
8	idea was, if we use the IBA measure that we
9	alluded to this morning as kind of a frame of
10	reference to the back of our head, I think it
11	will be valuable because it is a preparedness
12	measure. I think it is the preparedness
13	measures really that are going to have the
14	most trouble when you look at the way
15	measurement evaluation criteria are set up and
16	the degree to which they are outcome- and
17	patient-measurement-focused. So, I think if
18	we think of that measure in the back of our
19	head, and then go through these criteria, that
20	is probably the most valuable.
21	So, we will start with importance.
22	I don't have it in front of me, either, I

Page 374 1 don't think. 2 Within importance, if you think of that IBA measure as it currently stands, I 3 think that a lot of the preparedness measures, 4 5 importance is kind of subdivided by categories. That IBA measure would be able to 6 7 -- one of the first criteria is, does this 8 fall within a national strategy around guality 9 or improvement? I think that the preparedness concepts will often fall within national 10 strategies, either by fiat or whatever it is. 11 12 But that part wouldn't be very challenging. The second step of that would 13 14 often be, is there an evidence base to suggest that there is a performance gap, would come 15 under importance. So, I guess a question for 16 17 the group is, what does performance gap data look like? What does variation data look like 18 19 for a proposed measure, be it at the hospital 20 level or regional level, around preparedness? 21 Because if the outcome is rare, we may not 22 have that type of gap data.

	Page 375
1	MEMBER CARRIER: May I ask a
2	question?
3	MEMBER VENKATASH: Yes.
4	MEMBER CARRIER: When you are
5	talking about importance, is it enough to say
6	that in a disaster it is important that
7	hospitals be able to move beds? Or do we have
8	to say in a disaster we have demonstrated that
9	it is important that hospitals be able to move
10	20 percent of their acute beds within four
11	hours, which are two different questions I
12	think?
13	MEMBER VENKATASH: So, I mean, the
14	latter. But we are almost even a step up from
15	that, in the sense that that would get more at
16	the focus of measurement and the actual
17	specifications of a measure. But you were to
18	be a measure developer and make a measure
19	around IBA, part one of importance would be
20	that it is high impact. So, we would argue
21	that preparedness in the setting of either
22	surge or large-scale massive disaster is

	Page 376
1	important to the National Quality Strategy,
2	things like that.
3	And then, when you describe the
4	opportunity for improvement in the current
5	performance gap, you would have to show data
6	that says, okay, in the setting of disasters,
7	currently, there is variation amongst
8	hospitals, and 50 percent of hospitals are
9	unable to create 20-percent capacity.
10	So, the question I would have is,
11	if we think about this in terms of the IBA
12	measure, right, the IBA measure asks, can you
13	increase capacity by 20 percent in four hours?
14	What data would a measure developer have to
15	show you for that measure for you to believe
16	that there is a performance gap, that right
17	now, at either the hospital level or the
18	regional level, that there is currently a gap
19	between being able to do that or not?
20	DR. BURSTIN: Just one
21	clarification. Actually, it doesn't have to
22	be a gap in care. It could also be variation

Page 377 1 across providers or across entities, whatever 2 the case may be. But that would be adequate 3 as well. 4 CO-CHAIR PITTS: Mike, you have 5 got something to say? 6 MEMBER STOTO: Yes. I think that 7 that criteria is a really important one. But, 8 given the state of development of this field, 9 where no one has any data at all about this, 10 we just can't do that right now. So, I think that in this case the 11 12 importance argument has to rely on the kind of 13 arguments that Dave was making this morning 14 about, if you can't do this, you can't do 15 anything else, is basically what it comes down 16 to. 17 I think that, given the state of development, we just have to think about that 18 19 differently now. 20 MEMBER ADIRIM: You could say it 21 has face validity. 22 MEMBER STOTO: I'm sorry?

	Page 378
1	MEMBER ADIRIM: You could say it
2	has face validity.
3	CO-CHAIR PITTS: Face validity.
4	MEMBER STOTO: Yes, that's right.
5	Right. And I think of that in terms of a
6	logic model that you really think through how
7	is this going to lead to the outcomes that we
8	want. It really is on the order of face
9	validity and kind of logical thinking, as
10	opposed to data, at this stage.
11	MR. PINES: Right. Right. So,
12	essentially, what we are trying to do here is
13	basically take the objective criteria, NQF
14	criteria, that are applied to all measures,
15	and given the unique nature of preparedness
16	data/evidence, basically, modify those
17	standards a little bit. And we don't want to
18	say "reduce the standards," but modify those
19	standards, so that measures that are important
20	can potentially get through.
21	MEMBER VENKATASH: I guess a
22	related question here is, traditionally, when

Page 379 1 thinking about the performance gap, right, it 2 helps us identify those areas which require 3 performance improvement. So, in the case of preparedness, part of this is justifying that 4 5 this is worth measuring and that it needs improvement. 6 7 So, does it need simulated 8 exercise to demonstrate performance is 9 inadequate? Or is this kind of face concept

10 that we believe in general consensus that current performance with respect to that 11 12 measure is inadequate? I think that is probably a question that this group can 13 14 provide guidance on because, if that is not enough, if we are going to dedicate a lot of 15 16 resources to the improvement, should the standard be that at least simulated exercise 17 has demonstrated that current performance is 18 19 inadequate before you continue through the 20 rest of measure development? 21 CO-CHAIR PITTS: Is there not any

> Neal R. Gross & Co., Inc. 202-234-4433

empirical data on performance being inadequate

22

	Page 380
1	in response to some disaster? There must be.
2	You hear about disasters, and this and this
3	was done, but was it adequate?
4	MEMBER CARR: What sources do they
5	use? Do they need peer-reviewed literature?
6	Does anybody know this?
7	MEMBER STOTO: I don't think that
8	people have looked at this in a systematic
9	way. I think people have looked at one
10	disaster after another and have said, "Oh,
11	gee, we didn't have enough capacity in the
12	hospital to do this." And that is the kind of
13	reasoning that this is based on, but I don't
14	think it is the kind of statistical analysis
15	that we often see in NQF.
16	MEMBER CARR: But does anybody
17	know the threshold? I mean, does that work?
18	There is a series of six disasters, right? We
19	just heard that Aurora's emergency department
20	was crowded before they got 20-some-odd
21	DR. BURSTIN: For the performance
22	gap, yes. For the evidence for the measure

	Page 381
1	focus, no. Those are different. So, you
2	could certainly use, I think, the cumulative
3	experience to assess that there are issues.
4	I think the question that is
5	raised up here on the top one is really
6	evidence of measure focus. And again, I think
7	there is going to be plenty of data, I would
8	think, to suggest that better-organized
9	that the availability of beds makes a
10	difference. No? Okay.
11	MEMBER STOTO: But, you know, I
12	think that we have to I want to be careful
13	about not saying we lower standards, but just
14	think about it differently. Because the state
15	of this field is just very early. The fact
16	that we don't have evidence doesn't mean that
17	it is not important.
18	DR. BURSTIN: So, two things to
19	add to that, the first of which is, if it is
20	an outcome and I guess the question is, is
21	this an outcome? I am not sure this really
22	is. No, I guess it is a process measure. So,

Page 382

1 that doesn't really count.

2	But we actually do have an
3	exception as well which we put in there
4	specifically for areas that just aren't as
5	further along in terms of evidence, which is
6	that if there is no empirical evidence, expert
7	opinion is systematically assessed with
8	agreement that the benefits to patients
9	greatly outweigh potential harms. I mean, to
10	me, this seems like a logical area for where
11	the exception could potentially be invoked.
12	But I think it is important to note that it
13	probably will need to be invoked for these
14	kinds of measures.
15	CO-CHAIR PITTS: So, I am speaking
16	for Suzanne here, who wonders if there is not
17	data internationally in places where they have
18	disasters every couple of weeks, Israel or
19	someplace like that.
20	MEMBER STOTO: You know, there is
21	another issue here, too. Where did the 20
22	percent come from? It may be that 20-percent

	Page 383
1	increase in capacity doesn't do you any good
2	at all in most kind of exercises. Maybe you
3	need to double or triple your capacity in this
4	regard. But that, to me, is a bigger
5	challenge than the idea that you need to
6	increase it.
7	CO-CHAIR PITTS: Wes?
8	MEMBER FIELDS: Well, I may be
9	missing something here, but it seems to me
10	that this provides the best rationale for
11	fusing these two areas of activity. Because
12	I think if you go back to sort of the calculus
13	of this, there is lots and lots of peer-
14	reviewed evidence that crowding translates
15	into bad patient outcomes. If you aggregate
16	all that, I think it provides a compelling
17	case for why, if we are having this much
18	trouble managing low- to mid-range surges in
19	demand, then we can reasonably conclude that,
20	whether it is 20 percent or 40 percent above
21	the highest level of the tide in the nation's
22	EDs, that additional capacity needs to be

	Page 384
1	created.
2	So, I actually think that is the
3	reason why we are all here. It is ironic that
4	crowding data that has been peer-reviewed can
5	make the case for achieving a fairly high-
6	level national strategy around surge capacity.
7	CO-CHAIR PITTS: Peggy? Yes,
8	sorry.
9	MS. SPARR: I'm sorry. I am new
10	to ASPR. As I have been aware, this standard
11	of 20 percent, even for individual hospitals,
12	it has been above their normal daily operating
13	ability, not for IBA going 20 percent below
14	it.
15	But it is tied, also, to the
16	ability of when a community will essentially
17	say, "We need help." So, if you can do that,
18	somebody has come up with the number, and it
19	predates me, but it is tied to at what point
20	you are going to ask the state to come in to
21	offer resources, and then the state to ask the
22	feds to come in for resources. So, it is not

	Page 385
1	just a number; it is a number tied to how many
2	days that you can hold off, how many hours you
3	can hold off on your own without anybody else
4	coming in.
5	MR. PINES: And also, just to
6	clarify the discussion here, essentially, we
7	are talking about the specific criteria under
8	impact. I don't see a major issue with a lot
9	of preparedness measures being able to show,
10	certainly, a national impact here.
11	But, specifically, under
12	performance gap and evidence, where there may
13	be issues specifically tying specific
14	interventions to outcomes so, for example,
15	IBA is an idea right now. It is not something
16	that has been necessarily tested. How do we
17	modify our criteria for acceptance of
18	performance measures where there may not be a
19	lot of data on performance gap? And what
20	Helen had said we could potentially do is have
21	expert consensus.
22	And then, basically, for evidence,

	Page 386
1	in a lot of the preparedness literature there
2	is not really any sort of tie to outcomes, for
3	the reasons that Mike mentioned earlier. No
4	counterfactual; you know, you don't really
5	have a control group, and other issues. You
б	don't really know what would have happened had
7	you not done what you did.
8	So, essentially, how do we modify
9	that language to make sure that measures like
10	IBA can actually get through?
11	MEMBER STOTO: Well, you know,
12	actually, in a way, I don't think we do,
13	thinking about it that way, because this is a
14	major feature of the HPP capacities and the
15	PHEP capacities. Just the way that we would
16	say that the Preventive Services Task Force
17	recommends this, I think that has similar
18	standing.
19	CO-CHAIR PITTS: Brent?
20	MEMBER ASPLIN: I think we could
21	do that, but I thought that was the whole
22	point of this meeting. You know what I mean?

	Page 387
1	So, if we were going to do that, why have this
2	second phase of the whole process? We could
3	have just been doing the measures today?
4	I am not suggesting that you are
5	saying that is your preferred outcome. I
6	would really like to avoid it, if we can,
7	though, because, ultimately, I think it serves
8	this body of work best if we meet the same
9	standards for the whole consensus-development
10	process as the other measures that go through
11	NQF. I think it will help the body of work
12	better.
13	MR. PINES: I think the issue that
14	we are going to run into, especially with
15	taking a look at the measures from the
16	environmental scan and other measures that
17	Mike has brought up, essentially, we would
18	systematically make it very difficult for any
19	measure to get through if we use the current
20	NQF criteria. And essentially, not for
21	crowding measures, but specifically for a lot
22	of the preparedness measures that are HPP.

1	
	Page 388
1	MEMBER VENKATASH: The last part I
2	think that is worth a quick discussion within
3	evidence is the consistency standard,
4	especially because, as more measures have been
5	getting reviewed recently, that has been one
6	where there has been a lot more, I think,
7	within Steering Committees discussion.
8	What that basically expects is
9	that, for things that have been studied in
10	multiple contexts and I can imagine the
11	situation here being that, if we look at
12	historical examples, achieving consistency is
13	going to be difficult. It would be easy for
14	somebody to say, "Well, that experience is a
15	little different than this one," right there.
16	That shooting in Aurora was different than
17	that flood there.
18	And so, coming to some agreement
19	around what evidence consistency means here
20	for the measure focus I think is actually
21	going to be something that would be fairly
22	challenging. Since I don't know this

Page 389 1 literature at all -- and maybe, Mike, this is 2 looking to you and others in the room -- the idea around, how well agreed-upon is the idea 3 that what we have known from historical 4 5 examples, if that is what we are going to use 6 to get at this idea of importance, how 7 consistent is that across different examples? 8 MEMBER STOTO: This is a good 9 question. I mean, I think that consistency in 10 this context is also basically used the same way it is used in a systematic review. 11 Ι 12 mean, do you see not only that there is a strong effect in a meta-analysis, but there is 13 14 relatively-little heterogeneity. So, we just 15 don't know that because this kind of study hasn't been done. 16 17 But I do think, though, that if 18 you think about it logically, there are some, 19 I guess there are likely to be some kinds of 20 emergencies where having surge capacity is 21 important; some where it is not that 22 important.

	Page 390
1	Now does that mean that we
2	shouldn't have a measure of it, because it is
3	only important in some situations but not in
4	others? I don't think so.
5	What I would say is that we
6	interpret this in terms of heterogeneity in a
7	meta-analysis, and it just doesn't apply here.
8	I don't want to seem like an apologist for
9	this, but I think that the process, we need to
10	really think carefully about how to apply the
11	process to a very different situation for the
12	situations we used before.
13	MEMBER VENKATASH: I mean, if that
14	is the recognition that is made from the
15	group, that is a big deal because right now
16	consistency is a must-pass criteria. So, if
17	there was a measure developer out there
18	developing a measure
19	MEMBER STOTO: I am not saying
20	that it shouldn't apply. I am just saying
21	that it doesn't we just don't know. We are
22	not in a position to assess it because we

	Page 391
1	don't have the kind of statistical studies
2	that you would in others.
3	MR. PINES: But, also thinking
4	about consistency in a broader way, you know,
5	are there ways to measure consistency or other
6	potential standards that we could either
7	replace that with, that would kind of seem
8	like a similar bar for preparedness measures?
9	Because, essentially, I think what we don't
10	want is what seems like sort of measures that
11	are sort of experiments, that are sort of put
12	out there, saying that this is what we think
13	we should do. So, this is your measure of
14	performance.
15	So, essentially, that we do have
16	at least some sort of an expert panel, expert
17	consensus, some rigorous methodology that was
18	used. I know that for HPP there was a lot of
19	rigorous methodology, a lot of expert panels
20	that have gone into develop those measures.
21	That could potentially be used for this.
22	MEMBER STOTO: And maybe this is

	Page 392
1	the place where the simulation studies you
2	mentioned, you suggested, might come into
3	play, is that you can sort of do it, look at
4	it over a range of different kinds of
5	situations; does this consistently make a
6	difference?
7	CO-CHAIR PITTS: Okay. Brendan?
8	And then, Emily.
9	MEMBER CARR: I also wonder if
10	there is room to lean on crisis standards-of-
11	care document to talk about the fact that
12	there are times I don't know. I am
13	sensitive to Brent saying he doesn't want the
14	rules to be different. But, at the same time,
15	you know, we are being asked to play by
16	evidence-based rules in a world that doesn't
17	use evidence-based decisionmaking. This is
18	the intersection of public health and
19	healthcare, and it is tricky to do that.
20	So, I don't know. I wonder if we
21	sort of go through the crisis standards-of-
22	care conceptual framework and try to apply it

Page 3931here, if we feel less conflicted, given that2central entities have said it is okay.3MEMBER ASPLIN: Keep in mind I am4coming at it from the crowding side more than5 so, I am spending more time in that world.6So, I probably feel more strongly about that,7those measures, than I would from8preparedness.9MEMBER CARR: Sure. Sure. Yes.10DR. BURSTIN: I think it is11actually quite different on the emergency12preparedness side, where there just isn't a13robust literature to draw on. We wouldn't,14for example, let a lot of the care-15coordination measures go forward, even though16there is systems research that clearly showed17evidence that was applicable.1819did this for some of our palliative care20measures, a new, emerging field as well.21There aren't a lot of studies on the benefits22of spirituality for patients undergoing end-		
<pre>central entities have said it is okay. MEMBER ASPLIN: Keep in mind I am coming at it from the crowding side more than  so, I am spending more time in that world. So, I probably feel more strongly about that, those measures, than I would from preparedness. MEMBER CARR: Sure. Sure. Yes. DR. BURSTIN: I think it is actually quite different on the emergency preparedness side, where there just isn't a robust literature to draw on. We wouldn't, for example, let a lot of the care- coordination measures go forward, even though there is systems research that clearly showed evidence that was applicable. In this case, again, I think we did this for some of our palliative care measures, a new, emerging field as well. There aren't a lot of studies on the benefits</pre>		Page 393
3       MEMBER ASPLIN: Keep in mind I am         4       coming at it from the crowding side more than         5       so, I am spending more time in that world.         6       So, I probably feel more strongly about that,         7       those measures, than I would from         8       preparedness.         9       MEMBER CARR: Sure. Sure. Yes.         10       DR. BURSTIN: I think it is         11       actually quite different on the emergency         12       preparedness side, where there just isn't a         13       robust literature to draw on. We wouldn't,         14       for example, let a lot of the care-         15       coordination measures go forward, even though         16       there is systems research that clearly showed         17       evidence that was applicable.         18       In this case, again, I think we         19       did this for some of our palliative care         11       measures, a new, emerging field as well.         12       There aren't a lot of studies on the benefits	1	here, if we feel less conflicted, given that
<ul> <li>coming at it from the crowding side more than</li> <li> so, I am spending more time in that world.</li> <li>So, I probably feel more strongly about that,</li> <li>those measures, than I would from</li> <li>preparedness.</li> <li>MEMBER CARR: Sure. Sure. Yes.</li> <li>DR. BURSTIN: I think it is</li> <li>actually quite different on the emergency</li> <li>preparedness side, where there just isn't a</li> <li>robust literature to draw on. We wouldn't,</li> <li>for example, let a lot of the care-</li> <li>coordination measures go forward, even though</li> <li>there is systems research that clearly showed</li> <li>evidence that was applicable.</li> <li>In this case, again, I think we</li> <li>did this for some of our palliative care</li> <li>measures, a new, emerging field as well.</li> <li>There aren't a lot of studies on the benefits</li> </ul>	2	central entities have said it is okay.
<ul> <li> so, I am spending more time in that world.</li> <li>So, I probably feel more strongly about that,</li> <li>those measures, than I would from</li> <li>preparedness.</li> <li>MEMBER CARR: Sure. Sure. Yes.</li> <li>DR. BURSTIN: I think it is</li> <li>actually quite different on the emergency</li> <li>preparedness side, where there just isn't a</li> <li>robust literature to draw on. We wouldn't,</li> <li>for example, let a lot of the care-</li> <li>coordination measures go forward, even though</li> <li>there is systems research that clearly showed</li> <li>evidence that was applicable.</li> <li>In this case, again, I think we</li> <li>did this for some of our palliative care</li> <li>measures, a new, emerging field as well.</li> <li>There aren't a lot of studies on the benefits</li> </ul>	3	MEMBER ASPLIN: Keep in mind I am
<ul> <li>So, I probably feel more strongly about that,</li> <li>those measures, than I would from</li> <li>preparedness.</li> <li>MEMBER CARR: Sure. Sure. Yes.</li> <li>DR. BURSTIN: I think it is</li> <li>actually quite different on the emergency</li> <li>preparedness side, where there just isn't a</li> <li>robust literature to draw on. We wouldn't,</li> <li>for example, let a lot of the care-</li> <li>coordination measures go forward, even though</li> <li>there is systems research that clearly showed</li> <li>evidence that was applicable.</li> <li>In this case, again, I think we</li> <li>did this for some of our palliative care</li> <li>measures, a new, emerging field as well.</li> <li>There aren't a lot of studies on the benefits</li> </ul>	4	coming at it from the crowding side more than
those measures, than I would from preparedness. MEMBER CARR: Sure. Sure. Yes. DR. BURSTIN: I think it is actually quite different on the emergency preparedness side, where there just isn't a robust literature to draw on. We wouldn't, for example, let a lot of the care- coordination measures go forward, even though there is systems research that clearly showed evidence that was applicable. In this case, again, I think we did this for some of our palliative care measures, a new, emerging field as well. There aren't a lot of studies on the benefits	5	so, I am spending more time in that world.
<ul> <li>preparedness.</li> <li>MEMBER CARR: Sure. Sure. Yes.</li> <li>DR. BURSTIN: I think it is</li> <li>actually quite different on the emergency</li> <li>preparedness side, where there just isn't a</li> <li>robust literature to draw on. We wouldn't,</li> <li>for example, let a lot of the care-</li> <li>coordination measures go forward, even though</li> <li>there is systems research that clearly showed</li> <li>evidence that was applicable.</li> <li>In this case, again, I think we</li> <li>did this for some of our palliative care</li> <li>measures, a new, emerging field as well.</li> <li>There aren't a lot of studies on the benefits</li> </ul>	б	So, I probably feel more strongly about that,
9       MEMBER CARR: Sure. Sure. Yes.         10       DR. BURSTIN: I think it is         11       actually quite different on the emergency         12       preparedness side, where there just isn't a         13       robust literature to draw on. We wouldn't,         14       for example, let a lot of the care-         15       coordination measures go forward, even though         16       there is systems research that clearly showed         17       evidence that was applicable.         18       In this case, again, I think we         19       did this for some of our palliative care         20       measures, a new, emerging field as well.         21       There aren't a lot of studies on the benefits	7	those measures, than I would from
10DR. BURSTIN: I think it is11actually quite different on the emergency12preparedness side, where there just isn't a13robust literature to draw on. We wouldn't,14for example, let a lot of the care-15coordination measures go forward, even though16there is systems research that clearly showed17evidence that was applicable.18In this case, again, I think we19did this for some of our palliative care20measures, a new, emerging field as well.21There aren't a lot of studies on the benefits	8	preparedness.
11 actually quite different on the emergency 12 preparedness side, where there just isn't a 13 robust literature to draw on. We wouldn't, 14 for example, let a lot of the care- 15 coordination measures go forward, even though 16 there is systems research that clearly showed 17 evidence that was applicable. 18 In this case, again, I think we 19 did this for some of our palliative care 19 measures, a new, emerging field as well. 20 There aren't a lot of studies on the benefits	9	MEMBER CARR: Sure. Sure. Yes.
12 preparedness side, where there just isn't a 13 robust literature to draw on. We wouldn't, 14 for example, let a lot of the care- 15 coordination measures go forward, even though 16 there is systems research that clearly showed 17 evidence that was applicable. 18 In this case, again, I think we 19 did this for some of our palliative care 20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits	10	DR. BURSTIN: I think it is
robust literature to draw on. We wouldn't, for example, let a lot of the care- coordination measures go forward, even though there is systems research that clearly showed evidence that was applicable. In this case, again, I think we did this for some of our palliative care measures, a new, emerging field as well. There aren't a lot of studies on the benefits	11	actually quite different on the emergency
14 for example, let a lot of the care- 15 coordination measures go forward, even though 16 there is systems research that clearly showed 17 evidence that was applicable. 18 In this case, again, I think we 19 did this for some of our palliative care 20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits	12	preparedness side, where there just isn't a
15 coordination measures go forward, even though 16 there is systems research that clearly showed 17 evidence that was applicable. 18 In this case, again, I think we 19 did this for some of our palliative care 20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits	13	robust literature to draw on. We wouldn't,
16 there is systems research that clearly showed 17 evidence that was applicable. 18 In this case, again, I think we 19 did this for some of our palliative care 20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits	14	for example, let a lot of the care-
<pre>17 evidence that was applicable. 18 In this case, again, I think we 19 did this for some of our palliative care 20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits</pre>	15	coordination measures go forward, even though
In this case, again, I think we did this for some of our palliative care measures, a new, emerging field as well. There aren't a lot of studies on the benefits	16	there is systems research that clearly showed
19 did this for some of our palliative care 20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits	17	evidence that was applicable.
20 measures, a new, emerging field as well. 21 There aren't a lot of studies on the benefits	18	In this case, again, I think we
21 There aren't a lot of studies on the benefits	19	did this for some of our palliative care
	20	measures, a new, emerging field as well.
22 of spirituality for patients undergoing end-	21	There aren't a lot of studies on the benefits
	22	of spirituality for patients undergoing end-

	Page 394
1	of-life, but, boy, you would sure note, you
2	know, there is a lot of expert consensus that
3	says it is important. So, we are not going to
4	hold back a measure that is going to have
5	benefits to the nation just because it doesn't
6	emerge from that same level of database.
7	CO-CHAIR PITTS: So, Emily, and
8	then Rick.
9	MEMBER CARRIER: I was just
10	wondering if there was any benefit to thinking
11	about the frame of measures around never
12	events, particularly for the disaster
13	preparedness. I don't know much about how
14	those measures are developed, but no one is
15	going to do an RCT of wrong-side surgery
16	certainly. And yet, we are able to build a
17	measure that this should never happen.
18	Are there things in preparedness
19	or in crowding that are never events?
20	MEMBER ASPLIN: Apparently not in
21	crowding.
22	(Laughter.)

	Page 395
1	CO-CHAIR PITTS: Rick?
2	DR. HUNT: I am not sure if we
3	have resolved the performance gap piece, but
4	I want to get really concrete, really
5	specific, and really practical for just a
6	second.
7	Performance gap. After four days
8	at the Madrid hospital that saw the majority
9	of the patients, they said, "We did not
10	perform very well. We performed very badly."
11	They saw 272 patients in 2.5
12	hours. For the ER docs like me around the
13	room, that ought to make you really
14	tachycardic and lose bodily functions. Okay?
15	Two hundred and seventy-two, 2.5 hours. "We
16	performed very badly." That is what he said.
17	That was the surgeon in charge of the hospital
18	that day. They performed badly in terms of
19	they had a long list of these are the things
20	we did not it was a long list.
21	And so, when you think about where
22	there is a performance gap, I kept going,

	Page 396
1	well, how in the world did they do this at
2	all? It was a 1600-bed hospital. Blocks were
3	1600 beds. And by the way, we got lucky
4	because it was switch of shift. So, they had
5	staffing for 3200 patients.
6	So, if there is a performance gap
7	and that is real, that really happened. It
8	is not theoretical. So, in terms of are there
9	lists of kinds of events and people can do
10	Auroras. The gaps definitely exist.
11	So, I am hopeful that that one we
12	can get beyond.
13	CO-CHAIR PITTS: Anthony?
14	MEMBER MacINTYRE: Just the
15	literature, the medical literature is scant
16	and mainly anecdotal. There are recurring
17	patterns of process issues that are repeated.
18	But I wonder how looking at other bodies of
19	literature might be approached, not to
20	increase your workload, Jesse. But there is
21	a tremendous amount of emergency management
22	literature. There is a good body of business
	Page 397
----	--
1	crisis continuity literature. There is a
2	whole lot of DoD literature out there,
3	consultant-generated and otherwise. If you
4	really want to look at organizational
5	management, there could be some good pieces
б	out there.
7	Just as a specific example, you
8	know, DoD has spent a lot of time looking at
9	how to develop competencies for individuals to
10	perform in unusual situations, and how do they
11	maintain those skills, knowledge, and ability.
12	I think there are some parallels there.
13	Obviously, you are not going to develop a
14	whole new NQF standard based on one article,
15	but it might be worth looking at some of these
16	other bodies of literature. We tend to stay
17	siloed sometimes in our own realm.
18	DR. BURSTIN: And NQF has
19	experience doing this with our safe practices,
20	for example, where it is perfectly reasonable
21	to invoke other industries where safety has
22	been so far ahead of us for quite some time.

	Page 398
1	So, that is very fair game, a great
2	suggestion, Anthony.
3	CO-CHAIR PITTS: Jay?
4	MEMBER SCHUUR: I really like
5	Emily's idea around the never events. I think
6	that that is an interesting frame.
7	Maybe you guys can remind me.
8	When the Patient Safety Committee sort of went
9	through never events again, as I remember,
10	ACEP put one in which was death in the waiting
11	room, as an idea of a boarding never event.
12	And from what I remember of the form, there
13	was a different sort of standard. It wasn't
14	the typical full measure form. It was a
15	shorter form.
16	And has that now changed with the
17	new evidence development process? Or is there
18	a different process that that goes through?
19	DR. BURSTIN: It is a different
20	process for both serious reportable events and
21	safe practices. But I think the example that
22	was raised by Emily was the wrong-side

	Page 399
1	surgery. That actually is also in our Quality
2	Indicator. So, I mean, sometimes they are
3	measures and sometimes they are practices or
4	serious reportable events. And I think you
5	can go either way.
6	CO-CHAIR PITTS: Mike?
7	MEMBER STOTO: I could think of
8	lots of potential issues, preparedness issues,
9	and measures for which there is no good
10	evidence, and people don't really agree. But
11	does anybody really think that it doesn't
12	matter whether you can increase the capacity
13	of your healthcare system during an emergency?
14	I mean, that just seems so obviously true,
15	right?
16	MR. PINES: Well, I think the
17	question would come particularly if a measure
18	was submitted for IBA and the 20-percent
19	number was used. We would, hopefully, want to
20	see some sort of rigor around that 20-percent
21	number or at least some expert consensus or at
22	least some sort of a methodology that would

Page 400 demonstrate that that number was vetted. 1 2 MEMBER STOTO: Yes. No, I agree 3 about the 20 percent. But about the concept 4 of being able to increase your capacity to 5 treat acute cases, it is hard to imagine that not being true. 6 7 Right. Right, and I MR. PINES: 8 think that would come under the importance to measure and report. 9 10 MEMBER MacINTYRE: You also need to have assumptions, though, with that. And 11 12 the assumptions are that the sky is blue, Metro is running, the bridges haven't been 13 14 closed for the Inauguration, on and on. Because, unfortunately, most disasters do 15 16 occur with those other issues, and that 17 impacts your ability to surge 20 percent. So, 18 having some assumptions in there is pretty 19 important, even if you do scope out the number 20 well. 21 I mean, around here, Hurricane 22 Isabelle, Metro shuts down; there goes your 20

Page 401 1 percent. 2 CO-CHAIR PITTS: Did you cancel 3 your comment? Okay. All right. Arjun, do you want to 4 5 continue on? 6 MEMBER VENKATASH: I think it is 7 probably, given how much time we have, worth 8 going on to scientific acceptability. 9 MEMBER STOTO: I haven't heard actually how it is defined, this measure. 10 MEMBER VENKATASH: Well, it is not 11 12 specified. Right now, it really sits at a measure concept level. So, that is why I say 13 think of it as, if that were the concept, what 14 would your expectations be at each of these 15 junctures? Especially that applies primarily 16 to Category 1, importance, and Category 2. 17 MEMBER STOTO: Well, I mean, how 18 19 can we talk about validity and reliability if 20 we haven't defined it? 21 MEMBER VENKATASH: That is a good 22 question. I think in some of the sub-

	Page 402
1	questions, though, within validity and
2	reliability, we can get it without even the
3	definition. And that is that scientific
4	acceptability as a whole contains two
5	categories: first, validity, and then, second
6	is reliability.
7	Part of this does get at how
8	specific, how well it is specified, but a lot
9	of the validity question actually gets to how
10	well the specifications are supported by
11	evidence.
12	So, now, with a lot of the
13	preparedness measures, for the same reason
14	that we may not have evidence around the
15	measure focus above, it would be the same
16	reason why we wouldn't have evidence,
17	potentially around specific measure
18	specifications.
19	And the classic example I like to
20	use here is denominator exclusions within
21	this. And that is thinking about, when you
22	apply this measure and we think about who is

Page 403 1 in and who is out, which hospitals you 2 measure, which hospitals you don't measure, which patients within a hospital within a 3 region would be measured, which ones wouldn't, 4 5 the expectation is often that, if the patient 6 is going to be excluded, that is based on an 7 evidence base that lives below that. 8 It may be that for these measures 9 this doesn't become a huge issue because we 10 say everybody is in, which I think is probably the clear concept and gets to some of what we 11 12 were saying before. 13 But if there are going to be 14 exclusions, there is not going to be evidence 15 base around any of that. I don't know if that applies well, but it is certainly worth a 16 little discussion. 17 18 MR. PINES: I think that that kind 19 of gets too deep into the weeds. We can't 20 even think about that. 21 So, I am thinking there are a 22 couple of ways I can imagine of assessing

	Page 404
1	this. One is you can go around to whatever
2	these regions are and say, "Can you bump up
3	your capacity in four hours by 20 percent?"
4	And they say, "Oh, yeah, yeah, we can do
5	that." I mean, I wouldn't regard that as
6	evidence that is valid and reliable.
7	Well, then, I might say, "Well,
8	how about if you did it in an exercise where
9	you actually called the people in and did it
10	and moved them around, and so on?" Well,
11	then, I would think a lot more highly of that.
12	And maybe you guys have thought
13	this already, but I think until we hear
14	whether it is that, one or the other or
15	something else, we can't even begin to think
16	about these other issues.
17	MR. PINES: And I think we are
18	also thinking about the reliability and
19	validity in the context of what instrument is
20	used to actually measure what you are trying
21	to measure. I think there are a lot of ways
22	to do that.

	Page 405
1	I know that for emergency
2	preparedness, particularly preparedness, on
3	the preparedness side there are tons of
4	instruments out there with variable
5	reliability and validity, some with a lot more
6	testing than others. That could potentially
7	go into the NQF submission. You know, really
8	linking preparedness to actually may be a
9	little bit more tenuous.
10	And essentially, one of the only
11	things we may have in that part of the
12	application would be the reliability and
13	validity of the instrument itself.
14	MEMBER STOTO: But this is a
15	particular measure we are talking about, your
16	ability to increase your capacity for acute
17	cases by 20 percent in four hours. And so,
18	the validity or reliability of some other
19	issue is not relevant here. This is a
20	specific thing for which you can actually get
21	some evidence on this specific thing. But you
22	have to specify what you mean and how you are

Page 406 1 going to measure it first, before you can even 2 think about this. Right, right. 3 MR. PINES: So, I 4 mean, it could be done through a tabletop 5 exercise. And essentially, you would basically do repeated tabletop exercise to 6 7 demonstrate. I mean, that may be what we are 8 talking about. 9 CO-CHAIR PITTS: Oh, I'm sorry, go 10 ahead, Peggy. MS. SPARR: I just wanted to make 11 sure because I am not clear. I don't think I 12 13 heard Marco say that this morning. So, I just 14 want to make sure, when people think about IBA, that we are not talking about surge 15 above; we are talking actual offloading of 16 people within four hours. I just want to make 17 that within four hours you will have beds 18 19 available already versus having to pull them 20 out of your storage area, call in more staff, 21 because they are already there. And that is 22 his novel concept.

	Page 407
1	CO-CHAIR PITTS: Okay. Okay,
2	Arjun, go ahead.
3	MEMBER VENKATASH: So, I guess
4	within some of this reliability and within the
5	validity question, then, I guess, a reasonable
6	question for guidance is, would an attestation
7	measure be something that would be considered
8	for endorsement? Or is the general group
9	consensus that, listen, that bar is way too
10	low?
11	To demonstrate that this is worth
12	measuring, not worth measuring, but that this
13	is valid, at least there has to be some data
14	that suggests that it is done via exercise or
15	something else. Is that reasonable?
16	MEMBER STOTO: To me, it is.
17	MEMBER ADIRIM: There is a
18	systematic way of assessing.
19	MR. PINES: Yes, I think that is
20	what we are looking for, is basically to see
21	how much the group really agrees with this
22	language. You know, we will certainly send

	Page 408
1	this draft document out to the group. But,
2	essentially, to make sure that in the context
3	of the NQF standards that it does not appear
4	like we are going to basically modify the
5	standard so that, in order to get measures
6	through these campy ideas, there has to be
7	some scientific basis behind them.
8	CO-CHAIR PITTS: It sounds like we
9	all agrees attestation is not good enough.
10	Okay.
11	MEMBER VENKATASH: I think it is
12	sort of related in some way, you know, in the
13	specified measure, but the usability and
14	feasibility side of this. If a measure is
15	developed in this space, I think on the
16	crowding side this seems much clearer because
17	a lot of these things you can take a group of
18	hospitals, you can see what it took to measure
19	it, and then demonstrate how understandable
20	those findings are to various people, right,
21	be it boarding time, waiting time, any of
22	those? That kind of makes sense to us.

	Page 409
1	On the preparedness side, what is
2	a demonstration of usability? Does a measure
3	developer have to demonstrate that this
4	information is meaningful at the policy level,
5	patient level? How do you demonstrate that
6	the findings from this are meaningful, outside
7	of saying that we really wanted to measure
8	preparedness, I guess?
9	MEMBER STOTO: Oh, in the public
10	health preparedness world, what it usually
11	comes down to is these are one of the things
12	that CDC has required that we have been
13	reporting, and people have been looking at it
14	to make judgments, and so on.
15	DR. BURSTIN: I think the read of
16	what we have under usability and use fits the
17	extent to which potential audiences, which in
18	this case could be ASPR, CDC, and others, are
19	using or could use the performance results for
20	both accountability and performance
21	improvement. I think that is actually a
22	pretty easy fit on this one. Arjun, I am not

	Page 410
1	too worried.
2	MEMBER VENKATASH: And then, if
3	you look down at feasibility, about the same
4	general consensus, that if somebody has
5	collected some of this data in order to be
6	able to apply and demonstrate it, that that is
7	kind of the demonstration of feasibility?
8	CO-CHAIR PITTS: Yes, Wes?
9	MEMBER FIELDS: I think where we
10	may have to demonstrate feasibility is if we
11	really get to the point of demonstrating how
12	hospital systems cooperate and collaborate in
13	this mode. And again, that might be a little
14	challenging, but I think the concept of
15	scalability has come up several times and it
16	makes sense to me. But whether or not that
17	will meet the test for a standard measure, you
18	guys will have to tell me.
19	MEMBER VENKATASH: That is
20	actually a good question. If a measure is
21	developed and the level of measurement is
22	specified as coalition or region, should data

	Page 411
1	already be present at that level? Or is
2	hospital-level data from multiple different
3	regions but not all within one existing
4	coalition sufficient?
5	DR. BURSTIN: It depends on the
б	level of analysis. So, I think it will work
7	either way.
8	MEMBER CARR: You think it will
9	work, even though we don't know what the
10	region is or what a coalition looks like?
11	DR. BURSTIN: I think you have to
12	have preciseness
13	MEMBER CARR: Okay. Yes, right.
14	It does strike me that the geographic unit
15	here
16	DR. BURSTIN: Yes.
17	MEMBER CARR: is a really big
18	gap. I mean, we all could sum the data, but
19	we do have to know what we are summing it to.
20	So, will they say, "We are not letting
21	anything through until you tell us what the
22	unit is?" or will they allow us to have a

Page 412

nebulous unit?

1

2	DR. BURSTIN: I mean, one of the
3	most important issues here is precision of
4	specifications. You have got to be able to
5	compare apples to apples. So, that is the
6	goal. So, the precision is important, but we
7	do require measure testing at the level of
8	analysis in which it is intended. So, in some
9	ways, having a regional measure makes it
10	easier because it is a whole lot easier to be
11	potentially, with data already collected, to
12	do some of the signal-to-noise analysis at a
13	higher level of analysis than it is to take
14	the deeper dive on the reliability of the
15	provider-level data aggregated up.
16	So, there are different approaches
17	here. I think both of them are workable.
18	MEMBER STOTO: I think that might
19	be true for this particular measure about
20	capacity, because this really is summing up,
21	I think. But some of the other preparedness
22	measures we want to do really have to do with

	Page 413
1	how the different parts of the system work
2	together. And that is very different from
3	summing up and that would be a different kind
4	of situation.
5	CO-CHAIR PITTS: Jesse? Did you
6	have something? Oh, I'm sorry.
7	MEMBER VENKATASH: Actually,
8	Brendan just raised a good question, which is,
9	I mean, currently, as measures would be
10	specified, you would have to specify, if you
11	say this is a regional measure, what the
12	region is.
13	DR. BURSTIN: You have to define
14	what a region is, right.
15	MEMBER VENKATASH: That probably
16	needs big, red underlining in terms of
17	expectations of developers.
18	DR. BURSTIN: And I think there
19	are some good examples. I mean, for example,
20	if you look at the AHRQ Prevention Quality
21	Indicators, which are defined at a community-
22	level, a population-level, those are examples.

Page 414 You recently endorsed a measure in population 1 2 health, one of the only, looking at late-stage presentation for HIV, again, at a more 3 4 regional approach. So, there are some 5 examples. There are plenty of HRSA regions 6 7 and HHS regions and lots of ways to cut and 8 paste these things, as appropriate. 9 MEMBER ADIRIM: Does it have to be so specific that it is saying that it is a 10 state being a region versus just coming up 11 with a definition, so that there is 12 flexibility for local communities? 13 So that, 14 for example, a region could be multiple states versus a local community. Tiered. I mean, I 15 16 could see various ways to define a region. 17 Would it raise MEMBER VENKATASH: 18 a harmonization issue? If you have multiple 19 measures with differently-specified regions, 20 then if you endorsed multiple measures, the 21 same agents are functioning within preparedness under different collaboratives or 22

1	
	Page 415
1	different collections of what a region is.
2	MEMBER ADIRIM: Yes, but for
3	preparedness you would have the same elements
4	within a region. The capabilities would be
5	similar, right? So, you could compare a local
6	region I may be hallucinating but can
7	compare a local region, because it would have
8	certain elements that you would need to handle
9	disaster versus a multi-state region maybe?
10	I don't know.
11	CO-CHAIR PITTS: Go ahead, Gregg.
12	MEMBER MARGOLIS: Well, I don't
13	know if I have the answer, but we have
14	certainly had a lot of conversations about
15	this, and more questions than answers, I am
16	sure.
17	First of all, I think at least in
18	terms of the regions, there is some element of
19	geopolitical borders here that probably do
20	make sense, although we know that patients
21	don't necessarily follow those geopolitical
22	borders in terms of referral patterns. But

Page 416 there are elected officials, whether at a 1 2 county level or a municipal level, that bear certain responsibility and interest in some of 3 these variables for the communities in which 4 5 they have been elected to serve. So, there probably is, at least in 6 7 terms of preparedness and some of these other 8 variables, some value in being able to make a comment to elected officials that the 9 10 preparedness of your county or city or state is this. And that kind of gets a little bit 11 12 to the accountability piece that was brought up a little bit earlier. 13 14 But I don't think that that is the whole piece of it. One of the things that we 15 16 have been talking about and kicking around a little bit is what might some of the Dartmouth 17 18 Atlas work in terms of geographic variations 19 in care be able to offer to some of this 20 conversation? And we were just having a 21 little watercooler conversation. You know, 22 what might be the analog of the hospital

1	
	Page 417
1	referral regions for emergency care? Is it
2	possible and Ryan might be able to help us
3	with this to define that people that have
4	emergency care issues within this geographic
5	area have a 90-percent or 95-percent
б	probability of staying within the healthcare
7	resources of this area and, therefore, helping
8	to define maybe not health or hospital
9	referral regions, but maybe emergency care
10	referral region? And do those, in fact, line
11	up with some of these other ways to look at
12	geographic variations in care, such as the
13	Dartmouth Atlas?
14	CO-CHAIR PITTS: So, Ryan?
15	MEMBER MUTTER: So, yes, there
16	have been a lot of these sort of
17	conversations. We have kicked around a lot of
18	ideas and at this point probably generated
19	more heat than light.
20	But there are a few ideas that
21	sort of come to mind. One is sort of what I
22	will regard of as a positive approach, which

	Page 418
1	is we sort of come up with some kind of
2	construct and sort of empirically build a
3	region.
4	The other is sort of what I regard
5	as a bit of a negative/testing approach, which
6	is to look at an existing construct, whether
7	it is a geopolitical boundary, say a county,
8	or something like that, or sort of more of a
9	scientifically-based measure, an HRR, or
10	something, and then look at unplanned critical
11	illness and what is going on there.
12	So, there is an idea that it is
13	sort of from the economics literature. It is
14	Elzinga and Hogarty. Some of you all have
15	talked to me about this. You have heard me
16	talk about them.
17	And they came up with a measure
18	basically for alcohol. What they did is they
19	looked at an area and said, okay, so there are
20	people in this area and there are breweries in
21	this area. What we are interested in is how
22	much beer is coming into this area to be

	Page 419
1	consumed by these people and how much of the
2	locally-produced beer is going out.
3	Okay. So, let's do the analog for
4	healthcare, for unplanned critical illness.
5	Let's look at a region and there are hospitals
6	in there, and there are injured patients in
7	there and all around. So, what percent of the
8	injury or the unplanned critical illnesses in
9	the HRR, let's say, are being treated in
10	there? What percent are going out? And if
11	that is a high number, then that suggests that
12	maybe HRRs aren't so good for this. And what
13	percent of unplanned critical illness is
14	outside the HRR flowing into it? If that
15	number is high, if that percent is high, maybe
16	these things aren't so good.
17	So, basically, it is sort of an
18	assessment. We could do an assessment of this
19	sort for different constructs, be it HRRs,
20	HSAs, counties, whatever. So, that is one
21	sort of aspect of it.
22	The other aspect of it is to look

1	
	Page 420
1	at variation in some quality-of-care metrics.
2	And there are a few that we could use within
3	these entities, HRRs, HSAs, whatever, and sort
4	of see, is there variation across these
5	entities in these quality measures that we are
6	interested in? And if so, if there is
7	variation in quality, well, that suggests
8	there is an opportunity for improvement.
9	Maybe these things are interesting.
10	And so, anyway, those are some of
11	the concepts that in various conversations,
12	and whatnot, we have sort of kicked around,
13	because this is like a very big issue. It is,
14	what is this area that we want to assess? Is
15	it connected to the idea of coalition-
16	building? Is it exactly the same as the
17	coalition? Is it related? So, there is sort
18	of the definition for coalition-building
19	purposes, and then there is sort of the
20	definition of area for sort of quality
21	measurement purposes. And there may be an
22	extent to which those two are related.

Page 421 CO-CHAIR PITTS: Brendan? 1 2 MEMBER CARR: So, yes, Ryan and I spoke, and Gregg, about this at length. 3 But, then, the last piece is, if we are going to 4 5 talk about incentivizing geographies, regions, coalitions to do something, to cooperate, what 6 7 happens to all the shared space? I mean, 8 these are not going to be crystal-clear lines 9 in the sand. There is going to be, you know, 10 as you get further and further away from one coalition, you are going to bleed into the 11 12 other coalitions. So, there is going to be lots and lots of -- I talked this morning 13 14 about white space, Marco, because I worry about white space all the time, people that 15 16 aren't part of the team. 17 And sort of going back to my trauma system roots, people that are not part 18 19 of an inclusive system, they are sort of on 20 their own, but I also worry about the shared 21 space and the redundancies because we don't 22 know which coalition. We don't know how to

	Page 422
1	share credit or responsibility or blame for
2	poor outcomes for those places that are shared
3	by multiple coalitions. You can imagine how
4	miserable this becomes in urban areas where
5	there is a lot of overlap.
б	CO-CHAIR PITTS: Jesse?
7	MR. PINES: Just a quick comment.
8	I just want to make sure, you know, I think
9	this is a really important discussion. I
10	think we are going to be integrating a lot of
11	the sort of need to empirically define
12	regional boundaries as a recommendation.
13	But I also just want, just sort of
14	getting back to this specific question about
15	the precision of specification, regardless of
16	whatever region it is, whether it is HRR or
17	whether it is these newly-defined empirical
18	regions, it has got to be precise when it is
19	submitted to NQF.
20	CO-CHAIR PITTS: Mike?
21	MEMBER STOTO: You know, I think
22	that this is a critically-important issue for

	Page 423
1	ASPR in implementing this approach. But I
2	don't think it is so much a measurement issue
3	or a harmonization issue. I think the real
4	critical issue is how do you define these
5	regions.
б	We did some work here in this
7	region that we are sitting in at this moment
8	now. We came up with five different views of
9	what the region was. I heard two different
10	ones, in addition, already just in the last
11	few minutes.
12	So, I think coming up with regions
13	that make sense is really hard, but that is
14	the hard part. It is not a measurement issue.
15	MEMBER MARGOLIS: If I could
16	actually just respond to that, they are not
17	regionally-exclusive, either. I mean, it is
18	entirely possible that you might want to be
19	able to, for different purposes, if you are an
20	elected official, you are only concerned about
21	the entities within the borders of your
22	community.

	Page 424
1	But if you want to look at it
2	differently, I think it would be really cool
3	if you are able to define the regions in
4	different ways based on different needs.
5	MEMBER STOTO: Cool, but hard.
6	And the other dimension is that in this region
7	here we cross state boundaries, maybe as many
8	as five, depending on how you call it. You
9	know, the Governor of Virginia doesn't care
10	much about Maryland.
11	CO-CHAIR PITTS: Wes?
12	MEMBER FIELDS: Yes, actually, I
13	think this sounds an awful lot like a
14	management problem. I think if we assume
15	that, from now on, it is a mutual problem,
16	then, to me, what that means is that the usual
17	chain of command that hospitals respond to are
18	the ones that are going to make the most sense
19	because of the improvement opportunities won't
20	happen from disaster to disaster. They will
21	happen from, you know, micro-event to micro-
22	event.

	Page 425
1	So, I think, especially if the
2	launch point is metrics and measures, which in
3	theory changes the way providers behave and
4	how hospitals deliver services, to me, what
5	that implies is you may need the geographical
6	management scheme for the big blowoff, but to
7	actually make the hospitals work better, and
8	for them to cooperate more across systems, you
9	are going to have to use fairly familiar-
10	looking management structures that aren't
11	geopolitical, and they are much more about how
12	the money flows.
13	CO-CHAIR PITTS: Arjun, are you
14	still proceeding onward or are we done?
15	MEMBER VENKATASH: We can be done.
16	CO-CHAIR PITTS: Okay.
17	MR. PINES: So, one thing I did, I
18	know we are sort of ending our time in the
19	next couple of minutes here. I did want to
20	just have a very brief discussion with the
21	broader group. Essentially, we were asked to
22	set up a runway for measure development, and

i	
	Page 426
1	I just wanted to have a quick discussion about
2	the who and how, and to do a little
3	brainstorming about who are the measure
4	developers for this, how do we communicate
5	with them now to let them know that there may
6	be a consensus-development process in the
7	coming years, and what sort of tools do they
8	need? And what sort of mechanisms can we use
9	to make the highest likelihood of good
10	performance measures in this area?
11	MEMBER MUTTER: So, I will mention
12	that AHRQ has an IDIQ mechanism that we use to
13	facilitate measure development. That is the
14	means by which we are doing our current
15	emergency department Quality Indicator work
16	that we are just beginning right now.
17	Other agencies who want to use
18	this mechanism, basically, through an IAA, can
19	do so. For example, the current work we are
20	doing, as I mentioned before, has got a mental
21	health component to it that is funded by
22	SAMHSA. So, if there were other agencies that

	Page 427
1	wanted to support this kind of work, our IDIQ
2	is a possibility to get that done.
3	CO-CHAIR PITTS: Does HCUP what
4	kind of identifiers or at what level do you
5	identify these types of data, all the way down
6	to the hospital, the region, the address?
7	What is available?
8	MEMBER MUTTER: So, I mean, I
9	think some of that sort of depends on the
10	scope of work that is envisioned. I mean, a
11	lot of AHRQ's Quality Indicator work has been
12	built around data that is coded like HCUP
13	because we have HCUP data.
14	That doesn't mean that measure
15	development work has to be done on HCUP-
16	looking data. Basically, the IDIQ is a
17	mechanism. If someone were to want to come in
18	and do work on a different type of data, I
19	mean I think that is a conversation. It is
20	certainly not by nature limited to admin data
21	that looks like HCUP.
22	CO-CHAIR PITTS: Arjun?

Page 428 MEMBER VENKATASH: I think one 1 2 obvious potential operator is the Joint Commission, right? They have already got flow 3 standards. They already have a lot of 4 5 standards around preparedness to some degree, and they have experience in the measure 6 7 development space. 8 CO-CHAIR PITTS: AnnMarie? 9 MEMBER PAPA: I don't know, but 10 what about IHI? They have a lot of measures and they do a lot of -- I don't know if they 11 12 actually develop the measures or they use 13 other people's measures. So, I can't answer 14 that. But just something to think about. 15 MR. PINES: Jay, any thoughts on 16 ACEP potentially being a measure developer in this area? 17 18 MEMBER SCHUUR: I think probably 19 saying that the organization is going to be 20 discussing over the next six months, but at 21 this point I would say, no, I think not by 22 themselves, but in collaboration with other

Page 429 1 entities, whether governmental or academic 2 groups. DR. BURSTIN: 3 There is actually a nice example in the world of stroke 4 5 measurement, where it is a combination of the 6 American Stroke Association, the Joint 7 Commission, the CDC, who actually came 8 together as a coalition to develop a set of 9 guidelines that everybody is comfortable with, and then the Get with the Guidelines folks are 10 involved as well. 11 12 So, one thought might be kind of 13 thinking about how are the right people at the 14 table and seeing if there is a way to kind of 15 have some collaborative development, so you 16 don't wind up with measures in different 17 spaces that are really conflicting with each 18 other. 19 MEMBER CARR: For the less-20 initiated, could we get like the 90-second 21 primer on how you go and who goes to engage 22 them? I mean, does NQF do advocacy in that

Page 4301realm, to build coalitions? Is that something2that feds usually do? Or we just hope for the3best after we put the paper out?4DR. BURSTIN: It happens in a5whole variety of ways. I think in many of the6clinical areas those coalitions sort of7already exist. They are sort of more natural.889could help play any matchmaking role here. It10sounds like some of this is just who is ready11around the table. It might be a good, logical12place to start here.1314gaps. So, a lot of what this report will15indicate is where the gaps or where measures1617And frankly, just to be honest,1819other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others22find to be the three-four most important		
2that feds usually do? Or we just hope for the3best after we put the paper out?4DR. BURSTIN: It happens in a5whole variety of ways. I think in many of the6clinical areas those coalitions sort of7already exist. They are sort of more natural.8I think the question is if we9could help play any matchmaking role here. It10sounds like some of this is just who is ready11around the table. It might be a good, logical12place to start here.13But we do put out the measurement14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others		Page 430
<ul> <li>best after we put the paper out?</li> <li>DR. BURSTIN: It happens in a</li> <li>whole variety of ways. I think in many of the</li> <li>clinical areas those coalitions sort of</li> <li>already exist. They are sort of more natural.</li> <li>I think the question is if we</li> <li>could help play any matchmaking role here. It</li> <li>sounds like some of this is just who is ready</li> <li>around the table. It might be a good, logical</li> <li>place to start here.</li> <li>But we do put out the measurement</li> <li>gaps. So, a lot of what this report will</li> <li>indicate is where the gaps or where measures</li> <li>need to be developed.</li> <li>And frankly, just to be honest,</li> <li>measurement development costs money. So, the</li> <li>other question is, if there are dollars on the</li> <li>table, that people can put on the table to say</li> <li>here are the defined gaps that ASPR and others</li> </ul>	1	realm, to build coalitions? Is that something
4DR. BURSTIN: It happens in a5whole variety of ways. I think in many of the6clinical areas those coalitions sort of7already exist. They are sort of more natural.8I think the question is if we9could help play any matchmaking role here. It10sounds like some of this is just who is ready11around the table. It might be a good, logical12place to start here.13But we do put out the measurement14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others	2	that feds usually do? Or we just hope for the
<ul> <li>whole variety of ways. I think in many of the</li> <li>clinical areas those coalitions sort of</li> <li>already exist. They are sort of more natural.</li> <li>I think the question is if we</li> <li>could help play any matchmaking role here. It</li> <li>sounds like some of this is just who is ready</li> <li>around the table. It might be a good, logical</li> <li>place to start here.</li> <li>But we do put out the measurement</li> <li>gaps. So, a lot of what this report will</li> <li>indicate is where the gaps or where measures</li> <li>need to be developed.</li> <li>And frankly, just to be honest,</li> <li>measurement development costs money. So, the</li> <li>other question is, if there are dollars on the</li> <li>table, that people can put on the table to say</li> <li>here are the defined gaps that ASPR and others</li> </ul>	3	best after we put the paper out?
<ul> <li>clinical areas those coalitions sort of</li> <li>already exist. They are sort of more natural.</li> <li>I think the question is if we</li> <li>could help play any matchmaking role here. It</li> <li>sounds like some of this is just who is ready</li> <li>around the table. It might be a good, logical</li> <li>place to start here.</li> <li>But we do put out the measurement</li> <li>gaps. So, a lot of what this report will</li> <li>indicate is where the gaps or where measures</li> <li>need to be developed.</li> <li>And frankly, just to be honest,</li> <li>measurement development costs money. So, the</li> <li>other question is, if there are dollars on the</li> <li>table, that people can put on the table to say</li> <li>here are the defined gaps that ASPR and others</li> </ul>	4	DR. BURSTIN: It happens in a
7already exist. They are sort of more natural.8I think the question is if we9could help play any matchmaking role here. It10sounds like some of this is just who is ready11around the table. It might be a good, logical12place to start here.13But we do put out the measurement14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others	5	whole variety of ways. I think in many of the
8I think the question is if we9could help play any matchmaking role here. It10sounds like some of this is just who is ready11around the table. It might be a good, logical12place to start here.13But we do put out the measurement14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others	6	clinical areas those coalitions sort of
<ul> <li>9 could help play any matchmaking role here. It</li> <li>10 sounds like some of this is just who is ready</li> <li>11 around the table. It might be a good, logical</li> <li>12 place to start here.</li> <li>13 But we do put out the measurement</li> <li>14 gaps. So, a lot of what this report will</li> <li>15 indicate is where the gaps or where measures</li> <li>16 need to be developed.</li> <li>17 And frankly, just to be honest,</li> <li>18 measurement development costs money. So, the</li> <li>19 other question is, if there are dollars on the</li> <li>20 table, that people can put on the table to say</li> <li>21 here are the defined gaps that ASPR and others</li> </ul>	7	already exist. They are sort of more natural.
10 sounds like some of this is just who is ready around the table. It might be a good, logical place to start here. 13 But we do put out the measurement gaps. So, a lot of what this report will indicate is where the gaps or where measures need to be developed. 17 And frankly, just to be honest, measurement development costs money. So, the other question is, if there are dollars on the table, that people can put on the table to say here are the defined gaps that ASPR and others	8	I think the question is if we
11around the table. It might be a good, logical12place to start here.13But we do put out the measurement14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others	9	could help play any matchmaking role here. It
12place to start here.13But we do put out the measurement14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others	10	sounds like some of this is just who is ready
But we do put out the measurement gaps. So, a lot of what this report will indicate is where the gaps or where measures need to be developed. And frankly, just to be honest, measurement development costs money. So, the other question is, if there are dollars on the table, that people can put on the table to say here are the defined gaps that ASPR and others	11	around the table. It might be a good, logical
14gaps. So, a lot of what this report will15indicate is where the gaps or where measures16need to be developed.17And frankly, just to be honest,18measurement development costs money. So, the19other question is, if there are dollars on the20table, that people can put on the table to say21here are the defined gaps that ASPR and others	12	place to start here.
15 indicate is where the gaps or where measures 16 need to be developed. 17 And frankly, just to be honest, 18 measurement development costs money. So, the 19 other question is, if there are dollars on the 19 table, that people can put on the table to say 21 here are the defined gaps that ASPR and others	13	But we do put out the measurement
16 need to be developed. 17 And frankly, just to be honest, 18 measurement development costs money. So, the 19 other question is, if there are dollars on the 20 table, that people can put on the table to say 21 here are the defined gaps that ASPR and others	14	gaps. So, a lot of what this report will
And frankly, just to be honest, measurement development costs money. So, the other question is, if there are dollars on the table, that people can put on the table to say here are the defined gaps that ASPR and others	15	indicate is where the gaps or where measures
18 measurement development costs money. So, the 19 other question is, if there are dollars on the 20 table, that people can put on the table to say 21 here are the defined gaps that ASPR and others	16	need to be developed.
19 other question is, if there are dollars on the 20 table, that people can put on the table to say 21 here are the defined gaps that ASPR and others	17	And frankly, just to be honest,
20 table, that people can put on the table to say 21 here are the defined gaps that ASPR and others	18	measurement development costs money. So, the
21 here are the defined gaps that ASPR and others	19	other question is, if there are dollars on the
	20	table, that people can put on the table to say
22 find to be the three-four most important	21	here are the defined gaps that ASPR and others
	22	find to be the three-four most important

	Page 431
1	measures we need developed in the next year,
2	I don't think it would be that hard between
3	AHRQ and us and others to find the right
4	people to help you with that.
5	CO-CHAIR PITTS: Wes?
6	MEMBER FIELDS: That just takes me
7	back to my first response this morning to the
8	pitch. If you have \$350 million funded, it
9	makes a lot more sense to me to use it to do
10	the focused measure development we have been
11	talking about rather than trying to pile it on
12	an ACO for disasters.
13	MR. PINES: So, any final comments
14	for the group? We have a few administrative
15	things before we end, but any other final
16	comments?
17	(No response.)
18	Angela is going to be taking us
19	through the timeline, but, basically, we have
20	to get this done this fall. So, we will be on
21	a very tight timeline.
22	But I just wanted to go ahead and

Page 432 1 thank everyone for all their attention today. 2 I know today was a very long day. There were a lot of really great comments, and this is 3 very helpful as we develop this document. 4 5 MS. FRANKLIN: Okay. And before we wrap up, Arnika, I wanted to check to see 6 7 if there is public comment out there. 8 THE OPERATOR: Once again, to ask a question, please press \*1. 9 10 (Pause.) There are no questions at this 11 12 time. 13 MS. FRANKLIN: Is there any member 14 of the public in the room who wants to make a 15 comment? 16 (No response.) 17 There's none? None here. We are 18 good. 19 Actually, what I would say, I will 20 turn it over to Adeela. But we will be 21 getting back with you to set up a call in the 22 next two to three weeks to go over all of the
Page 433 1 changes that we want to aggregate into the 2 document, based on your comments. Please 3 don't hesitate to email us comments and suggestions as well in the interim. But you 4 will be getting a poll from NQF as to your 5 6 availability for a call to get together to 7 walk through the new document. 8 MR. PINES: And one thing I 9 forgot, I just wanted to thank our Co-Chairs, Suzanne and Steve, for leading this meeting 10 and, also, for all the folks who put together 11 12 extra stuff for this meeting, extra 13 presentations: Mike Stoto, Dave Marcozzi, and 14 Arjun Venkatash. 15 If there is nothing MS. FRANKLIN: 16 else, I think we are adjourned. 17 (Whereupon, at 5:02 p.m., the meeting was adjourned.) 18 19 20 21 22

				Page 45
A	absence 201:1	310:9 319:3	406:16	addressed 239:11
abandon 141:15	absolute 135:9	321:19 322:11	acuity 6:16 52:9,20	285:4
abandoned 268:5	absolutely 180:21	325:16 328:2	54:6,21 56:4,17	Adeela 3:16 8:15
abdominal 230:9	232:21 253:2	330:19 331:4,5	59:2,2 73:20	195:5 432:20
276:16 285:11	288:3 344:22	332:9 343:7 368:3	104:3 109:3	adequate 69:8
293:16,17	absorb 299:20	370:9 409:20	128:10,17 141:8	236:15 377:2
,	337:13,14	416:12	142:2 244:16	380:3
<b>ability</b> 46:20 52:2,9 52:19 53:5 54:5	absorbed 117:1	accountable 49:6	245:19 286:21	adequately 148:20
	abstraction 200:12	165:9 167:16,16	287:6 291:11	adherence 227:10
54:13,14,20 55:2	AC 16:13	174:16 328:16	321:5	Adirim 2:4 18:5,6
57:7,15 58:21	academic 18:8	329:1,2 332:7	acute 74:9,13 81:14	60:15 84:12 150:1
59:3,4 62:8 63:11	21:12 23:16	361:18	134:13 135:2	151:14 152:11
64:6,20 66:4 68:4	149:11 242:9	accreditation	136:2 146:6 166:2	170:2,5 188:7
69:20 71:16 72:2	429:1	111:12	167:17,18 273:5	197:7 198:22
79:11 81:2,3	<b>accept</b> 52:9,19 53:6	<b>accurate</b> 293:6	273:16,22 276:5	212:4 213:21
83:12 101:16	57:8 68:3,5 73:19	<b>ACEP</b> 19:3 20:16	280:8,12 282:6	301:15 318:22
104:3 114:7	109:12 211:11	20:18 115:21	280:8,12 282:6 283:2 375:10	340:19 350:22
146:15,19 159:4		20:18 115:21 398:10 428:16	400:5 405:16	340:19 350:22 370:4 377:20
167:8 168:6	<b>acceptability</b> 34:10 401:8 402:4			
201:22 204:15		achievable 58:4	ad 39:16 54:9,9	378:1 407:17
233:22 299:20	acceptable 161:10	achieve 58:12	55:18 107:6	414:9 415:2
310:10 336:8,22	acceptance 162:5	66:13 97:7 98:18	adapt 342:14	Adirim's 186:20
337:12,14 347:14	385:17	99:6	adaptability 81:6	<b>adjourned</b> 433:16
370:1 384:13,16	accepted 160:22	<b>achieving</b> 384:5	adapted 150:19	433:18
397:11 400:17	161:6 339:13	388:12	176:17	<b>adjunct</b> 15:6
405:16	accepting 221:20	acknowledge	adapts 50:13	adjust 257:14
<b>able</b> 32:7 35:21	344:7	114:13 136:3	add 67:7 112:16	258:19,21 262:1,2
37:11 53:6 54:3,4	access 136:6	ACO 59:10 219:15	155:20 196:22	262:14,15
63:2 65:6 66:1,18	174:17 207:19,21	431:12	203:11 236:18	adjusted 6:12
70:4 76:10 81:7	207:22 218:22	ACOs 49:9 60:13	321:2,3 322:18	242:15,16 249:4
83:15 84:1 95:17	247:7	ACS 361:13,20	327:21 347:11	253:10 256:15
121:18 123:14	accident 140:18	Act 49:6 82:12,18	362:13 371:18	258:4 261:10
127:7 152:21	accomplish 61:10	82:21	381:19	266:15 268:3
174:7 179:9	78:1 83:9 151:6,7	action 101:3	added 6:15 286:20	295:3,13,15,15
180:20 236:18	151:20 152:4	actions 225:20	311:4	296:2 297:5,7,8
250:9 256:20	250:4	<b>activate</b> 149:16	adding 123:19	adjusting 243:9
267:5,16 270:12	accomplished 84:5	active 201:8,10,14	addition 97:9	253:11 258:7,14
271:11 296:8	84:6	292:17 365:16	423:10	adjustment 233:8
309:9 312:7 313:1	accomplishing	actively 292:7	additional 7:4 36:6	240:22 242:18
350:9,20 356:16	252:6	activities 26:10	71:18 128:22	248:12 249:7
357:8 362:5 374:6	account 30:4 141:9	45:20	232:13 275:21	251:20 253:22
375:7,9 376:19	248:13	activity 383:11	276:1 329:8	254:2,4,18 287:12
385:9 394:16	accountability 7:6	actual 102:20	383:22	292:12 293:16
400:4 410:6 412:4	35:5 40:2,20 81:6	105:11 109:14	address 65:10 68:1	294:5,21 295:2
416:8,19 417:2	91:13 92:1 105:3	199:20 202:13	74:16 106:20	296:18 316:20
423:19 424:3	106:19 154:3	213:9 226:15	153:6,14 294:15	adjustments 6:8
<b>abnormal</b> 132:20	177:3 196:10	243:10 244:13	298:15 333:6	240:18
abs 285:21	262:12 263:13,22	324:5 375:16	427:6	adjusts 293:19
	•	•	•	-

	1	1	1	1
admin 201:18,22	adopted 40:1	agree 115:2 126:9	alignment 79:15	369:19
202:7,20 218:19	adults 17:12 240:6	150:3 153:19	<b>Alliance</b> 14:3,15	<b>analog</b> 416:22
220:1 228:13	advance 9:12	154:13 155:9	<b>allow</b> 31:13 32:5	419:3
427:20	adverse 53:7 231:8	161:15 180:18	37:5 50:19 83:18	analogy 113:17
administration	adversely 265:3	181:9 203:18	99:2 109:17	137:7 175:14
18:11 19:15 45:11	advice 44:18 83:4	207:11 238:11	179:10 231:5	analyses 105:14
76:12 240:2	advisory 87:7	247:18 256:8	238:6 271:10	analysis 104:20
administrative	advocacy 16:12	262:7 265:19	350:18 411:22	119:4 173:18
7:19 182:10	332:2 429:22	266:17 284:6	<b>allowed</b> 48:7 50:10	174:2 176:20
224:17 253:1	advocate 346:3	286:8 288:2	84:3 221:8	231:20 264:2,4
270:8 347:19	ad-hoc 352:13	289:12 294:6	allowing 83:20	338:7 380:14
431:14	<b>AED</b> 166:6	303:22 309:11	allows 32:6 83:17	411:6 412:8,12,13
administrators	Affairs 18:10 24:11	310:17 314:17	98:14 254:19	Analyst 8:16
316:3	affect 64:20,21	319:1 326:21	329:14	anchor 34:1
admission 176:5,13	66:4,18 73:5	399:10 400:2	<b>allude</b> 312:8	ancillary 280:3
181:3 216:2 217:5	83:19 162:18	agreed-upon 389:3	alluded 126:7	and/or 36:13
221:17 229:6	171:22 264:20	agreement 164:15	158:18 260:14	347:10 357:3
232:1,7 235:21	359:21 370:1	226:14 351:12	295:7 373:9	anecdotal 396:16
245:15 251:6	Affordable 49:5	382:8 388:18	all-comers 52:13	Angela 3:13 4:4,18
273:17,18,19,22	afternoon 148:6	agreements 159:4	52:16	8:13 189:10 323:6
275:22 276:13	185:19 186:12	305:11	all-hazards 365:19	373:4 431:18
278:12,13,16	313:3	agrees 407:21	already-existing	angle 349:10 350:1
285:1 366:14	age 35:9	408:9	199:2	animal 140:20
admissions 270:9	agencies 79:15 89:8	aha 355:20	alternative 86:11	253:9 254:10
277:13	97:8 114:19	ahead 8:11 44:9	102:19 202:19	animals 123:11
admit 175:8,11	360:19 426:17,22	81:20 108:6 188:3	219:17 238:14	ankle 56:19
176:1 180:3	Agency 25:20	188:5 195:3,5	alternatively	<b>Ann</b> 3:14 4:14 10:1
193:22 194:3,7	agenda 107:13	197:6 249:9	242:19 287:12	10:6 26:8
203:13 206:17	343:2	264:13 307:14	alternatives 285:1	Annals 241:2
208:6 209:6 211:9	agents 414:21	326:5 359:7 361:4	301:4	256:17
221:17 223:3,6,17	aggravates 236:17	370:20 397:22	altogether 282:3	AnnMarie 2:15
224:16,20 225:10	aggregate 336:16	406:10 407:2	amazing 119:19	18:16 71:10
225:14,19,21	367:15 383:15	415:11 431:22	183:8	210:15 245:11
250:22 259:15	433:1	AHRQ 2:14 17:13	ambulance 218:7	288:1 303:20
283:7 340:3	aggregated 27:5	20:7 23:4 24:15	345:20 354:21	317:7 344:16
354:15	306:22 337:3	30:18 174:11	ambulatory 13:22	350:3 359:13
admitted 55:19	370:14 412:15	182:9,14 190:15	22:5 182:5	428:8
131:20 203:3	<b>aggregating</b> 196:8	195:14 413:20	<b>America</b> 2:8	anomaly 231:22
208:9,9 214:20	331:12 368:9	426:12 431:3	American 2:19	<b>answer</b> 45:14 117:6
216:6 228:18,19	aggressive 281:1	<b>AHRQ's</b> 181:20	11:16 21:4 180:11	127:1 145:20
232:4 233:3 269:9	ago 10:13 92:15	182:1 427:11	280:18 429:6	149:6 215:20
270:13,15 275:15	120:14 149:2	AHRQ-funded	<b>amount</b> 160:6	220:8 239:19
282:22 283:1,2	173:21 219:19	14:11	213:1 218:7 229:5	240:3,10 251:15
316:15 326:15	227:9 237:16	alcohol 418:18	234:3 250:3 277:8	297:3 352:16
339:20 340:1	241:2 256:4,17	<b>algorithm</b> 222:16	300:14 320:5	415:13 428:13
admitting 235:17	332:15 354:18	286:3	396:21	answers 415:15
237:20 259:10	372:1	<b>Aligning</b> 41:9	amounts 261:19	Anthony 2:10 23:9
237.20 239.10	372.1	Anguing 41.9	amounts 201.19	<b>Exititiony</b> 2.10 25.9
	I	l	I	l

	1	1		
74:19 87:6 92:10	257:15 263:4	236:20 302:10	articulating 332:14	106:12 185:12,15
93:20 112:11	401:16 403:16	304:20 319:22	artificial 215:6	273:17,19,20,21
120:22 147:12	<b>apply</b> 45:13 81:16	323:3 327:10	aside 28:22 231:20	282:6 283:2
150:4 184:19	91:6 126:6,13	348:18 351:13	asked 88:5 153:11	312:16 320:17
301:8 363:21	143:22 365:11	360:3 382:10	153:15 170:6	327:17 419:18,18
396:13 398:2	390:7,10,20	406:20 417:5,7	202:6 392:15	assessments 36:2
Anthrax 142:3	392:22 402:22	418:19,20,21,22	425:21	96:8,21 311:19
antibiotics 39:11	410:6	420:14,20 426:10	asking 68:13 85:10	<b>Assistant</b> 2:7 17:1
anticipate 181:13	applying 152:1	428:17	86:10 103:14	24:12 25:17 42:12
anticipating 152:14	appreciate 19:6	areas 26:20,20 34:3	112:14 132:13	83:3
antiquated 365:7	44:11	35:14 43:10 68:16	136:7 205:2	assisted 235:3
anti-labs 285:20	approach 31:9	136:11 142:10	356:20	347:1
anybody 11:18	50:20 62:12 63:8	165:6 311:1 352:3	asks 376:12	Associate 17:6
55:4 108:3 124:17	77:1 98:20 106:12	379:2 382:4	asleep 117:16	associated 165:12
129:17 221:6	107:7 111:20	383:11 422:4	aspect 249:13,13	172:2 192:20
276:11 277:9	126:10 142:13	430:6	285:3 305:21	222:16 241:9
297:16 380:6,16	151:10 251:17	<b>argue</b> 375:20	362:3 419:21,22	300:11,20 301:13
385:3 399:11	414:4 417:22	argument 238:1	Asplin 17:15,16	303:8,10 305:22
<b>anymore</b> 36:20	418:5 423:1	280:17 377:12	125:19 160:18	312:5
240:16 266:6	approached 396:19	arguments 377:13	162:9,12 201:3,6	association 2:18
anytime 275:3	approaches 38:9	<b>Arjun</b> 2:23 7:10	208:4,12,15	18:22 19:9,11
anyway 272:19	106:2 107:21	20:11 68:10 71:14	218:16 228:12	28:9 192:16
286:15 289:21	324:3 412:16	78:20 158:14	231:1 247:14	301:22 429:6
323:9 420:10	appropriate 38:12	163:6 199:17	274:8 284:17	assume 176:19
apologies 345:7	56:4 57:17 64:3	201:3 260:11	285:12 308:16	286:21 424:14
apologist 390:8	226:18 236:9	262:8 265:20	313:10,19 316:2	assumptions
apologize 9:11	263:12,20,21	294:18 310:14	334:19 354:2	147:19 148:13
125:20 297:19	281:3 368:18	313:10 320:10	386:20 393:3	400:11,12,18
apparently 251:4,7	414:8	335:6 357:22	394:20	assurance 106:19
394:20	appropriately	362:12 370:22	<b>ASPR</b> 2:11,12 13:6	asterisk 98:5
<b>appear</b> 183:7 408:3	83:19 146:9	401:4 407:2	20:3 24:16 42:13	as-lean-as-it-can
appeared 187:9	328:21	409:22 425:13	44:14,15,16 46:8	51:19
apples 253:16,16	appropriateness	427:22 433:14	226:19 328:12	Atlanta 9:6 119:16
254:20,20 267:6,6	216:2	<b>Arjun's</b> 322:22	384:10 409:18	Atlas 416:18
412:5,5	approximately	<b>arms</b> 69:12	423:1 430:21	417:13
applicability	50:5 53:12,16	Arnika 42:17 189:5	assess 32:5 54:6,20	attaches 263:3
342:14	202:2	432:6	182:20 324:12	attack 88:3
applicable 150:18	<b>arc</b> 231:14	arrival 207:14	381:3 390:22	attending 158:8
342:18 393:17	<b>area</b> 26:16 31:6	213:4	420:14	attention 432:1
application 40:2	34:4 37:20 69:21	<b>arrive</b> 128:14	assessed 281:20	attestation 110:6
200:6 201:20	78:12,19 79:12,20	arrived 128:4	382:7	111:18 407:6
263:18 405:12	85:6 89:18 91:8	158:5	assessing 54:12	408:9
applications	100:15 104:19	arrives 343:14	91:16 106:7	attestation-type
263:13,16,22	114:10 120:17	article 53:4 397:14	403:22 407:18	333:4
applied 75:9 182:8	125:15 128:20	articulate 75:18	assessment 33:10	attractive 79:14
246:20 378:14	152:19 172:15,16	articulated 75:10	91:7 94:17 96:15	audience 166:13
applies 125:16	172:17,19 181:20	329:5	97:10 103:8 106:1	audiences 34:21
L				

400.17	. 140.1	100 7 000 7 16	270 17 277 15	1
409:17	axis 142:1	180:7 229:7,16	370:17 377:15	beginning 31:19
<b>Aurora</b> 115:17	A-F-T-E-R-N-O	238:4 239:7,8	378:13,16 385:22	46:10 108:18
116:1 134:7	189:1	270:6 348:13,18	388:8 389:10	172:9 238:9
138:13 140:18	<b>A-plus</b> 78:6	351:21 360:9	406:6 407:20	270:21 280:21
148:7 163:17	<b>a.m</b> 1:21 8:2 122:7	383:15	408:4 418:18	317:21 329:16
388:16	122:8 188:20	<b>badly</b> 395:10,16,18	419:17 426:18	426:16
<b>Auroras</b> 396:10	B	bailiwick 121:9	427:16 431:19	<b>begins</b> 310:1
Aurora's 380:19		bake 293:12,13	<b>basis</b> 162:21 175:3	begrudgingly
Australia 217:2	<b>B</b> 348:17	318:12	309:12 323:14	202:11
223:12 289:8	babe 72:15	<b>balance</b> 106:21	408:7	<b>begun</b> 182:14
320:16,18	<b>back</b> 42:4 44:13	311:5	<b>bathroom</b> 107:15	<b>behave</b> 425:3
<b>author</b> 137:9	56:9 68:12 84:2	balancing 107:1	<b>bear</b> 49:19 135:18	behavioral 231:19
authorities 369:8	85:17 91:18 92:4	<b>balloon</b> 156:16	416:2	236:4 358:13
availability 52:7,8	96:4 104:1 106:4	Baltimore 90:15	bearing 131:7	<b>believe</b> 20:15
61:8 210:8 381:9	108:21 118:8	<b>bar</b> 33:4 371:12	178:18	144:11 154:6
433:6	119:16 122:8	391:8 407:9	<b>beasts</b> 147:18	181:11 203:1
available 26:18	123:13 124:7	barriers 27:1	365:2	252:2 376:15
102:15 113:9	135:1 150:9	<b>bars</b> 82:15	beauty 228:14	379:10
270:14 293:9	161:22 169:16	<b>base</b> 53:2,9 54:16	<b>bed</b> 52:6 54:9 61:8	<b>belong</b> 359:11
406:19 427:7	175:19 176:4	88:8 200:14	168:22 169:3,10	benchmark 14:3
average 53:10,12	178:7 188:21	374:14 403:7,15	202:7 203:14,15	14:15 357:8,14
53:15 65:4 214:20	190:10 212:5,12	<b>based</b> 7:8 13:17	204:2 205:5	benchmarking
215:2 290:5	221:10 232:16	26:4 40:11 119:5	206:18 208:10,16	21:15
299:14 363:11	235:9 259:14	176:12 182:10	208:19 212:13	benchtop 114:11
<b>avoid</b> 38:18 277:11	260:15 274:10	214:16 231:20	213:13,13,20	<b>bend</b> 147:20
277:12 351:16	282:19 285:22	243:11 257:9	216:22 217:5,10	149:18 154:20
387:6	288:7 313:15	280:15 331:10	220:6,22 221:4,16	bending 161:2
avoidable 174:8,9	314:14 316:6	380:13 397:14	221:21 222:1	beneficiary 234:20
174:10	322:6 326:4,8	403:6 424:4 433:2	223:3,4,9 224:17	<b>benefit</b> 141:17
awaiting 51:17	334:7 340:15	<b>basic</b> 111:13	228:22 234:20	260:7 266:11
57:1	346:7 352:10	186:10	253:8 259:16	272:7 292:4,15
awarded 182:15	354:17 355:18	<b>basically</b> 29:7,13	316:18 317:14	394:10
183:13	366:4 369:18,19	89:18 132:2	327:3 356:3,6	benefits 382:8
<b>awardee</b> 59:17,17	373:10,18 383:12	133:11 134:5	<b>beds</b> 57:9 58:6	393:21 394:5
<b>awardees</b> 48:16	394:4 421:17	135:3 182:2,20,22	72:10 74:5,8,9,11	<b>bent</b> 148:8
50:17 60:5,6,7	422:14 431:7	190:7 191:19	74:13 81:12 104:3	<b>Berwick</b> 40:14
62:13 64:22 65:9	432:21	192:1 193:5 195:8	109:4 112:19	<b>best</b> 17:18 79:2
65:13 74:14 78:4	backdrop 31:17	241:2 242:1,2,13	113:6,7 180:8	84:14 92:3 98:17
78:5	32:21	248:4 250:2	214:7 221:7	99:4 105:6 125:8
awardee's 70:21	background 15:16	254:19 257:6,20	267:12,12 269:8	145:15 193:3
<b>aware</b> 343:10	28:5 95:7 268:21	258:22 260:4	270:16 279:3,10	204:12 211:19,21
372:19 384:10	backgrounds 43:10	263:10 272:18	316:19 337:5	220:7 224:3
awareness 318:13	backs 265:4	276:6,11 278:3	349:15 375:7,10	279:20 300:17
318:19 357:21	backup 153:1	284:4 287:6 291:4	381:9 396:3	302:22 383:10
<b>awful</b> 148:22	backwards 151:8	323:15 331:11	406:18	387:8 430:3
237:11 424:13	<b>bad</b> 130:19 136:5	348:16 351:11	bed-ordering 221:3	<b>bets</b> 141:14
<b>axes</b> 141:13	163:19 171:18	359:3 368:6	<b>beer</b> 418:22 419:2	<b>better</b> 47:9 48:3,6
				<u> </u>

49:14 63:13 68:2	277:5	<b>blunt</b> 239:14 247:9	Board-certified	153:7 158:19
104:22 105:17	<b>bills</b> 182:10	272:3	342:4	205:12 210:18
136:20 137:3	biological 45:17	board 18:12 93:7	<b>boat</b> 117:12 359:19	212:7 252:18
151:4 152:2	biosurveillance	162:5 171:18	359:20 365:18	318:2 336:18
166:21 172:21,21	100:15 101:20	323:22	<b>bodies</b> 121:8	346:9 356:17
172:22 174:22	<b>bit</b> 9:18 10:11 30:7	<b>boarded</b> 230:10	396:18 397:16	359:15 392:7
203:8 205:20,20	31:17 37:3 41:1	315:17	<b>bodily</b> 395:14	413:8 421:1
215:16 223:21	58:16 61:22 68:12	<b>boarding</b> 5:17,23	<b>body</b> 387:8,11	<b>Brendan's</b> 157:8
245:21 259:9,22	86:2,6 89:13,21	6:3,12,24 26:19	396:22	259:4 296:16
267:5,8 288:18	92:12 107:14	64:4,9 67:3,5	<b>boil</b> 59:19 154:14	Brent 17:16 129:9
297:15 344:13	108:8 122:1,17	72:21 80:15	<b>boiled</b> 154:17	160:17 161:15
349:1 351:18	123:13 126:4	116:21 129:15,18	<b>bolus</b> 72:22 73:1	165:8,10 199:18
387:12 425:7	132:8 137:14	131:8 145:6	83:21 317:16	200:18 203:11
better-organized	139:15 150:9	159:21 160:2,6,22	<b>bombing</b> 119:15	212:6,12 218:15
381:8	169:19 183:11,11	161:3,18 171:8,15	<b>bond</b> 275:14	228:11 230:19
between-hospital	190:4,9 196:10,12	175:13 176:2	borders 415:19,22	236:5 247:13
291:4	198:18,18 210:13	181:11 186:13,15	423:21	274:7 284:16
<b>beyond</b> 6:24 41:14	225:1,2 240:21	190:5 191:15	<b>Boston</b> 112:13	294:6 299:6,11
77:22 119:4 207:8	247:9 259:14	193:8 194:12,15	<b>bother</b> 298:7	308:15 313:9
241:6 264:18	271:16 273:9	196:21 207:21	bottleneck 206:19	315:22 334:18
275:8 281:12	278:11 280:19	209:20 210:11	356:9	340:18 354:1
315:5 316:21	281:12 288:19	214:15 215:1,3	<b>bottom</b> 296:20	363:2 386:19
326:21 327:18	290:11 296:18	218:4,22 219:8,21	boundaries 422:12	392:13
335:3 350:18	308:2 315:4	225:2,5,6 227:4	424:7	Brent's 171:7
396:12	319:18 325:13	229:1,5,6,15,21	boundary 418:7	183:4 190:13
<b>bias</b> 124:13 245:1	333:14 345:13	230:17 232:8	<b>bow</b> 206:12 221:8	195:4
Biddinger 103:2	365:22 378:17	234:4 237:3,5,6	<b>box</b> 110:7	breweries 418:20
<b>big</b> 107:9 115:9,12	405:9 416:11,13	237:13 238:3,3	<b>boy</b> 394:1	<b>bridge</b> 67:12
117:22 137:19	416:17 418:5	239:8 240:20	brainstorming	127:17
138:21 149:15	<b>bits</b> 169:22	253:1 261:4,10,20	426:3	<b>bridges</b> 400:13
184:5 199:11	<b>black</b> 126:16	266:21 267:11	<b>Brave</b> 266:7	bridging 352:2
235:5 242:8,11	134:17 136:13	268:4 284:19	breadth 66:17	brief 118:14,14
257:10 283:3	137:7,10,10,12,14	286:6,9 294:2,5	<b>break</b> 44:19 69:14	181:19 184:3
319:22 329:4	137:18 138:1,5,9	295:16 306:13,14	80:2 107:15	278:14 425:20
360:4 369:1	147:8 248:18	306:21 307:5	119:21 121:18,20	briefly 37:2 38:22
390:15 411:17	309:16	308:18 310:1	134:11 188:3	<b>Brigham</b> 20:22
413:16 420:13	<b>blame</b> 422:1	313:5 314:5 315:5	311:10 315:2	brilliant 363:2
425:6	<b>blank</b> 11:17	322:1 333:19,22	321:13 326:1	bring 28:20 49:19
<b>bigger</b> 88:20	blanket 71:2	336:1 337:3 338:3	333:12	74:22 75:5 86:4
127:11 264:9	<b>bleed</b> 421:11	338:8 339:12,17	breaking 169:18	118:7 120:6
383:4	<b>blend</b> 49:8 60:13	353:10 360:15	breakpoint 169:6	132:11 135:18
<b>biggest</b> 313:14	82:2	372:16 398:11	breaks 134:16	144:19 165:18
314:12	<b>blind</b> 215:18	408:21	Brendan 2:5 19:20	173:17 175:3
<b>bill</b> 204:22 205:6	blocking 180:8	boarding-speak	63:15 67:20 68:13	321:22
277:16,18	<b>Blocks</b> 396:2	337:20	80:11 128:19	bringing 176:22
billboard 145:15	<b>blowoff</b> 425:6	boarding/crowdi	132:17 143:7	brings 132:22
<b>billing</b> 245:18	<b>blue</b> 400:12	312:1	146:2,21 150:10	<b>broad</b> 164:15
L				

	1	1	1	I
broaden 153:2	263:6,9 376:20	326:14 337:7	97:10 98:20 111:3	130:6 132:15,16
broadened 210:9	380:21 381:18	338:8 404:9	114:18 119:7	133:13,16 136:2
broader 193:7	393:10 397:18	calls 29:1 43:13	129:5,14 131:1	143:15 144:3,17
196:22 203:14	398:19 409:15	287:5 354:20	135:4 144:20	145:16 146:10,16
215:10 253:13	411:5,11,16 412:2	<b>camp</b> 147:17	158:1 181:4	146:19 150:17
391:4 425:21	413:13,18 429:3	157:12 168:3	204:13 209:5,16	151:1,17 154:21
broadly 173:16	430:4	229:17 364:5	234:2 261:5 262:6	157:15 164:2
176:16 195:22	<b>bus</b> 56:18 57:3	<b>campy</b> 408:6	272:12,21 294:22	165:10,14 166:2,2
257:16 283:20	128:4 134:6	<b>Canada</b> 241:21,21	304:3 305:1	166:15 167:16,17
305:5 328:9	140:17 149:15	242:1 260:3	306:17 307:2	167:17,18 168:12
broken 62:14	153:4 336:9	284:11 292:6	308:6 309:10	169:7,8 170:11,18
brought 27:15	<b>buses</b> 128:13	Canadian 287:5	313:21 314:2,7	170:22 171:17,17
44:16 60:19	<b>business</b> 9:10 19:17	<b>cancel</b> 401:2	316:7 330:9,11	172:15,19 179:7
150:11 307:7	48:8 117:20 125:3	cancer 145:15	333:20,21 347:20	180:20 182:5,20
319:11 332:19	134:15 367:20	capabilities 45:12	347:22 348:12	183:19,19 190:17
367:5 387:17	396:22	45:13,21 46:4,5,7	362:1,10 376:9,13	194:17 207:19,20
416:12	businesses 89:10	46:9,11,14,18	380:11 383:1,3,22	210:18,21 230:5
bucket 219:11	<b>busy</b> 133:9,16	47:3 50:20 51:3	384:6 389:20	235:6 236:9
<b>budget</b> 65:4	168:6,7	66:5 77:7 78:1	399:12 400:4	237:21 240:5,8
<b>build</b> 52:21 99:21	<b>button</b> 56:14 243:2	93:11,17,19 94:5	404:3 405:16	242:9,11 245:19
137:21 141:19	bypassing 282:15	94:7 95:15,19	412:20	250:10 252:1
175:22 270:19		97:21,21 98:2,12	capped 211:15	260:19 265:1,9
293:16 394:16	C	99:6,13 100:1,3,8	<b>capture</b> 35:9 37:11	271:6 273:5 276:5
418:2 430:1	calculated 185:12	100:14 101:21	41:6 69:6 111:5	276:6 280:8,11,12
building 90:3 95:1	246:13	102:2,7,21 106:20	158:11 214:9	280:14 292:7
95:2 117:8 141:18	calculating 245:9	108:22 109:2	239:7,13 244:7	295:9 307:2 311:9
420:16	calculations 227:9	127:2,10 162:20	262:4	314:1 331:14
<b>builds</b> 318:7,10	calculus 136:8	188:15 323:13,21	capturing 207:22	334:4 338:17
<b>built</b> 111:15 427:12	383:12	324:3 415:4	cardiac 246:4,5	344:18 345:17
<b>bulk</b> 190:21	California 2:23	capability 46:21,22	cardiologists	346:12,22 347:10
<b>bullet</b> 39:1	14:7 101:14	47:2,14,15 70:19	179:13	357:21 362:4
<b>bump</b> 104:8 404:2	111:22 205:1	92:15 94:3,14	cardiovascular	363:18 369:20
<b>bunch</b> 168:14	235:15	95:4 98:18 100:16	35:14	376:22 392:11,22
226:13 334:15	<b>call</b> 4:4 24:21 39:16	101:15 108:17	care 1:5 8:5 13:6	393:14,19 416:19
<b>bundler</b> 16:14	52:6 141:7 187:13	119:8 341:4,11	13:22 17:11,12	417:1,4,9,12
<b>bunk</b> 72:10	187:14 195:17,20	348:12	20:6 22:5 23:6	424:9
<b>Bupa</b> 15:1	205:14 208:17	capability-based	28:10 31:10 35:14	career 9:4 23:3,16
burden 35:8	221:11 249:16	45:7,8	35:19 37:20 41:3	careers 19:12
bureaucratic	274:12 280:7,8	capable 235:3	48:18,18 49:5,6	careful 60:10
217:19	282:9,13 300:16	capacities 93:10,17	52:8 56:5 57:12	381:12
<b>burnout</b> 327:13	313:16 335:4	93:19,22 94:6	57:13,16,18,19	carefully 75:10
Burstin 3:12 4:23	366:7,18 406:20	95:14,21 99:21	58:22 59:2 60:1,2	103:17 194:12
30:9,11,22 173:11	424:8 432:21	101:22 102:1	61:1 63:11 69:5	390:10
177:6,10 198:17	433:6	106:20 386:14,15	74:1,4,10,13	caregivers 345:1
206:15 208:6,14	called 15:20 263:17	capacity 50:6 67:9	81:12 83:20 85:13	care-coordination
222:11,14 226:16	272:17 273:5,17	78:19 94:13 95:2	86:8 90:2 102:7	342:13
227:5 232:10	273:19 297:22	96:7,8,15,21	109:8 117:1 129:1	care/general
L				

173:13	224.7 242.20	<b>CEO</b> 109:5 252:17	ahanga 2.7 22.11	<b>Chris</b> 92:14
	324:7 343:20		<b>change</b> 2:7 22:11	
care/primary	400:5 405:17	<b>CEP</b> 2:8	45:9 75:21 85:21	Cipro 142:5
280:11	<b>case-mix</b> 258:16	<b>certain</b> 103:13	132:2 153:15	circumstance
<b>Carr</b> 2:5 19:18,20	casualties 121:8	156:4 229:5 257:3	156:1 168:9,10	.118:20
63:16 67:1,6	CAT 152:21,22	276:9 277:8	169:8 227:6 335:4	circumstances
129:3,19 143:8	<b>categories</b> 231:19	288:20 295:21	changed 12:9 39:17	105:18 287:1
153:8 205:13	244:4 372:9 374:6	296:1 301:10	50:7 140:12,15	359:16
206:6,8 207:11	402:5	307:22 415:8	198:15,19 209:18	<b>cite</b> 54:16 76:2
208:20,22 252:19	categorizing 95:13	416:3	216:1 398:16	<b>cited</b> 15:16 91:3
254:3 255:2 318:3	category 236:11	<b>certainly</b> 33:4	changes 50:12	<b>city</b> 60:10 69:15,16
336:19 338:9,22	244:12 279:21	44:16 45:15 47:4	107:3 119:5	89:14 142:2,3
339:11,18,22	280:4 401:17,17	48:22 49:5 54:16	163:10 171:22	144:2,7 155:3,4
340:5,12 356:18	<b>cath</b> 146:17 156:18	62:20 83:22	227:7 295:22	416:10
358:20 359:5	210:2 230:16	162:18 166:20	343:3 425:3 433:1	claims 37:7 200:10
380:4,16 392:9	291:15 343:15	233:22 251:11	<b>changing</b> 65:1	clarification
393:9 411:8,13,17	caught 229:22	267:3 280:14,15	132:15 216:19	120:21 376:21
421:2 429:19	causally 149:5	295:12 310:19	284:20	clarify 120:22
<b>Carrier</b> 2:6 22:7,8	<b>causing</b> 39:14	315:19 331:21	characteristics	224:6 244:1
108:7 110:6,10,13	<b>cautious</b> 163:13	343:8 352:8	247:10 262:2	247:21 266:13
110:17 141:2	caveat 52:16	358:12 381:2	charge 44:14 156:7	275:4 283:11
143:1 200:17	<b>CDC</b> 2:12 17:13	385:10 394:16	237:10,13,17,22	340:9 385:6
201:5 239:2	20:7 22:13 44:16	403:16 407:22	275:21 276:1,4	clarifying 91:12
255:21 257:2,11	46:5 87:2 97:19	415:14 427:20	279:2 395:17	clarity 61:22 237:9
258:10 275:12	100:14 105:9	cetera 25:12	charged 355:17	238:8
276:18 302:8	328:11 409:12,18	175:19 218:22	360:19	class 236:13
342:21 366:2	429:7	285:2 297:13	charging 269:22	<b>classes</b> 236:8 257:3
375:1,4 394:9	<b>CDC's</b> 97:20	356:7,7	<b>chart</b> 200:7,20	260:6
carrots 172:1	CDC-funded 15:9	<b>chain</b> 90:17 424:17	223:15,16,16	classic 402:19
carry 275:22	<b>CDU</b> 276:12	<b>chains</b> 51:13 90:11	charters 48:8	Classically 50:3
cars 118:8,9	<b>CDUs</b> 286:12	<b>chair</b> 15:20 18:2	charts 199:21	classification 143:5
<b>cart</b> 62:13	cellulitis 269:4	21:3 24:6 355:18	223:20	242:22 245:8
cascade 35:21	286:1	Chairman's 307:8	<b>check</b> 42:19 110:7	257:9 289:19
cascading 126:7	census 192:17	Chairs 12:21	189:4,5 432:6	292:16
<b>case</b> 40:5,15 113:4	212:19 307:20	challenge 61:4,15	checklists 103:18	classifications
141:13 145:8	338:7	100:9 102:2	chemical 45:16	248:3
213:2 241:7 244:8	censuses 192:19	169:12 205:10	139:18	classify 276:7
244:15 245:4	<b>center</b> 2:6,11,20,22	329:4,5 383:5	<b>chest</b> 131:19	<b>clean</b> 318:7
248:21 254:14	2:24 9:9 13:9	challenged 72:20	224:18 269:4	<b>cleaned</b> 356:4,7
257:8 258:7,15	18:19 22:3,10	166:1	273:11 291:13	<b>clear</b> 39:12 109:19
265:16 311:7	46:20 87:3 105:10	challenges 47:6	361:12	172:10 208:11
377:2,11 379:3	144:7 242:9,11	87:17 108:20	chest-pain 57:1	216:4 224:15
383:17 384:5	302:16 341:19	294:20	<b>chewed</b> 229:14	237:7 251:3,4
393:18 409:18	<b>Centers</b> 2:16 15:11	challenging 158:22	<b>Chicago</b> 163:18	294:11 308:11
caseload 259:20	15:12	159:14 374:12	<b>child</b> 31:2	340:13 354:4
cases 109:15 127:7	<b>central</b> 6:18 297:13	388:22 410:14	children 188:11	357:6 361:19
178:1 212:22	298:19 300:3	<b>chance</b> 325:13	Children's 116:2	372:18 403:11
213:15 254:16	393:2	chances 298:4	<b>choice</b> 297:15	406:12

				Page 44
408:16	69:15 70:6,19,20	341:7	157:17 188:14	commiserate 23:11
<b>clearly</b> 75:14 76:8	70:21 72:8 74:4,8	colleagues 73:7	226:4 269:21	commission 62:21
89:21 97:10	74:9 75:7,11 77:9	87:2 150:4 306:8	281:4 282:1 323:8	96:12 111:11
284:10 358:13	77:20,21 78:22	319:2	326:13 361:10	194:16 221:9
370:8 393:16	110:18 112:12	<b>collect</b> 37:12 167:8	377:15 409:11	225:8 230:2
clear-cut 269:3	121:4,14 135:16	collected 41:2	comfortable 429:9	237:16 251:13
<b>click</b> 99:19	141:17 143:14	410:5 412:11	<b>coming</b> 14:12	352:22 353:19
<b>clinic</b> 345:19	356:21 359:11	<b>collection</b> 110:3,20	28:14 29:15 57:4	428:3 429:7
<b>clinical</b> 16:8 18:17	368:10 410:22	111:5	66:18 71:7,8 72:7	committee 7:4
20:13 22:8 130:17	411:4,10 420:15	collections 415:1	88:3 104:1 152:4	10:19 11:1,5,13
239:10 269:1,5	420:17 421:11,22	collectively 79:21	163:22 170:11	11:21 12:12 13:7
272:17 273:9	429:8	266:1 309:13,15	192:5 194:18	17:19 18:3 20:17
275:15,20 343:11	coalitions 48:7,12	<b>College</b> 2:19 21:5	274:17 281:17	21:4 24:7 25:5,11
430:6	48:16,17 49:3,4	<b>color</b> 350:17,21	329:3 385:4	25:14 37:17 149:4
clinically 9:5 13:2	54:3 58:5,6 59:8	<b>column</b> 99:22	388:18 393:4	227:12 355:19
14:8 298:11	59:15 60:5 62:17	183:18	414:11 418:22	398:8
<b>clinician</b> 85:7 86:4	65:13,15 67:8	combination	423:12 426:7	committees 19:2
clinicians 86:16	68:17 70:16 77:11	115:11 211:19	<b>command</b> 424:17	22:1 32:19 263:11
168:14 365:7	77:17,19 78:4	429:5	comment 5:15 7:22	371:6 388:7
<b>clinics</b> 81:13	421:6,12 422:3	combinations	84:8 123:13 125:1	<b>common</b> 95:6
<b>clock</b> 269:6	430:1,6	103:12	155:8,8 164:8	105:15 118:12
<b>close</b> 36:16 56:6	coalition-building	combine 10:9	170:6 173:14	124:12 127:2
66:20 166:6,20	420:18	313:20	181:17 187:11	129:10 248:2
167:2 330:2	coalition-level	combining 142:7	201:16 226:2	<b>commonly</b> 287:15
<b>closed</b> 73:2 116:9	348:10	296:14	243:6,14 260:2	communicate
400:14	coalition-ness	come 16:3 29:2,12	262:9 264:12	96:21 365:14
closest 83:21	338:14	47:18 49:14,18	297:19 298:16	426:4
146:17 202:12	coauthor 24:2	55:19 62:14 70:12	299:6 303:6	communicating
<b>closing</b> 175:16	199:19	83:1 85:3 86:17	305:18 306:6	100:6
Clotting 20:17	<b>code</b> 116:11 245:17	86:22 90:22 92:4	307:10,14 328:1	communication
<b>CMI</b> 245:8,13,14	246:16,18,22	106:5 107:19	330:16 364:18	118:5 351:18
246:2,4,10 247:6	coded 427:12	145:16 164:5,9	401:3 416:9 422:7	communications
<b>CMS</b> 202:5 206:4	codes 246:15	178:6 184:10	432:7,15	112:18
214:15 216:2	cognizant 164:3	192:6 202:11	<b>comments</b> 5:10,12	communities 92:16
225:18 246:8,9	214:6	224:7 227:3 228:1	5:20,24 6:7,9,14	137:4 234:1
251:1,7,12 263:3	<b>cohort</b> 247:15	242:6 248:11	6:17,20,23,26	306:16 309:9
338:10 339:13	<b>cohorts</b> 247:16	251:15 258:1	7:12 62:3 107:17	310:5 367:10
349:17 369:8	collaborate 410:12	310:6 339:9 350:1	108:4 164:17	414:13 416:4
coalescing 97:22	collaboration	362:8 374:15	169:17 184:4	community 35:2
coalition 24:8	428:22	382:22 384:18,20	186:10,18,20	47:15 49:18
46:19 47:15 48:22	collaborative 98:9	384:22 392:2	187:15 233:17	114:10 118:14
52:18 54:22 55:15	159:19 429:15	399:17 400:8	297:16 298:17	135:17 146:8,8
55:16 56:2 57:17	collaboratives	410:15 417:21	307:8 345:10	154:9 174:3,21
58:7 59:1 60:8,9	22:15 414:22	418:1 427:17	360:12 364:7	182:17 183:21
60:12 63:22 64:10	collaborators	comes 68:20 90:3,8	367:2 368:4,12	194:18 234:2,18
65:22 66:3,14	127:20	94:2,9 105:1	431:13,16 432:3	235:2 261:7,18,20
68:20 69:2,7,13	colleague 103:3	123:16 154:2	433:2,3	280:16 307:3
	1	1	1	I

$\begin{array}{llllllllllllllllllllllllllllllllllll$					
360:20 384:16 complete 81:5 conceptually 37:19 connects 95:1 consistently 133:10   413:21 414:15 21:18 134:1 concern 34:13 cons 228:5684.8 consolidating 65:9   community-level 182:11 271:2 292:20 cons 228:5 2684.8 cons 228:5 2684.8 consolidating 65:9   comorbidities 120:7 123:11 137:17 171:13 224:7.8 2264 21:12   comorbidity 246:19 392:5 constant 56:9 constant 56:9   comorbidity 265:7 353:17 319:19 349:17 394:2 399:21 70:12 365:9 418:2   comparable 32:6 276:8,8,12 286:12 concerts 55:7 consensus-develow. construct 126:14   38:17 107:17 236:15 concerte 29:9 46:8 419:19   comparable 32:6 276:8,8,12 286:12 conclude 383:19 consult 16:16   201:19 215:13 compliant 281:10 contine 231:2 212:21 230:12 consult 16:16   201:19 215:13 compliant 281:10 contine 31:2 212:21 230:12 consult 41:20:56   201:19 25:7 compliant 281:10 contiforis 31:56 consequenc	328:10,17 330:5,9	complaining	conceptual 195:9	connection 306:10	consistent 57:10
413:21:414:15 221:18 134:1 connert 31:23 connert 31:23 consolidating 65:9   423:22 completed 181:22 concern 34:13 consecus 31:21 consolidating 65:9   comporbidities 120:71 123:11 137:17 171:13 224:78 226:44 21:12 consolidating 65:9   comorbidity 147:21 181:9 293:10 319:4,13 335:21 391:17 construct 53:10   comparability 147:21 181:9 293:10 319:4,13 335:21 391:17 construct 53:10   comparability 88:11 94:21 concerns 75:7 consensus-drelo construct 126:14   comparable 32:6 276:8.8,12 286:12 concerns 75:7 consensus-drelo construct 0126:14   202:19 215:13 compliant 28:10 240:14 273:13 259:13 26:2:1 construct 126:14   202:19 215:13 compliant 28:10 240:14 273:13 259:13 26:2:12 consult 4:20:56:2   204:19 25:5 compliant 28:10 240:14 273:13 256:16 consult 4:20:56:2   207:19 21:3:12 compliant 28:10 240:14 273:13 26:16 28:2:13:19   201:12 25:5 conficence 13:9 <td></td> <td></td> <td></td> <td></td> <td></td>					
423:22 completed 181:22 concern 34:13 consensus 13:21 consolidating 65:9   community-level 182:11 271:2 29:20 consensus 13:21 66:6   comorbidities 120:7 123:11 137:17 171:13 224:7.8 226:4 21:12   254:5 124:6 140:13.17 228:19 269:14 312:14 379:10 consortium 2:10   236:12 265:7 353:17 319:19 349:17 384:2 399:21 70:12 365:9 418:2   comparability 88:11 94:21 concerns 55:7 consensus-develom construct 01:69   comparable 32:6 276:8.8,12 286:12 concert 312:5,17 371:7 387:9 426:6 construct 01:69   comparable 32:6 276:18,84:12 240:14 273:13 consequence construct 24:1   compare 32:7 compliance 21:9 consequences 39:9 construct 312:6 consequences 39:9 519:817 217:4   241:14 254:20 compliance 13:19 conditions 31:56 consequences 39:9 519:817 217:4   257:12 256:5,9 10:19 240:14 273:13 259:13 262:21 consult 316:16   comparison 33:15 130:21 14:23 consequen		-			e e
community-level 174:12,17 182:11 completely 117:12 componentiality 271:2 292:20 componentiality consensus 13:21 224:15 66:6 consortium 2:10 224:15 226:4   254:5 124:6 140:13,17 236:12 285:17 171:13 255:17 319:17 39:19 349:17 212:12 355:17 211:12 259:12   compatibility 147:21 181:9 293:10 319:4,13 38:17 385:21 391:17 construct 53:10 39:12 38:48 85:5   comparability 88:11 94:21 comparability concerts 55:7 consensus-develou- 38:17 consensus-develou- construct 312:5,17 construct 312:5,17   complexity 259:7 58:20 395:4 consensus-driven concret 29:9 construct 38:16   202:19 215:13 compliant 289:10 240:14 273:13 259:13 262:21 construct 36:87   202:19 215:13 compliant 289:10 240:14 273:13 259:13 262:21 consult ant 4:20 5:6   276:15 344:2 276:15 344:2 316:22 40:4 93:1.6 consult ant 4:20 5:6   comparing 199:20 component 426:21 195:20 219:19 119:12 138:13 consult 316:16   comparing 199:20 component 426:21 129:19:12 138:13 consult 316:16   comparing 199:20 composites 325:8					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		-		-	
comorbidities 120:7 123:11 137:17 171:13 224:7,8 226:4 21:12   254:5 124:6 140:13,17 228:19 269:14 312:14 379:10 constant 56:9   comorbidity 147:21 181:9 293:10 319:413 385:21 391:17 394:2 399:17 394:2 399:17 70:12 365:9 418:2   company 222:4 complex 38:4 85:5 423:20 407:9 410:4 418:6   comparability 88:11 94:21 concerts 55:7 consensue-develon construct 126:14   38:17 107:17 236:15 concert 312:5,17 371:7 387:9 426:6 construct 68:7   comparable 32:6 276:8,8,12 286:12 contilion 231:2 212:21 230:12 construct 68:7   202:19 21:51 compliant 29:10 240:14 273:13 259:13 262:21 consultant 4:20 5:6   267:6 289:20 complicated 145:7 conditions 315:6 consequences 39:9 5:19 8:17 217:4   235:14 254:21,22 complication 90:8 Cone 320:15 consultant 4:20 5:6 consultant 4:20 5:6   241:14 254:21 component 426:21 195:20 219:19 119:12 138:13 consultant 4:20 5:6   255:12 256:5.	•				
254:5 124:6 140:13,17 228:19 269:14 312:14 379:10 constant 56:9   comorbidity 147:21 181:9 293:10 319:4,13 385:21 391:17 170:12 36:59   compary 222:4 complex 38:4 85:5 423:20 407:9 410:4 418:6   comparability 88:11 94:21 concerns 55:7 607:7 387:9 426:6 constructed 126:14   38:17 107:17 236:15 concert 312:5,17 371:7 387:9 426:6 constructed 126:14   202:19 215:13 compliance 213:19 conclude 383:19 consequence construct 68:7   202:19 215:13 compliance 213:19 condition 31:2 21:21 230:12 consult 316:16   241:14 254:20 complicated 145:7 conditions 31:56 consequences 30:9 51:9 8:17 217:4   255:7 complexited 126:11 195:20 219:19 162:17 230:4 consult 41:20 5:6   255:7 complexite 32:4 20:5 43:13 195:17 consult 61:61 consult 41:21   297:2 component 26:11 295:10 170:12 28:6 consult 41:21   290:2 36:4:4 203:7 333:11 338:3 280:11	,				
comorbidity 147:21 181:9 293:10 319:4,13 385:21 391:17 construct 53:10   236:12 265:7 333:17 319:19 349:17 394:2 399:21 70:12 365:9 418:2   compar 311 88:11 94:21 concerts 55:7 consensus-develo construct 02:14   3817 107:17 236:15 concert 312:5,17 371:7 387:9 426:6 construct 68:7   compar 32:6 276:8,8,12 286:12 concret 29:9 46:8 419:19   compare 32:7 compliance 213:19 condition 231:2 212:21 230:12 consult 316:16   202:19 215:13 compliance 213:19 conditions 315:6 consequences 39:9 5:19 8:17 217:4   241:14 254:20 complicated 145:7 conditions 315:6 consequences 39:9 5:19 8:17 217:4   245:14 254:21,22 component 26:21 195:20 219:19 119:17 230:4 consult 4:20 5:6   215:12 256:5.9 166:14 234:15 confidence 135:9 324:15 331:6 consult 48:19   290:2 364:4 20:37 49:26 36:16 consult 39:34   205:5 component 126:11 249:16 170:9 268:1 28:61					
236:12 265:7 353:17 319:19 349:17 394:2 399:21 70:12 365:9 418:2   company 222:4 complex 38:4 85:5 423:20 407:9 410.4 418:6   comparability 88:11 94:21 concerns 55:7 concensus-develon constructed 126:14   38:17 107:17 236:15 concerns 55:7 consensus-develon constructs 68:7   99:6 290:6 286:14 concrete 29:9 46:8 419:19   comparable 32:6 compliance 213:19 condition 231:2 212:21 230:12 consult 316:16   complicated 145:7 complicated 145:7 condition 315:6 consequences 39:9 51:9 81:7 217:4   241:14 254:20 complication 90:8 conficence 1:19 238:14 276:16 282:13,19   compared 128:8 90:19 conficence 1:19 238:14 237:61 62:17 230:4 consultant-gener   297:2 component 426:21 195:20 219:19 19:12 138:13 consumer 249:3   290:22 364:4 20:37 333:11 338:3 280:11   comparison 20:10 component 52:18 confident 18:19 341:4 342:1 <t< td=""><td></td><td>,</td><td></td><td></td><td></td></t<>		,			
compary 222:4 complex 38:4 85:5 423:20 407:9 410:4 418:6   comparability 88:11 94:21 concerts 55:7 consensus-develom. constructed 126:14   38:17 107:17 236:15 concert 312:5.17 371:7 3879 426:6 construct 68:7   99:6 290:6 286:14 concert 29:9 46:8 419:19   compare 32:7 compliant 289:10 240:14 273:13 259:13 262:21 construct 24:1   202:19 215:13 complicate 145:7 condition 315:6 consequences 39:9 51:9 8:17 217:4   267:6 289:20 complicated 145:7 conference 1:19 233:14 276:15 344:2 316:22 40:4 93:1.6 276:16 282:13,19   compared 128:8 90:19 conference 1:19 233:14 397:3 consumed 49:1   297:2 component 26:21 195:20 219:19 119:12 138:13 consumers 249:3   290:22 364:4 203:7 333:11 338:16 contat 88:19   295:5 component 26:21 confidence 135:9 324:15 331:6 contat 88:19   295:5 components 23:24 233:11 <td></td> <td></td> <td>,</td> <td></td> <td></td>			,		
comparability 88:11 94:21 concerts 55:7 consensus-develo constructed 126:14   38:17 107:17 236:15 concert 312:5,17 371:7 387:9 426:6 construction 116:9   comparable 32:6 276:8,8,12 286:12 concerte 29:9 46:8 419:19   compare 32:7 compliance 213:19 condition 231:2 212:21 230:12 consult 316:16   202:19 215:13 compliance 213:19 240:14 273:13 259:13 262:21 consult 316:16   267:6 289:20 complicated 145:7 conflition 315:6 consequences 39:9 5:19 8:17 217:4   364:13 412:5 276:15 344:2 316:22 40:4 93:1.6 276:16 282:13,19   compared 128:8 90:19 conflectnee 1:19 283:14 237:3   253:14 254:21,22 complorent 426:11 20:5 43:13 195:17 consult a16:16 consumers 249:3   209:22 component 32:61 249:16 170:9 268:1 288:6 265:15   290:22 36:44 203:7 333:11 338:3 280:11   comparison 200:10 comcett 90:1 confident 218:19 34:15 331:6 contatin 39:56					
38:17 107:17 236:15 concert 312:5,17 371:7 387:9 426:6 construction 116:9   comparable 32:6 276:8,8,12 286:14 concrete 29:9 46:8 419:19   comparable 32:7 compliant 289:10 concrete 29:9 46:8 419:19   202:19 215:13 compliant 289:10 240:14 273:13 259:12 250:12 construet 24:1   202:19 215:13 compliant 289:10 240:14 273:13 259:12 250:13 262:21 consultant 4:20 5:6   267:6 289:20 complication 90:8 conficions 315:6 consequences 39:9 51:19 8:17 217:4   364:13 412:5 276:15 344:2 316:22 40:4 93:1,6 276:16 282:13,19   compared 128:8 90:19 component 226:11 20:5 43:13 195:17 consultant 4:20 5:6   comparing 199:20 component 26:11 20:52 0 219:19 119:12 138:13 consumed 419:1   290:22 364:4 20:37 333:11 338:3 280:11 consumed 49:1   290:22 364:4 203:7 333:11 338:3 280:11 consumes 49:9   295:5 composites 325:8 confident 218:19 <		-			
comparable 32:6 276:8,8,12 286:12 conclude 383:19 consensus-driven constructs 68:7   99:6 290:6 286:14 concrete 29:9 46:8 419:19   compare 32:7 compliance 213:19 consequence construct 36:16   202:19 215:13 compliance 213:19 condition 231:2 212:21 230:12 consult 316:16   267:6 289:20 complicated 145:7 conditions 315:6 consequences 39:9 5:19 8:17 217:4   364:13 412:5 276:15 344:2 316:22 40:4 93:1,6 276:16 282:1,319   compared 128:8 90:19 conference 1:19 283:14 397:3   comparing 199:20 component 426:21 195:20 219:19 119:12 138:13 consumed 419:1   297:2 component 426:21 249:16 170:9 268:1 288:6 265:15   215:12 256:5,9 166:14 234:15 conflient 218:19 341:4 342:1 contagious 93:4   comparison 200:10 composits 325:8 conflient 118:10 349:19 360:8,10 contain 139:5,6   comparisons 34:15 130:21 146:3 confliet 111:10 12:5 360:16 contain 30:2,14					
99:6 290:6286:14concrete 29:946:8419:19compare 32:7complexity 259:758:20 395:4consetured 24:1construed 24:1202:19 215:13compliant 289:10240:14 273:13259:13 262:21consultant 4:20 5:6267:6 289:20complicated 145:7condition 315:6consequences 39:95:19 8:17 217:4364:13 412:5276:15 344:2316:2240:4 93:1,6276:16 282:13,19415:5,7complication 90:8Cone 320:15162:17 230:4consultant-genercompared 128:890:19conference 1:19283:14397:3253:14 254:21,22component 426:21195:20 219:19119:12 138:13consumed 419:1comparing 199:20component 126:11249:16170:9 268:12 88:6265:15200:22364:4203:7333:11 338:3280:11comparison 200:10composite 325:8conflicence 13:9349:19 360:8,10contain 139:5,6comparison 33:15130:21 146:3conflict 11:10 12:5360:16contain 39:5,6compass 132:2148:19 150:2012:9 14:19 18:13considerationcontain 139:5,6competencies325:10 330:3conflicts 12:3 17:3264:7203:21 304:18397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competencies325:10 330:3conflicts 12:3 17:3264:7203:21 304:18397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competing 35:17400:31 41:16:22conflicts 12:3 17			,		
compare 32:7 complexity 259:7 58:20 395:4 consequence consult 24:1   202:19 215:13 compliance 213:19 condition 231:2 212:12 230:12 consult 316:16   241:14 254:20 complianct 289:10 240:14 273:13 259:13 262:21 consult ant 4:20 5:6   267:6 289:20 276:15 344:2 316:22 40:4 93:1,6 276:16 282:13,19   364:13 412:5 276:15 344:2 316:22 40:4 93:1,6 276:16 282:13,19   415:5,7 complication 90:8 Cone 320:15 162:17 230:4 consummat 4:19:1   297:2 component 426:21 195:20 219:19 119:12 138:13 consumers 249:3   209:22 364:4 20:37.7 333:11 338:3 280:11   comparison 200:10 comcept 90:1 confidence 135:9 324:15 331:6 contact 88:19   295:5 concept 90:1 confilent 11:10 12:5 360:16 contain 139:5,6 contain 139:5,6   comparison 34:15 130:21 146:3 conflict 13:31 34:1:4 342:1 contain 402:4   comparison 33:11 301:2 316:7 conflict 193:11 232:3 288:14 <td><b>▲</b></td> <td></td> <td></td> <td></td> <td></td>	<b>▲</b>				
202:19 215:13 compliance 213:19 condition 231:2 212:21 230:12 consult 316:16   241:14 254:20 compliant 289:10 240:14 273:13 259:13 262:21 consult 316:16   267:6 289:20 complicated 145:7 conditions 315:6 consequences 39:9 5:19 8:17 217:4   364:13 412:5 276:15 344:2 316:22 40:4 93:1.6 276:16 282:13,19   compared 128:8 90:19 completation 90:8 Cone 320:15 162:17 230:4 205:13 125   component 266:11 component 426:21 195:20 219:19 19:12 138:13 consumed 419:1   297:2 component 326:11 249:16 170:9 268:1 288:6 265:15   comparison 200:10 composites 325:8 confidence 135:9 324:15 331:6 contagious 93:4   295:5 composites 325:8 confilent 218:19 341:4 342:1 contagious 93:4   compet 331:18 301:2 316:7 conflict 11:10 12:5 360:16 contait 39:5,6   compet 331:18 301:2 316:7 conflict 12:3 17:3 consideration context 23:21   compet 331:18 301:2 316:7 conflictid				46:8	
241:14 254:20 267:6 289:20complicated 145:7 complicated 145:7240:14 273:13 conditions 315:6259:13 262:21 consultant 4:20 5:6364:13 412:5276:15 344:2 276:15 344:2316:2240:4 93:1,65:19 8:17 217:4215:7complication 90:8 90:19Cone 320:15 conference 1:19 253:14 254:21,22Cone 320:15 component 426:21 195:20 219:19162:17 230:4 283:14397:3253:14 254:21,22 297:2component 426:21 component 426:21195:20 219:19 195:20 219:19119:12 138:13 283:14consumers 249:3 265:15200:22364:4203:7 203:7333:11 338:3 333:11 338:3280:11 contact 88:19 280:11295:5comcept 90:1 confies 153:10confilent 218:19 341:4 342:1360:6 contact 88:19 203:7295:5comcept 90:1 130:21 146:3conflict 11:10 12:5 conflict 11:10 12:5360:16 contact 88:10 contact 139:5,6 contact 139:5,6compatisons 34:15 compete 331:18 397:9316:12 316:7 30:12 316:7conflict 11:10 12:5 conflict 12:3 17:3 conflict 12:3 17:3264:7 203:21 304:18competency 77:13 competition 331:17400:3 401:13,14 400:3 401:13,1418:4 20:15 21:3 conflict 12:3 17:3 conflict 12:3 17:3 conflict 12:3 17:3264:7 203:21 304:18 205:6 389:10competition 331:17 competition 331:17concepts 5:4,18 6:4 concept 5:4,18 6:4 reacept 5:4,18 6:4confise 13:17 <b< td=""><td></td><td></td><td></td><td></td><td></td></b<>					
267:6 289:20 364:13 412:5complicated 145:7 276:15 344:2conditions 315:6 316:22consequences 39:9 40:4 93:1.65:19 8:17 217:4 276:16 282:13,19415:5,7 compared 128:8 290:1990:19 90:19conference 1:19 20:5 43:13 195:17162:17 230:4 283:14276:16 282:13,19253:14 254:21,22 comport 128:8 297:2component 426:21 component 426:21195:20 219:19119:12 138:13 170:9 268:1 288:6397:3 200:2comparing 199:20 290:22components 126:11 components 246:31249:16170:9 268:1 288:6 203:7265:15concept 90:1 comparison 200:10 295:5confident 218:19 confident 218:19341:4 342:1 341:4 342:1contagious 93:4 confident 218:19comparison 34:15 competined 383:16 competined 383:16 262:3 294:2023:3 86:12 23:3 86:12336:16contact x2:21 consider ationcompetencies 397:9325:10 330:3 35:1,10,12 379:9conflicts 12:3 17:3 conflicts 12:3 17:3264:7 203:21 304:18203:23 288:14 341:2 36:5competing 35:17 competing 35:17 210:10400:3 401:13,14 400:3 401:13,1418:4 20:15 21:3 20:15 21:3 279:7considerations 23:23 288:14307:7 367:6,6 305:14,15competition 331:17 rcompetitor 172:20 rcompetitor 172:2091:14 92:7134:3 7:8 26:18 27:9confusing 75:2 279:7339:20 407:7 consider 335:15 consider 335:15 consider 335:15 consider 335:15context 388:10 consider 335:14 33:15 388:31,210rcompetitor 172:20 rcompetitor 172:2091:14 92:7134:3 7:8 26:18 27:9congestion 219:5 279:7339:20 407:7 		<b>–</b>			
364:13 412:5276:15 344:2316:2240:4 93:1,6276:16 282:13,19415:5,7complication 90:8Cone 320:15162:17 230:4consultant-gener253:14 254:21,22comply 148:1420:5 43:13 195:17162:17 230:4consultant-gener297:2component 426:21195:20 219:19119:12 138:13consumed 419:1297:2component 126:11249:16170:9 268:1 288:6265:15215:12 256:5,9166:14 234:15confidence 135:9324:15 331:6265:15290:22364:4203:7333:11 338:3280:11comparison 200:10composites 325:8confident 218:19331:14 342:1contagious 93:4295:5concept 90:1confident 218:19341:4 342:1contagious 93:4compasi 132:2148:19 150:2012:9 14:19 18:13360:16contaxi 402:4competencies325:10 330:3conflict 11:10 12:5360:16context 23:21competencies325:10 330:3conflicting 429:17considerations185:18 191:4,11397:9335:1,10,12 379:9conflicting 429:17considerations185:18 191:4,11397:9335:1,10,12 379:9confusing 75:2339:20 407:7contexts 388:10competition 331:17concept 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitor 172:2091:14 92:7 134:3confusing 75:2339:20 407:7contexts 388:10competitor 172:2091:14 92:7 134:3confusing 75:2339:20 407:7contexts 388:10competitor 118:3 <td></td> <td></td> <td></td> <td></td> <td></td>					
415:5,7complication 90:8Cone 320:15162:17 230:4consultant-gener253:14 254:21,2290:19comply 148:1420:5 43:13 195:17consider 6:11397:3297:2component 426:21195:20 219:19119:12 138:13consumers 249:3comparing 199:20components 126:11249:16170:9 268:1 288:6265:15290:22364:4203:7333:11 338:3280:11comparison 200:10composites 325:8confidence 135:9324:15 331:6contact 88:19295:5concept 90:1confines 153:10349:19 360:8,10contain 139:5,6compasis 132:2148:19 150:2012:9 14:19 18:13360:16contain 402:4compete 331:18301:2 316:7conflict d 393:1346:3 361:5164:21 172:7competencies325:10 330:3conflict 12:3 17:3264:7203:21 304:18sompetency 77:13400:3 401:13,1418:4 20:15 21:3considered 244:13307:7 367:6,6competition 331:17concept 5:4,18 6:4confused 113:8315:7 319:14404:19 408:2competitor 172:2060:19 61:2 84:16279:7considering 65:1context a88:10competitor 172:2091:14 92:7 134:3confused 129:5326:12 341:10315:14competitor 172:2091:14 92:7 134:3confused 129:5326:12 341:10315:14competitor 172:2091:14 92:7 134:3considers 335:15context a88:10competitor 172:2091:14 92:7 134:3considers 335:15context a89:9competitor 118:31164:2					
compared 128:8 253:14 254:21,22 297:290:19 comply 148:14 component 426:21 297:2conference 1:19 20:5 43:13 195:17 195:20 219:19283:14 consider 6:11 119:12 138:13 205:20 219:19397:3 consider 419:1 consumers 249:3 265:15comparing 199:20 290:22components 126:11 166:14 234:15 290:22166:14 234:15 364:420:5 43:13 195:17 203:7consider 6:11 195:20 219:19119:12 138:13 170:9 268:1 288:6 203:7265:15 contact 88:19 280:11comparison 200:10 295:5composites 325:8 concept 90:1 confices 153:10confident 218:19 341:4 342:1 confiaes 153:10341:4 342:1 349:19 360:8,10 contatin 139:5,6 contatin 139:5,6compatisons 34:15 competing 383:16 262:3 294:20 23:3 86:1212:9 14:19 18:13 23:3 86:12consideration 23:3 86:12context 23:21 23:2 23:3 288:14competeng 31:18 397:9301:2 316:7 325:10 330:3 397:9conflicts 12:3 17:3 351:1,10,12 379:9conflicts 12:3 17:3 conflicts 12:3 17:3264:7 20:321 305:14,15competing 35:17 210:10400:3 401:13,14 410:1418:4 20:15 21:3 confused 113:8315:7 319:14 307:7 367:6,6competitor 331:17 competitor 331:17 competitor 17:20 competitor 17:20 40:19 40:22279:7 279:7considering 65:1 26:12 341:10 315:14315:14 315:14competitors 118:3 164:22 186:7 competitors 118:3164:22 186:7 13:21 114:16 33:15 388:3,12,19context a38:10 20:21 241:10 315:14context a38:10 20:21 241:10 315:14competitors 118:3 164:22 186:7 competitors 118:360:19 61:2 84:16 164:22 186:7 <td></td> <td></td> <td></td> <td>,</td> <td>-</td>				,	-
253:14 254:21,22 297:2comply 148:14 component 426:2120:5 43:13 195:17 195:20 219:19consider 6:11 119:12 138:13consumed 419:1 consumers 249:3207:2components 126:11 215:12 256:5,9166:14 234:15 364:420:7324:15 331:6 203:7265:15209:22364:420:7333:11 338:3 280:11280:11comparison 200:10 295:5comcept 90:1 concept 90:1confident 218:19 confilet 11:10 12:5341:4 342:1 360:810contagious 93:4 contagious 93:4compass 132:2148:19 150:20 20:3212:9 14:19 18:13 20:32consideration conflict 11:10 12:5context 23:21 considerationcompeting 383:16 397:9262:3 294:20 355:11,0,12 379:923:3 86:12 conflicts 12:3 17:3232:3 288:14 20:32113:20 118:11 considerationcompetences 397:9335:1,10,12 379:9 355:17conflicts 12:3 17:3 400:3 401:13,14 410:14conflicts 12:3 17:3 conflicts 12:3 17:3264:7 20:32 305:14,1520:32 305:14,15 369:6 389:10competitor 331:17 competitor 331:17concepts 5:4,18 6:4 concepts 5:4,18 6:4 confusing 75:2considering 65:1 326:12 341:10 315:14307:7 367:6,6 context 338:10 consider 335:15competitors 118:3 r78 26:18 27:9 competitors 118:3164:22 186:7 r13:20 12:8:16consider 335:15 r39:14context 338:10 radiers 335:15consider 11:10 r2:2291:14 92:7 134:33 r39:14context 338:10 radiers 335:15context 338:10 radiers 335:15competitors 118:3 r17:218 348:18341:2 363:17 r13:21 114:16 r13:21 114:16con	-	-			
297:2component 426:21195:20 219:19119:12 138:13consumers 249:3comparing 199:20components 126:11249:16170:9 268:1 288:6265:15215:12 256:5,9166:14 234:15203:7333:11 338:3280:11comparison 200:10composites 325:8confidence 135:9333:11 338:3280:11comparison 30:10composites 325:8confilent 218:19341:4 342:1contagious 93:4comparison 34:15130:21 146:3conflict 11:10 12:5360:16contain 139:5,6compasis 132:2148:19 150:2012:9 14:19 18:13considerationcontains 402:4competing 383:16262:3 294:2023:3 86:12232:3 288:14113:20 118:11competercise325:10 330:3conflicted 393:1346:3 361:5164:21 172:7competing 35:17400:3 401:13,1418:4 20:15 21:3264:7203:21 304:18competing 35:17400:3 1406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competitor 172:2060:19 61:2 84:16congestion 219:5considering 65:1context 338:10competitors 118:3164:22 186:7congestion 219:5326:12 341:10315:14172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,19315:14context 113:20113:21 114:1633:15 388:3,12,1935:14competitors 118:3164:22 186:7congestion 219:5389:9 390:16continue 120:12	-				
comparing 199:20 215:12 256:5,9 290:22components 126:11 166:14 234:15 364:4249:16 confidence 135:9 203:7170:9 268:1 288:6 324:15 331:6 324:15 331:6 333:11 338:3265:15 contact 88:19 280:11comparison 200:10 295:5composites 325:8 concept 90:1confident 218:19 confines 153:10341:4 342:1 349:19 360:8,10contagious 93:4 contain 139:5,6comparisons 34:15 comparisons 34:15130:21 146:3 concept 90:1conflict 11:10 12:5 conflict 11:10 12:5360:16 considerationcontain 139:5,6 contains 402:4competing 383:16 compete 331:18 competencies262:3 294:20 325:10 330:323:3 86:12 conflicts 12:3 17:3232:3 288:14 conflicts 12:3 17:3113:20 118:11 considerations397:9 210:10335:1,10,12 379:9 400:3 401:13,14conflicts 12:3 17:3 184:4 20:15 21:3considered 244:13 conflicts 12:3 17:3307:7 367:6,6 considered 244:13competitor 31:17 competitor 172:20 formpetitor 172:20concept 5:4,18 6:4 91:14 927:7 134:3confusing 75:2 congestion 219:5 279:7 considering 65:1 326:12 341:10305:13 41:2 considering 65:1 326:12 341:10315:14 continental 13:16 considers 335:15competitors 118:3 172:12 348:18 compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12					
215:12256:5.9166:14234:15confidence 135:9324:15331:6contact 88:19290:22364:4203:7333:11338:3280:11comparison 200:10composites 325:8confident 218:19341:4342:1contagious 93:4295:5concept 90:1confines 153:10349:19360:8,10contain 139:5,6compass 132:2148:19150:2012:914:1918:13considerationcontext 23:21competing 383:16262:3294:2023:386:12232:3288:14113:20118:11compete 331:18301:2316:7conflict 1939:1346:3361:5164:21172:7competencies325:10330:3conflicts 12:317:3264:7203:21304:18397:9335:1,10,12379:9confised 113:8considered 244:13307:7367:6,6competing 35:17400:3401:13,1418:420:1521:1424:12302:3305:14,15369:6389:10210:10410:14confusing 75:2339:20407:7context 23:81:0context 388:10context 388:10competitor 172:2060:1961:284:19279:7considering 65:1context 335:15continental 13:16competitors 118:3164:22186:7congestion 219:5considers 335:15continental 13:16continental 13:16competitors 118:3164:22186:17113:21114:1633:15389:9390:16continental 13:					
290:22364:4203:7333:11 338:3280:11comparison 200:10composites 325:8confident 218:19341:4 342:1contagious 93:4295:5concept 90:1confines 153:10349:19 360:8,10contain 139:5,6comparisons 34:15130:21 146:3conflict 11:10 12:5360:16contain 402:4competing 383:16262:3 294:2023:3 86:12232:3 288:14113:20 118:11compete 331:18301:2 316:7conflicted 393:1346:3 361:5164:21 172:7competencies325:10 330:3conflicting 429:17considerations185:18 191:4,11397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competing 35:17400:3 401:13,1418:4 20:15 21:3considered 244:13307:7 367:6,6competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitior 172:2091:14 92:7 134:3congestion 219:5326:12 341:10315:14competitors 118:3164:22 186:7conguestion 219:5326:12 341:10315:14competitors 118:3164:22 186:7connect 81:2,3considered 33:1431:15 388:3,12,1957:16competitors 118:3164:22 186:7connect 81:2,3consistency 33:14contingency 57:14competite 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12					
comparison 200:10 295:5composites 325:8 concept 90:1confident 218:19 confines 153:10341:4 342:1 349:19 360:8,10contagious 93:4 contain 139:5,6comparisons 34:15130:21 146:3conflict 11:10 12:5360:16contains 402:4compass 132:2148:19 150:2012:9 14:19 18:13considerationcontext 23:21compelling 383:16262:3 294:2023:3 86:12232:3 288:14113:20 118:11compete 331:18301:2 316:7conflict a93:1346:3 361:5164:21 172:7competencies325:10 330:3conflicts 12:3 17:3264:7203:21 304:18397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competing 35:17400:3 401:13,1418:4 20:15 21:3considered 244:13307:7 367:6,6competing 35:17403:11 406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitive 145:137:8 26:18 27:9279:7considering 65:1context a113:16competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10315:14172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12					
295:5concept 90:1confines 153:10349:19 360:8,10contain 139:5,6comparisons 34:15130:21 146:3130:21 146:3360:16contains 402:4compass 132:2148:19 150:2022:3 294:2023:3 86:1223:3 288:14113:20 118:11compet 331:18301:2 316:7conflicted 393:123:5:10 330:325:10 330:3264:7203:21 304:18competency 77:13400:3 401:13,1418:4 20:15 21:3264:7203:21 304:18203:21 304:18competing 35:17403:11 406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7context s388:10competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10315:14Continental 13:16competitors 118:3164:22 186:7connect 81:2,332:15 388:3,12,19315:14Continental 13:16competitors 118:3164:22 186:7204:14 250:5389:9 390:16continental 120:12					
comparisons 34:15130:21 146:3conflict 11:10 12:5360:16contains 402:4compass 132:2148:19 150:2012:9 14:19 18:13232:3 288:14113:20 118:11compeling 383:16262:3 294:2023:3 86:12232:3 288:14113:20 118:11compete 331:18301:2 316:7conflicted 393:1346:3 361:5164:21 172:7competencies325:10 330:3conflicting 429:17considerations185:18 191:4,11397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competing 35:17400:3 401:13,1418:4 20:15 21:3264:7203:21 304:18competing 35:17403:11 406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10315:14172:2291:14 92:7 134:3conjunction 48:9considered 335:15Continental 13:16competitors 118:3164:22 186:7connect 81:2,333:15 388:3,12,1957:16172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12	-	-			0
compass 132:2148:19 150:2012:9 14:19 18:13considerationcontext 23:21compelling 383:16262:3 294:2023:3 86:12232:3 288:14113:20 118:11compete 331:18301:2 316:7conflicted 393:1346:3 361:5164:21 172:7competencies325:10 330:3conflicting 429:17considerations185:18 191:4,11397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competency 77:13400:3 401:13,1418:4 20:15 21:3202:3 305:14,15307:7 367:6,6competing 35:17403:11 406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10315:14172:2291:14 92:7 134:3conjunction 48:9consistency 33:14315:14competitors 118:3164:22 186:7connect 81:2,3consistency 33:14315:14172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12		-		· · · · · · · · · · · · · · · · · · ·	
compelling 383:16262:3 294:2023:3 86:12232:3 288:14113:20 118:11competencies325:10 330:3conflicted 393:1346:3 361:5164:21 172:7397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competency 77:13400:3 401:13,1418:4 20:15 21:3264:7203:21 304:18competing 35:17403:11 406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competitor 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7considering 65:1competitor 172:2060:19 61:2 84:16conjunction 48:9considers 335:15Continental 13:16competitors 118:3164:22 186:7connect 81:2,3consistency 33:14Continental 13:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12	-				
compete 331:18301:2 316:7conflicted 393:1346:3 361:5164:21 172:7competencies325:10 330:3conflicting 429:17considerations185:18 191:4,11397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competing 35:17400:3 401:13,1418:4 20:15 21:3202:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10315:14172:2291:14 92:7 134:3113:21 114:1633:15 388:3,12,1931:15 388:3,12,19rompetitors 118:3164:22 186:7connect 81:2,3considered 33:14Contingency 57:14rompile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12					
competencies 397:9325:10 330:3 335:1,10,12 379:9conflicting 429:17 conflicts 12:3 17:3considerations 264:7185:18 191:4,11 203:21 304:18competency 77:13 210:10400:3 401:13,14 403:11 406:2218:4 20:15 21:3 21:14 24:2264:7 302:3 305:14,15203:21 304:18 307:7 367:6,6210:10410:14confused 113:8 conpetitor 331:17 competitor 172:20315:7 319:14 60:19 61:2 84:16 91:14 92:7 134:3315:7 319:14 279:7309:20 407:7 339:20 407:7contexts 388:10 considering 65:1 315:14competitors 118:3 172:18 348:18164:22 186:7 371:11,13 374:10connect 81:2,3 204:14 250:5consistency 33:14 389:9 390:16Continue 120:12					
397:9335:1,10,12 379:9conflicts 12:3 17:3264:7203:21 304:18competency 77:13400:3 401:13,1418:4 20:15 21:3considered 244:13307:7 367:6,6competing 35:17403:11 406:2221:14 24:2302:3 305:14,15369:6 389:10210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitor 172:2060:19 61:2 84:16279:7congestion 219:5326:12 341:10315:14172:2291:14 92:7 134:3conjunction 48:9consideres 335:15Continental 13:16competitors 118:3164:22 186:7113:21 114:1633:15 388:3,12,1957:16172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12	-				
competency 77:13 competing 35:17 210:10400:3 401:13,14 403:11 406:22 410:1418:4 20:15 21:3 21:14 24:2 confused 113:8 confused 113:8considered 244:13 302:3 305:14,15 315:7 319:14307:7 367:6,6 369:6 389:10competition 331:17 competitive 145:13 rompetitor 172:20410:14 410:14confused 113:8 confused 113:8 confusing 75:2 279:7339:20 407:7 congestion 219:5 326:12 341:10contexts 388:10 contexts 388:10competitor 172:20 172:2260:19 61:2 84:16 91:14 92:7 134:3 164:22 186:7congestion 219:5 connect 81:2,3 113:21 114:16326:12 341:10 soliders 335:15continental 13:16 considers 335:15compile 187:20371:11,13 374:10204:14 250:5389:9 390:1657:16 continue 120:12	-		0		
competing 35:17 210:10403:11 406:22 410:1421:14 24:2 confused 113:8302:3 305:14,15 315:7 319:14369:6 389:10 404:19 408:2competition 331:17 competitive 145:13 172:22concepts 5:4,18 6:4 7:8 26:18 27:9confusing 75:2 279:7302:3 305:14,15 315:7 319:14369:6 389:10 404:19 408:2competitive 145:13 172:22concepts 5:4,18 6:4 91:14 92:7 134:3confusing 75:2 279:7302:3 305:14,15 315:7 319:14369:6 389:10 404:19 408:2competitor 172:20 172:2260:19 61:2 84:16 91:14 92:7 134:3congestion 219:5 conjunction 48:9 conjunction 48:9326:12 341:10 considers 335:15contextually 315:14competitors 118:3 172:18 348:18164:22 186:7 341:2 363:17connect 81:2,3 113:21 114:1633:15 388:3,12,19 389:9 390:16S7:16 continue 120:12					
210:10410:14confused 113:8315:7 319:14404:19 408:2competition 331:17concepts 5:4,18 6:4confusing 75:2339:20 407:7contexts 388:10competitive 145:137:8 26:18 27:9279:7considering 65:1315:7 319:14404:19 408:2competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10contextually172:2291:14 92:7 134:3connect 81:2,3326:12 341:10315:14competitors 118:3164:22 186:7connect 81:2,3consistency 33:14Continental 13:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:1657:16		,			
competition 331:17 competitive 145:13 competitor 172:20concepts 5:4,18 6:4 7:8 26:18 27:9confusing 75:2 279:7339:20 407:7 considering 65:1 326:12 341:10contexts 388:10 considering 65:1172:22 competitors 118:3 172:18 348:1860:19 61:2 84:16 91:14 92:7 134:3congestion 219:5 conjunction 48:9 connect 81:2,3339:20 407:7 considering 65:1contexts 388:10 considering 65:1172:22 172:18 348:1891:14 92:7 134:3 164:22 186:7congestion 219:5 connect 81:2,3326:12 341:10 considers 335:15Continental 13:16 consistency 33:14172:18 348:18 compile 187:20341:2 363:17 371:11,13 374:10113:21 114:16 204:14 250:5339:9 390:1657:16 continue 120:12					
competitive 145:13 competitor 172:207:8 26:18 27:9 60:19 61:2 84:16 91:14 92:7 134:3279:7 congestion 219:5 conjunction 48:9 considering 65:1contextually 315:14172:22 competitors 118:3 172:18 348:18164:22 186:7 341:2 363:17connect 81:2,3 113:21 114:16considering 65:1 326:12 341:10contextually 315:14172:18 348:18 compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12					
competitor 172:2060:19 61:2 84:16congestion 219:5326:12 341:10315:14172:2291:14 92:7 134:3conjunction 48:9considers 335:15Continental 13:16competitors 118:3164:22 186:7connect 81:2,333:15 388:3,12,1957:16172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12		-	8		
172:2291:14 92:7 134:3conjunction 48:9considers 335:15Continental 13:16competitors 118:3164:22 186:7connect 81:2,3consistency 33:14contingency 57:14172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12				0	e
competitors 118:3164:22 186:7connect 81:2,3consistency 33:14contingency 57:14172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12			U		
172:18 348:18341:2 363:17113:21 114:1633:15 388:3,12,1957:16compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12			ů.		
compile 187:20371:11,13 374:10204:14 250:5389:9 390:16continue 120:12	-		,	•	<u> </u>
complained 38:5 420:11 connected 420:15 391:4,5 122:14 143:9	-				
	complained 38:5	420:11	connected 420:15	391:4,5	122:14 143:9

				2
186:11,21 187:4	266:21 331:19	<b>counties</b> 419:20	137:5 138:6,12,18	302:6 303:4,20
199:14 331:18	356:20 357:4	counting 47:22	139:2,20 142:19	305:16 306:4
379:19 401:5	410:12 421:6	48:1	143:4 145:18	307:12 308:14
<b>Continued</b> 5:2 6:2	425:8	<b>country</b> 16:8 63:20	147:11,13 149:22	309:3 310:14
6:4 7:2	cooperating 369:3	89:19 161:1 242:3	151:11 153:7	313:7,16 314:20
continuity 76:19	cooperation 332:5	275:3 287:18	155:6 157:1	315:10,22 316:8
77:1 109:9 304:12	351:22	county 17:9 69:9	158:14 160:17	317:4 318:2,21
397:1	cooperative-type	89:14 152:19	161:13,14 162:11	319:16 320:10,21
continuous 56:12	333:5	416:2,10 418:7	163:1 164:6 165:1	322:8,17,19
continuously 58:22	coopetition 332:5	couple 18:20 31:8	169:15 170:4	325:12 326:5
<b>continuum</b> 203:22	348:6 370:19	61:18 74:6 78:9	172:4 173:10	327:20 329:7
204:5 280:12	coordinate 72:1,4	84:11 101:5	177:4,9,12 178:22	330:12 332:16
308:12 315:15	211:5,20	107:16 119:20	181:16 184:1	334:8 335:6
344:18	coordinating 13:6	122:14,17 128:13	187:6,10 188:5,17	336:18 338:1,18
<b>contract</b> 13:5 29:17	90:16 210:21	128:21 150:11	189:20 198:20	339:4,7,8,10,14
182:15 183:12	coordination	169:17 171:6	199:14 200:16	339:21 340:2,17
276:5	144:12 150:17	219:19 226:11	203:10 204:9	342:20 344:15
contrary 85:11	170:18,22 210:17	237:18 241:1	205:12 206:3,7,12	345:6 346:6
contribute 106:14	311:9 344:19	249:6,11 256:17	208:21 209:11	347:15 350:3,12
330:13	345:14 393:15	308:21 318:8	210:14 212:1,15	351:3 352:5 353:6
contributing	coordination-of	323:2 351:6	214:11 215:17	353:22 354:7
257:17	170:20	354:11 358:1	216:14 217:21	356:17 358:11
contribution 17:18	Coordinator	382:18 403:22	218:13 220:9	359:1,13 360:11
contributions	175:15	425:19	221:2 222:7,13,19	361:7 362:12
328:19	core 45:12,21 48:20	<b>coupled</b> 312:15	225:15 226:22	363:21 366:1,17
<b>control</b> 140:5	127:10,14	<b>course</b> 61:16	228:4 230:1	366:22 367:18
185:10 248:14	cornerstone 33:11	211:22 252:7	231:17 233:6,10	368:14 370:3
252:3 282:17	corollaries 78:15	316:19 324:11	233:21 237:1	377:4 378:3
386:5 <b>controversial</b> 225:4	corporations 125:4 Correct 339:21	343:11	239:1,15 240:17 243:1 244:10	379:21 382:15
controversial 225:4 convened 224:9	correct 339:21 correlate 291:12	<b>cover</b> 66:16 70:20 70:22 71:2	243:1 244:10 245:4,11 246:7,12	383:7 384:7
conventional 57:13	<b>correlate</b> 291:12 <b>cost</b> 156:22 236:2		245:4,11 246:7,12 246:17 247:4,12	386:19 392:7 394:7 395:1
168:12	240:14 281:1	<b>coverage</b> 69:8 136:6	240:17 247:4,12 249:9 251:18	394:7 395:1 396:13 398:3
conversation 73:3	293:11 347:12	covered 68:17	252:18 255:17	399:6 401:2 406:9
76:7 152:15 153:3	costly 155:20	70:13	252.18 253.17 258:18 260:11	407:1 408:8 410:8
168:16 202:10	<b>costs</b> 430:18	<b>covering</b> 66:10	263:1,8 264:13	407.1408.8410.8
257:12 344:19	cost-effective	<b>Co-Chair</b> 2:3,4 4:9	265:11 267:17	417:14 421:1
355:17 357:8	279:19	4:11 8:21 9:15	272:8 273:4 274:7	422:6,20 424:11
364:2 416:20,21	couch 44:22	13:1,13 58:15,19	275:11 277:22	425:13,16 427:3
427:19	couching 131:5,5	68:10 71:10 74:19	278:20 279:3,9	427:22 428:8
conversations 81:9	<b>Counsel</b> 4:14 10:7	78:7 80:1 81:19	281:14 284:16	431:5
87:5 415:14	count 47:18 382:1	84:10,22 86:18	285:6 286:6,18	<b>Co-Chairs</b> 1:22
417:17 420:11	counter 88:14	107:12 113:15	288:1 289:7 290:9	8:11,19 27:20
conversions 98:7	counterfactual	115:14 119:14	291:9 292:19	433:9
<b>cool</b> 142:20,21	185:9 386:4	122:5,9,13 124:14	293:21 294:17	<b>co-PI</b> 15:9
424:2,5	counterproductive	126:15 127:19	296:17 297:10	cranny 210:4
cooperate 145:14	251:21	129:17 131:14	298:22 300:2	crash 134:6 149:15
1	1	ı 1		•

	I	I	I	
crashed 353:16	359:17	387:21 393:4	81:3 120:11	412:11,15 427:5
<b>crawl</b> 62:12	critical-care 73:7	394:19,21 408:16	122:11,19,21	427:12,13,16,18
crazy 217:1 256:10	cross 108:8 424:7	crowding-specific	123:15 124:1,9	427:20
create 16:14 21:18	crosswalk 279:16	197:19	125:12 147:15	database 212:16,22
79:10 170:13	crowded 31:14	crowding/boardi	148:16 149:13	213:1 394:6
219:17 244:2	192:8 250:6	143:11	160:21 161:11	datasets 244:17
247:22 256:18	270:17 299:8	crutches 56:21	162:13,20 308:5	293:8
271:15 309:18	333:19 335:16	crystal-clear 421:8	309:14 314:3,4	data/evidence
337:5 357:3 376:9	353:9 380:20	<b>CT</b> 285:7,9,11,18	323:13 349:20	378:16
created 269:1	crowding 5:13,17	293:15 358:4	363:3 384:12	date 221:19
272:9 384:1	5:23 6:3,12,22	CTAS 241:22	Dark 115:21	Dave 25:15 43:20
creates 83:12	9:11 14:1,16,22	242:2 260:4,7	Dartmouth 416:17	74:22 90:4 93:18
creating 141:20	19:3 22:1 23:5	290:15	417:13	97:19 99:1 104:1
266:20	26:18 27:10 28:9	<b>culture</b> 85:20 86:13	dashboard 269:17	154:13 178:2
creation 142:16	28:18,21 29:5	cumulative 381:2	<b>data</b> 5:23 34:17	377:13 433:13
creatively 141:21	30:3 43:17 67:19	curious 330:22	35:10 37:7,8,9	Dave's 88:19
creativity 125:14	67:22 68:1,5,7	332:3,8	38:15,18,19 41:1	David 2:9,11 5:8
<b>credit</b> 422:1	80:15 81:16 114:1	current 22:9,13	41:6,13 66:18	21:8 75:6 145:21
crisis 57:12,14,19	114:2,17 120:11	106:10 186:3	108:14 109:15,17	163:1 165:1
154:21 392:10,21	128:15 132:12	190:8 191:1 224:4	110:3,19 111:5	320:15 362:17
397:1	135:21 147:15	224:6 225:18	121:12 124:18	Davids 163:2
criteria 27:3 32:18	151:16 154:19	241:14 242:14	154:2 166:16,19	day 12:18 16:6
33:2 91:19 122:3	159:10,21 160:2	255:9,13 266:14	166:22 167:3,8,12	18:16 20:2 21:9
197:17 231:18	163:15 164:13	368:8 372:14	167:13 182:8,8,10	22:9 34:9 35:9
235:18 242:1	165:15 167:20,21	376:4 379:11,18	196:20 199:9,11	51:12 53:16 61:17
243:15 337:9	184:21 185:16,17	387:19 426:14,19	199:12,20 200:4,5	114:2 117:19
339:5 352:7,20	185:20 186:1,13	currently 13:2 14:9	200:11,20 203:8	127:2 128:12
353:3,5 354:4	186:15 190:5	18:9 20:12 24:3	207:8 213:11	129:8 130:14
370:22 371:10,19	191:15,19 192:2	53:11 77:17	214:17 220:12	132:20 151:19
372:15 373:2,15	193:1 196:21	235:16 302:20	231:12 240:22	154:16 157:20,21
373:19 374:7	204:12 205:14,19	343:8 370:13	241:4,13,16,20,21	168:6,7 181:4
377:7 378:13,14	205:20 206:9,10	374:3 376:7,18	242:15,16 243:8	186:22 232:15
385:7,17 387:20	206:11 218:4	413:9	243:19 247:16	278:19 299:14,17
390:16	234:15 236:17	<b>curve</b> 231:3	248:1 249:4 256:2	310:4 317:14
criterion 33:9	266:22 268:3	<b>cut</b> 80:6 318:7	256:13 258:11	336:9 350:15
339:5	272:1 301:1 303:3	414:7	265:8,16 266:16	370:7 395:18
<b>critical</b> 98:1,1	306:13,15,21	cutoff 269:21	267:3 270:8	432:2
99:14 101:15	307:6 309:14	cuts 355:1	274:14,15 291:14	days 53:13 128:2,4
106:4 127:16	313:5,13 314:10	<b>CV</b> 10:20	298:14 302:17	128:8,8 132:16
144:13 172:14	316:12 322:1	cycle 50:15 91:11	316:5 347:19	133:4,9,16,19
207:12 247:7	327:12 333:7	cycles 24:4	355:21 374:17,18	314:21 316:18
418:10 419:4,8,13	335:3 347:7 351:9	cynical 180:9	374:22 376:5,14	335:22 352:8
423:4	354:14 355:19	C-O-N-T-E-N-T-S	377:9 378:10	385:2 395:7
critically 158:3	360:15 362:22	4:2 5:2 6:2 7:2	379:22 381:7	day-to 129:7
critically-import	364:9 366:7,18		382:17 384:4	day-to-day 115:12
422:22	370:15 372:16	D	385:19 407:13	117:5 118:1
critical-access	383:14 384:4	daily 5:13 63:4	410:5,22 411:2,18	127:22 131:11
			, , , -	
	1	1	1	1

٦

107 01 140 1 0	1 (2 1 ( 2 (2 1 1		001 10 005 14	
137:21 148:1,2	163:16 263:11	deliverables 59:21	291:19 295:14	designation 341:18
154:18,19 162:5	<b>deep</b> 32:18 105:16	delivery 51:20	300:11 301:21	341:19
163:8 174:20	119:4 403:19	57:13 63:5 85:13	306:17 310:13	<b>desk</b> 41:16
<b>DC</b> 112:11	<b>deeper</b> 213:1	89:9 90:6,11	315:13 326:16	detail 37:3 95:22
<b>dead</b> 158:4	412:14	146:19 168:12	329:18 347:8	360:17
<b>deal</b> 80:21 100:14	<b>define</b> 6:5 48:21	369:20	350:16 357:13,17	detailed 232:21
116:11 140:1,4,9	50:18 69:9 147:22	<b>delta</b> 208:16	367:7 380:19	detail-specific
180:1,4 203:12	220:15 250:21	<b>deluge</b> 62:12	426:15	106:21
235:5 249:19,20	333:15 413:13	demand 114:6,22	departments 30:15	determines 234:3
329:3 390:15	414:16 417:3,8	383:19	39:15 97:1 98:16	determining
dealing 180:14	422:11 423:4	Deming 172:8	105:12 114:19	150:21 202:20
<b>deals</b> 103:1	424:3	demonstrate 330:7	171:16 266:12	develop 29:22 64:3
dealt 22:1 294:3	<b>defined</b> 48:17 49:1	379:8 400:1 406:7	269:1 271:16,19	76:3 84:17 85:4
<b>death</b> 398:10	59:9,13 70:6	407:11 408:19	272:15 328:12,13	103:4 105:11
<b>debate</b> 280:11	152:7 177:21	409:3,5 410:6,10	342:3 367:4,9	106:1 110:2
debrief 116:1	213:20 222:8	demonstrated	departure 9:18	166:17 191:16
118:14	328:9 401:10,20	375:8 379:18	194:4,7 201:19	197:8 240:3
decade 96:5	413:21 430:21	demonstrates	207:15 208:13	312:20 324:2
<b>decide</b> 209:10	defining 59:8 60:8	135:22 309:19	213:5	331:6 357:2
223:3 237:19	60:11 220:21	demonstrating	depend 231:15	391:20 397:9,13
352:9	definitely 23:4	410:11	dependent 64:7	428:12 429:8
<b>decided</b> 130:18	141:12 142:7	demonstration	292:1	432:4
213:12	163:18 171:21	409:2 410:7	depending 71:5	developed 77:10,11
<b>decision</b> 175:9,11	262:14 396:10	denominator	126:13 229:13	85:12 92:14
193:22 194:7	definition 59:14	402:20	245:14 286:22	103:17 160:15
201:18,22 202:7	99:14 194:14,19	denominators 64:4	298:9 327:14	188:10 200:6,7
202:14,21 203:14	225:9 238:2 402:3	<b>Denver</b> 13:17	424:8	241:19 255:14
204:2 206:17	414:12 420:18,20	depart 208:18	depends 236:10,13	394:14 408:15
207:13 208:8	definitional 251:17	department 2:15	411:5 427:9	410:21 430:16
209:4 211:3,9,10	definitions 14:4	9:5 13:4 14:2,22	deployed 304:20	431:1
212:8 218:20	100:13 224:13	21:21 24:11 25:16	<b>depth</b> 57:17	developer 200:14
220:1 224:16	225:8,22 226:21	35:22 71:20 72:11	<b>Deputy</b> 24:12	284:5 375:18
225:10,13,19	227:9,11 355:13	73:22 74:18 88:4	42:12	376:14 390:17
228:14 235:11	definitive 31:11	88:21 114:22	derived 200:11	409:3 428:16
250:21 259:17	<b>degree</b> 160:9	127:8 130:6,8	<b>describe</b> 34:5 49:15	developers 5:22 6:5
269:1,6 272:17	236:12 260:16	133:5,13 136:17	50:1 294:22	6:10 28:17 29:10
273:9 275:16,20	261:1,13 271:17	157:16 158:8	302:14 376:3	29:14,21 44:7
352:13 357:12,14	296:11 373:16	162:7,22 170:17	described 125:7	108:12 120:15
decisionmaking	428:5	179:20 180:3	253:2	164:11,20 165:5
392:17	<b>delay</b> 85:16 215:8	192:3,11 205:11	describing 49:16	166:19 172:11
<b>decisions</b> 86:12	253:1	209:21 210:19	49:17 52:1 61:5	191:4,17 194:11
214:6 225:20	<b>delays</b> 136:4 314:5	230:5 236:20	69:13,14,18	196:19 197:3
<b>declare</b> 82:8,10,11	delighted 9:18	241:8 242:7	130:11	199:1 200:2
<b>declaring</b> 83:2,14	226:19	245:20 246:16	<b>deserve</b> 265:18	220:15 226:6,12
<b>decrease</b> 161:21	<b>deliver</b> 17:13 146:9	253:14,15 268:13	deserves 169:9	268:1 275:10
<b>dedicate</b> 379:15	146:15 425:4	269:19,22 281:18	<b>Design</b> 15:20	312:19 315:7
<b>deemed</b> 56:3,16	deliverable 51:5	282:16,21 283:1	designated 341:20	319:8 325:1
	l	l	l	l

Г

340:10,11 341:4	298:8 334:11	330:15,21 332:14	18:17 21:11,22	11:9 12:2,8,15,20
342:12,22 372:19	346:14 381:10	350:16 353:17	<b>Directors</b> 17:9	17:3 18:4 19:17
413:17 426:4	392:6	363:6,11 364:4,5	disadvantage 266:5	22:6 24:1,17
developing 28:18	differences 192:21	365:2 368:9 369:8	disagree 303:6	25:10
61:14 91:15 107:8	291:4 300:12,20	370:14 375:11	disagreement	disclosing 11:3
113:13 178:8	301:14	381:1 388:15,16	224:14	disclosure 11:11
190:18 195:15	different 35:19	389:7 390:11	<b>disaster</b> 5:14 52:13	disclosures 4:12
255:22 319:9	38:18 41:13 43:9	392:4,14 393:11	55:3 56:3 78:10	10:3,8,10 20:9
324:8 325:2 348:9	43:10 45:18 48:9	398:13,18,19	80:18 81:4 82:9	25:8,18,21 26:1,4
390:18	54:17 60:4,9	411:2 412:16	116:4 117:22	<b>discount</b> 265:7
development 7:15	74:14 75:14 79:3	413:1,2,3 414:22	120:11 122:11,20	discovered 104:15
16:11 23:3 26:15	79:6 87:20 89:18	415:1 419:19	123:1 124:5 130:2	discuss 8:8 12:13
27:15 29:8,18	90:22 91:21 95:11	423:8,9,19 424:4	130:4 132:1,4	26:3 46:15 122:15
46:19 47:16 48:8	95:12 98:14,14,15	424:4 427:18	133:19 136:22	149:5
49:4 91:11 110:20	99:2 101:13 103:6	429:16	142:6 143:5 147:3	discussed 85:8
120:17 171:11	103:9 104:10	differently 104:21	147:6,16,22	122:17 315:4
174:11 182:17	107:20,22 113:6	132:3 150:8	149:13 151:12,18	342:19 368:17
193:15 200:5	116:4 118:17,19	363:19 377:19	154:19 163:9	discussing 260:21
242:17 279:14	118:20 120:7	381:14 424:2	164:5 168:7	335:18 342:10
312:15 343:4	122:20 123:11,12	differently-specif	180:19,22 184:18	428:20
348:1 349:5	123:14,21 124:6	414:19	206:11 308:13	discussion 5:4,17
372:20 377:8,18	125:4,13,15 126:5	<b>difficult</b> 41:20 57:9	330:11 349:14,21	6:3 7:4,15 43:8
379:20 398:17	126:10 129:8,9	76:2 168:15	375:6,8,22 380:1	44:18,20 49:22
425:22 426:13	137:12 138:1	192:13 213:6	380:10 394:12	64:12 65:7 67:12
427:15 428:7	140:20 142:14	225:22 242:12	415:9 424:20,20	74:3 116:8 120:12
429:15 430:18	143:18 145:6,17	243:13 357:15	disasters 61:17	123:9 146:3
431:10	147:17,21 148:21	387:18 388:13	63:14 118:1 123:3	164:18 166:1
deviant 161:6	149:8,17 154:20	difficulty 283:5	123:22 124:3	167:5 169:12
diabetes 35:15	155:2,14 156:20	diffuse 71:3	133:18 136:10	184:8 185:21
diagnoses 280:5	157:14 158:12	diffusely 64:19	141:3,12 148:20	186:11 187:5
diagnosis 231:16	161:5,9 165:6	dimension 424:6	160:20,21 161:2	190:13 191:5
338:5 358:5	170:13 178:5	dimensions 143:6	161:12 369:1,14	194:14 196:13
diagnosis-specific	181:10 184:22	<b>dipped</b> 9:10	376:6 380:2,18	202:2 204:15
240:14	185:1 186:5	direct 263:7	382:18 400:15	218:5 225:1
diagnostic 219:20	188:16 192:1,19	direction 107:22	431:12	233:15 240:19
220:5 236:11	192:20 194:16	159:8,11,15	disastrous 298:2	250:20 266:18
252:22 269:3	201:19 205:5	160:13	<b>discharge</b> 53:10,16	296:12 304:13
279:21 284:21	206:4 223:13	directionality	56:17 169:5 278:3	306:10 307:11
<b>diagram</b> 126:3	226:10 227:11	158:22	278:10 317:10,10	313:3 323:11
135:8 165:11	231:3 242:3 253:9	<b>directive</b> 45:5,6	317:11,21 338:21	336:3 354:12,13
167:22	253:19 254:9	202:6,18	350:17 355:22	354:16 368:2,11
<b>died</b> 158:4	257:1,17,18,18	directly 17:14 88:2	356:1,5,6,9	370:21 371:19
<b>Diego</b> 353:13	261:3 273:9	102:9 174:15	360:22 366:13	385:6 388:2,7
difference 34:5	276:10,20 278:17	241:9 282:19	discharged 57:2	403:17 422:9
39:3 75:19 138:7	282:3 283:17	283:7 342:8	131:18 169:8	425:20 426:1
163:8 232:4,9	299:15 301:11,20	director 4:5,18	339:15	discussions 66:9
256:7,14 278:12	324:5 328:20	8:14 16:6,21 18:9	disclose 10:17 11:8	67:19 73:6 354:17
	•		•	•

261.2	227.10		000 10 0 (1 10	
361:3	327:19	door-to-admit	229:19 264:10	economically 64:16
<b>disease</b> 93:5 101:1	doctors 223:21	329:15	295:1	economics 418:13
127:6 140:10	document 24:3	door-to-balloon	<b>driven</b> 239:10	economist's 290:2
145:17 236:12	46:9 49:1 95:7	50:22 159:6	240:15	Ed 5:23 6:12,24
244:16	100:4,5,6 188:9	<b>door-to-doc</b> 162:3	driving 39:4	14:15 26:18 39:9
diseases 358:1	196:15 227:21	163:11	<b>drove</b> 248:4	42:11 85:13
361:18	326:3 392:11	<b>dots</b> 114:17 204:14	<b>dumb</b> 215:20	116:10,22 117:9
disease-specific	408:1 432:4 433:2	<b>double</b> 383:3	<b>duress</b> 365:10	128:12 148:11
361:14	433:7	dovetail 71:13	dynamically 205:4	162:15 163:22
disguise 250:2	documentation	314:11	dynamics 343:22	174:8,10 175:1,1
disorders 231:22	223:21 225:12	downside 271:5	dysfunctional	175:5,8 176:5,10
232:5,6	235:20	downstream	283:9	176:13 182:8,8,18
dispatch 354:18	documenting	230:11 264:17	<b>D.C</b> 1:21 24:7	182:20,21 183:1,2
dispersal 82:14	223:13	<b>dozen</b> 90:13	90:18 165:21	192:5,8 196:20
83:18	documents 13:19	<b>Dr</b> 8:11 30:9,22		199:21 203:2,16
dispositioned 214:5	225:11 228:1,3	42:8 44:9,15	$\frac{\mathbf{E}}{\mathbf{E}}$	204:6 206:20,22
dispositions 235:1	251:7	54:18 84:13	earlier 27:18 43:13	207:14,14,20
236:1	<b>DoD</b> 397:2,8	173:11 177:6,10	80:11 126:8	208:1,18 209:13
<b>distal</b> 36:17	doing 10:15 15:15	186:20 189:6,9	130:11 157:21	210:1,10 211:13
distinct 168:4	16:11 25:7 30:15	198:17 206:15	193:17 211:1	216:12 217:3,17
distinction 129:5	36:6 49:9 55:12	208:6,14 222:11	260:14 286:11	218:9 230:10
158:16 181:15	65:1 87:1,9 107:5	222:14 226:16	311:8 318:11	239:9 241:6
237:7 252:20	110:14 112:13,17	227:5 232:10	332:20 334:21	245:15 246:6
distinctly 152:6	113:12 115:12	263:6,9 288:9,10	342:11 386:3	248:21 254:13
distinguishes	117:6 123:18	341:7 354:11	416:13	257:7 258:7,17
358:14	139:14 155:18	360:13 376:20	early 96:19 111:20	264:18 267:12
distress 345:2	156:13,15 174:22	380:21 381:18	221:12 381:15	268:3 275:18
distribution 299:4	183:7,20 201:11	393:10 395:2	early-warning	277:4 278:12,17
<b>dive</b> 32:18 412:14	217:9 222:20	397:18 398:19	308:9	281:21 282:1,2
<b>diverse</b> 141:4	236:19 267:5	409:15 411:5,11	easier 10:12 110:14	283:8 284:8
diversion 117:5	272:19 281:13	411:16 412:2	146:22 267:10	286:17 292:13,18
218:7 333:8	284:21 286:15	413:13,18 429:3	412:10,10	293:8 294:10
345:13 351:8,13	293:14,15 294:13	430:4	easiest 153:22	305:7 307:20
351:20 352:6,9,11	305:3 312:10	draft 91:3 183:5	301:18 372:5	309:14 313:12
352:20 353:8,15	319:21 326:22	191:1 305:12	easiest-case 139:16	314:17,18 315:3,4
divert 116:16	331:16 366:16	323:3 326:3	easily 41:2	315:7 316:5
353:21 354:5	369:4 387:3	370:10 408:1	easy 94:11 99:7	319:12,14 321:9
<b>Division</b> 13:16	397:19 426:14,20	dramatic 114:1	222:6 272:5 315:8	327:1,15,17
16:21	dollars 179:20	dramatically	315:12 388:13	342:14 343:14
<b>doable</b> 79:17	430:19	198:15	409:22	344:5
<b>doc</b> 72:18 131:15	dominated 76:8	<b>draw</b> 393:13	<b>echo</b> 146:1 163:5	<b>EDBA</b> 224:11
132:5 169:4	<b>Don</b> 40:13	draws 89:4 97:18	165:10 252:21	228:1 244:3
357:18	<b>door</b> 52:14 57:4	drill 112:17 165:19	318:4 344:17	257:22
<b>docs</b> 395:12	72:20 281:16	166:10,12 309:15	364:1	<b>eDocs</b> 204:19 205:2
<b>doctor</b> 9:4 13:11	291:13 358:10	drills 62:22 130:4	echos 50:22	<b>EDs</b> 35:3 41:4
214:4 223:22,22	<b>doors</b> 73:2	drive 34:8 40:19	economic 148:3	270:16 286:13
237:20 282:17	door-to 156:15	63:7 121:22 219:4	317:3	293:1 383:22
L				

advantion 90.10	251.22 250.0	omorgonov 1.4	257.17 265.10	onconculato 202.10
education 89:10 EDWARD 2:7	351:22 359:9 363:12 372:13	<b>emergency</b> 1:4 2:19 5:4 8:5 9:5	357:17 365:19	encapsulate 323:10
			367:4,8 369:15	encompasses
<b>ED-based</b> 205:8	373:22 374:11	9:11 13:3,6,15,21	380:19 393:11	218:11
ED-level 334:13	375:21 376:17	14:2,6,16,21	396:21 399:13	encountered
ED-oriented	391:6 399:5 411:7	15:10 16:7 17:6,8	405:1 417:1,4,9	296:19
279:22 281:2	423:17	18:1,7,17,22	426:15	<b>encourage</b> 76:10
<b>ED-run</b> 273:1	<b>EKG</b> 291:14,20	19:10,12,22 20:6	emerging 125:6,9	170:15 188:8
effect 49:14,19 63:8	elaborate 346:9	20:13 21:1,5,9,16	301:19 393:20	221:4 293:20
65:10 66:6 128:21	elderly 341:9	21:21 22:8 23:1,5	Emily 2:6 22:7	304:22 341:1
173:8 264:17	<b>elected</b> 416:1,5,9	23:10,17 24:6,7	120:13 150:4	342:12 355:10
272:2 306:20	423:20	24:14 26:19 28:5	200:16 239:1	encouragement
389:13	<b>electronic</b> 35:10,11	30:14,19 31:10	240:11 255:20	355:15
effective 88:10 93:7	200:8 201:12	35:22 39:15 46:19	275:11 302:6	encouraging
142:13	elegantly 148:4	48:19 61:1 71:19	311:7 342:20	234:22
effectively 64:8	element 6:15 34:17	72:11 73:22 74:18	345:7 362:19	encrypted 347:21
117:1 204:16	37:9,10 286:20	82:10,17,21 83:2	366:1 392:8 394:7	endorse 325:5
304:1,5 315:18	415:18	83:15 87:18 88:4	398:22	endorsed 175:7
efficiency 157:22	elements 41:1	88:21 90:2 91:8	<b>Emily's</b> 303:6	190:11 193:10
317:2	99:15,18 218:12	92:20 93:12 95:3	347:17 398:5	205:17 232:12
efficient 87:15	300:19 301:21	97:20 103:22	<b>Emory</b> 9:6 13:2	263:10 264:3
134:12 280:19	311:17 415:3,8	106:15 114:18	297:21	371:15 414:1,20
316:18	eliminating 36:21	115:6 121:6 127:3	emphasize 157:10	endorsement 26:13
efficiently 239:11	<b>Ellen</b> 2:23 14:5	127:13 129:1	306:9	26:15 31:22 32:11
315:18 337:19	80:5,5 126:7	130:6,8 133:5,12	empirical 379:22	407:8
effort 47:11 73:4	162:16 177:17	134:22 135:1,13	382:6 422:17	endorses 324:21
94:4 110:20	179:2 216:14	135:14 136:16	empirically 133:2	ends 147:15 364:3
113:12 247:15	220:3 237:1	143:15 157:16	418:2 422:11	<b>energy</b> 202:9
251:15	251:18 252:21	158:8 160:20	employer 11:19	enforcement 166:5
efforts 35:15 49:8	267:21 275:13	162:7,21 165:15	employers 89:10	354:6
49:10 82:2 111:6	281:14 293:22	170:10,17 171:15	<b>empty</b> 163:21	<b>engage</b> 31:5 429:21
<b>egg</b> 59:18,19	307:14 308:17	179:8,19 180:2	<b>EMS</b> 2:18 13:15	engaged 65:18
154:14,17	316:8 326:6	192:3,10 194:17	17:9 18:9 19:9,12	166:8
<b>EHR</b> 23:12 41:4,15	344:20 351:3	209:2,21 210:19	48:18 79:15 89:22	88
343:12,12,18,18	<b>Ellen's</b> 113:17	230:5 236:19	114:19 118:6,7	England 14:21
<b>EHRs</b> 23:14	<b>else's</b> 332:8 357:9	241:8 242:7	166:7,7,9 167:4	179:18 235:9
<b>eight</b> 46:11,18 47:3	<b>Elzinga</b> 418:14	245:20 246:15	218:8 319:21	286:13 326:9
287:8 288:11	<b>email</b> 323:6 340:16	253:14,15 260:19	320:1,12,17	enjoyed 30:15
363:11,14	433:3	266:12 268:13,15	332:20,20 354:18	enlightened 351:15
Einstein 172:8	embedded 89:16	268:22 271:6,18	355:6 360:19	<b>ensure</b> 5:22 34:20
<b>either</b> 34:17 37:6	91:20	273:10 281:18	367:12	36:12 69:7 196:19
40:10 84:7 143:22	embrace 347:8	282:16,20,22	<b>EMTALA</b> 78:17	197:11
151:18 189:15	eMeasures 41:12	300:11 301:21	79:6 82:7,14	entertaining
243:18 262:11	<b>emerge</b> 394:6	306:16 307:2	83:20	204:21
270:18 276:7	emergencies 87:22	310:13 314:1,8	EMTALA's 82:6	<b>entire</b> 32:15 71:4
287:11 294:21	137:17 178:14,19	315:13 326:20	<b>ENA</b> 14:1 19:4	73:5 204:6 222:16
311:1 312:6	323:14,15,20	329:18 342:4	115:22 224:10	231:22 253:4
334:13 342:16	324:6 389:20	347:7 350:16	227:22	265:4 315:15,20

Г

1			1	
<b>entirely</b> 168:1,2	158:4 164:11	128:5 135:11	32:12 36:10 52:2	excluded 38:3,10
423:18	186:10 190:2,7	136:13,18 184:18	54:7 217:7 303:1	403:6
entirety 74:7	191:2 192:18	185:7 349:14	392:16,17	exclusions 402:20
entities 48:10,11,13	195:2 196:17	365:15,16 398:11	evolve 355:8	403:14
109:7 377:1 393:2	214:21 224:12	424:22	evolved 371:20	excuse 94:6 119:8
420:3,5 423:21	225:18 242:12	events 45:19,22	evolves 50:13 63:3	execute 56:15
429:1	243:17 244:5	84:1 102:20	evolving 50:11	57:15,20 62:17
entrepreneurial	248:18 254:12,18	103:13 105:11	exact 220:16	66:4 82:12 83:15
235:14	255:6,11,14	106:4,9,10 115:4	262:20	execution 57:6
entry 282:8	257:19 258:2,3,13	115:12 127:11,11	exactly 77:15 94:19	exemplary 78:6
environment 167:9	292:5 302:21	127:15 136:22	107:9 131:2	exempted 268:17
227:7 353:11	305:12 325:18	310:5 324:1	198:14 211:6	exercise 48:2 62:21
environmental	331:16 338:20	369:15 394:12,19	222:8 224:16	70:2 103:4 106:3
387:16	353:4 358:4,19	396:9 398:5,9,20	245:22 286:10	114:12 371:4
envisioned 427:10	368:5,7,8 370:12	399:4	300:6 309:22	379:8,17 404:8
<b>EOP</b> 149:16	370:15 378:12	eventually 63:7	420:16	406:5,6 407:14
<b>epi</b> 100:17	384:16 385:6	107:22 130:7	<b>examine</b> 366:6	exercises 62:19
equally 148:15	386:8 387:17,20	everybody 10:12	examining 365:21	63:1 102:20 103:6
equation 261:12	391:9,15 405:10	19:19 30:10	366:5	103:7 111:9,22
<b>equity</b> 136:1	406:5 408:2	126:15 169:22	example 12:11	112:14 113:13
<b>ER</b> 9:3 72:18,22	425:21	179:14 180:4,21	35:15,20 37:9	115:13 184:16
131:15 161:8	establish 45:12	229:20 246:8	39:10 95:8 109:2	324:6 383:2
168:7,22 169:2	47:11,21 50:18	251:22 255:18	133:7 139:4	exercising 62:9
212:19 213:9	54:3,4 68:9 69:19	269:21 289:8	156:16 159:2	exhausted 267:18
278:2,9 279:3	established 48:6	319:4 332:8	165:19 172:13	exist 154:21 174:3
297:20 319:5	60:5 205:3 321:7	337:10 373:7	185:6 201:15	193:19 242:19
395:12	establishing 58:9	403:10 429:9	234:14 236:5	365:6 396:10
<b>error</b> 201:10	et 25:12 175:19	everybody's 223:18	241:7,20 254:8,15	430:7
<b>ERs</b> 213:10	218:22 285:2	332:3	265:2 293:13	existing 175:22
<b>ER's</b> 319:5	297:13 356:7,7	everyday 84:20	300:13 301:18	186:1 196:5
<b>ESI</b> 130:17 287:14	evacuate 360:20	113:21,22 136:10	315:5 331:13	241:20 342:13
287:20 290:2,19	evacuation 365:16	137:1	343:15 349:15	369:7 411:3 418:6
290:22 291:2,5	evaluate 103:15	evidence 33:12,15	360:18 385:14	exists 205:11 262:6
especially 114:2	112:15 216:21	36:6 39:8 53:2,8	393:14 397:7,20	365:9
164:3 188:14	evaluated 372:10	54:16 58:2 61:6	398:21 402:19	<b>exit</b> 118:4
	evaluates 31:18	88:8 97:5 200:14	413:19 414:14	exogenous 241:6
	evaluating 112:11	270:5 372:2	426:19 429:4	256:21
401:16 425:1	115:11	374:14 380:22	examples 111:19	expand 104:3
	evaluation 32:17	381:6,16 382:5,6	240:4 388:12	182:7 224:22
63:11 64:21 69:18	44:15 286:16	383:14 385:12,22	389:5,7 413:19,22	272:16,20
168:17	345:12 371:10	388:3,19 393:17	414:5	expanded 272:12
essentially 28:14	372:3,15 373:1,15	398:17 399:10	excellent 171:17	expanding 320:7
	evaluators 103:16	402:11,14,16	exception 372:13	expansion 117:9
,	event 45:10,14,16	403:7,14 404:6	382:3,11	<b>expect</b> 187:2
79:5 121:5,18	45:17 52:15 55:15	405:21	<b>exchange</b> 231:6,9	345:16 346:12
122:2 132:10,13	56:2,12,13 73:14	evidenced 52:3	excited 244:11	expectation 74:15
132:19 133:7,9,17	83:5 114:8 115:16	evidence-based	308:21	403:5

expectations 51:6	extending 133:17	160:1,22,22	families 32:13	felt 31:1 257:5
59:21 372:2	extent 178:17	179:22 205:7	family 57:4 265:1	321:4
401:15 413:17	186:2 210:10	206:21 232:3,17	<b>famous</b> 125:3	<b>fiat</b> 374:11
expected 325:7	234:3 285:5	253:7 270:6 271:2	fantastic 186:3	<b>fidelity</b> 113:11
expecting 151:17	304:22 409:17	292:10,22 381:15	190:15	200:9
232:14	420:22	392:11 417:10	<b>far</b> 17:18 36:17	<b>field</b> 8:9 27:14
expects 388:8	extenuating 359:15	<b>factor</b> 164:1 250:7	85:13 99:16 114:5	29:18 35:20 39:13
expeditiously 250:9	external 103:16	251:3 257:10	183:11 184:11	119:10 198:2
expensive 277:20	133:20	factored 175:21	205:18 228:18	214:18 233:13
experience 102:22	<b>extra</b> 128:13 140:7	factorial 88:12	270:16 397:22	338:8 377:8
131:15 152:17	277:9 433:12,12	factors 88:1 218:21	fascinating 116:7	381:15 393:20
157:17 171:12,14	extraordinary	221:13 241:6,8	fashion 126:7	<b>fields</b> 2:8 16:5,6
171:19 176:5	85:22 134:17	245:3 248:6,13	<b>fast</b> 62:13 117:8	28:20 78:8 113:16
204:22 211:21	135:11 136:22	249:17,19 255:4,5	166:5 219:6	134:8 204:10
218:10 275:14	extreme 75:19	255:10 256:21	300:13 301:19	215:19 234:6
278:14 288:20	127:16 138:9	257:13,17 258:8	304:6	240:9 265:13
290:15,20 315:21	140:6 299:3	258:14 262:15	faster 219:7,21	279:13 291:10
326:9 327:8,9,17	<b>eye</b> 281:16	facts 9:12	294:10	301:2 304:11
344:21,22 347:12	<b>E&amp;M</b> 246:22	factuals 88:15	fatality-manage	309:4 329:9 346:8
369:1 381:3		fact-track 281:19	46:21	350:13 383:8
388:14 397:19	F	faculty 15:5,7 16:8	fault 209:10 319:5	410:9 424:12
428:6	face 47:6 123:20,21	22:21	favor 79:18 265:15	431:6
experience-of-care	125:6 377:21	fade 170:1	feasibility 35:7	Fifteen 122:5
177:7	378:2,3,8 379:9	failed 151:13	40:22 108:14	<b>Fifty</b> 60:6
experimental 348:2	facilitate 343:3	326:17	408:14 410:3,7,10	<b>fighting</b> 124:10
experiments	426:13	failing 235:5	<b>feature</b> 386:14	<b>figure</b> 29:21 53:13
391:11	<b>facilities</b> 51:15 60:1	failures 297:4	<b>federal</b> 16:12 23:18	62:16 64:15 82:1
<b>expert</b> 1:7,17 11:22	69:5 74:5 84:2	fair 85:1 213:10	28:11 328:22	98:16 99:3 101:12
14:10 96:22	90:14 109:8	300:14 320:5	<b>feds</b> 60:11 384:22	128:11 146:5
206:13 267:21	166:12 266:5	398:1	430:2	168:16 176:9
382:6 385:21	310:10 345:17,18	fairly 190:12 268:9	<b>fee</b> 278:3	183:5 218:18
391:16,16,19	349:15 364:14	273:3 276:15	feedback 82:4	222:17 238:21
394:2 399:21	368:21	279:17 384:5	<b>feel</b> 117:19 124:14	259:21 268:14
expertise 43:11	facilities-specific	388:21 425:9	136:19,20 173:6	274:2 280:1,22
44:17	364:10	fairly-uniform	174:14 189:16	354:19 358:8
experts 10:22	<b>facility</b> 23:18 52:10	220:21	205:17,21 235:22	<b>figured</b> 228:14
28:21 97:1	52:17 55:19 74:11 75:13 76:16 83:22	<b>Fairview</b> 17:21,22	236:14,16 291:17	277:19
<b>explains</b> 272:10	152:16 245:17,18	<b>fall</b> 65:17 94:20	317:14 327:16	<b>figuring</b> 130:22
<b>explicit</b> 224:13	246:15,16,18	96:10 121:9	343:5 346:20	283:6 306:20
233:20 357:1,5	254:9 306:13,21	157:12 231:14	347:6 393:1,6	<b>fill</b> 11:17
explicitly 6:5	355:5 363:4,8	245:16 374:8,10	<b>feeling</b> 223:18	<b>filled</b> 10:15
220:15	370:17	431:20	311:20 feels 120:4 145:11	<b>final</b> 27:8 186:17
exploring 362:11	<b>fact</b> 20:4 23:11	<b>falling</b> 147:16 <b>falls</b> 96:7 281:9	<b>feels</b> 129:4 145:11	186:18 249:1
<b>explosive</b> 52:14 <b>extend</b> 113:17	32:3 33:3 67:11	326:13 332:21	154:11 155:1 253:8 254:4	266:2 372:12 431:13 15
132:7	75:20 77:19 96:4	familiar 256:3	<b>Fellow</b> 13:9	431:13,15 <b>finally</b> 12:1 34:1
extended 231:12	96:11 107:8 115:5	268:9 302:9 425:9	fellowship 20:19	35:12 86:7 120:20
	2011 10710 11010	200.7 302.7 423.7	10110 womp 20.17	55.12 00.7 120.20
				I I

	1	I	1	1
190:20 310:11	334:9 335:11	204:5 431:10	forming 77:16	frame 157:8 170:7
349:9	409:16	focusing 58:1	forms 314:2	190:6 197:2
finances 50:22	<b>five</b> 9:7 33:4 45:3	focusing-in 35:16	formulating 164:16	340:11 373:9
financial 12:4,5	50:15 58:1 59:22	folks 29:4,5 35:3,3	forth 47:14 49:13	394:11 398:6
154:4,5	60:3 74:4 92:15	116:2,5,5,6,12	250:5,16 264:16	framed 368:5
<b>find</b> 129:10 155:13	242:6 267:11	122:12 129:15,18	270:2 271:21	framework 29:6
210:4 211:15	279:3 291:14	146:18 162:21	273:15 286:3	77:4 95:7 108:2,9
213:15,18 253:7	352:9 423:8 424:8	175:14 205:14	327:3	126:6,12 141:20
256:6 269:8	<b>fix</b> 314:14	222:15 229:16	fortunately 42:10	142:9 195:7,9
309:11 323:16,21	<b>fixing</b> 243:2	246:21 429:10	Forum 1:2,19	196:6 204:17
430:22 431:3	flagged 337:10	433:11	forward 9:20 39:21	392:22
<b>finding</b> 293:4	flashed 354:17	follow 70:9 109:10	41:6,9 60:20	framing 4:22
347:13	fledgling 273:8	109:18 204:11	75:16 97:8 102:19	186:21 188:8
<b>findings</b> 408:20	<b>flew</b> 334:6	234:7 270:12	111:1 180:17	Francisco 2:24
409:6	flex 159:13 160:7	283:19 286:2	234:9 286:5	14:7
fine 11:9 178:1	312:9 335:19	303:5 337:22	314:19 325:3	Frank 125:17
229:18 246:2	flexibility 81:7	343:13 344:11	393:15	Franklin 3:13 4:4
<b>finish</b> 177:14	132:10,14 299:15	415:21	found 47:20 48:5	4:18 8:3,13 26:8
finished 15:2	414:13	followed 250:22	214:19 223:15	42:8,15,19 43:3
fire 157:19 309:14	<b>flexible</b> 133:8	following 34:12	241:4 244:5 248:5	186:19 187:8,12
360:19	flex-up 133:10	306:8	258:4	188:2 189:3,8,11
<b>firmer</b> 337:2	floating 82:18	follows 199:22	foundation 15:1	189:13,19 325:5
<b>first</b> 12:22 33:7,9	<b>flood</b> 388:17	305:18	20:12 22:16,17	432:5,13 433:15
44:12 47:15 50:9	floor 1:19 54:8	food-borne 127:5	28:12 58:2 147:9	frankly 148:2
54:5 55:20 59:1	73:18 148:10	force 8:6 14:1 19:2	foundational 45:21	430:17
62:10 63:17 70:19	168:21 169:4	269:7 386:16	four 24:5 33:2	<b>free</b> 124:14 189:16
76:15 80:16 86:10	175:12 230:6,11	forces 41:9 78:12	39:11 52:10,20	freestanding 367:4
90:16 91:11 92:8	339:1	155:19 209:15	53:22 54:1 56:18	367:8
103:1 120:3	flow 56:9,12 225:9	foregoing 122:6	58:8 117:13	frequently 23:12
122:16 165:8	303:9,16,17 304:9	188:19 322:5	140:19 180:3	Friday 16:2
167:19 175:2	306:1 308:2 312:7	forever 310:12	216:22 221:7	<b>front</b> 47:7,8 83:1
183:13 196:17	314:4 315:8 352:1	forget 273:18	225:9 227:8 228:6	291:13 373:22
237:18 276:14	352:22 428:3	forgetting 52:3	230:10,21 235:9	<b>full</b> 10:2 86:4 207:3
280:10 287:5	flowing 419:14	86:15	237:11,13 268:13	263:12 280:16
292:20 314:13	<b>flows</b> 425:12	forgot 291:20	283:19 284:7,10	398:14
318:10 326:6	<b>flu</b> 114:4	350:14 433:9	286:22 287:9	<b>fully</b> 27:1
329:12,12 336:20	fluctuated 229:13	<b>form</b> 10:14,14	295:16 310:1,7	full-capacity 301:7
340:21 347:17	<b>fly</b> 334:7 359:20	49:12 55:21,22	336:3 372:9	function 59:11
356:15 374:7	360:5	70:1 138:9 162:14	375:10 376:13	functioning 366:15
381:19 402:5	<b>focus</b> 15:12 28:15	261:7 398:12,14	395:7 404:3	414:21
406:1 415:17	33:13,13 40:12	398:15	405:17 406:17,18	functions 99:15
431:7	121:11 178:12	formal 245:5,8	four-hour 179:22	395:14
<b>fit</b> 96:14 143:11,16	183:16 269:15,15	352:6,11	238:6 268:10	fundamental 95:16
196:5 216:12	375:16 381:1,6	formalized 48:7	269:19 275:17	96:1 169:14
236:10 312:3	388:20 402:15	formally 233:2	fraction 88:5 244:8	fundamentally
409:22	focused 23:16	format 167:18	fracture 56:19	101:19
<b>fits</b> 79:13 313:2	26:12 75:7 79:6	227:15	fragmented 89:3	fundamentals

٦

140:8,9,12	200:22 251:12	32:22 36:1 43:21	282:22 285:16,21	101:13 102:19
<b>funded</b> 27:17	342:4 362:15	57:16 64:1 80:3	297:12 304:8	107:5 111:1
153:11 426:21	372:9 379:10	83:21 111:4,19	307:14 310:6	118:19,19 126:10
431:8	407:8 410:4	180:20 181:19	311:12 322:22	130:5,12 146:16
<b>funding</b> 11:3,5 13:5	generalize 192:13	200:2 211:22	325:14,19 326:5	147:22 148:14
14:9 19:14 20:5,7	generally 142:15	240:4 320:5	333:14 334:5,15	149:4 151:3
22:13,15 24:4	250:10 251:1	364:20 371:1	339:1 341:17	152:21 154:20
25:11,12 28:11	351:14	given 40:12 88:13	346:7 347:6 352:9	155:7,9 157:14
66:1 97:8 98:10	generate 278:1,3	99:4 119:10	352:10 354:5	158:12 160:13
<b>funds</b> 66:2 328:22	generated 38:15	136:21 142:17	356:15 360:1,6,6	163:17 164:2
<b>further</b> 36:3 44:20	417:18	224:3 231:2	369:18 370:5,20	168:22 169:15,21
149:21 239:4	generations 343:9	264:19 284:20	372:20 373:19	170:3 172:20
382:5 421:10,10	generically 141:5	307:2 337:6 377:8	383:12 387:10	174:2 176:3
fusing 383:11	geographic 66:15	377:17 378:15	392:21 393:15	180:19 182:3,11
futility 345:2	411:14 416:18	393:1 401:7	399:5 404:1 405:7	182:12,22 183:17
<b>future</b> 106:8	417:4,12	gives 48:16 176:20	406:9 407:2	183:18,21 184:10
193:15 302:22	geographical 27:7	306:16 328:11,12	415:11 429:21	185:19 187:3
343:9	425:5	<b>giving</b> 29:20	431:22 432:22	190:7,21,22 191:9
	geographically	glad 42:13 55:6	goal 28:14 29:11	192:7,9 194:13
G	278:21	58:13	40:9 51:4 53:21	196:9,15 202:13
<b>Gab</b> 53:3	geographies 421:5	<b>global</b> 219:14	59:1 74:13 91:2,5	203:6,8 204:3
<b>Gabriel</b> 2:7 42:8,10	geography 143:13	232:22	92:20 104:13	206:15 211:7
42:12 55:6	geometric 6:19	globally 101:7	120:5,14 121:2	212:5,5 219:12,16
game 154:14,15	298:18	<b>go</b> 8:11 10:17 12:17	151:7 158:19	219:21 221:7
201:22 211:8	geopolitical 415:19	26:9 36:11 37:13	412:6	224:20 226:13
359:7 398:1	415:21 418:7	41:5,14 44:8 78:3	goals 29:3 44:3	228:20,22 229:4
game-able 214:16	425:11	81:19 85:11 87:9	95:5 97:7	231:15 235:3
gaming 194:11	George 2:10,13	87:14 91:18 95:21	goes 37:18 56:14,21	237:2 238:13,16
203:4 235:19	22:22 23:10	96:12 102:1	123:13 124:7	238:18 243:11,12
285:4	Georgetown 2:21	107:14 108:6,21	133:7 159:11	243:20 244:17
<b>gap</b> 201:12 374:15	15:6 90:12	113:14 121:14	169:9 178:7	245:12 252:9,14
374:17,22 376:5	getting 44:5 66:1	125:20 145:8	181:13 327:14,18	258:1 260:2,14
376:16,18,22	80:11,14 85:21	147:3 151:21	341:13 342:7	262:19 264:20
379:1 380:22	94:5,6 118:15	159:8,15 168:19	398:18 400:22	269:17 270:1
385:12,19 395:3,7	139:10 160:11	169:3 171:12	429:21	271:8,13 274:10
395:22 396:6	180:2 181:8	180:9,16 187:7	going 9:13 10:1,16	275:2 277:13
411:18	192:10 213:11	188:3,5 190:7,22	11:12 12:1,13,16	279:19 284:18,22
gaps 27:1 193:18	217:10,17 227:14	193:15 195:2,5	24:20 26:22 27:9	286:5 288:9,11
396:10 430:14,15	230:16 232:18	197:6,17 202:4	29:22 33:21 36:14	296:11 307:10
430:21	271:20 283:11	219:21 221:12	38:17 39:21 41:13	308:19,21 309:1,4
gates 62:11 77:16	285:7 286:10	228:22 230:10	41:15 44:6,8,20	312:12,13 313:1
gee 116:19 117:14	293:1 294:9 298:4	235:15 242:8	46:14,15 49:9	315:16 316:10,16
380:11	312:14 318:17	249:9 252:16	55:22 58:1 59:10	318:16 320:12
Geisinger 2:22	326:8 355:10	255:8,16,22	65:6 75:9,14	325:14 326:7
general 4:14 10:7	388:5 422:14	260:14 264:13	76:20 77:7 80:18	327:5 333:16,17
70:7 93:14 100:15	432:21 433:5	267:20 271:4,7	80:19 86:3,6	336:2 343:20
191:20 197:4,16	give 27:13 31:17	274:3 280:18	92:11 95:17 100:2	348:22 349:4,19

٦

	400 11 400 10			
353:22 356:12	430:11 432:18	greater 57:17	155:7 165:3	handle 39:18 81:2
357:14 359:2,6,21	gotten 9:7 33:3	218:11 237:8	169:17 188:2	81:3 123:15,15
361:6,17 365:2,3	86:7 104:22	360:17	196:21 197:4,15	139:13 415:8
366:4,18 368:5	229:22 243:18	greatly 382:9	203:18 209:7	handles 125:9
369:12,17,18	333:8	<b>Greg</b> 16:20 20:3	215:10 218:2	handling 125:12
370:8,14,20 371:1	government 179:12	<b>Gregg</b> 2:12 306:4	220:7 249:11	234:2
373:13 378:7	268:14 269:10,11	308:14 330:12	268:8 277:2	handoff 230:7
379:15 381:7	governmental	415:11 421:3	289:12 301:17	hands 12:10
384:13,20 387:1	59:11 89:7 429:1	Greyhound 56:18	310:15 313:4	hang 365:8
387:14 388:13,21	Governor 424:9	57:3	315:8 318:3 335:9	hanging 145:15
389:5 394:3,4,15	Governors 205:5	grind 202:8	346:2 349:8	happen 29:15
395:22 397:13	<b>GP</b> 282:9	grips 178:6	356:22 362:12	61:17 67:20 73:3
401:8 403:6,13,14	<b>GPs</b> 271:4	gross 354:13 355:4	366:4 374:16	88:7 115:5 126:17
406:1 408:4	graduated 268:11	355:9 356:15	378:21 381:20,22	177:22 217:14
418:11 419:2,10	Grady 2:3 298:6	ground 12:15 95:6	389:19 407:3,5	222:5 228:21
421:4,8,9,11,12	grant 11:3 14:9,11	129:10	409:8	272:12 290:4
421:17 422:10	14:20,22 19:14	groundwork 26:14	guidance 27:14	354:21 394:17
424:18 425:9	24:4 25:12 50:15	group 14:16 15:21	28:17 29:20 30:2	424:20,21
428:19 431:18	64:12 65:7 105:10	15:21 16:2 17:22	96:22 97:5 108:11	happened 88:16
good 8:3 9:15 10:4	granted 147:7	22:1 27:4 42:14	200:1 312:18	105:16 116:1,20
15:3 16:19 17:4	grants 17:13 22:16	48:21 59:9,10	315:20 379:14	120:3 137:13
17:15 18:5,15	28:8 66:11	109:22 125:9	407:6	158:7 163:18
19:5,18 21:7 23:7	granular 354:14	131:11 165:7	guide 10:7 120:15	185:7 190:10
24:9 26:6 30:9	355:8 356:11,16	184:5 185:10	guidelines 33:16	272:10 282:5
60:19 69:2 78:10	granularity 355:10	203:12 225:5	38:7 429:9,10	371:22 386:6
97:3 98:8 118:5	355:21 356:13	226:17,20 229:13	<b>guy</b> 71:6,8 73:10	396:7
122:21,22 124:1,2	grappling 168:10	232:16 253:21	<b>guys</b> 354:10 398:7	happening 126:18
136:19 155:3,4	grassroots 135:13	255:14 263:17	404:12 410:18	126:20 164:5
167:3 171:15	gray 138:9,10	264:8 287:5	<b>GW</b> 28:6	174:9 182:4 183:1
172:16,16 174:1	147:7,8 148:18	316:12 326:4	H	282:18 329:16
177:22 179:20	150:5 281:8 305:1	330:18 366:19		happens 114:11,21
187:1 216:9 229:8	grayer 137:14,15	372:10 374:17	half 44:2 116:8	118:16,16 133:20
253:18 259:5	great 8:22 12:6	379:13 386:5	120:4 320:2	134:7,14 139:17
272:15 282:16	27:22 42:5 43:3,5	390:15 407:8,21	hallucinating 415:6	201:13 317:11
286:7 291:18	59:12 70:3 72:9	408:1,17 425:21	hallway 148:10,11	337:20 338:22
293:7 294:7	82:4 119:22	431:14	314:13	421:7 430:4
303:13,14,15	131:14 150:1	groups 34:5 224:7	hallways 149:19	happy 16:17 30:17
312:18 320:13	184:7 189:8,13	229:14 263:15	hammer 309:6	87:13 284:8
324:20 342:19	190:1 203:12	328:21 333:16	hammering 213:22	hard 88:7,12 97:13
344:12 361:14	226:22 234:3	429:2	Hammersmith	124:19 128:15
362:17 371:5	235:17 236:5	growing 219:1,6	3:14 4:14 10:4,6	148:15 173:5,6
372:7 383:1 389:8	238:15 240:19	<b>Guam</b> 60:8,8	24:19 25:22	207:2 213:11,17
396:22 397:5	266:9,10 267:17	guess 14:18 23:2,19	hand 258:19	219:16 222:20
399:9 401:21	271:2 286:9 313:7	23:22 24:13 31:1	260:16 272:4	236:22 359:9
408:9 410:20	321:12 323:8	68:11 71:13	289:17 328:11	400:5 423:13,14
413:8,19 419:12	344:15 366:4,6,9	102:12 143:17	348:9 362:6	424:5 431:2
419:16 426:9	398:1 432:3	144:21 153:17	handful 371:5	harder 94:11 99:8
			l	

			l	
hard-boiled 59:18	156:8 157:9 236:4	heartened 67:11	414:7	62:7 96:11 243:2
harm 39:14 237:9	240:13 312:6	heat 417:19	<b>Hi</b> 20:10 22:7,20	<b>HIV</b> 414:3
harmonization	326:13 328:4,12	Heavy 216:1	23:7 122:9	hives 176:21
414:18 423:3	328:13 392:18	Helen 3:12 4:23	hierarchical 33:6	hoc 39:16 55:18
harmonizing 35:18	409:10 414:2	30:6,11 42:6,7	36:8	107:6
harms 237:6 382:9	417:8 426:21	91:19 173:10	high 82:15,22	<b>Hogarty</b> 418:14
harm's 79:8	healthcare 16:22	181:18 186:2	136:21 141:13	hold 223:6 328:15
Harvard 15:7,8	22:14 24:7 25:20	193:17 196:1	142:1 151:18	361:17 385:2,3
20:14 87:2 103:3	40:10,11 46:3	198:14 206:14	159:19 160:1,8	394:4
125:2	48:9,10,13,21	208:4 222:8	246:3 261:19	holding 116:17
hat 365:8	49:17 50:11,12	367:18 372:8	307:20 336:13	117:5 161:18
hate 333:4,8	51:11,19 53:5,11	385:20	375:20 384:5	209:20
hazard 139:19	54:22 55:15,16	Helen's 204:1	419:11,15,15	holistic 106:22
HCA 13:16 220:20	56:2 57:16 63:5	helicopter 359:19	higher 27:5 33:4	home 56:21 125:20
HCAHPS 176:6	67:14,16 75:7,11	helicopters 156:17	52:9,20 73:19	130:12,15 168:21
177:4,5	76:9 89:8,21 90:6	Hello 8:21 249:8	178:4 186:6	169:3 221:12
HCPC 247:2	90:10,14 92:16	help 27:13 29:4,12	254:15 298:5	238:15,19 240:6
HCUP 212:17	104:11 105:15	55:6 77:3 84:18	331:12 412:13	259:9 264:22
298:14 334:14	112:12 115:1	95:15 133:21	higher-acuity 53:6	269:7 274:3
347:19 427:3,12	121:4,13,14	135:12 137:1	55:10 57:8 63:12	276:17 311:14
427:13,15,21	134:16 140:13,16	143:9 161:15	highest 238:9	337:8 350:18
HCUPS 266:9	152:2 166:12	176:18 205:15	383:21 426:9	Homeland 2:15
head 62:7 272:9	168:11,19 180:12	206:1 218:20	highlight 26:11	24:12 89:9
273:14 350:5	182:21 277:21	227:15 305:1,20	334:20	homes 311:15,21
373:10,19	319:15 363:5,9	311:4 314:18	highly 141:1	hone 120:13
headed 364:20	392:19 399:13	344:12 384:17	404:11	honest 71:1 77:18
heading 45:2	417:6 419:4	387:11 417:2	highly-consolidat	146:13 430:17
heads 202:15	hear 55:5 72:19	430:9 431:4	79:16	hone-in 226:20
health 2:6,6,9 9:9	148:5 187:14	<b>helpful</b> 31:16 60:20	highly-variable	370:8
13:9 15:8,22	249:8 282:18	141:3,4 178:20	192:21	hook 244:22 245:2
16:21 18:10 21:2	380:2 404:13	233:19 261:8	<b>Highway</b> 19:15	hooked 153:1
21:12 22:3,10,22	heard 27:18 39:12	264:8 274:21	high-cost 344:8	hope 29:19 44:1
24:11,14 25:16	41:3 61:21 108:18	303:13 309:2	high-impact 34:3	50:14 58:4 63:12
28:6 30:13 35:11	115:19 116:3	329:6 432:4	high-performing	64:11,13 66:12
40:11 46:5,6	118:6 140:18	<b>helping</b> 417:7	159:22 335:20	138:4 174:11
48:19 49:18 82:10	145:18 151:2	helps 220:2 263:19	high-risk 273:13	430:2
82:17,21 83:2,15	174:14 177:13	295:4 371:12	high-volume 149:16	<b>hopeful</b> 60:14
87:18,21 89:2,4,8 89:21 91:8 92:16	184:11 220:19 250:20 297:14	379:2 hemorrhage 358:2	149:16 high-water 50:16	81:22 396:11
		Herculean 154:12	8	hopefully 29:15
92:20 97:1,20,22 98:15 100:17	310:3 380:19 401:9 406:13	hesitate 433:3	Hill 47:8 hint 83:7	45:13 66:13 310:12 325:13
101:6 102:3,4,9	401:9 406:15 418:15 423:9		HIPAA 55:21	329:6 399:19
	<b>hearing</b> 61:3	heterogeneity 242:4 389:14	historical 388:12	
103:11 105:12,13 118:22 121:3,6,10	164:11 165:5	242:4 389:14 390:6	389:4	<b>hoping</b> 111:2 325:15
118:22 121:3,6,10				325:15 Hopkins 53:3
121:10 127:4,8 132:14 146:8	168:2 253:18,20 332:12	<b>Hey</b> 221:6 <b>HHS</b> 17:2 25:21	historically 168:16 history 276:16	hospital 13:3 18:9
154:8,9,9 155:17	heart 88:3 290:10	27:17 82:9 83:13	hit 52:14 56:14	20:22 22:4 48:13
134.0,7,7 133.17	<b>HEAL ( 00.3 290.10</b>	21.11 02.7 03.13	<b>mt</b> <i>J2</i> .14 <i>J</i> 0.14	20.22 22.4 40.13
	l		l	l

48:14 51:6,20	351:18 352:12,19	345:15 346:5	293:18 295:16,17	<b>IBA-type</b> 69:1
57:22 65:2,4,21	353:4,16 355:19	363:11,14 375:7,9	295:20 304:8,8	ICU 221:7 345:1
70:14 71:3 73:1	355:22 356:5	376:8,8 384:11	310:1,7 326:16,21	<b>id</b> 67:13
79:15 80:13,20	359:17,18 360:21	403:1,2 408:18	336:1,3,4,4 362:8	<b>idea</b> 34:20 39:6
81:11 82:8 90:12	365:17 368:10	419:5 424:17	366:14 375:11	66:19 80:10 89:2
98:6,15 103:10	374:19 376:17	425:4,7	376:13 385:2	95:13 105:10
109:5,12,16 111:2	380:12 395:8,17	hospital's 193:12	395:12,15 404:3	144:22 179:5
115:18 116:2,8,9	396:2 403:3	249:18 252:3	405:17 406:17,18	180:10 207:18
132:21 134:11,15	410:12 416:22	337:12 344:5	HPP 24:3,16 63:19	217:6 250:11
136:19 139:7	417:8 427:6	hospital-associated	100:6,10 386:14	268:16 293:3
144:4,16 149:1	hospitalist 280:9	166:22	387:22 391:18	296:16 304:14
154:2 155:19	281:6	hospital-based	HRR 418:9 419:9	316:10 325:11,16
157:5,20 159:5,18	hospitalists 282:7	154:10 265:7	419:14 422:16	336:17 347:7,9
162:8 172:16	hospitalization	321:11	HRRs 419:12,19	361:11 362:22
176:9,12 177:7,11	174:10 179:16	hospital-level	420:3	363:3 373:8 383:5
179:12 180:4	219:18	121:15 260:22	HRSA 2:4 18:12	385:15 389:3,3,6
182:3 204:6,13,17	hospitalizations	261:9 411:2	19:14 414:6	398:5,11 418:12
207:17,22 208:1	329:21	hospital-specific	HSAs 419:20 420:3	420:15
209:5,5,16,16	hospitals 48:18	264:15	huge 128:6 318:1	ideal 109:13 195:11
210:8 215:7,13,14	49:16 50:7 59:9	hospital-wide	334:10 403:9	ideas 80:15 170:7
216:20 218:22	65:17 69:4 74:6	204:19	Human 25:16	312:8 325:22
234:4,12 235:14	78:17 79:5 85:19	hospital/coalition	hundred 395:15	408:6 417:18,20
238:13,17,22	90:10,13,15,18	370:18	Hunt 44:15 54:18	identifiable 173:7
240:1 241:5,14	96:14,22 104:10	hour 44:2 120:3	354:11 360:13	identifier 347:22
242:10 244:20,22	109:9 113:19	164:18 215:4,14	395:2	identifiers 427:4
245:14,14 246:3	114:5,10,18	217:4 230:22	Hurricane 400:21	identify 26:21 92:7
247:1,9 250:15,16	117:17 124:1	235:10 320:2	hurry 235:11	127:7 173:6 199:1
251:11 252:8,13	135:2 137:1 139:9	366:13	hurt 139:21,22	239:7 323:12
252:15 255:1,4	140:7 144:15	hours 39:11 52:11	143:9	359:2 379:2 427:5
256:9,12 261:15	145:5 155:2	52:20 53:22 54:1	hypothesis 257:22	identifying 60:16
262:15 265:4	156:14 162:13	56:18 58:8 117:13	hypothetical	91:14 217:13
267:4,12 270:18	171:22 172:17	134:15 140:19	109:18	338:4
272:22 276:8	182:19 192:14,20	161:18,18 180:3	<b>H&amp;P</b> 278:2,6	<b>IDIQ</b> 426:12 427:1
277:11 280:17	194:4,5 205:2	190:3 211:12,14	H1N1 101:7,8	427:16
282:8 283:7 291:5	211:2 214:19	214:22 215:1,3,13	115:4	iffy-ness 321:8
296:19 297:21	215:12 235:10	216:21,22 217:3,4		ignoramus 124:16
299:14,16 301:10	239:21 245:1	225:10,12 227:12	I	ignore 234:13
304:21 307:19	247:7 248:13	228:6,6,21 230:10	<b>IAA</b> 426:18	<b>IHI</b> 428:10
315:5,15,21 316:3	256:6 257:3,18	230:12,21,22	<b>IAAs</b> 48:7	<b>ill</b> 158:3
317:1,6 320:1	262:16,17 265:22	235:19 237:11,13	<b>IBA</b> 52:6 57:15,20	<b>illness</b> 144:13
321:6 329:15,18	266:4,8,20 267:7	237:18 238:4	62:9 63:3 69:20	146:7 172:14
330:8 331:13	267:8 269:8 276:5	242:7 268:13	83:16,17 84:4	358:14,15 418:11
333:2 336:11,15	287:19 288:20	274:3 275:20	122:1,2 373:8	419:4,13
337:2,21 339:1,15	297:3 299:19,21	276:15 283:20	374:3,6 375:19	<b>illnesses</b> 419:8
340:1,8 343:13,17	300:16 304:4	284:8 286:22	376:11,12 384:13	illuminated 116:15
344:6 346:15,16	305:11 309:12	287:8,9 288:12	385:15 386:10	illustrate 131:16
348:17,17 351:17	330:7 333:18	291:19 292:13	399:18 406:15	imagine 84:17
5 10.17,17 551.17	550.7 555.10			
	I	I	I	I

	1	1	1	
124:19 150:22	45:9 75:17,21	172:12 173:9	87:6 172:17	247:18 292:9
162:9 213:7	76:9 87:12,16,22	201:7 296:3 349:7	285:15	333:2 344:11
388:10 400:5	93:16 96:19 98:12	374:9 376:4 379:3	<b>inclusive</b> 421:19	368:21 384:11
403:22 422:3	111:8 119:11	379:6,16 409:21	incorporate 341:2	individually 309:12
imagined 141:6	122:19 153:6,13	420:8 424:19	incorrect 38:19	individuals 92:17
imaging 219:9	160:14 173:2,4,7	improvements	272:11	345:15 397:9
280:2	194:20 207:10	162:2 243:17	increase 77:13	individual-based
immediate 18:2,21	214:3 216:18	293:1 295:1,21	131:6 161:20	168:11,19
52:6,8	217:18 224:13	296:1	270:9,9 318:18	industries 397:21
immediately 169:7	227:4 240:8	improves 296:2	376:13 383:1,6	industry 32:15
<b>impact</b> 23:5 78:20	243:21 244:9	improving 131:7	396:20 399:12	64:14 234:12
256:21 265:9	255:18 258:17	240:12 352:1	400:4 405:16	<b>infected</b> 139:10
309:14 315:7	262:9 264:2	inadequacies	increased 61:8	infection 139:6
329:22 342:8	266:22 271:12	372:18	increases 128:10	140:5
349:21 375:20	281:8 289:20	inadequate 23:12	increasingly 35:9	infectious 93:4
385:8,10	298:11 306:14	310:2 379:9,12,19	38:13 90:10	101:1 139:18
impacts 230:17	314:6 318:5	379:22	346:21 347:19	140:10 141:1
400:17	323:13 327:18	inadvertently 80:9	349:11,17	influenza 138:22
implement 303:17	334:9,17 335:1	inappropriately	incredible 162:2	inform 27:13 261:1
309:20	341:11 343:7	38:3	incredibly 142:3	261:11
implementable	348:7 350:14	Inauguration	incremental 62:15	Informatics 21:10
27:2	351:9 375:6,9	400:14	310:20	information 32:6
implementation	376:1 377:7	incentive 154:5	independent 50:11	101:16 113:1,3
26:16	378:19 381:17	173:5,8 201:2	68:6 258:6 347:1	208:3 213:2
implementations	382:12 389:21,22	235:12 266:20	independently	225:17 231:6,10
307:22	390:3 394:3	331:19 348:19,21	235:4 248:6	232:11 267:2
implemented 23:13	400:19 412:3,6	incentives 348:6	<b>index</b> 16:1,4 244:15	307:1 315:9,12
35:8	422:9 430:22	357:3,4	245:5 328:5	320:5 334:13
implementing	importantly 257:8	incentivize 154:8	<b>indicate</b> 430:15	409:4
262:18 304:2	371:22	172:12 332:5	indication 179:15	infrastructure
360:21 423:1	impossible 93:2	349:7	indications 39:12	111:15 113:14
implements 251:2	334:13 343:10	incentivized 177:11	indicator 174:17	inherently 225:22
implication 198:10	impression 176:12	incentivizing 154:9	183:1 399:2	226:1
implications	224:2	421:5	426:15 427:11	initially 40:13
260:17 276:20	impressions 176:11	incident 115:17	indicators 14:13	257:20
implicit 92:19	<b>improve</b> 17:12 42:1	117:4,13 118:17	91:15 174:12	initiated 429:20
<b>implied</b> 78:20	131:3 153:21	119:3 148:8	181:21 182:2,6,13	initiative 67:2
implies 425:5	167:2 172:19	incidents 105:20	182:18 348:2	<b>injured</b> 419:6
importance 33:8	173:5 211:8 295:2	149:9	413:21	<b>injury</b> 362:6 419:8
47:1 87:10 108:19	330:8 347:5,11	include 68:21	indirectly 341:17	innercity 253:15
373:2,21 374:2,5	356:14	170:19 320:8	342:6,7	innocently 11:15
374:16 375:5,19	improved 199:3	included 20:19	individual 11:13,22	<b>inpatient</b> 72:1,6,13
377:12 389:6	302:18 303:9,10	69:4 116:2 224:11	75:13 85:7 111:2	72:15 81:10 182:1
400:8 401:17	improvement	311:17 341:12	124:10 127:21	216:6 234:20
important 32:2	33:19 34:8 35:6	<b>includes</b> 213:3,4	132:4 157:5 179:6	235:20 236:21
33:16 37:20 39:20	39:5,7 40:10,16	313:4	179:17 182:19	261:6 281:5,10
39:21 40:17 41:19	40:19 92:2 105:2	including 76:11	203:20 207:9	318:19 336:22
	l		l	

	422:22 423:2,3,4
I I I I I I I I I I I I I I I I I I I	423:14
	ues 5:7 20:8
-	22:19 26:12 31:14
0	43:12 44:5 55:7
I v v	58:2 150:6 151:15
0	55:10 157:5,6,13
	65:15,16 166:10
Ŭ	75:13 176:14,18
	77:2 190:5 192:9
	93:5 194:22
	201:18 233:20
	239:11 248:20
	256:11 264:9,16
8	277:7 314:7
0	319:10 322:13
	333:6 335:18
	342:19 362:8
,	381:3 385:13
, , , , , , , , , , , , , , , , , , , ,	386:5 396:17
5	399:8,8 400:16
, , , , , , , , , , , , , , , , , , , ,	404:16 412:3
	417:4
0 <b>1</b>	lics 102:14
	<b>m</b> 213:19
290:5,6 326:17 interest 4:13 10:8 interventions Israel 382:18 —	J
341:18 342:5 10:10 11:10 12:5 385:14 issue 68:5 81:16	
	<b>MA</b> 256:4
	<b>y</b> 2:19 20:21 59:6
	59:13 60:14 103:4
	55:6 158:18
	63:5 168:5
	225:15 239:17
	243:4 247:12,19
	260:12 289:13
Instruct 222.21 Interesting 00.10 9.5 205.1209.0	292:19 303:4
	309:3 310:18 261:7 362:14
	361:7 362:14
	398:3 428:15
	<b>CAHO</b> 228:9
	308:2 309:22
	353:18 Fforgen 254:21
	fferson 254:21
	<b>opardy</b> 234:9
	sse 3:17 4:20 5:6
	5:19 8:16 23:11
insurer 369:8 interim 433:4 investment 79:2 414:18 420:13 27	27:20,21 28:4

	1	1		
42:4 44:10 119:20	juxtaposed 86:2	170:21 171:2	118:21 120:2,9	350:20 352:20
148:3 152:16,20		179:10 184:17	121:7 123:18,21	353:15 354:5
159:12 164:6	<u> </u>	197:10 202:11	123:22 124:17	355:3 360:4
165:3 166:17	Kathy 2:18 19:6	214:8,9 219:18	125:18 127:12,13	363:14 364:11,16
167:6 169:16,20	217:21,21 345:7,7	237:19 259:20	127:19 128:3,11	367:11 369:6,15
170:1,6 177:15	360:11	262:5 268:11	128:14,19 129:3,6	373:7 380:6,17
184:2 189:20	Katrina 341:8	269:20 271:8,12	130:1 131:1,3	381:11 382:20
214:13 240:17	Katz 25:2 42:21	272:18 294:4	133:1 138:19	386:4,6,11,22
256:8 300:7	keep 73:2,17,17	295:6 296:12	141:9,15 142:2	388:22 389:15
302:10 332:12	76:16,20 168:22	299:22 303:21	143:8,13 144:5,9	390:21 391:4,18
341:14 367:21	188:11 213:22	306:2 307:15,18	146:15,16 150:5	392:12,15,20
370:5 396:20	223:11 227:5	308:1,9 314:9	150:22 151:8	394:2,13 397:8
413:5 422:6	237:7 269:2	315:9 316:6	152:4 164:12	403:15 405:1,7
<b>Jesse's</b> 41:4 172:6	271:13 282:17	326:19 332:19	170:20 171:13	407:22 408:12
218:17	288:11 309:5	333:13 341:13,21	173:2 174:6 176:3	411:9,19 415:10
<b>job</b> 9:13 12:18	393:3	342:6 346:3 352:2	180:10 185:7,21	415:13,20 416:21
18:16 21:9 22:9	keeping 187:4	352:13 363:4	192:5 198:2 200:9	421:9,22,22 422:8
58:7 65:14,15	277:4 284:9	370:6 373:9 374:5	201:16 202:3	422:21 424:9,21
124:1,2 146:21	<b>Kelen 53:3</b>	377:12 378:9	205:21 207:14	425:18 426:5
174:22 235:17	kept 109:11 139:10	379:9 380:12,14	208:9,12 211:6	428:9,11 432:2
249:18 274:1	269:5 278:17	383:2 389:15	212:18 213:21	knowing 9:12
<b>jobs</b> 16:6	395:22	391:1,7 403:18	214:9 220:19	219:22 267:4
<b>Johnson</b> 20:12	<b>key</b> 46:1 74:1	408:22 410:7	223:11,17,22	335:19 357:16
22:17	keypad 187:18	413:3 416:11	224:20 228:17	knowledge 292:17
<b>Joint</b> 62:20 96:12	<b>Khan</b> 3:16 8:15	418:1 427:1,4	229:4,12 230:9,21	397:11
111:11 194:15	kicked 417:17	429:12,14	233:13 238:19	<b>known</b> 104:19
225:8 230:2	420:12	kinds 103:13	245:6 252:5,11,12	389:4
237:16 251:13	kicking 416:16	118:11 123:22	260:13 261:18	<b>knows</b> 94:19
352:22 353:19	<b>kidding</b> 275:1	124:2 140:8	263:11 271:12	112:11 126:16
428:2 429:6	<b>kids</b> 188:16	174:18 188:13	274:4 283:19	240:18 295:14
<b>joke</b> 350:15	kind 44:22 53:19	304:16 382:14	284:10 285:21	
<b>Jones</b> 288:11	55:12 62:4 68:12	389:19 392:4	287:14 288:2,9	$\frac{L}{1.1.100.17.156.10}$
judgment 107:2	75:2 77:12 79:1,6	396:9	289:4 290:10,14	lab 100:17 156:18
112:9 130:17	80:11,22 86:14,16	knew 96:20 112:7	290:20 291:22	210:2 230:17
judgments 409:14	91:5,7 92:2 97:11 98:22 103:9,22	Knight 115:22	292:8,14 295:19	291:16 Labor 269:10,13
juice 34:6	105:13 106:1	know 10:22 14:19	296:13 298:1,10	
<b>jump</b> 46:14 81:17	109:16 115:11	28:1,2 31:1 32:1,9	300:5 304:9 305:2	<b>laboring</b> 12:19 <b>labs</b> 101:1 209:3
82:1 129:21 331:2	123:17,20 124:6	34:6 42:1 51:4,5	305:5 309:17	285:22
jumps 165:3	125:4,6,13 126:6	53:17 56:11 59:15	316:4 317:13	lack 136:1,6 152:1
juncture 355:7	126:16 127:9	59:16,20,22 61:16	318:15 319:11	237:9 238:8
356:12	128:3 131:9,9	62:11 64:4 67:6 69:11 74:15 88:11	320:1 322:3,20	lacking 97:6
junctures 401:16 jurisdictions 99:7	136:8,9 137:16		327:16 331:16,17 333:14 334:5	Lancet 53:3
justifying 379:4	139:13,18 140:9	88:12,15,17 94:16 103:3 107:14	335:10 337:9,12	land 360:6,6
just-in 51:18 160:3	141:17 151:8,22	109:4,19 110:7	337:13,20,22	language 386:9
221:10	151:22 152:3	115:14 116:14	340:6,13 345:1,3	407:22
just-in-time 51:12	159:8 160:15,20	117:15 118:7,18	348:8,16 349:3,22	languages 120:7
<b>Just-111-1111C</b> J1.12	10,10 10010,20	11/.15 110./,10	540.0,10 547.5,22	
		I		l

				Page 45
large 22:18 54:1	207:5	less-urgent 163:14	376:18 383:21	<b>list</b> 47:4 96:9 312:3
69:15 264:21	learned 101:3	letting 180:15	384:6 394:6	333:10 395:19,20
265:2 299:21	139:11	411:20	401:13 409:4,5	<b>listen</b> 407:9
323:14	learning 105:10	let's 8:10 44:22	410:21 411:1,6	listened 354:16
largely 273:10	119:6	92:6 107:16 109:2	412:7,13 413:22	listening 367:1
larger 143:12	leave 37:3 197:21	141:7 165:17,19	416:2,2 427:4	lists 396:9
203:4 314:7 343:2	211:17 214:11	169:19 177:14	levels 23:18 27:6	literally 78:3
largest 16:7	226:6 255:4	230:5,19 238:21	57:18 192:17	326:17
large-scale 45:17	317:12	254:20 267:20	257:18 264:3	literature 192:18
63:1 69:21 323:20	leaves 340:18	275:7,16 297:12	288:13 311:14	200:19 300:15
375:22	leaving 71:7 85:6	301:19 322:4	331:12 333:6	301:20 302:9,19
lastly 166:11 176:3	296:6 317:22	419:3,5,9	358:6 368:9,10	305:6 318:16
lasts 50:14	357:13 358:10	level 27:12 33:12	370:14	380:5 386:1 389:1
late 19:21	led 24:14 128:6	34:17,18 37:6,10	leverage 49:10	393:13 396:15,15
latest 98:8	<b>left</b> 38:5,7,8 45:16	64:10,10 75:7,11	Levine 2:9 21:7,8	396:19,22 397:1,2
late-stage 414:2	63:21 69:17 99:22	75:13 80:14 86:4	163:1,3,4 321:1	397:16 418:13
laughter 17:20	226:12	89:15 93:15	lib 54:9,9	little 10:11 15:17
23:15 31:3 110:15	legislature 205:1	109:16 110:18	life 21:20 24:14	30:7 31:17 58:16
117:10 123:7	length 53:12,19	111:2 121:1,4,15	161:1	61:22 68:12 86:2
125:21 131:22	128:16 133:6,12	132:21 133:11,22	light 116:4 274:15	86:6 104:18
137:8,11 138:11	160:5 162:3	135:13 140:6	307:8 417:19	107:14 108:8
143:3 145:10	192:17,21 193:8	141:7,8 143:13	liked 271:1	118:1 121:22
179:14 183:9	194:6 203:2,22	144:4 145:2,4	likelihood 130:18	122:1 123:12
199:16 202:11	214:20 215:2,15	154:1 155:22,22	369:11 426:9	124:12 126:4
212:3 229:2 279:8	239:9 241:9	157:22 159:5	likes 93:14 97:12	128:20 132:8
285:10 288:8	242:10 244:6	172:15,19 173:18	limit 358:17	137:14 139:15
289:16 297:9	253:4 254:16	173:18 174:2	limited 109:15	150:9 155:21
309:7 313:18	256:4,22 259:10	176:9,20,22 178:4	180:14 290:19	169:19 183:10,11
314:22 326:18	259:17 261:19	180:20 186:5,6	427:20	190:4,9 196:9,12
340:14 351:2	262:19 264:20	196:8 207:7,8,9	Linda 2:12 22:2	203:5 218:16
363:1 366:8,20	265:2,16 266:10	213:18 241:5	362:18	225:1,2 240:21
394:22	280:3 291:11	247:18 250:13,18	line 42:21 46:4	255:1 257:13,16
launch 425:2	295:15 300:12,20	252:1 261:4,15,16	160:16 189:4,6,9	259:14 271:16
law 82:19 166:5	301:22 305:7	264:1,5,6 266:16	199:8 228:13	273:9 278:11
lay 26:14	315:5 316:5,21	266:19 292:5,6	330:15 417:10	280:19 281:12
layers 352:12	329:22 331:14	296:4 306:14,15	<b>lines</b> 42:21 89:17	288:19 308:1
lead 95:14 222:22	363:7,12 366:11	310:9 311:15,15	199:6 318:8	310:21 319:17
304:17 378:7	421:3	311:15 324:4	335:22 421:8	320:8 325:13
leadership 117:4	lengths 257:4	328:14 330:5,9	lingo 87:19	333:13 345:13
209:15	lengthy 10:14	333:1,3 336:16,16	link 134:2 167:12	348:21 378:17
leading 29:1	length-of 264:15	337:2,4 351:11	185:22	388:15 403:17
433:10	length-of-stay	355:6,6,7,8 357:2	linkage 167:21	405:9 410:13
lean 392:10	326:11	357:20 363:4,5,6	linked 36:9 37:20	416:11,13,17,21
leaner 51:12	lens 35:1 142:12	363:8,10 364:12	linking 120:11	426:2
learn 105:15,19	186:14,16	364:16 368:10,19	164:22 186:7	live 254:6
115:7 118:13	lesser 81:14	370:17,18,19	405:8	lived 39:10
119:3,11 138:3	lessons 137:22	374:20,20 376:17	links 99:21	lives 403:7
	1	I	I	I

r				)
living 235:4,4	50:17 61:12 62:17	75:15 101:6 107:3	97:14 99:8 101:21	404:11,21 405:5
347:1,2	63:8 66:10 70:3	107:21 120:2	107:12 111:10	408:17 412:10
loaded 254:5	71:5,14,22 76:6	127:21 128:15	112:13 114:14	415:14 417:16,17
local 36:2 58:9	76:11 79:3 83:3	129:19,20 151:12	115:17 118:6,13	422:5,10 424:13
69:10 83:7 121:9	89:19 96:4 100:20	152:3,5 153:22	120:4,10 124:11	427:11 428:4,10
414:13,15 415:5,7	105:20 106:3,7	163:2,6,7,10	127:21 130:10	428:11 430:14
localities 98:14	113:10 114:20	171:2 173:21	131:10 133:2,14	431:9 432:3
99:3	118:2 121:3 128:1	175:16 176:8	134:18 135:6	lots 9:12 40:16
locality 68:22 69:9	136:9 144:2	182:17,19,19	137:15,16 138:16	41:21 153:13
locally 68:21 101:7	147:14 148:12	190:16 192:4	139:4 141:22	157:15 174:14
locally-produced	150:16 154:1	193:4,5,7 196:14	146:21 155:18	178:10 256:10
419:2	155:14,15 157:4	200:22 203:21	156:12 158:10	257:13,16 383:13
location 98:17	167:1 170:15	205:8 206:20,20	162:20 164:16	383:13 399:8
locations 345:17	172:20,21,22	213:7 214:1,10	166:20,22 175:20	414:7 421:13,13
logarithmically-l	182:22 183:17	222:9 234:8 256:4	178:14 179:16,19	love 31:4 63:7
114:8	187:1 193:16	285:1 290:22	181:12 184:8	175:7 289:17
logic 54:19 95:1	202:17,19 207:7	298:14 301:20	185:4 192:15	362:21
378:6	212:10 222:22	304:14,15 306:7	194:5 201:9	loved 30:14
logical 99:22	230:20 232:7	314:1 352:4 360:1	206:21 216:1,9	low 142:1 157:21
175:12 378:9	235:1 236:22	362:2 364:17	219:5 224:8	160:19 266:11
382:10 430:11	266:9 267:8 289:3	389:2 396:18	235:17 236:19	273:12 383:18
logically 389:18	293:5 312:12	397:8,15 407:20	238:17 240:12	407:10
long 10:21 85:6	315:14 317:9	409:13 414:2	242:4 243:16	lower 56:3,16 81:8
100:20 130:15	323:7 325:6 328:6	425:10 427:16	246:4 252:2	130:18 156:22
161:16 194:6	342:12,13 348:22	looks 69:2 143:5	253:18 258:17	381:13
205:8 211:1,2	366:10 367:15	215:14 216:20	265:11 267:1,10	lower-acuity 57:8
229:8 230:17	370:12 371:10	217:1 230:20	270:4,17 271:10	73:15 164:4
239:9 261:19	373:14 374:18,18	231:21 232:2	271:15,17 277:6	lower-level 161:11
262:19 275:18	387:15 388:11	236:7,8 267:17	277:18 279:17	low-acuity 234:17
286:16 292:18	392:3 397:4 410:3	330:6 348:18	283:6,16 285:6	low-level 160:20
316:13 317:14	413:20 417:11	372:12 411:10	288:14 289:1	161:2
331:15 354:16,17	418:6,10 419:5,22	427:21	290:4 292:22	luck 158:10
354:19 358:7	424:1	loop 175:17,21	294:13 295:1	lucky 140:22 396:3
359:8 395:19,20	looked 12:12 46:10	<b>loose</b> 282:20	302:11 314:20,21	<b>lumped</b> 332:10
432:2	68:8 124:18	lose 190:6 267:1	320:16 321:6	lumping 330:22
<b>longer</b> 135:6	128:10 144:1	347:13 395:14	322:12 324:16	lunch 184:2,5
238:19 252:9,14	155:21 192:16	lost 58:15 84:13	327:1 331:11	187:7,8 188:17,20
253:6,7 254:17	194:3 198:4	171:8,10 172:3	335:14 337:17	M
257:4 269:3 287:8	199:20 201:8	262:3 336:21	344:9 345:1	
366:7	241:2 290:10	347:18 361:6	349:16 353:10	<b>MacINTYRE</b> 2:10
<b>longer-term</b> 216:10	298:12 302:13	lot 15:14 16:10,15	354:22 369:11	23:7,9 74:21
long-term 48:18	311:18 380:8,9	20:7 34:7 35:8,15	370:15 374:4	140:11,15 152:9 152:12 363:22
60:1 69:4 74:4,10	418:19	37:8,17 43:9,10	379:15 385:8,19	396:14 400:10
74:11 109:8	<b>looking</b> 9:20 26:14	63:20 74:22 78:18	386:1 387:21	<b>macro-level</b> 134:7
345:17 Jook 27:1 31:20	27:3 28:9 34:4	85:11 86:16 87:4	388:6 391:18,19	Madrid 83:22
<b>look</b> 27:1 31:20	49:7,9 60:20 62:8 66:2,7 71:19	87:20 90:13,15	393:14,21 394:2 397:2,8 402:8,12	395:8
35:2,14 37:8 39:2	00.2,7 /1.19	94:11,14,20 96:6	371.2,0 402.0,12	0,0.0
		I		I

<b>magical</b> 228:20	Manish 2:20 17:5	375:22	230:15 234:1	26:17 27:15 28:17
230:21	319:16 332:16	massively 272:11	238:3,11 239:4	29:5,5,8,10,14,17
magically 148:9	340:18 353:6	333:18	245:7 246:2	29:20 31:14 33:8
183:7	<b>manner</b> 124:6	matchmaking	252:20 253:8	33:13 34:14 35:7
<b>main</b> 62:3	210:22	430:9	255:21 257:2,14	35:17 36:18,18,19
<b>maintain</b> 132:14,20	manpower 345:22	<b>matter</b> 122:6	258:10 275:1	37:21 38:14 39:11
133:11,21 134:3	manual 200:12	128:17 188:19	277:2 295:18	39:17,17,21,22
397:11	<b>man-down</b> 165:19	266:3 322:5	296:18,22 298:21	41:22 42:1,2 44:7
<b>major</b> 34:13 37:16	166:10,12	399:12	299:1,2 319:21	47:22 49:20 50:10
44:4,5 196:3	<b>map</b> 313:4	matters 7:19	338:20 346:5	50:14 51:9,22
264:17 385:8	Marcello 316:10	207:13 239:5	348:18 349:10	52:5,18 54:4 57:7
386:14	<b>Marco</b> 318:11	<b>mature</b> 77:19	350:6 352:7 353:8	57:21 60:21 61:7
majority 166:9	406:13 421:14	maximized 160:5	354:22 356:14,21	61:14 68:9,19
395:8	<b>Marcozzi</b> 2:11 5:8	<b>maximum</b> 326:10	357:6 359:21	69:2 70:18,19
making 26:1 39:7	25:15,15 43:21	<b>MBA</b> 125:3	360:8 363:8,10	72:14 73:4,9 74:6
40:15 43:14 86:11	44:9,10 58:18,21	McCAIG 2:12 22:2	365:6 375:13	74:12 75:8 79:11
107:13 127:17	59:12 62:6 64:11	22:2	380:17 381:16	80:17 82:22 83:9
131:1 156:10	67:4,10 69:11	<b>McCARTHY</b> 2:13	382:9 386:22	84:18 85:5 88:1,4
158:21 164:20	70:9 72:17 77:14	22:20,21 77:5	389:9,12 390:1,13	92:2 93:13 95:17
187:3 194:10	81:17,21 145:22	123:4,10 124:22	399:2,14 400:21	100:11 103:9
209:5 238:2 255:7	165:1,2 433:13	128:9 139:1,3,22	401:18 404:5	104:4 107:4
288:18 297:19	Margolis 2:12	140:21 207:16	405:22 406:4,7	108:12,15 109:14
299:6 355:14	16:19,20 20:3	227:1 298:20	411:18 412:2	114:5,11 119:2,7
377:13	306:5 330:14	299:18 362:21	413:9,19 414:15	119:8,9,13 120:15
manage 71:21	332:1 415:12	mean 11:10 62:2	421:7 423:17	120:17 122:1,3
73:18 149:3 205:4	423:15	80:6 82:7 85:2	427:8,10,14,19	142:11 145:3
272:5 312:7 314:4	mark 50:16 53:21	92:9 101:20 104:7	429:22	146:6,7 150:12,13
330:10 358:7,8	68:3 69:3	110:22 117:17	meaner 51:12	159:3,5 164:10,19
365:9	<b>marked</b> 98:4	123:16 124:19	meaning 200:6	165:5 166:18
managed 315:18	marker 54:11	126:16 129:15	290:3 299:14	171:4 172:13
<b>management</b> 24:6 48:19 148:21	220:3 358:18,20 markers 47:12	130:10 132:22 133:14 134:5	<b>meaningful</b> 215:11 283:22 296:9	173:9 175:16 178:9,10,12,13,15
149:17 203:14,16	market 78:12	133.14 134.3	307:1 343:9	178:17 182:2,16
205:10 209:17	145:13 155:19	145:22 146:3	350:19 409:4,6	184:14 185:5
304:3 347:4	344:3	147:7 150:6	means 6:19 16:15	191:4,16 192:2
365:11 396:21	marketplaces	151:14 157:3	101:18 194:13	191.4,10 192.2
397:5 424:14	137:2	159:17,22 160:3	213:16,17 222:5	196:19 197:3,8
425:6,10	markets 79:16	161:16 165:2	243:18 245:6	199:1 200:2,4
Manager 19:8	343:16,20 344:1,4	173:22 175:12	250:2 254:5 266:6	201:8 202:22
managers 75:6	344:9	179:18 184:7	286:21 298:18	201:8 202:22
managing 121:7,8	marks 47:12	197:3,9,15 198:1	300:7 388:19	215:11 216:13
149:8 383:18	355:14	198:5 199:4 204:4	424:16 426:14	222:17 226:6,12
mandate 153:15	Maryland 424:10	208:8 212:14	meant 122:19	232:17 220.0,12
mandated 177:8	mass 102:7	214:8 218:17	294:21 295:1	240:7 244:16
mandates 137:2	Massachusetts	222:19 223:20	measurable 309:13	245:22 251:3
mandatory 62:20	353:13	224:21 226:17	measure 5:22 6:10	261:15 262:18
62:21	massive 311:16	228:13 229:7	7:15 8:5 14:3	268:1 275:10
	I	1	1	

279:14 284:4,20	320:4 331:15	104:17 105:4	310:17,19 311:1,3	293:5 339:16
285:3 298:19	336:12 403:4	106:5,18,22 107:1	312:17 315:3,4	426:12,18 427:17
301:12 302:15	measurement 5:7	107:8 108:13,19	317:1 319:9 320:9	mechanisms 311:3
303:2,16 308:18	5:23 15:12 38:4	114:20 120:19	324:3,16,17 325:2	426:8
309:22 310:21	40:8,8,8,15 43:17	121:13,15,21	325:7 326:10	<b>median</b> 241:16
311:2,5,6,6,11,14	43:17 44:1,4	142:8,8 148:15	327:11 330:7	274:13,17,21,21
311:16 312:12	88:20 91:10,12	150:18 151:22	331:4,6,11 334:10	275:6 297:13
313:1 319:1,3,8	104:2 107:7	156:7,12,14 157:4	334:22 341:15,16	299:4,13 363:12
319:20 320:13	113:14,21 121:1	157:9,13 158:11	342:13 344:14	medians 6:19
323:17,20,22	126:6,11 143:15	158:13,16,18	345:4 348:10	298:17
324:22 325:6	184:13 185:3	159:14,16,20	350:6 354:13,14	Medicaid 2:17
326:11 335:10,20	186:8 190:4	160:12,15 164:21	361:15 362:1	248:17
335:21 336:15	191:20 195:10	170:10 171:11	363:17 365:3,3	<b>medical</b> 1:5 2:11,20
338:19 340:4,10	196:21 200:21	173:4,17,21 174:1	366:10 368:8	2:22,24 8:5 17:9
340:11 341:4	201:1 205:20	174:6,8,10,19	370:1,13,16,16	17:21 18:19 21:10
342:12,22 343:3	227:16 279:18	175:6,22 176:17	372:9 373:13	21:12,21 47:1
346:14 349:4	309:19 324:9	177:20 178:8	374:4 378:14,19	50:1,3 52:22 77:9
350:22 351:8	337:1 373:15	179:4,10 181:7,10	382:14 385:9,18	78:2 102:8 135:16
354:18 355:4,9,15	375:16 410:21	181:12 183:21	386:9 387:3,10,15	235:21 273:20
360:9 361:11	420:21 423:2,14	184:17 185:17,20	387:16,21,22	311:14,15,21
362:10 371:10	429:5 430:13,18	186:1,3 187:2	388:4 391:8,10,20	339:3 396:15
372:2,14,15,19,20	measurements	188:9 190:8,10,18	393:7,15,20	<b>Medicare</b> 2:16
373:1,3,8,12,18	204:18 205:9	192:4,12,15 193:9	394:11,14 399:3,9	78:16 135:3 216:3
374:3,6,19 375:17	280:22	193:17 195:10,11	402:13 403:8	234:19 245:9
375:18,18 376:12	measures 4:24 5:4	195:14,22 196:1,1	408:5 412:22	246:10,11 263:4
376:12,14,15	5:18 6:4,12,18,22	196:5,7 197:18	413:9 414:19,20	281:10
379:12,20 380:22	6:24 7:8 8:8	198:3,7,13 199:2	420:5 425:2	Medicare-partici
381:6,22 387:19	13:22,22 21:17	199:8 201:20	426:10 428:10,12	79:4
388:20 390:2,17	26:14,16,17 27:2	203:7 206:4.10	428:13 429:16	<b>Medicate</b> 246:13
390:18 391:5,13	27:5,12 28:18,19	214:2,8,18 215:9	430:15 431:1	medication 227:10
394:4,17 398:14	30:1,12 31:12,18	220:12 224:8,15	measuring 33:20	medicine 9:11 14:6
399:17 400:9	31:19 32:4,20	226:14 227:14	47:6 61:4 86:9	14:17 16:7 17:6
401:10,13 402:15	33:17 34:7,17,21	236:15 240:4,5,7	95:20 102:21	18:8 20:14 21:9
402:17,22 403:2,2	35:2,13,17,18,21	241:3,11,15 244:7	104:5 108:20	21:16,21 22:9
404:20,21 405:15	36:14,21 37:4	248:5 250:16	110:18 111:1,14	23:1 57:11 89:5
406:1 407:7	38:8,12 39:2,20	251:2,12 259:6,15	142:14 145:1	127:13 273:5
408:13,14,18	40:18 46:17 47:14	260:17,22 262:10	156:10 157:10	278:5 280:8 328:7
409:2,7 410:17,20	47:16 59:15 61:21	263:10,18,19	161:16 171:21	<b>MedStar</b> 90:12
412:7,9,19 413:11	62:1,1,18 64:9	264:3 266:19	184:20 188:15	meet 28:2 70:4 95:5
414:1 418:9,17	66:5,14 67:21	268:3 269:17	203:20 207:19,20	95:15 104:13
425:22 426:3,13	75:9,15 76:3,4	270:3 274:11	207:21 211:7	235:18 268:20
427:14 428:6,16	82:3 84:18,20	292:2 297:12	228:15 234:9,10	270:1 308:22
431:10	85:9,12,17,22	301:1 302:4,5	236:3 281:11	309:1 387:8
measured 85:19	86:8,13 88:18	303:8,10,13,14,14	299:16 301:16	410:17
91:14 92:7 171:22	91:1 99:16,17	303:16 305:5,7,9	379:5 407:12,12	meeting 1:7 9:2
188:10 203:15	100:12 101:21	305:15,20 306:13	<b>meat</b> 44:6	16:2 26:7 29:2
217:20 261:4,16	102:15 103:19	306:15 308:8	mechanism 181:21	71:7,9 107:9
				,, <u> </u>
	I I		I	1

			1	
183:14 274:20	189:17,18 197:7	336:19 338:9,22	mentioned 38:21	<b>micro</b> 424:21
366:11 386:22	198:1,22 199:5,18	339:11,18,22	93:18 97:19	micro-event 424:21
433:10,12,18	200:17 201:3,5,6	340:5,12,19	195:14 196:2	micro-level 134:5
meetings 9:19	204:10 205:13	342:21 344:17	301:8 311:8	<b>MICU</b> 73:14
251:12	206:6,8 207:11,16	345:8 346:8	316:11 325:22	<b>MICU's</b> 73:8
Melissa 2:13 22:21	208:4,12,15,20,22	347:16 350:4,13	328:4 334:21	<b>middle</b> 85:20
74:20 123:4	210:16 212:4	350:22 351:5	386:3 392:2	117:16 215:6
127:19 132:8	213:21 215:19	352:17 353:1,7	426:20	mid-management
192:15 362:20	216:15 218:1,16	354:2 356:18	mentioning 108:20	227:12
364:15 366:17	225:16 227:1	358:20 359:5,14	message 209:8	<b>mid-range</b> 383:18
<b>member</b> 14:5,15	228:12 231:1	360:12 361:9	messed 217:11	migrate 169:16
15:3,7 16:5,19	233:9,12 234:6	362:21 363:22	<b>met</b> 1:17	<b>Mike</b> 2:21 5:11
17:4,15 18:5,15	237:2 239:2,18	366:2 370:4 371:2	metaphor 136:5	15:5 24:22 43:21
19:5,18 20:10,21	240:9 243:5	375:1,3,4,13	meta-analysis	80:3 86:19 120:21
21:7 22:2,7,20,21	244:14 245:7,12	377:6,20,22 378:1	389:13 390:7	126:21 137:5
23:7 24:9 25:5,15	246:9,14 247:5,14	378:4,21 380:4,7	<b>method</b> 149:4	177:17 185:8
25:19 30:20 42:10	249:5,10 251:19	380:16 381:11	245:10 290:15	201:17 249:5
44:10 58:18,21	252:19 254:3	382:20 383:8	methodological	252:21 305:16
59:7,12 60:15	255:2,21 257:2,11	386:11,20 388:1	26:12	322:20 327:21
62:6 63:16 64:11	258:10 259:4	389:8 390:13,19	methodologies	364:19 377:4
67:1,4,6,10 68:11	260:13 262:7	391:22 392:9	54:17 185:1	386:3 387:17
69:11,22 70:9	264:11,14 265:13	393:3,9 394:9,20	202:20	389:1 399:6
71:11 72:17 74:21	268:7 272:14	396:14 398:4	methodology	422:20 433:13
77:5,14 78:8 80:7	273:7 274:8	399:7 400:2,10	185:15 205:3	mild 149:1
81:17,21 84:12	275:12 276:2,18	401:6,9,11,18,21	241:18 242:18	miles 156:17
85:2 86:20 108:7	277:1 278:15	405:14 407:3,16	248:12 255:13	million 64:13,18
110:4,6,8,10,12	279:1,5,13 282:4	407:17 408:11	267:15 321:7	65:5 66:3 67:7
110:13,16,17	284:6,17 285:8,12	409:9 410:2,9,19	391:17,19 399:22	142:4 223:13
111:7 113:16	285:14 286:8	411:8,13,17	<b>methods</b> 38:16	431:8
115:2 118:21	288:2 290:1,13	412:18 413:7,15	149:8 324:13	mind 16:13 62:4
123:10 124:22	291:10 292:20	414:9,17 415:2,12	<b>metric</b> 67:8 135:22	129:7 187:4
125:19 126:22	294:1,19 297:6	417:15 421:2	243:11 310:8	188:11 220:10
128:9 129:3,19,21	298:20 299:18	422:21 423:15	334:2 340:6	223:11 227:5
134:8 137:6 138:8	301:2,15 302:8	424:5,12 425:15	metrics 21:19	298:13 313:11
138:14 139:1,3,22	303:5,21 304:11	426:11 427:8	155:3 163:7,11	325:10 326:1
140:3,11,14,15,21	305:17 306:5	428:1,9,18 429:19	164:2 207:6	332:11 361:10
141:2 143:1,8	307:15 308:16	431:6 432:13	234:11 332:20	393:3 417:21
145:22 150:1	309:4 310:15	members 11:14	339:12 357:2	mindset 125:14
151:14 152:9,11	313:10,19 314:11	12:3 44:13 57:4	420:1 425:2	161:5,9 181:2
152:12 153:8	316:2,9 317:8	187:13	<b>metro</b> 79:20 114:10	mindsets 123:14
155:7 157:7	318:3,22 319:17	membership 21:13	400:13,22	mind's 281:16
158:15 160:18	320:11 321:1	21:18 63:21	metropolitan 78:11	<b>mini</b> 20:18
162:9,12 163:4	323:1 325:9 326:7	mental 231:18	136:11	minimized 160:6
165:2 170:2,5	327:22 329:9	426:20	Mexico 101:13	minister 326:13
172:5 177:18	330:14 331:2	mention 37:2 105:8	<b>MI</b> 52:13	Minneapolis 17:22
179:3 181:18	332:1,12,18	224:6 326:2	Michael 2:16 42:20	<b>minor</b> 287:9 336:8
188:7 189:7,10,12	334:19 335:9	332:17 426:11	260:13	minorities 248:18

			l	1
minus 53:13 65:5	modify 191:6,6	<b>MOUs</b> 48:8	N	72:3 76:4 78:19
<b>minute</b> 180:13	197:20 378:16,18	<b>move</b> 36:19 55:5,8	nail 62:7 309:5	79:10 81:1,13
321:13 331:3	385:17 386:8	57:12 64:20 65:6	name 8:13 16:5,20	82:11 88:17 90:21
minutes 51:1 75:1	408:4	73:18 75:16 104:8	17:5,16 18:6	94:8 97:2 98:2
116:21 120:14	moment 41:21	109:3,5,7 110:10	20:11 235:15	99:1 100:1,7
122:5 169:21	48:11 92:5 187:19	122:10 131:1	narrower 212:22	105:3 106:17
275:21 291:14,16	332:15 355:20	143:17 206:10	<b>NASEMSO</b> 19:13	107:4,6 109:10
295:3,16,18,20	423:7	219:14 231:13	Nashville 13:18	113:8 118:10
423:11 425:19	money 12:9 49:13	265:21 267:13	nation 31:13 58:5,6	120:18 121:12
<b>mirror</b> 71:19	270:20 271:20	273:2 274:5	66:11 71:4 394:5	125:10,11,14,19
miserable 422:4	277:10 328:11,12	284:18 287:21	national 1:2,19	127:5,7 130:8
misleading 115:3	328:16 425:12	288:10 314:18	2:18 9:9 13:9	131:12 133:20
mismatch 135:4	430:18	319:8 335:3	15:22 19:9,14	141:15 142:13
misnamed 48:14	monies 48:15,16	345:18 346:14	22:3,4 34:2 56:2	145:14 147:4
misrepresenting	monitor 58:22 59:1	356:13 370:21	58:10 83:8 89:15	150:15 153:2
205:9	Montgomery	375:7,9	154:8 175:15	175:1 178:6
missed 70:8 117:12	152:18	moved 36:7 117:1	213:8,18 222:20	179:11 181:4
205:16	months 10:13	212:9 354:22	289:18 328:4	185:11 200:2
misses 69:3 70:6	131:15 140:22	404:10	353:3 354:3 374:8	204:17 205:19
missing 38:19 80:4	241:2 256:17	movement 367:5	374:10 376:1	206:2,9 208:2
147:11 175:10,20	288:21 428:20	movements 367:7	384:6 385:10	221:7,11 234:22
206:17 365:18	moral 132:2 345:2	moving 35:10 41:6	nationally 256:18	236:6 237:7
383:9	morbidity 63:9	60:20 77:22 93:19	national-level	242:17 260:9
mistake 313:14	92:22	346:22 347:17	352:6	266:8 268:20
314:12	morning 8:3,7 9:16	353:12	nation's 383:21	274:4,5,5 282:2
mitigate 92:21	10:5,16 15:3	MSA 248:21 257:7	<b>natural</b> 430:7	287:11 294:4,14
<b>mix</b> 241:7 244:9,15	16:19 17:4,15	<b>MSCC</b> 24:3	naturally 299:22	311:5 316:20
245:5 248:21	18:5,15 19:5,18	<b>multi</b> 88:11	nature 12:7 267:9	318:14 321:4
254:14 257:8	21:7 23:8 24:9	multiple 38:15	378:15 427:20	324:11,18 331:3,5
258:7,15 367:17	26:4 30:9 43:8,20	143:6 170:13	NCQA 311:13,14	346:1,13 347:8
mixed 278:21	119:17 124:13	301:13 312:4	<b>nearly</b> 263:6	355:8 356:22
<b>mixes</b> 137:9	186:14 191:5,12	352:12 388:10	nebulous 412:1	357:5 360:16
<b>mobilize</b> 46:20	204:15 206:16	411:2 414:14,18	necessarily 12:4	369:4,15 372:19
<b>mode</b> 147:4 410:13	278:6,8 304:12	414:20 422:3	48:3 159:22 168:1	379:7 380:5
model 15:20 50:21	306:10 308:4	multi-state 415:9	174:13 208:7	382:13 383:3,5
54:19 95:1,9	322:2 323:11	municipal 416:2	217:16 235:12	384:17 390:9
99:22 106:1,7	364:2 372:8 373:9	must-pass 390:16	250:22 261:1	400:10 415:8
183:4 190:14	377:13 406:13	must-past 373:2	264:20 265:6	422:11 425:5
195:4 219:4 236:7	421:13 431:7	Mutter 2:14 25:19	371:20 385:16	426:8 430:16
254:12 255:3,8,11	morphs 314:6	25:19 172:5	415:21	431:1
256:1 258:4,5	mortality 63:9	181:18 199:5	necessary 101:10	needed 57:20 89:11
278:13 283:19	92:21 159:7	247:5 290:1	101:10 250:9	94:3 268:12 269:9
292:12 311:22	mother 30:21,22	347:16 417:15	311:4	282:21 316:14
328:7 361:14	motivated 302:16	426:11 427:8	necessity 235:21	needing 77:7
378:6	369:14	mutual 424:15	need 30:2 54:3	345:11
<b>modern</b> 50:13	motivators 147:19	mutually-accoun	55:11 56:8 66:21	needle 64:20 65:6
modified 176:18	148:1,13	145:5	67:13,14,15,19	needs 60:14 62:11
	-	-	-	-

				Page 401
70:20 71:20 79:7	212:17 222:21	30:7,7,13 31:18	73:18 134:22	<b>OCTOBER</b> 1:13
82:9 107:3 111:15	241:4 248:1	31:22 32:11 33:1	135:14 210:20	odd 119:18
131:1 200:3 210:6	256:18 334:14	33:5 39:13 40:9	223:20 288:5,17	offer 102:18 357:11
261:15 289:14	338:2	87:20 91:7 93:13	289:2,5 317:17	384:21 416:19
310:8 355:4	<b>NHS</b> 179:20 276:3	97:12 108:2,8	nurse-run 282:10	office 2:7 16:22
372:14 379:5	nice 28:2 176:7	120:19 121:16	nursing 18:17	18:10 20:3 24:11
383:22 413:16	278:7 327:19	122:3 153:15	19:12 288:4,16	175:15 269:11
424:4	429:4	171:13 175:8	<b>N.W</b> 1:20	official 89:7 423:20
<b>negative</b> 230:4	nicely 212:20 219:2	186:4 197:17	11.00	officials 2:18 19:9
272:2	night 117:16	199:3 222:9 226:3	0	416:1,9
negative/testing	157:18 158:7	228:7,8 263:2,11	objective 290:11	offload 55:2 59:3
418:5	278:10 298:1,2	311:12 324:21	378:13	72:3,4,6 81:13
neighboring 81:11	317:13,16	334:10 339:5	<b>objectives</b> 95:16,18	218:8 319:21
344:6	nightclub 157:19	361:11 370:21	objectivity 107:1	320:2,12 333:1
neighbors 359:10	nine 15:11 330:3	371:6,10 372:14	obs 131:21 272:12	338:16 345:13
<b>Nelson</b> 92:14	nine-step 222:4	378:13 380:15	275:22 276:19	offloaded 57:5
<b>NEMSIS</b> 167:7,10	noise 227:16	387:11,20 397:14	277:3 278:1,2,5,5	offloading 359:9
167:12	nomenclature	397:18 405:7	278:9,13,13,16,17	406:16
nested 203:2,19	335:5	408:3 422:19	285:7,15,17,18	offload/onload
net 190:18 256:6	nominated 11:20	408.3 422.19 429:22 433:5	<b>observation</b> 142:20	70:4
<b>neuro</b> 316:15	nominations	<b>NOF's</b> 10:6	215:21 216:7,10	oftentimes 40:7
neurosurgical	122:15	NQF-Endorsed 7:8	216:11 233:3	95:20 208:7
358:3	<b>non-acute</b> 163:21	177:20 215:9	236:20 272:20,22	of-life 394:1
<b>never</b> 36:19 126:19	non-safety 256:5	241:3	277:5,15 280:1	oh 67:4 131:11
184:4 185:9	non-safety 230.3	nuanced 280:7	281:2 329:17	162:6 177:6
206:20 312:14	<b>noon</b> 169:18	284:15	346:20 349:9,11	183:11 188:3
394:11,17,19	normal 137:15	<b>number</b> 19:2 21:22	349:16	189:8 233:10
398:5,9,11	369:18,19 384:12	22:16 51:14 60:19	observations	243:3 247:12
nevertheless	<b>north</b> 144:6	74:7,9 87:5	354:12	249:10 294:17
180:22 203:6	noses 47:18	138:19 155:10	observe 273:14	296:20 320:21
new 16:14 51:15,17	note 26:22 175:18	161:17 187:18	285:13,19	372:6 380:10
52:4,22 53:1,1	175:18 231:19	195:14 201:19	observed 281:22	404:4 406:9 409:9
60:9 101:14 117:8	343:7 382:12	213:10 215:6	<b>obtained</b> 291:14	413:6
131:16,18 142:2,3	394:1	225:7 226:8 241:5	obvious 291:11	<b>OIG</b> 235:16
219:2 263:2 266:7	notes 307:17	241:10 293:18	299:2 428:2	okay 8:22 10:4
269:11 278:4	Notice 52:15	310:4 329:21	obviously 16:1	24:19 25:4,6 26:6
284:11 384:9	noticed 187:11	335:22 336:1	21:16 32:1 40:12	43:1,3 74:19 80:1
393:20 397:14	notification 221:5	384:18 385:1,1	55:11 75:6 90:2	80:4 86:18,20
398:17 433:7	<b>notion</b> 331:17	399:19,21 400:1	123:1 141:10	143:6 144:20
newcomer 107:18	332:9	400:19 419:11,15	231:11 336:2	145:2,3,3 147:3
newer 174:7	<b>novel</b> 110:3,19	<b>numbers</b> 127:9	397:13 399:14	143:2,3,5 147:5
newly 44:16	111:5 125:6,10	151:19 243:10	occasions 230:3	163:16 173:3,11
newly-defined	406:22	295:11 359:7,8	occupancy 192:4	177:9,18 179:1,21
422:17	<b>NOF</b> 3:10 4:6,15	364:17 368:20	occur 162:22 231:7	181:16 183:11
422:17 news 115:16	• ·		346:17 400:16	
news 115:16 nexus 48:20	4:19,24 12:19 17:18 18:12 20:19	<b>nurse</b> 221:11,12 290:1 352:8 356:2	occurred 52:15	184:1 187:7 188:17 189:11,19
<b>NHAMCS</b> 212:16	27:3,16 28:7 29:6	<b>nurses</b> 18:22 19:11	occurring 367:9	201:5 210:14
1411AIVIC5 212:10	27.3,10 20:7 29:0	<b>HULSES</b> 10.22 19:11	5000011111g 50117	201.3 210.14
	l	l	l	l

٦

214:13 220:9	onsite 55:3	424:19	organizational	303:11,19 304:16
222:10,13 226:22	onus 179:16	opportunity 5:15	397:4	306:1 313:1 342:9
228:9 233:6 238:5	onward 425:14	7:22 19:1,7 33:19	organizations	347:5 378:7
240:17 252:10	open 222:12 284:19	67:18 103:8,9	28:11 49:6 140:13	383:15 385:14
253:6 255:17	332:11	111:12 173:16	140:17 328:14,15	386:2 422:2
257:11 261:17	opened 42:22	176:7 232:18	328:20	outcome-based-t
263:8 273:13	opening 196:13	286:14 290:17	organized 158:9	171:3
276:18 279:5	operate 172:1	313:12 321:10	220:11	outcome-oriented
293:21 294:17	operated 140:13,17	335:3 376:4 420:8	orientation 330:4	63:6
296:17 297:11,11	operating 137:2	opposed 148:10	oriented 63:6,8	outdated 293:3
300:5 307:12	384:12	152:5 156:11	original 209:12	outflow 6:24 315:4
308:14 325:9	operational 53:9	171:5 193:11	orthopedist 362:7	outpatient 56:5
332:15 352:16	68:7 126:10	203:21 221:16	ought 157:4 317:2	72:2,7 81:10
354:8 356:17	129:13 149:12	227:17 245:20	327:11 395:13	output 195:22
357:13 362:13,16	157:22 158:13,17	250:11 254:22	ounce 202:9	226:17
367:18 376:6	159:14 243:17	308:7 329:5 332:7	outage 149:2	output-related
381:10 392:7	260:22 292:22	378:10	152:18	218:21
393:2 395:14	296:4	opposite 262:20	outbreak 101:8,11	outside 90:6 121:7
401:3 407:1,1	operationalize	357:3	112:2 127:6,6	143:20 183:2
408:10 411:13	94:12 99:9	<b>ops</b> 116:6	outbreaks 101:1	409:6 419:14
418:19 419:3	operationalized	opt 329:15	outcome 36:19	outsider 233:13
425:16 432:5	97:11	optimal 231:4,16	37:21 38:12 56:6	outskirts 144:9
<b>old</b> 223:16 314:21	operationally	optimize 334:3	63:7 64:21 94:19	outweigh 382:9
352:8	54:19 126:4 129:8	order 4:4 121:12	130:19 145:6	overadjust 244:19
<b>older</b> 17:12 240:6	154:18 162:1	152:21 187:17	151:6 152:6	overall 176:11
<b>ology</b> 274:4	operationally-ten	197:17 202:6,13	155:22 159:7	193:8 203:2
<b>Olympic</b> 119:15	52:4 53:20 58:3	203:12 210:13	171:3 181:9,10	254:16 277:20
onboard 64:6	74:12	221:9,17,17,19	211:22 231:4	285:3 306:17
86:17	operations 46:19	222:1 225:21	240:10 257:3	343:2
once 129:13 132:6	56:11 76:19,20	242:16 251:6	303:14 308:18	overcrowded 169:1
228:17 315:13	77:2 125:5,12	285:18 287:10,17	310:19 373:16	overcrowding
363:16 432:8	129:6 131:12	288:10 316:14	374:21 381:20,21	165:14 168:20
ones 31:8 36:15,16	154:12 162:13,18	317:10,11,21	387:5	308:7
97:7 98:5 102:8	174:20 314:3	354:15 356:9	<b>outcomes</b> 36:8,9,16	overdose 286:2
109:6 115:9	349:20 363:4	372:15 378:8	53:7 61:9 63:13	overflowing 344:6
127:16 205:17	366:19	408:5 410:5	88:2 93:10,13	overlap 126:2
333:20 403:4	operator 42:18	ordered 212:13	95:18 108:19,21	135:8 142:5
423:10 424:18	43:1 187:16	213:20 214:7	136:5 143:15	161:11 162:10
one's 131:17	235:14 428:2	220:22	144:4,14 145:1	422:5
one-by-one 196:15	432:8	ordering 209:2,3	151:21 152:5	overloading 351:17
one-hour 288:12	<b>opinion</b> 64:2 193:2	213:13,13 221:16	155:12,14 156:10	overnight 277:9
one-size-fits-all	382:7	orders 355:22	156:19,21 157:10	oversaw 30:18
240:15	opinions 123:5	356:1,5,6	158:2 167:1,13	overuse 293:14
ongoing 22:18	253:19	ordinary 136:10	187:1 231:8,15	294:13
201:1	opportunities	organization 21:13	239:6,12 250:6	overview 4:22
online 91:4	178:10,12,15,21	81:7 226:4 365:10	262:18 279:20	43:22
onload 59:4	323:19 324:5	428:19	281:1 302:1	overwhelmed

359:10	55:21	202:22 216:3	225:9 230:15	218:8 232:5,6
<b>owned</b> 209:15	paradigm 50:1,7	218:3 249:21	234:17,19 237:10	233:2 234:1
owns 165:20 166:4	51:9 169:14 178:5	283:12 317:6	237:18 239:15	235:18 246:5,8,9
166:5,7,9 211:13	parallel 19:11	367:19 405:15	245:3 246:1,15	246:13 249:2,20
<b>o'clock</b> 211:10	203:17 221:15	412:19	247:18 250:7	249:21 256:10
317:12,13,16	parallels 130:10	particularly 17:11	252:12 254:7	260:6 264:22
	397:12	36:9 93:3,15	255:4 259:9	268:12,17,19
<u> </u>	<b>pardon</b> 52:17	104:18 156:9	264:19 271:7,9,14	269:2,8 270:12,16
package 325:3	67:14 83:17	243:20 267:3	272:7 275:17	270:22 271:3
<b>PACU</b> 210:1,11	<b>Park</b> 119:15	305:8,22 394:12	276:1 278:1,17	275:15 276:7
page 43:15 44:3	part 9:19 14:1,10	399:17 405:2	282:9,18 288:10	278:5 279:11,20
120:8 147:2 183:5	17:22 37:17 41:3	<b>parties</b> 166:3	288:13 291:12,15	283:7 285:16
183:10 196:16	44:13 52:3 56:1	201:19	291:18 292:8,17	287:7,9 293:17
paid 277:13	63:19 78:21,21	partner 72:14	295:12 303:11	296:22 298:6
<b>pain</b> 41:4 131:19	90:7,12 98:19	partners 49:13,15	314:13 316:15,16	311:20 315:16
224:18 230:9	101:14 103:1	49:17 59:16 66:16	317:12,22 327:2,9	317:16 320:3
269:4 276:16	105:9,22 107:9	72:1,2,13 89:20	327:15 342:9	321:6,9 334:4
291:13 293:17,17	134:16 135:19	partnership 16:7	343:11,14 344:21	337:5 338:16
361:12	162:12 175:11	201:21 263:18	347:1,11,20,21	339:3 343:17
<b>paired</b> 366:12	198:12 199:11	parts 90:11 101:13	350:20 357:22	344:11 345:16
pale 326:22	202:17 209:14	104:11 134:10	358:7,9 359:19	350:17 352:10
palliative 393:19	217:19,20 224:11	135:7 413:1	362:3,5 383:15	353:10 357:19
pandemic 45:18	227:20 252:8	part-time 16:8 20:2	398:8 403:5 409:5	358:21,22 359:9
panel 1:7,17 26:20	261:12 269:12	pass 27:3 33:9,9	patients 32:13 38:2	360:22 361:13
87:7 391:16	270:22 271:22	passed 100:22	38:5 51:14,16,18	382:8 393:22
panels 13:21 32:10	281:8 294:12	204:22	52:10,20 53:6	395:9,11 396:5
391:19	311:20 318:9	paste 414:8	54:11 55:2,10	403:3 415:20
<b>Papa</b> 2:15 18:15,16	319:12 340:13	<b>path</b> 27:14 109:18	56:15 57:8 63:12	419:6
71:11 210:16	352:22 367:13	109:19 110:22	64:6 72:3,20,22	patient's 109:9
245:12 246:9,14	374:12 375:19	172:12 221:15	73:1,20 81:14	171:12 193:11
288:2 290:13	379:4 388:1 402:7	pathway 7:8 31:11	83:11,19 84:2	228:17 229:9
303:21 314:11	405:11 421:16,18	202:4 269:4	88:3 109:6 110:11	242:5
317:8 344:17	423:14	pathways 219:17	116:18,22 118:8	patient-centered
350:4 359:14	participants	patient 56:4 73:15	123:19 128:6,22	210:7
428:9	103:15 112:14	73:16,16 79:7	130:22 131:19	patient-measure
paper 4:22 15:15	participate 19:7	82:14 88:21	134:4 139:8,9	373:17
71:6 75:12,18	130:4 359:12	109:18 123:16	148:9 151:19	patterns 105:21
91:2 96:3 123:6	participating 42:14	124:10 146:11	156:2,3,4 158:3	295:8 396:17
182:12 199:19	135:2 301:4	156:17,19 158:4	161:8 163:14,21	415:22
201:3 219:3	participation 86:5	163:9 165:20	164:4 173:22	<b>Paul</b> 103:2
223:16,16,20	particular 26:13	169:2,7,9 171:13	174:22 175:4	pause 187:19,21
241:1 256:2,17	34:22 36:15 37:10	171:19 175:17	176:10 177:22	432:10
257:1 258:15	41:11 61:7 92:1	176:4 193:4,21,22	178:11 180:2	pay 55:22 263:14
270:7 368:13	103:2,22 104:6	201:15 211:11,20	192:10 196:2	payer 236:8,13
430:3	114:2,22 115:1	214:1,22 216:18	203:3 206:21	279:6
papers 226:7	142:16 150:19	216:21 218:10	209:6 210:5,11	payment 262:12
paperwork 55:20	158:8 179:4	221:7,22 223:7	214:21 216:3,5	276:9,10
		,- <b></b> ,-,-		
	1		1	l .

4.010.14	242 10 10 251 14	075 7 007 14	120 10 20 170 11	170 0 260 15
payments 219:14	243:10,18 251:14	275:7 297:14	130:18,20 179:11	179:8 268:15
peak 128:2	254:1 268:18	298:5,7 299:9	253:6,8 291:8	271:11 273:11,16
pecking 210:12	272:5,21 273:2,12	perception 312:6	318:13	274:1 284:9 292:6
pediatric 18:7	281:17 283:6	perfect 139:4	personal 157:17	294:10 326:21
341:20 342:5	284:13 303:17	perfectly 11:9,14	245:1	physician's 225:20
pediatrician 341:7	304:2,4,6 307:22	397:20	personally 229:22	<b>pick</b> 12:21 50:4
<b>peer</b> 106:1 383:13	314:21 321:16	perform 128:8	personnel 124:5	113:19 163:10
peered 124:18	337:19 341:8	203:9 266:1	135:15 136:19	186:20 357:18
peer-reviewed	351:6,14 353:12	299:17 395:10	139:6 360:22	358:1
380:5 384:4	356:20 357:4	397:10	perspective 30:3	picking 284:11
<b>Peggy</b> 44:14 368:15	361:17 369:2,10	performance 4:24	73:9 156:1,19	<b>picture</b> 75:2 111:4
384:7 406:10	369:13 371:5	7:8 18:3 20:17	184:13,21,22	207:3 218:11
penalize 238:7	380:8,9 396:9	21:4,15 30:12	185:2 192:3 193:4	324:20 366:15
286:11,16	399:10 404:9	32:4 35:5 46:16	193:11,12 195:10	<b>piece</b> 32:2 55:20
penalty 154:5	406:14,17 408:20	47:22 50:10 51:9	214:1 228:17	64:5,5,9 146:20
pendulum 70:15	409:13 417:3	51:22 52:4 54:4	242:6 260:20	148:17 153:17
220:3	418:20 419:1	57:7,21 61:21	267:4 288:4 290:2	163:6 166:4,5,11
<b>Penn</b> 18:18 246:3	421:15,18 429:13	62:1,18 66:5	295:8,10 296:5	167:4 175:9
254:21,22	430:20 431:4	68:19 70:2 82:3	336:14	202:16 206:19
PennSTAR 360:5	people's 428:13	85:8 86:9 99:15	pertinent 20:9	207:2 210:18,22
Pennsylvania 2:5	percent 45:14 50:4	99:17 100:12	<b>Peter</b> 316:10	218:6 219:8 289:2
2:15 18:18 20:2	50:5 51:10 61:7	102:15 119:13	<b>pharma</b> 231:18	321:5 337:2,16
people 11:20 12:4	66:10,20 68:3	122:21,22 128:2	<b>phase</b> 20:20 219:21	354:15 362:1
16:16 24:20 32:14	69:16,17 70:13,20	154:10 155:3,5	320:14 387:2	364:9 395:3
35:3 38:17 43:9	70:22 71:17 72:5	157:3,4 158:13,18	phenomena 101:15	416:12,15 421:4
47:18 48:1,1	73:21 74:2,7	159:16 160:1,9	phenomenon 219:1	pieces 16:12 64:5
60:16 72:10 80:8	80:13 93:1 104:3	239:21 248:4,16	<b>PHEP</b> 87:18 89:6	146:12 175:20
85:21 86:7 87:4,6	109:3,6 110:11	263:14 274:16	106:14 386:15	220:5,6 240:8
87:6 90:16 94:1	113:18,19 129:11	300:21 301:14	<b>PHEs</b> 83:18	397:5
94:13 96:5 100:21	129:11,11,12	336:13 348:13	Philadelphia 144:2	piggyback 152:13
107:19 110:1,22	132:17,18 205:22	366:10 374:15,17	144:3,6 360:3	350:9
113:1,2 117:13,18	213:15,16 217:9	376:5,16 379:1,3	Phillips 2:15 24:9	<b>pile</b> 119:14 132:6
119:18 120:4,16	217:10 246:20	379:8,11,18,22	24:10 30:20 85:2	431:11
122:17 127:7	247:2 248:17,17	380:21 385:12,18	<b>phone</b> 24:20,22	pileup 83:10
130:7,11,14,15	263:4 268:12,14	385:19 391:14	25:2 201:17	<b>pillar</b> 55:1 57:6
131:12 132:6	268:16,17,19	395:3,7,22 396:6	264:12	64:8 318:7,10
133:4,6 135:1,11	269:20 283:20	409:19,20 426:10	phrased 232:2	pillars 54:2 57:20
136:15,16 138:15	284:10 333:22	performed 395:10	phrasing 331:7	58:17 59:5 70:5
138:16 141:9,21	336:9,10 375:10	395:16,18	<b>physician</b> 17:8 18:2	<b>pin</b> 251:9
142:4,4 149:14,19	376:8,13 382:22	performing 159:20	18:7 19:22 21:1,9	<b>Pines</b> 3:17 4:20 5:6
158:6 162:14	383:20,20 384:11	215:16	23:10 28:5 42:11	5:19 8:16 27:22
176:21 179:21	384:13 400:3,17	period 238:19	179:17 209:2	28:4 42:5 43:5
192:7 202:11	401:1 404:3	286:16	210:20 212:8	119:22 132:7
203:6 206:13	405:17 419:7,10	periods 231:12	246:22 280:14	164:7 184:3 190:1
213:8 217:14	419:13,15	perseveration	300:14 342:5	197:14 198:11
223:19 226:8	percentage 50:4	234:7	physicians 2:19	214:14 224:5
229:14,17 234:11	percentile 274:14	person 125:3 130:5	21:5 135:1,14	227:19 240:19
			1	
243:22 247:20	169:15 170:4	335:6 336:18	215:2 246:18	point 38:1 58:16
---------------------------	-------------------	-----------------------	---------------------------	--------------------------
253:12 254:11	172:4 173:10	338:1 339:4,8	277:18 282:8	84:13,21 88:19,19
255:6 256:16	177:4,9,12 178:22	340:17 342:20	331:18 352:10	89:2 92:4,10
257:6,19 258:12	181:16 184:1	344:15 345:6	359:7,8 360:7	93:21 94:10 96:1
260:1 266:13	187:6,10 188:5,17	346:6 347:15	361:1 372:13,18	101:11 124:4,7
275:4 283:10	189:20 199:14	350:3,12 351:3	382:17 422:2	134:8 149:12,20
287:3 290:21	200:16 204:9	352:5 353:6,22	<b>plan</b> 29:16 56:4	160:4 162:16
291:22 299:12	205:12 206:3,7,12	354:7 356:17	63:2 116:5 144:18	168:18 169:6
300:8 301:5,17	208:21 210:14	358:11 359:1,13	144:19 147:2	171:8,10,14 172:3
302:19 305:4	212:1,15 214:11	360:11 361:7	154:14,15 308:5	174:5 176:4 178:7
307:9 321:12	215:17 216:14	362:12 363:21	308:20 309:1	186:8 193:12
322:15 325:18	217:21 220:9	366:1,17 367:18	346:1 352:19	204:1 209:13
331:9 340:9	222:7,13,19	368:14 370:3	359:7 360:21	220:4 225:17
352:21 353:2	226:22 228:4	377:4 378:3	plane 126:1 131:18	232:10 237:20
367:22 370:10	231:17 233:6,10	379:21 382:15	131:20 149:15	256:2,13 259:4
378:11 385:5	233:21 237:1	383:7 384:7	353:16	268:11 272:15
387:13 391:3	239:1,15 240:17	386:19 392:7	planning 45:8 47:5	298:15 300:6
399:16 400:7	243:1 244:10	394:7 395:1	56:20 73:10	301:10 318:9
403:18 404:17	245:4,11 246:7,12	396:13 398:3	190:16 227:20	332:14 344:20
406:3 407:19	247:4,12 249:9	399:6 401:2 406:9	307:20	347:17 359:14
422:7 425:17	251:18 252:18	407:1 408:8 410:8	planning-based	384:19 386:22
428:15 431:13	255:17 258:18	413:5 415:11	45:7	410:11 417:18
433:8	260:11 263:1,8	417:14 421:1	<b>plans</b> 45:9 47:17	425:2 428:21
pinned 56:21,22	264:13 265:11	422:6,20 424:11	48:8 56:17 369:9	pointed 219:2
<b>pinning</b> 56:20	267:17 272:8	425:13,16 427:3	plasticity 131:17	<b>points</b> 38:22 41:4
<b>Pioneer</b> 219:15	273:4 274:7	427:22 428:8	plausible 36:12	74:22 75:4 84:14
pitch 431:8	275:11 277:22	431:5	play 90:3 210:13	91:19 150:11
<b>Pitts</b> 1:21 2:3 4:8	278:20 279:3,9	<b>pivotal</b> 146:11	281:4 360:1	177:19 220:3
8:12,21 9:1 13:1,1	284:16 285:6	place 29:17 36:11	367:10 392:3,15	249:6,12,15
58:15,19 68:10	286:6,18 288:1	41:21 47:17 56:18	430:9	250:20 340:20
71:10 74:19 78:7	289:7 290:9	63:10 86:14 89:19	players 29:22	341:8 347:16
80:1 81:19 84:10	292:19 293:21	94:7 97:13 98:2	68:22 71:15	364:22
84:22 86:18	294:17 296:17	139:13 145:16,17	<b>plays</b> 233:5	pointy-headed
107:12 113:15	297:10 298:22	146:17 149:18	please 10:20 31:21	297:18 298:16
119:14 122:5,13	300:2 302:6 303:4	175:2 181:13	55:5 154:16	point-in 192:14
124:14 126:15	303:20 305:16	204:3 210:12	189:16 288:5	<b>police</b> 118:9
127:19 129:17	306:4 307:12	270:14 281:18	322:2 432:9 433:2	policeman 9:13
131:14 137:5	308:14 309:3	285:2 288:21	pleased 31:5	199:15
138:6,12,18 139:2	310:14 313:7,16	295:21 297:22	<b>plenty</b> 381:7 414:6	policy 16:11,22
139:20 142:19	314:20 315:22	299:7 301:7,9	<b>plot</b> 141:6 142:11	20:1 22:22 162:17
143:4 145:18	316:8 317:4 318:2	305:10 308:9	<b>plus</b> 53:13 65:5	343:2 409:4
147:11 149:22	318:21 319:16	333:5 350:8	274:22 288:16	political 134:22
151:11 153:7	320:10,21 322:8	352:19 392:1	358:18	135:20
155:6 157:1	322:19 325:12	430:12	pneumonia 39:10	Politically 275:1
158:14 160:17	326:5 327:20	placement 253:11	168:20 169:3	politics 275:8
161:13 163:1	329:7 330:12	places 59:22 68:4,6	<b>PO</b> 54:9,14	<b>poll</b> 254:1 265:14
164:6 165:1	332:16 334:8	77:17 209:22	poetic 180:12	433:5
L'		-	-	

				1
<b>poor</b> 422:2	244:13 271:5	198:18 227:2	121:6,21 130:2	presentations
<b>pop</b> 114:21	302:4 319:20	422:18	131:4,6 132:12	43:20 108:10
<b>popped</b> 350:5	329:20 382:9	preciseness 411:12	142:11 146:14,18	433:13
<b>pops</b> 224:18	391:6 399:8	precision 412:3,6	147:10 148:16	presented 372:8
<b>popular</b> 16:15	409:17 428:2	422:15	157:3,13,14	presenting 52:16
population 40:11	potentially 73:15	predates 384:19	158:17 159:16	83:11
66:17 70:7,13,22	73:16 80:17 85:10	predict 101:9	160:1,9 164:13	present-day 114:9
79:8 124:8 145:2	121:4,13 161:19	330:10	165:15 167:21	President 4:23
145:4 151:22	167:1 169:1 175:2	predictable 114:4	170:19 178:3	13:15 17:21 18:21
156:8 163:9	176:14 184:15	134:14	181:11 184:12,21	19:10 21:10 30:12
206:11 233:2	185:14,22 186:4	predictably 135:12	185:2,5,18,21	82:11
236:3,4,7 240:13	192:9 193:6,16,18	prediction 288:18	186:14,15 190:6	<b>Presidential</b> 45:4,5
264:21 330:4	196:7 214:16	predictive 244:6	191:13 197:1	presiding 1:22
347:4 367:11	216:8 228:1	248:7,16 249:17	260:18 261:8,12	press 47:8 187:17
414:1	234:17 236:16	predictors 258:6	265:5,9 294:22	432:9
populations 137:3	241:19 242:20	prefer 38:9 114:5	305:21 306:3	pressure 219:12
304:15 341:5,10	252:4 283:22	289:4	312:3,7 313:2,5	271:11
population-based	300:22 301:12	preference 36:8	314:8 323:2 328:5	presuming 339:1
168:13 169:6	303:2 304:13	preferred 387:5	328:8 333:7	pretend 145:8
179:6	320:4 330:10	preliminary 183:14	336:14,17 349:21	pretty 13:10 39:12
population-level	333:2 347:10	183:15 249:15	360:15 364:19	119:19 125:19
413:22	348:3,7 349:18,21	<b>prepare</b> 126:19	365:1,19 370:16	135:21 162:2
porcelain 288:13	378:20 382:11	231:9	372:16 373:11,12	217:1 222:22
portal 282:3	385:20 391:21	prepared 47:10	374:4,9,20 375:21	234:16 235:5
<b>portfolio</b> 24:15	402:17 405:6	65:18 71:8 84:19	378:15 379:4	272:4 296:3 299:1
36:22 106:18	412:11 428:16	184:15 189:22 328:10	385:9 386:1 387:22 391:8	302:20 303:15 330:2 354:4 368:1
<b>portion</b> 13:7 <b>posed</b> 70:11	<b>pounding</b> 309:5 <b>pouring</b> 212:16	preparedness 2:8	393:8,12 394:13	400:18 409:22
position 332:2	power 149:1	5:4 15:10,22 16:4	394:18 399:8	<b>prevent</b> 92:17
390:22	152:17,22 153:1	17:1 22:14 23:17	402:13 405:2,2,3	161:3 162:14
<b>positive</b> 329:21	powerful 304:14	24:15 25:17 26:19	405:8 409:1,8,10	194:11
417:22	practical 120:16	27:10 28:19,22	412:21 414:22	prevention 93:1
possibility 427:2	165:18 395:5	29:6 30:3,19	415:3 416:7,10	182:1 413:20
possible 34:15	practicality 91:16	31:15 43:16 44:1	428:5	<b>Preventive</b> 386:16
36:16 39:19 104:5	practically 29:7	44:4 45:1,2,20	prepares 309:15	<b>preview</b> 114:6
127:1 128:1 143:2	practice 97:10	46:4 47:7,13 48:4	preparing 15:21	previous 13:20
178:17 239:12	155:17 157:16	48:6,13,15 51:6	Presbyterian 18:19	20:20 21:20 22:15
258:21 259:1	235:2 280:16	51:21 57:22 60:21	presence 301:18	24:13 150:16
323:22 334:14	303:1	60:22 61:16 67:16	present 2:2 21:17	241:3 320:14
343:19 344:5	practices 85:18	67:17,19 70:14	44:21 141:3	335:11
417:2 423:18	300:17 397:19	71:3 75:20,22	213:14 291:15	previously 47:16
possibly 131:7	398:21 399:3	76:1 80:16 83:4	411:1	50:6 65:2 193:10
163:17	practicing 21:1	87:3,18 91:9 92:9	presentation 80:4	235:4 236:21
post 182:12	209:2	92:11 94:1,5 95:6	108:4 115:22	345:10
potential 54:10	pre 18:8 136:18	96:6 97:20 98:6	120:21 322:22	pre-hospital 17:11
106:7 166:14	preceded 31:8	98:10 102:7 105:9	357:17 358:9	135:14 167:9
184:14 198:6	<b>precise</b> 33:3 34:14	116:5 120:19	371:1,3 414:3	pre/post 302:17

primarily 22:17	97:4 98:19 111:8	156:11,20 160:4	protocols 305:10	100:17 101:6
365:8 401:16	115:8 135:4	217:11 239:6,14	protocols/policies	102:3,9 103:11
primary 48:18 60:2	181:13 203:5	239:20 245:1	333:5	105:12 118:22
81:12 173:12	210:16 219:22	270:19 313:6	provide 27:4 28:16	121:5,10,10 127:4
207:19,20 276:6	236:15,17 237:22	produce 154:17	29:9 57:17 277:14	135:15 166:4
280:14 281:6	295:2 296:19	professed 124:16	307:1 372:11	187:11,13 215:9
primer 429:21	297:1 310:13	professional 107:2	379:14	253:15 262:11
Principal 42:12	322:9 335:16	<b>Professor</b> 14:6 17:6	provided 136:2	263:14 392:18
principle 258:20	347:8 350:19	proficiency 100:22	285:4	409:9 432:7,14
principles 55:14	356:13 424:14,15	<b>profound</b> 135:4,4	provider 40:10	published 256:16
181:1	<b>problems</b> 106:13	program 19:8	78:17 109:10	<b>pull</b> 41:14 147:2
prior 231:7 275:17	113:22,22 114:1	48:14,15 51:7,21	176:20 193:6,21	232:20 406:19
priori 197:11	130:1,16 137:1	57:22 64:14 70:14	207:9 210:20	pulled 235:9
prioritization 8:5,8	219:5 234:2	71:3 85:9 98:6	211:3 221:20	<b>pulling</b> 56:19
prioritize 77:12	251:17 280:12	103:5 106:3 201:2	264:5 280:15	<b>punch</b> 337:13
prioritized 77:8	358:13	219:13 263:20	281:6 288:6	punish 262:16,19
prioritizing 130:22	problem-solving	programs 89:6	providers 32:7	<b>purpose</b> 27:8 91:12
<b>priority</b> 76:14,18	355:5 356:16	progress 39:7	33:22 55:9 79:12	111:13,14 215:8
136:21	procedure 344:8	120:10	79:19 134:19	305:12 310:2
prism 68:8	procedures 140:6	project 4:5,16,18	139:21 140:1	purposely 335:4
private 59:10	<b>proceed</b> 80:2 86:19	8:14,16,17 20:20	174:14 259:18,21	purposes 104:16
probability 417:6	proceeding 425:14	22:12 26:10 27:17	292:7,13 377:1	105:3 202:21
probably 33:11	process 9:21 30:7	28:7 31:7 35:1	425:3	373:6 420:19,21
41:7 46:12 84:14	36:13,14 61:6	41:8 45:22 60:7	provider-level	423:19
114:13,15 115:3	63:5,10 64:21	60:11 75:3,6	412:15	<b>push</b> 84:1 351:22
134:9,14,18	94:18 120:19	181:22 182:15	<b>provides</b> 48:15	pushback 177:1
135:19 155:13	121:16 156:12,14	198:20 202:19	383:10,16	216:1
156:21 167:2,10	159:20 181:9,12	320:14	providing 55:13	<b>pushes</b> 67:8
179:8 183:20	197:10 198:8,12	projects 16:14	108:11 167:17	<b>pushing</b> 111:4
192:9 198:17	198:14 199:11	proliferation 367:8	245:19	<b>put</b> 41:9 47:14
200:1,12 202:12	200:22 201:7	prolonged 349:16	provision 164:2	49:13 50:9,14
204:17 213:17	203:16,16 204:6	promote 79:11	proxies 201:14	53:21 63:10 97:8
219:6 227:8 234:9	216:19 222:4	370:19	<b>proxy</b> 208:14,15	102:6 108:1 117:7
234:12,15 238:4,5	255:22 303:14,15	promoted 146:4	<b>psych</b> 231:22 232:5	149:19 169:22
245:21 246:19,20	310:19,21 311:6	<b>properly</b> 297:4,8	232:6 234:2 338:3	195:6 210:5 221:9
272:10 280:2,19	311:12 312:15,21	proportion 177:21	338:5 339:2	221:22 226:18
281:12 312:19	317:1,20 318:17	254:15 337:4	358:14	227:13 238:13
313:14 316:22	352:11 371:4,7,17	proportions 248:3	psychiatric 233:1	249:20 255:4
330:2 336:13	372:17,21 373:1	proposed 4:22	psychological	272:5 295:21
361:16 371:9,21	381:22 387:2,10	308:17 374:19	92:22	310:9 314:13
372:5 373:20	390:9,11 396:17	proposing 206:4	<b>public</b> 5:15 7:22	316:14 319:7
379:13 382:13	398:17,18,20	253:4	15:7 24:14 46:5,6	325:3 367:16
393:6 401:7	426:6	pros 228:5 268:4,8	48:19 78:15 82:10	382:3 391:11
403:10 413:15	<b>processes</b> 36:10	prospect 242:10	82:17,20 83:2,15	398:10 430:3,13
415:19 416:6	72:13 139:13	protect 92:17 266:8	87:17,21 89:2,3,7	430:20 433:11
417:18 428:18	141:16 142:17	protocol 301:7,9	89:20 91:8 92:15	<b>puts</b> 86:1,12 319:3
<b>problem</b> 94:20	152:6 155:15	304:3 324:9	92:20 97:20,22	<b>putting</b> 197:9
	I	l		

220 10 22 1 12		051 14 055 11		
230:18 234:10	quality-of-care	251:14 375:11	42:20 189:9,10,12	61:5 64:12 65:5
286:19 296:14	420:1	402:1 415:15	189:18 249:5,5,10	69:2 71:20 72:4
331:10	quantify 202:14	432:11	rare 87:22 93:12	78:8 84:14 86:17
<b>puzzle</b> 175:9 207:2	quantitative	quick 38:22 164:8	374:21	86:22 87:3 89:1,4
P-R-O-C-E-E-D	104:17 105:4	170:3 228:5	rarely 128:11	91:5 93:6 95:1
8:1	106:21 185:13	239:18 260:1	246:5	96:7,19,20 97:18
<b>p.m</b> 188:21 189:2	354:4	291:11 321:20	ratcheted 86:14	98:8 99:20 100:19
322:6,7 433:17	quantitatively	354:2,11 388:2	rate 53:10 245:15	101:9,10,16,22
P9-to-the-P50	164:22	422:7 426:1	245:21	102:16 109:18,19
298:9	quantitize 309:10	quickest 336:12	rates 245:9 290:10	112:13 113:13
<b>P90</b> 299:8	quantity 33:14	quickly 26:9,10	366:12,13	114:16 115:10
	quarter 270:1	39:15 42:9 188:7	<b>ratio</b> 298:9	116:15 117:7
$\frac{Q}{Q}$	<b>question</b> 42:16	230:16 273:3	rationale 383:10	118:15 119:9
<b>QA</b> 215:7,11	59:13 65:11 66:22	329:10	<b>raw</b> 265:16	120:5,6,8,14
QI 91:13	67:1 68:12,19	quite 41:22 75:13	<b>RCT</b> 394:15	121:3,6,9,11
qualified 346:19	69:12 93:8 97:14	76:8 89:13,21	<b>reach</b> 95:5	123:12,17 128:11
qualitative 22:18	117:3 120:22	111:10 115:9	read 75:12 92:18	132:20 133:16,21
104:17,20 105:5	122:21 149:12	123:12,15 148:2	225:21 283:12	134:2 136:19
106:22 185:11,12	170:3,5 172:6,18	155:20 187:8	302:12 352:18	137:21 138:2
278:12 311:19	178:8 187:17	223:19 266:7	409:15	141:14 142:20
312:16	192:22 196:22	286:4 290:16,18	readmission	155:8 161:18
quality 1:2,19 5:22	197:7 200:17	328:1,20 344:4	244:21 277:12	164:9,14,22 165:8
6:10,22 14:12	215:10,20 218:17	348:8 349:22	readmissions	166:9 167:5
18:3 21:4 23:5	220:8 228:5 237:3	393:11 397:22	219:13	168:17 169:13
25:20 27:12 28:10	240:10 241:12	<b>quote</b> 249:17	ready 94:1 199:3	171:1,15,18
32:5 33:14 34:2	253:13,17 259:1	<b>quotes</b> 172:8	430:10	177:20 178:4,6
41:9 62:1 85:12	275:13 277:2,6	<b>Q&amp;A</b> 187:20	real 29:20 80:17	179:11 180:7
85:13,17,22 86:8	279:2 307:5		111:8 114:5,6	183:4 184:8,20,22
92:1 105:2 106:19	308:15 315:8	<u> </u>	115:4 149:10	185:8,9,10,17
108:13 132:15	332:19 370:5	radiation 139:19	173:15 176:6	186:7,12 190:6,21
133:13,16 134:4	374:16 375:2	radically-different	227:17 259:13	191:3 192:14,16
150:21 151:1	376:10 378:22	223:1	266:11 289:7	193:3,3,10,14
153:19,20 171:17	379:13 381:4,20	radiology 210:3	295:3 309:21	194:11,12,15
181:20 182:1,6,13	389:9 399:17	<b>raise</b> 251:14 336:2	354:2 396:7 423:3	195:7 196:13
182:18 196:18	401:22 402:9	414:17	reality 41:12	201:6 202:4 204:5
199:8 200:21	407:5,6 410:20	raised 240:11	realized 180:6	204:14,21 205:15
201:1,7 227:17	413:8 422:14	346:9 348:4 381:5	really 9:20 19:16	207:10,18,20
230:7,13 231:13	430:8,19 432:9	398:22 413:8	23:19 28:15,15,16	209:12,15 210:6
238:10 240:13	<b>questions</b> 4:22 5:10	<b>RAND</b> 111:21	29:2,3,4,9,11 31:5	211:18 215:5,8,12
268:1 269:16	5:12,20,24 6:7,9	<b>range</b> 32:14 263:12	31:10,13 32:7,11	216:4,5,12 217:11
270:2 300:21,22	6:14,17,20,23,26	263:15 392:4	32:14 33:13 34:4	218:5,11 222:20
301:12 302:4,15	7:12 26:2 42:7	ranking 296:21	34:8,20 35:16	225:5 227:4 229:8
302:15 315:7	44:19 58:14 63:17	rapid 56:17 280:20	36:7,11,17,20	229:14 230:6,13
342:7 344:14	75:5 124:15	rapidly 55:2 57:5	37:11 38:8 39:18	231:12 232:15
374:8 376:1 399:1	167:11 186:17,21	59:3,4 134:17	39:20 40:14 41:22	234:8,22 236:5,10
413:20 420:5,7,20	188:1 194:21	281:20	43:19 44:1,2	236:22 237:19
426:15 427:11	198:21 201:21	<b>Rapp</b> 2:16 24:22	47:21 49:22 59:2	240:22 241:6,12
L				

		1		
244:11 245:16,18	165:22 247:1	300:6,9,18 302:2	<b>recount</b> 10:20	132:5 242:7
248:4,8,10,12	248:2,2,10 305:19	302:21 303:7	<b>recover</b> 336:8,12	422:15
252:5 253:16	324:15 357:2,7	304:19 305:13	recovery 210:2	<b>regards</b> 345:12
254:19 261:10	384:3 402:13,16	306:7,19 307:13	335:21	region 66:15 70:21
263:9 264:2,9,17	reasonable 299:5	307:19 315:2,3	recurring 396:16	83:11 104:12
265:21 267:16	397:20 407:5,15	320:8 328:2 330:6	red 98:4 413:16	144:12 145:5
268:22 269:7	reasonably 383:19	332:22 340:10,22	redo 270:18	150:21 151:1,18
270:4 271:1,7,9	reasoning 380:13	341:3,15 345:11	reduce 93:6 227:15	153:20 155:17
274:14 275:18	reasons 50:8	363:20 422:12	236:2 266:21	159:19 174:3
277:10 281:11	160:19 214:15	recommendations	329:20 347:12	196:8 262:4
283:18 286:19	272:20 317:3	6:11 7:4 27:4	378:18	264:19 265:10,22
289:3,19 294:3,8	346:11 386:3	29:10,13 44:7	reduced 95:20	266:1,17 310:10
294:12 298:11	reason-for-visit	120:16 164:10,19	269:20	319:20 334:3,22
299:8 304:4,11,14	257:9	165:4 166:18	reducing 240:13	338:13 356:21
304:21 306:9,12	<b>Rebecca</b> 25:2 42:20	170:8 172:7 184:9	242:10	357:9 364:14
308:11 309:8,17	recall 203:11	187:3 191:1,3,7	reduction 219:13	403:4 410:22
310:17 312:12	receive 19:13 51:16	191:10,11,12,14	redundancies	411:10 413:12,14
313:20 315:16	112:22 328:21	194:10 195:16,21	421:21	414:11,14,16
318:5 319:11	received 10:13	196:12,14 205:19	refer 175:17	415:1,4,6,7,9
321:5 323:9	20:18 51:18 113:1	206:9 228:2	reference 373:10	417:10 418:3
324:17,18,22	116:12,17 223:5	242:13 266:14	referral 175:17	419:5 422:16
326:22 328:14,18	267:21 328:16	268:2 296:14	415:22 417:1,9,10	423:7,9 424:6
330:2,3 334:9,12	receives 340:3	319:6 321:17,17	referred 96:13	427:6
334:17 335:2,3	receiving 109:7	321:22 322:14,16	referring 115:4	regional 22:14
343:7 344:1,10	recognition 45:11	322:18 323:5	201:4	27:12 35:3 36:1
346:10 347:14	390:14	325:20 326:3	reflect 32:12 98:8	58:10 64:10 83:7
349:10 351:9	recognize 44:12	329:13 342:22	148:16	83:12 89:16 111:6
355:4,12 360:13	87:17 136:7	343:1 364:8,21	reflected 98:22	154:8 155:22
361:17 364:3,9	recommend 75:21	recommended	reflects 85:17 87:4	156:18 178:3
368:16 369:22	172:11 179:4	241:15	93:18	207:7 249:13
373:13 377:7	243:15 254:2	recommending	refocus 164:8	250:13 261:4,11
378:6,8 381:5,21	255:12 275:9	173:3,4	reform 16:12	261:16 266:19
382:1 386:2,4,6	284:3 287:13,21	recommends	regard 44:17 47:9	304:15 306:15
387:6 390:10	292:2 362:11	386:17	47:13 49:3,8,10	324:4 333:1
395:4,4,5,13	recommendation	reconcile 29:4	57:11 59:14 62:7	336:16 343:22
396:7 397:4 398:4	6:15,21,24 194:20	108:1	62:19 66:8,11	363:6,10,18
399:10,11 401:12	196:18 197:1,5,13	reconciling 5:13	83:7 165:13 166:8	364:12,16 368:9
405:7 407:21	197:15,16,20	122:11 228:2	170:6,16,17	368:19 370:18
409:7 410:11	200:13 202:18	reconnecting	171:16 188:8,13	374:20 376:18
411:17 412:20,22	218:3 220:14	320:19	340:21,22 341:16	412:9 413:11
422:9 423:13	226:3 228:8	reconvene 322:4	341:18 344:21	414:4 422:12
424:2 429:17	242:20 248:19	record 122:7,8	360:17 383:4	regionalization 7:6
432:3	253:22 255:7,15	188:20,21 201:12	404:5 417:22	19:1 27:10 155:12
realm 94:21 293:7	261:14 267:22	214:12 229:8	418:4	156:8 196:10
397:17 430:1	275:5 283:13,21	322:6,7 332:1	regarding 196:2	233:15 266:18
real-world 114:17	286:18 287:2,19	343:19	237:3 372:2	307:5 321:20
reason 73:2 154:22	287:22 294:7	records 35:11	regardless 131:19	322:11 325:17

330:20   332:6,10   408:12   420:17,22   repated   379:2   421:7   357:10   358:12     341:1   342:18   relates   215:21   repated   396:17   required   111:11   364:18   379:11   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   357:10   358:12   361:18   357:10   358:12   361:18   357:10   358:12   361:18   357:10   358:12   361:18   357:10   358:12   361:18   351:10   361:18   351:10   361:18   351:10   361:18   351:10   361:18   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:10   351:1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
351:10 368:2 regionalize 346:12relationship 36:13 181:5 361:20 regionalized 1:4relationships 181:5 361:20 report 27:8,11 report 27:8,11 28:15 29:12 33:8409:12 requirements 62:22 353:19 62:22 353:19 94:8 95:4 103:138:4 20:6 23:20 90:2 146:5 157:8141:20 142:15 191:3 112:19 121:270:1 81:1 89:5 191:3 112:19 121:2research 11:5 15:8 15:10 16:14,16 102:14 116:6,7103:21 106:8 102:14 114:6,790:2 146:5 157:8 90:2 146:5 157:8107:18 107:18127:8 183:5 213:8 20:50 263:220:57 21:2 22:13 241:16 242:16112:1 114:6,7 20:12 42:5 136:13165:9,14 166:2,2 166:15 167:15,16 167:17,18 170:10 260:18 313:22relatively 105:14 248:16 255:920:67 21:4 248:16 255:9146:9 152:14 157:15 39:3 176:7 293:7 295:8178:19 234:11 235:9 162:21260:18 313:22 regionally asci12 regional-ness 338:13released 46:6,9 22:12 23:2 25:10 338:1335:19 68:22 69:4 399:4370:11 372:12 241:1,13 242:15researcher 20:1 22:10 28:6 30:14 22:10 28:6 30:14130:11 336:6 25:14 24:17354:3 404:2 411:3 42:17 405:19399:4 142:17 405:19234:22 241:1,13 242:15responding 55:14 resident 356:214:6,7,19 415:18 44:6,7,19 415:1834:16 37:5 91:16 20:17 218:19266:16 320:18 25:7 329:14resilience 58:10,10 338:10responding 55:14 17:2 23:17 25:1,3 17:2 23:17 25:1,3 338:10422:18 423:5,12 424:3 20:217 218:19196:20 197:11 20:12 29:17216:13 217:12 243:7 249:1reslience 58:10,10 25:12reslience 58:10,10 25:12 25:12 25:10 25:110region's 337:14 
regionalize 346:12181:5 361:20report 27:8,11requirements88:13 92:18 94:3regionalized 1:4relationships28:15 29:12 33:862:22 353:1994:8 95:4 103:138:4 20:6 23:20141:20 142:1570:1 81:1 89:5research 11:5 15:8103:21 106:827:6 31:9 60:22relative 19:1691:3 112:19 121:215:10 16:14,16112:1 114:6,790:2 146:5 157:8107:18127:8 183:5 213:820:5,7 21:2 22:13117:4 118:19157:15 159:3relatively 105:14216:20 226:1924:15 25:11,20124:5 136:13165:9,14 166:2,2163:20 263:2241:16 242:1630:16 38:6 72:14146:9 152:14166:15 167:15,16relatively-little243:10 247:1687:3 89:6 91:13153:9 162:21167:17,18 170:10389:14248:16 255:9176:7 293:7 295:8178:19 234:11260:18 313:22released 46:3 270:6299:10 323:3311:18 334:16310:11 336:6regional-ness35:19 68:22 69:4370:11 372:12researcher 20:1424:17423:1711:6,7 12:13 18:4400:9 430:1422:10 28:6 30:14responded 88:16106:9 168:835:19 68:22 69:4399:4234:22responded 88:16338:1335:19 68:22 69:4399:4234:22156:13414:6,7,19 415:1834:16 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:1,3422:18 423:5,12198:5,9 200:3338:10362:1025:18 26:5 45:19
regionalized 1:4relationships28:15 29:12 33:862:22 353:1994:8 95:4 103:138:4 20:6 23:20141:20 142:1570:1 81:1 89:5research 11:5 15:8103:21 106:827:6 31:9 60:22relative 19:1691:3 112:19 121:215:10 16:14,16112:1 114:6,790:2 146:5 157:8107:18127:8 183:5 213:820:5,7 21:2 22:13117:4 118:19157:15 159:3relatively 105:14216:20 226:1924:15 25:11,20124:5 136:13165:9,14 166:2,2163:20 263:2241:16 242:1630:16 38:6 72:14146:9 152:14166:15 167:15,16relatively-little243:10 247:1687:3 89:6 91:13153:9 162:21167:17,18 170:10389:14248:16 255:9176:7 293:7 295:8178:19 234:11260:18 313:22released 46:6,9357:1,6 368:6343:2 393:16356:19 423:16regionally 36:12released 46:6,9357:1,6 368:6343:2 393:16356:19 423:16regional-ness22:12 23:2 25:10reportable 398:20researchers 105:19106:9 168:8338:1335:19 68:22 69:4399:4234:22responded 88:16338:1335:19 68:22 69:4399:4234:22responded 88:16414:6,7,19 415:1834:16 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:1,3424:320:2:17 218:19reporting 215:10resilience 58:10,1025:18 26:5 45:19424:320:2:17 218:19reporting 215:1036:1275:20
8:4 20:6 23:20141:20 142:1570:1 81:1 89:5research 11:5 15:8103:21 106:827:6 31:9 60:22relative 19:1691:3 112:19 121:215:10 16:14,16112:1 114:6,790:2 146:5 157:8107:18127:8 183:5 213:820:5,7 21:2 22:13117:4 118:19157:15 159:3relatively 105:14216:20 226:1924:15 25:11,20124:5 136:13165:9,14 166:2,2163:20 263:2241:16 242:1630:16 38:6 72:14146:9 152:14166:15 167:15,16relatively-little248:16 25:9176:7 293:7 295:8178:19 234:11260:18 313:22released 46:6,9s77:1,6 368:6343:2 393:16310:11 336:6regionally 336:12released 46:6,9s77:1,6 368:6343:2 393:16356:19 423:16regionally-exclusrelevant 10:18 11:4370:11 372:12researcher 20:1424:17423:1711:6,7 12:13 18:4400:9 430:1422:10 28:6 30:14responded 88:16regional-ness35:19 68:22 69:4399:4234:22responded 88:16338:1335:19 68:22 69:4399:4234:22responded 88:16341:6 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:13,3422:18 423:5,12198:5,9 200:3338:10362:1025:18 26:5 45:19424:3202:17 218:19reporting 215:1025:12 75:20 76:1,3,7,13region's 337:14200:12 291:7243:7 249:1resiliency 33:845:20 49:15,19region's 337:14 </td
27:6 31:9 60:22 90:2 146:5 157:8relative 19:16 107:1891:3 112:19 121:2 127:8 183:5 213:815:10 16:14,16 20:5,7 21:2 22:13112:1 114:6,7 117:4 118:19157:15 159:3 165:9,14 166:2,2 166:15 167:15,16 167:17,18 170:10 260:18 313:22relatively 105:14 166:15 167:15,16 389:14216:20 226:19 24:16 242:1624:15 25:11,20 30:16 38:6 72:14124:5 136:13 146:9 152:14260:18 313:22 regionally 336:12 regionally-exclus 423:17release 46:3 270:6 released 46:6,9 22:12 23:2 25:10299:10 323:3 357:1,6 368:6 357:1,6 368:6311:18 334:16 343:2 393:16310:11 336:6 356:19 423:16regional-ness 338:1322:12 23:2 25:10 15:19 68:22 69:4reportable 398:20 399:4researcher 20:1 22:12 23:2 25:10resound 88:16 106:9 168:8 resound 101:2regions 333:15142:17 405:19 142:17 405:19reported 101:2 266:16 320:18resound 25:12 2338:10resound 25:13 362:1017:2 23:17 25:1,3 25:13414:6,7,19 415:18 424:3202:17 218:19 202:17 218:19reporting 215:10 216:13 217:12resilience 58:10,10 365:12resound 25:18 26:5 45:19 365:12region's 337:14 424:3202:17 218:19 20:12 291:7reporting 215:10 216:13 217:12resiliency 83:8 365:1245:20 49:15,19 75:20 76:1,3,7,13 78:10 83:4 88:11
90:2 146:5 157:8107:18127:8 183:5 213:820:5,7 21:2 22:13117:4 118:19157:15 159:3relatively 105:14216:20 226:1924:15 25:11,20124:5 136:13165:9,14 166:2,2163:20 263:2241:16 242:1630:16 38:6 72:14146:9 152:14166:15 167:15,16relatively-little243:10 247:1687:3 89:6 91:13153:9 162:21167:17,18 170:10389:14248:16 255:9176:7 293:7 295:8178:19 234:11260:18 313:22release 46:3 270:6299:10 323:3311:18 334:16310:11 336:6regionally-exclusrelevant 10:18 11:4370:11 372:12researcher 20:1424:17423:1711:6,7 12:13 18:4400:9 430:1422:10 28:6 30:14responded 88:16regional-ness22:12 23:2 25:10reportable 398:20researchers 105:19106:9 168:8338:1335:19 68:22 69:4399:4234:22responding 55:14414:6,7,19 415:1834:16 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:1,3422:18 423:5,12198:5,9 200:3338:10362:1025:18 26:5 45:19424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
157:15relatively 105:14216:20226:1924:1525:11,20124:5136:13165:9,14166:2,2163:20263:2241:16242:1630:1638:672:14146:9152:14166:15167:15,16relatively-little243:10247:1687:389:691:13153:9162:21167:17,18170:10389:14248:16255:9176:7293:7295:8178:19234:11260:18313:22release 46:3270:6299:10323:3311:18334:16310:11336:6regionally 336:12released 46:6,9357:1,6368:6343:2393:16356:19423:16regionally-exclusrelevant 10:1811:4370:11372:12researcher 20:1424:17423:1711:6,712:1318:4400:9430:1422:1028:630:14regional-ness22:1223:225:10reportable398:20researchers105:19338:1335:1968:2269:4399:4234:22responding 55:14regions333:15142:17405:19reported101:2resident 356:2156:13414:6,7,19415:637:591:16266:16320:18resilience 58:10,10response 2:815:10417:1,9421:5196:20197:11325:7329:1458:1183:1317:223:1725:1826:545:19424:3202:17218:1975:20<
165:9,14 166:2,2163:20 263:2241:16 242:1630:16 38:6 72:14146:9 152:14166:15 167:15,16relatively-little243:10 247:1687:3 89:6 91:13153:9 162:21167:17,18 170:10389:14248:16 255:9176:7 293:7 295:8178:19 234:11260:18 313:22release 46:3 270:6299:10 323:3311:18 334:16310:11 336:6regionally 336:12release 46:6,9357:1,6 368:6343:2 393:16356:19 423:16regionally-exclusrelevant 10:18 11:4370:11 372:12researcher 20:1424:17423:1711:6,7 12:13 18:4400:9 430:1422:10 28:6 30:14responded 88:16338:1335:19 68:22 69:4399:4234:22responded 88:16338:1335:19 68:22 69:4399:4234:22resonding 55:14354:3 404:2 411:3reliability 5:22241:1,13 242:15resofthul 271:18147:6 148:19354:3 404:2 411:3reliability 5:22241:1,13 242:15resilience 58:10,10response 2:8 15:10414:6,7,19 415:1834:16 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
166:15 167:15,16 167:17,18 170:10 260:18 313:22relatively-little 389:14243:10 247:16 248:16 255:987:3 89:6 91:13 176:7 293:7 295:8153:9 162:21 178:19 234:11260:18 313:22 regionally 336:12 regionally-exclusrelease 46:3 270:6 released 46:6,9299:10 323:3 357:1,6 368:6311:18 334:16 343:2 393:16310:11 336:6 356:19 423:16423:1711:6,7 12:13 18:4 11:6,7 12:13 18:4400:9 430:14 400:9 430:14researcher 20:1 22:10 28:6 30:14424:17 responded 88:16regional-ness 338:1335:19 68:22 69:4 354:3 404:2 411:335:19 68:22 69:4 343:15399:4234:22 respondig 55:14regions 333:15 414:6,7,19 415:18 417:1,9 421:5142:17 405:19 196:20 197:11reported 101:2 325:7 329:14resentful 271:18 58:11 83:13respondig 55:14 156:13414:6,7,19 415:18 424:3196:20 197:11 196:20 197:11325:7 329:14 338:10362:10 362:1025:18 26:5 45:19 365:12424:3 region's 337:14 registry 105:12202:17 218:19 324:12 401:19reporting 215:10 243:7 249:1resliency 83:8 365:12 78:10 83:4 88:11
167:17,18 170:10 260:18 313:22389:14248:16 255:9 299:10 323:3176:7 293:7 295:8 311:18 334:16178:19 234:11 310:11 336:6regionally 336:12 regionally-exclusrelease 46:3 270:6 released 46:6,9299:10 323:3 357:1,6 368:6343:2 393:16310:11 336:6regionally-exclus 423:17relevant 10:18 11:4 11:6,7 12:13 18:4370:11 372:12 400:9 430:14researcher 20:1 22:10 28:6 30:14424:17regional-ness 338:1322:12 23:2 25:10 35:19 68:22 69:4reportable 398:20 399:4researchers 105:19 234:22106:9 168:8 resonded 88:16regions 333:15 414:6,7,19 415:1834:16 37:5 91:16 196:20 197:11266:16 320:18 325:7 329:14resilience 58:10,10 38:10response 2:8 15:10 17:2 23:17 25:1,3422:18 423:5,12 424:3198:5,9 200:3 20:17 218:19338:10 reporting 215:10362:10 resiliency 83:8 365:1225:18 26:5 45:19 75:20 76:1,3,7,13region's 337:14 registry 105:12202:12 291:7 324:12 401:19216:13 217:12 243:7 249:1resolved 395:378:10 83:4 88:11
260:18 313:22 regionally 336:12 regionally-exclus 423:17release 46:3 270:6 released 46:6,9 relevant 10:18 11:4299:10 323:3 357:1,6 368:6311:18 334:16 343:2 393:16310:11 336:6 356:19 423:16423:17 regional-ness 338:1311:6,7 12:13 18:4 22:12 23:2 25:10309:4 399:422:10 28:6 30:14 researchers 105:19responded 88:16 106:9 168:8338:13 35:19 68:22 69:4 354:3 404:2 411:3 414:6,7,19 415:1835:19 68:22 69:4 142:17 405:19399:4 234:22234:22 resontful 271:18 resident 356:2 resident 356:2responding 55:14 147:6 148:19417:1,9 421:5 422:18 423:5,12196:20 197:11 196:20 197:11325:7 329:14 338:1058:11 83:13 362:1017:2 23:17 25:1,3 25:18 26:5 45:19424:3 region's 337:14 registry 105:12202:17 218:19 220:12 291:7reporting 215:10 243:7 249:1resiliency 83:8 35:1245:20 49:15,19 75:20 76:1,3,7,13 78:10 83:4 88:11
regionally 336:12 regionally-exclusreleased 46:6,9 relevant 10:18 11:4357:1,6 368:6 370:11 372:12343:2 393:16 researcher 20:1356:19 423:16 424:17423:1711:6,7 12:13 18:4 11:6,7 12:13 18:4400:9 430:14 400:9 430:1422:10 28:6 30:14 22:10 28:6 30:14responded 88:16 106:9 168:8338:1335:19 68:22 69:4 35:19 68:22 69:4399:4234:22 resident 356:2responding 55:14 142:17 405:19354:3 404:2 411:3 414:6,7,19 415:18142:17 405:19 196:20 197:11reported 101:2 266:16 320:18resident 356:2 156:13response 2:8 15:10 17:2 23:17 25:1,3422:18 423:5,12 424:3198:5,9 200:3 202:17 218:19338:10362:10 26:13 217:1217:2 23:17 25:1,3 365:12region's 337:14 registry 105:12220:12 291:7 324:12 401:19216:13 217:12 243:7 249:1365:12 resolved 395:378:10 83:4 88:11
regionally-exclus 423:17relevant 10:18 11:4 11:6,7 12:13 18:4 22:12 23:2 25:10370:11 372:12 400:9 430:14researcher 20:1 22:10 28:6 30:14424:17 responded 88:16regional-ness 338:1322:12 23:2 25:10 35:19 68:22 69:4399:422:10 28:6 30:14 reportable 398:20researchers 105:19 234:22106:9 168:8 responding 55:14regions 333:15 354:3 404:2 411:3 414:6,7,19 415:18 417:1,9 421:5142:17 405:19 142:17 405:19reported 101:2 266:16 320:18 338:10researcher 20:1 234:22424:17414:6,7,19 415:18 417:1,9 421:5142:17 405:19 196:20 197:11266:16 320:18 325:7 329:14resilience 58:10,10 58:11 83:13response 2:8 15:10 17:2 23:17 25:1,3422:18 423:5,12 424:3198:5,9 200:3 202:17 218:19338:10 216:13 217:12365:12 365:1275:20 76:1,3,7,13 78:10 83:4 88:11
423:1711:6,7 12:13 18:4400:9 430:1422:10 28:6 30:14responded 88:16regional-ness22:12 23:2 25:1039:4234:22106:9 168:8338:1335:19 68:22 69:4399:4234:22responding 55:14regions 333:15142:17 405:19reported 101:2241:1,13 242:15resontful 271:18147:6 148:19354:3 404:2 411:3416 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10414:6,7,19 415:1834:16 37:5 91:16266:16 320:1858:11 83:1317:2 23:17 25:1,3422:18 423:5,12198:5,9 200:3338:10362:1025:18 26:5 45:19424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
regional-ness 338:1322:12 23:2 25:10 35:19 68:22 69:4 142:17 405:19reportable 398:20 399:4researchers 105:19 234:22106:9 168:8 responding 55:14regions 333:15 354:3 404:2 411:3 414:6,7,19 415:18 417:1,9 421:5142:17 405:19 reliability 5:22reported 101:2 241:1,13 242:15resentful 271:18 resident 356:2147:6 148:19 156:13417:1,9 421:5 422:18 423:5,1234:16 37:5 91:16 196:20 197:11266:16 320:18 325:7 329:14resilience 58:10,10 58:11 83:13response 2:8 15:10 17:2 23:17 25:1,3422:18 423:5,12 424:3198:5,9 200:3 202:17 218:19338:10reporting 215:10 216:13 217:12resiliency 83:8 365:1245:20 49:15,19 75:20 76:1,3,7,13region's 337:14 registry 105:12220:12 291:7 324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
338:1335:19 68:22 69:4399:4234:22responding 55:14regions 333:15142:17 405:19reported 101:2resentful 271:18147:6 148:19354:3 404:2 411:3142:17 405:19241:1,13 242:15resident 356:2156:13414:6,7,19 415:1834:16 37:5 91:16266:16 320:18resilience 58:10,1017:2 23:17 25:1,3417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:1,3422:18 423:5,12198:5,9 200:3338:1058:11 83:1317:2 23:17 25:1,3424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
regions 333:15142:17 405:19reported 101:2resentful 271:18147:6 148:19354:3 404:2 411:3reliability 5:22241:1,13 242:15156:13414:6,7,19 415:1834:16 37:5 91:16266:16 320:18resilience 58:10,10response 2:8 15:10417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:1,3422:18 423:5,12198:5,9 200:3338:10362:1025:18 26:5 45:19424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
354:3 404:2 411:3 414:6,7,19 415:18 417:1,9 421:5reliability 5:22 34:16 37:5 91:16 196:20 197:11241:1,13 242:15 266:16 320:18 325:7 329:14resident 356:2 resilience 58:10,10 58:11 83:13 362:10156:13 response 2:8 15:10 17:2 23:17 25:1,3 25:18 26:5 45:19422:18 423:5,12 424:3198:5,9 200:3 202:17 218:19 220:12 291:7338:10 reporting 215:10 216:13 217:12seident 356:2 resilience 58:10,10 58:11 83:13 362:10156:13 response 2:8 15:10 17:2 23:17 25:1,3 25:18 26:5 45:19region's 337:14 registry 105:12220:12 291:7 324:12 401:19216:13 217:12 243:7 249:1365:12 resolved 395:375:20 76:1,3,7,13 78:10 83:4 88:11
414:6,7,19 415:18 417:1,9 421:534:16 37:5 91:16 196:20 197:11266:16 320:18 325:7 329:14resilience 58:10,10 58:11 83:13response 2:8 15:10 17:2 23:17 25:1,3422:18 423:5,12 424:3198:5,9 200:3 202:17 218:19338:10 reporting 215:1058:11 83:13 362:1017:2 23:17 25:1,3 25:18 26:5 45:19 45:20 49:15,19region's 337:14 registry 105:12220:12 291:7 324:12 401:19216:13 217:12 243:7 249:1365:12 resolved 395:375:20 76:1,3,7,13 78:10 83:4 88:11
417:1,9 421:5196:20 197:11325:7 329:1458:11 83:1317:2 23:17 25:1,3422:18 423:5,12198:5,9 200:3338:10362:1025:18 26:5 45:19424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
422:18 423:5,12 424:3198:5,9 200:3 202:17 218:19 220:12 291:7338:10 reporting 215:10 216:13 217:12362:10 resiliency 83:8 365:1225:18 26:5 45:19 45:20 49:15,19 75:20 76:1,3,7,13 78:10 83:4 88:11registry 105:12324:12 401:19243:7 249:1365:12 resolved 395:378:10 83:4 88:11
424:3202:17 218:19reporting 215:10resiliency 83:845:20 49:15,19region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
region's 337:14220:12 291:7216:13 217:12365:1275:20 76:1,3,7,13registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
registry 105:12324:12 401:19243:7 249:1resolved 395:378:10 83:4 88:11
J .
<b>regular</b> 13:11 402:2,6 404:18 262:11 263:14 <b>resonated</b> 367:2 88:13 92:11 93:7
175:3 232:5405:5,12,18 407:4267:2 274:13resounded 360:1393:9 96:6 99:18
309:11412:14301:3 409:13resource 276:20101:7 106:15
regulations 148:14   reliable 103:19   reports 101:3   285:15   114:9 115:6 127:2
regulatory 16:12106:5 197:18241:21 284:2resourced 262:17135:12 136:18,22
rehab   134:13   265:1   199:9,13   200:15   372:1   resources   18:11   161:7   170:19
345:18   291:2,6 404:6   represent 18:12   79:2,19 99:4   184:20 185:3
reimbursement   reliably 37:12   101:22 348:16   104:10 112:5   195:1 218:17
246:10 263:5   relieve 337:3   representative   133:21 134:19   239:19 300:4
reimbursing 266:4   relive 202:1   212:21   135:5,18 139:4,12   308:6 313:22
reiterate 206:16   rely 377:12   represented 91:20   144:19 180:7,14   314:2,7 316:7
294:2 329:10   remarkable 158:2   representing 11:16   180:15 204:16   330:11,16,17
332:19 351:6 <b>REMCS</b> 1:5 7:8,8   11:18,19,20 28:7   210:8 221:10   365:1,20 380:1
364:22   remember 40:17   represents 136:12   245:22 249:20   431:7,17 432:16
reiteration 236:641:20 281:15225:19252:4 264:19,22responses 40:3
relate 90:5 102:9   310:3 352:7 366:3   reps 338:8   270:10,17 345:21   118:15 151:12
related 16:1 17:14   398:9,12   request 202:7   361:1 379:16   224:3 308:6 330:5
37:19 84:19 114:3 remind 11:12 12:2 requested 223:4,10 384:21,22 417:7 responsibility
164:15 233:22   398:7   require 37:4 86:6   respecify 342:16   416:3 422:1
307:16 378:22reminder 41:16110:19 279:18respect 198:9responsible 90:21

	1	l	1	1
97:15	146:10,20 147:5,9	<b>rise</b> 154:7	<b>rollup</b> 334:21	266:8 267:7
rest 37:13 135:15	156:13 161:20	risen 161:19	<b>roof</b> 326:12	<b>RWJ's</b> 41:8
271:17 319:15	162:11 163:7	rising 154:6	room 1:20 16:16	<b>Ryan</b> 2:14 25:19
379:20	165:3,19,20	risk 6:8 71:12	71:15,16 74:3	166:21 167:13
result 40:3 45:4	167:11 169:18	134:21 233:7	120:2 129:13	172:4 174:7
104:22 136:4	177:12 178:2,13	238:10 240:18,22	163:20 168:15	181:17 195:13,17
351:19	198:5 206:6	242:18 248:11	173:13 175:3	195:19 247:4
results 35:4 223:1	207:22 209:1,8	249:7 250:7	191:9 192:6,7	289:21 347:15
232:15,17 250:3	212:14 214:8	251:20 252:21	202:9 206:22	350:6 354:7
409:19	221:1 222:7,12	253:9,10,22 254:2	208:10 223:22	356:19 417:2,14
retriaged 56:8	223:10,10 225:13	254:4,18 256:14	224:1 229:18	421:2
retrievable 41:2	232:2,19,21	257:14 267:18	289:5 297:22	<b>Ryan's</b> 207:18
retrofitting 188:12	235:12 238:18	273:13 287:11	321:21 325:15,20	291:3
<b>revector</b> 66:21	246:8 252:22	292:11 293:5	371:5 389:2	
revenue 368:19	253:5,12 254:11	294:5 316:20	392:10 395:13	S
reverse 53:4 64:8	258:18 259:2	risk-adjust 243:13	398:11 432:14	<b>s</b> 24:7
reverse-triage	278:19 280:3,4	245:3 250:1,14	rooms 116:10,11	<b>SAEM</b> 14:16,20
337:8	283:12 284:12	risk-adjusted	163:15	15:1 19:1
reverse-triaged	289:9 293:7 295:6	38:13 253:3	roots 421:18	safe 76:17 397:19
318:14	296:4 299:3,11,12	259:16,18,19	root-cause 105:14	398:21
review 26:17 32:13	301:5 305:8	risk-adjusting	roster 187:20	safety 19:15 76:15
39:16 96:2 195:4	307:12 311:16	243:7 249:14	round 322:16	78:15 135:15
200:7 389:11	313:1,22 315:1	252:6 253:4	rounded 278:19	190:18 365:12
reviewed 383:14	322:14 333:17	265:15	rounds 107:16	397:21 398:8
388:5	334:7 338:14	risk-adjustment	278:7,8	safety-net 183:19
<b>revise</b> 70:18	339:10 340:17	241:18 254:12	round-robining	256:5 262:16
revised 70:18	350:11 352:21	255:12 256:1	322:20	266:5
<b>revisits</b> 366:13	354:7 357:22	260:10 267:15	route 180:9	safety-net-hospit
revolved 17:10	367:21 372:6	321:4,7	routine 41:3 127:5	265:8
re-endorsing	376:12,16 377:10	road 57:9	127:11,15 178:18	safety/security
193:16	378:4,5,11,11	<b>Robert</b> 20:12 22:17	<b>row</b> 205:1	77:1
re-reviewed 39:16	379:1 380:18	<b>robin</b> 322:16	<b>rule</b> 217:3 235:10	sake 10:11
<b>Rhode</b> 157:19	385:15 388:15	<b>Robinson</b> 2:18 19:5	ruleout 57:1	salary 13:8
<b>Rick</b> 44:15 394:8	390:15 399:15	19:6 218:1 345:8	rules 79:3 147:20	Sally 2:15 24:10
395:1	400:7,7 401:4,12	360:12	148:8 149:18	30:17 84:22
rid 243:18 272:1	406:3,3 408:20	<b>robust</b> 167:10	154:21 161:2,3	Sally's 123:13
293:2 333:9	411:13 413:14	190:12 305:8	392:14,16	124:4
right 18:13 45:16	415:5 426:16	368:2 393:13	rule-writing 16:13	SAM 21:22
62:9 65:11,12	428:3 429:13	Rochester 2:20	<b>run</b> 62:12 273:1,10	<b>SAMHSA</b> 426:22
69:22 70:3,15	431:3	17:7 353:14	282:6 387:14	sample 123:3
71:1,15 82:1,8,17	right-size-fit 51:14	role 199:15 284:20	running 221:15	212:18,20 213:8,9
84:21 88:13 110:9	right-size-fit-it	361:22 367:10	333:19,21 400:13	298:10
110:16 113:15	167:11	430:9	runway 29:14,19	San 2:23 14:7
115:21 122:13	<b>rigor</b> 399:20	roll 36:1 250:17	425:22	353:13
124:10 128:20	rigorous 32:12	rolled 119:18 167:6	rural 79:20 136:10	sanction 263:4
129:1,7,12 134:9	185:11 391:17,19	<b>rollover</b> 149:15	242:9 253:14	sand 355:14 421:9
144:3 146:10,10	<b>rigs</b> 166:7	153:5	255:1 256:12	<b>SARS</b> 123:16 139:1
				l

139:2,3,8,9 140:4	scant 396:15	82:5,6 88:10 92:6	271:4 281:7,16	337:4 348:12
140:22	scenario 45:7,8	167:20 175:11	289:10 290:4	353:11 375:15
sat 32:9	104:7 124:20	182:14 243:14	312:14 320:22	408:22 410:16
satisfaction 239:16	139:17 272:9	258:20 260:15	321:21 334:16	415:20 423:13
satisfy 176:18	scenarios 79:5	278:2,6 293:4	348:11,13 352:2	424:18 431:9
satisfying 109:22	138:19,20	324:2 337:16	366:9 380:15	sensitive 355:12
saw 57:10 83:22	schedule 317:5	341:13 348:5	385:8 389:12	392:13
395:8,11	scheduled 134:13	364:18 365:5	399:20 407:20	sent 130:12 270:13
saying 15:17 31:12	scheme 425:6	372:3 374:13	408:18 414:16	275:19 339:22
69:19 80:9 99:1	scholar 20:13	387:2 395:6 402:5	420:4 432:6	separate 107:20
104:2 144:21	school 15:7 128:4	secondary 76:18	seeing 28:16,19	125:9 129:16
145:2,12 150:10	128:13	secondly 88:6	60:4 77:15,16	150:6 151:15
150:15 151:2	<b>Schuur</b> 2:19 20:21	111:17 180:7	106:9 130:1	168:3 171:9 221:3
157:2 179:14	20:21 59:7 155:7	250:12 372:17	150:17 201:15	224:10 277:5
183:14 185:8	157:7 225:16	Secretary 2:8 17:1	220:7 338:5	278:18 282:14
		24:13 25:17 42:13		
212:6,13 239:3 252:21 258:22	239:18 243:5	24:13 25:17 42:13 82:9,22 83:3,13	429:14 seen 33:21 90:9	319:14 331:21
	244:14 245:7	<i>, , ,</i>	seen 33:21 90:9 96:10 129:2 138:2	332:22 363:17
283:18 289:13	262:7 292:20	section 191:14		separated 367:16
291:8 312:22	303:5 361:9 398:4	195:8 199:22	193:21 213:5,6	<b>separately</b> 277:17
315:11 323:18	428:18	219:4 275:5	231:11 234:18	277:19
358:16 360:8	science 91:6	307:11 325:19	256:2,13 311:11	separations 81:5
366:5 370:6	scientific 32:12	368:13 370:6,11	sees 214:22 216:18	<b>sepsis</b> 361:20
381:13 387:5	34:10 401:8 402:3	sector 16:17 136:3	326:14	sequence 322:9
390:19,20 391:12	408:7	<b>secure</b> 76:17	<b>select</b> 35:16	series 380:18
392:13 403:12	scientifically	security 2:16 15:22	selected 11:1	serious 203:5
409:7 414:10	334:12	24:12 76:16 89:9	selection 40:17	265:21 287:7
428:19	scientifically-bas	116:5 328:4	<b>self</b> 59:8	398:20 399:4
says 13:18 129:10	418:9	365:13	self-select 164:4	serum 288:12
130:8 145:15	<b>scope</b> 26:10 51:3	sedated 73:17	self-selected 163:22	serve 11:1,21 20:16
159:12 225:13	121:7 156:7	<b>see</b> 33:18 39:2	semantics 243:9	300:22 301:12
240:17 242:14	281:13 400:19	42:20 69:1,13	semi-non-contro	309:9 367:12
269:22 296:20	427:10	78:17 94:12,16	327:6	416:5
312:16 376:6	score 34:18 37:6	97:12 102:11,13	send 130:14 156:17	served 12:11 13:20
394:3	233:1 241:22	104:12 105:20	175:18 258:14	14:14 21:22 371:6
scalability 410:15	288:3 289:4,9	107:19 112:1,22	259:8 282:9 326:3	371:9
scalable 80:10	scores 38:14	120:4 121:20	407:22	serves 387:7
scale 81:8 126:12	103:18	128:16 130:5	sending 113:3	service 78:12 79:12
130:17 281:8	screen 183:8	136:4 137:19	276:19 277:3	132:21 133:11,22
287:14,18,20	224:19	142:7 182:7 187:2	337:8	211:15 278:8,18
323:15	Scroll 183:10	189:5 199:5 207:5	senior 4:5,18,23	280:9 304:20
scaled-up 364:12	se 201:8 308:7	211:3 214:4 215:8	8:14 30:12 235:3	327:1 358:3
scales 291:6	season 114:4	222:17 224:17	sense 32:22 68:14	services 1:5 2:17
scan 152:21,22	seats 122:12	230:20 231:4	98:21 103:21	13:15 18:11 21:2
285:7,13,18 358:4	Seattle 77:20 79:17	232:17,18 233:5	151:9 152:8 182:4	25:17 28:6 30:14
387:16	second 34:11 50:19	246:5 248:4 249:3	198:3,6 240:12	31:10 36:2 133:10
scans 285:9,11	55:1,1,21 59:2	251:20 257:15	296:7 306:16	135:5 136:2 216:7
293:15	64:1 66:22 67:1	261:5 265:18	312:18 330:22	236:19 281:19
	0			
	1	1	I	I

	I			
304:16 329:17	422:2	sick 125:18 142:4	simulation 392:1	127:6
345:20 346:20	<b>shelf</b> 147:2	253:6,8 254:6	simulations 324:7	small-scale 323:14
349:9,11 386:16	Shelly 2:22 264:11	256:10 271:7	<b>single</b> 279:6 343:18	324:1
425:4	<b>shift</b> 45:6 46:1 50:1	362:3	343:18	smartly 64:15
serving 24:5	57:18 117:19	sicker 169:2,8	sit 11:13,21 19:1	Smith 288:9
session 318:8	169:14 192:5	180:16 268:18	32:2 237:19	smoothness 136:1
321:19	396:4	296:22	sites 35:19	smooths 296:15
sessions 318:9	<b>shifted</b> 51:10 53:9	SICU's 73:9	sits 401:12	<b>social</b> 92:22
set 29:14 31:12	70:15	side 78:15 132:12	sitting 233:14	<b>society</b> 11:16
40:18 79:3 85:18	shifts 119:17	132:12 160:10	423:7	136:12,21
89:5 139:7 154:4	<b>shine</b> 274:15	185:16 190:16	situation 69:1	socioeconomic
156:21 170:10,20	<b>ships</b> 154:7	195:13,15 208:2	278:9 388:11	255:10
171:9 173:20	<b>shoot</b> 82:4 288:5	210:9 252:22	390:11 413:4	socioeconomics
182:2 267:9 277:5	<b>shooter</b> 365:16	261:6,11 294:22	situations 118:11	264:16
280:5 324:19	shooting 140:18	299:3 364:19	125:6,10 134:18	socks 350:17,21
325:2 361:12	388:16	393:4,12 405:3	140:2 141:19	<b>soft-call</b> 56:22
371:12 373:15	<b>shoots</b> 163:19	408:14,16 409:1	250:6 390:3,12	solely 174:16
425:22 429:8	<b>short</b> 43:20 59:5	sidebar 355:17	392:5 397:10	<b>solicit</b> 44:18
432:21	84:11 194:7 238:3	side-by-side 227:21	<b>six</b> 131:15 214:22	solution 348:9
sets 21:17 170:13	238:16 259:10	<b>sign</b> 17:19 55:18	219:7,8 288:21	349:3
170:16,17 188:10	281:9 359:6	<b>signal</b> 37:8 227:18	292:13 317:12,15	solve 14:21 137:1
324:15	370:22	signal-to-noise	380:18 428:20	solving 329:6
setting 6:11 29:19	<b>shorten</b> 156:15	412:12	size 51:2 66:17	356:14
103:20 127:3	217:14	signed 356:2	123:3 254:9 267:9	somebody 112:22
140:7 182:5	shorter 254:17	significant 36:7	298:10	128:3 130:3,7
200:21 234:18	267:10 280:1	46:13 209:21	skewed 274:15	142:22 143:4
268:2 281:5 296:2	398:15	258:9,13 310:5	skills 397:11	147:12 148:22
375:21 376:6	shortsighted 71:12	347:2	skipped 335:7	180:15,16 211:11
settings 30:16	365:22	significantly	sky 400:12	238:7 251:6
178:18 219:7	short-stay 281:2	256:22	sleep 298:1	276:14 277:3
347:21	<b>short-term</b> 216:11	<b>signing</b> 55:20	slide 34:11 41:18	278:10 291:19
seven 60:2 317:15	236:17	201:11	93:10 95:8 96:2	309:6 325:15
seventy-two 395:15	<b>shot</b> 138:15,17	siloed 397:17	96:16 97:17 99:11	384:18 388:14
severity 244:18	141:10	<b>silos</b> 129:16	100:12	410:4
289:19 290:5	<b>show</b> 37:12 70:3	similar 77:6 105:18	slides 86:21	<b>someday</b> 67:7
sexy 131:9	128:18 144:16	105:20 119:16	<b>slightly</b> 53:15,17	<b>someplace</b> 382:19
shades 147:7	256:13 329:20	144:14 185:4	65:16 91:4,21 222:0	somewhat 87:19
Shah 2:20 17:4,5	376:5,15 385:9 <b>showed</b> 158:3	287:10 345:5	322:9 slow 200:4	88:8 114:1 149:11 282:5
319:17 332:18 341:7 353:7	214:17 393:16	365:17 386:17 391:8 415:5	slow 209:4 small 13:7 14:10	282:5 soon 125:22 182:13
			242:9 267:7	<b>Soon</b> 125:22 182:13 188:18 229:10
<b>shape</b> 77:3 231:3 231:16	<b>showing</b> 113:18 <b>shown</b> 133:3,15	<b>simple</b> 244:2 247:22 248:8	297:20 298:3	275:3
share 85:1 104:9	299:22	256:19 276:7,10	359:16	<b>sooner</b> 355:11
105:17 222:15	shows 192:18 270:7	317:5	smaller 138:7	sorry 19:20 27:21
232:16 422:1	302:18	simplest 49:12	148:20 256:11	67:5 80:5 81:18
shared 177:2	shuts 400:22	simply 11:11	299:19,21	152:20 163:3
343:18 421:7,20	shuis 400.22 shying 284:14	simulated 379:7,17	smallpox 112:1	177:6,17 187:10
5+5.10 +21.7,20	suying 204.14		511anpvx 112.1	1//.0,1/ 10/.10
	I	l	l	I

187:12 188:3	260:10 263:5	51:17 53:1 63:18	385:7,13 395:5	<b>spoke</b> 46:10 146:21
215:17 233:11,12	266:2 267:5,16	63:21 65:12,16	397:7 402:8,17	165:4 166:18
243:3 245:4	268:21 269:3	66:8 68:14 69:17	405:20,21 414:10	168:5,8 421:3
247:13 249:10	273:8 274:1	143:18 153:13	422:14	<b>spoken</b> 47:17 165:9
289:6 293:22	277:14 289:18	183:20 408:15	specifically 27:11	spread 64:18,22
298:16 300:5	292:3,8,11,15,16	421:7,14,15,21	67:21 108:5 121:2	65:2 141:11
302:7 306:19	293:1,2,18 299:12	428:7	164:21 179:4	squeeze 34:6
307:13 313:9	302:22 303:5	spaces 429:17	186:13 190:17	squirming 120:5
320:21 335:6	308:10 311:13	Sparr 44:14 368:16	191:15 194:3	squirrel 138:13,14
339:19 345:6	318:6,18 325:22	384:9 406:11	225:4 260:5 308:5	148:19 150:5
351:4 354:9 366:2	326:12 327:5,18	sparse 302:20	323:4 339:12	squirrels 137:10,14
368:14 377:22	332:6 337:1	<b>speak</b> 48:10,12	354:15 382:4	137:15,18 138:5,6
384:8,9 406:9	346:10 348:6,11	51:8 54:18 57:11	385:11,13 387:21	138:8,21 147:8
413:6	349:20 350:1	60:17 72:16	specification	305:2
sort 41:20 43:14	351:21 352:6,13	115:15 120:6	422:15	<b>stable</b> 73:12
47:12 59:8 75:1	352:15 355:9	145:9 148:4	specifications 16:3	stack 161:7
76:14,18,22 85:4	357:22 361:14	165:17 166:21	34:14 251:2	staff 3:10 44:13
85:6,18 86:1,11	367:3,16 369:5	167:15 174:7	375:17 402:10,18	51:16 52:22 327:9
107:5,6 113:17	383:12 386:2	216:16 250:1	412:4	342:2 345:21
115:15 120:2,10	391:10,11,11,16	255:19 268:7	specificity 364:21	356:4 365:15
121:6,11 123:4	392:3,21 398:8,13	282:4 289:5	specifics 251:16	406:20
128:5 131:4	399:20,22 408:12	speaking 11:6	specified 371:21	staffed 304:7 356:4
132:22 135:22	417:16,21,21	25:12 62:5 79:18	401:12 402:8	staffing 51:13
141:5 143:12,13	418:1,2,4,8,13	82:13 198:22	408:13 410:22	396:5
144:9 145:12	419:17,19,21	205:7 207:17	413:10	<b>Stafford</b> 82:12,18
147:14 149:5	420:3,12,17,19,20	251:1 281:15	specify 405:22	82:21
151:9 153:8 154:4	421:17,19 422:11	320:15 382:15	413:10	staffs 135:16
154:15 156:1	422:13 425:18	speaks 83:6,9	specs 222:11	stage 325:1 378:10
157:8 158:9 159:3	426:7,8 427:9	166:13 167:6	225:18 232:21	staged 62:16
164:8,15,18	430:6,7	168:9 281:22	<b>spectrum</b> 74:1	stakeholder 14:11
169:16 170:1	sorts 130:7 157:9	337:18	147:15 159:11	stakeholders 32:14
172:7,15 175:20	361:3	<b>special</b> 18:10 341:5	323:16 364:3	194:17
181:6 182:5,10	<b>sound</b> 199:10	specialist 274:5	speculation 123:2	stamps 201:10
184:19 185:7,11	sounds 170:12	specialty 273:5	spend 191:9 227:12	stand 47:7,8 53:3
185:14 186:14	212:1,8 233:18	<b>specific</b> 29:13,16	242:6 282:2	55:4 58:5 65:14
192:22 195:3	276:21 283:13	29:17 30:1 44:6	spending 285:1	67:17 83:14
192:22 193:3	286:7 408:8	45:19 46:11 50:8	393:5	146:14,18,18
190:14 197:4,10	424:13 430:10	91:15 170:16	spent 9:4,8 13:8	140:14,18,18
197:19,21 199:0,8		194:19 198:18	16:10 37:17	147.5 179.15 184:4
209:18 212:19	<b>source</b> 200:4 287:22	200:13 202:5	191:21 275:18	184:4 standard 152:1
215:5,20 216:15	<b>sources</b> 38:15,18	203:13,15 226:2	320:15 397:8	225:9 289:18
216:17 218:20	41:13 108:15	239:10 260:5	spheres 107:20	308:18,22 324:13
220:2 224:19	200:5 380:4	264:3 276:3	<b>spiral</b> 141:11	352:22 354:3
231:14 241:18	southeast 144:10	300:10 301:6	<b>spirit</b> 10:1	379:17 384:10
242:21 243:8	so-and 112:6	303:18 305:6,10	spirituality 393:22	388:3 397:14
247:10 248:9,11	<b>So-and-So</b> 11:15	307:21 315:6	<b>splint</b> 56:21	398:13 408:5
249:21 251:17,20	<b>space</b> 35:13 39:9	316:22 364:7,8	splitting 209:9	410:17

standardization	373:21 430:12	239:10 241:10	162:11 203:10	strategically 67:9
242:21 292:21	started 8:10 36:21	242:11 244:6	209:11 218:13	strategies 303:18
352:14	43:8 122:10 132:6	253:5 254:16	221:2 225:15	303:19 304:19
standardize 287:17	162:1 189:4	256:5,22 257:4	230:1 246:17	374:11
standardized 32:3	209:19 272:16	259:10,17 261:19	281:14 291:9	<b>strategy</b> 34:2 304:1
287:13 288:3	347:22	262:20 264:16,20	315:10 322:17	309:20 374:8
standardizing 6:16	starting 38:1 174:4	265:3 266:10	338:18 339:7,10	376:1 384:6
286:20	219:4	271:10 280:1,4	339:14,21 340:2	stratification 244:1
standardly 320:18	starts 229:11	281:9 287:7,9	366:22	244:2 247:22
standards 30:8	231:14 318:5	291:11 295:15	stop 33:10 42:3	248:9 256:19
57:12,19 96:13,21	321:19	300:12,21 301:22	185:21 314:9	257:21 258:3
132:16 154:21	state 2:18 19:9	305:7 315:6 316:5	<b>storage</b> 406:20	267:16,19 292:3
198:15 226:5,11	23:18 65:3 69:9	316:21 320:1	<b>stories</b> 149:14	293:5
283:15,17,22	89:14,17 102:16	329:22 331:14	story 246:21	stratified 38:9
284:3,18 378:17	119:10 328:13,14	343:17 363:7,12	337:17 338:16	241:22 243:8
378:18,19 381:13	344:7 377:8,17	366:11 397:16	340:7	247:15
387:9 391:6 408:3	381:14 384:20,21	staying 162:15	Stoto 2:21 5:11	stratifies 287:6
428:4,5	414:11 416:10	206:22 417:6	15:3,5 43:21 80:3	stratify 243:12
standards-of	424:7	stays 265:17	86:19,20 110:4,8	247:17
392:10,21	stated 61:6 230:2	349:16	110:12,16 111:7	<b>straw</b> 254:1 265:14
<b>standing</b> 49:7 53:8	statement 92:14	steal 316:10	115:2 118:21	stream 88:2
386:18	states 60:6 82:11	Steering 371:6	126:22 137:6	street 1:20 165:21
standpoint 54:7	267:22 414:14	388:7	138:8,14 140:3,14	strengths 96:17,18
82:6 154:13 157:2	static 56:10 274:10	<b>STEMI</b> 146:15	177:18 185:8	142:14
162:19 212:11	274:22 275:2	156:3 159:2	198:1 233:9,12	stress 57:1,2 115:6
229:10 265:5	stating 80:8	173:22 291:15	305:17 323:1	115:9 130:13
284:22 314:1	station 109:21	step 49:21 77:15	325:9 327:22	271:16 327:13
345:22 360:14	157:19	80:3 86:10 92:7	331:2 332:12	335:2
stands 51:21 87:19	statistical 380:14	239:4 248:10	377:6,22 378:4	stretch 54:2
146:14 147:10	391:1	274:9 322:10	380:7 381:11	<b>stretcher</b> 218:9,9
179:12 374:3	statistically 300:1	374:13 375:14	382:20 386:11	<b>strike</b> 411:14
Stanford 14:12	<b>statistics</b> 9:9 13:10	Stephen 1:21 2:3	389:8 390:19	strikes 129:3
182:16	22:4 115:20	stepped 24:5	391:22 399:7	332:13 337:11
start 8:7,19 12:22	statistics-type 9:8	steps 172:19	400:2 401:9,18	<b>stroke</b> 429:4,6
32:19 44:5 53:19	<b>status</b> 205:4,5	201:14 334:15	405:14 407:16	<b>strong</b> 77:10
73:13 77:12 81:9	215:21 216:6	Steve 9:1 13:1	409:9 412:18	141:19 142:6
86:7 92:13 123:8	221:21 236:21	219:1 298:21	422:21 424:5	389:13
149:18,19 164:16	247:10 257:7	299:19 433:10	433:13	strongly 37:20
167:8 186:5	265:22	Steven 4:8 8:11	Stoto's 120:21	393:6
189:21 191:19	statused 221:18	sticks 172:1	straightforward	structural 6:21
193:19 196:13	statutory 281:9	stomachache	279:17	184:16 300:19,22
225:5,6 229:10,20	stay 53:12,19	291:21	straight-out 341:3	301:6,20 302:4
237:5 274:14	128:16 133:6,12	Stone-Griffith 1:22	strata 232:22 233:4	303:2,8,9,12
285:2 286:9	160:5 162:3	2:4 4:10 8:12	248:7 338:19	305:5,6,9,14
315:11 318:18	192:18,21 193:8	9:15,17 13:13,14	367:14	310:17,22 311:3,6
355:13 363:16	194:6 203:3,22	115:14 122:9	strategic 277:14	311:11,16,17
369:18 372:22	214:20 215:2,15	147:13 161:14	313:14	312:12,17 330:6

<b></b>				Page 400
341:14,16	290:16,19	summarized 15:15	408:2 415:16	185:6,14 222:21
<b>structure</b> 36:10,13	subjectivity 288:15	summary 363:15	408.2 413.10	surveyors 213:14
94:18 119:9	subjectivity 288.15 submission 405:7	<b>summary</b> 303.13 <b>summation</b> 136:11		222:21
	submission 403:7 submitted 173:21		surge 5:14 26:19	
127:17 300:10		summed-up 143:12	47:1 50:2,3 52:22	suspect 127:14
313:4	399:18 422:19	summing 411:19	71:18 76:8,13,13	<b>suspended</b> 78:13
structured 99:13	subpopulation	412:20 413:3	76:17,21 77:2,9	78:17
<b>structures</b> 89:16	236:11	sunset 313:12,13	78:2,18 81:3	sustain 125:5,11
99:5 142:16 312:2	subsequently 46:7	sunsetting 362:22	102:8 118:2	sustainable 50:21
312:3,4 425:10	48:17 55:11	superior 35:17	120:11 122:11,11	sustained 162:2
struggle 211:14	322:13	supply 51:13	122:19,20,22	336:1
299:7	subset 203:3	support 20:18	123:1,15 124:9	sustaining 125:4,12
struggling 102:3	subsets 231:18	24:16 66:1 97:5	134:4 141:7 142:1	Suzanne 1:21 2:4
117:21 126:3	236:8	265:1 277:15	142:6,12 147:16	4:10 8:12 9:17
160:19 161:10	substantial 235:13	308:16 315:19	147:16 148:1,2,16	10:9 13:14 14:14
212:6 218:3 328:3	substantially	318:16 345:9	149:13 152:15,20	161:13 198:20
364:1	236:18	427:1	157:22 159:10	204:11 220:19
stuck 109:20 110:4	suburban 256:11	supported 402:10	160:21 161:11	243:1 366:21
155:1 239:8,13	success 50:18,18	<b>suppose</b> 220:13	162:14,20 174:20	382:16 433:10
students 78:6	314:17	359:16	181:3 299:20	<b>swan</b> 134:17
studied 103:17	<b>sudden</b> 73:13 147:1	supposed 352:19	305:1 308:4	136:13 137:7
128:7 198:8	163:20 317:15	sure 23:19 30:9	309:10 314:4	138:1,13 309:16
200:20 388:9	suddenly 148:8	34:3 38:2,16	330:11 335:15,21	swans 126:16
studies 38:6 124:17	228:21 364:12	43:14 58:18 60:16	336:8 344:3	137:10,12 138:7
250:5 290:22	367:3	77:10 81:19 95:19	355:19 365:5,8,12	swat 118:8
301:13 302:12	suffers 133:17	103:3 121:17	365:15,21 367:12	switch 396:4
391:1 392:1	sufficient 110:1	144:15 145:19	375:22 384:6	synergies 49:5
393:21	302:14 411:4	148:3 153:14	389:20 400:17	synergy 67:2,2,7
study 14:20 22:14	suggest 200:15	156:10 175:6	406:15	system 2:6,7,9 18:1
22:18 88:7 176:7	217:8 243:6,6	183:3 184:3	surgeon 158:9	21:12 22:11 50:12
200:22 316:14	244:14 251:8	188:14 189:14,18	366:5 395:17	50:12 51:11,20
344:4 389:15	274:9 306:18	198:14 208:9,21	surgeries 134:13	52:21 53:5 56:10
studying 2:6 22:10	319:7 357:1	214:12 216:12	surgery 85:16	69:7 70:5 76:9
191:22	374:14 381:8	233:10 237:4	246:4,5 317:6	84:7 85:9 86:15
stuff 9:8 53:1 91:7	suggested 119:2	251:22 256:3	394:15 399:1	86:15 89:2,4,9,11
102:10 108:1	392:2	263:21 266:6,7	surges 80:20 114:6	90:6 93:15 98:13
128:3,16 141:22	suggesting 129:9	275:7 283:11	308:6 383:18	101:6 102:5
184:17 188:15	361:4 387:4	287:1,3 290:16	surgical 273:21	103:21 104:11
223:13 238:18	suggestion 274:19	294:14 297:1	344:8	105:15 106:8
240:11 322:21	398:2	298:11,22 300:8	surging 86:11	110:3 115:1 118:3
332:6 433:12	suggestions 323:2	307:4,6,9 328:1	surplus 128:6	121:3,13 133:8
stunned 356:8	433:4	334:9 336:21	surprising 355:20	134:11 146:5,19
stunning 117:7	suggests 63:19	346:19 351:7,12	surrogate 54:10	155:17 160:7,8
summig 117.7 sub 401:22	351:14 407:14	361:9 368:1,3	surrounding	161:6 171:4
sub 401:22 subdivided 374:5	419:11 420:7	,	152:19 354:13	180:12 182:21
	suites 366:9	369:2,10 370:3 381:21 386:9		
<b>subject</b> 107:17 189:21 227:6			<b>surveillance</b> 100:18 140:5	199:21 200:8,11
	sum 87:7 411:18	393:9,9 394:1		205:4 211:9 221:5
subjective 226:1	summarize 97:13	395:2 406:12,14	survey 22:5 177:7	224:4 227:16
	I	I	l	

				2
244:2 247:22	systemwide 74:18	36:3 40:7 61:21	375:5 385:7	tempted 153:8
248:9 249:13	86:3 266:21	71:16 82:5 85:15	405:15 406:8,15	ten 9:7 267:11
250:18 256:19	321:11	93:10 94:17 96:16	406:16 416:16	tend 262:13 289:3
257:21 258:3	system-level 88:18	101:20 153:18	431:11	397:16
259:22 260:10	S-E-S-S-I-O-N	155:9 178:3 179:1	talks 125:3 328:8	tendencies 300:3
264:6 265:2,5	189:1	190:3,9 196:12	tally 289:9	tendency 6:18
277:21 280:18		203:19 220:20	tangent 319:18	297:13 298:19
287:6,12,13 291:2	T	225:1 240:21	tangible 164:10	tends 33:15 290:2
292:4 293:19	table 10:17 12:17	241:17 249:14	165:4,18 166:18	tension 91:22
294:12 308:10	47:19 48:1 135:10	260:2 267:13	184:9	160:12 271:6
312:6,9 313:21	136:16 373:5	275:6,7 300:7	target 58:11 67:21	tenuous 405:9
314:2 316:7	429:14 430:11,20	322:11 325:2	70:7 84:21 180:1	term 23:20 89:3
318:20 319:15	430:20	392:11 401:19	260:9 268:10	229:15 245:5
324:4 328:9	tabletop 111:22	418:16 421:5	269:19 271:13	313:12
329:11 333:9	112:6 114:15	talked 40:22 43:19	274:10,22 275:2	terms 25:11 28:4
335:15,19,20	184:15 406:4,6	53:4,4 110:18	275:17 292:8	43:15 44:3 68:16
343:17 344:11,12	tachycardic 395:14	115:3,17 123:17	294:3,5,16	80:14 91:10 95:2
345:12 346:15	tagline 52:21	203:12 212:17	targets 260:3,4,5,8	108:13 109:1
347:11,18 350:7	take 58:13 71:17	219:18 220:17	267:14,20 268:20	113:20 132:9
355:3,3,7 362:10	80:2 93:9 100:21	274:11 283:4	271:21 275:8	135:18 173:3,18
363:5,9 366:15	106:2 109:2,19	327:8 335:14	284:13 294:8	174:2 176:11
399:13 413:1	119:21 121:18,21	345:12 368:6	314:5 327:5	177:21 178:9
421:18,19	122:2,12 141:9	418:15 421:13	366:11	213:1 230:18
systematic 38:19	143:20 144:17	talking 61:3 72:6	task 8:6 14:1 19:2	240:12 250:8,15
107:7 380:8	169:21 172:19	81:8,15 82:15	164:9 260:15	261:21 262:5
389:11 407:18	175:22 177:15	86:5 93:4 102:10	386:16	276:20,21 279:18
systematically	179:16 183:16	107:10 124:9	teaching 247:10	279:20 280:11,22
39:22 257:4 382:7	193:10 237:21	129:5 138:22	252:7,13,15 257:7	283:5 291:7 308:4
387:18	250:9 252:9,14	141:18 143:19	team 148:21	329:19 330:9
systemness 318:6	254:1 257:20	148:22 151:11,16	149:17 421:16	347:4 351:9,10
systems 16:21 20:6	273:11 288:14	159:10 161:1	<b>tease</b> 209:1,4	367:10 372:11
53:11 79:16 90:2	290:3 317:16,18	168:18 178:14	telemetry 230:11	376:11 378:5
92:16 98:15 99:2	321:13 327:2	182:9,9 186:12	telephone 2:17,22	382:5 390:6
103:10,11,12	338:17 357:21	189:21 196:9	187:18	395:18 396:8
105:13 107:4	358:7 363:7	218:10 220:17	tell 12:17,19 25:8	413:16 415:18,22
109:17 111:3	368:20 370:11	237:5 239:5	59:17,18,21 62:6	416:7,18
115:6 132:14	371:13 378:13	249:12 250:13	70:10 96:22 97:1	terribly 175:7
156:13 166:15	408:17 412:13	253:17 272:19	117:18 212:15	<b>Terry</b> 2:4 18:6
168:11,13 178:19	taken 117:1 183:15	278:16 307:21	219:15 221:6	149:22 153:18
227:22 242:4	186:4 370:17	308:1,3 313:20	235:10 252:16	179:1 188:4,6
264:9 283:8 291:1	takes 76:14 94:22	314:9 318:11	338:1 410:18	210:14 318:21
304:21 320:17	113:11 211:1	325:1 327:4	411:21	340:18 344:18
330:8 336:6,11	218:8 235:6	332:22 333:13	telling 154:13	350:10 370:3
343:21 346:16	248:12 250:4	335:13 339:2,2,11	338:15 358:10,12	<b>Terry's</b> 155:8
363:18 365:11	253:5,7 316:13	341:14 343:6	358:12	173:14 176:4
393:16 410:12	431:6	346:4 350:5 353:9	tells 98:20 340:7	tertiary 76:14
425:8	talk 14:12 30:6	360:14 368:18	temptation 147:14	242:8,11
	-	-	-	-

<b>test</b> 37:12 62:8 63:2	82:5 98:8,11 99:7	155:13,18 156:4	61:19,22 65:9	156:6 157:12,15
121:22 130:13	100:5 102:13	156:15 158:1,21	67:8,22 68:14,15	158:11,15,20,21
214:18 232:13	104:14 105:1,7	159:7 162:3,4	68:18 71:4 75:4,9	159:12,13,17
282:11,12,12	107:21 112:10,21	163:17 168:4	75:15,17,18 77:3	160:11 161:4,6,8
410:17	139:14 153:22	172:12 177:14,16	77:5 79:14,19,21	164:12,14,17
testable 27:2	173:9 175:5	178:15,17 180:11	80:1,10 81:1,4,5	165:5,11,22
tested 61:15 127:10	177:22 178:13	188:13 191:16	81:21 83:8 84:13	167:22 168:4,5,8
127:15 291:5	223:14 247:5	196:3 203:20	85:3 87:10,12,16	169:12 170:21
385:16	249:22 250:4	213:4 216:9 227:6	89:6 90:1,5,16,21	171:9,20 173:15
testimony 47:9	261:3 265:20	227:20 234:10	91:6,10,18 92:6	173:16 174:1,13
testing 26:15 34:16	280:6 281:3	241:20 244:13,21	92:19 93:16,20,20	174:19 176:15,21
37:4 63:3 100:17	285:14 293:6	245:9 247:11	93:22 94:10,22	176:22 178:2,5,9
200:3 232:17	294:2,6 296:10	248:15,17,22	95:14,16,22 97:1	178:16 179:7,9
233:5 274:2	306:2 307:20	250:10 252:2	98:11,21,22 99:20	180:10,11,13,18
288:12 372:4	308:2,10 310:16	258:5 265:9	100:7,10 101:17	180:19,22 181:5
405:6 412:7	317:9 319:12	270:11 275:19	101:19 102:4,8,18	181:18 183:6
tests 100:22 209:3	327:7 333:12	281:7 300:16	102:19 103:5,18	184:8,11,20 186:2
288:10	348:20 350:4	301:6 302:13,18	104:18 105:5	186:5,9,21 187:6
text 323:3	351:21 353:17	305:21 307:22	106:6,13,15,17	189:20 190:15,21
<b>thank</b> 9:14 10:15	355:20 357:11	314:14,21 316:11	107:6 108:18	191:2,13 193:14
13:12 24:18 25:22	361:10 362:9	319:19 321:15	110:2,22 111:7,9	194:1,9,10,13,18
26:6 27:22 28:13	366:3 372:5	323:10,16,17	111:17,21 112:16	195:9,17,19,21
60:15 71:11 86:19	405:20,21 425:17	324:19 326:8,20	113:4,4,10,19	196:3,4 197:14
86:20 107:11	433:8	329:10 330:20	114:16 115:10	198:19 199:7,18
120:1 122:4 150:1	things 12:2 18:20	333:3,4,10 334:20	118:2,10,10,12	199:22 200:12
173:11 184:6	23:22 33:20,21	336:7 345:3	119:10 120:9	204:11 206:17
189:13,17,22	37:7 41:21 43:18	346:17 350:7,11	121:19,22 122:18	207:1,4,9,17
218:1 228:10	61:4,18 62:4	359:22 364:4,6	123:1,5,10,12	208:2,8,11 209:18
317:8 340:19	64:17 65:8 76:15	366:12 367:2	124:4,7,11,15	210:17 211:18
345:8 432:1 433:9	78:10 80:22 84:11	369:17 371:22	125:11,15,22	213:12 214:5,7,14
Thanks 26:8 42:5	85:4,10 86:22	376:2 381:18	126:2,9,22 127:1	215:6,22 216:8,19
43:4,5 44:10	87:8 92:21 93:5	388:9 394:18	129:16,22 130:2,9	217:11,18 218:4
74:21 84:8 107:12	94:20 96:3,9	395:19 405:11	131:4 132:4,8,9	219:11,20 220:18
110:8 119:22	97:12,15 98:1	408:17 409:11	132:10,22 133:1,2	221:12,14,18
122:12 163:4	99:1,4,12,20	414:8 416:15	133:14 134:1,9,15	223:2,15 224:12
177:18 189:19	100:10,20 101:4,9	419:16 420:9	134:21 135:19,20	224:14,14 225:17
190:1 265:11	101:12 105:5	431:15	136:3,6 137:9,16	226:5,18 227:1,19
theirs 348:20	108:14,16 111:9	think 9:22 10:18	137:20,22 138:3	228:7 230:1
<b>theme</b> 15:12	114:3,14 115:5	13:18 18:13 20:8	141:5,15,21	231:17 232:8
theoretical 396:8	119:1,11,21 121:8	21:5 27:19 28:1	142:13,19 143:11	233:19 234:8,14
theoretically 231:2	121:19 126:17	29:7 31:6,7,19	143:16 144:14	234:21 235:2,8,10
theory 213:5 425:3	127:14 132:3	39:12,19,22 40:4	145:13,19 146:11	236:3,21 237:6,8
thereof 225:20	136:14 137:19	41:7,19 43:12	147:13 148:12	237:15 238:1,12
thin 88:9	138:4,21 142:18	46:12,22 47:5	149:20 150:7	239:2,19,22 240:3
thing 14:18 15:19	145:4,7 147:4	49:21 53:20 54:2	151:5 152:14	240:9,15 243:12
55:13 61:13,20	149:6 150:14	55:17 58:3 60:14	153:2,9,11,19	243:16 244:16,20
74:1 75:17 76:6,9	153:3,14 154:1	60:19 61:2,8,9,11	155:9,11,12,13,18	246:2,17,21

Page 4	4	8	3
--------	---	---	---

				~
248:10 249:14	346:13,16 347:8	58:20 65:8 68:18	141:16 142:22	<b>tide</b> 154:7 383:21
250:7,8,14,15,17	348:7,8 349:2,9	77:6 80:8 87:8	144:17,18 151:2	tides 310:6
251:9 253:5,13,16	350:2,9 351:8	92:8 93:18 95:12	173:14 179:21	tie 27:9 304:9 314:9
254:10 255:9,18	352:3,4,21 353:2	98:9 99:9 108:9	214:15 246:6	386:2
258:20 259:5,12	353:8,17 356:12	108:17 120:10	251:19 271:19	<b>tied</b> 20:8 64:9
259:12,15 260:7	356:19 357:6,12	124:8 125:2	291:20 298:13,14	303:19 308:17
260:16 262:1,9,10	358:11 359:6	131:17 134:12	314:10 323:9	311:19 384:15,19
262:13,22 264:7,8	360:2,9,18 361:16	135:9 138:4 142:8	332:3,8 340:12	385:1
265:6,16,19	361:22 363:18	150:12 155:16	341:21 352:17	<b>tier</b> 311:14
266:17,18,22	365:21 366:3	156:2,7,9 157:10	355:2 363:19	tiered 76:22 414:15
267:1,14 268:5	367:14 368:1,19	160:14 164:13,20	365:7 366:19	ties 316:6
272:6,8 274:11,21	368:22 369:5,13	172:6,14 174:4	386:21 404:12	<b>tigers</b> 71:6
275:5 276:3 278:3	369:22 371:3,8,17	176:16 181:6	429:12	tight 431:21
279:13,14,15,16	371:21 372:5,10	184:12,16,18	thoughts 125:17	time 10:1,11,21
279:22 280:6,17	372:13 373:10,12	185:17,19,22	173:19 204:8	16:10 37:17 43:2
280:21 281:10	373:17,18 374:1,2	186:3 191:10.19	300:3 428:15	44:8 51:1,19 54:6
283:3,16 284:1,7	374:4,9 375:12	191:21 193:18,19	thread 67:14,15	54:21 85:6 87:13
284:12 285:12	376:11 377:6,11	194:12 196:6	247:15,17	94:2,9 97:13
286:9 287:8 289:8	377:17,18 378:5,6	199:6,7 218:2	threat 141:8	99:19 102:16
289:14 290:18	379:12 380:7,9,14	229:9 233:14	threats 37:16	107:14 115:6
291:17 292:1,5,14	381:2,4,6,8,12,14	253:21 260:21	123:20	116:15,17 117:14
293:2,6,11 294:19	382:12 383:12,16	261:2 271:8	three 54:2 57:19	117:17 119:17
295:4,6,13 296:3	384:2 386:12,17	275:13 280:10	58:16 59:5 64:5,9	130:15 138:16
296:5,10 298:12	386:20 387:7,11	293:12 299:13	70:5 142:3 165:6	146:10 149:7
299:1,18 301:8	387:13 388:2,6,20	300:9 305:4	205:1,16,21 206:3	156:16 159:6
303:12,15 304:13	389:9,17,18 390:4	310:16 311:8,10	216:21,22 217:2,3	160:4,6 161:17
304:14,18,21	390:9,10 391:9,12	311:22 320:20	219:8 227:8	175:8 176:1,2
305:2,9,18,19	393:10,18 395:21	322:20 331:9,20	234:15 238:4	181:2 187:16,22
306:1,12 307:10	397:12 398:5,21	334:2 348:5 349:5	276:15 291:19	191:9 192:15
309:2,8,17,21	399:4,7,11,16	361:18 362:15	310:3 323:10	193:6,8,13 194:1
310:3,8,16,22	400:8 401:6,14,22	363:16 371:11	326:8 329:12	194:4,8 201:18,22
311:1,7,22 312:18	402:22 403:10,18	372:12 378:9	336:4 340:20	202:7,8,10,21
315:11,14 316:3	403:20 404:11,13	379:1 386:13	344:14 432:22	203:13 204:1
318:4,6,9 319:3	404:15,17,21	391:3 394:10	three-day 281:9	207:14,15,21
319:19 320:13	406:2,12,14	402:21 403:21	three-four 430:22	208:7,10,13,17
321:16 323:18	407:19 408:11,15	404:18 429:13	three-hour 286:17	209:19 211:1,2,2
324:7,16,18,22	409:15,21 410:9	thinks 95:10	threshold 380:17	211:3,11 213:3,4
325:13,21 327:10	410:14 411:6,8,11	109:22 373:7	threw 285:18	213:5,5,6,11,12
327:18 328:19,20	412:17,18,21	third 56:1 57:6	throughput 19:3	213:16,20 214:15
329:4,10,16 330:2	413:18 415:17	59:4 76:6 89:1	175:6 219:3 236:7	215:1,3 217:5,17
330:5,19,21 331:3	416:14 422:8,10	234:21 281:16	264:18 308:8	218:7,20,21 220:1
331:4 334:8,17	422:21 423:2,3,12	324:14 349:8	341:17	220:7,22 221:3,11
335:1,17 336:21	424:2,13,14 425:1	<b>thirdly</b> 78:18	<b>throw</b> 285:17	221:19 223:2,3,4
337:16 338:12,14	427:9,19 428:1,14	thought 31:16	321:10 326:7	223:5,9,17 225:2
339:6 340:6 341:9	428:18,21 430:5,8	32:21 41:10 61:18	338:11	228:14 229:21
341:15 342:8,15	431:2 433:16	84:21 117:11	thumbs-down	230:21 231:5,7,9
344:12,20 346:11	thinking 41:11	122:18 126:18,20	266:3	231:12 232:13
	-	-	-	_

225 7 220 2 15 20	201.0.224.0	4 200 < 405 2		202.14
235:7 238:2,15,20	201:9 224:9	tons 298:6 405:3	<b>trailing</b> 204:13	383:14
239:9 241:10	226:11,15	tool 324:9	train 139:5	transparency
250:3 259:16,18	time-based 283:15	tools 32:4 426:7	trained 20:13	72:18 82:16 146:2
260:3,3,5,8,8	283:17,21 284:3	top 33:1 118:2	103:16 142:2	transport 146:17
267:11,14,20	284:18 291:1	335:15 372:22	training 22:8 103:7	345:16
269:15,18 275:8	292:2	381:5	280:13 342:1	<b>trauma</b> 13:16
275:17,18 277:8	time-in 358:17	<b>topic</b> 6:15 11:6,7	transaction 347:2	116:10 123:17,19
280:16 282:2	359:3	26:16 31:6 122:16	transcend 210:6	128:21,22 139:16
284:19,22 289:10	time-limited	124:17 169:20	transfer 144:18	158:9 254:15
294:3,5,16 295:13	232:12	233:7 286:19	156:3 159:4	265:2 341:19
295:16,17,20	time-out 359:3	322:13 325:14,16	173:20 196:7	421:18
296:2,9 304:5	time-specific 6:11	334:16 368:4	232:1,3,7 233:18	traumas 273:15
306:7 309:21	268:2	topics 12:12 25:13	233:22 305:11	travel 144:5
315:13 317:10,19	time-to-outcomes	122:15 313:21	339:5,8,16 346:15	treat 139:7 400:5
319:21 320:12,16	361:19	topped-out 33:20	347:3 357:11,12	treated 281:20
324:22 325:6	timing 85:14 333:1	totally 80:10 81:16	357:14,19 358:18	350:21 419:9
327:5 329:15	Timmons 2:22	125:15 137:12	358:19 359:22	treating 139:9
338:2 347:20	189:6,7,17 264:11	138:1 143:18	361:12 362:1,4,6	treatment 85:16
350:15 351:20	264:12,14	144:22 164:12	367:5	136:4 286:1
354:18,19,19	tiny 248:8 254:22	224:15 238:11	transferrable	297:22
356:1 357:12,16	297:21	touched 322:12	345:5	tremendous 219:12
357:18 358:4,9,10	<b>tipping</b> 168:18	336:20 346:10	transferred 337:21	312:13 396:21
358:13,17 359:8,9	<b>title</b> 75:22	touches 22:19 23:4	338:6,20 343:12	tremendously
359:22 360:20	<b>today</b> 10:19 11:5,6	71:4 75:18 286:19	343:15 357:19	329:19
361:2,4,12 365:10	11:7 12:14 15:18	tough 126:18	358:3,21,22 359:2	trend 284:12
366:11 370:7	16:18 19:7 26:11	244:17	transferring 156:2	trends 152:15
371:20,21 392:14	26:21 28:6,14,14	tower 117:8	156:4 196:2 362:2	218:21
393:5 397:8,22	29:4,11 32:20	town 78:21 331:13	362:7	<b>triage</b> 6:16 53:4
401:7 408:21,21	40:12 41:10 44:21	to-day 127:3	transfers 173:22	54:10,10,17 56:10
421:15 425:18	46:16 50:2 53:11	<b>to-noise</b> 37:9	186:6 337:18	64:8 130:14,21
432:12	57:13 63:5 67:12	<b>TPA</b> 316:17	338:3,15 344:7	242:1,4,21 243:15
<b>timeline</b> 431:19,21	87:11 102:10	track 117:8 127:8	346:13 347:10,17	243:18,19 244:12
timely 210:22	121:11 130:13	161:19 229:7	361:10 367:6	245:21 286:21
<b>times</b> 13:20 78:11	143:19 146:20	261:22 296:8	<b>transit</b> 208:17	287:6,13,14,14,18
78:16 85:22	147:5 162:22	300:13 301:19	transition 168:6	287:20 288:3,20
145:14 163:11	164:9 168:12	304:6 316:13	220:4 229:21	289:1,14 291:1,6
229:8 290:4 295:3	239:5 281:13	329:16 343:11	230:4,8 231:5,5	292:4,6,15,21
310:3 327:1	318:11 387:3	347:13,20 366:16	235:6 236:9	293:13 300:14
345:14 361:18	432:1,2	tracked 317:2	237:10 238:9	318:19 337:1,7
392:12 410:15	<b>toe</b> 9:10	tracking 199:21	346:22	357:18
timestamp 6:6	token 173:12	200:8 224:19	transitioning 240:6	triaged 55:12
220:16 224:1	told 132:5 228:18	traditional 243:19	transitions 231:7	triaging 288:6
225:19 230:18	337:18	313:5	347:9	tricky 392:19
timestamped	<b>tolerate</b> 54:9,14	traditionally	translate 48:3	tried 68:9 83:6
199:20 200:20	tomorrow 56:20	378:22	108:11,13 122:22	128:14 149:3
timestamps 193:6	68:1	<b>Traffic</b> 19:15	208:7	182:7 223:9 244:1
193:7,20 200:19	<b>ton</b> 311:17	tragic 141:10	translates 63:13	247:21 256:18

	1		1	
tries 83:9	154:7 196:5 207:6	395:15 402:4	underlined 102:14	273:18,19,20,21
trigger 56:14 169:6	220:10 227:17	420:22 423:9	underlining 413:16	275:16,20 277:5
triggered 313:11	235:10 250:17	432:22	understand 23:20	277:16 278:5
triggers 82:7	251:21 262:4	tying 370:6 385:13	40:15 49:2 85:21	282:6,10 283:2
<b>trillion</b> 64:14	264:10 265:21	<b>Tylenol</b> 286:2	101:17 145:12,19	285:7,15,17,18,21
triple 383:3	279:10,15 314:14	type 45:10,22 72:14	204:12 205:16	314:15 411:14,22
trolley 326:15	318:7 320:2 347:5	151:17 221:21	206:1 209:13	412:1
trouble 168:10	364:20 378:12	341:19 362:4	233:16 257:12	<b>United</b> 82:11
373:14 383:18	404:20 431:11	374:22 427:18	287:1 295:22	units 216:10,11
<b>true</b> 47:21 100:10	<b>tsunami</b> 310:6	types 45:18 54:17	336:6 339:18	269:2 272:18,22
102:4 121:10	<b>turn</b> 8:18 10:1	149:8 230:16	347:14 359:4,5	273:10,22
197:14 213:7	27:19 30:6 42:4	249:21 336:7	understandable	universal 136:15
218:14 238:14	44:9 147:2 282:20	427:5	197:3 249:2	224:3
265:20 297:10	371:14 432:20	typical 50:6 398:14	408:19	universally 202:8
299:19 347:4	<b>turns</b> 99:16 101:8	typically 73:3	understanding	university 2:3,5,9
399:14 400:6	194:5 232:11	93:13 223:20	43:15 56:16	2:11,14,15,20,21
412:19	235:19	234:19 324:21	169:19 203:9	2:23,23 9:6 13:3
<b>truly</b> 111:5 113:20	tweaking 86:6		207:13 257:16	14:7 15:6 17:7
243:13 285:19	<b>two</b> 15:11 23:22	U	260:18 261:8,9	18:18 20:1 21:11
287:17 298:16	25:6 38:22 43:19	UC-Irvine 16:9	281:11 295:8	22:22 23:11 28:11
<b>trusts</b> 276:6	44:12 46:13 63:16	<b>UHC</b> 21:11,14	296:1 343:22	115:19 116:3,13
<b>truth</b> 54:7 67:10,20	64:5,8 68:14	297:1,3	344:13,13 371:12	297:21
73:6 84:4	73:12 76:15 80:15	UK 162:18 223:12	understood 112:5	unlimited 180:13
truthfully 49:18	87:22 100:14	260:9 268:6	113:2,6 237:4	345:20
52:7 67:13	111:8,19 120:6	269:13 275:13	276:4 346:21	unmentioned
<b>try</b> 16:3 40:18 41:1	127:18 129:16	276:21 278:13,16	<b>undue</b> 269:12	235:15
47:11 66:2 68:6	131:5 147:15	280:8 283:19	unfiltered 265:18	unnecessary
79:10 82:1 87:7	149:2 150:14	284:7	unfortunately	277:12
107:22 165:18	151:15 161:17	ultimate 192:22	42:11 47:20 64:13	unplanned 144:13
209:12 217:14	163:2 168:3	ultimately 90:20	138:15 314:16	145:17 146:6
219:16 226:18,20	169:22 177:19	109:4 240:11	400:15	172:14 418:10
226:20 227:3	192:1 205:5	251:15 263:2	unheard 140:3	419:4,8,13
249:18 251:9	211:10,12,14,19	387:7	unified 109:17	unrealistic 368:20
295:22 304:12	214:2,7 215:1,13	ultra-busy 133:19	343:19	unreliable 37:22
338:4 392:22	217:3,4 224:7	unable 376:9	uniform 194:19	unscheduled
<b>trying</b> 31:7 35:16	225:12 226:7	unadjusted 6:11	uniformly 267:7	183:19 190:17
43:16 49:13 51:11	227:22 228:6,21	241:15 242:14	unintended 39:8	unusual 140:4
51:13 58:12 61:10	230:12,22 235:19	249:4 261:3,10,16	40:3 162:17	397:10
62:16 63:10 64:17	288:10,22 295:16	265:18 266:15	259:13 283:14	update 181:19
65:10 66:10,12,13	295:17,20 313:21	267:2 268:3	<b>unique</b> 12:6 114:14	183:22
67:12 77:22 78:5	324:4,6 329:10	295:17,20 296:6	258:11 347:21	updated 34:20 39:1
82:3 85:4 95:5	330:20 336:3,19	<b>unclear</b> 97:16	378:15	40:14 91:4
105:11,22 110:2	339:1 361:1 364:3	154:11 222:14	<b>unit</b> 27:7 49:20	upfront 292:9
114:16 133:18	364:3,5,7,22	uncomfortable	52:18 72:15 75:8	<b>upside</b> 270:15
134:2 142:11	365:1 371:22	124:12 134:10	88:20 90:4 131:21	upstairs 149:19
146:4,5 151:5,7	372:1 375:11	144:22 331:7	159:18 178:4	169:9 206:18
151:20 152:4	381:18 383:11	undergoing 393:22	210:2 269:6	207:1 208:10
	l		l	l

		000 11 000 10 10		
221:6,10 271:7	182:3 242:2 244:3	293:11 299:10,13	425:15 428:1	248:2,3 258:1,7
274:6 317:17,17	<b>usual</b> 117:20 149:3	310:20 311:4	433:14	<b>visits</b> 128:12
uptake 71:17	424:16	347:11 371:9	Venn 126:3 135:7	212:20 213:9
128:17	<b>usually</b> 17:17 88:14	372:11 416:8	165:11 167:22	<b>voice</b> 17:17 55:5
<b>urban</b> 256:9 422:4	353:18 409:10	<b>values</b> 299:3	vent 73:11,12,17	<b>volume</b> 161:12
urgent 183:19	430:2	value-added	<b>versa</b> 194:8	241:7 244:15
190:17	<b>utility</b> 91:17 310:20	238:20 259:8	version 91:4	248:21 254:13
<b>URL</b> 91:5	357:16	variability 262:5	137:19 224:6	256:10 257:7
usability 34:19	utilization 285:15	variable 176:6,11	241:14 242:14	258:2,7,17 266:11
38:21 408:13	295:9	363:13 405:4	255:9,13	298:4
409:2,16	<b>utilize</b> 304:4,5	variables 258:16	versus 6:19 45:16	<b>volumes</b> 162:4
<b>use</b> 34:19,21 35:4	<b>U.S</b> 90:11 131:20	306:22 416:4,8	45:17 62:1 92:11	volume-stratified
38:21 89:3 103:8	153:20 223:14	variation 33:21	125:5 132:17	244:3
106:3 111:13,14	275:14 276:19	127:22 244:8	140:17 141:11	voluntary 301:3
114:9 136:21	277:22	333:17 348:11	147:16 148:16	volunteer 18:20
150:19 179:20		349:12 374:18	155:4 169:5 179:6	46:21
180:7 185:1 199:9		376:7,22 420:1,4	181:9 209:4	volunteers 46:20
199:12 200:8	<b>VA</b> 350:6	420:7	215:14 228:6	voted 269:11
202:6 204:16	vacated 356:3	variations 416:18	230:12 238:22	
205:2,4 221:16	vacating 356:6	417:12	256:11 274:17	W
223:9,20 226:20	valid 37:22 103:19	varied 225:11	278:13 282:3	wagon 62:14
241:19 243:19	106:4 197:18	varies 89:13 290:11	287:8 295:17	wait 130:15,19
244:11 247:9,16	199:9,12 248:11	variety 209:15,22	297:13 298:18,18	163:16 180:16
261:20 276:21	404:6 407:13	430:5	321:8 344:3	326:15
285:7 293:13	validated 185:6	<b>various</b> 28:10	351:17 354:14	waiting 51:16
294:4 295:12	199:3 242:18	192:17 201:14	357:9,9 358:17	163:15,20 192:6,7
299:2 336:22	255:12 256:1	229:13 275:19	406:19 414:11,15	228:19,22 229:10
343:9 349:12	validation 110:21	333:6 408:20	415:9	234:20 241:10
350:6,19 373:8	199:12	414:16 420:11	versus-passive	306:6 398:10
380:5 381:2	validity 5:22 34:12	vary 89:21 298:9	201:9	408:21
387:19 389:5	34:16 37:5,16	varying 107:2	vertical 354:8	waiting-for-the
392:17 402:20	68:19 91:16 142:7	vectoring 45:15	Veterans 76:12	220:5
409:16,19 420:2	196:19 197:11	<b>vehicle</b> 345:22	vetoed 205:6	waits 130:20
425:9 426:8,12,17	198:4,9 220:11	<b>vein</b> 77:6	<b>vetted</b> 400:1	waiver 82:12 84:5
428:12 431:9	324:12 364:11	Venkatash 2:23	vice 4:23 13:14	waivers 82:14
<b>useful</b> 40:20 41:10	377:21 378:2,3,9	7:10 20:10,11	21:10 30:12 52:14	83:18,21 84:3,9
62:2 79:22 100:5	401:19 402:1,5,9	68:11 69:22	194:8	walk 54:13 57:9
100:6 101:4	404:19 405:5,13	158:15 199:18	<b>victim</b> 314:16	62:12 433:7
104:16 105:1	405:18 407:5	260:13 294:19	<b>view</b> 171:14 186:8	walked 25:6
106:18 114:20	<b>valuable</b> 113:20	297:6 310:15	viewed 310:11	walking-wounded
141:16 150:7	217:18 236:1	320:11 335:9	<b>views</b> 423:8	55:8
174:19 215:7	329:11,19 371:4	370:22 371:2	Virginia 77:19	walks 291:12
232:16 299:10	371:18 373:11,20	375:3,13 378:21	424:9	wall 47:12 50:16
306:3 320:6	value 155:21 156:9	388:1 390:13	virtually 251:13	53:22 68:3
323:21 325:4	157:11 216:16	401:6,11,21 407:3	<b>visibility</b> 167:13,14	waning 169:13
<b>useless</b> 296:3	217:12 220:6	408:11 410:2,19	<b>visible</b> 240:1	want 25:10 26:3,11
<b>uses</b> 24:3 40:16	236:18 252:10,11	413:7,15 414:17	<b>visit</b> 217:15 244:15	26:17,22 27:13
L				

30:6 33:18,19	378:8,17 381:12	watercooler 416:21	380:9 386:12,13	weeks 73:12 382:18
34:3,21 35:20	390:8 391:10	<b>wax</b> 180:12	386:15 389:11	432:22
36:12,20 37:11	392:13 395:4	waxing 169:13	391:4 396:3 399:5	week's 149:6
38:2,11,16,18	397:4 399:19	way 9:3 32:5 41:2,5	407:9,18 408:12	weigh-in 189:15
39:18 40:4,18	401:4 406:14,17	41:14 70:15 71:5	411:7 425:3 427:5	weird 135:22
41:14,22 42:9	412:22 420:14	79:8 80:20 84:7	429:14	142:18
44:12 59:17 61:19	422:8,13 423:18	84:15 85:11 87:15	ways 68:15 78:9	welcome 4:4,7 8:4
84:12 85:1 92:2	424:1 425:19	88:13,16 91:21	85:8 86:9 95:11	8:11 9:2
95:18,21 98:13	426:17 427:17	97:12 98:17,21	95:12 97:6 140:16	well-connected
105:7 108:3 109:3	433:1	99:4,12 102:20	141:4 142:14	340:7
109:14 113:16	wanted 30:5 42:19	104:5,15 105:16	175:13 179:7	well-designed
120:12,16 121:17	43:7 119:20 120:1	113:2,7,11,17	184:14 185:4	226:13
121:20 124:5	120:20 121:19	115:9 119:16	192:2 197:19	well-established
141:14 146:1	153:18 163:5	125:7,8,11 126:17	211:8 223:13	135:21 234:16
150:13,22 153:19	164:7 184:6	127:17 132:9,11	257:17 283:17	well-formed 77:18
155:2,4 160:5	186:10,19 189:5	134:10 136:1	300:10 306:21	77:20,21
166:17 170:9	189:14 196:11	137:20 138:3	323:16 347:13	went 104:20 112:4
171:7 172:2	216:16 237:4	140:12 151:4	391:5 403:22	122:7,7 188:20,21
178:22 179:5	250:19 257:20	153:21 156:3	404:21 412:9	241:6 268:10
184:2,4 185:20	264:14 268:15	159:9,15 162:6	414:7,16 417:11	269:7 276:11,17
186:11 188:13	269:2 282:17,18	176:13 179:9	424:4 430:5	322:6,6 398:8
189:15 191:3,6,8	290:13 307:6	180:1,21 185:13	weak 312:13	weren't 139:14
191:16 193:19	318:4 321:1,3	191:5 193:3 197:2	weaknesses 96:18	270:11
195:12 197:20	326:1 331:20	202:14 205:9,22	wean 73:13	Wes 2:8 16:5 78:7
202:1,4 204:10,14	340:20 343:5	208:19 211:4	weaning 73:11	113:15 124:7
212:10 215:19	346:18 356:18	218:18 220:21	weave 67:13,14,15	204:9 207:17
217:15,16 225:1,6	357:11 367:22	224:3 232:1	Weber 2:23 14:5,5	215:18 234:5
227:3 229:7,15	368:3 370:4	238:12 241:16	80:7 129:21 179:3	239:3,19 265:12
234:6 238:7	406:11 409:7	252:3 260:3	216:15 237:2	279:12 291:9
240:21 241:17	426:1 427:1	266:14 267:9	251:19 259:4	309:3 329:7 346:6
244:19 252:13,14	431:22 432:6	269:13 270:5	268:7 272:14	350:12 383:7
254:2 257:15	433:9	275:22 276:4	273:7 276:2 277:1	410:8 424:11
260:7 262:16,21	wanting 142:4	282:15,16 283:6	278:15 279:1,5	431:5
263:21 266:4	wants 432:14	284:2 286:9	282:4 284:6 285:8	west 144:8
275:9 277:11	ward 270:13	293:15 294:15	285:14 286:8	<b>We'll</b> 72:9
282:11,12 283:10	wards 271:18 274:6	296:18 304:17	294:1 307:15	whatnot 163:19
283:11 286:11,15	Washington 1:20	306:22 309:9,11	316:9 326:7 351:5	420:12
291:17 292:3	2:10,13 22:22	309:18 312:1,9,19	352:17 353:1	wheels 62:14
296:21 303:7,9,18	23:10 89:17	313:14 314:8	<b>Weber's</b> 84:13	274:16 354:21
304:11,22 312:20	wasn't 60:16 79:6	318:12 329:3	website 182:13	<b>whichever</b> 336:10
321:12,15,22	116:14 141:1	330:10 332:14	WEDNESDAY	white 15:15 63:18
327:20 329:9	158:4 198:12	337:11 338:7,10	1:12	65:12,16 66:8
330:4 332:17	211:15 231:9	346:20 351:15	weeds 205:18	68:13 69:17
335:4,17 336:6,20	270:4 289:14	353:8 359:18	403:19	421:14,15
345:9 346:6,8	297:4 355:22	365:14 367:15	week 20:3 56:22	<b>white-space</b> 65:10
349:5 351:5,7	356:9 398:13	368:5,21 369:2,10	57:2 104:9 251:13	wide 32:14 35:1
362:14 367:19	watch 247:6 290:8	369:17,19 373:14	274:19	263:15 333:17
/				
				1

	1	1		
willing 109:12	182:11,17 183:6	393:5 396:1	wrong-side 394:15	<b>1</b> 1:1 170:14 183:5
135:16 136:9	192:15 194:2	409:10 429:4	398:22	187:18 263:4
willingness 147:20	209:19 219:16	worlds 29:2 120:6	wrote 307:16	311:15 373:1
148:13	236:6 253:6 272:6	worried 96:5		401:17 432:9
wind 180:8 429:16	272:6 273:16	115:10 230:3	X	<b>1,000</b> 58:6
window 182:21	287:5 290:18	410:1	<b>X</b> 155:4,5 293:18	<b>10</b> 4:12 6:24 75:1
261:5 338:12	294:10,14 297:20	worry 139:15	<b>X-axis</b> 141:6	113:18 206:9
wish 274:20	324:17 345:2	178:11 421:14,20		215:3 219:22
Women's 20:22	351:16 368:21	worse 250:5	<u> </u>	306:7,19 307:13
wonder 71:14	370:2 380:17	worst 262:17	Yale 2:23 20:13	307:16 315:3
72:12 109:22	387:8,11 411:6,9	299:16	<b>yeah</b> 404:4,4	321:17
128:1,6 142:20,21	413:1 416:18	worth 34:6,8 110:2	year 9:8 13:8 20:17	<b>10-bed</b> 253:13
160:18 352:14	423:6 425:7	171:21 173:1	46:10 62:10	<b>10-hour</b> 215:15
357:5,15 392:9,20	426:15,19 427:1	227:2 236:22	161:19 219:3	10-to-20-percent
396:18	427:10,11,15,18	279:15 280:21	256:4 372:1 431:1	114:21
wondering 63:17	workable 412:17	281:11 320:19	years 9:7 12:12	<b>10:30</b> 122:7
63:18 79:1 108:10	worked 14:2 19:3	326:12 334:2	16:11 24:5 29:15	<b>10:54</b> 122:8
150:14 151:3	85:5 111:21	352:4 361:16	33:2,4 36:5 45:3	<b>100</b> 65:14 70:13
197:12 205:13	112:15 251:5	379:5 388:2	50:15 58:2 92:15	83:10 93:1
356:22 394:10	272:1	397:15 401:7	101:5 149:2	<b>100-bed</b> 253:15
wonders 382:16	working 9:5 13:2	403:16 407:11,12	161:17 173:21	<b>1030</b> 1:20
Wood 20:12 22:17	15:21 32:19 105:9	worthwhile 251:9	191:21 205:1	<b>104</b> 5:12
word 152:2 229:7	131:15 132:4	worthy 149:21	219:7,8,19,22	105 336:9
254:5	135:3 157:18	wouldn't 208:17	227:9 237:16	<b>106</b> 336:9
words 102:12	158:7 175:16	244:19 262:15	288:22 314:14	<b>11</b> 306:19 317:11
249:19 285:16	182:12 235:6	271:4 283:18	426:7	<b>11:57</b> 188:20
337:6	265:14 328:5	302:14 303:7	<b>York</b> 60:9 101:14	<b>110-percent</b> 333:19
wordy 74:2	334:3 350:10	356:20 374:12	142:2,3	<b>1135</b> 82:12 83:18
work 11:4 12:7	369:12,19	393:13 402:16	<b>Young</b> 20:22	83:20 84:3,5,8,9
14:8 15:14 17:7,8	workload 396:20	403:4 404:5	<b>Y-axis</b> 141:7	<b>12</b> 100:16 326:16
17:10 18:8 20:2,5	works 84:4 88:8	Wow 228:22		326:21
20:19 22:4 23:3	89:14 104:19	wrap 106:11 432:6		<b>12-hour</b> 326:15
28:15 29:12 30:18	134:5 178:1	wrapped 221:8	<b>Z</b> 29:8	<b>12:48</b> 188:21 189:2
34:7 35:22 36:6	263:19 276:4	230:6,13	<b>Zealand</b> 131:16,18	<b>1200</b> 247:8
40:13 41:8 43:22	344:2 363:8	wraps 296:12	278:4 284:11	<b>122</b> 5:13
49:11,14 60:22	workup 217:9,17	wrestle 102:17	<b>zero</b> 229:20 285:11	<b>13</b> 100:17
76:11 84:16 87:1	253:10 286:12,17	write 223:17 284:1	\$	<b>15</b> 46:6 97:21 279:4
87:4,20 89:12	workups 219:10	340:16 353:18		<b>15th</b> 1:20
90:9 97:18 102:3	286:14	370:8	<b>\$1.5</b> 66:3	<b>15-minute</b> 321:13
103:2 105:6	world 28:22,22	writes 54:8	<b>\$1.8</b> 66:3	<b>16-percent</b> 161:21
106:14 112:12	38:14 94:17 96:8	<b>written</b> 123:6	<b>\$2.1</b> 66:3	<b>1600</b> 396:3
114:14 127:21	97:22 102:5,17	169:5 242:13	<b>\$2.5</b> 64:14 <b>\$200</b> 65:4	<b>1600-bed</b> 396:2
128:20 133:3	106:15 109:13,15	266:15 303:7	<b>\$200</b> 65:4 <b>\$350</b> 64:13 18 67:7	<b>17</b> 1:13
144:15 149:7	118:22 121:5	317:21 356:1,2	<b>\$350</b> 64:13,18 67:7	<b>18</b> 116:12
150:16 151:8	127:4 195:11	wrong 104:21	431:8	<b>187</b> 5:15
152:17 153:10	254:6 266:7	151:4 214:8	<b>\$60,000</b> 65:3,5	<b>188</b> 5:13
174:8 181:20	364:10 392:16	256:12 341:22	1	<b>190</b> 5:17,19
				, ,
	1	1	Ĩ	1

<b>196</b> 5:22,24	<b>23</b> 116:17 274:3	<b>495</b> 206:8 216:4	298:5,6 299:9	
<b>197</b> 5:20	<b>24</b> 4:16,18 366:13	<b>496</b> 206:8	363:13	
<b>1986</b> 135:5	<b>24-hour-plus</b> 281:3	<b>497</b> 206:8 208:5	<b>90-percent</b> 417:5	
2	<b>240</b> 6:8	216:5,16 225:17	<b>90-second</b> 429:20	
	<b>243</b> 6:9	228:15 284:20	<b>95</b> 220:1 268:16	
<b>2</b> 2:1 113:19 129:11	<b>25</b> 116:16 192:6	5	269:20 284:10	
129:11 132:17	<b>25-percent</b> 161:20		<b>95-percent</b> 417:5	
170:15 220:14	<b>267</b> 6:10	<b>5</b> 5:1 80:12 268:16	<b>97</b> 220:1	
291:8 311:15	<b>268</b> 6:14	268:19	<b>98</b> 268:11,13	
401:17	<b>27</b> 4:20	<b>5-percent</b> 80:19	283:20	
<b>2.5</b> 395:11,15	<b>272</b> 395:11	<b>5:02</b> 433:17	<b>99th-percent</b> 271:9	
<b>2:56</b> 322:6	<b>286</b> 6:15	<b>50</b> 158:2 217:9,9		
<b>20</b> 50:4,5 51:10	<b>288</b> 6:17	376:8		
61:7 68:3 69:16	<b>297</b> 6:18,20	<b>50-car</b> 83:10		
71:16 72:5 73:21	3	<b>55-minute</b> 202:2		
74:2,6 104:3		212:2		
109:3,6 110:11	<b>3</b> 3:7 275:20 290:5	<b>58</b> 5:10		
113:18 119:17	290:6,7 291:8	6		
129:11,12 132:17	311:15 342:10	<b>6</b> 6:1		
213:16 267:12	<b>3-percent</b> 80:12,19	<b>60</b> 158:2 247:1		
375:10 376:13	<b>3:15</b> 322:4	<b>60,000</b> 128:12		
382:21 383:20	<b>3:18</b> 322:7	<b>60-percent</b> 333:21		
384:11,13 400:3	<b>30</b> 4:22 103:6	<b>00-percent</b> 555.21		
400:17,22 404:3	275:20 291:16	7		
405:17	<b>300</b> 6:21	7 6:15 7:1 183:5,10		
20,000-visits-per	<b>301</b> 6:23	286:18		
244:4	<b>315</b> 6:24,26	<b>70</b> 333:21		
<b>20-percent</b> 52:9,19	<b>3200</b> 396:5	<b>70</b> 355.21 <b>72</b> 366:12		
53:16 376:9	3227:4			
382:22 399:18,20	<b>343</b> 7:6	8		
20-some-odd	<b>371</b> 7:8	<b>8</b> 4:4,7,8 45:6 275:5		
380:20	<b>374</b> 7:12	<b>8:30</b> 1:21		
<b>200</b> 58:5 65:15 74:5	4	<b>8:44</b> 8:2		
74:10	<b>4</b> 4:1 147:2	80 45:14 66:10,20		
<b>2003</b> 111:22	<b>4.9</b> 53:13,18	69:17 70:20,22		
<b>2004</b> 268:11	<b>4:30</b> 117:17	205:22 213:15		
<b>2006</b> 53:3	<b>40</b> 103:6 246:20	80-year-old 224:18		
<b>2008</b> 190:10 193:10	295:17,20 383:20	<b>87</b> 5:11		
198:12 216:1	<b>400</b> 58:5	. <u> </u>		
224:15 241:15	<b>400</b> 38.3 <b>42</b> 4:12	9		
274:11	<b>425</b> 7:15	<b>9</b> 4:10 6:21 196:16		
<b>2009</b> 101:8 161:21	<b>425</b> 7:15 <b>43</b> 5:4,6	300:6,9 304:19		
<b>2010</b> 269:10	<b>43</b> 5:4,0 <b>431</b> 7:19	307:16 330:6		
<b>2011</b> 46:6	<b>431</b> 7:19 <b>432</b> 7:22	<b>9th</b> 1:19		
<b>2012</b> 1:13 45:1	<b>432</b> 7:22 <b>44</b> 5:7,8	<b>90</b> 45:14 51:1		
234:8	<b>44</b> 5:7,8 <b>45</b> 116:21	<b>90th</b> 274:13,22		
<b>220</b> 6:5,7	<b>43</b> 110:21 <b>48</b> 274:3	275:6 297:14		
1				

#### CERTIFICATE

This is to certify that the foregoing transcript

In the matter of: Regionalized Emergency Medical Services Expert Panel Meeting

Before: NQF

Date: 10-17-12

Place: Washington, DC

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

near A ans &

Court Reporter

# **NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

www.nealrgross.com