NATIONAL QUALITY FORUM

National Voluntary Consensus Standards for Home Health Care

A CONSENSUS REPORT

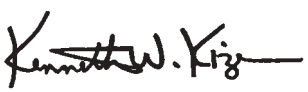
Foreword

The old saying that "there is no place like home" is increasingly relevant in healthcare today. More than 4 million patients currently receive home health services, and the number is steadily increasing. Despite the growing popularity of home care, information to assist patients and their families in assessing the quality of home care providers is scant.

This report details 15 standardized performance measures that will facilitate the comparison of the quality of home health care providers. These measures have been carefully reviewed and endorsed by a diverse group of stakeholders pursuant to the National Quality Forum's (NQF's) formal Consensus Development Process, giving them the special status of voluntary consensus standards.

The primary purpose of these NQF-endorsed™ voluntary consensus standards is to help consumers select high-quality home health care providers. The Centers for Medicare and Medicaid Services will report data from these measures for all Medicare-certified home health agencies on its web site, Home Health Compare (www.medicare.gov/HHCompare). The consensus standards also may be used by home health care providers for internal quality improvement efforts and by purchasers, policymakers, researchers, and regulators for their various purposes.

We thank the Home Health Care Performance Measures Steering Committee and its Technical Advisory Panel, as well as the NQF Member organizations, for their assistance with this project and for their collective dedication to improving the quality of home health care.



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

Permissions
National Quality Forum
601 Thirteenth Street, NW, Suite 500 North
Washington, DC 20005
Fax 202.783.3434
www.qualityforum.org

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National Voluntary Consensus Standards for Home Health Care

Table of Contents

(continued)

National Voluntary Consensus Standards for Home Health Care

Executive Summary

The quality of home health care—defined as any healthcare services provided to clients in their homes, including but not limited to skilled nursing services, home health aide services, palliative and end-of-life care (e.g., in-home hospice services), therapies (i.e., physical, speech-language, and occupational), homemaker services/personal care, social services, infusion and pharmacy services, medical supplies and equipment, and in-home physician services—is a subject of growing national concern. Although more than 4 million patients receive care from approximately 20,000 home health agencies, of which nearly 7,000 are Medicare certified, limited information is available to support quality-based decisions by patients and their families.

Publicly reported measures of performance that allow comparisons among providers have been reported by the Centers for Medicare and Medicaid Services (CMS) for home health care since 2003, when the federal government launched its Home Health Quality Initiative (www.medicare.gov/HHCompare). However, information to be gleaned from this initiative was limited, and consensus among consumers, providers, purchasers, researchers, and quality improvement organizations on these measures had not been achieved. To ensure that those stakeholders had the opportunity to provide their input, CMS asked the National Quality Forum (NQF) to identify a set of voluntary consensus standards for home health care. Based on its review of available measures, NQF has endorsed a set of 15 performance measures, 8 research recommendations, and 8 additional recommendations.

The primary purpose of these home health care voluntary consensus standards is to provide information to help consumers select home health care providers. The standards are intended to emphasize care provided by the range of personnel providing home health care services, as well as the variety of provider organizations delivering home-based care. However, given the paucity of measures in certain areas, these consensus standards are an initial set that collectively only begins to address the quality of home health care services in the United States. Today, CMS is collecting and publicly reporting information on the quality of home health care providers as part of the Home Health Quality Initiative, which is based on the NQF-endorsed™ consensus standards.

National Voluntary Consensus Standards for Home Health Care

- Improvement in ambulation/locomotion
- Improvement in bathing
- Improvement in transferring
- Improvement in management of oral medications
- Improvement in pain interfering with activity
- Improvement in status of surgical wounds
- Improvement in dyspnea
- Improvement in urinary incontinence
- Increase in number of pressure ulcers
- Emergent care for wound infections, deteriorating wound status
- Emergent care for improper medication administration, medication side effects
- Emergent care for hypo/hyperglycemia
- Acute care hospitalization
- Discharge to community
- Emergent care

National Voluntary Consensus Standards for Home Health Care

Introduction

More than 4 million patients receive care from approximately 20,000 home health agencies, of which nearly 7,000 are Medicare certified.[1,2,3,4,5] Expenditures for home health care services, including those provided through public and private insurance insurers and out-of-pocket payments by patients, exceeded $45 billion in 2001, with Medicare and Medicaid covering approximately half of these costs.[6,7,8] Because of the large population receiving services and the significant degree of public funding of care, the need to measure and report on the performance of home health care providers and to understand the quality of services has gained widespread attention.

[1] Based on data from 1999 in *Key Data on Health Care Financing: The 2001 Medicare and Medicaid Statistical Supplement to the Health Care Financing Review.* Available at www.cms.hhs.gov/review/supp/2001/table89.pdf. Last accessed May 6, 2004.

[2] *Home Health Quality Initiative: Overview;* March 21, 2003. Available at www.cms.hhs.gov/quality/hhqi/HHQIOverview.pdf. Last accessed May 3, 2004.

[3] Based on data from 1998-2000, Medicare Payment Advisory Commission (MedPAC), *Report to the Congress: Medicare Payment Policy,* Washington DC: MedPAC; March 2004. Available at www.medpac.gov/publications/congressional_reports/Mar04_Table_Contents.pdf. Last accessed August 2, 2004.

[4] Based on data compiled by the National Association for Home Care and Hospice (NAHCH), Personal communication, Carina T. Deans, NAHCH; August 19, 2004.

[5] U.S. Census Bureau, *Establishment and Firm Size, 1997 Economic Census: Health Care and Social Assistance Subject Series,* Issued October 2000. Report EC97S62S-SZ. Available at www.census.gov/prod/ec97/97s62-sz.pdf. Last accessed August 19, 2004.

[6] Based on data from 1997, in Institute of Medicine (IOM), Committee on Improving Quality in Long-Term Care, *Improving the Quality of Long-Term Care,* Washington, DC: National Academy Press; 2001.

[7] Based on data from 1999 in *Key Data on Health Care Financing: The 2001 Medicare and Medicaid Statistical Supplement to the Health Care Financing Review.* Available at www.cms.hhs.gov/review/supp/2001/table101.pdf. Last accessed May 6, 2004.

[8] Based on data from 2000 in Centers for Medicare and Medicaid Services (CMS), *Health Care Industry Market Update – Home Health;* September, 22 2003. Available at www.cms.hhs.gov/reports/hcimu/hcimu_09222003.pdf. Last accessed August 19, 2004.

As with other types of healthcare, the quality of home health care services that are provided is of concern to consumers, purchasers, providers, and others. However, limited information has been available to support quality-based decisions by patients and their families. Measures of performance that allow comparisons among providers have been publicly reported by the Centers for Medicare and Medicaid Services (CMS) for home health care since 2003[9]; however, consensus among consumers, providers, purchasers, researchers, and quality improvement organizations on these measures had not been achieved. Furthermore, the performance measures reported on the CMS Home Health Compare web site (www.medicare.gov/HHCompare) apply only to those services that are provided to adult, non-maternity patients receiving skilled care under Medicare and Medicaid, which includes less than half of the patients receiving or providers delivering home health care services. For these reasons, a standardized set of performance measures for home health care that has been vetted by all healthcare stakeholders is needed for quality improvement and public accountability. To address this issue, CMS asked the National Quality Forum (NQF) to endorse a set of national voluntary consensus standards for home heath care.

National Voluntary Consensus Standards for Home Health Care

This report presents the NQF-endorsed™ national voluntary consensus standards for home health care and includes a framework for measuring home health care services, the 15 evidence-based performance measures, and related recommendations. These consensus standards are intended to emphasize the care that is provided by the range of personnel providing home health care services (e.g., nurses, homemaker/home health aides, therapists), as well as the variety of provider organizations delivering home-based care (e.g., home health agencies, hospices, private duty nursing agencies).

[9] Eleven home health care quality measures are reported by CMS through its Home Health Quality Initiative via the Home Health Compare web site.

However, given the paucity of measures in certain areas, these consensus standards represent an initial set that only begins to address the quality of home health care services in the United States. It is clear, from the gaps in measurement, that a more comprehensive, yet still parsimonious, set of performance measures is needed to address the care that is provided to all patients receiving home health care.

These consensus standards are endorsed using the NQF Consensus Development Process (appendix G), which includes an assessment of their compatibility with existing provider requirements and accreditation standards. To minimize burden to providers, many of the endorsed consensus standards are consistent with federal requirements and other national reporting initiatives (e.g., CMS' Outcome-Based Quality Improvement [OBQI] and Outcome-Based Quality Monitoring [OBQM] Reports and the Agency for Healthcare Research and Quality's [AHRQ's] National Healthcare Quality Report [NHQR] and National Healthcare Disparities Report [NHDR]). Additionally, to help mitigate measurement burden, NQF is engaged in discussions with CMS regarding the degree to which consensus standards not derived from the Outcome and Assessment Information Set (OASIS) can be generated from OASIS data.

Relationship to Other NQF-Endorsed Consensus Standards

This report does not represent the entire scope of NQF work relevant to the quality of home health care. NQF has completed or is currently working on separate projects relevant to various healthcare settings, patient safety issues, and patient conditions. For example, *A National Framework for Healthcare Quality Measurement and Reporting*[10] provides a standardized framework for identifying voluntary healthcare quality consensus standards and articulates guiding principles and priorities for healthcare quality improvement. The NQF-endorsed framework for home health care performance measurement builds on this consensus standard as well as others previously endorsed by NQF.[11,12]

Serious Reportable Events in Healthcare[13] identifies 27 serious adverse events (e.g., surgery performed on the wrong patient, infant discharged to the wrong person) that NQF believes should be reported by all licensed healthcare facilities. Although not directly applicable to home health care providers, some of these reportable events are consistent with endorsed home health care consensus standards, such as increase in the number of pressure ulcers and emergent care associated with hypoglycemia.

[10] National Quality Forum (NQF), *A National Framework for Healthcare Quality Measurement and Reporting: A Consensus Report,* Washington, DC: NQF; 2002.

[11] NQF, *A Comprehensive Framework for Hospital Care Performance Evaluation: A Consensus Report,* Washington, DC: NQF; 2003.

[12] NQF, *National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set,* Washington, DC: NQF; 2004.

[13] NQF, *Serious Reportable Events in Healthcare: A Consensus Report,* Washington, DC: NQF; 2002.

Similarly, *Safe Practices for Better Healthcare*[14] describes 30 healthcare safe practices that should be used universally in all appropriate settings to reduce the risk of harm resulting from processes, systems, or environments of care; among the practices are several relevant to these consensus standards, including written documentation of patients' preferences for life-sustaining treatment and evaluation of the risks of both pressure ulcers and malnutrition.

Finally, these home health care consensus standards are similar in several ways to those endorsed as *National Voluntary Consensus Standards for Nursing Home Care*.[15] Although those consensus standards are intended for assessing the quality of care for long-term, subacute, and post-acute residents and are not directly relevant to the provision of home health care services, consistency and alignment exist between them. For example, measures related to activities of daily living (ADLs), pain, and pressure ulcers are endorsed in both sets.

The full constellation of consensus standards, along with those endorsed in this report, provide a growing number of NQF-endorsed voluntary consensus standards that directly and indirectly reflect the importance of measuring and improving quality of care. Organizations that adopt these consensus standards will promote the development of safer and higher-quality care for patients throughout the nation.

Identifying the Set

An NQF Steering Committee (appendix C) established the initial approach for identifying, assessing, and screening potential consensus standards. This approach included recommending a definition of home health care, a specific purpose for the performance measures, a framework for measurement, scope, and priority thresholds, and the screening of candidate measures through the application of standardized measure evaluation criteria (appendix D).

Definition of Home Health Care

In general, *home care* is a broad term used to describe an assorted set of client-based services that includes—but is not limited to—social services, transportation, nutrition support and meal delivery, housing, personal care, and homemaker/companion services, as well as those provided by skilled and unskilled providers. Alternatively, *home health care* is a term used to describe a more narrow set of health-related services that generally are provided by home health agencies, homemaker/home health aide agencies, hospice providers, supplemental healthcare staffing agencies, durable medical equipment providers, and pharmaceutical and infusion companies.

Although it is more narrowly defined, home health care encompasses a multidisciplinary collection of services that are

[14] NQF, *Safe Practices for Better Healthcare: A Consensus Report,* Washington, DC: NQF; 2003.

[15] NQF, *National Voluntary Consensus Standards for Nursing Home Care: A Consensus Report,* Washington, DC: NQF; 2004.

provided to a diverse group of patients by a collection of provider organizations and that are paid through a variety of mechanisms. For the purposes of these consensus standards, home health care is defined as:

> any healthcare services provided to clients in their homes, including but not limited to skilled nursing services, home health aide services, palliative and end-of-life care (e.g., in-home hospice services), therapies (i.e., physical, speech-language, and occupational), homemaker services/personal care, social services, infusion and pharmacy services, medical supplies and equipment, and in-home physician services.

Purpose

The primary purpose of the NQF-endorsed set of national voluntary consensus standards for home health care is to improve patient safety, healthcare outcomes, and processes of care (as they relate to the six aims for healthcare quality [safety, benefit, patient-centeredness, timeliness, efficiency, and equity])[16] delivered to patients in their homes across the United States by enabling:

- the evaluation of the performance of home health care services;
- the provision of provider accountability to the public through the adequate supply of information on which stakeholders' understanding of quality home health care is based;
- the identification of priority areas for needed research related to home health care performance;
- the improvement of care coordination and continuity across settings and providers; and
- the facilitation of benchmarking and sharing of best practices among home health care providers.

[16] In *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001), the IOM identifies six aims of the healthcare quality system: safe, effective, efficient, timely, patient centered, and equitable. In October 2000, the NQF Board of Directors adopted a purpose statement that largely mirrors the IOM aims, but states that one aim should be beneficial, which encompasses but also goes beyond effectiveness.

Framework for Measurement

Establishing a conceptual model organizes measures into categories and shapes the nature and content of the consensus standards. It also provides a framework that can be used to delineate the scope of measures that should be included in the future, when research advances and other measures are developed. The framework for home health care performance measurement recognizes that:

- A set of consensus standards is endorsed for quality improvement, while a subset, or a separate set of consensus standards, is endorsed for public accountability.[17]
- Measures of outcome, process, and structure are incorporated under the following 16 domains:
  - Outcome (quality of life and quality of care)
    1. utilization outcomes
    2. functional
    3. physiological
    4. cognitive
    5. emotional/behavioral
    6. perception of care (patient/caregiver)
    7. safety
  - Process
    8. referral/intake
    9. patient assessment
    10. care planning and implementation of treatment
    11. education and consultation (patient/caregiver)
    12. care coordination and continuity
    13. participation in care management (patient/caregiver)
  - Structure
    14. results of external assessments
    15. system and organization characteristics, including utilization, costs, etc.
    16. workforce and human resource characteristics

[17] Fifteen measures have been endorsed by NQF, all for public accountability. See table 1 and appendix D.

- The NQF aims of healthcare quality (i.e., safe, beneficial, patient centered, timely, efficient, equitable) are areas that cross the organizing framework.
- Every consensus standard need not be applicable to all home health care providers, but at least some must apply to all home health care providers regardless of any specific characteristic.
- The framework for home health care performance measurement aligns with non-home health care services/settings and any of their respective frameworks.

The general principles underlying the framework and a visual representation of the measurement framework are provided in appendix D.

Scope

The NQF-endorsed national voluntary consensus standards for home health care encompass measures that:

- apply to all healthcare organizations providing home health services;
- apply to skilled and unskilled providers delivering home health care services;
- are fully open source;[18]
- are fully developed (precisely specified, tested, in regular use);
- are derived from all data sources, with priority given to measures in regular use;
- are outcome measures or have been linked to patient outcomes; and
- reflect those aspects of care over which home health care providers have control, but include the transition of care between home health care providers and others along the continuum of care.

Priority Areas for Measurement

The NQF-endorsed voluntary consensus standards are derived from the following priorities for measurement and reporting of home health care quality:

- measures that are in regular, widespread use and/or required that are for other purposes (i.e., included on CMS' Home Health Compare web site or in AHRQ's NHQR or NHDR);
- at least some measures that apply to **all** home health care patients;
- at least some measures that apply to **all** home health care organizations;
- measures that address high-risk, high-volume, and/or high-cost conditions and/or treatments;[19,20]
- measures that address the six NQF aim areas (i.e., safe, beneficial, patient centered, timely, efficient, and equitable); and

[18] On January 29, 2003, the NQF Board of Directors adopted a policy that NQF will endorse only fully open source measures. Open source is defined by NQF as being "fully disclosed" (i.e., data elements, measure algorithm, if applicable, and risk-adjustment methods/data elements/algorithms are fully described and disclosed; if calculation requires database-dependent coefficients that change frequently, the existence of such coefficients shall be disclosed and the general frequency with which they change shall be disclosed, but the precise numerical value need not be disclosed).

[19] These conditions and treatments were derived from Medicare data in *Key Data on Health Care Financing: The 2001 Medicare and Medicaid Statistical Supplement to the Health Care Financing Review.* Available at www.cms.hhs.gov/review/supp/2001/table52.pdf and www.cms.hhs.gov/review/supp/2001/table53.pdf. Last accessed May 3, 2004.

[20] For purposes of this project, 13 conditions/treatments were identified as the operational definition of "high risk, high volume, high cost." These are heart failure, hypertension, cerebrovascular disease, fracture of the neck of the femur, osteoarthritis, diabetes mellitus, pressure ulcer/decubitus ulcer, pneumonia, chronic airway obstruction, neoplasm, pain (chronic and acute), cognitive impairment/dementia, and depression.

- measures that address priorities for national healthcare quality (e.g., NQF,[21] Institute of Medicine).

For sequencing of implementation and for practicality, lower priority is given to measures that address in-home physician, pharmacy, and durable medical equipment.

Criteria for Selection of Consensus Standards

Measures were evaluated based on the criteria endorsed by NQF, as derived from the previous work of the NQF Strategic Framework Board (box A).[22,23,24,25] These criteria were applied to candidate measures drawn from national home health care performance measurement activities (e.g., CMS, AHRQ, the Joint Commission on Accreditation of Healthcare Organizations, interRAI[26]), prominent national home care outcomes initiatives (e.g., National Core Indicators,[27] Department of Veterans Affairs), efforts by national home health companies, and published research. Additionally, candidate measures were solicited through a national "Call for Measures" that involved more than a dozen home health care provider organizations and specialty societies (i.e., the National Association for Home Care and Hospice, the American Association for Homecare, the National Hospice and Palliative Care Organization, the Visiting Nurse Associations of America), more than 200 NQF Members, and public notice.

The NQF-Endorsed Consensus Standards

The NQF-endorsed consensus standards for home health care encompass 15 measures that facilitate efforts to achieve higher levels of patient safety and better outcomes for patients who receive home health care. These measures are intended for public reporting.[28] Table 1 presents brief descriptions of each measure. Because consensus standards must be specified consistently in order to meet the goal of standardization, each measure is further specified for risk adjustment and other components in appendix A.

[21] In October 2004, NQF attained consensus on national priorities for healthcare quality improvement; in the absence of endorsed priorities at the time these consensus standards were developed, home health care measures were screened against those priorities detailed in the draft consensus report (NQF, *Priorities for National Healthcare Quality: Voluntary Consensus Standards,* Washington DC: NQF; Consensus Draft 2).

[22] The Strategic Framework Board's design for a national quality measurement and reporting system, *Med Care,* 2003;41(1)suppl:I-1—I-89.

[23] NQF, *A National Framework for Healthcare Quality Measurement and Reporting: A Consensus Report.*

[24] NQF, *A Comprehensive Framework for Hospital Care Performance Evaluation: A Consensus Report.*

[25] NQF, *National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set.*

[26] interRAI is a collaborative network of researchers in more than 20 countries committed to improving healthcare for persons who are elderly, frail, or disabled. For more information visit www.interrai.org. Last accessed April 27, 2004.

[27] National Core Indicators were developed by the Human Services Research Institute in collaboration with the National Association of State Directors of Developmental Disabilities Services.

[28] Although designating a subset of measures for disclosure was permissible, all voluntary consensus standards for home health care have been endorsed for public accountability. (See appendix D.)

Box A – Criteria for Evaluation and Selection

Proposed measures will be evaluated for their suitability based on four sets of standardized criteria (e.g., importance, scientific acceptability, usability, and feasibility). Not all acceptable measures will be strong—or equally strong—among each of the four sets of criteria, or strong among each of their related criteria. Rather, a candidate measure should be assessed regarding the extent to which it meets any of the desired criteria within each set:

1. **Importance.** This set addresses the extent to which a measure reflects a variation in quality, low levels of overall performance, and the extent to which it captures key aspects of the flow of care.
   a. The measure addresses one or more key leverage points for improving quality.
   b. Considerable variation in the quality of care exists.
   c. Performance in the area (e.g., setting, procedure, condition) is suboptimal, suggesting that barriers to improvement or best practice may exist.
2. **Scientific acceptability.** A measure is scientifically sound if it produces consistent and credible results when implemented.
   a. The measure is well defined and precisely specified. Measures must be specified sufficiently to be distinguishable from other measures, and they must be implemented consistently across institutions. Measure specifications should provide detail about cohort definition, as well as the denominator and numerator for rate-based measures and categories for range-based measures.
   b. The measure is reliable, producing the same results a high proportion of the time when assessed in the same population.
   c. The measure is valid, accurately representing the concept being evaluated.
   d. The measure is precise, adequately discriminating between real differences in provider performance.
   e. The measure is adaptable to patient preferences and a variety of contexts of settings. Adaptability depends on the extent to which the measure and its specifications account for the variety of patient choices, including refusal of treatment and clinical exceptions.
   f. An adequate and specified risk-adjustment strategy exists, where applicable.
   g. Patient outcomes or consistent evidence is available linking the structure and process measures to patient outcomes.

continued

Box A – Criteria for Evaluation and Selection (continued)

3. **Usability.** Usability reflects the extent to which intended audiences (e.g., consumers, purchasers) can understand the results of the measure and are likely to find them useful for decisionmaking.
   a. The measure can be used by the stakeholder to make decisions.
   b. The differences in performance levels are statistically meaningful.
   c. The differences in performance are practically and clinically meaningful.
   d. Risk stratification, risk adjustment, and other forms of recommended analyses can be applied appropriately.
   e. Effective presentation and dissemination strategies exist (e.g., transparency, ability to draw conclusions, information available when needed to make decisions).
   f. Information produced by the measure can/will be used by at least one healthcare stakeholder audience (e.g., public/consumers, purchasers, clinicians and providers, policymakers, accreditors/regulators) to make a decision or take an action.
   g. Information about specific conditions for which the measure is appropriate has been given.
   h. Methods for aggregating the measure with other, related measures (e.g., to create a composite measure) are defined, if those related measures are determined to be more understandable and more useful in decisionmaking. Risks of such aggregation, including misrepresentation, have been evaluated.
4. **Feasibility.** Feasibility is generally based on the way in which data can be obtained within the normal flow of clinical care and the extent to which an implementation plan can be achieved.
   a. The point of data collection is tied to care delivery, when feasible.
   b. The timing and frequency of measure collection are specified.
   c. The benefit of measurement is evaluated against the financial and administrative burden of implementation and maintenance of the measure set.
   d. An auditing strategy is designed and can be implemented.
   e. Confidentiality concerns are addressed.

Research

During the course of this project, eight high-priority areas for research and measure development emerged. Generally, these areas represent those identified through the framework as high priority, but for which candidate measures either did not exist or failed to meet the established scope and priority thresholds or evaluation criteria. These priority research areas represent gaps in NQF-endorsed consensus standards that, when filled, will contribute to the understanding of quality in this area.

Measures that Address All Home Health Care Populations

To fully understand and differentiate the quality of home health care services, research should be undertaken and an assortment of measures should be developed to address all patients receiving home health care, including but not limited to the following subpopulations: post-acute and chronic care, pediatric, mentally retarded/developmentally disabled, and mentally ill/substance use disorder patients.

Cross-Cutting Measures

For parsimony and comprehensiveness, at least some measures should be developed that are cross-cutting and address important aspects of home health care that are not unique to any particular patient disease, condition or population (e.g., perception of care, pain, patient safety).

Measures that Address All Home Health Care Provider Organizations

Because of the diversity of provider organizations serving patients in their homes, measure development should be undertaken to ensure that future consensus standards address skilled nursing services, home health aide services, palliative and end-of-life care, therapies (i.e., physical, speech-language, and occupational), homemaker services/personal care, social services, infusion and pharmacy services, medical supplies and equipment provision services, and in-home physician services.

Measures that Address All of the NQF Aims

Based on the predominance of consensus standards addressing care that is safe and beneficial, sufficient measures that address the four other NQF aims should be developed, with specific attention to measures that address the degree to which home health care services are patient centered, timely, efficient, and equitable.

Measures in All Framework Areas

To achieve a comprehensive set of home health care consensus standards, measures should be developed to address all areas and domains of the framework for measurement. Specific attention should be paid to developing measures that address all process of care domains (e.g., referral/intake, education/consultation) and structural elements, including system, organizational (e.g., costs), workforce, and human resource (e.g., staffing, staff turnover) characteristics.

Measures that Address High-Risk, High-Volume, High-Cost Conditions and Treatments

Although priority was placed on consensus standards that address 13 identified high-risk, high-volume, high-cost conditions and treatments, research should be undertaken to develop measures that comprehensively address all priority areas: heart failure, hypertension, cerebrovascular disease, fracture of the neck of the femur, osteoarthritis, diabetes mellitus, pressure ulcer/decubitus ulcer, pneumonia, chronic airway obstruction, neoplasms, pain (chronic and acute), cognitive impairment/dementia, and depression. Additionally, because these 13 priorities were derived from Medicare data, research also should be undertaken to identify pediatric-specific high-risk, high-volume, and high-cost conditions/treatments and performance measures that address them.

Care Management and System-Level Coordination Measures

Because coordination and integration of care requires one component of the healthcare system to be dependent on the actions of another, system-level measures should be developed that enable measurement across the continuum of healthcare, foster system accountabilities, and address care coordination, integration, and case management, with a focus on those measures that are suitable for public reporting.

Measures for Which Gaps in Consensus Exist

To address significant gaps in home health care performance measurement, additional research should be undertaken to address a broad range of important areas (box B).

Additional Recommendations

In addition to the NQF-endorsed consensus standards and recommendations for research, eight additional recommendations to accompany the set were identified.

Data and Burden Reduction

Given that a standardized, uniform assessment system (e.g., OASIS) exists for home health agencies certified under Medicare, there is a pressing need for providers, researchers, purchasers, and information system vendors to refine this dataset and any supporting information systems to include all of the data elements necessary to generate non-OASIS-based NQF-endorsed consensus standards.

Information System Readiness

For those organizations that are not currently participating in the federally mandated uniform assessment system (OASIS), providers, researchers, information system vendors, and purchasers should collaborate to make rapid modifications to existing chart-based and electronic data systems to enable the collection of all NQF-endorsed consensus standards.

Sufficiency of Measures Against Evaluation Criteria

As new measures are developed and/or existing measures refined, researchers should continue to investigate and document each measure's adequacy against the evaluation criteria (e.g., the extent to which each measure is important, scientifically acceptable, usable, and feasible).

Box B – Specific Priorities for Research

The following additional areas are essential for research, measure development, and investigation:

Areas for which home health care measures require development

- Adequacy of support services post-discharge (e.g., family and community support, access to primary care) beyond measures of discharge status.
- Unmanaged pain, including measures that incorporate standardized pain scales.
- Infection control and wound management, including the refinement of measures addressing wound healing (e.g., the number of surgical wounds) and the development of outcomes for non-surgical wounds (e.g., stasis ulcers).
- Depression, including the adequacy of assessment, screening, treatment, patient education/counseling.
- Cognitive impairment, dementia, delirium, anxiety, and behavioral problems, with special attention to the implications of patient's cognitive status on safety (e.g., falls, symptom identification, avoidable hospitalizations), self-management (e.g., medication management, treatment decisions), and related healthcare outcomes (e.g., pain, depression, behavioral problems, nutrition, dehydration, receptivity to physical/occupational/speech therapy).
- Quality-of-life assessment tools and measures derived from them that are relevant to the home health care population.
- Patient perception of functional status and its application to home health care.
- Physiological status (e.g., composite measure of laboratory values and diagnostic indicators of improvement/decline—weight, blood pressure, Hemoglobin A1c).
- Risk assessment and associated interventions, including but not limited to falls, medication management, depression, malnutrition, injury, abuse/neglect.
- Behavior change and compliance with recommended plan of care (e.g., tobacco, alcohol, physical activity/exercise screening, and compliance with medication and physician appointments).
- Choice of home health care provider by patients and/or families, especially as it relates to the physically and mentally disabled, psychiatric, and chronic care populations.
- Chronic illness support, disease management, and adherence to evidence-based practice for diabetes, chronic obstructive pulmonary disease, and congestive heart failure.
- Vaccinations, including the administration of vaccinations to prevent pneumococcal and influenza infections.
- Discharge appropriateness, accounting for its suitability for patients and their families and referrals to higher levels of care.
- Unmet patient needs, including the extent to which prescribed home health care services are adequate and reasons for denying admissions.
- Efficiency before and after the provision of home health care to demonstrate the cost savings to the healthcare system.
- Patient and family satisfaction with services and providers of home health care.

Measure refinement opportunities

- Testing and refinement of adverse event measures for purposes of public reporting.
- Granularity of ambulation measure/s to distinguish between improvements resulting from dependence on assistive devices (e.g., independence resulting from patient reliance on a walker versus a cane).
- Relevance and meaningfulness to healthcare stakeholders of measures that address the stabilization of healthcare outcomes (e.g., stabilization of ambulation/locomotion, bathing, feeding).

continued

Box B – Specific Priorities for Research (continued)

Measure refinement opportunities (continued)

- Segmentation and stratification of acute care hospitalization measures to address causal factors.
- Measures considered but excluded from these NQF consensus standards (appendix D details all measures considered but ultimately excluded).
- Application of each measure beyond existing, specified populations (e.g., caregiver support and patient safety to patients beyond those who have dementia, applicability of ADL measures to pediatric populations).
- Measures that are currently under development.

Empirical research, data availability, and technological innovation

- Additional data elements that enable enhanced case mix adjustment for such factors as geographic location (e.g., rural versus urban), and access to adjunct services (e.g., physicians, public clinics, tertiary care hospitals).
- Technological advancements that support the feasibility of measurement (e.g., electronic medical record).
- Technological advancements that support the capability of home health care to positively impact patient outcomes.
- Integration of measurement into daily operations, including collaborative research with information system vendors, to minimize burden and improve data reliability.

Implementation and evaluation of home health care consensus standards

- Application of the consensus standards to specific, additional populations and in non-home health care settings.
- Performance of the consensus standards, including testing the reliability and validity of the measures as a set and developing a composite home health care performance index.
- Investigation of the effectiveness of the consensus standards in improving patient outcomes and achieving healthcare system efficiencies.
- Evaluation of the implementation of the consensus standards by all stakeholders, including consumers' use of home health care performance results.

Equitable Home Health Care Quality

To enable healthcare stakeholders to determine the extent to which home health care services are equitable and in support of NQF's report *Improving Healthcare Quality for Minority Patients,*[29] results of these consensus standards should be stratified and reported by race/ethnicity, age, gender, and patient subpopulations (i.e., condition/diagnosis), unless the sample size is so small that it would jeopardize the confidentiality of individual patients. Such reporting also should be done for the entire home health care population.

Implementation

The readiness of provider organizations to implement these consensus standards should be used as an overall indication of their commitment to high-quality patient care and an environment that is supportive of safety and quality.

Reporting Home Health Care Performance

Entities that report home health care performance results should include guidance to the various stakeholder audiences (e.g., consumers, clinicians and providers, policymakers) on their interpretation and use. Any specific limitations of the performance results, including limitations in the underlying measure specifications, data elements, or risk-adjustment methodologies, should be identified and described for complete disclosure (e.g., reporting entities should acknowledge OBQM/adverse event measures' low frequencies and lack of risk adjustment, as well as their function as markers of possible quality problems rather than as definitive indicators of poor outcomes).

Scope of the Consensus Standards

The NQF-endorsed consensus standards for home health care quality should be viewed by healthcare stakeholders as a set. No individual measure is intended to be used in isolation as an indicator of home health care quality. Rather, stakeholders should use all of the consensus standards, as specified, to gain a more comprehensive assessment of the quality of home health care.

Improving the Set

NQF should review the overall set of national voluntary consensus standards for home health care on a regular basis, and no less frequently than every three years, to revise, evaluate, and identify improvements to the standards.[30] Specific possible improvements for future refinements to the standards are detailed in appendix D.

Acknowledgments

This work was conducted under a subcontract from CMS (subcontract NQF 2-101 with the Delmarva Foundation for Medical Care).

[29] NQF, *Improving Healthcare Quality for Minority Patients,* NQF: Washington, DC; 2002.

[30] This recommendation is consistent with those previously endorsed by NQF's Board of Directors in *A Comprehensive Framework for Hospital Care Performance Evaluation* and *National Voluntary Consensus Standards for Nursing-Sensitive Care.*

Table 1 – National Voluntary Consensus Standards for Home Health Care†

FRAMEWORK CATEGORY	MEASURE	DEFINITION
Functional activities of daily living (ADLs)	1. Improvement in ambulation/ locomotion	Percentage of patients with less impairment in ambulation/ locomotion at discharge from home health care compared with start or resumption of care*
	2. Improvement in bathing	Percentage of patients with less impairment in bathing at discharge from home health care compared with start or resumption of care*
	3. Improvement in transferring	Percentage of patients with less impairment in transferring at discharge from home health care compared with start or resumption of care*
Functional instrumental activities of daily living (IADLs)	4. Improvement in management of oral medications	Percentage of patients with less impairment in management of oral medications at discharge from home health care compared with start or resumption of care*
Physiologic	5. Improvement in pain interfering with activity	Percentage of patients with less impairment in frequency of pain at discharge from home health care compared with start or resumption of care*
	6. Improvement in status of surgical wounds	Percentage of patients whose surgical wounds or skin lesions have healed at discharge from home health care*
	7. Improvement in dyspnea	Percentage of patients with less impairment from shortness of breath at discharge from home health care compared with start or resumption of care*
	8. Improvement in urinary incontinence	Percentage of patients without urinary incontinence or urinary catheter at discharge from home health care when such was present at start or resumption of care, or of patients with less frequent urinary incontinence at discharge than at start or resumption of care*
	9. Increase in number of pressure ulcers	Percentage of patients with more pressure ulcers at discharge from home health care compared with start or resumption of care*
Safety	10. Emergent care for wound infections, deteriorating wound status	Percentage of patients receiving home health care who require emergent care for wound infection or deteriorating wound status
	11. Emergent care for improper medication administration, medication side effects	Percentage of patients receiving home health care who require emergent care for improper medication administration or medication side effects
	12. Emergent care for hypo/ hyperglycemia	Percentage of patients receiving home health care who require emergent care for hypo/hyperglycemia
Utilization	13. Acute care hospitalization	Percentage of patients receiving home health care who are admitted from home health care to acute care hospital
	14. Discharge to community	Percentage of patients discharged from home health care to the community
	15. Emergent care	Percentage of patients receiving home health care who are referred from home health care to emergency services

† See appendix A for specifications, risk adjustment, additional background, and reference material.
* Applies only to patients for whom it is possible for improvement to occur.

Appendix A

Specifications of the National Voluntary Consensus Standards for Home Health Care

The following table summarizes the detailed specifications for each of the National Quality Forum (NQF)-endorsed™ home health care 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 1, 2005.

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 via the "Implementation Feedback Form" found at 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 Home Health Care

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
Functional activities of daily living (ADLs)	1. Improvement in ambulation/ locomotion[1]	Outcome and Assessment Information Set (OASIS)/Outcome-Based Quality Improvement (OBQI)[2,3,4]	Patients for whom the value of OASIS item M0700 Ambulation/Locomotion (a scale ranging from 0 to 5) at discharge from home health care is lower numerically (indicating less impairment) than the value of the same item at the start of or resumption of care	Patients for whom the value of the OASIS item M0700 Ambulation/Locomotion at the start of or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age
	2. Improvement in bathing[1]	OASIS/OBQI[2,3,4]	Patients for whom the value of OASIS item M0670 Bathing (a scale ranging from 0 to 5) at discharge from home health care is lower numerically (indicating less impairment) than the value of the same item at the start of or resumption of care	Patients for whom the value of the OASIS item M0670 Bathing at the start of or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age

[1] Risk adjusted with the logistic regression model described in Shaughnessy PW, Hittle DF, *Overview of Risk Adjustment and Outcome Measures for Home Health Agency OBQI Reports: Highlights of Current Approaches and Outline of Planned Enhancements,* Baltimore, MD: Centers for Medicare and Medicaid Services (CMS); September 2002. Available at www.cms.hhs.gov/oasis/RiskAdj1.pdf. Last accessed August 3, 2004.

[2] All Outcome-Based Quality Improvement (OBQI) and Outcome-Based Quality Monitoring (OBQM) measures are derived from the OASIS datasets. Available at: www.cms.hhs.gov/oasis/oasisdat.asp. Last accessed August 2, 2004.

[3] For all OBQI and OBQM measures, transformation documentation is provided in appendix A, table 1.

[4] Measures derived from OASIS (i.e., OBQIs and OBQMs) apply to "adult patients receiving home health skilled services" (see www.cms.hhs.gov/oasis/hhregs.asp) as a subset of the broader definition of home health care adopted for these national voluntary consensus standards.

Appendix A – Specifications of the National Voluntary Consensus Standards for Home Health Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
Functional activities of daily living (ADLs) *continued*	3. Improvement in transferring[1]	OASIS/OBQI[2,3,4]	Patients for whom the value of OASIS item M0690 Transferring (a scale ranging from 0 to 5) at discharge from home health care is lower numerically (indicating less impairment) than the value of the same item at the start of or resumption of care	Patients for whom the value of the OASIS item M0690 Transferring at the start or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age
Functional instrumental activities of daily living (IADLs)	4. Improvement in management of oral medications[1]	OASIS/OBQI[2,3,4]	Patients for whom the value of OASIS item M0780 Management of Oral Medications (a scale ranging from 0 to 2) at discharge from home health care is lower numerically (indicating less impairment) than the value of the same item at the start of or resumption of care	Patients for whom the value of the OASIS item M0780 Management of Oral Medications at the start of or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age
Physiologic	5. Improvement in pain interfering with activity[5]	OASIS/OBQI[2,3,4]	Patients for whom the value of OASIS item M0420 Frequency of Pain (a scale ranging from 0 to 3) at discharge from home health care is lower numerically (indicating less impairment) than the value of the same item at the start of or resumption of care	Patients for whom the value of the OASIS item M0420 Frequency of Pain at the start of or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age

[5] Although this measure is risk adjusted by CMS for its *Home Health Compare* web site, the measure is not risk adjusted for OBQI reports. The NQF-endorsed version is risk adjusted.

Appendix A – Specifications of the National Voluntary Consensus Standards for Home Health Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
Physiologic *continued*	6. Improvement in status of surgical wounds	OASIS/OBQI [2,3,4]	Patients for whom: ■ the value of OASIS item M0488 Status of Most Problematic (Observable) Surgical Wound (a scale ranging from 1 to 3) at discharge from home health care is lower numerically (indicating more healing) than the value of the same item at the start of or resumption of care **OR** ■ the value of OASIS item M0482 Surgical Wound or M0440 Skin Lesion or Open Wound (0-1 indicators) at discharge from home health care is 0, and the value of M0482 Surgical Wound at the start of or resumption of care is 1	Patients for whom: ■ the value of the OASIS item M0482 Surgical Wound at the start of or resumption of care is >0 (i.e., it is possible for improvement to occur) **AND** ■ the value of OASIS item M0488 Status of Most Problematic (Observable) Surgical Wound is not equal to "NA - No Observable Surgical Wound"	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age
	7. Improvement in dyspnea[1]	OASIS/OBQI [2,3,4]	Patients for whom the value of OASIS item M0490 Short of Breath (a scale ranging from 0 to 4) at discharge from home health care is lower numerically (indicating less impairment) than the value of the same item at the start of or resumption of care	Patients for whom the value of the OASIS item M0490 Short of Breath at the start of or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age

Appendix A – Specifications of the National Voluntary Consensus Standards for Home Health Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
Physiologic *continued*	8. Improvement in urinary incontinence[1]	OASIS/OBQI[2,3,4]	Patients for whom: ■ the value of OASIS item M0520 Urinary Incontinence or Urinary Catheter Presence at discharge from home health care indicates no incontinence when incontinence was indicated at start or resumption of care **OR** ■ the value of OASIS item M0520 Urinary Incontinence or Urinary Catheter Presence at discharge indicates no catheter when catheter was indicated as present at start or resumption of care **OR** ■ the value of OASIS item M0530 Urinary Incontinence (a scale of 0 to 2) at discharge from home health care is lower numerically (indicating less frequent incontinence) than the value of the same item at the start of or resumption of care when urinary incontinence occurs	Patients for whom the value of the OASIS items M0520 Urinary Incontinence or Urinary Catheter Presence or M0530 Urinary Incontinence at start or resumption of care is >0 (i.e., it is possible for improvement to occur)	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age
	9. Increase in number of pressure ulcers	OASIS/OBQM[2,3,4]	Patients for whom on OASIS item M0450 there are more pressure ulcers (all stages 1-4) at the end of care than there were at the beginning time point (summed across all 4 stages at each time point)	Patients for whom on OASIS item M0450 it is possible to have more pressure ulcers at the end time point than at the beginning time point (If there is no wound or pressure ulcer at one or both time points, then a count of 0 is assigned for the time point in question)	■ Number of pressure ulcers is 16 at the beginning time point ■ Episodes of home health care ending with admission to an inpatient facility or death ■ Maternity patients ■ <18 years of age

Appendix A – Specifications of the National Voluntary Consensus Standards for Home Health Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
Safety	10. Emergent care for wound infections, deteriorating wound status	OASIS/OBQM[2,3,4]	Patients for whom this event happens (emergent care reason is wound infection or deteriorating wound status) on transfer to inpatient facility or discharge from agency	All emergent care reasons (except "unknown" on M0840) and patients for whom no emergent utilization occurred	■ Episodes of home care ending with death ■ Maternity patients ■ <18 years of age
	11. Emergent care for improper medication administration, medication side effects	OASIS/OBQM[2,3,4]	Patients for whom this event happens (emergent care reason is improper medication administration or medication side effects) on transfer to inpatient facility or discharge from agency	All emergent care reasons (except "unknown" on M0840) and patients for whom no emergent utilization occurred	■ Episodes of home care ending with death ■ Maternity patients ■ <18 years of age
	12. Emergent care for hypo/ hyperglycemia	OASIS/OBQM[2,3,4]	Patients for whom this event happens (emergent care reason is hypo/hyperglycemia) on transfer to inpatient facility or discharge from agency	All emergent care reasons (except unknown on M0840) and patients for whom no emergent utilization occurred	■ Episodes of home care ending with death ■ Maternity patients ■ <18 years of age
Utilization	13. Acute care hospitalization[1]	OASIS/OBQI[2,3,4]	Patients for whom the response on OASIS item M0855 Inpatient Facility Admission is 1-Hospital	All patients	■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with death ■ Maternity patients ■ <18 years of age
	14. Discharge to community[1]	OASIS/OBQI[2,3,4]	Patients for whom the value of M0100 Reason for Assessment for the episode of care end point assessment is equal to 9-Discharge from Agency, and the response to M0870 Discharge Disposition is 1-Patient remained in the community	All patients	■ Response to M0870 Discharge Disposition is "unknown" ■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with death ■ Maternity patients ■ <18 years of age

Appendix A – Specifications of the National Voluntary Consensus Standards for Home Health Care (continued)

Framework Category	Measure	Source of Measure	Numerator	Denominator	Exclusions
Utilization *continued*	15. Emergent care[1]	OASIS/OBQI[2,3,4]	Patients for whom the response on OASIS item M0830 Emergent Care is 1-Hospital emergency room, 2-Doctor's office emergency visit/house call, or 3-Outpatient department/ clinic emergency	All patients	■ Value of the OASIS item M0830 Emergent Care at discharge or transfer is "unknown" ■ Non-responsive at start or resumption of care ■ Episodes of home health care ending with death ■ Maternity patients ■ <18 years of age

Table 1 – Outcome Measure Transformation Documentation*

MEASURE	TRANSFORMATION DOCUMENTATION
Improvement in ambulation/ locomotion	**IF** M0700_CUR_AMBULATION NOT = 00, 01, 02, 03, 04, 05 OR M0700_CUR_AMBULATION[2] NOT = 00, 01, 02, 03, 04, 05 **THEN** IMP_AMBULATION = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0700_CUR_AMBULATION = 01 AND M0700_CUR_AMBULATION[2] = 00) OR (M0700_CUR_AMBULATION = 02 AND M0700_CUR_AMBULATION[2] = 00, 01) OR (M0700_CUR_AMBULATION = 03 AND M0700_CUR_AMBULATION[2] = 00, 01, 02) OR (M0700_CUR_AMBULATION = 04 AND M0700_CUR_AMBULATION[2] = 00, 01, 02, 03) OR (M0700_CUR_AMBULATION = 05 AND M0700_CUR_AMBULATION[2] = 00, 01, 02, 03, 04) **THEN** IMP_AMBULATION = 1 **ELSE IF** (M0700_CUR_AMBULATION = 01 AND M0700_CUR_AMBULATION[2] = 01, 02, 03, 04, 05) OR (M0700_CUR_AMBULATION = 02 AND M0700_CUR_AMBULATION[2] = 02, 03, 04, 05) OR (M0700_CUR_AMBULATION = 03 AND M0700_CUR_AMBULATION[2] = 03, 04, 05) OR (M0700_CUR_AMBULATION = 04 AND M0700_CUR_AMBULATION[2] = 04, 05) OR (M0700_CUR_AMBULATION = 05 AND M0700_CUR_AMBULATION[2] = 05) **THEN** IMP_AMBULATION = 0 ELSE IF M0700_CUR_AMBULATION = 00 **THEN** IMP_AMBULATION = MISSING
Improvement in bathing	**IF** M0670_CUR_BATHING NOT = 00, 01, 02, 03, 04, 05 OR M0670_CUR_BATHING[2] NOT = 00, 01, 02, 03, 04, 05 **THEN** IMP_BATHING = MISSING STAB_BATHING = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0670_CUR_BATHING = 01 AND M0670_CUR_BATHING[2] = 00) OR (M0670_CUR_BATHING = 02 AND M0670_CUR_BATHING[2] = 00, 01) OR (M0670_CUR_BATHING = 03 AND M0670_CUR_BATHING[2] = 00, 01, 02) OR (M0670_CUR_BATHING = 04 AND M0670_CUR_BATHING[2] = 00, 01, 02, 03) OR (M0670_CUR_BATHING = 05 AND M0670_CUR_BATHING[2] = 00, 01, 02, 03, 04) **THEN** IMP_BATHING = 1 **ELSE IF** (M0670_CUR_BATHING = 01 AND M0670_CUR_BATHING[2] = 01, 02, 03, 04, 05) OR (M0670_CUR_BATHING = 02 AND M0670_CUR_BATHING[2] = 02, 03, 04, 05) OR (M0670_CUR_BATHING = 03 AND M0670_CUR_BATHING[2] = 03, 04, 05) OR (M0670_CUR_BATHING = 04 AND M0670_CUR_BATHING[2] = 04, 05) OR (M0670_CUR_BATHING = 05 AND M0670_CUR_BATHING[2] = 05) **THEN** IMP_BATHING = 0 **ELSE IF** M0670_CUR_BATHING = 00 **THEN** IMP_BATHING = MISSING

* Transformation documentation is the formula or logical expression indicating how the measure is calculated from specific OASIS data fields.

Table 1 – Outcome Measure Transformation Documentation* (continued)

MEASURE	TRANSFORMATION DOCUMENTATION
Improvement in transferring	**IF** M0690_CUR_TRANSFERRING NOT = 00, 01, 02, 03, 04, 05 OR M0690_CUR_TRANSFERRING[2] NOT = 00, 01, 02, 03, 04, 05 **THEN** IMP_TRANSFERRING = MISSING STAB_TRANSFERRING = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0690_CUR_TRANSFERRING = 01 AND M0690_CUR_TRANSFERRING[2] = 00) OR (M0690_CUR_TRANSFERRING = 02 AND M0690_CUR_TRANSFERRING[2] = 00, 01) OR (M0690_CUR_TRANSFERRING = 03 AND M0690_CUR_TRANSFERRING[2] = 00, 01, 02) OR (M0690_CUR_TRANSFERRING = 04 AND M0690_CUR_TRANSFERRING[2] = 00,01,02,03) OR (M0690_CUR_TRANSFERRING = 05 AND M0690_CUR_TRANSFERRING[2] = 00,01,02,03,04) **THEN** IMP_TRANSFERRING = 1 **ELSE IF** (M0690_CUR_TRANSFERRING = 01 AND M0690_CUR_TRANSFERRING[2] = 01, 02, 03, 04, 05) OR (M0690_CUR_TRANSFERRING = 02 AND M0690_CUR_TRANSFERRING[2] = 02,03,04,05) OR (M0690_CUR_TRANSFERRING = 03 AND M0690_CUR_TRANSFERRING[2] = 03, 04, 05) OR (M0690_CUR_TRANSFERRING = 04 AND M0690_CUR_TRANSFERRING[2] = 04, 05) OR (M0690_CUR_TRANSFERRING = 05 AND M0690_CUR_TRANSFERRING[2] = 05) **THEN** IMP_TRANSFERRING = 0 **ELSE IF** M0690_CUR_TRANSFERRING = 00 **THEN** IMP_TRANSFERRING = MISSING
Improvement in management of oral medications	**IF** M0780_CUR_ORAL_MEDS NOT = 00, 01, 02, NA OR M0780_CUR_ORAL_MEDS[2] NOT = 00, 01, 02, NA **THEN** IMP_ORALMEDS = MISSING STAB_ORALMEDS = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0780_CUR_ORAL_MEDS = 01 AND M0780_CUR_ORAL_MEDS[2] = 00) OR (M0780_CUR_ORAL_MEDS = 02 AND M0780_CUR_ORAL_MEDS[2] = 00, 01) **THEN** IMP_ORALMEDS = 1 **ELSE IF** (M0780_CUR_ORAL_MEDS = 01 AND M0780_CUR_ORAL_MEDS[2] = 01, 02) OR (M0780_CUR_ORAL_MEDS = 02 AND M0780_CUR_ORAL_MEDS[2] = 02) **THEN** IMP_ORALMEDS = 0 **ELSE IF** M0780_CUR_ORAL_MEDS = 00, NA OR M0780_CUR_ORAL_MEDS[2] = NA **THEN** IMP_ORALMEDS = MISSING
Improvement in pain interfering with activity	**IF** M0420_FREQ_PAIN NOT = 00, 01, 02, 03 OR M0420_FREQ_PAIN[2] NOT = 00, 01, 02, 03 **THEN** IMP_PAIN = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0420_FREQ_PAIN = 01 AND M0420_FREQ_PAIN[2] = 00) OR (M0420_FREQ_PAIN = 02 AND M0420_FREQ_PAIN[2] = 00, 01) OR (M0420_FREQ_PAIN = 03 AND M0420_FREQ_PAIN[2] = 00, 01, 02) **THEN** IMP_PAIN = 1 **ELSE IF** (M0420_FREQ_PAIN = 01 AND M0420_FREQ_PAIN[2] = 01, 02, 03) OR (M0420_FREQ_PAIN = 02 AND M0420_FREQ_PAIN[2] = 02, 03) OR (M0420_FREQ_PAIN = 03 AND M0420_FREQ_PAIN[2] = 03) **THEN** IMP_PAIN = 0 ELSE IF M0420_FREQ_PAIN = 00 **THEN** IMP_PAIN = MISSING

* Transformation documentation is the formula or logical expression indicating how the measure is calculated from specific OASIS data fields.

Table 1 – Outcome Measure Transformation Documentation* (continued)

MEASURE	TRANSFORMATION DOCUMENTATION
Improvement in status of surgical wounds	**IF** M0440_LESION_WND = 0 OR M0482_SURG_WOUND = 0 **THEN** STAT_INT1 = 00 **ELSE IF** M0482_SURG_WOUND = 1 **THEN** STAT_INT1 = M0488_STAT_PRB_SURGWND **IF** M0440_LESION_WND[2] = 0 OR M0482_SURG_WOUND[2] = 0 **THEN** STAT_INT2 = 00 **ELSE IF** M0482_SURG_WOUND[2] = 1 **THEN** STAT_INT2 = M0488_STAT_PRB_SURGWND[2] **IF** ((M0440_LESION_OPEN_WND = 1 OR M0482_SURG_WOUND = 1) AND STAT_INT1 NOT = 00, 01, 02, 03, NA) OR((M0440_LESION_OPEN_WND[2] = 1 OR M0482_SURG_WOUND[2] = 1) AND STAT_INT2 NOT = 00, 01, 02, 03, NA) **THEN** IMP_STATUSWOUNDS = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (STAT_INT1 = 01 AND STAT_INT2 = 00) OR (STAT_INT1 = 02 AND STAT_INT2 = 00, 01) OR (STAT_INT1 = 03 AND STAT_INT2 = 00, 01, 02) **THEN** IMP_STATUSWOUNDS = 1 **ELSE IF** (STAT_INT1 = 01 AND STAT_INT2 = 01, 02, 03) OR (STAT_INT1 = 02 AND STAT_INT2 = 02, 03) OR (STAT_INT1 = 03 AND STAT_INT2 = 03) **THEN** IMP_STATUSWOUNDS = 0 **ELSE IF** (STAT_INT1 = 00, NA) OR (STAT_INT2 = NA) **THEN** IMP_STATUSWOUNDS = MISSING
Improvement in dyspnea	**IF** M0490_WHEN_DYSPNEIC NOT = 00, 01, 02, 03, 04 OR M0490_WHEN_DYSPNEIC[2] NOT = 00, 01, 02, 03, 04 **THEN** IMP_DYSPNEA = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0490_WHEN_DYSPNEIC = 01 AND M0490_WHEN_DYSPNEIC[2] = 00) OR (M0490_WHEN_DYSPNEIC = 02 AND M0490_WHEN_DYSPNEIC[2] = 00, 01) OR (M0490_WHEN_DYSPNEIC = 03 AND M0490_WHEN_DYSPNEIC[2] = 00, 01, 02) OR (M0490_WHEN_DYSPNEIC = 04 AND M0490_WHEN_DYSPNEIC[2] = 00, 01, 02, 03) **THEN** IMP_DYSPNEA = 1 **ELSE IF** (M0490_WHEN_DYSPNEIC = 01 AND M0490_WHEN_DYSPNEIC[2] = 01, 02, 03, 04) OR (M0490_WHEN_DYSPNEIC = 02 AND M0490_WHEN_DYSPNEIC[2] = 02, 03, 04) OR (M0490_WHEN_DYSPNEIC = 03 AND M0490_WHEN_DYSPNEIC[2] = 03, 04) OR (M0490_WHEN_DYSPNEIC = 04 AND M0490_WHEN_DYSPNEIC[2] = 04) **THEN** IMP_DYSPNEA = 0 **ELSE IF** M0490_WHEN_DYSPNEIC = 00 **THEN** IMP_DYSPNEA = MISSING

* Transformation documentation is the formula or logical expression indicating how the measure is calculated from specific OASIS data fields.

Table 1 – Outcome Measure Transformation Documentation* (continued)

MEASURE	TRANSFORMATION DOCUMENTATION
Improvement in urinary incontinence	**IF** M0520_UR_INCONT NOT = 00, 01, 02 OR (M0520_UR_INCONT = 01 AND M0530_UR_INCONT_OCCURS NOT = 00, 01, 02) OR (M0520_UR_INCONT = 00, 02 AND M0530_UR_INCONT_OCCURS = 00, 01, 02) OR M0520_UR_INCONT[2] NOT = 00, 01, 02 OR (M0520_UR_INCONT[2] = 01 AND M0530_UR_INCONT_OCCURS[2] NOT = 00, 01, 02) OR M0520_UR_INCONT[2] = 00, 02 AND M0530_UR_INCONT_OCCURS[2] = 00, 01, 02) **THEN** OUT_INTERIM1 = MISSING OUT_INTERIM2 = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** M0520_UR_INCONT = 00 **THEN** OUT_INTERIM1 = 0 **ELSE IF** M0530_UR_INCONT_OCCURS = 00 **THEN** OUT_INTERIM1 = 1 **ELSE IF** M0530_UR_INCONT_OCCURS = 01 **THEN** OUT_INTERIM1 = 2 **ELSE IF** M0530_UR_INCONT_OCCURS = 02 **THEN** OUT_INTERIM1 = 3 **ELSE IF** M0520_UR_INCONT_OCCURS = 02 **THEN** OUT_INTERIM1 = 4 **IF** M0520_UR_INCONT[2] = 00 **THEN** OUT_INTERIM2 = 0 **ELSE IF** M0530_UR_INCONT_OCCURS[2] = 00 **THEN** OUT_INTERIM2 = 1 **ELSE IF** M0530_UR_INCONT_OCCURS[2] = 01 **THEN** OUT_INTERIM2 = 2 **ELSE IF** M0530_UR_INCONT_OCCURS[2] = 02 **THEN** OUT_INTERIM2 = 3 **ELSE IF** M0520_UR_INCONT[2] = 02 **THEN** OUT_INTERIM2 = 4 **IF** OUT_INTERIM1 = NOT = 0, 1, 2, 3, 4, OR OUT_INTERIM2 NOT = 0, 1, 2, 3, 4 **THEN** IMP_INCONT = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (OUT_INTERIM1 = 1 AND OUT_INTERIM2 = 0) OR (OUT_INTERIM1 = 2 AND OUT_INTERIM2 = 0, 1) OR (OUT_INTERIM1 = 3 AND OUT_INTERIM2 = 0, 1, 2) OR (OUT_INTERIM1 = 4 AND OUT_INTERIM2 = 0, 1, 2, 3) **THEN** IMP_INCONT = 1 **ELSE IF** (OUT_INTERIM1 = 1 AND OUT_INTERIM2 = 1, 2, 3, 4) OR (OUT_INTERIM1 = 2 AND OUT_INTERIM2 = 2, 3, 4) OR (OUT_INTERIM1 = 3 AND OUT_INTERIM2 = 3, 4) OR (OUT_INTERIM1 = 4 AND OUT_INTERIM2 = 4) **THEN** IMP_INCONT = 0 **ELSE IF** OUT_INTERIM1 = 0 **THEN** IMP_INCONT = MISSING

* Transformation documentation is the formula or logical expression indicating how the measure is calculated from specific OASIS data fields.

Table 1 – Outcome Measure Transformation Documentation* (continued)

MEASURE	TRANSFORMATION DOCUMENTATION

Increase in number of pressure ulcers	1 if PRESSURE1 < 16 and PRESSURE2 > PRESSURE1;
	0 if M0100_ASSMT_REASON[2] = 09 and PRESSURE1 < 16, and PRESSURE2 <= PRESSURE1; MISSING Otherwise.
	This measure requires the computation of two interim measures. PRESSURE1 represents the number of stageable pressure ulcers at SOC/ROC while PRESSURE2 represents the number of stageable pressure ulcers at DC.
	PRESSURE1
	M0450_NBR_PRSULC_STG1 + M0450_NBR_PRSULC_STG2 + M0450_NBR_PRSULC_STG3 + M0450_NBR_PRSULC_STG4
	if M0100_ASSMT_REASON[2] = 09 and M0440_LESION_OPEN_WND = 1 and M0445_PRESS_ULCER = 1;
	0 if M0100_ASSMT_REASON[2] = 09 and (M0440_LESION_OPEN_WND = 0 or M0445_PRESS_ULCER = 0); MISSING otherwise.
	PRESSURE2
	M0450_NBR_PRSULC_STG1[2] + M0450_NBR_PRSULC_STG2[2] + M0450_NBR_PRSULC_STG3[2] + M0450_NBR_PRSULC_STG4[2]
	if M0100_ASSMT_REASON[2] = 09 and M0440_LESION_OPEN_WND[2] = 1 and M0445_PRESS_ULCER[2] = 1;
	0 if M0100_ASSMT_REASON[2] = 09 and (M0440_LESION_OPEN_WND[2] = 0 or M0445_PRESS_ULCER[2] = 0); MISSING otherwise.

Emergent care for wound infections, deteriorating wound status	1 if M0100_ASSMT_REASON[2] = 06,07,09 and M0840_ECR_WOUND[2] = 1; 0 if M0100_ASSMT_REASON[2] = 06,07,09 and M0830_EC_UNKNOWN[2] = 0 and (M0830_EC_NONE[2] = 1 or M0840_ECR_UNKNOWN[2] = 0); MISSING Otherwise.
Emergent care for improper medication administration, medication side effects	1 if M0100_ASSMT_REASON[2] = 06,07,09 and M0840_ECR_MEDICATION[2] = 1; 0 if M0100_ASSMT_REASON[2] = 06,07,09 and M0830_EC_UNKNOWN[2] = 0 and (M0830_EC_NONE[2] = 1 or M0840_ECR_UNKNOWN[2] = 0); MISSING Otherwise.
Emergent care for hypo/hyperglycemia	1 if M0100_ASSMT_REASON[2] = 06,07,09 and M0840_ECR_HYPOGLYC[2] = 1; 0 if M0100_ASSMT_REASON[2] = 06,07,09 and M0830_EC_UNKNOWN[2] = 0 and (M0830_EC_NONE[2] = 1 or M0840_ECR_UNKNOWN[2] = 0); MISSING Otherwise.
Acute care hospitalization	**IF** (M0100_ASSMT_REASON[2] = 06, 07 AND M0855_INPAT_FACILITY[2] NOT = 01, 02, 03, 04) OR (M0100_ASSMT_REASON[2] = 09 AND M0855_INPAT_FACILITY[2] NOT = NA) OR (M0855_INPAT_FACILITY[2] = 01 AND M0890_HOSP_RSN[2] NOT = 01, 02, 03, UK) **THEN** UTIL_HOSPDC = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** (M0100_ASSMT_REASON[2] = 06, 07 AND M0855_INPAT_FACILITY [2]= 01) **THEN** UTIL_HOSPDC = 1 ELSE UTIL_HOSPDC = 0

* Transformation documentation is the formula or logical expression indicating how the measure is calculated from specific OASIS data fields.

Table 1 – Outcome Measure Transformation Documentation* (continued)

MEASURE	TRANSFORMATION DOCUMENTATION
Discharge to community	**IF** M0100_ASSMT_REASON[2] = 09 AND M0870_DSCHG_DISP[2] NOT = 01, 02, 03, UK **THEN** UTIL_DCCOMM = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** M0100_ASSMT_REASON[2] = 09 AND M0870_DSCHG_DISP[2] = 01 **THEN** UTIL_DCCOMM = 1 **ELSE IF** (M0100_ASSMT_REASON[2] = 09 AND M0870_DSCHG_DISP[2] = 02, 03) OR M0100_ASSMT_REASON[2] = 06, 07 **THEN** UTIL_DCCOMM = 0 **ELSE IF** M0870_DSCHG_DISP[2] = UK **THEN** UTIL_DCCOMM = MISSING
Emergent care	**IF** M0830_EC_NONE[2] NOT = 0, 1 OR M0830_EC_EMER_ROOM[2] NOT = 0, 1 OR M0830_EC_MD_OFF[2] NOT = 0, 1 OR M0830_EC_OUTPAT[2] NOT = 0, 1 OR M0830_EC_UNKNOWN[2] NOT = 0, 1 OR ((M0830_EC_UNKNOWN[2] = 1 OR M0830_EC_NONE[2] = 1) AND (M0830_EC_EMER_ROOM[2] = 1 OR M0830_EC_MD_OFF[2] = 1 OR M0830_EC_OUTPAT[2] = 1)) OR (M0830_EC_NONE[2] = 0 AND M0830_EC_EMER_ROOM[2] = 0 AND M0830_EC_MD_OFF[2] = 0 AND M0830_EC_OUTPAT[2] = 0 AND M0830_EC_UNKNOWN[2] = 0) OR (M0830_EC_UNKNOWN[2] = 1 AND M0830_EC_NONE[2] = 1) **THEN** UTIL_EMERGENT = MISSING '**[SHOULD NEVER OCCUR]** **ELSE IF** M0830_UNKNOWN[2] = 1 **THEN** UTIL_EMERGENT = MISSING **ELSE IF** M0830_EC_NONE[2] = 0 **THEN** UTIL_EMERGENT = 1 **ELSE IF** M0830_EC_NONE[2] = 1 **THEN** UTIL_EMERGENT = 0

* Transformation documentation is the formula or logical expression indicating how the measure is calculated from specific OASIS data fields.

Sources:

U.S. Department of Health and Human Services (DHHS). *Outcome-Based Quality Improvement Reports: Technical Documentation of Measures.* Baltimore, MD: Centers for Medicare and Medicaid Services (CMS); September 2003. Available at www.cms.hhs.gov/oasis/riskadjappb.pdf. Last accessed August 17, 2004.

U.S. DHHS. *Outcome-Based Quality Monitoring Reports: Technical Documentation of Measures.* Baltimore, MD: CMS. March 2002; Revised (Corrections Made) October 2003.

Appendix B
Members and Board of Directors

Members*

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AFT Healthcare
American Hospice Foundation
Consumers Advancing Patient Safety
Consumers' Checkbook
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American Heart Association
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American Managed Behavioral Healthcare Association
American Medical Association
American Medical Group Association
American Nurses Association
American Optometric Association
American Osteopathic Association
American Psychiatric Institute for Research and Education
American Society for Therapeutic Radiology and Oncology
American Society of Clinical Oncology
American Society of Health-System Pharmacists
America's Health Insurance Plans
Ascension Health
Association for Professionals in Infection Control and Epidemiology
Association of Professors of Medicine
Aurora Health Care

*When voting under the NQF Consensus Development Process occurred for this report.

Bayhealth Medical Center
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
Calgary Health Region
Catholic Health Association of the United States
Catholic Healthcare Partners
Catholic Health Initiatives
Centura Health
Child Health Corporation of America
CHRISTUS Health
CIGNA Healthcare
College of American Pathologists
Connecticut Hospital Association
Council of Medical Specialty Societies
Detroit Medical Center
Empire BlueCross/BlueShield
Exempla Healthcare
Federation of American Hospitals
First Health
Florida Hospital Medical Center
Gentiva Health Services
Good Samaritan Hospital
Greater New York Hospital Association
Hackensack University Medical Center
HCA
Healthcare Leadership Council
HealthHelp
HealthPartners
Health Plus
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/Mount Diablo Health System
Kaiser Permanente
KU Med at the University of Kansas Medical Center
Los Angeles County-Department of Health Services
Lutheran Medical Center
Mayo Foundation
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Memorial Health University Medical Center
Memorial Sloan-Kettering Cancer Center
The Methodist Hospital
Milliman Care Guidelines
National Association for Homecare and Hospice
National Association Medical Staff Services
National Association of Chain Drug Stores
National Association of Children's Hospitals and Related Institutions
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National Consortium of Breast Centers
National Hospice and Palliative Care Organization
National Rural Health Association
Nebraska Heart Hospitals
Nemours Foundation
New York Presbyterian Hospital and Health System
North Carolina Baptist Hospital
North Shore-Long Island Jewish Health System
North Texas Specialty Physicians
Norton Healthcare
Oakwood Healthcare System
PacifiCare
PacifiCare Behavioral Health
Parkview Community Hospital and Medical Center
Partners HealthCare
Premier
Robert Wood Johnson University Hospital-Hamilton
Robert Wood Johnson University Hospital–New Brunswick
Sentara Norfolk General Hospital
Sisters of Charity of Leavenworth Health System
Sisters of Mercy Health System
Society of Thoracic Surgeons
Spectrum Health
State Associations of Addiction Services
State University of New York-College of Optometry
St. Mary's Hospital Medical Center
St. Vincent Regional Medical Center
Sutter Health
Tampa General Hospital
Tenet Healthcare
Triad Hospitals
Trinity Health
UnitedHealth Group
University Health System Consortium
University Health Systems of Eastern Carolina
University Hospitals of Cleveland
University of California-Davis Medical Group
University of Michigan Hospitals and Health Centers
University of Pennsylvania Health System
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General Motors
Greater Detroit Area Health Council
HealthCare 21
The Leapfrog Group
Lehigh Valley Business Conference on Health
Maine Health Management Coalition
Midwest Business Group on Health
National Association of State Medicaid Directors
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American Association of Colleges of Nursing
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Forum of End Stage Renal Disease Networks
Health Care Excel
Health Grades
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Institute for Clinical Systems Improvement
Institute for Safe Medication Practices
Integrated Healthcare Association
Integrated Resources for the Middlesex Area
Iowa Foundation for Medical Care
IPRO
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
Medstat
National Academy of State Health Policy
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 Research Corporation
New England Healthcare Assembly
Niagara Health Quality Coalition
Northeast Health Care Quality Foundation
Ohio KePRO
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Partnership for Prevention
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Pfizer

Physician Consortium for Performance Improvement
Press, Ganey Associates
Professional Research Consultants
ProHealth Care
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Research!America
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Sanofi-Synthélabo
Select Quality Care
Society for Healthcare Epidemiology of America
Solucient
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Uniform Data System for Medical Rehabilitation
United Hospital Fund
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URAC
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US Pharmacopeia
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American Health Quality Association
Washington, DC

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Boston, MA

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State Medicaid Director
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President and Chief Executive Officer
National Quality Forum
Washington, DC

Norma M. Lang, PhD, RN
Lillian S. Brunner Professor of Medical Surgical Nursing
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Philadelphia, PA

Brian W. Lindberg
Executive Director
Consumer Coalition for Quality Health Care
Washington, DC

Mark B. McClellan, MD, PhD[9]
Administrator
Centers for Medicare and Medicaid Services
Washington, DC

Debra L. Ness
Executive Vice President
National Partnership for Women and Families
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Director
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Lansing, MI

Paul H. O'Neill
Pittsburgh, PA

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Chief Executive Officer
Employer Health Care Alliance Cooperative
Madison, WI

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Chair
Virginia Cardiac Surgery Quality Initiative
Norfolk, VA

Thomas A. Scully[12]
Administrator
Centers for Medicare and Medicaid Services
Washington, DC

Gerald M. Shea
Assistant to the President for Government Affairs
AFL-CIO
Washington, DC

Dennis G. Smith[13]
Acting Administrator
Centers for Medicare & Medicaid Services
Washington, DC

Janet Sullivan, MD
Chief Medical Officer
Hudson Health Plan
Tarrytown, NY

James W. Varnum
President
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Senior Vice President for Public Policy and Government Affairs
March of Dimes
Washington, DC

Dale Whitney[14]
Corporate Health Care Director
UPS
Atlanta, GA

Liaison Members

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Chicago, IL

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

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Director
National Institutes of Health
Bethesda, MD

** During project period

[1] Resigned from Board of Directors in February 2004; renamed to Board of Directors and named Chair-Elect in May 2005

[2] Vice-Chair since November 2004

[3] Since February 2005

[4] Since May 2004

[5] Through December 2004

[6] Through February 2005

[7] Through January 2005

[8] Through November 2004

[9] Since April 2004

[10] Since January 2005

[11] Since January 2005

[12] Through December 2003

[13] Through March 2004

[14] Since February 2004

[15] Through May 2004

[16] Through September 2004

[17] Since June 2004

Appendix C
Steering Committee and Project Staff

Steering Committee

Kathleen E. Chavanu, MSN, RN (Co-Chair)
Children's National Medical Center
Washington, DC

Charles Sabatino, Esq. (Co-Chair)
American Bar Association,
Commission on Law and Aging
Washington, DC

Margaret Berkhousen, RN, BA
Trinity Home Health Services
Farmington Hills, MI

Stephen R. Connor, PhD
National Hospice and Palliative Care Organization
Alexandria, VA

Penny Feldman, PhD
Visiting Nurse Service of New York
New York, NY

Christie L. Franklin, RN
AseraCare
Fort Smith, AR

Jon D. Fuller, MD
VA Palo Alto Health Care System
Palo Alto, CA

Sally Kozak, RN
Department of Public Welfare/Office of Medical Assistance Programs
Harrisburg, PA

Katie Maslow, MSW
Alzheimer's Association
Washington, DC

Cathy S. Meckes
CareLink
Quincy, IL

Lynn V. Mitchell, MD, MPH
Oklahoma Healthcare Authority
Oklahoma City, OK

Maryanne L. Popovich, RN, MPH
Joint Commission on Accreditation of Healthcare Organizations
Oakbrook Terrace, IL

John C. Rother, JD
AARP
Washington, DC

Liaison Members

Lisa Hines, MS, BSN
Centers for Medicare and Medicaid Services
Baltimore, MD

Karen Pace, PhD, RN
Delmarva Foundation for Medical Care
Easton, MD

Debra Saliba, MD, MPH
Veterans Affairs Health Services Research and Development Service/RAND Health
Los Angeles, CA

Robert E. Schlenker, PhD
University of Colorado Health Sciences Center
Aurora, CO

Teresa Twilley, RN, MS
Home Health Corporation of America
Salisbury, MD

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

Dianne Feeney, BSN, MS
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Merilyn D. Francis, RN, MPP
Assistant Vice President

Tammy P. McBride, RN, BSN
Senior Program Director

Rodger J. Winn, MD
Clinical Consultant

Erika B. Wolter, MBA, MPH
Research Assistant

Sabrina Zadrozny
Research Assistant

Appendix D
Commentary

Introduction

In late 2003, the National Quality Forum (NQF) initiated a project to achieve consensus on a set of home health care performance measures. Specifically, under the contract for this project, the Centers for Medicare and Medicaid Services (CMS) identified a guiding objective—"to endorse a set of voluntary consensus standards for public reporting of the quality of home health care provided by home health agencies, as defined by the Medicare program." NQF could, at its discretion, expand the scope of endorsed voluntary consensus standards for home health care quality, provided it did so with funds other than those attached to the contract. Additionally, the project's purposes were to identify a framework for how to measure home health care performance and prioritize unresolved issues and research needs that would guide the research and measure development community.

As with other NQF consensus projects, a Steering Committee representing key healthcare constituencies—including consumers, providers, purchasers, and research and quality improvement organizations—was convened, and in August 2004 it recommended a set of measures that was sent to NQF Members and the public for comment in accordance with NQF's Consensus Development Process. This appendix summarizes the deliberations supporting the recommended measures and additional recommendations of the Steering Committee, as well as relevant discussions or changes related to the NQF Member and public review period.

The NQF-endorsed™ consensus standards for home health care encompass 15 measures that facilitate efforts to achieve higher levels of patient safety and better outcomes for patients who receive home health care.

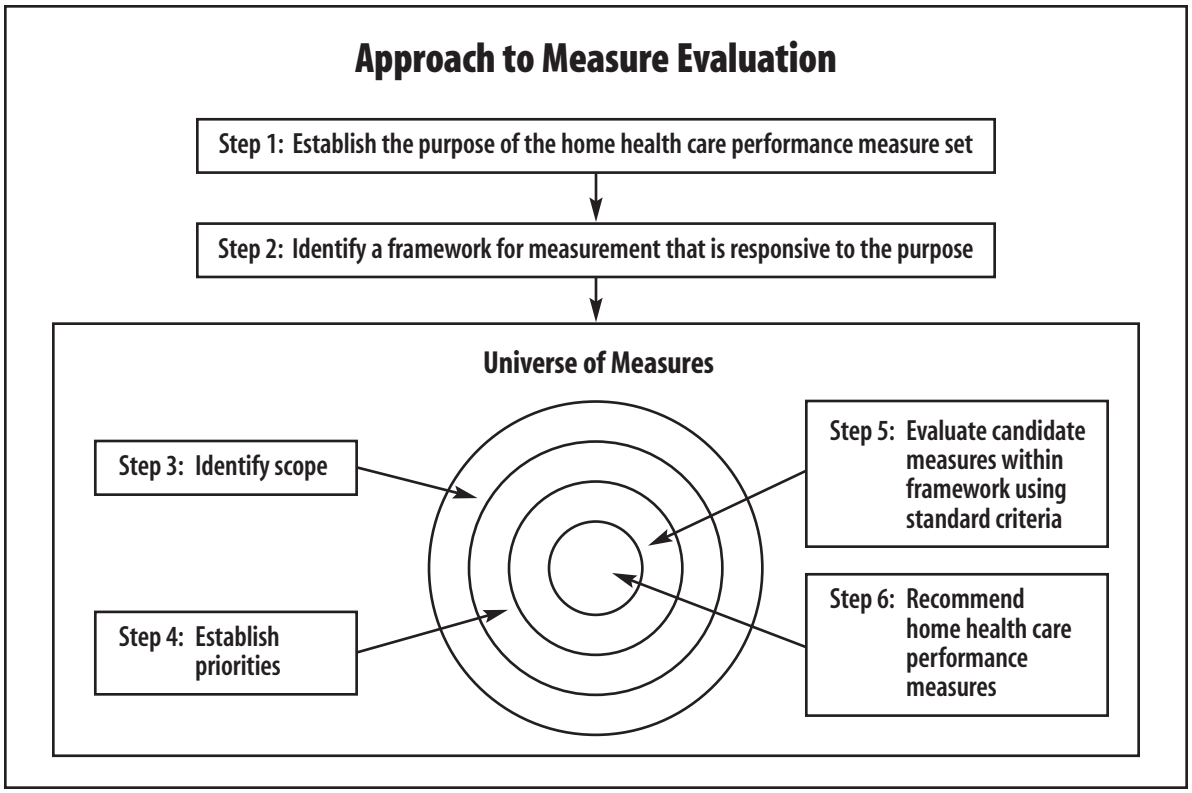
Approach to Measure Screening and Evaluation

The Steering Committee's overall approach to measure screening and evaluation followed a six-step process. This process entailed establishing specific decision rules—or thresholds—to screen candidate measures and is illustrated in the diagram below.

The application of these decision rules narrowed the inventory of measures from an extensive collection of all potential candidate measures ("universe") to those that met the established boundaries.

Defining Home Health Care

A critical step taken by the Steering Committee in the development of these consensus standards was the formulation of a definition of home health care. Because home health care is a complex system of multidisciplinary services delivered to a group of diverse patients in their homes by a collection of provider organizations, and is paid through a variety of mechanisms (e.g., Medicare, Medicaid, Veterans Health Administration [VHA], Older Americans Act, private insurance), agreeing on a definition was critical to the establishment of standards. The degree and maturity of measure development among certain



home health care providers/patients was considered, as was:

- the complexity of delivery systems, patients served, and the range of providers;
- the extent to which performance measurement should not be based on artificial "silos";
- the magnitude of differences in patients served;
- the complexity of the project and the Steering Committee's task; and
- the advantages and disadvantages of separating the endorsement of standards for various populations/providers.

Although NQF staff recommended that the Steering Committee should adopt a broad definition of home health care, for sequencing and practicality, staff also recommended that the initial measure set should be limited to measures that apply to home health care services provided to clients under the Medicare program. Committee members noted the following concerns with such an approach:

- strong concerns that this more narrow definition would limit the Committee to rely exclusively on measures derived from the Outcome and Assessment Information Set (OASIS);
- recognition that some professional services and in-home physician services would not be addressed by the more narrow scope;
- general agreement that additional services need to be represented in the broad definition, including palliative care/end-of-life care, pharmacy services, infusion services, and in-home physician services;
- consensus that the definition should not exclude special populations, especially those that are vulnerable (e.g., pediatric populations, mentally/physically disabled); and
- controversial reaction to the narrow definition proposed for practicality—with some recognizing that a focus on the Medicare population would be too limiting, result in a set of measures identical to what already has been promulgated, and inadvertently suggest that what constitutes quality home health care differs by payment source.

Others shared the concern that a broad scope would be impossible to accomplish. Several alternatives to the more narrow definition were suggested (e.g., health and personal care services, services provided to adults, services provided to patients as appropriate, skilled nursing services). The Steering Committee initiated a vote to gauge support for adopting the broad definition alone, but it did not complete the vote.

Ultimately, the Steering Committee agreed to avoid establishing a definition based on practicality or sequencing and opted instead to adopt a broad definition of home health care:

> Any healthcare services provided to clients in their homes, including but not limited to skilled nursing services, home health aide services, palliative and end-of-life care (e.g., in-home hospice services), therapies (i.e., physical, speech-language, and occupational), homemaker services/personal care, social services, infusion and pharmacy services, medical supplies and equipment, and in-home physician services.

During the public comment period, various concerns were raised regarding the approach taken by the Steering Committee. Specifically, the broad definition led to confusion about the extent to which the proposed standards address all patients, as well as the degree to which the proposed standards apply to each of the diverse patient populations included in the definition. For these reasons, although the original definition of home health care was retained, measure developers clarified, to the extent possible, the degree to which each of the proposed standards applies to each of the various patient populations. Additionally, narrative adjustments to the consensus standards were made to acknowledge the differences between "home care" and "home health care" and to clarify the inclusion of in-home hospice services in the original definition.

Establishing the Purpose of the Set

Before identifying candidate measures, the Steering Committee articulated specific purpose statements that would inform the measure selection and prioritization process. Specifically, measures that met one or more of the purposes would be considered for inclusion, while measures that might be adequate in other ways, but that did not satisfy one or more purposes, would be considered beyond the scope of the project.

In its consideration of a purpose, the Committee noted the following issues:

- collective agreement that the fundamental purpose of the project should be to improve patient safety, healthcare outcomes, and processes of care;
- concern that any purpose should be attainable in order to avoid prohibitively ambitious objectives;
- clarification that an overall objective of "improving home health care" should be further specified in order to identify aspects of care that should be prioritized for improvement;
- recognition that measurement alone does not improve care, but serves as a mechanism to identify opportunities and accelerate quality improvement;
- concern that improvement, as a purpose, may not fully represent the range of services delivered and/or outcomes achieved in home health care, especially among those patients for whom decline is inevitable (e.g., high rates do not always represent negative events/outcomes);
- recognition that some programs and home health care organizations focus on maintaining comfort levels in the end stages of life rather than on rehabilitation and restoration;
- varied reactions to attempts to prioritize the purpose statements—specifically, some members preferred to list the most important/critical purposes first, while others proposed to list the most actionable/possible first;
- support for home health's role in continuity of care, while recognizing its limited control over other providers along the continuum; and
- mixed reaction to the role of public accountability and rewards as a purpose. Some Committee members favored including this, while others were concerned that the role of performance measurement in rewarding and incentivizing may be outside the scope of the project and that the project should focus on providing the information upon which each purchaser/customer can make decisions as it sees fit.

Ultimately, the Steering Committee recommended the following statement of purpose:

> The primary purpose of the NQF-endorsed set of national voluntary consensus standards for home health care is to improve patient safety, healthcare outcomes, and processes of care (as they relate to the six aims for healthcare quality [safety, benefit, patient-centeredness, timeliness, efficiency, and equity])[1] delivered to patients in their homes across the United States by enabling:
>
> - the evaluation of the performance of home health care services;
> - the provision of provider accountability to the public through the adequate supply of information upon which stakeholders' understanding of quality home health care is based;
> - the identification of priority areas for needed research related to home health care performance;
> - the improvement of care coordination and continuity across settings and providers; and
> - the facilitation of benchmarking and sharing of best practices among home health care providers.

Identifying the Framework for Measurement

After identifying the purpose of the measure set, the Steering Committee constructed a conceptual model to serve as the basis for measure selection. In determining its framework, the Steering Committee reviewed general research on organizing frameworks for healthcare quality and home health care literature to determine whether existing frameworks could be adapted for this purpose.

Based on this review of existing frameworks, the following principles were adopted to drive the development of a framework for home health care performance measurement:

- A set of measures should be endorsed for quality improvement, while a subset, or a separate set of measures, should be endorsed for public accountability.[2]
- Measures of outcome, process, and structure should be incorporated under the following 16 domains:

Outcome
(quality of life and quality of care)

1. utilization outcomes
2. functional
3. physiological
4. cognitive
5. emotional/behavioral
6. perception of care (patient/caregiver)
7. safety

[1] In *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001), the Institute of Medicine (IOM) identifies six aims of the healthcare quality system: safe, effective, efficient, timely, patient centered, and equitable. In October 2000, the National Quality Forum (NQF) Board of Directors adopted a purpose statement that largely mirrors the IOM aims, but states that one aim should be beneficial, which encompasses but also goes beyond effectiveness.

[2] Fifteen measures are endorsed by NQF; all are endorsed for public accountability.

Process

8. referral/intake
9. patient assessment
10. care planning and implementation of treatment
11. education and consultation (patient/caregiver)
12. care coordination and continuity
13. participation in care management (patient/caregiver)

Structure

14. results of external assessments
15. system and organization characteristics including utilization, costs, etc.
16. workforce and human resource characteristics

- The NQF aims of healthcare quality (i.e., safe, beneficial, patient centered, timely, efficient, equitable) cross the organizing framework.
- Every consensus standard need not be applicable to all home health care providers, but at least some must apply to all home health care providers regardless of any specific characteristic.
- The framework for home health care performance measurement should align with non-home health care services/ settings and any of their respective frameworks.

A representation of these principles follows in figure 1, including a display of the 28 measures recommended by the Steering Committee within this framework.

Identifying the Scope of the Set

Establishing the scope of the home health care performance measure set required the Steering Committee to set boundaries to limit the evaluation of candidate measures to those that were most appropriate to the needs of the overall project. The scope for this initial effort was defined as measures that:

- apply to all healthcare organizations providing home health services;
- apply to skilled and unskilled providers delivering home health care services;
- are fully open source[3];
- are fully developed (precisely specified, tested, and in regular use);
- are derived from all data sources, with priority given to measures in regular use;
- are outcome measures or have been linked to patient outcomes; and
- reflect those aspects of care over which home health care providers have control, but include the transition of care between home health care providers and others along the continuum of care.

Establishing Priorities for Measurement

Within the defined scope, the Steering Committee agreed to limit the measure set further by identifying priorities for measurement. By establishing priorities, the Steering Committee acknowledged that not all candidate measures deserve

[3] On January 29, 2003, the NQF Board of Directors adopted a policy that NQF would endorse only fully open source measures.

Figure 1 – Home Health Care Domains and Measures

equal consideration, particularly given the pressing need for measures in some areas and the underdeveloped state of home health care performance measurement. In the absence of quantitative mechanisms for determining priorities for home health care performance measurement (e.g., logic maps or clinical algorithms), priorities were identified through Steering Committee discussion and consensus. As a result, the following principles were used to prioritize candidate measures:

- higher priority would be given to measures that are in regular, widespread use, and/or are required for other purposes (i.e., included on CMS's Home Health Compare web site or in the Agency for Healthcare Research and Quality's [AHRQ's] National Healthcare Quality Report [NHQR] or National Healthcare Disparities Report [NHDR]);
- at least some measures would be included that apply to **all** home health care patients;
- at least some measures would be included that apply to **all** home health care organizations;
- higher priority would be given to measures that address high-risk, high-volume, and/or high-cost conditions and/or treatments[4];
- higher priority would be given to measures that address the six NQF aim areas;
- higher priority would be given to measures that address priorities for national healthcare quality (e.g., NQF,[5] Institute of Medicine); and
- for sequencing of implementation and practicality, lower priority would be given to measures that address in-home physician, pharmacy, and durable medical equipment.

Identifying Candidate Measures

Once the scope and priorities of the measure set were established, the Steering Committee used multiple and varied approaches to identify the universe of potential candidate measures:

- A literature review was conducted based on specific search parameters: published within the last 10 years, containing key words/phrases (e.g., home health care, quality/performance measures, patient care), and/or authored by a known researcher in the field of home health care performance. This search resulted in the identification of nearly 250 articles and other publications.

[4] Based on quantitative analyses (prevalence of persons served by diagnosis and total cost of charges by diagnosis by Medicare Home Health Agencies; see *Key Data on Health Care Financing: The 2001 Medicare and Medicaid Statistical Supplement to the Health Care Financing Review* [available at www.cms.hhs.gov/review/supp/2001/table53.pdf]) and through discussion, the Steering Committee selected 13 conditions/treatments as the operational definition of "high risk, high volume, and high cost." These are heart failure, hypertension, cerebrovascular disease, fracture of the neck of the femur, osteoarthritis, diabetes mellitus, pressure ulcer/decubitus ulcer, pneumonia, chronic airway obstruction, neoplasm, pain (chronic and acute), cognitive impairment/dementia, and depression.

[5] In October 2004, NQF reached consensus on national priorities for healthcare quality; in the absence of endorsed priorities at the time these consensus standards were developed, home health care measures were to be screened against those priorities detailed in the draft consensus report (NQF, *Priorities for National Healthcare Quality: Voluntary Consensus Standards,* Consensus Draft 2).

- Members of professional organizations and experts in the field were interviewed to determine relevant activities and research in this area (e.g., the American Association for Homecare, the National Association for Home Care, the Visiting Nurse Associations of America, the Joint Commission on Accreditation of Healthcare Organizations [JCAHO], and CMS).
- NQF-endorsed measures and other related, ongoing NQF consensus work were reviewed to identify home health care measures within these other efforts.
- A "Call for Measures" was undertaken to solicit possible measures for review and evaluation. This call included a web site posting and e-mail communication sent to NQF Members. NQF received 3 responses to the call, resulting in the identification of 47 unique candidate measures—including some that met the Steering Committee's purposes, framework, scope, and priorities.
- Targeted correspondence with relevant home health care organizations and specialty societies (e.g., the American Academy of Home Care Physicians, the Case Management Society of America, the Community Health Accreditation Program, Inc., the Home Caregivers Accreditation of America, the Home Healthcare Nurses Association, the National Private Duty Healthcare Association, the National Home Infusion Association) to determine the extent to which any measurement efforts might apply to the NQF home health care project. Although more than 40 measures were identified through this process, only 26 of them ultimately met Committee decision rules and underwent further investigation and evaluation.
- Steering Committee members were encouraged to circulate the list of candidate measures within their organizations to determine whether additions could be made.

Together, these efforts resulted in the identification of more than 120 measures that underwent screening.

Measure Screening, Evaluation, and Selection

Once measures were identified, they were examined for relevance to the definition of home health care, as well as to the purpose, framework, and scope and priority thresholds. Although Committee members were inclined to apply the decision rules liberally in order to avoid rejecting any measure prematurely, generally, measures that met the established thresholds became candidates, and those that did not were excluded from further investigation.

For example, measures that were in regular, widespread use and/or that were required for other purposes, as evidenced by their inclusion either on CMS' Home Health Compare or in AHRQ's NHQR and NHDR, were prioritized for selection, while several common activities of daily living (ADLs) and instrumental ADL measures derived from OASIS that did not meet this screening criteria were excluded (e.g., improvement in lower body dressing, improvement in eating, improvement in housekeeping). Additionally, although burden and duplication of effort were assessed at a later point in the process, at

this stage of screening, the Steering Committee retained measures that met the screening thresholds but that were derived from non-OASIS data sources. For example, measures based on chart review (e.g., VHA measures of pain, adaptive equipment, and quality of life), alternative assessment systems (e.g., Home Health Quality Indicators [HCQIs] from the Minimum Data Set-Home Care [MDS-HC]), and patient/family perception of care surveys (e.g., National Core Indicators [NCI], Service Adequacy and Satisfaction Measurements [SASI], and the Home Care Satisfaction Measure [HCSM]), all were retained by the Steering Committee during this phase of screening.

After these preliminary exclusions were made, the Steering Committee reviewed detailed evaluations of each remaining measure. Measures were evaluated based on the criteria endorsed by NQF, as derived from the previous work of the NQF Strategic Framework Board (SFB)[6,7,8,9]—that is, based on importance, scientific acceptability, usefulness, and feasibility. These criteria were operationalized for purposes of conducting consistent, comprehensive measure reviews:

- Comprehensive evaluations based on the agreed-upon criteria were conducted for 81 measures selected by the Steering Committee for evaluation. For each measure, evidence, documentation, citations, and other published references from the measure developer, as well as published practice guidelines, published evidence, and published research that supplemented material supplied by the measure developer, were used to assess the measure's strength relative to each evaluation criterion. Together, this constituted the information that supported each individual evaluation. Once gathered, the evidence was reviewed, and each measure was rated for each criterion.
- Once each measure had been evaluated for each criterion, a simple classification system was employed to rate each measure for its appropriateness for inclusion in the home health care performance measure set. The following describes each of the classifications:

  Class Ia—Precisely specified, feasible for implementation (i.e., scored "high" for feasibility), scientifically supported ("high" or "medium" validity **and** reliability), and demonstrated link to a patient outcome and/or aim of efficiency.

  Class Ib—Precisely specified, feasible for implementation, demonstrated link to a patient outcome and/or aim of efficiency, but lacks scientific support ("low" or "unknown" for reliability and/or validity).

  Class II—Precisely specified, but concerns about feasibility and/or link to patient outcome and/or aim of efficiency.

[6] Ashton, C, ed., The Strategic Framework Board's design for a national quality measurement and reporting system, *Med Care,* 2003;41(1)suppl:I-1—I-89.

[7] NQF, *A National Framework for Healthcare Quality Measurement and Reporting: A Consensus Report,* NQF: Washington, DC; 2002.

[8] NQF, *A Comprehensive Framework for Hospital Care Performance Evaluation: A Consensus Report,* NQF: Washington, DC; 2003.

[9] NQF, *National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set,* NQF: Washington, DC; 2004.

Class III—Neither precisely specified nor feasible, or measures with serious methodological concerns (e.g., risk-adjustment inadequacies, unresolved proprietary considerations).

Special Considerations

During this review of candidate measures, the Committee discussed a number of unique issues that characterized the overall state of measurement in this area:

Measures for Non-Medicare Populations

The Steering Committee noted the "catch 22" with which they were presented regarding candidate measures: Because many of the measures were developed by CMS and derived from OASIS, the universe of measures collectively did not adequately address non-Medicare populations. For example, a limited number of measures were identified and retained that addressed pediatric, maternity, or psychiatric patients. On the other hand, those measures that were identified by the Committee that did address non-Medicare populations (e.g., SASI, HCSM, NCI measures) were not derived from commonly used datasets. In some cases, the resulting burden was viewed as too onerous to justify the recommendation of a candidate measure.

Chronic Care Versus Post-Acute Care Populations

In addition, the Committee raised concerns that candidate measures generally address the needs of post-acute care populations rather than those patients needing chronic care. This was especially evident in discussions about patients served by VHA. In particular, home health care patients served by VHA are reported to present differently (e.g., demographic, diagnostic, comorbid variables) and have different goals of care (e.g., prevention of decline versus improvement; drug and/or alcohol treatment versus ADL independence). For these reasons, the commonly used Outpatient Based Quality Improvement (OBQI) and Outpatient Based Quality Management (OBQM) measures are less relevant. Additionally, some Committee members raised specific concerns that recommending only measures that address post-acute care populations—measures that predominantly address improvements in physiologic, functional, cognitive, and emotional/behavioral status—might disincentivize providers from caring for patients who are not likely to improve. Ultimately, to address these concerns, the Steering Committee proposed several research recommendations.

Measures Recommended

Based on its deliberations, the Steering Committee initially recommended 29 measures that it concluded clearly met the evaluation criteria. One measure was subsequently withdrawn by the developer, decreasing the total number to go forward in the CDP to 28.[10] Ultimately, following the comment period, Member voting, and NQF Board consideration, 15 consensus standards were endorsed.

The recommended measures are discussed below, including any measure-specific concerns raised during the Steering

[10] See ADL/rehabilitation potential and no therapies measure.

Committee's deliberations and their disposition through subsequent public review, voting, and NQF Board review periods. Measures are discussed in the sequence the Committee dealt with them, and the measures are parenthetically numbered consistent with the numbers assigned on the Member voting ballots. Twenty-two of the proposed standards (identified below) were recommended by a majority vote (i.e., show of hands of Committee members, not merely a voice vote).[11] Of note, although comments of concern were submitted on most of the recommended measures during the review period, ultimately the Steering Committee recommended the retention of all of the measures as national voluntary consensus standards for home health care. Concerns and objections were, however, referred to the relevant measure developer for future measure refinement.

- **Improvement in ambulation/ locomotion** (1)
  The Steering Committee noted that the measure is controversial, because the degree of independence related to device use (e.g., improvement resulting from using a cane versus a walker) is not captured. However, it also was noted that such sensitivity would require additional data elements and additional measurement burden and that there is inconsistent agreement in the rehabilitation literature regarding whether incremental change (e.g., walker to cane) can be considered "improvement." Furthermore, caution was raised that there is not uniformity regarding how ambulation devices are defined (e.g., three-prong cane versus cane) and prescribed. Such variation might create a perverse incentive for providers to move to the least restrictive device without evidence of patient safety. Nevertheless, the measure addresses an important area (mobility) for which there are few measures; the AHRQ Technical Expert Panel (TEP) recommended this measure because of its relevance to the full spectrum of services agencies provide. Further refinement of this measure as part of the research agenda also was recommended. This measure was approved by majority vote in all four NQF Member Councils on the initial ballot and endorsed by the NQF Board of Directors in February 2005.
- **Improvement in bathing** (2)
- **Improvement in transferring** (3)
  The Steering Committee noted that these measures are hierarchical,[12] in that patients who can transfer can generally toilet, patients who can bathe generally can dress themselves, and bathing is generally the first ADL to become impaired, while eating is the last. With scientific evidence of positive correlation among the improvement in ADL measures cited, the Committee viewed these two ADL measures as proxies for other ADLs. A caution was raised, however, that in excluding several of the ADL measures (e.g., dressing, toileting), measures most relevant to some patients may be omitted. There also was concern that improvement measures do not

[11] In most cases, a clear majority of Steering Committee members approved each motion to recommend/exclude the measure. In several cases, in which it was not clear by voice vote whether a majority existed, the Co-Chair called for a hand vote and a tally was taken. These cases are noted explicitly.

[12] Siu AL, Reuben DB, Hays RD, Hierarchical measures of function in ambulatory geriatrics, *JAGS,* 1990;38:1113-1119.

address the population of patients who will not improve; however, the Committee recognized that the stabilization measures are generally less appealing because variation in rates is low. Ultimately, the Steering Committee agreed that a parsimonious set dictated a focus on a select number of measures rather than all of the ADLs, with the explicit suggestion that bathing and transferring are the most critical.

In public comment, additional concerns were raised—that improvement in bathing should reflect a patient's progression from bathing with assistance to bathing independently at the sink, and improvement in transferring should reflect all types of transfers, not simply those included in the underlying OASIS data elements (e.g., bed to chair, on/off toilet or commode, in/out of tub or shower). The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continues to recommend the measures' inclusion. These measures were approved by majority vote in all four NQF Member Councils on the initial ballot, and were endorsed by the NQF Board of Directors in February 2005.

- **Improvement in management of oral medications** (4)
- **Substantial decline in management of oral medications** (5)

The Committee viewed these two measures as important because patients' management of their medication influences their overall disease management and self-care. It also acknowledged that the measure "improvement in management of oral medications," although ultimately recommended, excludes patients who already are independent and who cannot demonstrate improvement, while the "stabilization in management of oral medication" measure ultimately not recommended by the Committee is more expansive in the patient population it includes (the Committee's concerns about the stabilization measure are outlined below under "Measures Not Endorsed").

The Committee noted that the two measures apply to many patients and to different denominator populations and that therefore they do not correlate highly. The Committee ultimately recommended the improvement measure because it was viewed as more mutable in terms of helping patients to gain independence in taking their medications. Additionally, the improvement measure is risk adjusted and the stabilization measure is not, making the improvement measure more appealing.

Concerns were raised about the improvement measure during the review period. Specifically, there was concern that the measure does not adequately reflect improvements made through training/arranging for a responsible caregiver to manage the patient's oral medications and that it does not recognize subtle improvements in independence, personal choices made by patients to remain dependent on others for their medication management, or management through intermittent assistance. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments, and it recommended the measure's inclusion.

The improvement measure was approved by all four NQF Member Councils in the first round of voting and was endorsed by the NQF Board

of Directors in February 2005. The substantial decline measure ultimately was not endorsed. The decline measure did pass three of four Councils in the first round of voting. In February 2005, the NQF Board recommended a second voting round for this measure.

Prior to the conclusion of the second voting round, on an all-Council call, NQF Members raised concerns about the validity and low frequency of occurrence, with some supporting use of the measure in quality improvement, but not for public reporting. The measure again passed three of four Councils on the second ballot, and the NQF Board of Directors subsequently voted unanimously not to endorse the measure, noting that two other medication management consensus standards had been approved ("improvement in management of oral medications" [#4], and "emergent care for improper medication administration, medication side effects" [#17]).

- **Improvement in pain interfering with activity** (6)
  This measure deals with the frequency of pain, not its intensity or severity (e.g., no severity scales are incorporated into the metrics), and the Committee recognized the measure as one over which home health care providers have enormous influence and also recognized that controlling pain correlates highly with a patient's quality of life. During consideration, CMS clarified that this measure is risk adjusted for its Home Health Compare web site, but not for agency OBQI reports. Given this, the Committee considered whether, for simplicity, a single approach should be recommended for both agencies and public reporting purposes. It was suggested that risk adjustment may not be necessary for agency-to-agency comparisons and that some patient advocates would claim that any pain should be treated and ameliorated, making risk adjustment less critical. On the other hand, the Committee opined that the general convention is to risk adjust outcome measures because providers that specialize in serving patients with pain care needs could be disadvantaged without risk adjustment; disincentives may exist in admitting the most difficult pain cases; risk models do partially adjust for important characteristics; and many of the factors that impact this outcome cannot easily be adjusted for (e.g., tolerance to pain medication). Although initially the Steering Committee recommended the measure without risk adjustment, it subsequently recommended the measure in its risk-adjusted format and did so by a plurality rather than a majority.

  During the comment period, commenters raised concerns that the measure should include patients admitted to facilities (a current exclusion) and should be stratified by patient population rather than risk adjusted. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and recommended the measure's inclusion. This measure was approved by majority vote in all four NQF Member Councils on the initial ballot and was endorsed by the NQF Board of Directors in February 2005.

- **Improvement in status of surgical wounds** (7)
  The Committee acknowledged that the status of surgical wounds is important to consumers. In its discussion of this measure, the Committee contemplated the different ways wounds heal and

how scarring can be interpreted in various manners, resulting in data inaccuracies. The Committee members generally agreed that the "status of surgical wounds" measure is less problematic than the "number of surgical wounds" measure. The Committee noted the concern that clinicians have issues with collecting these data resulting from the "skip patterns" in the OASIS assessment, but ultimately it recommended the measure. It also recommended that refinements be undertaken as part of the research agenda.

During the public review period, the following concerns were noted: the adequacy of the measure in addressing wounds that improve beyond the fully granulating stage, healing that results in two smaller wounds, and the lack of risk adjustment in light of the measure being proposed for public reporting. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion. This measure was approved by majority vote in all four NQF Member Councils on the initial ballot and endorsed by the NQF Board of Directors in February 2005.

- **Improvement in dyspnea** (8) Dyspnea is important with respect to patients' quality of life, and this measure focuses on improvement among those patients for whom improvement is possible and for whom a discharge assessment is completed (i.e., it excludes patients for whom a second assessment is not possible). The measure was recommended by AHRQ's TEP and is included in the NHQR. Given its focus on a key component of quality of life, the Committee also recommended the measure's inclusion in the set. This measure was approved by majority vote in all four NQF Member Councils on the initial ballot and endorsed by the NQF Board of Directors in February 2005.
- **Improvement in urinary incontinence** (9) The Committee recognized the measure as one that correlates highly to a patient's quality of life. Although some Steering Committee members identified this measure as one that home health care providers can influence regarding improvement, others recognized the degree of difficulty involved in supervising the contingency regimen because care is supervised for only a portion of any given period. Concerns also were raised that it can be difficult for providers to ask patients if they are incontinent and get reliable answers. Additionally, it was noted that for the nursing home consensus standards, two measures—incontinence and presence of a catheter—are derived from the Minimum Data Set (MDS) and are recommended as a pair, which minimizes the perverse incentive of catheterizing patients to reduce the rate of incontinence. There was no measure that could be used to pair for this set; however, the Committee recognized the single measure alone, given its importance to patients.

  Commenters raised concerns during the review period about the inconsistent interpretation of the definition of urinary incontinence and the measure's failure to address patient tolerance levels. Furthermore, concerns were raised that few home health care interventions result in improvement in incontinence within an episode of care—especially stress incontinence—and that the measure does not adequately distinguish between chronic and short-term

illness and does not address patients/caregivers who have been successfully taught to perform a straight catheterization or patients who remain incontinent but are discharged without a catheter. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion. This measure was approved by majority vote in all four NQF Member Councils on the initial ballot and was endorsed by the NQF Board of Directors in February 2005.

- **Increase in number of pressure ulcers** (10)
- **Evaluation of pressure ulcers**[13,14] (23)

The Committee considered these measures together because of their similarities, although it noted that the two measures address different aspects of pressure ulcers and therefore should not be viewed as mutually exclusive. It discussed whether it should limit its recommendations only to the outcome measures in the OASIS dataset or expand its recommendations for the set. Committee members agreed they should recommend the measures regardless of data source, although burden should weigh heavily in their considerations. Against this backdrop, the Steering Committee discussed whether the Assessing Care of Vulnerable Elders (ACOVE) measure (#23) would increase burden. It concluded, however, that the measure can be captured in many home health settings, is important for managing pressure ulcers, and already is fairly well documented. As a result, both measures were recommended by the Committee, with the measure "increase in number of pressure ulcers," recommended by a majority vote.

Concerns were raised about both measures during the public review period. It was questioned whether the first measure accounts for CMS's new definition of pressure ulcer. In discussions with CMS, the agency clarified that although the measure specifications have not changed, the guidelines for assessors completing the underlying OASIS data elements have changed, which results in a reduced number of stage 1 and stage 2 ulcers being coded item 450.

With respect to the measure "evaluation of pressure ulcers," commenters raised concerns that it should include the standard pressure ulcer assessment instrument on which the results are based (i.e., Braden or Pressure Ulcer Scale for Healing), rather than merely identify the assessment elements that are required to satisfy the measure's numerator statement (i.e., location, depth/stage, size). The Steering Committee considered these concerns both during its initial deliberations

[13] For all ACOVE measures, concerns were raised by the Steering Committee about the definition of "vulnerable elder" (i.e., the population to whom this measure applies). Subsequently, the measure developer clarified the definition and provided an operational mechanism to identify this population. Because the derivation requires the administration of a four-item survey, some members viewed it as burdensome, while others, who recognized that many of the items could be derived from OASIS, did not view the additional items as resource intensive.

[14] During the comment period, additional concerns were raised concerning all ACOVE measures. In particular, commenters shared objections to the increased burden of data collection, limited testing of the measures within home health care populations, duplication of ACOVE data elements with OASIS items, and the degree to which hospice patients should be excluded. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measures' inclusion.

and upon review of the comments and continued to recommend the measure's inclusion.

The "increase in number of pressure ulcers" measure (#10) was approved by all four NQF Member Councils in the first round of voting and was endorsed by the NQF Board of Directors in February 2005. The "evaluation of pressure ulcers" measure (#23) was approved by two of four NQF Member Councils and ultimately not endorsed. For the latter measure, consistent with the first round vote for the other six ACOVE measures, there was a strong lack of approval expressed in two of the four Member Councils. The Board noted that comments received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven ACOVE measures and instead referred them back to the measure developer.

- **Family Evaluation of Hospice Care (FEHC)** (11)
  This measure, which is used by more than 500 hospice agencies in the United States reporting data to the National Hospice and Palliative Care Organization (NHPCO), is a perception of care tool developed by NHPCO with Brown University and was originally known as the "Toolkit After-Death Bereaved Family Member Interview." The measure is intended to be administered to family members of hospice patients who have died following their hospice care; it has four domains to reduce burden on grieving families plus three symptom management scores. The original version was tested in many settings in which palliative care patients receive care (i.e., home, hospice, hospital), and the measure developer believes the instrument would be useful in settings beyond those studied. Some factor analysis has been conducted, and more is planned, to validate the original toolkit and the existing NHCPO instrument. Some Committee members suggested that a modification to measure patient perception of their care would be helpful. (A representative from NHPCO confirmed that it is in the process of developing such an instrument.) Some Committee members raised concerns that this is duplicative of existing, proprietary perception of care instruments in which home health agencies have invested.

  Additionally, several Committee members noted that only a small subset of items (20) from the 61-item survey is used to derive the 7 domain scores; thus, the Committee debated the advantages and disadvantages of recommending only that subset of items. However, upon the recommendation of the measure developer, who indicated that an abbreviated version of the survey had not been tested for its psychometric properties, the Committee ultimately recommended the full, 61-item instrument and its 7 domains. Additionally, concerns were raised about 4 items on the 61-item tool (items G2b, G2c, G2d, G3a) that have not been previously evaluated by the developer. Because these items were added to the survey following its psychometric testing in order to address patients' rights and affiliated accreditation standards, the developer recommended that these additional items be included in the recommended version, as well.

Additional concerns were raised with FEHC during the comment period—namely, the length of the instrument, the internal duplication of questions, the likelihood of insufficient response rates, the lack of risk adjustment and "don't know" options, and possible response bias from grieving family members. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion. Consistent with its determination on two other measures related to hospice care, in February 2005, the NQF Board opted to defer action on this measure preferring that it be considered in NQF's ongoing project on hospice and palliative care.

- **Comfort within 48 hours** (12)
  Because the measure deliberately does not include a pain scale, it does not address improvement in pain, but rather the patient's perception of the attainment of comfort with pain. During the deliberations, it was clarified that the measure was tested as "comfort within 48 hours" and "comfort within 72 hours" and that the measure developer agreed that the former demonstrated higher discrimination among providers. Additionally, during the development of the measure, it was acknowledged that having to wait 72 hours for pain control is a reflection of poor quality of care. The measure has been used for several years in hospices, and testing has been limited to hospice patients. Nevertheless, the Committee recognized the importance of this measure to patients and recommended its inclusion.

  Concerns were raised during the public comment period and were shared with the measure developer following review (i.e., the method/consistency of data collection, the degree to which the provider has control over the outcome, the lack of risk adjustment, the need for an exclusion of patients with intractable pain, and the lack of a standardized pain scale). The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion. Consistent with its determination on two other measures related to hospice care, in February 2005, the NQF Board opted to defer action on this measure, preferring that it be considered in NQF's ongoing project on hospice and palliative care.

- **Unwanted hospitalizations** (13)
  This measure addresses the degree to which a hospice patient's preference to avoid hospitalization is not honored. It is viewed as an area of great concern to hospice patients. The Committee clarified that if inpatient care is provided under the hospice benefit, then it is not considered a hospitalization. Additionally, if patients' preferences change, they would be excluded from the numerator. The Committee asked for clarification regarding whether a patient who is discharged from hospice for reasons other than death is included in the measure.[15] Given the importance of this measure to patients, the Committee recommended its inclusion.

[15] The measure developer later confirmed that all hospice patients discharged including but not limited to those discharged due to death are included.

During the public comment period, concerns were raised regarding the method/consistency of data collection for this measure and the degree to which providers control this outcome. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend its inclusion. Consistent with its determination on two other measures related to hospice care, in February 2005, the NQF Board opted to defer action on this measure, preferring that it be considered in NQF's ongoing project on hospice and palliative care.

- **Emergent care for wound infections, deteriorating wound status** (14)
- **Emergent care for improper medication administration, medication side effects** (15)
- **Emergent care for hypo/hyperglycemia** (16)
- **Emergent care** (21)

Many Steering Committee members stated that all of the OASIS/OBQM measures accounted for important adverse events that need to be monitored/investigated and that these measures provided critical information that can drive quality improvement. During its deliberations, the Committee did discuss the extent to which the more narrow measures could be excluded on the basis of parsimony. The Committee ultimately agreed that the broad measure does not completely enable providers to improve care in the same way in which the specific, narrow measures do—for example, it was noted that agencies could have the same rate of emergent care but varying rates for the three other more specific measures that would result in different interventions. Some Committee members raised concerns about the directionality of emergent care—specifically, whether an increase in the rate should be viewed as an improvement or a decline. Based on its deliberations, the Steering Committee members generally agreed that a decrease in the measure should be viewed as an improvement. Therefore, the measure was not considered by the Committee as "neutral," but as directional, and the Committee members agreed that it should be noted as such for reporting purposes. Additionally, although the Committee categorized the broader emergent care measure as a "utilization outcome" under its adopted framework, it categorized the three more narrow measures as "safety outcomes." Lastly, three of these measures (emergent care for wound infections/deteriorating wound status, emergent care for improper medication administration/medication side effects, emergent care for hypo/hyperglycemia) were recommended by a majority vote.

During the public comment period, additional concerns were raised about the emergent care measure (#21). Concern was expressed that the measure does not adequately account for aspects outside the control of the home health care agency (i.e., physician behavior, hospital practices); that it should exclude planned physician office visits; that it can often represent good care (as opposed to being viewed as a negative outcome); and that it is not adequately risk adjusted. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion. These measures were approved by majority vote in all four NQF Member Councils on an initial ballot and were endorsed by the NQF Board of Directors in February 2005.

- **Discharge to the community needing wound care or medication assistance** (17)
  This was one of only a few measures considered by the Committee that addresses the arranging of follow-up care. Concerns were raised that the measure is limited because it excludes patients who have a caregiver, resulting in a low frequency of occurrence. Concern also was raised that the measure may be beyond the control of the home health care provider, in that support resources following discharge are not always available—especially when patients are being served in rural settings/communities. Still, the measure appealed to many members of the Steering Committee because of its relevance to continuity of care, and the measure was recommended by a majority vote.

  Concerns were raised during the comment period that the measure fails to take into account the presence of caregivers who perform these functions or instances when these functions are performed by caregivers prior to admission to home health care. Additionally, concerns were raised that the measure should actually be two separate indicators—one for wound care and the other for medication assistance. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion.

  On the initial ballot, one of four Member Councils opposed this measure. In February 2005, upon review of the voting results, the NQF Board recommended a second voting round for this measure. Prior to the conclusion of the second voting round, on an all-Council call, NQF Members raised concerns regarding this measure's validity and low frequency of occurrence and noted that more research was needed on the measure. The measure passed two of four Councils on the second ballot, and the NQF Board of Directors subsequently voted unanimously not to endorse the measure, noting decreasing Member support for the measure on the second ballot.

- **Acute care hospitalization** (18)
  The Committee believed that this measure represented an overall proxy for home health care quality—that is, that managing hospitalization is a key component of home health care. It noted that some technical experts have recommended refining the risk model for this measure to make it more inclusive of chronicity. The Committee also noted that the AHRQ TEP discussed how hospitalization is often a result of difficulty in contacting a physician, which can be a marker of quality problems within the larger healthcare system, not just within the purview of home health care. Nevertheless, given their view that this measure was an overarching proxy, Committee members recommended its inclusion.

  Concerns were raised about this measure that were similar to those raised regarding the emergent care measure—specifically, that the measure does not adequately account for aspects outside the control of the home health care agency (i.e., physician behavior, hospital admission practices, increasing numbers of scheduled admissions by managed care), that it should exclude scheduled admissions (i.e., chemotherapy or surgery), that it can often represent good care (as opposed to being viewed as a negative outcome), and that it is not adequately risk adjusted. The Steering

Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion. This measure was approved on the initial ballot by majority vote in all four NQF Member Councils and was endorsed by the NQF Board of Directors in February 2005.

- **Unexpected nursing home admission** (19)
  As with "acute care hospitalization," this measure is to an extent an overarching snapshot of home health care quality. The Committee discussed the problem of coding this measure—that some patients are included in the numerator and denominator populations because they are identified as "good rehabilitative prognosis." It also noted that the measure might not necessarily indicate poor quality care, because many patients are inappropriately identified as having some rehabilitation potential. Furthermore, at times a patient is discharged to a nursing home for proper care because the patient previously was discharged inappropriately from the hospital to the home. Given the measure's importance to consumers and the overall picture it provides, the Committee opted to recommend it as a consensus standard.

  Commenters raised concerns during the public comment period that the measure does not adequately reflect patient/family refusal of nursing home admission and does not account for instances when nursing home placement is the most appropriate course of action. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion.

  On the initial ballot, one Council disapproved this measure, one Council tied, and two Councils voted to approve the measure. In February 2005, upon review of the voting results, the NQF Board recommended a second voting round for this measure. Prior to the conclusion of the second voting round, on an all-Council call, NQF Members raised concerns regarding this measure's low frequency of occurrence (with some supporting use of the measure in quality improvement, but not for public reporting), and a potential for the measure's meaning to be misinterpreted by the public at large if not reported "with care." The measure passed two of four Councils on the second ballot, and the NQF Board of Directors subsequently voted unanimously not to endorse the measure.

- **Discharge to community** (20)
  This measure, like measure #17, was appealing in that it addresses the arranging of follow-up care, albeit more broadly (i.e., #17 is specified as discharge to the community needing wound care or medication assistance). Concern was expressed by some Committee members that the reliability of the measure is unknown and that the measure does not reflect the quality of care an agency provides. On the other hand, a few members stated that the measure was more reliable than the acute care hospitalization measure. In recommending the measure for inclusion, the Committee members generally agreed that an increase in the measure should be viewed as an improvement—that is, the measure is not "neutral," but directional—and should be noted as such for reporting purposes. This measure was approved on an initial ballot by majority vote in all four NQF

Member Councils and was endorsed by the NQF Board of Directors in February 2005.

- **Comprehensive geriatric assessment**[13,15] (22)
  This measure addresses the adequacy of documentation in nine different areas for the purpose of developing a care plan for a new home health care patient. The Committee noted that an OASIS assessment would include most of the assessment items required to satisfy this measure. However, this proposed measure would contribute more information about assessment quality, although the Committee recognized that the "bar" is set relatively low with respect to the documentation needed to satisfy its requirements. During the discussion, concern also was expressed that although assessment and documentation of the nine areas are important, the measure does not address actual care plan implementation, and the link to actual improvements in outcome is not explicit. On the other hand, the prevailing view was that the measure provided important information that should be measured and reported because, based on findings from recent research, comprehensive geriatric assessment has been associated with improvements in outcomes if coupled with follow-up interventions.

  For this measure, consistent with the first round vote for the other six ACOVE measures, there was strong disapproval in two of the four Member Councils. The Board noted that comments received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven measures and instead referred them back to the measure developer.

- **Risk assessment for pressure ulcers**[13,15] (24)
  Research has demonstrated that only approximately 40 percent of home health agencies currently document the risk of pressure ulcers. This measure is aimed at addressing the risk of patients developing pressure ulcers by identifying those for whom a pressure ulcer risk assessment has been documented. Furthermore, the measure crosses patient populations to encompass non-Medicare populations. Although some members expressed concern about the feasibility of identifying "vulnerable elders," the burden of implementing this measure was viewed as minimal by the Committee. Given its saliency for consumers and the data demonstrating that less than half of agencies conduct a risk assessment for pressure ulcers, the measure was recommended for inclusion.

  Additional concerns were raised regarding this measure during the public comment period—specifically, that many patients with relevant risk factors will fail to improve and that alternative incontinence, mobility, and nutrition risk-assessment measures would be preferable proxies. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion.

  For this measure, consistent with the first round vote for the other six ACOVE measures, there was strong disapproval in two of the four Member Councils. The Board noted that comments

received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven measures and instead referred them back to the measure developer.

- **Evaluation of reversible causes of malnutrition**[13,15] (25)
  The Committee noted that because agencies already conduct a malnutrition assessment as part of the admission assessment, this measure should be of minimal burden. Concerns were raised, however, that because Medicare does not reimburse nutritionists within home health care, the measure may not be as relevant. Furthermore, the Committee noted that the measure holds home health care providers accountable for weight loss only if a nutritional assessment is not documented. Although the existing measure is limited to the vulnerable elder population, the Committee viewed it as being relevant to all age groups and all home health care patients, suggesting its importance to a broader population. Given the importance of this measure, the Committee believed it should be included.

  Commenters raised concerns that definitions for "reversible" and "malnutrition" required greater specificity. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion.

  For this measure, consistent with the first round vote for the other six ACOVE measures, there was strong disapproval in two of the four Member Councils. The Board noted that comments received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven measures and instead referred them back to the measure developer.

- **Evaluation of falls ("asking about falls")**[13,15] (26)
  This measure focuses on whether the patient was asked about any recent fall (which, according to the measure developer, is documented only about half of the time), but it does not address the implications of the fall (e.g., interventions to prevent falls). And, although the Steering Committee questioned whether there was a uniform definition of "fall," members agreed that because this measure focuses on the patient's perception of falling, it is less important to arrive at a definition in this case. Additionally, the Committee noted that the literature indicates that prior falls predict future falls. Therefore, this measure was viewed as particularly important.

  During the public comment period, preference was noted for an alternative falls risk-assessment measure rather than this patient-reported measure. Additionally, concern was raised that a clear definition for "fall" was needed. The Steering Committee considered these concerns both during its initial deliberations and upon review of the comments and continued to recommend the measure's inclusion.

  For this measure, consistent with the first round vote for the other six ACOVE measures, there was strong

disapproval in two of the four Member Councils. The Board noted that comments received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven measures and instead referred them back to the measure developer.

- **Caregiver support and patient safety for dementia patient**[13,15] (27)
  Because there were few other measures that addressed dementia and/or cognitive impairment, the Committee members generally agreed that this measure was an important addition to the measure set. It also was noted that the measure falls into the high-risk, high-cost, high-volume priority area identified by the Committee.

  For this measure, consistent with the first round vote for the other six ACOVE measures, there was strong disapproval in two of the four Member Councils. The Board noted that comments received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven measures and instead referred them back to the measure developer.

- **Documentation of advance directive, surrogate or preferences**[13,15,16] (28)
  The Steering Committee noted that this measure addresses continuity of care by documenting a patient's preference concerning his or her care; it also is relevant across all patients. Although concern was expressed that documentation of advance directives would not be helpful in emergencies because there would be little or no time to track down a paper record, the Committee noted that potential discrepancies between patient preference and care would be discovered through this measure—and systemic improvements would be made.

  For this measure, consistent with the first round vote for the other six ACOVE measures, there was strong disapproval in two of the four Member Councils. The Board noted that comments received during voting reflected the view that the measures needed further testing and validation, and not that the candidate consensus standards were inherently bad measures. Therefore, rather than recommending a second ballot, in February 2005 the Board took no further action on the seven measures and instead referred them back to the measure developer.

- **ADL/rehabilitation potential and no therapies** (29)
  As noted above, subsequent to the Steering Committee's recommendation to retain this measure in the set, the measure developer withdrew this measure from consideration.[17] This measure was viewed as similar to another OASIS-derived measure that

[16] During the Committee's initial review, questions were raised about whether a "do not resuscitate" (DNR) order is included in this measure's numerator. The measure developer later confirmed that a DNR order satisfies the requirement for inclusion in this measure's numerator.

[17] NQF's intellectual property policy and the developer's reluctance to support the recommendation of a single measure from its 22-measure set were cited as reasons for the measure's withdrawal.

was not recommended by the Committee (i.e., substantial decline in three or more ADLs). During the Committee's discussion, concern was expressed that the provision of physical therapy, occupational therapy, and exercise therapies to all patients are not required by CMS-certified home health agencies, resulting in the measure being outside of the home health care provider's sphere of control, from a federal standpoint. Additionally, questions were raised regarding whether a patient could qualify for ADL/rehabilitation potential but not necessarily need physical or occupational therapy. Although it was noted that the data elements for this measure are not required by federal regulations, some Committee members believed the data elements could be gathered through a combination of OASIS and claims data; CMS concurred with this assessment. Thus, Committee members recommended inclusion because of the aspect of care measured and because they believed that data collection would not be burdensome because of the high potential to be derived from the existing OASIS dataset.

General Measure-Related Concerns Raised During the Public Comment Period

In addition to the specific concerns about several measures that were raised and noted in the preceding sections, commenters raised a few general concerns during the review period that resulted in additional Steering Committee deliberation:

- **Adequacy of risk adjustment/ refinement of risk adjustment:** Specific objections focused on the degree to which the OQBI risk-adjustment methodology reflects patient populations and the degree of impact home- and community-based waiver programs have on the resultant home health care populations. Additional concerns were raised about the lack of adjustment for the OBQM, ACOVE, and NHPCO measures.
- **Concerns with the "50 percent rule":** For the OASIS-based measures that are derived from questions that ask the assessor to determine the extent to which a patient demonstrates function "50 percent of the time" (e.g., transferring, management of oral medications), commenters raised concerns that this assessment results in subjectivity on the part of the clinician and an insensitivity to improvements that occur up to but not at the 50 percent level.
- **Exclusions to OASIS-based measures:** Commenters suggested that OBQI and OBQM measures did not adequately address anticipated decline resulting from normal aging and/or illness progression.

In all cases, although the Steering Committee contemplated the impact of these issues, ultimately, all measures were recommended for inclusion as consensus standards for home health care.

Measures Not Recommended

The Steering Committee did not recommend 52 other measures for endorsement as consensus standards, although it noted that additional research should be conducted to improve them. Many of these measures clearly were of interest to Committee members, but a variety of issues, including those involving feasibility, were raised that resulted in the recommendation

to exclude these measures from the set. Each of these measures and a brief summary of the rationale for excluding it follow.

- **Discharge to the community with behavioral problems (OASIS/OBQM)**
  In addition to reliability concerns (e.g., the measure rated "medium" for reliability), the Committee raised concerns that some patients are discharged with behavioral problems because they are violent and/or it is unsafe to provide care in the home. This is viewed as an appropriate action and as one that is unrelated to the quality of care provided. These concerns outweighed the Committee's support of the measure because of its relevance to continuity of care and adequacy of resources for patients with behavioral problems.

- **Unexpected death (OASIS/OBQM)**
  A number of related concerns resulted in the Committee's exclusion of this measure. Specifically, based on a previous review by the AHRQ TEP, the lack of risk adjustment, the reluctance among clinicians to document a patient's likeliness to die within six months, the tendency of providers to rate every patient's life expectancy as less than six months, and the small sample on which the reliability tests were conducted all were viewed as limitations. Additionally, the Committee raised the concern that life expectancy is difficult to predict (i.e., prediction is outside a nurse's scope of work, evidence suggests that among physicians it is difficult to predict, and there is a general tendency to overpredict life expectancy). Finally, the Committee raised concerns that the measure excludes patients who die after recertification (i.e., the measure is calculated from the OASIS start of care assessment) and who die from miscare—despite a life expectancy of less than six months—thereby not adequately capturing deaths resulting from poor care in these instances.

- **Improvement in upper body dressing (OASIS/OBQI)**
  Improvement in toileting (OASIS/OBQI)
  Stabilization in bathing (OASIS/OBQI)
  Despite the fact that these measures do not address the population of patients who will not improve, the Committee generally preferred improvement measures over stabilization measures, based on the recognition that the stabilization measures generally show less variation. Additionally, to achieve parsimony, the Committee members agreed that they should focus on a select number of ADLs rather than all of them. To that end, these measures, in comparison to other ADLs, were viewed as less relevant than others that were recommended because these others were seen as proxies for function in upper body dressing and toileting (i.e., because bathing requires more dexterity and functional independence than upper body dressing, it was viewed as a more critical measure of quality; because patients who can transfer can generally toilet, the former measure was preferred over the latter). A minority of Committee members believed that these ADL measures are most relevant to some patients and should be recommended.

- **Stabilization in management of oral medications (OASIS/OBQI)**
  In addition to their general preference for improvement measures over stabilization measures, Committee members

agreed that, for parsimony, they should focus on a select number of the oral medication-related measures rather than all three considered. Although the improvement measure is less expansive, excluding patients who already are independent and who cannot demonstrate improvement, overall the Committee favored the improvement/decline measures over the stabilization measure because they were viewed as more mutable in terms of assisting patients to gain independence in taking their medications, and they were viewed as more understandable to consumers than the stabilization measure. Additionally, the improvement measure is risk adjusted, which was viewed by the Committee as preferable to the stabilization measure, which is not risk adjusted.

- **Disruptive/intense pain (HCQIs/interRAI)**
  Unmanaged pain (HCQIs/interRAI)
  Some Committee members supported these measures, because they address a critical component of care that was unexpressed and because of the data source, but these measures were not recommended because of the degree of added burden and the Committee's general preference to recommend measures that could be derived from existing data sources, although they were suggested as key areas for the research agenda.

- **Improvement in number of surgical wounds (OASIS/OBQI)**
  The Steering Committee discussed the different ways wounds heal and how scarring can be interpreted in various manners, resulting in data inaccuracies. In this regard, it generally was agreed that the number of surgical wounds is problematic as a measure, while the status of surgical wounds is preferable. Specifically, concerns were raised that clinicians have issues with collecting data resulting from the "skip patterns" in the OASIS assessment and that ambiguities, such as those that result when a wound begins to heal from the center out resulting in two smaller wounds and the conclusion that performance is lagging (when improvement actually is being realized), make this measure less appealing and relatively less important to consumers. Ultimately, although this measure was not recommended, refinements to it were suggested as part of the research agenda.

- **Partial-thickness pressure ulcer management (ACOVE)**
  Full-thickness pressure ulcer management (ACOVE)
  Although the Committee agreed to consider measure sources beyond OASIS, it was concerned about the burden of these two measures, especially in light of the other pressure ulcer measures that were recommended. Although it was noted that many Committee members supported assessing care and risk for pressure ulcers, members agreed that a more specific measure to address these aspects of care would be preferable.

- **Improvement in confusion frequency (OASIS/OBQI)**
  Improvement in cognitive functioning (OASIS/OBQI)
  Stabilization in cognitive functioning (OASIS/OBQI)
  Delirium (HCQIs/interRAI)
  The Steering Committee discussed the difference between cognitive impairment and confusion, and members generally agreed that "cognitive impairment" usually refers to a condition caused by a

physical disease or condition (e.g., stroke, Alzheimer's disease) while "confusion" can be caused by these and many additional factors. Specifically, Committee members wondered about the extent to which home health care providers can change either cognitive impairment or confusion. It was proposed that the measurement of quality of care in this area should focus on improving patient safety (e.g., medication management) and functioning instead of on changing either cognitive functioning or confusion. To that end, there was general agreement that a measure of delirium might be more preferable, but that the existing delirium measure raised issues related to burden and feasibility. Additionally, the Committee previously recommended a measure for comprehensive geriatric assessment that includes an assessment of cognitive function, making this measure less relevant. Ultimately, the Committee members agreed that because these are critical issues for measurement and because no existing measures appear to be adequate, they were important areas for the research agenda.

- **Improvement in anxiety level (OASIS/OBQI)**
  Improvement in behavioral problem frequency (OASIS/OBQI)
  The Steering Committee discussed the differences between these measures and the cognitive/confusion measures, mainly noting the number of effective pharmacological treatments for anxiety. It was suggested that promoting medication compliance for anxiety could have more of an influence on improvement than simply measuring anxiety levels, which is the focus of these measures. Additionally, it was noted that few, if any, patients are admitted to home health care primarily because of behavioral problems, which makes the latter measure less relevant. There was concern that these outcomes did not improve in pilot testing and that they did not appear likely candidates for accountability. Because of the critical importance of identifying measures in these areas, the Committee suggested they be included in the research agenda.

- **Incidence of premature discharge of therapy (infusion) (National Home Infusion Association [NHIA])**
  The Committee discussed the history of this measure, which was developed by the National Home Infusion Association and has been used for nearly 10 years. Although the Committee believed the measure was feasible to collect, concerns were raised that the extensive number of exclusions limit the measure and make its applicability questionable, that patient adherence to infusion therapy should be incorporated into the measure's construct, and that the exclusion of noncompliance was viewed as counterintuitive to determining the reasons for discontinuation. For these reasons, the Committee recommended the measure's exclusion with an agreement to include it on the research agenda.

- **Hospitalization (HCQIs/interRAI)**
  The Steering Committee preferred the OASIS/OBQI acute care hospitalization measure to this measure, which is derived from the MDS-HC dataset. Additionally, concerns were raised about this measure that were similar to those raised regarding the acute care hospitalization measure (e.g., refinement of the risk model, performance dependent

on ease/difficulty in contacting a physician) that was recommended by the Committee. Nevertheless, given their view that this measure's construct was an overarching proxy for quality, Committee members ultimately recommended the OASIS/OBQI version over this HCQI measure.

- **Substantial decline in three or more ADLs (OASIS/OBQM)**
  According to research, this measure occurs very infrequently (approximately 0.5 percent), and because of this low occurrence, the Committee viewed it as relatively less important than other ADL-related candidates. Additionally, this measure was viewed as similar to another measure, "ADL/rehabilitative potential and no therapies," which was preferred by the Committee because it is a process measure rather than an outcome measure. Generally, the Committee members believed that in the context of all ADL-related measures, this was not the most important leverage point for quality.

- **Emergent care for injury caused by fall/accident (OASIS/OBQM)**
  This measure was considered in conjunction with several other emergent care measures, four of which were ultimately recommended. Because it was viewed as less sufficient than the others reviewed (i.e., concerns about a standard definition of fall/accident), it was excluded.

- **Alcohol screening (ACOVE)**
  It was acknowledged that there is questionable evidence linking alcohol screening to improved outcomes in this area. Further concerns were raised that the measure is not specific to home health care and may be beyond its control.

- **No medication review (HCQIs/interRAI)**
  The Steering Committee noted that there is a small but growing body of literature related to medication errors in home health care and that, although it is based on data that are not included in OASIS, the measure was not viewed as particularly burdensome (e.g., information is gathered as part of the home health care assessment every 60 days/each recertification), suggesting its utility as a performance measure. However, some members mentioned that attempts to gather medication review/error data have faced difficulties in operationalizing definitions and measurement specifications, although this was not specific to this measure. Additional concerns (e.g., measure does not adequately discriminate for quality, acknowledgement that medication review is best performed by a pharmacist and not a physician) were raised, which resulted in the exclusion of this measure.

- **Inadequate meals (HCQIs/interRAI)**
  This measure was viewed as a lower priority than others considered as candidates and was excluded on that basis.

- **Quality of life (VHA)**
  Quality of life was viewed by the Steering Committee as a critical area with a rich literature base. However, numerous tools exist for assessing

patients' quality of life, and the Committee viewed these tools, collectively, as underdeveloped and lacking in operational use. As a result, the Committee members generally agreed that a separate study should be undertaken to identify the strongest tool for this purpose. Additionally, because VHA is exempt from CMS's federal assessment requirements, this measure was viewed as a proxy by the Committee for many of the data elements required as part of OASIS. Also, because of the fully integrated electronic medical record in use at VHA, which enables rapid measure generation, the measure was viewed as highly feasible to Department of Veterans Affairs (VA) providers, but burdensome to non-VA providers. Other concerns were raised that contributed to the Committee's recommendation to exclude it (i.e., lack of evidence that supports the aggregation of the six independently validated areas—psychosocial, advance directives, nutrition and hydration, pain, dyspnea, depression—addressed by the measure, the multitude of qualifying statements in the specifications that could lead to diminished validity, and the overlap in construct with another recommended measure [comprehensive geriatric assessment]). Finally, the Committee noted that because CMS will likely move to a CAHPS®-based survey for assessing patient perception of care, recommending this measure would be premature.

- **Falls (HCQIs/interRAI)**
  Any injuries (HCQIs/interRAI)
  These measures were considered together by the Committee and were viewed as similar to another measure, "evaluation of falls," which was recommended. As was true for other fall-related measures, there was concern that a clear definition for "fall" does not exist. Furthermore, because falls and injuries are often impacted by a patient's environment, the Committee viewed this as an area over which providers have limited control.

- **Neglect/abuse (HCQIs/interRAI)**
  It was acknowledged that home health care providers already pay attention to this area because there are state and federal laws and licensure requirements for reporting elder abuse. This, along with concerns that the measure as currently specified (presence of neglect/abuse) was less useful for quality improvement than it would be if it were to include provider-reported abuse and/or neglect, led the Committee to exclude this measure.

- **Social isolation with distress (HCQIs/interRAI)**
  Negative mood (HCQIs/interRAI)
  Although the Committee viewed these risks as important to assess, they were not viewed as critical to quality of care and/or quality improvement efforts.

- **Home Care Satisfaction Measure (HCSM) (literature, research)**
  Service Adequacy and Satisfaction Measurements (SASI) (literature, research)
  Although these measures appealed to the Committee because they address non-skilled home-based services (e.g., home health aide, meal delivery), the Committee generally favored a tool that would include all home health care services and that would be less burdensome, because the data collected for these measures are not required for

other purposes. Additionally, the Committee acknowledged that CMS has a growing interest in developing perception of care tools for various populations. While it has no plans to develop one for home health, because it would be a likely extension of current perception of care measure development efforts, the Committee viewed recommending any candidates in this area as premature to the government's efforts. Ultimately, it was acknowledged that this area should be added to the research agenda and that the recommendation should go beyond what the two instruments cover, because any survey should be inclusive in order to reflect the home health services that are being provided.

- **RAND 36-Item Health Survey (literature, research, RAND)**
  The Committee recognized that this tool is viewed as the leading quality-of-life measure and that it exists in several formats, including the RAND-36, SF-36, and SF-36 version 2. In general, the Committee was comfortable with the tool's psychometric properties, but it questioned the relevance of all the items to home health care (e.g., no ADL-related items). Ultimately, the Committee members agreed that this issue should be placed on the research agenda.

- **Unwanted resuscitation (hospice) (NHPCO)**
  Because this is an extremely rare event, the Committee generally viewed it as a lower priority. Additionally, concerns were raised regarding the extent to which performance may be low based solely on the fact that patients had not completed the relevant paperwork. In some states, in the absence of explicit documentation on the part of the patient specifying his or her wishes, providers are legally bound to resuscitate. For these reasons, the Committee excluded the measure from its recommendations.

- **Service access equity (Cincinnati Children's Hospital Medical Center [CCHMC])**
  Although this measure was developed and submitted by a provider of pediatric home health care services, it was viewed by the Committee as being useful mostly to those serving the vulnerable under Medicaid, private duty agencies, and state-level/regional-level reporting organizations. Concerns were raised that scientific testing was limited and that the measure had been in use by a single organization for less than a year. Additional concerns about the lack of knowledge of this measure as a key leverage point in home health care quality, the extent to which data/results could be used by attorneys to wage discrimination lawsuits, especially if publicly reported, the extent to which the measure would be helpful to the collection of home health organizations, and its applicability at the provider level led to the Committee's exclusion.

- **Addressing constipation with opioid use (ACOVE)**
  The Steering Committee raised concerns that fiber, which is incorporated into the measure specifications, is generally not viewed as an appropriate intervention for constipation resulting from opioid use. For this reason, the measure was viewed as inconsistent with existing guidelines. Additional concerns were raised that providers do not necessarily

document this item; therefore, chart review would not provide the data elements necessary to configure this measure, and any additionally required data elements would prove burdensome. Lastly, the Committee recognized that JCAHO, in conjunction with other partners, has been developing a similar measure that might be more adequate when finalized.

- **Tobacco screening (ACOVE)**
  The Committee discussed the critical link between tobacco screening and subsequent counseling in order to improve outcomes. Concerns were raised that the proposed screening process did not include an associated intervention or counseling. Additionally, the Committee raised concerns about the measure's direct link to improving quality outcomes (smoking cessation), because it is based on an interview item (a query to patients about whether they have been asked about their smoking histories or efforts to stop smoking). Furthermore, the Steering Committee recognized that sentinel events in the home (e.g., fires, burns) are related to smoking, especially in the presence of oxygen, yet the measure does not address these critical aspects of home care. Finally, concerns were raised that Medicare does not pay for tobacco cessation programs and/or counseling. This means that even when a smoking history is established, payment mechanisms do not exist to support linked interventions.

- **Initial evaluation for urinary incontinence (ACOVE)**
  Because this measure is incorporated into several other measures that were recommended (i.e., improvement in urinary incontinence, comprehensive geriatric assessment), it was viewed as a lower priority.

- **Physical activity screening (ACOVE)**
  Although Committee members agreed that physical activity has broad public interest, including support by the Centers for Disease Control and Prevention, CMS, and the Department of Health and Human Services, they disagreed over whether this measure would be applicable to frail, homebound patients.

- **National Core Indicators (NCI) – Consumer survey (NCI/Human Services Research Institute [HSRI]) National Core Indicators - Provider survey (NCI/HSRI)**
  These measures were viewed as burdensome because the surveys are long, several data elements are not used in the configuration of indicators, and the intent of the Steering Committee's recommendation would be to use the tools at the provider level. Additionally, the indicators were viewed by the Committee as a dataset rather than as a set of measures, and although several elements are directed toward quality/performance improvement issues, many of the data elements are more useful for state planning and/or resource utilization. Furthermore, some members viewed the single most critical aspect of care for the developmentally disabled as choice over caregiver, which is included in the surveys but is not their focus.

Ultimately, the measures were viewed as extending beyond the core scope of the project (home health care versus developmental disability services).

- **No influenza vaccination (HCQIs/interRAI)**
  In addition to questioning the measure's adequacy in accounting for the seasonability of vaccinations, Committee members raised concerns that the measure does not allow for patient choice (i.e., refusal of the vaccination) or the needs of particular subpopulations (e.g., pediatric patients) and that the measure is limited to influenza vaccination, when lack of pneumoccocal vaccination also is troublesome among the elderly.

- **Other measures not recommended**
  Because of their relative weaknesses, as identified in their respective measure evaluations (e.g., not precisely specified, nor feasible, or had methodological issues), the Steering Committee agreed to exclude the following measures:
  - Arrival time accuracy (CCHMC)
  - Pain (non-pharmaceutical interventions) (VHA)
  - Adaptive equipment (VHA)
  - Urinary incontinence (VHA)
  - Increased health instability (HCQIs/interRAI)
  - Failure to improve/incidence of cognitive decline (HCQIs/interRAI)
  - Incidence of unplanned hospitalizations (infusion) (NHIA)
  - Incidence of adverse drug reactions (infusion) (NHIA)
  - Incidence of reported medication errors (infusion) (NHIA)
  - Incidence of infusion pump incidents (infusion) (NHIA)

Measures Recommended for Public Reporting

Initially, the Steering Committee debated the merits of recommending only those measures that scored "high" in the "usability" criterion for public reporting (as well as contemplating others that were rated "medium" for this same purpose). However, the Committee raised concerns about recommending the OBQM/adverse event measures for public reporting, despite the fact that several (i.e., increase in the number of pressure ulcers, emergent care for wound infections/deteriorating wound status, emergent care for improper medication administration/medication side effects, and emergent care for hypo/hyperglycemia) had been rated "high" for usability. The Committee discussed the following reasons for excluding the OBQM/adverse event measures from public reporting:

- they were not developed for the purpose of public reporting;
- they occur in low frequencies;
- they are not risk adjusted;
- they are defined as potential events for which the link to poor quality must be investigated; and
- they may be misinterpreted by the public.

During subsequent deliberations, however, several concerns were raised about the rationale for excluding the adverse events:

- Although the OBQM measures were not developed for public reporting, neither were several of the other measures recommended by the Committee. For example, none of the ACOVE measures or the NHCPO measures was developed for public reporting.

- Although risk-adjustment models had minimal explanatory power, it was not clear what empirical rationale existed for needing to risk adjust these measures. None of the NQF-endorsed *Serious Reportable Events in Healthcare* is risk adjusted, suggesting that these adverse events may be so egregious that any single event should be reportable.
- Although coding errors may contribute to instances in which adverse events are identified, assuming that variation in coding errors is random (and occurs an equal numbers of times for OBQM and non-OBQM measures), this rationale applies to all measures based on administrative data and is not exclusive to the adverse events.
- Although it is possible that interpretation of these measures may be problematic for consumers—and others—evidence indicates exactly the opposite. Five of the seven OBQM measures recommended by the Committee were rated "high" or "medium" for usability (i.e., identified as most/more important) by consumers in testing conducted by CMS.

Ultimately, the Committee members reconsidered their initial rationale for excluding the QBQM/adverse event measures and agreed that it was inconsistent. Based on this determination, the Committee voted, by majority, to recommend all 28 measures for public reporting.

Establishing an Agenda for Research

During the course of evaluating potential consensus standards, a number of high-priority areas for measurement were identified, but they lacked measures that were appropriate for inclusion because they did not meet the established evaluation criteria. Based on the gaps in measurement that were identified, measure development opportunities and a research agenda were recommended that could enhance the state of the science and the maturity of candidate measures of home health care performance. To construct its agenda for research, the Steering Committee:

- examined the purpose, framework, scope, and priority principles and disaggregated them to determine existing gaps;
- reviewed the measure evaluation criteria to determine the extent to which measure developers and/or researchers were providing the type of evidence that is needed to adequately evaluate measures;
- detailed measure-specific refinements that would translate to measure improvements;
- reviewed measures that were beyond the scope thresholds and determined the extent to which these measures should be translated into priorities for research; and
- suggested, as guided by expert opinion, other important areas for research and development.

Based on this approach, the following research priorities were recommended:

- measures to address all patients receiving home health care, including but not limited to post-acute and chronic care, pediatric, mentally retarded/developmentally disabled, and mentally ill/substance abuse patients;
- measures that address all providers of home health care, including skilled nursing services, home health aide services, palliative and end-of-life care, therapies (i.e., physical, speech-language, and occupational), homemaker services/personal care, social services, infusion and pharmacy services, medical supplies and equipment, and in-home physician services;
- measures that address all NQF aim areas, with specific attention to measures that address the degree to which home health care services are patient centered, timely, efficient, and equitable;
- measures that address all areas and domains of the framework for measurement, with specific attention to measures that address processes of care (e.g., referral/intake, assessment, care planning and implementation, education/consultation) and structural elements, including system and organizational (e.g., costs) and workforce and human resource (e.g., turnover, staffing) characteristics;
- measures that comprehensively address all selected priority areas (i.e., heart failure, hypertension, cerebrovascular disease, fracture of the neck of the femur, osteoarthritis, diabetes mellitus, pressure ulcer/decubitus ulcer, pneumonia, chronic airway obstruction, neoplasm, pain [chronic and acute], cognitive impairment/dementia, and depression);
- measures that address coordination of care between home health care providers and others along the continuum of care, including but not limited to case management; and
- measures that address a broad range of important areas identified by the Committee including but not limited to unmanaged pain, depression, cognitive impairment, dementia, delirium, anxiety and behavioral problems, quality of life, functional status, physiological status, vaccinations, and patient and family satisfaction with services.

Of note, during the review period, commenters suggested that the research agenda should be embellished in various ways. Although a number of these suggestions were not recommended for action by the Steering Committee, it did recommend narrative adjustments in order to acknowledge the development of system-level measures that quantify performance across the healthcare continuum, and fostering system accountabilities.

Additional Recommendations

In addition to these research-related recommendations, the Steering Committee described some general additional recommendations that address the implementation and improvement of the measure set:

- To minimize burden and to achieve consistency with federal requirements, the standardized, uniform assessment system (e.g., OASIS) must be refined to incorporate all of the data elements necessary to generate non-OASIS-based NQF-endorsed consensus standards.

- In order to evaluate each measure's sufficiency, as new measures are developed (or existing measures refined) measure developers and researchers should investigate and document their adequacy using the NQF-endorsed measure evaluation criteria.
- Measure results should be stratified and reported by race/ethnicity, age, gender, and patient subpopulations (i.e., condition/diagnosis).
- Each organization's willingness to collect data is an indicator of its commitment to quality.
- The measures should be viewed as a set, and efforts should be undertaken to develop a composite/index of home health care quality.
- The measure set should be reviewed regularly and no less frequently than every three years.
- Following the comment period, and because of the objections raised to publicly reporting the OBQM/adverse event measures, the Steering Committee supported the addition of a recommendation to caution reporting entities when reporting performance results for any national voluntary consensus standard for home health care.

Appeals

After the 15 measures were endorsed in February 2005 by the Board of Directors, NQF received four letters of appeal requesting reconsideration of some or all of the measures. These letters were from the Arkansas Department of Health, the California Association for Health Services at Home, Kingsbrook Jewish Medical Center, and Professional Home Health Services. In May 2005, the Board voted unanimously to deny the four appeals based on the following:

- With respect to recommendations to include only Medicare patients within the scope of the set, the Board noted several points. This view is consistent with comment(s) received from a few providers during the review and voting phases. Additionally, CMS already requires completion of the OASIS dataset for Medicare and Medicaid patients served by Medicare-certified home health agencies, which means that information on many Medicaid patients already is being reported. Furthermore, the Steering Committee, particularly consumers, discussed the scope of applicability of the set and strongly felt that the NQF-endorsed set should apply to care for all patients receiving home health care—that is, source of payment should not govern which patients have access to information, and public reporting of the consensus standards also should include patients receiving care from Medicaid-only certified agencies, private paying patients, and others.

- Regarding the objection to public reporting of the OBQM measures, the Board again noted several points. This view again was represented by a few comments received during the review and voting phases. The Steering Committee also discussed this issue on multiple occasions during its deliberations, and, most recently, the issue was discussed by Members and the measure developer on the all-Council conference call. The measure developer reported that although the measures have been tested for reliability and validity, efforts to develop risk models have met with limited success, precisely because the rare occurrence of such events limits the degree to which statistical models can account for variation in the rate of occurrence. Finally, CMS reported at the February 7, 2005, Board meeting that it did not intend to publicly report data on this measure until it can assess the fair representation of the data. Thus, the appellant's most immediate concern has been addressed by CMS, and the Board continues to believe that those OBQM measures endorsed by NQF should be included in the set.
- With respect to the concerns of (non-Medicare-certified) organizations regarding the financial burden of collecting and reporting data and/or the potential disadvantage for agencies (which could be excluded by private provider networks) if they opted not to report, the Board's position was to not permit the payment source to be used as a criterion for measurement and reporting.
- Regarding the reconsideration of two of the measures—improvement in management of oral medications and improvement in bathing—and the substitution of stabilization measures in these areas, the Board noted that these issues were fully considered during the CDP. Specifically, NQF staff recommended adding stabilization measures to the set (but not replacing other measures). However, when burden related to the number of measures, importance of improvement versus stabilization to consumers, and breadth of the measure set in its entirety were considered, the Committee recommended against adding the measures.
- Finally, with respect to the appeal based on the perceived inadequacy of the OASIS tool and/or its development team, the Board noted that CMS, which contracted with the development team, believed the team was appropriate because CMS paid for the work. The Board also noted that throughout the project, and most recently in its comment letter during the review period, CMS has stated that it will convene expert panel(s) to review the OASIS tool and update it in response to this process.

Appendix E
Acronyms and Glossary

ACRONYMS

ACOVE	Assessing Care of Vulnerable Elders
ADLs	Activities of daily living
AHRQ	U.S. Agency for Healthcare Research and Quality
CAHPS®	Consumer Assessment of Health Plans Survey
CCHMC	Cincinnati Children's Hospital Medical Center
CDC	U.S. Centers for Disease Control and Prevention
CDP	Consensus Development Process (of NQF)
CHF	Congestive heart failure
CMS	U.S. Centers for Medicare and Medicaid Services
COPD	Chronic obstructive pulmonary disease
CVD	Cerebrovascular disease
DHHS	U.S. Department of Health and Human Services
DM	Diabetes mellitus
DSSI	Duke Social Support Index
FEHC	Family Evaluation of Hospice Care
HCQI	Home Care Quality Indicator
HCSM	Home Care Satisfaction Measure
HF	Heart failure
HHIE-S	Hearing Handicap Inventory for the Elderly-Screening
HSRI	Human Services Research Institute

HTN	Hypertension
IADLs	Instrumental activities of daily living
IOM	Institute of Medicine
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
MDS-HC	Minimum Data Set-Home Care
MMSE	Mini Mental Status Exam
MOS	Medical Outcomes Study Social Support Survey
NASDDDS	National Association of State Directors of Developmental Disabilities Services
NCI	National Core Indicators
NHDR	National Healthcare Disparities Report
NHIA	National Home Infusion Association
NHPCO	National Hospice and Palliative Care Organization
NHQR	National Healthcare Quality Report
NQF	National Quality Forum
OAA	Older Americans Act
OASIS	Outcome and Assessment Information Set
OBQI	Outcome-Based Quality Improvement
OBQM	Outcome-Based Quality Monitoring
OT	Occupational therapy
PT	Physical therapy
SASI	Service Adequacy and Satisfaction Measurements
SFB	Strategic Framework Board (of NQF)
UTI	Urinary tract infection
VA	U.S. Department of Veterans Affairs
VHA	U.S. Veterans Health Administration

GLOSSARY*

Abuse — improper or excessive use/treatment or physical maltreatment. Abuse can be physical or psychological and can include neglect, unusually poor hygiene, unexplained injuries, broken bones, or burns.

Activities of daily living (ADLs) — activities including but not limited to bathing, walking, dressing, grooming, toileting, transferring, and ambulation.

Adaptive equipment — equipment that assists an individual in performing activities of daily living independently; devices used to offset functional limitations.

Advance directive — a legal document, such as a living will, signed by a living competent person in order to provide guidance for medical and healthcare decisions (i.e., the termination of life support and/or organ donation) in the event that the person becomes incompetent to make such decisions.

Adverse drug reaction — any event in which the use of a medication (drug or biologic) at any dose, a medical device, or a special nutritional product (e.g., dietary supplement, infant formula, medical food) may have resulted in unintended injury or illness, which may or may not have been preventable.

Adverse event — a discrete, auditable, and clearly defined occurrence with a negative consequence of care that results in an unintended injury or illness, which may or may not have been preventable.

Ambulation — to walk or move from one location to another.

Anxiety — an abnormal and overwhelming sense of apprehension and fear often marked by physiological signs.

Cerebrovascular disease (CVD) — encompasses all abnormalities of the brain resulting from diseases of its blood vessels. Stroke is the most common but not the only form of CVD, and the terms stroke and CVD often are used interchangeably.

* Selected resources for this glossary include the American Nurses Association, at www.ana.org; the Centers for Disease Control and Prevention, at www.cdc.gov; the Centers for Medicaid and Medicare Services, at www.cms.hhs.gov; the *Hyperdictionary-Medical Dictionary,* available at www.hyperdictionary.com/medical; Medline-plus, available at www.nlm.nih.gov/medlineplus/mplusdictionary.html; Institute of Medicine (IOM), *Medicare: A Strategy for Quality Assurance,* Vol. II, Washington DC: National Academies Press; 1990; the *Merriam-Webster Medical Dictionary,* available at www.intelihealth.com; National Quality Forum (NQF), *Safe Practices for Better Healthcare: A Consensus Report,* Washington, DC: NQF; 2002; NQF, *Serious Reportable Events in Healthcare: A Consensus Report,* Washington, DC: NQF; 2002; NQF, *National Voluntary Consensus Standards for Hospital Care: An Initial Performance Measure Set,* Washington, DC: NQF; 2003; U.S. Department of Health and Human Services, Healthfinder, at www.healthfinder.gov; Morris JN, Fries BE, Barnebei R., et al, *RAI Home Care (RAI-HC) Assessment Manual© for Version 2.0; Primer on Use of the Minimum Data Set-Home Care (MDS-HC) Version 2.0© and the Client Assessment Protocols (CAPs),* Boston, MA: Hebrew Rehabilitation Center for Aged; 1999; Resubmission of Measures: HH Tech Specs from CHSR, Pam Cheetham, e-mail, February 2, 2004; *JCAHO Sentinel Event Glossary of Terms,* available at www.jcaho.org/accredited+organizations/hospitals/sentinel+events/glossary.htm; National Pressure Ulcer Advisory Panel, *NPUAP Staging Report,* available at www.npuap.org/positn6.html; IOM, *To Err Is Human: Building a Safer Health System,* Washington, DC: National Academy Press; 2000.

Chronic obstructive pulmonary disease (COPD) — pulmonary disease (such as emphysema or chronic bronchitis) that is characterized by chronic, typically irreversible airway obstruction resulting in a slowed rate of exhalation.

Clinical data — refers to all the information contained in the patient's clinical record, including medical history, diagnoses, signs and symptoms, and laboratory test results. Clinical data are more detailed than administrative data, which contain only basic information about the patient and his/her condition and treatment.

Confusion — disturbance of consciousness characterized by the inability to engage in orderly thought or by the lack of power to distinguish, choose, or act decisively; loss of understanding of time, place, or person.

Cognitive impairment/dementia — a breakdown in a person's mental state that may affect mood, fear, anxiety, and the ability to think clearly.

Congestive heart failure (CHF) — heart failure in which the heart is unable to maintain adequate circulation of blood in the tissues of the body or to pump out the venous blood returned to it by the venous circulation.

Delirium — a mental disturbance characterized by confusion, disordered speech, and hallucinations.

Dementia — a general decline in a person's mental abilities involving decreased functioning in memory, problem solving, learning, and other mental abilities.

Depression — a state of feeling sad, a psychoneurotic or psychotic disorder marked especially by sadness, inactivity, difficulty with thinking and concentration, a significant increase or decrease in appetite and time spent sleeping, feelings of dejection and hopelessness, and sometimes suicidal thoughts or an attempt to commit suicide.

Device — refers to an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article.

Diabetes mellitus (DM) — a disorder of carbohydrate metabolism caused by a combination of hereditary and environmental factors and usually characterized by inadequate secretion or utilization of insulin; high blood sugar.

Dyspnea — difficult or labored respiration; shortness of breath.

Emergent care — care given for an urgent, unplanned medical emergency.

Fall — an unplanned descent to the floor.

Fracture of the neck of the femur — fracture in the "neck" (upper) portion of the femur, or the bone that extends from the hip to the knee. The fracture may result either from rotation violence at the hip due to tripping over something on the floor and falling or a direct violence over the lateral aspect of the hip by a fall on the side.

Functional outcomes — outcomes associated with a person's functioning, including physical health, quality of self-maintenance, quality of role activity, and emotional status.

Heart failure (HF) — occurs when the heart loses its ability to pump enough blood through the body. Usually, the loss in pumping action is a symptom of an underlying heart problem, such as coronary artery disease. **Congestive heart failure** is a type of heart failure.

Home care — a broad definition of health-related and support services provided to clients in their homes; includes, but is not limited to, social services, transportation, home-delivered meals, housing, personal care, homemaker and companion services, and skilled and unskilled health services.

Home health care — for purposes of these national voluntary consensus standards, home health care is defined as "any healthcare services provided to clients in their homes, including but not limited to skilled nursing services, home health aide services, palliative and end-of-life care (e.g., in-home hospice services), therapies (i.e., physical, speech-language, and occupational), homemaker services/personal care, social services, infusion and pharmacy services, medical supplies and equipment, and in-home physician services."

Hypertension (HTN) — high blood pressure occurring without apparent or determinable prior changes in the tissues, possibly because of hereditary tendency, emotional tensions, faulty nutrition, or hormonal influence.

Incontinence — inability of the body to control the evacuative functions.

Influenza — an acute, highly contagious viral respiratory disease.

Infusion therapy — method in which patients receive vital fluids, nutrition, and medications via an intravenous line (enters the body through a vein).

Instrumental activities of daily living (IADLs) — activities related to independent living that include preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework, and using a telephone.

Logistic regression — a statistical method that can be used to estimate the likelihood of an outcome for a patient (e.g., death after surgery) based on the degree to which factors such as the patient's age, gender, and co-existing diseases influence the outcome. Logistic regression is a type of risk adjustment.

Majority — a number greater than half of the total.

Malnutrition — poor nutrition due to inadequate or unbalanced intake of nutrients or their impaired assimilation or utilization.

Neglect — the refusal or failure to fulfill a caretaking obligation, including, for example, the denial of needed food, health-related services, or eyeglasses. Also includes abandonment.

Neoplasm — any new and abnormal growth; specifically a new growth of tissue in which the growth is uncontrolled and progressive; commonly referred to as cancer.

Osteoarthritis — arthritis characterized by degenerative changes in the bone and cartilage of one or more joints and a progressive wearing down of apposing joint surfaces.

Outcome and Assessment Information Set (OASIS) — a group of data elements that represents the core items of a comprehensive assessment for an adult home care patient and forms the basis for measuring patient outcomes for purposes of outcome-based quality improvement (OBQI). This assessment is performed on every patient receiving the services of home health agencies that are approved to participate in the Medicare and/or Medicaid programs.

Outcome measure — a measure that describes a patient's health status or level of functioning following an episode of healthcare. Depending on the situation, healthcare providers have a varying degree of control over the outcome. Some outcome measures include death rates after a heart attack (i.e., AMI mortality) or changes in physical functioning after surgery.

Outcome-Based Quality Improvement (OBQI) — a system that uses outcome measures derived from OASIS to develop and manage continuous quality improvement programs.

Outcome-Based Quality Monitoring (OBQM) — a system that uses adverse event measures derived from OASIS to identify markers of potential problems and quality monitoring.

Multidisciplinary (interdisciplinary) care — a team of caregivers who work together to develop and implement a plan of care.

Opioid — possessing some properties characteristic of opiate narcotics. Opioid drugs relieve pain, dull the senses, and induce sleep.

Outcome measure — a measure that describes a patient's health status or level of functioning following an episode of healthcare.

Plurality — an excess of votes over those cast for another choice/candidate; the greatest number of votes cast when not a majority.

Pneumococcal — an infection caused by a bacterium that can result in pneumonia, blood infection (bacteremia), and meningitis (infection of the covering of the brain).

Pneumonia — infection in the lungs. Sometimes, vulnerable patients, such as the elderly or those who have had surgery, may contract pneumonia while in the hospital, which is referred to as nosocomial pneumonia.

Pressure ulcer — also called a decubitus ulcer, pressure sore, or bedsore, it is an ulceration of tissue deprived of adequate blood supply by prolonged pressure.

Partial-thickness pressure ulcer — partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater.

Full-thickness pressure ulcer — full thickness skin loss involving damage to, or death of, tissue below the epidermis that may extend down to, but not through, fascia (a sheet or band of fibrous connective tissue separating or binding together muscles and organs). The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue, or full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g., tendon, joint capsule).

Process measure — a measure that is focused on aspects of intervention and processes of care provided by healthcare personnel; based on the organization, nature, and quality of care processes.

Quality of care — degree to which health services for individuals and populations increase the likelihood of desired health outcomes, are consistent with current professional knowledge, and are safe, beneficial, timely, patient centered, efficient, and equitable.

Resuscitation — to revive an individual from apparent death or from unconsciousness.

Risk adjustment — a general term for statistical methods that account for patient risk factors (i.e., characteristics such as age, gender, and other illnesses that may influence outcomes) and adjust a healthcare provider's or hospital's performance results to take into account how sick their patients were. Outcome measures such as mortality are important to risk adjust, because some hospitals may treat sicker patients who are more likely to die even with good care, and risk adjusting the measures helps make for fair comparisons among hospitals. Risk adjustment can be done with clinical data or administrative data.

Structure measure — a measure focused on system-level organizational effectiveness and efficiency that influences and is influenced by healthcare; based on structural, organizational, work process, and work design-related elements of the work environment.

Surgical wound — an opening made in the skin or a membrane of the body incidental to a surgical operation or procedure.

Transferring — moving an individual from one location to another (e.g., getting in and out of bed).

Turnover — the number of persons hired within a period to replace those leaving or dropped from a workforce.

Urinary incontinence — inability to control the flow of urine and involuntary urination.

Urinary tract infection — a bacterial infection of the urinary tract (also known as a bladder infection or cystitis).

Appendix F
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Appendix G
Consensus Development Process: Summary

The National Quality Forum (NQF), a voluntary consensus standards-setting organization, brings together diverse healthcare stakeholders to develop consensus on voluntary consensus standards to improve healthcare quality. The primary participants in the NQF Consensus Development Process are NQF member organizations, which include:

- consumer and patient groups;
- healthcare purchasers;
- healthcare professionals, providers, and health plans; and
- research and quality improvement organizations.

Any organization interested in healthcare quality measurement and improvement may apply to be a member of NQF. Membership information is available on the NQF web site, www.qualityforum.org.

Members of the public with particular expertise in a given topic also may be invited to participate in the early identification of draft consensus standards, either as technical advisors or as Steering Committee members. In addition, the NQF process explicitly recognizes a role for the general public to comment on proposed consensus standards and to appeal healthcare quality consensus standards endorsed by NQF. Information on NQF projects, including information on NQF meetings open to the public, is posted at www.qualityforum.org.

Each project NQF undertakes is guided by a Steering Committee (or Review Committee) composed of individuals from each of the four critical stakeholder perspectives. With the assistance of NQF staff and technical advisory panels and with the ongoing input of NQF Members, a Steering Committee conducts an overall assessment of the state of the field in the particular topic area and recommends a set of

draft measures, indicators, or practices for review, along with the rationale for proposing them. The proposed consensus standards are distributed for review and comment by NQF Members and non-members.

Following the comment period, a revised product is distributed to NQF Members for voting. The vote need not be unanimous, either within or across all Member Councils, for consensus to be achieved. If a majority of Members within each Council do not vote approval, staff attempts to reconcile differences among Members to maximize agreement, and a second round of voting is conducted. Proposed consensus standards that have undergone this process and that have been approved by all four Member Councils on the first ballot or by at least two Member Councils after the second round of voting are forwarded to the Board of Directors for consideration. All products must be endorsed by a vote of the NQF Board of Directors.

Affected parties may appeal voluntary consensus standards endorsed by the NQF Board of Directors. Once a set of voluntary consensus standards has been approved, the federal government may utilize it for standardization purposes in accordance with the provisions of the National Technology Transfer Advancement Act of 1995 (P.L. 104-113) and the Office of Management and Budget Circular A-119. Consensus standards are updated as warranted.

For this report, the NQF Consensus Development Process, version 1.7, was in effect. The complete process can be found at www.qualityforum.org.

National Quality Forum Publication Information

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