



NATIONAL QUALITY FORUM

**National Voluntary  
Consensus Standards  
for Nursing-Sensitive  
Care: An Initial  
Performance  
Measure Set**

A  
CONSENSUS  
REPORT

## NATIONAL QUALITY FORUM

---

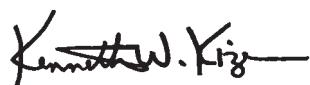
### Foreword

**N**ursing is the largest healthcare profession in the United States, with nurses serving as the principal caregivers in hospitals and other institutional care settings and nursing time constituting the single largest operational expense in any healthcare delivery system. However, considering that nursing as an organized service and nurses as individual caregivers are critical to optimal healthcare system performance, it is surprising how little attention has been directed to date toward developing nursing care performance measures.

This report details 15 voluntary consensus standards for nursing-sensitive care. The National Quality Forum (NQF) has endorsed these measures through its formal Consensus Development Process. This is the first-ever set of national standardized performance measures to assess the extent to which nurses in acute care hospitals contribute to patient safety, healthcare quality, and a professional work environment.

These consensus standards can be used by consumers to assess the quality of nursing care in hospitals, and they can be used by providers to identify opportunities for improvement of critical outcomes and processes of care. Furthermore, these standards can be used by purchasers to incentivize and reward hospitals for better performance.

We thank NQF Members and the Nursing Care Performance Measures Steering Committee and its Technical Advisory Panel for their stewardship of this work and for their dedication to improving the quality of healthcare in American hospitals by standardizing performance measurement of the frontline provider of care, the nurse.



Kenneth W. Kizer, MD, MPH  
President and Chief Executive Officer

© 2004 by the National Quality Forum  
All rights reserved

Printed in the U.S.A.

No part of this may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the National Quality Forum. Requests for permission to reprint or make copies should be directed to:

Permissions  
National Quality Forum  
601 Thirteenth Street, NW, Suite 500 North  
Washington, DC 20005  
Fax 202.783.3434  
[www.qualityforum.org](http://www.qualityforum.org)

## NATIONAL QUALITY FORUM

# National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set

## Table of Contents

Executive Summary.....	v
Introduction.....	1
Voluntary Consensus Standards for Nursing-Sensitive Care.....	2
Relationship to Other NQF-Endorsed Consensus Standards .....	3
Identifying the Initial Set .....	4
Purpose .....	4
Framework for Nursing-Sensitive Performance Measurement .....	5
Scope .....	6
Priority Areas for Nursing-Sensitive Performance Measurement.....	6
Criteria for Selection of Measures .....	7
Box A: Criteria for Evaluation and Selection.....	8
The NQF-Endorsed National Voluntary Consensus Standards for Nursing-Sensitive Care .....	10
Research Recommendations .....	10
Workforce Measures .....	10
Pain Assessment and Management Measures .....	11
Nurse-centered Intervention Process Measures.....	11
Measures for Other Gaps .....	11
Sufficiency of Measures Against Evaluation Criteria.....	11
Box B: Specific Priorities for Research .....	12
Additional Recommendations .....	11
Data Issues.....	11
Use for Quality Improvement.....	13
Implementation .....	13
Use as a Set.....	13
Improving the Set.....	13
Acknowledgments .....	13
Table 1—National Voluntary Consensus Standards for Nursing-Sensitive Care .....	14

*(continued)*

Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care .....	A-1
Appendix B – Members and Board of Directors .....	B-1
Appendix C – Steering Committee, Technical Advisory Panel, and Project Staff .....	C-1
Appendix D – Commentary .....	D-1
Appendix E – Acronyms and Glossary.....	E-1
Appendix F – Selected References .....	F-1
Appendix G – Consensus Development Process: Summary .....	G-1

## NATIONAL QUALITY FORUM

---

# National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set

## Executive Summary

Nurses, as the principal frontline caregivers in the U.S. healthcare system, have tremendous influence over a patient's healthcare experience. There is growing awareness that specific characteristics of the nursing workforce directly impact healthcare quality, including healthcare outcomes, patient safety, and the safety of the work environment. In recent years, the national shortage of nurses has led the healthcare community to study more closely the relationship between the number and type of nursing personnel—along with other variables—to healthcare outcomes and hospital performance. This has led to a growing body of evidence identifying certain healthcare processes and outcomes, as well as structural proxies of them, as "nursing sensitive."

This National Quality Forum (NQF) report details 15 national voluntary consensus standards for nursing-sensitive care endorsed by NQF, and it identifies principles for implementing them as well as priorities for research. This is the first-ever set of nationally standardized performance measures that assesses the extent to which nursing personnel in acute care hospitals contribute to healthcare quality, patient safety, and a professional and safe work environment.

These voluntary consensus standards consist of a collection of patient outcomes, nursing interventions, and system-level indicators. Viewed together, they provide consumers a way to assess the quality of nurses' contribution to inpatient hospital care, and they enable providers to identify critical outcomes and processes of care for continuous improvement that are directly influenced by nursing personnel. These

consensus standards also can be used by purchasers to reward hospitals that have higher performing nursing services.

Although endorsement of these consensus standards represents a notable step forward in improving healthcare quality, significant gaps in scientific evidence and research remain. Investigators, measure developers, and performance measurement organizations should review the endorsed research agenda as a roadmap to address these gaps.

---

### National Voluntary Consensus Standards for Nursing-Sensitive Care\*

---

FRAMEWORK CATEGORY	MEASURE
Patient-centered outcome measures	<ol style="list-style-type: none"> <li>1. Death among surgical inpatients with treatable serious complications (failure to rescue)</li> <li>2. Pressure ulcer prevalence</li> <li>3. Falls prevalence**</li> <li>4. Falls with injury</li> <li>5. Restraint prevalence (vest and limb only)</li> <li>6. Urinary catheter-associated urinary tract infection for intensive care unit (ICU) patients**</li> <li>7. Central line catheter-associated blood stream infection rate for ICU and high-risk nursery (HRN) patients**</li> <li>8. Ventilator-associated pneumonia for ICU and HRN patients**</li> </ol>
Nursing-centered intervention measure	<ol style="list-style-type: none"> <li>9. Smoking cessation counseling for acute myocardial infarction**</li> <li>10. Smoking cessation counseling for heart failure**</li> <li>11. Smoking cessation counseling for pneumonia**</li> </ol>
System-centered measures	<ol style="list-style-type: none"> <li>12. Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and contract)</li> <li>13. Nursing care hours per patient day (RN, LPN, and UAP)</li> <li>14. Practice Environment Scale—Nursing Work Index (composite and five subscales)</li> <li>15. Voluntary turnover</li> </ol>

---

\* See full report for specifications, risk adjustment (if applicable), additional background, and reference material.

\*\* Also an NQF-endorsed voluntary consensus standard for hospital care.

## NATIONAL QUALITY FORUM

---

### Appendix A

### Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care

The following table summarizes the detailed specifications for each of the National Quality Forum (NQF)-endorsed nursing-sensitive performance measures. All information presented has been derived directly from measure sources/developers without modification or alteration (except when the measure developer agreed to such modification during the NQF Consensus Development Process) and is current as of September 5, 2004.

All NQF-endorsed voluntary consensus standards are open source, meaning they are fully accessible and disclosed. References to related risk-adjustment methodologies and definitions are provided to assure openness and transparency.

Issues regarding any NQF-endorsed consensus standard (e.g., modifications to specifications, emerging evidence) may be submitted to NQF for review and consideration by using the "Implementation Feedback Form" found at [www.qualityforum.org/implementation\\_feedback.htm](http://www.qualityforum.org/implementation_feedback.htm). NQF will transmit this information to the measure developers and/or compile it for consideration in updating the measure set.

## Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
PATIENT-CENTERED OUTCOME MEASURES	1. Death among surgical patients with treatable serious complications (failure to rescue) <sup>1</sup>	Needleman, et al. for the Agency for Healthcare Research and Quality (AHRQ) <sup>2,3</sup>	Surgical inpatients (with primary procedure within 2 days of admission) with complications of care whose discharge status is death	<p>Major surgical discharges<sup>4</sup> with primary procedure within 2 days of admission AND with complications of care in secondary diagnosis field positions:</p> <ul style="list-style-type: none"> <li>■ sepsis (ICD-9-CM codes 038.0, 038.1, 038.10, 038.11, 038.19, 038.2, 038.3, 038.40, 038.41, 038.42, 038.43, 038.44, 038.49, 038.8, 038.9, 790.7, 995.90, 995.91, 995.92, 995.93, 995.94)</li> <li>■ pneumonia (ICD-9-CM codes 482.0, 482.1, 482.2, 482.3, 482.30, 482.31, 482.32, 482.39, 482.4, 482.40, 482.41, 482.49, 482.8, 482.81, 482.82, 482.83, 482.84, 482.89, 482.9, 485, 486, 507.0, 514, 997.3)</li> <li>■ GI bleeding (ICD-9-CM codes 530.82, 531.00, 531.01, 531.20, 531.21, 531.30, 531.31, 531.90, 531.91, 532.00, 532.01, 532.10, 532.11, 532.20, 532.21, 532.30, 532.31, 532.90, 532.91, 533.00, 533.01, 533.10, 533.11, 533.20, 533.21, 533.30, 533.31, 533.90, 533.91, 534.00, 534.01, 534.10, 534.11, 534.20, 534.21, 534.30, 534.31, 534.90, 534.91, 535.01, 535.40, 535.41, 537.84, 578.9)</li> <li>■ shock/cardiac arrest (ICD-9-CM codes 427.5, 785.5, 785.50, 785.51, 785.52, 785.59, 799.1, 93.93, 99.60, 99.63)</li> <li>■ DVT/PE (ICD-9-CM codes 415.1, 415.11, 451.11, 451.19, 451.81, 453.8)</li> </ul>	MDC code of 15 (newborns and other neonates) AND exclusions as noted for each complication of care <sup>5</sup>

<sup>1</sup> Patient-level factors that contribute to the risk of acquiring particular in-hospital complications are used in a logistic regression model to predict each patient's probability. See table 1 for the risk-adjustment coefficients as provided by Needleman, et al.

<sup>2</sup> Needleman J, Buerhaus PI, Mattke S, Stewart M, Zelevinsky K. *Nurse Staffing and Patient Outcomes in Hospitals. Health Resources and Services Administration (HRSA) Report No. 230-99-0021; February 28, 2001.*

<sup>3</sup> AHRQ has agreed to provide ongoing support through its Quality Indicators Software, specifically the Patient Safety Indicator module. Review of measure specifications and risk adjustment will be undertaken annually. Information will be posted at [www.ahrqqualityindicators.ahrq.gov](http://www.ahrqqualityindicators.ahrq.gov). Risk adjustment will be accomplished through use of the AHRQ co-morbidity software and covariates integrated into the AHRQ PSI module.

<sup>4</sup> Risk pools were constructed based on the diagnostic related group (DRG) codes found in table 2. AHRQ will post changes to the codes on its web site, [www.ahrq.gov](http://www.ahrq.gov).

<sup>5</sup> See table 3 for exclusion codes for each complication of care.

## Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
PATIENT-CENTERED OUTCOME MEASURES <i>continued</i>	2. Pressure ulcer prevalence	California Nursing Outcomes Coalition (CaNOC) <sup>6</sup>	Inpatients with National Pressure Ulcer Advisory Panel (NPUAP) – Stage II or greater (II-IV + eschar) hospital-acquired pressure ulcers <sup>7</sup>	Inpatients in the prevalence study <sup>8,9,10</sup>	<ul style="list-style-type: none"> <li>■ Patients &lt; 16 years of age</li> <li>■ Skin breakdown due to arterial occlusion, venous insufficiency, diabetes neuropathy, or incontinence dermatitis is not reported in the numerator</li> <li>■ Pressure ulcers present on admission (community acquired): <ul style="list-style-type: none"> <li>● Pressure ulcers discovered/document on first day of hospitalization</li> <li>● If the prevalence study is done on the first day of a patient's hospital stay and the patient's ulcer is already present</li> <li>● If the prevalence study is done on the second day of a patient's hospital stay and the patient's Stage II+ ulcer is already present</li> </ul> </li> </ul>
	3. Falls prevalence <sup>11</sup>	American Nurses Association National Database of Nursing Quality Indicators (ANA-NDNQ)	Number of inpatient falls <sup>12</sup> x 1,000	NOTE: Quarterly reporting is recommended by the measure developer	Total number of inpatient days <sup>9,13</sup> ■ None
	4. Falls with injury	ANA-NDNQ	Number of inpatient falls <sup>12</sup> with injuries <sup>14</sup> x 1,000	NOTE: Quarterly reporting is recommended by the measure developer	Total number of inpatient days <sup>9,13</sup> ■ None

<sup>6</sup> U.S. Department of Veterans Affairs Nursing Outcomes Database and the Military Nursing Outcomes Databases initiatives also are using this measure.

<sup>7</sup> NPUAP/AHCPR classification (any lesion caused by unrelieved pressure resulting in the damage of underlying tissue); In *Pressure Ulcers in Adults: Prediction and Prevention*. Clinical Practice Guideline Number 3, AHCPR Pub. No. 92-0047; May 1992.

<sup>8</sup> CaNOC unit stratification: medical, surgical, medical-surgical combined (units with a mix of patients receiving acute medical and surgical care), critical care, step down (units that provide care to patients requiring a higher level of care than provided on an acute unit, yet not sufficiently intensive to require admission to an intensive care unit [ICU]; examples include progressive care, telemetry, and intermediate care); reported as three strata (medical-surgical combined, critical care, step down).

<sup>9</sup> Stratified by hospital size: < 100, 100-199, 200-299, 300-399, 400-499, 500 or more.

<sup>10</sup> This measure is derived from data collected during a quarterly one-day prevalence study on all patients in each unit on the day of the study.  
■ NQF-endorsed hospital care performance measure.

<sup>11</sup> A fall is defined as an unplanned descent to the floor.

<sup>12</sup> ANA-NDNQ unit stratification: medical, surgical, medical-surgical combined (units with a mix of patients receiving acute medical and surgical care); critical care, step down (units that provide care to patients requiring a higher level of care than provided on an acute unit, yet not sufficiently intensive to require admission to an ICU; examples include progressive care, telemetry, and intermediate care); reported as five strata (medical, surgical, medical-surgical combined, critical care, step down).

<sup>14</sup> Level of injury is defined as minor (results in application of a dressing, ice, cleaning of a wound, limb elevation, or topical medication), moderate (results in suturing, steri-strips, fracture, or splinting), major (results in surgery, casting, or traction), or death (as a result of the fall).

## Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
PATIENT-CENTERED OUTCOME MEASURES <i>continued</i>	5. Restraint prevalence (vest and limb only)	CalNOC <sup>6</sup>	Inpatients who have vest restraint and/or limb restraint (upper or lower or both) <sup>15</sup> on the day of the prevalence study	Inpatients in the prevalence study <sup>8,9,10</sup>	■ Patients < 16 years of age
	6. Urinary catheter-associated urinary tract infection (UTI) for intensive care unit (ICU) patients <sup>11</sup>	Centers for Disease Control and Prevention (CDC)	Number of indwelling urinary catheter-associated UTIs (defined by CDC case definitions of symptomatic UTI or asymptomatic bacteruria, excludes other infections of the urinary tract <sup>16,17</sup> ) × 1,000	Number of indwelling urinary catheter days for ICU patients ■ Reported by type of ICU (coronary, cardiothoracic, medical, medical-surgical [major teaching and all others], neurosurgical, pediatric, surgical, trauma, burn, and respiratory)	■ None
	7. Central line catheter-associated blood stream infection rate for ICU and high-risk nursery (HRN) patients <sup>11</sup>	CDC	Number of central line-associated blood stream infections (laboratory-confirmed bloodstream infection or clinical sepsis) × 1,000 <sup>16,17</sup> Number of umbilical and central line-associated blood stream infections (laboratory-confirmed bloodstream infection or clinical sepsis) × 1,000 <sup>16,17</sup>	Number of central line-days for ICU patients ■ Reported by type of ICU (coronary, cardiothoracic, medical, medical-surgical [major teaching and all others], neurosurgical, pediatric, surgical, trauma, burn, and respiratory) Number of central-line days for HRN patients ■ Reported for HRNs by birth weight category (<1,000, 1,001-1,500, 1,501-2,500, and >2,500g)	■ None

<sup>15</sup> Any manual method or physical or mechanical device, material, or equipment attached or adjacent to the patient's body that he or she cannot easily remove that restricts freedom of movement or normal access to the body.

<sup>16</sup> Definition for infections are given in Garner JS, et al. *CDC Definitions for Nosocomial Infections*. In: Olmsted, RN, ed. APIC Infection Control and Applied Epidemiology: Principles and Practice. St. Louis: Mosby; 1996:A1-A20. Available at [www.apic.org/pdf/edcdets.pdf](http://www.apic.org/pdf/edcdets.pdf).

<sup>17</sup> Personal communication, Linda McKibbin, MD, MPH, Medical Officer, CDC/NCID, Division of Healthcare Quality Promotion/Prevention and Evaluation Branch, October 21, 2002.

## Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
<b>PATIENT-CENTERED OUTCOME MEASURES</b> <i>continued</i>	8. Ventilator-associated pneumonia for ICU and HRN patients <sup>11</sup>	DC	Number of ventilator-associated pneumonias x 1,000 <sup>16,17</sup>	Number of ventilator-days for ICU patients ■ Reported by type of ICU (coronary, cardiothoracic, medical, medical-surgical [major teaching and all others], neurosurgical, pediatric, surgical, trauma, burn, and respiratory)	■ None
<b>NURSE-CENTERED INTERVENTION MEASURES</b>	9. Smoking cessation counseling for acute myocardial infarction (AMI) <sup>11</sup>	Centers for Medicare and Medicaid Services (CMS)-Quality Improvement Organizations (QIO) and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (ORYX)	Inpatients who receive smoking cessation advice or counseling given during hospitalization	AMI inpatients (principal diagnosis) ICD-9-CM codes 410.01, 410.11, 410.21, 410.31, 410.41, 410.51, 410.61, 410.71, 410.81, 410.91 with a history of smoking cigarettes anytime during the year prior to hospital arrival	■ < 18 years of age ■ Transferred to another acute care hospital ■ Expired ■ Left against medical advice ■ Discharged to hospice
	10. Smoking cessation counseling for heart failure (HF) <sup>11</sup>	CMS-QIO and JCAHO (ORYX)	Inpatients who receive smoking cessation advice or counseling given during hospitalization	HF inpatients (principal diagnosis) ICD-9-CM codes 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.49 with a history of smoking cigarettes anytime during the year prior to hospital arrival	■ < 18 years of age ■ Transferred to another acute care hospital ■ Expired ■ Left against medical advice ■ Discharged to hospice

## Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
<b>NURSE-CENTERED INTERVENTION MEASURES</b> <i>continued</i>	11. Smoking cessation counseling for pneumonia <sup>11</sup>	CMS and JCAHO (ORYX)	Inpatients who receive smoking cessation advice or counseling given during hospitalization	Pneumonia inpatients (principal diagnosis ICD-9-CM code 480.0–483.8, 485–486, or 487.0; or a principal diagnosis code of sepsis (038.xx) or 518.81 <sup>18</sup> (respiratory failure), and a secondary diagnosis code of pneumonia with a history of smoking cigarettes anytime during the year prior to hospital arrival	<ul style="list-style-type: none"> <li>■ &lt; 18 years of age</li> <li>■ Transferred to another acute care hospital</li> <li>■ Expired</li> <li>■ Left against medical advice</li> <li>■ Discharged to hospice</li> <li>■ No working diagnosis of pneumonia on admission</li> <li>■ Receiving comfort measures only</li> </ul>
<b>SYSTEM-CENTERED MEASURES</b>	12. Skill mix (Registered Nurse [RN], Licensed Vocational Nurse/ Licensed Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and contract)	ANA-NDNQI <sup>19</sup>	Number of productive hours <sup>20</sup> worked by RN nursing staff (employee and contract) <sup>21</sup> with patient care responsibilities <sup>22</sup> Number of productive hours <sup>20</sup> worked by LVN/LPN staff (employee and contract) <sup>21</sup> with patient care responsibilities <sup>22</sup> Number of productive hours <sup>20</sup> worked by UAP staff (employee and contract) <sup>21</sup> with patient care responsibilities <sup>22</sup> Number of productive hours <sup>20</sup> worked by contract staff <sup>21</sup> (RN, LVN/LPN, and UAP) with patient care responsibilities <sup>22</sup>	Total number of productive hours worked by nursing staff (RN, LVN/LPN, UAP) with direct patient care responsibilities (employee and contract) <sup>9,13</sup>	<ul style="list-style-type: none"> <li>■ None</li> </ul>

<sup>18</sup> Principal diagnosis code 518.84 (acute and chronic respiratory failure) can be added to 518.81.

<sup>19</sup> This measure is also a CaINOC measure; however, because the CaINOC unit stratification differs (three strata reported) from the ANA-NDNQI stratification (five strata reported), a single version has been endorsed.

<sup>20</sup> Productive hours are the actual direct hours, not budgeted or scheduled hours. Productive hours do not include vacation, medical leave, orientation, education, or committee time.

<sup>21</sup> Employees are the persons who are employed directly by the facility and are on the hospital payroll; contracted/agency staff includes temporary nursing staff who are not employed by the facility but are hired on a contractual basis to fill staffing needs for a designated shift or for a short-term contracted basis, or registry staff from outside the facility, or traveling nurse staff contracted to the facility for a designated period of time.

<sup>22</sup> Patient care responsibilities are patient-centered nursing activities carried out by unit-based staff in the presence of the patient (e.g., medication administration, nursing treatments, nursing rounds, admission/transfer/discharge, patient teaching, patient communication) and nursing activities that occur away from the patient that are patient related (e.g., coordination of patient care, documentation, treatment planning).

## Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
SYSTEM-CENTERED MEASURES <i>continued</i>	13. Nursing care hours per patient day (RN, LVN/LPN, and UAP)	ANA-NDNQ <sup>19</sup>	Number of productive hours <sup>20</sup> worked by RN nursing staff (employee and contract) <sup>21</sup> with direct patient care responsibilities <sup>22</sup>	Inpatient days <sup>9,13</sup>	■ None
			Number of productive <sup>20</sup> hours worked by nursing staff (RN, LVN/LPN, and UAP) <sup>21</sup> with direct patient care responsibilities (employee and contract) <sup>22</sup>		
14. Practice Environment Scale-Nursing Work Index (composite and five subscales)	Literature <sup>23,24,25</sup>	Composite score is the mean of all subscales <sup>26</sup> Subscales = mean of all items comprising each subscale: ■ Nurse participation in hospital affairs (items: 5, 6, 11, 15, 17, 21, 23, 27, 28) ■ Nursing foundations for quality of care (items: 4, 14, 18, 19, 22, 25, 26, 29, 30, 31) ■ Nurse manager ability, leadership, and support of nurses (items: 3, 7, 10, 13, 20) ■ Staffing and resource adequacy (items: 1, 8, 9, 12) ■ Collegial nurse-physician relations (items: 2, 16, 24)	Staff RNs	NOTE: Random sample with a minimum response of 30 completed surveys (all items completed) is consistent with the NQF-endorsed consensus standard <sup>27,28</sup>	■ None

<sup>23</sup> Kramer M, Hafner LP. Shared values: impact on staff nurse job satisfaction and perceived productivity. *Nurs Res*. 1989;38:172-177.

<sup>24</sup> Aiken LH, Patrician P. Measuring organizational traits of hospitals: the revised nursing work index. *Nurs Res*. 2000;49:146-153.

<sup>25</sup> Lake ET. Development of the Practice Environment Scale of the Nursing Work Index. *Res Nurs Health*. 2002;25:176-188.

<sup>26</sup> See table 4 for the full instrument, subscales, and scoring instructions.

<sup>27</sup> National Quality Forum (NQF). A Comprehensive Framework for Hospital Care Performance Evaluation. Washington, DC: NQF; 2003.

<sup>28</sup> Although NQF's endorsed standard for a minimum sample size is 30, the measure developer acknowledges that a smaller number of completed surveys (i.e., a minimum of 15 to 25) retains the instrument's validity.

**Appendix A – Specifications of the National Voluntary Consensus Standards for Nursing-Sensitive Care (continued)**

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
<b>SYSTEM-CENTERED MEASURES</b> <i>continued</i>	15. Voluntary turnover	VHA	<p>Number of voluntary uncontrolled separations during the month for RNs and advanced practice nurses</p> <p>Number of voluntary uncontrolled separations during the month for LVNs/LPNs and nursing assistants/aides (NAs)</p>	<p>Number of employees (full time plus part time) on last day of the month for RNs and advanced practice nurses</p> <p>Number of employees (full time plus part time) on last day of the month for LPNs and NAs</p>	<ul style="list-style-type: none"> <li>■ Separation due to death, illness, pregnancy, relocation, retirement, performance or discipline, cutbacks due to mergers, cyclical layoffs, permanent reductions in force</li> <li>■ Per diem, consultants, temporary, agency, non-salaried physicians, students in training</li> </ul>

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, MW REGION\*****LOGIT ESTIMATES:**

Number of obs = 4993 LR chi2(65) = 379.85 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.0820 Log likelihood = -2125.8077

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
deaddirg	10.60517	.978822	1.08	0.279	-8.579387 29.78973
agelt1	.0257042	.7243314	0.04	0.972	-1.393959 1.445368
age1_4	.1024038	.9237548	0.11	0.912	-1.708122 1.91293
age5_17	-1.543634	.8356606	-1.85	0.065	-3.181499 .0942309
age45_64	.280112	.2558986	1.09	0.274	-.2214401 .7816641
age65_74	.1452626	.3010137	0.48	0.629	-.4447134 .7352385
age75_84	.3761315	.3011335	1.25	0.212	-.2140793 .9663423
agegt85	.4167824	.3257098	1.28	0.201	-.2215971 1.055162
female	-.0828821	.112315	-0.74	0.461	-.3030154 .1372512
mcare	.8379613	.2096575	4.00	0.000	.4270401 1.248883
mcaid	.7330899	.2939045	2.49	0.013	.1570477 1.309132
selfpay	-.0622596	.4694048	-0.13	0.894	-.9822761 .857757
othpay	-.2744876	.9527953	-0.29	0.773	-2.141932 1.592957
govpay	1.445361	.6019974	2.40	0.016	.2654679 2.625254
cancer_p	.6076081	.6067672	1.00	0.317	-.5816338 1.79685
m_cancer	.6561176	.3303163	1.99	0.047	.0087095 1.303526
cad	-.5417273	.4732054	-1.14	0.252	-1.469193 .3857383
chf	.0836462	.2888599	0.29	0.772	-.4825089 .6498013
vascular	.8221159	.4601048	1.79	0.074	-.0796729 1.723905
liver	.767542	.5095234	1.51	0.132	-.2311055 1.76619
renal	.6528522	.4441605	1.47	0.142	-.2176864 1.523391
dementia	-1.086125	1.051707	-1.03	0.302	-3.147433 .9751831
function	.3241707	.5424553	0.60	0.550	-.739022 1.387363
diabetes	-.5645652	.5174085	-1.09	0.275	-1.578667 .4495367
pulmon	-.2579191	.2774322	-0.93	0.353	-.8016762 .285838
nutritio	.9357347	.29659	3.15	0.002	.354429 1.51704
emerg	.4462333	.1912925	2.33	0.020	.0713069 .8211597
mo	.0698692	.0824971	0.85	0.397	-.091822 .2315605
ra1844	-4.693275	3.902219	-1.20	0.229	-12.34148 2.954933
ra4564	-2.86424	3.799617	-0.75	0.451	-10.31135 4.582872
ra6574	1.995689	4.194037	0.48	0.634	-6.224474 10.21585
ra7584	2.435501	4.199199	0.58	0.562	-5.794777 10.66578
ragt85	3.847419	4.848246	0.79	0.427	-5.654969 13.34981
rsmal	-1.133019	1.256439	-0.90	0.367	-3.595594 1.329556

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, MW REGION\* (continued)****LOGIT ESTIMATES**

Number of obs = 4993 LR chi2(65) = 379.85 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.0820 Log likelihood = -2125.8077

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
rpmcare	-3.319749	9.252638	-0.36	0.720	-21.45459 14.81509
rpmcaid	-.8669506	9.373952	-0.09	0.926	-19.23956 17.50566
rppriva	1.118011	9.198041	0.12	0.903	-16.90982 19.14584
rpselfp	4.527918	9.905796	0.46	0.648	-14.88709 23.94292
rgovpay	-2.452914	10.26711	-0.24	0.811	-22.57609 17.67026
rccanp	-4.318246	4.991355	-0.87	0.387	-14.10112 5.46463
rccanm	2.090172	2.911739	0.72	0.473	-3.616731 7.797075
rccad	-4.427162	2.576548	-1.72	0.086	-9.477102 6.227785
rcchf	-.7792235	1.550397	-0.50	0.615	-3.817945 2.259498
rcvasc	-5.499877	2.797766	-1.97	0.049	-10.9834 -.0163561
rcliver	2.47812	4.522819	0.55	0.584	-6.386442 11.34268
rcrenal	-2.945421	3.515052	-0.84	0.402	-9.834796 3.943954
rcdeme	3.03088	3.906053	0.78	0.438	-4.624843 10.6866
rcfunc	-4.682774	3.210685	-1.46	0.145	-10.9756 1.610054
rcdiab	9.961319	4.865213	2.05	0.041	.4256769 19.49696
rcpulm	-1.520955	1.648836	-0.92	0.356	-4.752614 1.710704
rcnutri	-6.135825	1.991701	-3.08	0.002	-10.03949 -2.232163
remerg	-1.962268	1.293023	-1.52	0.129	-4.496546 .5720096
ccanp65	-.0194357	.6099377	-0.03	0.975	-1.214892 1.17602
ccanm65	-.3443091	.328584	-1.05	0.295	-.9883219 .2997037
ccad65	.606219	4.700936	1.29	0.197	-3.151475 1.527586
cchf65	.2942637	.2782987	1.06	0.290	-.2511918 .8397192
cvasc65	-.4213015	.4448789	-0.95	0.344	-1.293248 .450645
cliv65	-.3232738	.5599779	-0.58	0.564	-1.42081 .7742626
ren65	.4014375	.4411685	0.91	0.363	-.4632369 1.266112
cdem65	.536716	1.055263	0.51	0.611	-1.531562 2.604994
cfunc65	.2504556	.5646391	0.44	0.657	-.8562167 1.357128
cdiab65	.1995672	.5227106	0.38	0.703	-.8249267 1.224061
cpulm65	.3134712	.2752072	1.14	0.255	-.225925 .8528674
cnutri65	-.3150852	.2982252	-1.06	0.291	-.8995958 .2694253
emerg65	-.0090368	.1894563	-0.05	0.962	-.3803642 .3622906
_cons	-3.148174	.2595026	-12.13	0.000	-3.65679 -2.639559

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, EA REGION\*****LOGIT ESTIMATES:**

Number of obs = 7063 LR chi2(66) = 915.68 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.1256 Log likelihood = -3187.7727

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
deaddirg	5.197165	.2445349	2.13	0.034	.4043695 9.98996
agelt1	1.348675	.4645889	2.90	0.004	.4380974 2.259252
age1_4	-.3070654	.8354498	-0.37	0.713	-.1944517 1.330386
age5_17	-.3412416	.5277429	-0.65	0.518	-.1375599 .6931156
age45_64	.5242741	.2045233	2.56	0.010	.1234157 .9251325
age65_74	.5207053	.2413296	2.16	0.031	.047708 .9937027
age75_84	.8686256	.2451043	3.54	0.000	.38823 1.349021
agegt85	1.126256	.2599512	4.33	0.000	.6167612 1.635751
female	-.0140685	.0864482	-0.16	0.871	-.1835039 .1553669
mcare	.1727217	.15174	1.14	0.255	-.1246832 .4701267
mcaid	.1798518	.1858234	0.97	0.333	-.1843554 .5440591
selfpay	.2365317	.3022537	0.78	0.434	-.3558747 .8289381
othpay	-.5810461	.3357356	-1.73	0.084	-.1239076 .0769836
unkpay	-.3730547	.2054073	-1.82	0.069	-.7756457 .0295362
govpay	.1550515	.8069318	0.19	0.848	-.1426506 1.736609
cancer_p	.7013328	.4139954	1.69	0.090	-.1100833 1.512749
m_cancer	.4258919	.2273916	1.87	0.061	-.0197875 .8715713
cad	-.3683642	.3577694	-1.03	0.303	-.1069579 .332851
chf	.7660714	.1898078	4.04	0.000	.3940549 1.138088
vascular	.1257182	.4182595	0.30	0.764	-.6940553 .9454916
liver	1.37157	.3999519	3.43	0.001	.5876791 2.155462
renal	.9859003	.282138	3.49	0.000	.4329201 1.538881
dementia	-2.636146	1.139208	-2.31	0.021	-4.868952 -.403339
function	.5866873	.3117184	1.88	0.060	-.0242695 1.197644
diabetes	-.0892849	.3816809	-0.23	0.815	-.8373657 .6587959
pulmon	-.0568577	.2043143	-0.28	0.781	-.4573062 .3435909
nutritio	.0695748	.2963035	0.23	0.814	-.5111694 .650319
emerg	.3588939	.1395081	2.57	0.010	.085463 .6323248
ny	.775021	.1274421	6.08	0.000	.5252391 1.024803
ra1844	1.625551	2.395472	0.68	0.497	-.3069489 6.32059
ra4564	2.2744	2.297342	0.99	0.322	-2.228308 6.777108
ra6574	1.63555	2.375002	0.69	0.491	-.3019368 6.290468
ra7584	1.951858	2.411339	0.81	0.418	-2.77428 6.677995
ragt85	2.069761	2.54113	0.81	0.415	-2.910762 7.050285

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, EA REGION\* (continued)****LOGIT ESTIMATES:**

Number of obs = 7063 LR chi2(66) = 915.68 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.1256 Log likelihood = -3187.7727

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
rsmal	-.680412	.6806679	-1.00	0.317	-2.014497 .6536727
rpmcare	-1.217198	1.359183	-0.90	0.371	-3.881149 1.446752
rpmaid	-.2372839	1.487382	-0.16	0.873	-3.152499 2.677932
rpprivp	-.6812012	1.364535	-0.50	0.618	-3.355641 1.993239
rpselfp	.7423648	2.184124	0.34	0.734	-3.538439 5.023169
rgovpay	-.2457098	7.213942	-0.03	0.973	-14.38478 13.89336
rccanp	2.269562	2.836435	0.80	0.424	-3.289749 7.828872
rccanm	.3854396	1.479925	0.26	0.795	-2.51516 3.286039
rccad	1.015059	1.631568	0.62	0.534	-2.182756 4.212874
rcchf	-1.469334	.7948429	-1.85	0.065	-3.027198 .088529
rcvasc	2.368887	1.866019	1.27	0.204	-1.288443 6.026217
rcliver	-.9400092	3.213343	-0.29	0.770	-7.238045 5.358027
rcrenal	1.692382	1.644389	1.03	0.303	-1.530561 4.915324
rcdeme	5.257012	2.493407	2.11	0.035	.3700248 10.144
rcfunc	-2.5315	1.127014	-2.25	0.025	-4.740406 -.3225939
rcdiab	.6328954	2.609358	0.24	0.808	-4.481353 5.747143
rcpulg	-.0077628	.8950757	-0.01	0.993	-1.762079 1.746553
rcnutri	-3.404533	1.240129	-2.75	0.006	-5.835141 -.9739249
remerg	-.9884126	.7303708	-1.35	0.176	-2.419913 .4430879
ccanp65	-.1976347	.4334684	-0.46	0.648	-1.047217 .6519477
ccanm65	.0065438	.2385081	0.03	0.978	-4.609235 .4740112
ccad65	-.2892634	.3697854	-0.78	0.434	-1.014029 .4355027
cchf65	-.0106065	.1912423	-0.06	0.956	-3.854346 .3642216
cvasc65	.2287581	.4059629	0.56	0.573	-.5669145 1.024431
cliv65	-.1957261	.4379425	-0.45	0.655	-1.054078 .6626255
cren65	.1399601	.3072371	0.46	0.649	-.4622135 .7421338
cdem65	2.103853	1.111664	1.89	0.058	-.0749684 4.282675
cfunc65	-.1160486	.3111142	-0.37	0.709	-.7258211 .4937239
cdiab65	.000662	.407613	0.00	0.999	-.7982444 .7995691
cpulg65	.1672465	.2124529	0.79	0.431	-.2491534 .5836465
cnutr65	.606295	.3030352	2.00	0.045	.012357 1.200233
emerg65	.2095087	.147436	1.42	0.155	-.0794605 .498478
_cons	-3.757097	.2479678	-15.15	0.000	-4.243105 -3.271089

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, SE REGION\*****LOGIT ESTIMATES:**

Number of obs = 6544 LR chi2(68) = 570.90 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.0853 Log likelihood = -3061.5955

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
deaddirg	12.27573	4.372822	2.81	0.005	3.705155 20.8463
agelt1	.5939335	.4884623	1.22	0.224	-.363435 1.551302
age1_4	.3134513	.5397998	0.58	0.561	-.7445369 1.371439
age5_17	-.0672141	.439453	-0.15	0.878	-.9285261 .7940979
age45_64	.3207648	.1888037	1.70	0.089	-.0492836 .6908133
age65_74	.7134402	.2263348	3.15	0.002	.2698321 1.157048
age75_84	1.050219	.2308023	4.55	0.000	.5978549 1.502583
agegt85	1.264341	.253624	4.99	0.000	.7672468 1.761435
female	-.1139447	.0933508	-1.22	0.222	-.2969089 .0690195
mcare	.2409263	.1573017	1.53	0.126	-.0673793 .549232
mcaid	.1491392	.2168775	0.69	0.492	-.2759329 .5742113
selfpay	.2759632	.2946401	0.94	0.349	-.3015208 .8534472
othpay	-.6845967	.5238111	-1.31	0.191	-1.711248 .3420542
unkpay	-.085194	.2698014	-0.32	0.752	-.613995 .443607
govpay	.6681023	.4809372	1.39	0.165	-.2745173 1.610722
cancer_p	1.135064	.4414926	2.57	0.010	.2697543 2.000373
m_cancer	.3370649	.2781572	1.21	0.226	-.2081133 .882243
cad	-.1639441	.3539668	-0.46	0.643	-.8577063 .5298181
chf	.404985	.2164074	1.87	0.061	-.0191656 .8291357
vascular	-.0405782	.4217141	-0.10	0.923	-.8671226 .7859662
liver	1.504723	.4202836	3.58	0.000	.680982 2.328463
renal	1.038641	.2705369	3.84	0.000	.5083986 1.568884
dementia	-1.197377	1.047973	-1.14	0.253	-3.251366 .856612
function	-.1973536	.4681265	-0.42	0.673	-1.114865 .7201576
diabetes	.1537326	.3496779	0.44	0.660	-.5316235 .8390887
pulmon	-.1030663	.2088886	-0.49	0.622	-.5124805 .3063478
nutritio	.5135741	.2841712	1.81	0.071	-.0433912 1.070539
emerg	.3241251	.157166	2.06	0.039	.0160854 .6321648
wv	-.0814047	.125377	-0.65	0.516	-.3271391 .1643297
va	-.0224501	.0915028	-0.25	0.806	-.2017924 .1568921
sc	-.0266507	.1031646	-0.26	0.796	-.2288495 .1755481
ra1844	1.645078	2.407791	0.68	0.494	-3.074106 6.364261
ra4564	2.062052	2.317715	0.89	0.374	-2.480586 6.60469
ra6574	1.914358	2.438315	0.79	0.432	-2.86465 6.693367

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, SE REGION\* (continued)****LOGIT ESTIMATES:**

Number of obs = 6544 LR chi2(68) = 570.90 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.0853 Log likelihood = -3061.5955

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
ra7584	1.525149	2.488423	0.61	0.540	-3.35207 6.402367
ragt85	.2279492	2.84228	0.08	0.936	-5.342817 5.798715
rsfem	.8242686	.9619546	0.86	0.392	-1.061128 2.709665
rpmcare	-7.352637	4.024915	-1.83	0.068	-15.24132 .5360519
rpmcaid	-7.205862	4.165384	-1.73	0.084	-15.36987 .9581408
rppriva	-6.580357	3.875781	-1.70	0.090	-14.17675 1.016034
rpselfp	-5.756945	4.431939	-1.30	0.194	-14.44339 2.929497
rgovpay	-14.27492	6.551409	-2.18	0.029	-27.11544 -1.434391
rccanp	-.7575503	3.628269	-0.21	0.835	-7.868827 6.353727
rccanm	-.1839209	2.580281	-0.07	0.943	-5.24118 4.873338
rccad	2.160822	2.248141	0.96	0.336	-2.245453 6.567097
rcchf	-.9100538	1.254009	-0.73	0.468	-3.367867 1.547759
rcvasc	-2.259938	2.342218	-0.96	0.335	-6.8506 2.330725
rcliver	.296561	3.958038	0.07	0.940	-7.461051 8.054173
rcrenal	-2.109648	2.180749	-0.97	0.333	-6.383838 2.164542
rcdeme	-1.107861	3.218523	-0.34	0.731	-7.416051 5.200329
rcfunc	-.8945558	2.352832	-0.38	0.704	-5.506021 3.71691
rcdiab	3.579787	2.980797	1.20	0.230	-2.262467 9.422041
rcpulm	-.8998367	1.231991	-0.73	0.465	-3.314495 1.514822
rcnutri	-1.564262	2.009016	-0.78	0.436	-5.501861 2.373338
remerg	-1.920655	1.093686	-1.76	0.079	-4.064241 .2229301
ccanp65	-.4782059	.4148036	-1.15	0.249	-1.291206 .3347942
ccanm65	-.1854858	.2890896	-0.64	0.521	-.7520911 .3811195
ccad65	-.2860806	.3653974	-0.78	0.434	-1.002246 .4300852
cchf65	-.0362276	.2066302	-0.18	0.861	-.4412154 .3687602
cvasc65	.4429129	.4142057	1.07	0.285	-.3689153 1.254741
cliv65	-.1999506	.4432473	-0.45	0.652	-1.068699 .6687982
cren65	-.0319692	.2841051	-0.11	0.910	-.5888049 .5248665
cdem65	.2809836	1.060265	0.27	0.791	-1.797098 2.359066
cfunc65	-.1891119	.444816	-0.43	0.671	-1.060942 .6827044
cdiab65	-.8235154	.3831957	-2.15	0.032	-1.574565 -.0724656
cpulm65	.2096419	.2048049	1.02	0.306	-.1917683 .6110521
cnutr65	-.2579309	.275149	-0.94	0.349	-.797213 .2813511
emerg65	.1422053	.1497276	0.95	0.342	-.1512554 .4356661
_cons	-2.798581	.1898639	-14.74	0.000	-3.170708 -2.426455

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, WS REGION\*****LOGIT ESTIMATES:**

Number of obs = 14110 LR chi2(68) = 1084.57 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.0737 Log likelihood = -6818.021

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
deaddirg	4.67451	4.589902	1.02	0.308	-4.321533 13.67055
agelt1	.0443716	.3031801	0.15	0.884	-.5498504 .6385936
age1_4	-.0506288	.3832706	-0.13	0.895	-.8018254 .7005678
age5_17	-.898651	.340062	-2.64	0.008	-1.56516 -.2321417
age45_64	.4913978	.1287731	3.82	0.000	.2390073 .7437884
age65_74	.8093096	.1584861	5.11	0.000	.4986826 1.119937
age75_84	.9957691	.159378	6.25	0.000	.6833939 1.308144
agegt85	1.118165	1768313	6.32	0.000	.7715821 1.464748
female	-.0937953	.0612497	-1.53	0.126	-.2138425 .0262519
mcare	.0876353	.0888736	0.99	0.324	-.0865537 .2618243
mcaid	.3035434	.1168835	2.60	0.009	.0744559 .5326308
selfpay	.2393047	.2138048	1.12	0.263	-.1797451 .6583544
othpay	-.0712962	.5383707	-0.13	0.895	-1.126483 .983891
unkpay	.2781851	1.263936	0.22	0.826	-2.199084 2.755454
govpay	-.236639	.2564817	-0.92	0.356	-.7393339 .2660559
cancer_p	.8385326	.3380398	2.48	0.013	.1759868 1.501078
m_cancer	.4188278	.1832992	2.28	0.022	.0595681 .7780876
aids	2.326485	.8856465	2.63	0.009	.5906495 4.06232
cad	.048697	.2206404	0.22	0.825	-.3837502 .4811442
chf	.8385751	.1312719	6.39	0.000	.5812868 1.095863
vascular	-.0892648	2769633	-0.32	0.747	-.6321028 .4535733
liver	1.176533	.2423655	4.85	0.000	.7015051 1.65156
renal	.514317	.2022507	2.54	0.011	.1179129 .9107211
dementia	-.4035866	.3815273	-1.06	0.290	-1.151366 .3441932
function	.2665469	.227077	1.17	0.240	-.1785158 .7116096
diabetes	-.0878176	.2237497	-0.39	0.695	-.526359 .3507237
pulmon	.1237733	.1294316	0.96	0.339	-.1299079 .3774546
nutritio	-.163878	.1963435	-0.83	0.404	-.5487042 .2209482
emerg	.5888212	.0979842	6.01	0.000	.3967757 .7808666
nv	-.1654503	.0842016	-1.96	0.049	-.3304824 -.0004182
az	-.1424548	.067363	-2.11	0.034	-.2744838 -.0104258
ra1844	-.5626443	1.976153	-0.28	0.776	-4.435833 3.310544
ra4564	.9714942	1.958791	0.50	0.620	-2.867666 4.810654
ra6574	1.554641	2.089376	0.74	0.457	-2.54046 5.649742

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 1 – Adjustment Models for Failure to Rescue (Surgical Pool)****FAILURE, MAJOR SURGERY POOL, WS REGION\* (continued)****LOGIT ESTIMATES:**

Number of obs = 14110 LR chi2(68) = 1084.57 Prob &gt; chi2 = 0.0000 Pseudo R2 = 0.0737 Log likelihood = -6818.021

<b>nfailmaj</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
ra7584	.7147486	2.09915	0.34	0.733	-3.39951 4.829007
ragt85	4.938536	2.425669	2.04	0.042	.1843124 9.692759
rsfem	1.410577	.6464898	2.18	0.029	.1434805 2.677674
rpmcare	2.048773	4.212651	0.49	0.627	-6.207871 10.30542
rpmcaid	.6708424	4.247343	0.16	0.875	-7.653796 8.995481
rppriva	.3533527	4.193201	0.08	0.933	-7.865169 8.571875
rpselfp	.8764345	4.442729	0.20	0.844	-7.831155 9.584024
rgovpay	1.521155	4.562344	0.33	0.739	-7.420874 10.46318
rccanp	-7.268976	2.521313	-2.88	0.004	-12.21066 -2.327292
rccanm	-.5713954	1.714222	-0.33	0.739	-3.931208 2.788417
rccad	-.7577314	1.484615	-0.51	0.610	-3.667523 2.15206
rcchf	-4.157619	.8406797	-4.95	0.000	-5.805321 -2.509917
rcvasc	-1.219719	1.637641	-0.74	0.456	-4.429436 1.989999
rcliver	-1.794866	2.241764	-0.80	0.423	-6.188642 2.598911
rcrenal	2.647041	1.658154	1.60	0.110	-.6028803 5.896963
rcdeme	-3.131036	2.024562	-1.55	0.122	-7.099104 .8370321
rcfunc	-2.472459	1.561157	-1.58	0.113	-5.532269 .5873522
rcdiab	.5042041	2.010371	0.25	0.802	-3.436051 4.44446
rcpulm	-.6880402	.7876462	-0.87	0.382	-2.231798 .8557181
rcnutri	-2.564538	1.10449	-2.32	0.020	-4.729298 -.3997779
remerg	-1.311626	.7391401	-1.77	0.076	-2.760314 .1370619
ccanp65	.0708786	.3442961	0.21	0.837	-.6039293 .7456866
ccanm65	-.1639307	.1833735	-0.89	0.371	-.523336 .1954747
ccad65	-.1492113	.2202692	-0.68	0.498	-.5809311 .2825084
cchf65	-.2633795	.1301252	-2.02	0.043	-.5184202 -.0083388
cvasc65	.3418326	.2693307	1.27	0.204	-.1860459 .8697111
cliv65	.0056079	.2433056	0.02	0.982	-.4712623 .4824782
cren65	.1685926	.2048967	0.82	0.411	-.2329976 .5701828
cdem65	.0953041	.3791931	0.25	0.802	-.6479006 .8385089
cfunc65	-.2716323	.2336044	-1.16	0.245	-.7294885 .1862238
cdiab65	.1274753	.2390174	0.53	0.594	-.3409903 .5959408
cpulm65	-.0092073	.1288086	-0.07	0.943	-.2616676 .2432529
cnutr65	.6583508	.1899768	3.47	0.001	.2860031 1.030699
emerg65	-.2341855	.1024308	-2.29	0.022	-.4349462 -.0334247
_cons	-2.880359	.1407151	-20.47	0.000	-3.156155 -2.604562

Source: Needleman J. UCLA School of Public Health, Los Angeles, CA. By e-mail, December 6, 2003, and December 12, 2003.

\* Regions:

Midwestern (MW) region — Wisconsin and Missouri

Eastern (EA) region — New York and Massachusetts

Southeastern (SE) region — Maryland, Virginia, West Virginia, and South Carolina

Western (WS) region — Nevada, Arizona, and California

**Table 2 – Major Surgical Risk Pools for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)” (Diagnostic Related Groups)**

<b>Major Surgical Risk Pool</b>	001-004, 005, 049, 075, 103-108, 110-111, 113-114, 146-151, 154-156, 159-160, 164-167, 191-200, 209-215, 218-219, 220, 221-222, 226-227, 230-231, 257-261, 263-266, 285-290, 302-307, 310-311, 334-337, 353-359, 392-393, 400-402, 406-407, 415, 439-440, 458-459, 468, 471-472, 476, 480-486, 488, 491, 493-504, 506-507, 512-515
---------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Sources: Needleman J, Buerhaus PI, Mattke S, Stewart M, Zelevinsky K. *Nurse Staffing and Patient Outcomes in Hospitals*. HRSA Report No. 230-99-0021; February 28, 2001; and Needleman J, University of California and Stewart M, Brandeis University, personal communication, September 5, 2004.

**Table 3 – Exclusion Codes for Complications of Care for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)”**

<b>COMPLICATION</b>	<b>EXCLUSIONS</b>
<b>Sepsis</b>	Discharges with an ICD-9-CM diagnosis code of sepsis in the principal diagnosis field; discharges with a DRG of infection (DRGs 020, 068, 069, 070, 079, 080, 081, 089, 090, 091, 126, 238, 242, 277, 278, 279, 302, 320, 321, 322, 350, 368, 416, 417, 418, 423); discharges with an ICD-9-CM diagnosis code of immunocompromised state (ICD-9-CM codes 042, 136.3, 279.00, 279.01, 279.02, 279.03, 279.04, 279.05, 279.06, 279.09, 279.10, 279.11, 279.12, 279.13, 279.19, 279.2, 279.3, 279.4, 279.8, 279.9, 795.71, V01.8, V01.81, V01.82, V01.83, V01.84, V01.89, V42.0, V42.1, V42.2, V42.3, V42.4, V42.5, V42.6, V42.7, V42.8, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9) in any diagnosis field; discharges with a length-of-stay (LOS) less than 3 days
<b>Pneumonia</b>	Discharges with an ICD-9-CM diagnosis code of pneumonia in the principal diagnosis field; discharges with an ICD-9-CM diagnosis code of viral pneumonia (ICD-9-CM codes 480.0, 480.1, 480.2, 480.8, 480.9, 481, 483, 483.0, 483.1, 483.8, 484.1, 484.3, 484.5, 484.6, 484.7, 484.8, 487.0, 487.1, 487.8) in any diagnosis field; discharges with an immunocompromised state DRG code (DRGs 103, 302, 480, 481, 488, 489, 490, 495, 512, 513); discharges with an ICD-9-CM diagnosis code of an immunocompromised state (ICD-9-CM codes 042, 136.3, 279.00, 279.01, 279.02, 279.03, 279.04, 279.05, 279.06, 279.09, 279.10, 279.11, 279.12, 279.13, 279.19, 279.2, 279.3, 279.4, 279.8, 279.9, 795.71, V01.8, V01.81, V01.82, V01.83, V01.84, V01.89, V42.0, V42.1, V42.2, V42.3, V42.4, V42.5, V42.6, V42.7, V42.8, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9) in any diagnosis field; discharges with an MDC code of 4 (diseases & disorders of the respiratory system)
<b>GI Bleeding</b>	Discharges with an ICD-9-CM diagnosis code of GI hemorrhage or acute ulcer in the principal diagnosis field; discharges with an ICD-9-CM diagnosis code of anemia (ICD-9-CD codes 280.0, 285.1) or trauma (ICD-9-CM codes 800.00, 800.01, 800.02, 800.03, 800.04, 800.05, 800.06, 800.09, 800.10, 800.11, 800.12, 00.13, 800.14, 800.15, 800.16, 800.19, 800.20, 800.21, 800.22, 800.23, 800.24, 800.25, 800.26, 800.29, 800.30, 800.31, 800.32, 800.33, 800.34, 800.35, 800.36, 800.39, 800.40, 800.41, 800.42, 800.43, 800.44, 800.45, 800.46, 800.49, 800.50, 800.51, 800.52, 800.53, 800.54, 800.55, 800.56, 800.59, 800.60, 800.61, 800.62, 800.63, 800.64, 800.65, 800.66, 800.69, 800.70, 800.71, 800.72, 800.73, 800.74, 800.75, 800.76, 800.79, 800.80, 800.81, 800.82, 800.83, 800.84, 800.85, 800.86, 800.89, 800.90, 800.91, 800.92, 800.93, 800.94, 800.95, 800.96, 800.99, 801.00, 801.01, 801.02, 801.03, 801.04, 801.05, 801.06, 801.09, 801.10, 801.11, 801.12, 801.13, 801.14, 801.15, 801.16, 801.17, 801.19, 801.20, 801.21, 801.22, 801.23, 801.24, 801.25, 801.26, 801.29, 801.30, 801.31, 801.32, 801.33, 801.34, 801.35, 801.36, 801.39, 801.40, 801.41, 801.42, 801.43, 801.44, 801.45, 801.46, 801.47, 801.49, 801.50, 801.51, 801.52, 801.53, 801.54, 801.55, 801.56, 801.59, 801.60, 801.61, 801.62, 801.63, 801.64, 801.65, 801.66, 801.69, 801.70, 801.71, 801.72, 801.73, 801.74, 801.75, 801.76, 801.79, 801.80, 801.81, 801.82, 801.83, 801.84, 801.85, 801.86, 801.89, 801.90, 801.91, 801.92, 801.93, 801.94, 801.95, 801.96, 801.99, 802.0, 802.1, 802.20, 802.21, 802.22, 802.23, 802.24, 802.25, 802.26, 802.27, 802.28, 802.29, 802.30, 802.31, 802.32, 802.33, 802.34, 802.35, 802.36, 802.37, 802.38, 802.39, 802.4, 802.5, 802.6, 802.7, 802.8, 802.9, 803.00, 803.01, 803.02, 803.03, 803.04, 803.05, 803.06, 803.09, 803.10, 803.11, 803.12, 803.13, 803.14, 803.15, 803.16, 803.19, 803.20, 803.21, 803.22, 803.23, 803.24, 803.25, 803.26, 803.29, 803.30, 803.31, 803.32, 803.33, 803.34, 803.35, 803.36, 803.39, 803.40, 803.41, 803.42, 803.43, 803.44, 803.45, 803.46, 803.49, 803.50, 803.51, 803.52, 803.53, 803.54, 803.55, 803.56, 803.59, 803.60, 803.61, 803.62, 803.63, 803.64, 803.65, 803.66, 803.69, 803.70, 803.71, 803.72, 803.73, 803.74, 803.75, 803.76, 803.79, 803.80, 803.81, 803.82, 803.83, 803.84, 803.85, 803.86, 803.89, 803.90, 803.91, 803.92, 803.93, 803.94, 803.95, 803.96, 803.99, 804.00, 804.01, 804.02, 804.03, 804.04, 804.05, 804.06, 804.09, 804.10, 804.11, 804.12, 804.13, 804.14, 804.15, 804.16, 804.19, 804.20, 804.21, 804.22, 804.23, 804.24, 804.25, 804.26, 804.29, 804.30, 804.31, 804.32, 804.33, 804.34, 804.35, 804.36, 804.39, 804.40, 804.41)

**Table 3 – Exclusion Codes for Complications of Care for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)” (continued)**

COMPLICATION	EXCLUSIONS
<b>GI Bleeding</b> <i>continued</i>	804.42, 804.43, 804.44, 804.45, 804.46, 804.49, 804.50, 804.51, 804.52, 804.53, 804.54, 804.55, 804.56, 804.59, 804.60, 804.61, 804.62, 804.63, 804.64, 804.65, 804.66, 804.69, 804.70, 804.71, 804.72, 804.73, 804.74, 804.75, 804.76, 804.79, 804.80, 804.81, 804.82, 804.83, 804.84, 804.85, 804.86, 804.89, 804.90, 804.91, 804.92, 804.93, 804.94, 804.95, 804.96, 804.99, 805.00, 805.01, 805.02, 805.03, 805.04, 805.05, 805.06, 805.07, 805.08, 805.10, 805.11, 805.12, 805.13, 805.14, 805.15, 805.16, 805.17, 805.18, 805.2, 805.3, 805.4, 805.5, 805.6, 805.7, 805.8, 805.9, 806.00, 806.01, 806.02, 806.03, 806.04, 806.05, 806.06, 806.07, 806.08, 806.09, 806.10, 806.11, 806.12, 806.13, 806.14, 806.15, 806.16, 806.17, 806.18, 806.19, 806.20, 806.21, 806.22, 806.23, 806.24, 806.25, 806.26, 806.27, 806.28, 806.29, 806.30, 806.31, 806.32, 806.33, 806.34, 806.35, 806.36, 806.37, 806.38, 806.39, 806.4, 806.5, 806.60, 806.61, 806.62, 806.69, 806.70, 806.71, 806.72, 806.79, 806.8, 806.9, 807.00, 807.01, 807.02, 807.03, 807.04, 807.05, 807.06, 807.07, 807.08, 807.09, 807.10, 807.11, 807.12, 807.13, 807.14, 807.15, 807.16, 807.17, 807.18, 807.19, 807.2, 807.3, 807.4, 807.5, 807.6, 808.0, 808.1, 808.2, 808.3, 808.41, 808.42, 808.43, 808.49, 808.51, 808.52, 808.53, 808.59, 808.8, 808.9, 809.0, 809.1, 810.00, 810.01, 810.02, 8100.3, 810.10, 810.11, 810.12, 810.13, 811.00, 811.01, 811.02, 811.03, 811.09, 811.10, 811.11, 811.12, 811.13, 811.19, 812.00, 812.01, 812.02, 812.03, 812.09, 812.10, 812.11, 812.12, 812.13, 812.19, 812.20, 812.21, 812.30, 812.31, 812.40, 812.41, 812.42, 812.43, 812.44, 812.49, 812.50, 812.51, 812.52, 812.53, 812.54, 812.59, 813.00, 813.01, 813.02, 813.03, 813.04, 813.05, 813.06, 813.07, 813.08, 813.10, 813.11, 813.12, 813.13, 813.14, 813.15, 813.16, 813.17, 813.18, 813.20, 813.21, 813.22, 813.23, 813.30, 813.31, 813.32, 813.33, 813.40, 813.41, 813.42, 813.43, 813.44, 813.45, 813.50, 813.51, 813.52, 813.53, 813.54, 813.80, 813.81, 813.82, 813.83, 813.90, 813.91, 813.92, 813.93, 814.00, 814.01, 814.02, 814.03, 814.04, 814.05, 814.06, 814.07, 814.08, 814.09, 814.10, 814.11, 814.12, 814.13, 814.14, 814.15, 814.16, 814.17, 814.18, 814.19, 815.00, 815.01, 815.02, 815.03, 815.04, 815.09, 815.10, 815.11, 815.12, 815.13, 815.14, 815.19, 817.0, 817.1, 818.0, 818.1, 819.0, 819.1, 820.00, 820.01, 820.02, 820.03, 820.09, 820.10, 820.11, 820.12, 820.13, 820.19, 820.20, 820.21, 820.22, 820.30, 820.31, 820.32, 820.8, 820.9, 821.00, 821.01, 821.10, 821.11, 821.20, 821.21, 821.22, 821.23, 821.29, 821.30, 821.31, 821.32, 821.33, 821.39, 822.0, 822.1, 823.00, 823.01, 823.02, 823.10, 823.11, 823.12, 823.20, 823.21, 823.22, 823.30, 823.31, 823.32, 823.4, 823.40, 823.41, 823.42, 823.80, 823.81, 823.82, 823.90, 823.91, 823.92, 824.0, 824.1, 824.2, 824.3, 824.4, 824.5, 824.6, 824.7, 824.8, 824.9, 825.0, 825.1, 825.20, 825.21, 825.22, 825.23, 825.24, 825.25, 825.29, 825.30, 825.31, 825.32, 825.33, 825.34, 825.35, 825.39, 827.0, 827.1, 828.0, 828.1, 829.0, 829.1, 830.0, 830.1, 831.00, 831.01, 831.02, 831.03, 831.04, 831.09, 831.10, 831.11, 831.12, 831.13, 831.14, 831.19, 832.00, 832.01, 832.02, 832.03, 832.04, 832.09, 832.10, 832.11, 832.12, 832.13, 832.14, 832.19, 833.00, 833.01, 833.02, 833.03, 833.04, 833.05, 833.09, 833.10, 833.11, 833.12, 833.13, 833.14, 833.15, 833.19, 835.00, 835.01, 835.02, 835.03, 835.10, 835.11, 835.12, 835.13, 836.0, 836.1, 836.2, 836.3, 836.4, 836.50, 836.51, 836.52, 836.53, 836.54, 836.59, 836.60, 836.61, 836.62, 836.63, 836.64, 836.69, 837.0, 837.1, 838.00, 838.01, 838.02, 838.03, 838.04, 838.05, 838.06, 838.09, 838.10, 838.11, 838.12, 838.13, 838.14, 838.15, 838.16, 838.19, 839.00, 839.01, 839.02, 839.03, 839.04, 839.05, 839.06, 839.07, 839.08, 839.10, 839.11, 839.12, 839.13, 839.14, 839.15, 839.16, 839.17, 839.18, 839.20, 839.21, 839.30, 839.31, 839.40, 839.41, 839.42, 839.49, 839.50, 839.51, 839.52, 839.59, 839.61, 839.69, 839.71, 839.79, 839.8, 839.9, 850.0, 850.1, 850.2, 850.3, 850.4, 850.5, 850.9, 851.00, 851.01, 851.02, 851.03, 851.04, 851.05, 851.06, 851.09, 851.10, 851.11, 851.12, 851.13, 851.14, 851.15, 851.16, 851.19, 851.20, 851.21, 851.22, 851.23, 851.24, 851.25, 851.26, 851.29, 851.30, 851.31, 851.32, 851.33, 851.34, 851.35, 851.36, 851.39, 851.40, 851.41, 851.42, 851.43, 851.44, 851.45, 851.46, 851.47, 851.49, 851.50, 851.51, 851.52, 851.53, 851.54, 851.55, 851.56, 851.59, 851.60, 851.61, 851.62, 851.63, 851.64, 851.65, 851.66, 851.69, 851.70, 851.71, 851.72, 851.73, 851.74, 851.75, 851.76, 851.79, 851.80, 851.81, 851.82, 851.83, 851.84, 851.85, 851.86, 851.89, 851.90, 851.91, 851.92, 851.93, 851.94, 851.95, 851.96, 851.99, 852.00, 852.01, 852.02, 852.03, 852.04, 852.05, 852.06, 852.09, 852.10, 852.11, 852.12, 852.13, 852.14, 852.15, 852.16, 852.19, 852.20, 852.21, 852.22, 852.23, 852.24, 852.25, 852.26, 852.29, 852.30, 852.31, 852.32, 852.33, 852.34, 852.35, 852.36, 852.39, 852.40, 852.41, 852.42, 852.43, 852.44, 852.45, 852.46, 852.49, 852.50, 852.51, 852.52, 852.53, 852.54, 852.55, 852.56, 852.59, 853.00, 853.01, 853.02, 853.03, 853.04, 853.05, 853.06, 853.09, 853.10, 853.11, 853.12, 853.13, 853.14, 853.15, 853.16, 853.19, 854.00, 854.01, 854.02, 854.03, 854.04, 854.05, 854.06, 854.09, 854.10, 854.11, 854.12, 854.13, 854.14, 854.15, 854.16, 854.19, 860.0, 860.1, 860.2, 860.3, 860.4, 860.5, 861.00, 861.01, 861.02, 861.03, 861.10, 861.11, 861.12, 861.13, 861.20, 861.21, 861.22, 861.30, 861.31, 861.32, 862.0, 862.1, 862.21, 862.22, 862.29, 862.31, 862.32, 862.39, 862.8, 862.9, 863.0, 863.1, 863.20, 863.21, 863.29, 863.30, 863.31, 863.39, 863.40, 863.41, 863.42, 863.43, 863.44, 863.45, 863.46, 863.49, 863.50, 863.51, 863.52, 863.53, 863.54, 863.55, 863.56, 863.59, 863.80, 863.81, 863.82, 863.83, 863.84, 863.85, 863.89, 863.90, 863.91, 863.92, 863.93, 863.94, 863.95, 863.99, 864.00, 864.01, 864.02, 864.03, 864.04, 864.05, 864.09, 864.10, 864.11, 864.12, 864.13, 864.14, 864.15, 864.19, 865.00, 865.01, 865.02, 865.03, 865.04, 865.09, 865.10, 865.11, 865.12, 865.13, 865.14,

**Table 3 – Exclusion Codes for Complications of Care for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)” (continued)**

COMPLICATION	EXCLUSIONS
<b>GI Bleeding</b> <i>continued</i>	865.19, 866.00, 866.01, 866.02, 866.03, 866.10, 866.11, 866.12, 866.13, 867.0, 867.1, 867.2, 867.3, 867.4, 867.5, 867.6, 867.7, 867.8, 867.9, 868.00, 868.01, 868.02, 868.03, 868.04, 868.09, 868.10, 868.11, 868.12, 868.13, 868.14, 868.19, 869.0, 869.1, 870.0, 870.1, 870.2, 870.3, 870.4, 870.8, 870.9, 871.0, 871.1, 871.2, 871.3, 871.4, 871.5, 871.6, 871.7, 871.9, 872.00, 872.01, 872.02, 872.10, 872.11, 872.12, 872.61, 872.62, 872.63, 872.64, 872.69, 872.71, 872.72, 872.73, 872.74, 872.79, 872.8, 872.9, 873.0, 873.1, 873.20, 873.21, 873.22, 873.23, 873.29, 873.30, 873.31, 873.32, 873.33, 873.39, 873.40, 873.41, 873.42, 873.43, 873.44, 873.49, 873.50, 873.51, 873.52, 873.53, 873.54, 873.59, 873.60, 873.61, 873.62, 873.63, 873.64, 873.65, 873.69, 873.70, 873.71, 873.72, 873.73, 873.74, 873.75, 873.79, 873.8, 873.9, 874.00, 874.01, 874.02, 874.10, 874.11, 874.12, 874.2, 874.3, 874.4, 874.5, 874.8, 874.9, 875.0, 875.1, 876.0, 876.1, 877.0, 877.1, 878.0, 878.1, 878.2, 878.3, 878.4, 878.5, 878.6, 878.7, 878.8, 878.9, 879.0, 879.1, 879.2, 879.3, 879.4, 879.5, 879.6, 879.7, 879.8, 879.9, 880.00, 880.01, 880.02, 880.03, 880.09, 880.10, 880.11, 880.12, 880.13, 880.19, 880.20, 880.21, 880.22, 880.23, 880.29, 881.00, 881.01, 881.02, 881.10, 881.11, 881.12, 881.20, 881.21, 881.22, 882.0, 882.1, 882.2, 884.0, 884.1, 884.2, 887.0, 887.1, 887.2, 887.3, 887.4, 887.5, 887.6, 887.7, 890.0, 890.1, 890.2, 891.0, 891.1, 891.2, 892.0, 892.1, 892.2, 894.0, 894.1, 894.2, 896.0, 896.1, 896.2, 896.3, 897.0, 897.1, 897.2, 897.3, 897.4, 897.5, 897.6, 897.7, 900.00, 900.01, 900.02, 900.03, 900.1, 900.81, 900.82, 900.89, 900.9, 901.0, 901.1, 901.2, 901.3, 901.40, 901.41, 901.42, 901.81, 901.82, 901.83, 901.89, 901.9, 902.0, 902.10, 902.11, 902.19, 902.20, 902.21, 902.22, 902.23, 902.24, 902.25, 902.26, 902.27, 902.29, 902.31, 902.32, 902.33, 902.34, 902.39, 902.40, 902.41, 902.42, 902.49, 902.50, 902.51, 902.52, 902.53, 902.54, 902.55, 902.56, 902.59, 902.81, 902.82, 902.87, 902.89, 902.9, 903.00, 903.01, 903.02, 903.1, 903.2, 903.3, 903.4, 903.5, 903.8, 903.9, 904.0, 904.1, 904.2, 904.3, 904.40, 904.41, 904.42, 904.50, 904.51, 904.52, 904.53, 904.54, 904.56, 904.6, 904.7, 904.8, 904.9, 925.1, 925.2, 926.0, 926.11, 926.12, 926.19, 926.8, 926.9, 927.00, 927.01, 927.02, 927.03, 927.09, 927.10, 927.11, 927.20, 927.21, 927.3, 927.8, 927.9, 928.00, 928.01, 928.10, 928.11, 928.20, 928.21, 928.3, 928.8, 928.9, 929.0, 929.9, 940.0, 940.1, 940.2, 940.3, 940.4, 940.5, 940.9, 941.00, 941.01, 941.02, 941.03, 941.04, 941.05, 941.06, 941.07, 941.08, 941.09, 941.10, 941.11, 941.12, 941.13, 941.14, 941.15, 941.16, 941.17, 941.18, 941.19, 941.20, 941.21, 941.22, 941.23, 941.24, 941.25, 941.26, 941.27, 941.28, 941.29, 941.30, 941.31, 941.32, 941.33, 941.34, 941.35, 941.36, 941.37, 941.38, 941.39, 941.40, 941.41, 941.42, 941.43, 941.44, 941.45, 941.46, 941.47, 941.48, 941.49, 941.50, 941.51, 941.52, 941.53, 941.54, 941.55, 941.56, 941.57, 941.58, 941.59, 942.00, 942.01, 942.02, 942.03, 942.04, 942.05, 942.09, 942.10, 942.11, 942.12, 942.13, 942.14, 942.15, 942.19, 942.20, 942.21, 942.22, 942.23, 942.24, 942.25, 942.29, 942.30, 942.31, 942.32, 942.33, 942.34, 942.35, 942.39, 942.40, 942.41, 942.42, 942.43, 942.44, 942.45, 942.49, 942.50, 942.51, 942.52, 942.53, 942.54, 942.55, 942.59, 943.00, 943.01, 943.02, 943.03, 943.04, 943.05, 943.06, 943.09, 943.10, 943.11, 943.12, 943.13, 943.14, 943.15, 943.16, 943.19, 943.20, 943.21, 943.22, 943.23, 943.24, 943.25, 943.26, 943.29, 943.30, 943.31, 943.32, 943.33, 943.34, 943.35, 943.36, 943.39, 943.40, 943.41, 943.42, 943.43, 943.44, 943.45, 943.46, 943.49, 943.50, 943.51, 943.52, 943.53, 943.54, 943.55, 943.56, 943.59, 944.00, 944.01, 944.02, 944.03, 944.04, 944.05, 944.06, 944.07, 944.08, 944.10, 944.11, 944.12, 944.13, 944.14, 944.15, 944.16, 944.17, 944.18, 944.20, 944.21, 944.22, 944.23, 944.24, 944.25, 944.26, 944.27, 944.28, 944.30, 944.31, 944.32, 944.33, 944.34, 944.35, 944.36, 944.37, 944.38, 944.40, 944.41, 944.42, 944.43, 944.44, 944.45, 944.46, 944.47, 944.48, 944.50, 944.51, 944.52, 944.53, 944.54, 944.55, 944.56, 944.57, 944.58, 945.00, 945.01, 945.02, 945.03, 945.04, 945.05, 945.06, 945.09, 945.10, 945.11, 945.12, 945.13, 945.14, 945.15, 945.16, 945.19, 945.20, 945.21, 945.22, 945.23, 945.24, 945.25, 945.26, 945.29, 945.30, 945.31, 945.32, 945.33, 945.34, 945.35, 945.36, 945.39, 945.40, 945.41, 945.42, 945.43, 945.44, 945.45, 945.46, 945.49, 945.50, 945.51, 945.52, 945.53, 945.54, 945.55, 945.56, 945.59, 946.0, 946.1, 946.2, 946.3, 946.4, 946.5, 947.0, 947.1, 947.2, 947.3, 947.4, 947.8, 947.9, 948.00, 948.10, 948.11, 948.20, 948.21, 948.22, 948.30, 948.31, 948.32, 948.33, 948.40, 948.41, 948.42, 948.43, 948.44, 948.50, 948.51, 948.52, 948.53, 948.54, 948.55, 948.60, 948.61, 948.62, 948.63, 948.64, 948.65, 948.66, 948.70, 948.71, 948.72, 948.73, 948.74, 948.75, 948.76, 948.77, 948.80, 948.81, 948.82, 948.83, 948.84, 948.85, 948.86, 948.87, 948.88, 948.90, 948.91, 948.92, 948.93, 948.94, 948.95, 948.96, 948.97, 948.98, 948.99, 949.0, 949.1, 949.2, 949.3, 949.4, 949.5, 952.00, 952.01, 952.02, 952.03, 952.04, 952.05, 952.06, 952.07, 952.08, 952.09, 952.10, 952.11, 952.12, 952.13, 952.14, 952.15, 952.16, 952.17, 952.18, 952.19, 952.2, 952.3, 952.4, 952.8, 952.9, 953.0, 953.1, 953.2, 953.3, 953.4, 953.5, 953.8, 953.9, 958.0, 958.1, 958.2, 958.3, 958.4, 958.5, 958.6, 958.7, 958.8) in the principal diagnosis field; discharges with a DRG code of trauma (DRGs 002, 027, 028, 029, 031, 032, 072, 083, 084, 235, 236, 237, 440, 441, 442, 443, 444, 445, 456, 457, 458, 459, 460, 484, 485, 486, 487, 491, 504, 505, 506, 507, 508, 509, 510, 511); discharges with an MDC code of 6 (diseases & disorders of the digestive system) or MDC code of 7 (diseases & disorders of the hepatobiliary system & pancreas) or MDC code of 20 (alcohol or drug use) or MDC code of 22 (burns)

**Table 3 – Exclusion Codes for Complications of Care for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)” (continued)**

COMPLICATION	EXCLUSIONS
Shock/cardiac arrest	Discharges with an ICD-9-CM diagnosis code of shock or cardiac arrest in the principal diagnosis field; discharges with an ICD-9-CM diagnosis code of hemorrhage (ICD-9-CM code 459.0), GI hemorrhage (ICD-9-CM codes 456.0, 456.20, 530.7, 531.00, 531.01, 531.20, 531.21, 531.40, 531.41, 531.60, 531.61, 532.00, 532.01, 532.20, 532.21, 532.40, 532.41, 532.60, 532.61, 533.00, 533.01, 533.20, 533.21, 533.40, 533.41, 533.60, 533.61, 534.00, 534.01, 534.20, 534.21, 534.40, 534.41, 534.60, 534.61, 535.01, 535.11, 535.21, 535.31, 535.41, 535.51, 535.61, 578.0, 578.1, 578.9) or trauma (ICD-9-CM codes 800.00, 800.01, 800.02, 800.03, 800.04, 800.05, 800.06, 800.09, 800.10, 800.11, 800.12, 800.13, 800.14, 800.15, 800.16, 800.19, 800.20, 800.21, 800.22, 800.23, 800.24, 800.25, 800.26, 800.29, 800.30, 800.31, 800.32, 800.33, 800.34, 800.35, 800.36, 800.39, 800.40, 800.41, 800.42, 800.43, 800.44, 800.45, 800.46, 800.49, 800.50, 800.51, 800.52, 800.53, 800.54, 800.55, 800.56, 800.59, 800.60, 800.61, 800.62, 800.63, 800.64, 800.65, 800.66, 800.69, 800.70, 800.71, 800.72, 800.73, 800.74, 800.75, 800.76, 800.79, 800.80, 800.81, 800.82, 800.83, 800.84, 800.85, 800.86, 800.89, 800.90, 800.91, 800.92, 800.93, 800.94, 800.95, 800.96, 800.99, 801.00, 801.01, 801.02, 801.03, 801.04, 801.05, 801.06, 801.09, 801.10, 801.11, 801.12, 801.13, 801.14, 801.15, 801.16, 801.19, 801.20, 801.21, 801.22, 801.23, 801.24, 801.25, 801.26, 801.29, 801.30, 801.31, 801.32, 801.33, 801.34, 801.35, 801.36, 801.39, 801.40, 801.41, 801.42, 801.43, 801.44, 801.45, 801.46, 801.49, 801.50, 801.51, 801.52, 801.53, 801.54, 801.55, 801.56, 801.59, 801.60, 801.61, 801.62, 801.63, 801.64, 801.65, 801.66, 801.69, 801.70, 801.71, 801.72, 801.73, 801.74, 801.75, 801.76, 801.79, 801.80, 801.81, 801.82, 801.83, 801.84, 801.85, 801.86, 801.89, 801.90, 801.91, 801.92, 801.93, 801.94, 801.95, 801.96, 801.99, 802.0, 802.1, 802.20, 802.21, 802.22, 802.23, 802.24, 802.25, 802.26, 802.27, 802.28, 802.29, 802.30, 802.31, 802.32, 802.33, 802.34, 802.35, 802.36, 802.37, 802.38, 802.39, 802.4, 802.5, 802.6, 802.7, 802.8, 802.9, 803.00, 803.01, 803.02, 803.03, 803.04, 803.05, 803.06, 803.09, 803.10, 803.11, 803.12, 803.13, 803.14, 803.15, 803.16, 803.19, 803.20, 803.21, 803.22, 803.23, 803.24, 803.25, 803.26, 803.29, 803.30, 803.31, 803.32, 803.33, 803.34, 803.35, 803.36, 803.39, 803.40, 803.41, 803.42, 803.43, 803.44, 803.45, 803.46, 803.49, 803.50, 803.51, 803.52, 803.53, 803.54, 803.55, 803.56, 803.59, 803.60, 803.61, 803.62, 803.63, 803.64, 803.65, 803.66, 803.69, 803.70, 803.71, 803.72, 803.73, 803.74, 803.75, 803.76, 803.79, 803.80, 803.81, 803.82, 803.83, 803.84, 803.85, 803.86, 803.89, 803.90, 803.91, 803.92, 803.93, 803.94, 803.95, 803.96, 803.99, 804.00, 804.01, 804.02, 804.03, 804.04, 804.05, 804.06, 804.09, 804.10, 804.11, 804.12, 804.13, 804.14, 804.15, 804.16, 804.19, 804.20, 804.21, 804.22, 804.23, 804.24, 804.25, 804.26, 804.29, 804.30, 804.31, 804.32, 804.33, 804.34, 804.35, 804.36, 804.39, 804.40, 804.41, 804.42, 804.43, 804.44, 804.45, 804.46, 804.49, 804.50, 804.51, 804.52, 804.53, 804.54, 804.55, 804.56, 804.59, 804.60, 804.61, 804.62, 804.63, 804.64, 804.65, 804.66, 804.69, 804.70, 804.71, 804.72, 804.73, 804.74, 804.75, 804.76, 804.79, 804.80, 804.81, 804.82, 804.83, 804.84, 804.85, 804.86, 804.89, 804.90, 804.91, 804.92, 804.93, 804.94, 804.95, 804.96, 804.99, 805.00, 805.01, 805.02, 805.03, 805.04, 805.05, 805.06, 805.07, 805.08, 805.10, 805.11, 805.12, 805.13, 805.14, 805.15, 805.16, 805.17, 805.18, 805.2, 805.3, 805.4, 805.5, 805.6, 805.7, 805.8, 805.9, 806.00, 806.01, 806.02, 806.03, 806.04, 806.05, 806.06, 806.07, 806.08, 806.09, 806.10, 806.11, 806.12, 806.13, 806.14, 806.15, 806.16, 806.17, 806.18, 806.19, 806.20, 806.21, 806.22, 806.23, 806.24, 806.25, 806.26, 806.27, 806.28, 806.29, 806.30, 806.31, 806.32, 806.33, 806.34, 806.35, 806.36, 806.37, 806.38, 806.39, 806.4, 806.5, 806.60, 806.61, 806.62, 806.69, 806.70, 806.71, 806.72, 806.79, 806.8, 806.9, 807.00, 807.01, 807.02, 807.03, 807.04, 807.05, 807.06, 807.07, 807.08, 807.09, 807.10, 807.11, 807.12, 807.13, 807.14, 807.15, 807.16, 807.17, 807.18, 807.19, 807.2, 807.3, 807.4, 807.5, 807.6, 808.0, 808.1, 808.2, 808.3, 808.41, 808.42, 808.43, 808.49, 808.51, 808.52, 808.53, 808.59, 808.8, 808.9, 809.0, 809.1, 810.00, 810.01, 810.02, 810.03, 810.10, 810.11, 810.12, 810.13, 811.00, 811.01, 811.02, 811.03, 811.09, 811.10, 811.11, 811.12, 811.13, 811.19, 812.00, 812.01, 812.02, 812.03, 812.09, 812.10, 812.11, 812.12, 812.13, 812.19, 812.20, 812.21, 812.30, 812.31, 812.40, 812.41, 812.42, 812.43, 812.44, 812.49, 812.50, 812.51, 812.52, 812.53, 812.54, 812.59, 813.00, 813.01, 813.02, 813.03, 813.04, 813.05, 813.06, 813.07, 813.08, 813.10, 813.11, 813.12, 813.13, 813.14, 813.15, 813.16, 813.17, 813.18, 813.20, 813.21, 813.22, 813.23, 813.30, 813.31, 813.32, 813.33, 813.40, 813.41, 813.42, 813.43, 813.44, 813.45, 813.50, 813.51, 813.52, 813.53, 813.54, 813.80, 813.81, 813.82, 813.83, 813.90, 813.91, 813.92, 813.93, 814.00, 814.01, 814.02, 814.03, 814.04, 814.05, 814.06, 814.07, 814.08, 814.09, 814.10, 814.11, 814.12, 814.13, 814.14, 814.15, 814.16, 814.17, 814.18, 814.19, 815.00, 815.01, 815.02, 815.03, 815.04, 815.09, 815.10, 815.11, 815.12, 815.13, 815.14, 815.15, 815.19, 817.0, 817.1, 818.0, 818.1, 819.0, 819.1, 820.00, 820.01, 820.02, 820.03, 820.09, 820.10, 820.11, 820.12, 820.13, 820.19, 820.20, 820.21, 820.22, 820.30, 820.31, 820.32, 820.8, 820.9, 821.00, 821.01, 821.10, 821.11, 821.20, 821.21, 821.22, 821.23, 821.29, 821.30, 821.31, 821.32, 821.33, 821.39, 822.0, 822.1, 823.00, 823.01, 823.02, 823.10, 823.11, 823.12, 823.20,

**Table 3 – Exclusion Codes for Complications of Care for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)” (continued)**

COMPLICATION	EXCLUSIONS
<b>Shock/cardiac arrest</b> <i>continued</i>	823.21, 823.22, 823.30, 823.31, 823.32, 823.4, 823.40, 823.41, 823.42, 823.80, 823.81, 823.82, 823.90, 823.91, 823.92, 824.0, 824.1, 824.2, 824.3, 824.4, 824.5, 824.6, 824.7, 824.8, 824.9, 825.0, 825.1, 825.20, 825.21, 825.22, 825.23, 825.24, 825.25, 825.29, 825.30, 825.31, 825.32, 825.33, 825.34, 825.35, 825.39, 827.0, 827.1, 828.0, 828.1, 829.0, 829.1, 830.0, 830.1, 831.00, 831.01, 831.02, 831.03, 831.04, 831.09, 831.10, 831.11, 831.12, 831.13, 831.14, 831.19, 832.00, 832.01, 832.02, 832.03, 832.04, 832.09, 832.10, 832.11, 832.12, 832.13, 832.14, 832.19, 833.00, 833.01, 833.02, 833.03, 833.04, 833.05, 833.09, 833.10, 833.11, 833.12, 833.13, 833.14, 833.15, 833.19, 835.00, 835.01, 835.02, 835.03, 835.10, 835.11, 835.12, 835.13, 836.0, 836.1, 836.2, 836.3, 836.4, 836.50, 836.51, 836.52, 836.53, 836.54, 836.59, 836.60, 836.61, 836.62, 836.63, 836.64, 836.69, 837.0, 837.1, 838.00, 838.01, 838.02, 838.03, 838.04, 838.05, 838.06, 838.09, 838.10, 838.11, 838.12, 838.13, 838.14, 838.15, 838.16, 838.19, 839.00, 839.01, 839.02, 839.03, 839.04, 839.05, 839.06, 839.07, 839.08, 839.10, 839.11, 839.12, 839.13, 839.14, 839.15, 839.16, 839.17, 839.18, 839.20, 839.21, 839.30, 839.31, 839.40, 839.41, 839.42, 839.49, 839.50, 839.51, 839.52, 839.59, 839.61, 839.69, 839.71, 839.79, 839.8, 839.9, 850.0, 850.1, 850.2, 850.3, 850.4, 850.5, 850.9, 851.00, 851.01, 851.02, 851.03, 851.04, 851.05, 851.06, 851.09, 851.10, 851.11, 851.12, 851.13, 851.14, 851.15, 851.16, 851.19, 851.20, 851.21, 851.22, 851.23, 851.24, 851.25, 851.26, 851.29, 851.30, 851.31, 851.32, 851.33, 851.34, 851.35, 851.36, 851.39, 851.40, 851.41, 851.42, 851.43, 851.44, 851.45, 851.46, 851.49, 851.50, 851.51, 851.52, 851.53, 851.54, 851.55, 851.56, 851.59, 851.60, 851.61, 851.62, 851.63, 851.64, 851.65, 851.66, 851.69, 851.70, 851.71, 851.72, 851.73, 851.74, 851.75, 851.76, 851.79, 851.80, 851.81, 851.82, 851.83, 851.84, 851.85, 851.86, 851.89, 851.90, 851.91, 851.92, 851.93, 851.94, 851.95, 851.96, 851.99, 852.00, 852.01, 852.02, 852.03, 852.04, 852.05, 852.06, 852.09, 852.10, 852.11, 852.12, 852.13, 852.14, 852.15, 852.16, 852.19, 852.20, 852.21, 852.22, 852.23, 852.24, 852.25, 852.26, 852.29, 852.30, 852.31, 852.32, 852.33, 852.34, 852.35, 852.36, 852.39, 852.40, 852.41, 852.42, 852.43, 852.44, 852.45, 852.46, 852.49, 852.50, 852.51, 852.52, 852.53, 852.54, 852.55, 852.56, 852.59, 853.00, 853.01, 853.02, 853.03, 853.04, 853.05, 853.06, 853.09, 853.10, 853.11, 853.12, 853.13, 853.14, 853.15, 853.16, 853.19, 854.00, 854.01, 854.02, 854.03, 854.04, 854.05, 854.06, 854.09, 854.10, 854.11, 854.12, 854.13, 854.14, 854.15, 854.16, 854.19, 860.0, 860.1, 860.2, 860.3, 860.4, 860.5, 861.00, 861.01, 861.02, 861.03, 861.10, 861.11, 861.12, 861.13, 861.20, 861.21, 861.22, 861.30, 861.31, 861.32, 862.0, 862.1, 862.21, 862.22, 862.29, 862.31, 862.32, 862.39, 862.8, 862.9, 863.0, 863.1, 863.20, 863.21, 863.29, 863.30, 863.31, 863.39, 863.40, 863.41, 863.42, 863.43, 863.44, 863.45, 863.46, 863.49, 863.50, 863.51, 863.52, 863.53, 863.54, 863.55, 863.56, 863.59, 863.80, 863.81, 863.82, 863.83, 863.84, 863.85, 863.89, 863.90, 863.91, 863.92, 863.93, 863.94, 863.95, 863.99, 864.00, 864.01, 864.02, 864.03, 864.04, 864.05, 864.09, 864.10, 864.11, 864.12, 864.13, 864.14, 864.15, 864.19, 865.00, 865.01, 865.02, 865.03, 865.04, 865.09, 865.10, 865.11, 865.12, 865.13, 865.14, 865.19, 866.00, 866.01, 866.02, 866.03, 866.10, 866.11, 866.12, 866.13, 867.0, 867.1, 867.2, 867.3, 867.4, 867.5, 867.6, 867.7, 867.8, 867.9, 868.00, 868.01, 868.02, 868.03, 868.04, 868.09, 868.10, 868.11, 868.12, 868.13, 868.14, 868.19, 869.0, 869.1, 870.0, 870.1, 870.2, 870.3, 870.4, 870.8, 870.9, 871.0, 871.1, 871.2, 871.3, 871.4, 871.5, 871.6, 871.7, 871.9, 872.00, 872.01, 872.02, 872.10, 872.11, 872.12, 872.61, 872.62, 872.63, 872.64, 872.69, 872.71, 872.72, 872.73, 872.74, 872.79, 872.8, 872.9, 873.0, 873.1, 873.20, 873.21, 873.22, 873.23, 873.29, 873.30, 873.31, 873.32, 873.33, 873.39, 873.40, 873.41, 873.42, 873.43, 873.44, 873.49, 873.50, 873.51, 873.52, 873.53, 873.54, 873.59, 873.60, 873.61, 873.62, 873.63, 873.64, 873.65, 873.69, 873.70, 873.71, 873.72, 873.73, 873.74, 873.75, 873.79, 873.8, 873.9, 874.00, 874.01, 874.02, 874.10, 874.11, 874.12, 874.2, 874.3, 874.4, 874.5, 874.8, 874.9, 875.0, 875.1, 876.0, 876.1, 877.0, 877.1, 878.0, 878.1, 878.2, 878.3, 878.4, 878.5, 878.6, 878.7, 878.8, 878.9, 879.0, 879.1, 879.2, 879.3, 879.4, 879.5, 879.6, 879.7, 879.8, 879.9, 880.00, 880.01, 880.02, 880.03, 880.09, 880.10, 880.11, 880.12, 880.13, 880.19, 880.20, 880.21, 880.22, 880.23, 880.29, 881.00, 881.01, 881.02, 881.10, 881.11, 881.12, 881.20, 881.21, 881.22, 882.0, 882.1, 882.2, 884.0, 884.1, 884.2, 887.0, 887.1, 887.2, 887.3, 887.4, 887.5, 887.6, 887.7, 890.0, 890.1, 890.2, 891.0, 891.1, 891.2, 892.0, 892.1, 892.2, 894.0, 894.1, 894.2, 896.0, 896.1, 896.2, 896.3, 897.0, 897.1, 897.2, 897.3, 897.4, 897.5, 897.6, 897.7, 900.00, 900.01, 900.02, 900.03, 900.1, 900.81, 900.82, 900.89, 900.9, 901.0, 901.1, 901.2, 901.3, 901.40, 901.41, 901.42, 901.81, 901.82, 901.83, 901.89, 901.9, 902.0, 902.11, 902.19, 902.20, 902.21, 902.22, 902.23, 902.24, 902.25, 902.26, 902.27, 902.29, 902.31, 902.32, 902.33, 902.34, 902.39, 902.40, 902.41, 902.42, 902.49, 902.50, 902.51, 902.52, 902.53, 902.54, 902.55, 902.56, 902.59, 902.81, 902.82, 902.87, 902.89, 902.9, 903.00, 903.01, 903.02, 903.1, 903.2, 903.3, 903.4, 903.5, 903.8, 903.9, 904.0, 904.1, 904.2, 904.3, 904.40, 904.41, 904.42, 904.50, 904.51, 904.52, 904.53, 904.54, 904.6, 904.7, 904.8, 904.9, 925.1, 925.2, 926.0, 926.11, 926.12, 926.19, 926.8, 926.9, 927.00, 927.01, 927.02, 927.03, 927.09, 927.10, 927.11, 927.20, 927.21, 927.3, 927.8, 927.9, 928.00, 928.01, 928.10, 928.11,

**Table 3 – Exclusion Codes for Complications of Care for “Death Among Surgical Inpatients with Treatable Serious Complications (Failure to Rescue)” (continued)**

COMPLICATION	EXCLUSIONS
Shock/Cardiac Arrest <i>continued</i>	928.20, 928.21, 928.3, 928.8, 928.9, 929.0, 929.9, 940.0, 940.1, 940.2, 940.3, 940.4, 940.5, 940.9, 941.00, 941.01, 941.02, 941.03, 941.04, 941.05, 941.06, 941.07, 941.08, 941.09, 941.10, 941.11, 941.12, 941.13, 941.14, 941.15, 941.16, 941.17, 941.18, 941.19, 941.20, 941.21, 941.22, 941.23, 941.24, 941.25, 941.26, 941.27, 941.28, 941.29, 941.30, 941.31, 941.32, 941.33, 941.34, 941.35, 941.36, 941.37, 941.38, 941.39, 941.40, 941.41, 941.42, 941.43, 941.44, 941.45, 941.46, 941.47, 941.48, 941.49, 941.50, 941.51, 941.52, 941.53, 941.54, 941.55, 941.56, 941.57, 941.58, 941.59, 942.00, 942.01, 942.02, 942.03, 942.04, 942.05, 942.09, 942.10, 942.11, 942.12, 942.13, 942.14, 942.15, 942.19, 942.20, 942.21, 942.22, 942.23, 942.24, 942.25, 942.29, 942.30, 942.31, 942.32, 942.33, 942.34, 942.35, 942.39, 942.40, 942.41, 942.42, 942.43, 942.44, 942.45, 942.49, 942.50, 942.51, 942.52, 942.53, 942.54, 942.55, 942.59, 943.00, 943.01, 943.02, 943.03, 943.04, 943.05, 943.06, 943.09, 943.10, 943.11, 943.12, 943.13, 943.14, 943.15, 943.16, 943.19, 943.20, 943.21, 943.22, 943.23, 943.24, 943.25, 943.26, 943.29, 943.30, 943.31, 943.32, 943.33, 943.34, 943.35, 943.36, 943.39, 943.40, 943.41, 943.42, 943.43, 943.44, 943.45, 943.46, 943.49, 943.50, 943.51, 943.52, 943.53, 943.54, 943.55, 943.56, 943.59, 944.00, 944.01, 944.02, 944.03, 944.04, 944.05, 944.06, 944.07, 944.08, 944.10, 944.11, 944.12, 944.13, 944.14, 944.15, 944.16, 944.17, 944.18, 944.20, 944.21, 944.22, 944.23, 944.24, 944.25, 944.26, 944.27, 944.28, 944.30, 944.31, 944.32, 944.33, 944.34, 944.35, 944.36, 944.37, 944.38, 944.40, 944.41, 944.42, 944.43, 944.44, 944.45, 944.46, 944.47, 944.48, 944.50, 944.51, 944.52, 944.53, 944.54, 944.55, 944.56, 944.57, 944.58, 945.00, 945.01, 945.02, 945.03, 945.04, 945.05, 945.06, 945.09, 945.10, 945.11, 945.12, 945.13, 945.14, 945.15, 945.16, 945.19, 945.20, 945.21, 945.22, 945.23, 945.24, 945.25, 945.26, 945.29, 945.30, 945.31, 945.32, 945.33, 945.34, 945.35, 945.36, 945.39, 945.40, 945.41, 945.42, 945.43, 945.44, 945.45, 945.46, 945.49, 945.50, 945.51, 945.52, 945.53, 945.54, 945.55, 945.56, 945.59, 946.0, 946.1, 946.2, 946.3, 946.4, 946.5, 947.0, 947.1, 947.2, 947.3, 947.4, 947.8, 947.9, 948.00, 948.10, 948.11, 948.20, 948.21, 948.22, 948.30, 948.31, 948.32, 948.33, 948.40, 948.41, 948.42, 948.43, 948.44, 948.50, 948.51, 948.52, 948.53, 948.54, 948.55, 948.60, 948.61, 948.62, 948.63, 948.64, 948.65, 948.66, 948.70, 948.71, 948.72, 948.73, 948.74, 948.75, 948.76, 948.77, 948.80, 948.81, 948.82, 948.83, 948.84, 948.85, 948.86, 948.87, 948.88, 948.90, 948.91, 948.92, 948.93, 948.94, 948.95, 948.96, 948.97, 948.98, 948.99, 949.0, 949.1, 949.2, 949.3, 949.4, 949.5, 952.00, 952.01, 952.02, 952.03, 952.04, 952.05, 952.06, 952.07, 952.08, 952.09, 952.10, 952.11, 952.12, 952.13, 952.14, 952.15, 952.16, 952.17, 952.18, 952.19, 952.2, 952.3, 952.4, 952.8, 952.9, 953.0, 953.1, 953.2, 953.3, 953.4, 953.5, 953.8, 953.9, 958.0, 958.1, 958.2, 958.3, 958.4, 958.5, 958.6, 958.7, 958.8) in the principal diagnosis field; discharges with a DRG code of trauma (DRGs 002, 027, 028, 029, 031, 032, 072, 083, 084, 235, 236, 237, 440, 441, 442, 443, 444, 445, 456, 457, 458, 459, 460, 484, 485, 486, 487, 491, 504, 505, 506, 507, 508, 509, 510, 511); discharges with an MDC code of 4 (diseases & disorders of the respiratory system) or MDC code of 5 (disease & disorders of the circulatory system)
DVT/PE	Discharges with an ICD-9-CM diagnosis code of DVT or PE in the principal diagnosis field; discharges with an ICD-9-CM code for abortion-related or postpartum obstetric pulmonary embolism in the principal diagnosis field (ICD-9-CM codes 673.20, 673.21, 673.22, 673.23, 673.24)

Sources: Needleman J, Buerhaus PI, Mattke S, Stewart M, Zelevinsky K. *Nurse Staffing and Patient Outcomes in Hospitals*. HRSA Report No. 230-99-0021; February 28, 2001; and Needleman J, University of California and Stewart M, Brandeis University, personal communication, September 5, 2004.

**Table 4 – The Practice Environment Scale of the Nursing Work Index**

**For each item, please indicate the extent to which you agree that the item is PRESENT IN YOUR CURRENT JOB.  
Indicate your degree of agreement by circling the appropriate number.**

	Strongly Agree	Agree	Disagree	Strongly Disagree
1 Adequate support services allow me to spend time with my patients.	1	2	3	4
2 Physicians and nurses have good working relationships.	1	2	3	4
3 A supervisory staff that is supportive of the nurses.	1	2	3	4
4 Active staff development or continuing education programs for nurses.	1	2	3	4
5 Career development/clinical ladder opportunity.	1	2	3	4
6 Opportunity for staff nurses to participate in policy decisions.	1	2	3	4
7 Supervisors use mistakes as learning opportunities, not criticism.	1	2	3	4
8 Enough time and opportunity to discuss patient care problems with other nurses.	1	2	3	4
9 Enough registered nurses to provide quality patient care.	1	2	3	4
10 A nurse manager who is a good manager and leader.	1	2	3	4
11 A chief nursing officer who is highly visible and accessible to staff.	1	2	3	4
12 Enough staff to get the work done.	1	2	3	4
13 Praise and recognition for a job well done.	1	2	3	4
14 High standards of nursing care are expected by the administration.	1	2	3	4
15 A chief nurse officer equal in power and authority to other top-level hospital executives.	1	2	3	4
16 A lot of team work between nurses and physicians.	1	2	3	4
17 Opportunities for advancement.	1	2	3	4
18 A clear philosophy of nursing that pervades the patient care environment.	1	2	3	4
19 Working with nurses who are clinically competent.	1	2	3	4
20 A nurse manager who backs up the nursing staff in decisionmaking, even if the conflict is with a physician.	1	2	3	4
21 Administration that listens and responds to employee concerns.	1	2	3	4
22 An active quality assurance program.	1	2	3	4
23 Staff nurses are involved in the internal governance of the hospital (e.g., practice and policy committees).	1	2	3	4
24 Collaboration (joint practice) between nurses and physicians.	1	2	3	4
25 A preceptor program for newly hired RNs.	1	2	3	4
26 Nursing care is based on a nursing, rather than a medical, model.	1	2	3	4
27 Staff nurses have the opportunity to serve on hospital and nursing committees.	1	2	3	4
28 Nursing administrators consult with staff on daily problems and procedures.	1	2	3	4
29 Written, up-to-date nursing care plans for all patients.	1	2	3	4
30 Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next.	1	2	3	4
31 Use of nursing diagnoses.	1	2	3	4

© Eileen T. Lake 2002

SUBSCALES AND COMPONENT ITEMS		SCORING DIRECTIONS
The Practice Environment Scale of the Nursing Work Index		Score each item so that higher numbers indicate greater agreement. Thus, if "strongly agree" was coded 1, and "strongly disagree" was coded 4, you must first reverse code (by subtracting each answer from 5) before calculating subscale scores. Once the coding is in the right direction, calculate nurse-specific subscale scores as the mean of the items in the subscale. The mean permits easy comparison across subscales. For hospital-level scores, calculate the item-level means at the hospital level. Then proceed with the standard computation for subscale scores. This approach permits all nurse responses, including responses of nurses who did not answer all items, to be included in the hospital score.
<b>SUBSCALE</b>		<b>COMPONENT ITEMS</b>
Nurse Participation in Hospital Affairs	5, 6, 11, 15, 17, 21, 23, 27, 28	
Nursing Foundations for Quality of Care	4, 14, 18, 19, 22, 25, 26, 29, 30, 31	
Nurse Manager Ability, Leadership, and Support of Nurses	3, 7, 10, 13, 20	
Staffing and Resource Adequacy	1, 8, 9, 12	
Collegial Nurse-Physician Relations	2, 16, 24	

Calculate an overall PES-NWI "composite" score as the mean of the five subscale scores. This approach gives equal weight to the subscales, rather than to the items.

## NATIONAL QUALITY FORUM

### Appendix B Members and Board of Directors

#### Members

##### CONSUMER COUNCIL

AARP  
AFL-CIO  
AFT Healthcare  
American Hospice Foundation  
California Health Decisions  
Consumer Coalition for Quality Health Care  
Consumers Advancing Patient Safety  
Foundation for Accountability  
Last Acts  
March of Dimes  
National Citizens' Coalition for Nursing Home Reform  
National Coalition for Cancer Survivorship  
National Consensus Project for Quality Palliative Care  
National Partnership for Women and Families  
Service Employees International Union

##### PROVIDER AND HEALTH PLAN COUNCIL

Alexian Brothers Medical Center  
Alliance for Quality Nursing Home Care  
America's Health Insurance Plans  
American Academy of Family Physicians  
American Academy of Nursing  
American Academy of Orthopaedic Surgeons  
American Academy of Physician Assistants

American Association of Homes and Services for the Aging  
American Association of Nurse Anesthetists  
American College of Cardiology  
American College of Physicians - American Society of Internal Medicine  
American College of Obstetricians and Gynecologists  
American College of Radiology  
American College of Surgeons  
American Health Care Association  
American Heart Association  
American Hospital Association  
American Medical Association  
American Medical Group Association  
American Nurses Association  
American Optometric Association  
American Osteopathic Association  
American Society for Therapeutic Radiology and Oncology  
American Society of Clinical Oncology  
American Society of Health-System Pharmacists  
Ascension Health  
Baylor Health Care System  
Beacon Health Strategies  
Beverly Enterprises  
BJC HealthCare  
Blue Cross and Blue Shield Association  
Blue Cross Blue Shield of Michigan  
Bon Secours Health System  
Bronson Healthcare Group

Catholic Health Association of the United States  
Catholic Health Initiatives  
Catholic Healthcare Partners  
Child Health Corporation of America  
CHRISTUS Health  
CIGNA Healthcare  
College of American Pathologists  
Community Hospital of the Monterey Peninsula  
Connecticut Hospital Association  
Council of Medical Specialty Societies  
Dialog Medical  
Empire BlueCross/BlueShield  
Exempla Healthcare  
Federation of American Hospitals  
First Health  
Greater New York Hospital Association  
HCA  
HealthHelp  
Healthcare Leadership Council  
HealthPartners  
Henry Ford Health System  
Hoag Hospital  
Horizon Blue Cross and Blue Shield of New Jersey  
Hudson Health Plan  
Illinois Hospital Association  
INTEGRIS Health  
John Muir/Mt. Diablo Health System  
Kaiser Permanente  
KU Med at the University of Kansas Medical Center  
Los Angeles County-Department of Health Services  
Mayo Foundation  
MedQuest Associates  
The Methodist Hospital  
Memorial Health University Medical Center  
Memorial Sloan-Kettering Cancer Center  
National Association of Chain Drug Stores  
National Assoc. of Children's Hospitals and Related Institutions  
National Association Medical Staff Services  
National Association of Public Hospitals and Health Systems  
National Hospice and Palliative Care Organization  
Nemours Foundation  
New York Presbyterian Hospital and Health System  
North Carolina Baptist Hospital  
North Shore-Long Island Jewish Health System  
Oakwood Healthcare System  
PacifiCare  
Partners HealthCare

Premier  
Pro Healthcare  
Robert Wood Johnson University Hospital-Hamilton  
Robert Wood Johnson University Hospital-New Brunswick  
Sentara Norfolk General Hospital  
Society of Thoracic Surgeons  
Sisters of Mercy Health System  
South Nassau Communities Hospital  
Spartanburg Regional Healthcare System  
Spectrum Health  
State University of New York-College of Optometry  
Sutter Health  
Tenet Healthcare  
Trinity Health  
UnitedHealth Group  
University Health Systems of Eastern Carolina  
University of Michigan Hospitals and Health Centers  
US Department of Defense-Health Affairs  
Vanguard Health Management  
Veterans Health Administration  
VHA Inc.  
WellPoint  
Yale New Haven Health System

#### **PURCHASER COUNCIL**

BoozAllenHamilton  
Buyers Health Care Action Group  
Centers for Medicare and Medicaid Services  
Central Florida Health Care Coalition  
Employers' Coalition on Health  
Employer Health Care Alliance Cooperative (The Alliance)  
Ford Motor Company  
General Motors  
Greater Detroit Area Health Council  
HealthCare 21  
Leapfrog Group  
Maine Health Management Coalition  
Midwest Business Group on Health  
National Association of State Medicaid Directors  
National Business Coalition on Health  
National Business Group on Health  
New Jersey Health Care Quality Institute  
Pacific Business Group on Health  
Schaller Anderson  
US Office of Personnel Management

**RESEARCH AND QUALITY IMPROVEMENT COUNCIL**

AAAHC-Institute for Quality Improvement  
ACC/AHA Taskforce on Performance Measures  
ACS/MIDAS+  
AI Insight  
Abbott Laboratories  
Adventist HealthCare  
Agency for Healthcare Research and Quality  
American Association of Colleges of Nursing  
American Board for Certification in Orthotics and Prosthetics  
American Board of Internal Medicine Foundation  
American Board of Medical Specialties  
American College of Medical Quality  
American Health Quality Association  
American Pharmacists Association Foundation  
American Society for Quality-Health Care Division  
Anesthesia Patient Safety Foundation  
Aspect Medical Systems  
Association of American Medical Colleges  
Aventis Pharmaceuticals  
Battelle Memorial Institute  
California HealthCare Foundation  
Cancer Quality Council of Ontario  
Cardinal Health, Inc.  
CareScience  
Center to Advance Palliative Care  
Centers for Disease Control and Prevention  
Cleveland Clinic Foundation  
Commonwealth Fund  
Coral Initiative  
Council for Affordable Quality Healthcare  
CRG Medical  
Delmarva Foundation  
eHealth Initiative  
Eli Lilly and Company  
First Consulting Group  
Forum of End Stage Renal Disease Networks  
GlaxoSmithKline  
Health Care Excel  
Health Grades  
Health Resources and Services Administration  
Illinois Department of Public Health  
Institute for Clinical Systems Development  
Institute for Safe Medication Practices  
Integrated Healthcare Association  
IPRO  
Jackson Organization  
Jefferson Health System, Office of Health Policy and Clinical Outcomes  
Joint Commission on Accreditation of Healthcare Organizations  
Long Term Care Institute  
Loyola University Health System Center for Clinical Effectiveness  
Lumetra  
Maine Quality Forum  
Medical Review of North Carolina  
National Association for Healthcare Quality  
National Committee for Quality Assurance  
National Committee for Quality Health Care  
National Institutes of Health  
National Patient Safety Foundation  
National Pharmaceutical Council  
National Research Corporation  
New England Healthcare Assembly  
Northeast Health Care Quality Foundation  
Ohio KePRO  
Pennsylvania Health Care Cost Containment Council  
Pfizer  
Physician Consortium for Performance Improvement  
Professional Research Consultants  
Qualidigm  
Press, Ganey Associates  
Roswell Park Cancer Institute  
Select Quality Care  
Solcient  
Stratis Health  
Substance Abuse and Mental Health Services Administration  
Texas Medical Institute of Technology  
Uniform Data System for Medical Rehabilitation  
United Hospital Fund  
University of North Carolina-Program on Health Outcomes  
URAC  
US Food and Drug Administration  
US Pharmacopeia  
Virginia Cardiac Surgery Quality Initiative  
Virginia Health Quality Center  
West Virginia Medical Institute

## Board of Directors\*

**Gail L. Warden (Chair)**

President Emeritus  
Henry Ford Health System  
Detroit, MI

**William L. Roper, MD, MPH (Vice-Chair)<sup>1</sup>**

Dean, School of Public Health, University of North Carolina  
Chapel Hill, NC

**John O. Agwunobi, MD, MBA<sup>2</sup>**

Secretary  
Florida Department of Health  
Tallahassee, FL

**Harris A. Berman, MD<sup>3</sup>**

Chairman  
Department of Family Medicine & Community Health, Tufts University School of Medicine  
Boston, MA

**Bruce E. Bradley**

Director, Managed Care Plans  
General Motors Corp.  
Detroit, MI

**Carolyn M. Clancy, MD**

Director  
Agency for Healthcare Research and Quality  
Rockville, MD

**Nancy-Ann Min DeParle, Esq.<sup>4</sup>**

Senior Advisor  
JPMorgan Partners  
Washington, DC

**William E. Golden, MD**

Immediate Past President  
American Health Quality Association  
Washington, DC

**Lisa I. Iezzoni, MD**

Professor of Medicine  
Harvard Medical School  
Boston, MA

**Kay Coles James**

Director  
Office of Personnel Management  
Washington, DC, representing QuIC

**Mary B. Kennedy**

State Medicaid Director  
Minnesota Department of Human Services  
St. Paul, MN

**Kenneth W. Kizer, MD, MPH**

President and Chief Executive Officer  
The National Quality Forum  
Washington, DC

**Norma M. Lang, PhD, RN<sup>3</sup>**

Lillian S. Brunner Professor of Medical Surgical Nursing  
University of Pennsylvania  
Philadelphia, PA

**Brian W. Lindberg**

Executive Director  
Consumer Coalition for Quality Health Care  
Washington, DC

**John R. Lumpkin, MD, MPH<sup>5</sup>**

Director  
Illinois Department of Public Health  
Springfield, IL

**Mark B. McClellan, MD, PhD<sup>6</sup>**

Administrator  
Centers for Medicare and Medicaid Services  
Washington, DC

**Debra L. Ness<sup>3</sup>**

Executive Vice President  
National Partnership for Women and Families  
Washington, DC

**Paul H. O'Neill<sup>3</sup>**

Pittsburgh, PA

**Christopher J. Queram**

Chief Executive Officer  
Employer Health Care Alliance Cooperative  
Madison, WI

**John C. Rother, JD**

Director of Policy and Strategy  
AARP  
Washington, DC

**Thomas A. Scully<sup>7</sup>**

Administrator  
Centers for Medicare and Medicaid Services  
Washington, DC

**Gerald M. Shea**

Assistant to the President for Government Affairs  
AFL-CIO  
Washington, DC

**Janet Sullivan, MD**

Chief Medical Officer  
Hudson Health Plan  
Tarrytown, NY

**James W. Varnum<sup>3</sup>**

President  
Dartmouth-Hitchcock Alliance  
Lebanon, NH

**Marina L. Weiss, PhD**

Senior Vice President for Public Policy and  
Government Affairs  
March of Dimes  
Washington, DC

**Dale Whitney<sup>8</sup>**

Corporate Health Care Director  
UPS  
Atlanta, GA

**Liaison Members****Yank D. Coble, Jr., MD<sup>9</sup>**

Immediate Past President  
American Medical Association  
Chicago, IL

**Janet M. Corrigan, PhD**

Director  
Board on Health Care Services, Institute of  
Medicine  
Washington, DC

**David J. Lansky, PhD**

President  
Foundation for Accountability  
Portland, OR

**Nancy H. Nielsen, MD, PhD<sup>10</sup>**

Speaker, House of Delegates  
AMA for the Physician Consortium for  
Performance Improvement  
Chicago, IL

**Margaret E. O'Kane**

President  
National Committee for Quality Assurance  
Washington, DC

**Dennis S. O'Leary, MD**

President  
Joint Commission on Accreditation of Healthcare  
Organizations  
Oakbrook Terrace, IL

**Elias A. Zerhouni, MD<sup>3</sup>**

Director  
National Institutes of Health  
Bethesda, MD

\* During project period

<sup>1</sup> Through February 2004

<sup>2</sup> Since July 2003

<sup>3</sup> Since April 2003

<sup>4</sup> Since May 2004

<sup>5</sup> Through April 13, 2003

<sup>6</sup> Since April 2004

<sup>7</sup> Through November 2003

<sup>8</sup> Since February 2004

<sup>9</sup> Through May 2004

<sup>10</sup> Since June 2004

## NATIONAL QUALITY FORUM

### Appendix C

### Steering Committee, Technical Advisory Panel, and Project Staff

#### Steering Committee

**Lillee S. Gelinas, RN, MSN (Co-Chair)**  
VHA  
Irving, TX

**Mary D. Naylor, PhD, RN (Co-Chair)**  
University of Pennsylvania School  
of Nursing  
Philadelphia, PA

**G. Rumay Alexander, EdD, RN**  
University of North Carolina-  
Chapel Hill School of Nursing/  
American Organization of Nurse  
Executives  
Chapel Hill, NC

**Linda Burnes Bolton, DrPH, RN**  
Cedars-Sinai Health System  
Los Angeles, CA

**Col. Laura R. Brosch, AN, PhD**  
U.S. Army Medical Research and  
Materiel Command  
Fort Detrick, MD

**Diane Storer Brown, PhD, RN**  
Kaiser Permanente—  
Northern California Region  
Oakland, CA

**Peter I. Buerhaus, PhD, RN**  
Vanderbilt University School  
of Nursing  
Nashville, TN

**Diane Ebersberger-McKeon**  
Catholic Healthcare Partners  
Cincinnati, OH

**Gaye J. Fortner, RN, BSN, MSN**  
HealthCare21 Business Coalition  
Knoxville, TN

**Theresa Helle**  
The Boeing Company  
Seattle, WA

**Stephen J. Horner, RN**  
HCA  
Nashville, TN

**Jerod M. Loeb, PhD**  
Joint Commission on Accreditation  
of Healthcare Organizations  
Oakbrook Terrace, IL

**Naomi Naierman, MPA**  
American Hospice Foundation  
Washington, DC

**Cathy Rick, RN**  
Department of Veterans Affairs  
Washington, DC

**Elmore F. Rigamer, MD, MPA**  
CHRISTUS Health  
Metairie, LA

**Bernard Rosof, MD**  
North Shore-Long Island Jewish  
Health System  
Great Neck, NY

**Diane Sosne, RN, MN**  
Service Employees International Union  
Renton, WA

**Wanda O. Wilson, PhD, MSN, CRNA**  
University of Cincinnati Medical Center  
Cincinnati, OH

#### Liaison Members

**Barbara A. Blakeney, MS, APRN, BC, ANP**  
American Nurses Association  
Washington, DC

**Yvonne Bryan, PhD, RN**  
National Institute of Nursing Research  
Bethesda, MD

**Judy Goldfarb, MA, RN**  
Centers for Medicare and Medicaid Services  
Baltimore, MD

**Barbara J. Hatcher, PhD, MPH, RN**  
American Public Health Association  
Washington, DC

#### Technical Advisory Panel

**Eileen Lake, PhD, RN**  
University of Pennsylvania School of Nursing  
Philadelphia, PA

**Margaret L. McClure, EdD, RN**  
New York University/American Academy  
of Nursing  
New York, NY

**Jack Needleman, PhD**  
University of California  
Los Angeles School of Public Health  
Los Angeles, CA

#### Project Staff

**Kenneth W. Kizer, MD, MPH**  
President and Chief Executive Officer

**Robyn Y. Nishimi, PhD**  
Chief Operating Officer

**Ellen T. Kurtzman, RN, MPH**  
Senior Program Director

**Lawrence D. Gorban, MA**  
Vice President, Operations

**Philip Dunn, MSJ**  
Vice President, Communications and Public Affairs

**Elaine J. Power, MPP**  
Vice President, Programs

**Christine M. Page-Lopez**  
Research Assistant

**Reva Winkler, MD, MPH**  
Clinical Consultant

**Merilyn D. Francis, RN, MPP**  
Assistant Vice President

**Helen W. Wu, MSc**  
Program Director

---

## NATIONAL QUALITY FORUM PUBLICATION INFORMATION

### *National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set—A Consensus Report*

Document No.	Description	Member Price* #	Non-member Price#
NQFCR-08-04	Paperback, 100 pages	\$24.00 each, incl. shipping & handling (additional 10% discount on bulk orders of 10 or more copies shipped to one address)	\$36.00 each, incl. shipping & handling (10% discount on bulk orders of 10 or more copies shipped to one address)

\*Primary contacts for NQF member organizations will receive two complimentary copies.

#Orders directed to organizations or individuals in Washington, DC, must add 5.75% sales tax or provide a copy of your tax-exempt certificate with your order. For deliveries outside the United States, please contact us (202.783.1300 or fax below) for pricing information.

No. of copies \_\_\_\_\_ Cost of reports \_\_\_\_\_ Sales tax (5.75% DC) \_\_\_\_\_ Total cost \_\_\_\_\_

**METHOD OF DELIVERY**

- U.S. Postal Service (included)  
 FedEx (Priority / Standard / 2-day / 3-day) [circle one]  Please invoice me (option ONLY for NQF Members)  
(FedEx used ONLY if a valid FedEx Acct. No. is provided)

Your FedEx Acct No. \_\_\_\_\_

**METHOD OF PAYMENT**

- Payment enclosed (check or money order, U.S. dollars only)

Credit Card:  Visa  Mastercard Card # \_\_\_\_\_ Expiration Date \_\_\_\_\_

Billing Address (for this credit card) \_\_\_\_\_

Total Amounts \$ \_\_\_\_\_ Signature \_\_\_\_\_

If you are paying using a credit card, please make certain that the order form (including your signature) is forwarded ALONG WITH A PHOTOCOPY  
OF THE FRONT AND BACK OF THE CREDIT CARD USED.

**INVOICE AND PUBLICATIONS TO BE SENT TO**

Name \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City State Zip \_\_\_\_\_

Phone \_\_\_\_\_

Fax and E-mail \_\_\_\_\_

**DIRECT ORDERS TO** National Quality Forum  
ATTN: Publications Unit  
601 Thirteenth Street, NW, Suite 500 North, Washington, DC 20005

**FAX** Publications Unit – 202.783.3400

**ALL SALES FINAL**

THE NATIONAL QUALITY FORUM (NQF) is a private, nonprofit, open membership, public benefit corporation whose mission is to improve the American healthcare system so that it can be counted on to provide safe, timely, compassionate, and accountable care using the best current knowledge. Established in 1999, NQF is a unique public-private partnership having broad participation from all parts of the healthcare industry. As a voluntary consensus standards setting organization, NQF seeks to develop a common vision for healthcare quality improvement, create a foundation for standardized healthcare performance data collection and reporting, and identify a national strategy for healthcare quality improvement. NQF provides an equitable mechanism for addressing the disparate priorities of healthcare's many stakeholders.

**National Quality Forum**  
601 Thirteenth Street, NW, Suite 500 North  
Washington, DC 20005