

# Memo

TO: NQF Members and Public

FR: NQF Staff

RE: Pre-Voting review for National Voluntary Consensus Standards: Infectious Disease

Endorsement Maintenance 2012, Addendum Report

DA: October 22, 2012

In the draft report, National Voluntary Consensus Standards: Infectious Disease Endorsement Maintenance 2012, measure 0500: Severe sepsis and septic shock: Management bundle was pending final recommendation from the Steering Committee to allow the Committee to review additional information on the measure's reliability testing that was not available for review at the time of the in-person meeting. The Committee reviewed the additional information provided by the developer via email to complete its evaluation following the in-person meeting. The final evaluation and recommendation are included in this addendum report.

The draft document, *National Voluntary Consensus Standards: Infectious Disease Endorsement Maintenance 2012, Addendum Report* is posted on the NQF website along with the <u>measure submission form</u>. This report recommends continued endorsement of one measure.

Pursuant to section II.A of the Consensus Development Process v. 1.9, this draft document, along with the accompanying material, is being provided to you at this time for purposes of review and comment only and is not intended to be used for voting purposes. You may post your comments and view the comments of others on the NQF website.

All comments must be submitted no later than 6:00 pm ET, November 20, 2012.

Thank you for your interest in NQF's work. We look forward to your review and comments.

National Voluntary
Consensus Standards:
Infectious Disease
Endorsement
Maintenance 2012

ADDENDUM DRAFT TECHNICAL REPORT FOR REVIEW

October 22, 2012



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# National Voluntary Consensus Standards: Infectious Disease Endorsement Maintenance 2012

ADDENDUM DRAFT TECHNICAL REPORT

### Introduction

In the draft report, National Voluntary Consensus Standards: Infectious Disease Endorsement Maintenance 2012, measure 0500: Severe sepsis and septic shock: Management bundle was pending final recommendation from the Steering Committee to allow the Committee to review additional information on the measure's reliability testing that was not available for review at the time of the inperson meeting. The Committee reviewed the additional information provided by the developer via email to complete its evaluation following the in-person meeting. The final evaluation and recommendation are included in this addendum report.

# **Measure Evaluation Summary**

Measure Recommended

0500 Severe sepsis and septic shock: Management bundle ......4

NOTE: The measure submission form can be accessed by clicking on the NQF measure number in the table below.

## Measure Recommended

Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable; Y=Yes; N=No

#### **0500** Severe sepsis and septic shock: Management bundle

Status: Maintenance, Original Endorsement: Oct 24, 2008

**Description:** This measure will focus on patients aged 18 years and older who present with symptoms of severe sepsis or septic shock. These patients will be eligible for the 3 hour (severe sepsis) and/or 6 hour (septic shock) early management bundle.

#### **Numerator Statement: If:**

- A. measure lactate level
- B. obtain blood cultures prior to antibiotics
- C. administer broad spectrum antibiotics
- D. administer 30 ml/kg crystalloid for hypotension or lactate >=4 mmol/L
- E. apply vasopressors (for hypotension that does not respond to initial fluid resuscitation to maintain a mean areterial pressure >= 65)
- F. In the event of persistent arterial hypotension despite volume resuscitation (septic shock) or initial lactate >=4 mmol/L (36 mg/dl) measure central venous pressure and central venous oxygen saturation
- G. remeasure lactate if initial lactate is elevated

represent processes of care:

Numerator statement: Patients from the denominator who received all the following: A, B, and C within 3 hours of time of presentation<sup>†</sup> AND IF septic shock is present (as either defined as hypotension\* or lactate >=4 mmol/L) who also received D and E and F and G within 6 hours of time of presentation.

- † "time of presentation" is defined as the time of triage in the Emergency Department or, if presenting from another care venue, from the earliest chart annotation consistent with all elements severe sepsis or septic shock ascertained through chart review.
- \* "hypotension" is defined as systolic blood pressure (SBP) <90 mm Hg or mean arterial pressure (MAP) <70 mm Hg or a SBP decrease >40 mm Hg or <2 SD below normal for age or known baseline.

**Denominator Statement:** Number of patients presenting with severe sepsis or septic shock.

**Exclusions:** A) Patients with advanced directives for comfort care are excluded.

- B) Clinical conditions that preclude total measure completion should be excluded (e.g. mortality within the first 6 hours of presentation as defined above in 2a1.1).
- C) Patients for whom a central line is clinically contraindicated (e.g. coagulopathy that cannot be corrected, inadequate internal jugular or subclavian central venous access due to repeated cannulations).
- D) Patients for whom a central line was attempted but could not be successfully inserted.
- E) Patient or surrogate decision maker declined or is unwilling to consent to such therapies or central line placement.

**Adjustment/Stratification:** No risk adjustment or risk stratification None Henry Ford Hospital (HFH) encourages the results of this measure to be stratified by race, ethnicity, gender, and primary language, illness severity and have included these variables as recommended data elements to be collected.

Level of Analysis: Facility, Integrated Delivery System

Type of Measure: Composite

Data Source: Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Paper Medical Records,

Electronic Clinical Data : Registry

Measure Steward: Henry Ford Hospital Other organizations: Henry Ford Hospital System(HFHS)

California Pacific Medical Center/Sutter Health (CPMC)

Society of Critical Care Medicine (SCCM)

Infectious Diseases Society of America (IDSA)

#### **0500** Severe sepsis and septic shock: Management bundle

Institute for Healthcare Improvement (IHI)

Surviving Sepsis Campaign (SSC)

Ohio State University (OSU)

#### STEERING COMMITTEE MEETING [08/28/2012]

#### Importance to Measure and Report: The measure met the Importance criteria

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: H-19; M-1; L-0; I-0; 1b. Performance Gap: H-7; M-12; L-1; I-0 1c. Evidence: Y-11; N-5; I-4

#### Rationale:

- There are greater than 750,000 estimated cases of severe sepsis a year in the United States. Additionally, there are an estimated 400,000 ICU admissions for sepsis, approximately 200,000 deaths a year, and at an estimated cost of \$17 billion a year.
- More than 50 publications have reported improved survival with use of the bundle in the past decade
  with the vast majority of the studies being observational. Some Committee members noted the lack of
  randomized controlled trials and they were informed that there are three randomized controlled trials
  currently ongoing in the U.S., UK and Australia.
- Committee members noted that there is some controversy in the field about the need for all of the bundle elements, specifically measuring central venous pressure (CVP). However, only about 15 percent of patients end up needing a CVP line because of the care algorithm in the bundle.
- Meta-analyses have shown survival benefit. National and international guidelines have been created for the management of severe sepsis and septic shock based on the data. The recommendations in the guidelines mirror the bundle in this measure.
- The developer pointed to the recent GENESIS trial published in the *Journal of Intensive Care Medicine* of 6000 patients in 11 hospitals throughout the U.S.; hospitals ranging from 100 to 1,000 patients found that meeting the bundle in a prospective, observational cohort resulted in mortality reduction of 14 percent.

#### 2. Scientific Acceptability of Measure Properties: The measure met the Scientific Acceptability criteria

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

Initial review: 2a. Reliability: H-1; M-7; L-5; I-7 2b. Validity: NA

#### Rationale:

- Committee members asked how the measure clearly distinguishes patients with severe sepsis versus those with septic shock.
  - O <u>Developer response</u>: The key difference is hypotension refractory to fluid administration that requires a vasopressor or a persistent lactate level greater than 4 is septic shock as specified.
- After several questions regarding the specifications, NQF staff realized that an attachment containing
  the data collection tool submitted by the developer had not been provided to the Committee. NQF
  staff provided the document to the Committee after the meeting.
- Committee members questioned whether the inter-rater reliability study of 498 patients in one institution would apply to other institutions. The developer responded that the measure is being used in a variety of health care systems such as Kaiser, Loma Linda University, University of Kansas and Intermountain Health in Utah.

**NOTE**: During the meeting, the Committee decided there was insufficient information included in the submission to determine whether the measure met the reliability criteria. Because the Committee had not been given all of the submitted information and the developer indicated additional data on reliability testing could be provided, the Committee agreed to revisit this measure. Additional information was provided to address the questions on reliability.

#### **0500** Severe sepsis and septic shock: Management bundle

#### After Review of all Submitted Information and Additional Information Addressing Reliability via Email:

2a. Reliability: **H-5; M-11; L-1; I-0** 2b. Validity: **H-1; M-14; L-2; I-0** Rationale:

- The term 'broad spectrum antibiotics' is not defined. This could potentially be problematic for a data abstractor to precisely, accurately and reproducibly identify antimicrobials that will satisfy the measure. A Committee member noted that the term 'broad spectrum antibiotics' was not used in the reliability testing results, instead, the term 'timely antibiotics' was used, which seemed to be more specific to measure
  - Developer response: The surviving sepsis campaign defined "broad spectrum antibiotics" as
    those with both Gram positive and Gram negative bacterial coverage. The rationale for antibiotic
    selection is further discussed in the 2004 and 2008 sepsis guidelines publications. Credit for
    timely antibiotics was assigned in the data set used for the analyses only if both species were
    covered.
- The ICD-9 diagnostic codes to identify the denominator were thought to be appropriate.
- The measure was tested both at the data element and measure score levels for reliability. For validity the measure was only tested at the measure score level.
- In review of the validity testing, a Committee member noted that measuring central venous pressure (CVP) and central venous oxygen saturation (ScvO2) were not a part of the validity testing.
- Committee members noted that the validity testing indicated that after adjusting for baseline characteristics, only administration of broad spectrum antibiotics and obtaining blood cultures before their initiation were associated with lower hospital mortality.
- The question of whether the sepsis bundle as a whole should be incorporated versus specific validated elements of the bundle (e.g., antibiotic selection and timing) was discussed. Though a few members supported individual measure, the majority support the bundle.
- The question of how the specifications indicate accountability was raised. A member commented that time zero is triage for time limited Emergency Department (ED) therapies. If a patient presents to the ED triage and does not qualify as severe sepsis or septic shock but develops it later, would the hospital and/or physician be held accountable? Another accountability example was if a patient presents to the ED with pneumonia without severe sepsis or septic shock, and 4 hours later the patient becomes hypotensive, would the ED physicians and/or hospital be held accountable for not providing care over a timeline that had elapsed once the patient developed symptoms? Although unit and ICU time zero is based upon when the patient is diagnosed, in the ED it is time of triage which may or may not be the time at which the patient developed symptoms. The Committee member questioned how it would be reconciled.
  - o <u>Developer response</u>: The patient is somewhere on the natural trajectory of becoming septic regardless of the point of presentation. If the patient who becomes hypotensive or has a high lactate does so in the ED, the reason for presentation to the ED is severe sepsis or shock. Likewise, the patient who presents with septic physiology on the floor and becomes hypotensive there after an initial admit for something else need to have time to start the clock. In both instances, we are relying on the presence of key features of severe sepsis or shock to make the attribution. Specifying triage time in the ED is not only reasonable since that is most likely what occasioned their visit to the ED, but also provides a standard time. The evidence in the literature also is consistent with picking triage time on this basis. There is less certainty with the floor patient, but again, a proper review yields the time that all the key features were first present. Thus, while there may be some admitted variability between the wards and the ED time of presentation in terms of precision, both are accurate for purposes of measurement.

#### **0500** Severe sepsis and septic shock: Management bundle

The data in the reliability and validity sections of the NQF submission accept this loss of precision in favor of accuracy. The evidence and data cited demonstrate a high degree of reliability at the level of a performance measure even with this known variability. Thus, we do not need to view it as a threat to reliability. According to the RAND paper, these very high scores on the signal-to-noise reliability indicator actually mean that meaningful comparisons can be drawn in performance using this metric "as is" even with some known variability.

#### 3. Usability: H-1; M-15; L-1; I-0

(Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)

#### Rationale:

- This measure is currently in wide use for public reporting and quality improvement by Kaiser Permanente, Surviving Sepsis Campaign, Catholic Healthcare West, Intermountain Healthcare and Sutter Healthcare.
- Highmark has been using the measure in its pay for performance program for the past two years. They initially had some data collection issues been those were soon resolved.
- The University of Kansas is currently using the measure in their EHR with real-time notifications.

#### 4. Feasibility: H-1; M-10; L-6; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/unintended consequences identified 4d. Data collection strategy can be implemented)

#### Rationale:

- The measure requires chart review and manual abstraction.
- The measure still has elements that may not be captured completely by EHR. The amount of data that
  needs to be collected may be overwhelming for facilities trying to work on improving outcomes for
  sepsis. Some of the individual elements may be helpful for internal monitoring within the institution to
  evaluate improvement over time.

#### 5. Related and Competing Measures

No related or competing measures noted.

#### Steering Committee Recommendation for Endorsement: Y-13; N-4

<sup>&</sup>lt;sup>1</sup> Cannon C, Holthaus C, Zubrow M, et al. The GENESIS Project (GENeralized Early Sepsis Intervention Strategies): A Multicenter Quality Improvement Collaborative. *Journal of Intensive Care Medicine*, 2012. DOI: 10.1177/0885066612453025. Available at: <a href="http://jic.sagepub.com/content/early/2012/08/17/0885066612453025">http://jic.sagepub.com/content/early/2012/08/17/0885066612453025</a>. Last accessed October 2012.

# **Appendix A: Measure Specifications**

	0500 Severe Sepsis and Septic Shock: Management Bundle
Status	Maintenance, Original Endorsement: Oct 24, 2008, Most Recent Endorsement: Oct 24, 2008 Time-limited
Steward	Henry Ford Hospital Other organizations: Henry Ford Hospital System(HFHS)
	California Pacific Medical Center/Sutter Health (CPMC)
	Society of Critical Care Medicine (SCCM)
	Infectious Diseases Society of America (IDSA)
	Institute for Healthcare Improvement (IHI)
	Surviving Sepsis Campaign (SSC)
	Ohio State University (OSU)
Description	This measure will focus on patients aged 18 years and older who present with symptoms of severe sepsis or septic shock. These patients will be eligible for the 3 hour (severe sepsis) and/or 6 hour (septic shock) early management bundle.
Туре	Composite
Data Source	Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Paper Medical Records, Electronic Clinical Data: Registry Surviving Sepsis Campaign Electronic Database:
	http://www.survivingsepsis.org/manual_database/Pages/default.aspx Paper Tools:
	http://www.survivingsepsis.org/About_the_Campaign/Documents/monthlymeasurementworks heet.pdf
	http://www.survivingsepsis.org/About_the_Campaign/Documents/individualchartmeasurement tool.pdf
	URL http://www.survivingsepsis.org/manual_database/Pages/default.aspx URL http://www.survivingsepsis.org/About_the_Campaign/Documents/le_field_descriptions_and_coding_information.pdf
Level	Facility, Integrated Delivery System
Setting	Hospital/Acute Care Facility

	0500 Severe Sepsis and Septic Shock: Management Bundle
Numerator	If:
Statement	A. measure lactate level
	B. obtain blood cultures prior to antibiotics
	C. administer broad spectrum antibiotics
	D. administer 30 ml/kg crystalloid for hypotension or lactate >=4 mmol/L
	E. apply vasopressors (for hypotension that does not respond to initial fluid resuscitation to maintain a mean areterial pressure >= 65)
	F. In the event of persistent arterial hypotension despite volume resuscitation (septic shock) or initial lactate >=4 mmol/L (36 mg/dl) measure central venous pressure and central venous oxygen saturation
	G. remeasure lactate if initial lactate is elevated
	represent processes of care:
	Numerator statement: Patients from the denominator who received all the following: A, B, and C within 3 hours of time of presentation <sup>†</sup> AND IF septic shock is present (as either defined as hypotension* or lactate >=4 mmol/L) who also received D and E and F and G within 6 hours of time of presentation.
	† "time of presentation" is defined as the time of triage in the Emergency Department or, if presenting from another care venue, from the earliest chart annotation consistent with all elements severe sepsis or septic shock ascertained through chart review.
	* "hypotension" is defined as systolic blood pressure (SBP) <90 mm Hg or mean arterial pressure (MAP) <70 mm Hg or a SBP decrease >40 mm Hg or <2 SD below normal for age or known baseline.

	0500 Severe Sepsis and Septic Shock: Management Bundle
Numerator Details	Time Window: Bundle elements should be *completed* in the times outlined in the numerator statement, however patients are *eligible* for inclusion in the numerator if diagnosed with severe sepsis or septic shock at anytime during their hospitalization.
	Following the scheme outlined in 2a1.1
	"A" requires a response of "yes" to the question: "Was a lactate level obtained within 3 hours of time of presentation?"
	"B" requires a response of "yes" to the question: "Were blood cultures obtained prior to antibiotic administration and within 3 hours of time of presentation?"
	"C" requires a response of "yes" to the question: "Were broad spectrum antibiotics administered within 3 hours of the time of presentation?"
	"Septic Shock" requires a response of "yes" to the question: "Was either hypotension (defined as SBP < 90 or MAP < 65 or decrease in SBP 30 mmHg from baseline) OR lactate >=4 mmol/L present in the first 6 hour of the time of presentation?"
	"D" requires a response of "yes" or "not applicable" to the question: "Were 30ml/kg of crystalloid administered for hypotension or lactate >= 4 mmol/L within 6 hours of the time of presentation?"
	"E" requires a response of "yes" or "not applicable" to the question: "Were vasopressors applied within 6 hours of the time of presentation for hypotension that did not respond to initial fluid resuscitation to maintain a mean arterial pressure >= 65 mmHg?"
	"F" requires a response of "yes" or "not applicable" to the question: "Were central venous pressure (CVP) and central venous oxygen saturation (ScVO2) measured within 6 hours of presentation in the event of hypotension despite volume resuscitation or initial lactate >= 4 mmol/L (36 mg/dl)?"
	"G" requires a response of "yes" or "not applicable" to the question: "Was serum lactate remeasured if initially elevated within 6 hours of presentation."
Denominator Statement	Number of patients presenting with severe sepsis or septic shock.
Denominator Details	Time Window: Patients are eligible for inclusion in the denominator for each episode of severe sepsis or septic shock during a hospitalization from emergency room presentation though discharge. The collection period for each increment of data reporting is monthly.
	The denominator may be derived by a) prospective real-time screening of all patients presenting for care to the facility, or b) retrospective screening through chart review of all patients presenting to the medical facility, or c) both methods. In each case the clinical diagnostic criteria for severe sepsis or septic shock as outlined below are applied to the population initially identified. The clinical criteria that must be applied in either instance do not vary whether prospective or retrospective data collection is employed.  SEVERE SEPSIS:
	Severe sepsis is defined as a suspected source of clinical infection, 2 or more manifestations of
	systemic infection (SIRS criteria) and the presence of sepsis-induced organ dysfunction.  SIRS criteria include: Temperature >38.3 C or <36.0 C, Heart rate >90 beats per minute, Respiration > 20 breaths/min, White blood cell count >12,000 or <4000/mm3, or >10% bandemia.
	Organ dysfunction variables include: (SBP)<90 mm Hg or mean arterial pressure <70 mm Hg or a SBP decrease >40 mm Hg or <2 SD below normal for age or known baseline, Creatinine > 2.0 mg/dl (176.8 mmol/L) or Urine Output < 0.5 ml/kg/hour for > 2 hours, Bilirubin > 2 mg/dl (34.2 mmol/L), Platelet count < 100,000, Coagulopathy (INR >1.5 or aPTT >60 secs), Lactate > 2

	0500 Severe Sepsis and Septic Shock: Management Bundle
	mmol/L (18.0 mg/dl). SEPTIC SHOCK:
	Septic shock.  Septic shock requires the presence of severe sepsis as above AND as sepsis-induced hypoperfusion persisting despite adequate fluid resuscitation OR lactate > 4 mmol/L.
	Sepsis induced tissue hypoperfusion is present with (SBP)<90 mm Hg or mean arterial pressure <70 mm Hg or a SBP decrease >40 mm Hg or <2 SD below normal for age or known baseline.
	If clinical coding documentation is used to derive the denominator in a retrospective collection effort, the codes that should be applied include:
	ICD9 DX: a) 0031: SALMONELLA SEPTICEMIA
	b) 0362: MENINGOCOCCEMIA
	c) 0380: STREPTOCOCCAL SEPTICEMIA
	d) 03810: STAPH SEPTICEMIA NOS
	e) 03811: MSSA SEPTICEMIA
	f) 03812: MRSA SEPTICEMIA g) 03819: STAPH SEPTICEMIA NEC
	h) 0382: PNEUMOCOCCAL SEPTICEMIA
	i) 0383: ANAEROBIC SEPTICEMIA
	j) 03840: GRAM-NEG SEPTICEMIA NOS
	k) 03841: H. INFLUENZAE SEPTICEMIA
	I) 03842: E. COLI SEPTICEMIA
	m) 03843: PSEUDOMONAS SEPTICEMIA
	n) 03844: SERRATIA SEPTICEMIA
	o) 03849: GRAM-NEG SEPTICEMIA NEC
	p) 0388: SEPTICEMIA NEC
	q) 0389: SEPTICEMIA NOS
	r) 78552: SEPTIC SHOCK
	s) 99591: SEPSIS t) 99592: SEVERE SEPSIS
Evolucione	
Exclusions	<ul><li>A) Patients with advanced directives for comfort care are excluded.</li><li>B) Clinical conditions that preclude total measure completion should be excluded (e.g.</li></ul>
	mortality within the first 6 hours of presentation as defined above in 2a1.1).
	C) Patients for whom a central line is clinically contraindicated (e.g. coagulopathy that
	cannot be corrected, inadequate internal jugular or subclavian central venous access due to repeated cannulations).
	D) Patients for whom a central line was attempted but could not be successfully inserted.
	E) Patient or surrogate decision maker declined or is unwilling to consent to such therapies or central line placement.
Exclusion	The exclusion details described in 2a1.8 must be ascertained by chart review.
Details	No specific definitions are required to discover this information from standard chart annotation.
Risk	No risk adjustment or risk stratification
Adjustment	None
Stratification	Henry Ford Hospital (HFH) encourages the results of this measure to be stratified by race, ethnicity, gender, and primary language, illness severity and have included these variables as recommended data elements to be collected.

## **0500 Severe Sepsis and Septic Shock: Management Bundle** Type Score Non-weighted score/composite/scale better quality = higher score Algorithm The data calculations may be performed in one of two ways. The Surviving Sepsis Campaign Database available at SurvivingSepsis.org automatically performs all calculations if data is entered into the required fields. However, hospitals are not restricted to use of the database to perform the required calculations. Two paper tools described below capture the logic. The two tools, URLs provided in 2a1.26.1, ("Individual Chart Measurement Tool" [ICMT], and "Monthly Measurement Worksheet" [MMW]) govern the calculation of the elements of the "all or nothing" composite measure. The tools, in fact, exceed the information required for calculation of the composite measure extending care to variables beyond the scope of this submission (e.g. care patterns for the first 24 hours of care such as the application of steroids or glucose control; calculation of individual component measures not requested for endorsement at this time). They are provided as a clear, yet highly detailed, statement of the logic. To simplify matters, the algorithm will be described in plain language here: Find the patients who meet the initial patient population (ie, the general group of patients that the performance measure is designed to address). This is accomplished as described in 2a1.7 either through prospective, retrospective or both forms of data screening. Codes and criteria are specified in 2a1.7. From the patients within the initial patient population criteria, find the patients who qualify for the denominator (ie, the specific group of patients for inclusion in a specific performance measure based on defined criteria). All exclusions identified by chart review in 2a1.8 will not, by definition, qualify for the denominator. Note: in some cases the initial patient population and denominator are identical. From the patients within the denominator less those excluded, find the patients who qualify for the Numerator (ie, the group of patients in the denominator for whom a process or outcome of care occurs). The individual component elements of the composite indicator (eg, lactate collected, blood cultures obtained, etc.) will be found on each instance of the ICMT (one per patient chart reviewed). Each month, all ICMT's will be gathered and tabulated to generate the composite numerator using the MMW. In this way the MMW consolidates all information gathered in each ICMT to create the composite numerator. For more detail, the steps are identified below: The logic on the ICMT captures all necessary data to be abstracted from a single chart to inform the numerator. b. The "time of presentation" is captured as defined in 2a1.1 in question 3 of the ICMT. c. Collection of lactate is determined and timed in question 4 of the ICMT. d. Administration of broad spectrum antibiotics and timing are captured in question 5 of the ICMT. e. Collection of blood cultures and timing is captured in question 6 of the ICMT. Next, required determinations to inform the conditional elements in the composite measure are made. Specifically, since component elements "D, E, F, G" defined in 2a1.1 above are dependent on the presence of septic shock, the shock state is documented in question 7 of the ICMT. i. If the patient has shock documentation of the administration of fluids is captured in

question 7c of the ICMT.

question 7e of the ICMT.

ii. If the patient has shock documentation of the application of vasopressors is captured in

iii. If the patient has shock documentation of the assessment of CVP and timing is captured

	0500 Severe Sepsis and Septic Shock: Management Bundle
	in question 8 of the ICMT.
	iv. If the patient has shock documention of the assessment of ScVO2 and timing is captured in question 9 of the ICMT.
	g. If shock is not present, credit is assigned for the dependent elements "D, E, F, G" and documented on line 16 of the ICMT.
	h. The tally of affirmative responses (or where credit has been assigned)
	to the individual component measures on a per chart basis is recorded by placing a mark in the designated boxes in line 16 of the ICMT.
	i. Note: questions 10-15 on the ICMT do not apply to the composite measure under submission here.
	j. Once monthly the MMW will be employed to tabulate all of the line 16 scores on the ICMT to generate the composite numerator for the month.
	i. While the MMW is designed to report out the component measures as individual quality indicators, this is not required for the composite measure under consideration. Thus, questions 1 to 12 on the MMW are not necessary in this instance.
	ii. Question 13 on the MMW generates the monthly "all or nothing" numerator by requiring that ALL boxes on line 16 of each ICMT be marked complete.
	iii. If a single box on line 16 of the ICMT is not completed, then the "all or nothing" criterion is not met and the individual chart is not included in the numerator. This represents a quality failure.
	iv. Questions 14 and 15 also do not apply to the composite measure under consideration here.
	4. Although the exclusion cases are removed from the denominator population for the performance calculation, the number of patients with valid exclusions should be calculated and reported along with performance rates to track variations in care and highlight possible areas of focus for QI. URL
	http://www.survivingsepsis.org/About_the_Campaign/Documents/individualchartmeasurement tool.pdf AND
	http://www.survivingsepsis.org/About_the_Campaign/Documents/monthlymeasurementworks heet.pdf
Copyright/ Disclaimer	Performance measures and related data specifications developed by the Henry Ford Hospital in collaboration with representatives from emergency medicine, critical care medicine (SCCM), and infectious diseases (IDSA).
	These performance measures are not clinical guidelines and do not establish a standard of medical care, and have not been tested for all potential applications. Neither the Henry Ford Hospital nor its affiliates or ageents shall be responsible for any use of the measures.