ltqa LONG-TERM QUALITY ALLIANCE

QUALITY MEASUREMENT WORKGROUP REPORT

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measurement opportunities & gaps

transitional care processes and outcomes among adult recipients of long-term services and supports

EXECUTIVE SUMMARY & DETAILED REPORT

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EXECUTIVE SUMMARY

The Long-Term Quality Alliance (LTQA) is a membership organization comprised of the nation's leaders in long-term care, health care, and consumer advocacy. As is reflected in its mission, LTQA is committed to improving the effectiveness and efficiency of long term services and supports (LTSS) (see Appendix A). LTQA includes a diverse group of stakeholders who foster person-and family-centered quality measurement and the advancement of innovative best practices and serve as an experienced policy "voice" for LTSS.

At the time of its establishment, LTQA set an ambitious framework for its work which includes the promotion of effective transitions, improvement in health and quality of life, and reduction in health care costs for adults receiving LTSS. Key levers to achieving this goal include the identification and dissemination of a streamlined set of meaningful person- and family-centered measures, and delineation of measurement gaps that signal opportunities for measure development and research. Over the past year, the 25-member Quality Measurement Workgroup (see Appendix B) was charged with addressing these goals. This Executive Summary provides an overview of the Workgroup's approach to its charge and the results from those efforts.

Goals of the LTQA Quality Measurement Workgroup

In conducting its work, the LTQA Quality Measurement Group accomplished three discrete objectives. Specifically, it:

- achieved consensus on domains for measurement of transitional care in LTSS and their definitions;
- identified and recommended relevant transitional care measures (see Appendix C); and
- identified gaps in measurement relevant to transitional care which represent areas for measure development and/or research.

Key Activities

The LTQA Quality Measurement Workgroup used an iterative consensus process to produce results (see Figure 1). In phase 1, a broad scan of existing measures coupled with a scan of the transitional care literature yielded key domains—and their specific definitions—for measuring transitional care processes and outcomes among older adults receiving LTSS. These three key domains are: person- and family-centered care, transitional care processes, and performance outcomes. Additionally during phase 1, the Workgroup established inclusion and exclusion criteria for measure evaluation and identified potential sources of measures based on the criteria. From the candidate measures (n=681), 104 were selected for further evaluation.

Phase 2 entailed an on-line survey of the Quality Measurement Workgroup to solicit feedback on its assessment of the 104 measures. This resulted in a narrowing of the potential measures to 38.

In phase 3, a second survey was used to validate and refine previous results, resulting in 12 recommended measures. In the final phase, measurement gaps were identified and general recommendations were refined.

Key Results

Taken together, these efforts produced three specific outcomes:

1. Identification and definitions of three key domains for measurement of transitional care in LTSS:
   - person- and family-centeredness,
   - transitional care processes, and
   - performance outcomes.
2. Recommendation of twelve measures summarized in the table below.
3. Identification of measurement gaps for recipients of LTSS which represent areas for measure development and/or research. These include:
   - Transitional care measures specific to person- and family-centeredness; specifically, measures to assess aspects that contribute to quality for individuals and their families and are broader than clinical outcomes (i.e., quality of life, autonomy, relationships, compassion, social supports, and emotional well-being)

RECOMMENDED MEASURES	DOMAIN
Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (NQF 166)[1]	Person/ Family-Centered Care
Client Perceptions of Coordination Questionnaire (CPCQ)[2]	
3-Item Care Transition Measure (CTM-3) (PCPI®) (NQF 228)[3]	Transitional Care Processes
Percentage of patients aged 65 years and older with a history of falls who had a plan of care for falls documented within 12 months (AGS/NCQA/PCPI®)[4]	
Percentage of Medicare members 65 years of age and older who received at least two different high-risk medications (NCQA HEDIS® 2011)[5]	
Percent of discharges from Jan 1st to Dec 1st of the measurement year for members 66 years of age and older for whom medications were reconciled on or within 30 days of discharge (NCQA HEDIS® 2011) (NQF 554)[6]	
Mean change score in basic mobility of patient in a post-acute-care setting assessed (AM-PAC) (CREcare) (NQF 429)[7]	
Mean change score in daily activity of patient in a post-acute-care setting assessed (AM-PAC) (CREcare) (NQF 430)[8]	
Percent of patients who need urgent, unplanned medical care (HHC) (OASIS) (CMS)[9]	
Percentage of patients, regardless of age, discharged from an inpatient facility to home/ any other site of care from whom a transition record was transmitted to the facility/ primary physical/other health care professional for follow-up-care within 24 hours of discharge (PCPI®) (NQF 648)[10]	
Advanced Care Plan (NCQA) (NQF 326)[11]	
All-cause readmission (risk adjusted) (NQF 329) (HEDIS® 2011)[12]	Performance Outcomes

- Personal experience with transitional care (e.g., personal transition process, self-care management abilities)
- Family caregivers' roles and experiences with transitional care (e.g., degree of burden, extent of support, adequacy of skills and care management abilities including assessment, monitoring, and care coordination, needs and experiences of families caring for special populations such as cognitive impairment/dementia);
- Assessment of the care for older adults who are seen in emergency departments and hospitals for treatment of chronic health conditions, then return home with no follow-up care for Medicare-covered services, or who are never admitted to the hospital and sent home from an emergency department
- Measures capturing the unique needs, care processes and outcomes for broad sub-populations (i.e., those with health disparities, special populations and their family caregivers including those with cognitive impairment, MRDD, those at the end of life/receiving hospice, and those with Alzheimer's disease or other dementias)
- Palliative care during transitions including issues such as pain and other symptoms, occurrence and documentation of discussions about goals of care
- Transitional care management across each episode of care (e.g., accountability across care settings; assessment of risk, needs and preferences; utilization of long-term services and support; individual-family education)
- Discharge readiness and social support (e.g., engagement, roles and responsibilities; needs and burden; extent of family caregiver support; access to community and professional services; shared accountability between family/informal caregiver)
- Preventive care for those in transition
- Access to, cost and cost-effectiveness of transitional care
- Testing the recommended measure set as a bundle to determine whether this set yields meaningful information for quality improvement and consumer selection

Recommendations to LTQA

The Workgroup submitted the following recommendations to the LTQA Board in September 2011 for its approval:

1) Recognize and promote the 12 recommended measures. Specifically, further evaluation of these 12 measures for use among more diverse populations, particularly older adults dually eligible for Medicare and Medicaid, and those with multiple co-morbidities and cognitive impairment, should be vigorously pursued;
2) Promote further testing and evaluation of measures that possess strong evidence and high alignment with the conceptual domains but lack robust generalizability;
3) Optimize measurement testing and implementation within the Innovative Communities Initiative;
4) Advocate for investments in research to address the major gaps in quality measures (developing new measures or testing and broadening applicability of existing measures); and
5) Identify the workforce implications of adoption of these performance measures including strategies that address potential training, dissemination, and practice integration.

INTRODUCTION

> *"…the United States needs a national commitment to the measurement, improvement, and maintenance of high-quality health care for all its citizens."*
>
> *President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry, 1998 (chapter 1)*

In 1998, the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry issued its report, *Quality First: Better Health Care for All Americans*[13] which called for a national strategy for health care transparency and accountability. Since then, enormous investments have been made to establish a sustainable, public-private infrastructure and consensus process for:

- setting national priorities for quality improvement;
- identifying, standardizing, and endorsing measures to assess performance in priority areas;
- collecting, analyzing, and publicly reporting performance;
- supporting consumers' understanding and use of performance results in health care decision making;
- better aligning payment with provider performance; and
- motivating research and measure development to fill important gaps in that which is available and implementable.

These investments and the progress that has been achieved in realizing a more transparent, accountable health care system have been facilitated, at least in part, by a growing number of collaboratives. While each of these collaboratives—referred to as alliances—represents the public and private sectors, unites multiple stakeholders with diverse interests, and marshals resources in advocating for change, they have unique constituencies and represent specific health care sectors. For example, the Hospital Quality Alliance (HQA) was established to make meaningful, relevant, and easily understood hospital performance information publicly accessible. The Kidney Care Quality Alliance (KCQA) represents members of the kidney care community in the development of performance measures to evaluate and improve care for patients with chronic kidney disease. In the case of the more than 10 million chronically ill and disabled Americans who are dependent on long-term care supports and services (LTSS), the Long-Term Quality Alliance (LTQA) serves this purpose.

LTQA is a membership organization comprised of the nation's leaders in long-term care, health care, and consumer advocacy and committed to improving the effectiveness and efficiency of LTSS. LTQA fosters person- and family-centered quality measurement and the advancement of innovative best practices and serves as a rational and experienced policy "voice" for LTSS (Appendix A).

POLITICAL LANDSCAPE

LTQA has set an ambitious agenda for its work which is focused on improving care transitions and reducing avoidable hospitalizations. This focus not only reflects the nation's shifting demographic and economic trends but is responsive to the political landscape—a landscape which has largely been shaped by four major forces:

Prioritization of Care Coordination and Care Transitions

Over the last decade, the nation's leaders have established a parsimonious set of priorities for quality improvement. In its 2003 report, *Priority Areas for National Action: Transforming Health Care Quality*, the Institute of Medicine (IOM) recommended 20 priorities for quality improvement[14]. Not surprisingly, care coordination and frailty associated with old age were among the identified priorities based on their likely impacts, potential to achieve dramatic improvements, and applicability to a broad range of individuals.

Since then, numerous, other organizations have reiterated this "call" to action. The National Priorities Partnership (NPP)—a collaboration of dozens of national organizations that has advised the Department of Health and Human Services on its quality strategy—identified six priorities for performance improvement including three specific goals for care coordination that include:

- soliciting and carefully considering feedback from all patients and their families regarding coordination of their care during transitions;
- clearly communicating medication information and reconfirming this information to patients, family members, and providers at each transition point; and
- reducing 30-day readmission rates.[15]

The recommendations of these independent, private organizations have since been assumed by the federal government. In 2011, the Department of Health and Human Services released the National Strategy for Quality Improvement in Health Care, creating national aims and priorities to guide local, state, and national health care quality improvement efforts.[16] Here again, effective communication and coordination of care were identified as national priorities. This consistent, recurring, and widespread support for improving care coordination and care transitions is echoed in LTQA's agenda.

Creation of a Framework for and Definition of Care Coordination

Recognition of care coordination and care transitions as national priorities has necessitated the creation of a common understanding of these terms and their component parts. To this end, dozens of definitions of care coordination have been adopted by various organizations. Standardization, however, was achieved in 2006 when the National Quality Forum (NQF) endorsed, through consensus, a definition of care coordination and identified its five supporting domains: health care home, proactive plan of care and follow-up, communication, information systems, transitions or "hand offs."[17] The adoption of a uniform definition and conceptual model for care coordination was a necessary precursor in motivating that which followed—developing and endorsing measures for transparency and accountability.

Development of Measures of Care Coordination and Care Transitions

Along with it becoming a national priority, significant investments have been made in developing and endorsing performance measures for public reporting and performance-based purchasing. Specifically, a growing number of entities—including government agencies, accreditation organizations, health plans, purchasers and employers, provider and specialty groups, and researchers—have developed

performance measures that have since been endorsed by NQF and now serve as the basis for public reporting and performance-based payment programs. As examples, more than 60 performance measures were recently identified by the Agency for Health Care Quality and Research (AHRQ) as appropriate for assessing care coordination interventions in research studies and demonstration projects with a particular emphasis in ambulatory care.[18] In 2010, NQF endorsed 25 preferred practices along with a set of 10 performance measures of care coordination including practices and measures of care transitions.[19] Although these efforts are significant in creating a national platform on which care coordination can be measured and evaluated, these activities have not specifically addressed the needs, preferences, and unique attributes of LTSS or the contributions of long term care providers in delivering high value health care. The lack of emphasis on LTSS raises some important questions:

- What measures are needed to sufficiently address the delivery of care transitions among persons receiving LTSS?
- What gaps exist between that which is needed and that which has been developed and/or endorsed?
- What will accelerate the development, endorsement, and implementation of measures that address care transitions in LTSS?
- What measures of care transitions and readmissions are sufficient to be adopted into public reporting and value-based purchasing programs that target LTSS?

Understandably, answers to these questions have been at the heart of LTQA's current agenda.

Transformation through Health Reform

The last of the major forces influencing LTQA's agenda is health care reform. Under the Affordable Care Act (ACA), a number of demonstrations, new programs, and novel payment and delivery system models have been established that target care coordination and accelerate improvements in care transitions and readmissions. Certainly, the expansion of public reporting and value-based purchasing to skilled nursing facilities and home health agencies requires a portfolio of performance measures suitable for those purposes. However, new programs that necessitate episode-based approaches to care—such as the Medicare Shared Savings Program (Sec. 3022), National Pilot Program on Payment Bundling (3023), Hospital Readmissions Reduction Program (Sec. 3025), Community-Based Care Transitions Program (Sec. 3026)—accelerate the demand for measures that address the full continuum and that specifically address care transitions and readmissions. Effective implementation of these programs, therefore, must account for persons receiving LTSS. LTQA serves as a natural vehicle to deliver the requisite expertise and knowledge to achieve these programs' aims.

LTQA RESPONDS

In response to these forces, LTQA made a commitment to achieving effective person- and family caregiver-centered care transitions, improving health-related quality of life, and decreasing potentially avoidable hospitalizations, rehospitalizations and total health care costs among adult recipients of LTSS. As a first step in achieving this vision, LTQA convened a multi-stakeholder group—the Quality Measurement Workgroup (see Appendix B)—to identify a streamlined set of measures reflecting these commitments, to establish a measurement strategy that fosters transparency and accountability in LTSS, and to describe measurement gaps that inform measure development and future research.

In conducting its work, the LTQA Quality Measurement Workgroup accomplished three goals. Specifically, it:

1. achieved consensus on domains for measurement of transitional care in LTSS and their definitions;
2. identified and recommended relevant transitional care measures (Table 1); and
3. identified gaps in measurement relevant to transitional care which represent areas for measure development and/or research.

This report:

- details the contributions of the Quality Measurement Workgroup in achieving LTQA's vision and the stepwise process it relied on to conduct its work;
- conveys results from the Workgroup's data gathering activities and deliberative consensus process; and
- sets forth the Workgroup's recommendations including specific research priorities that must be addressed through subsequent investments and next steps.

The Challenges of Developing a Measurement Strategy for LTSS

Because of unique characteristics and features of LTSS, developing a measurement strategy is not a simple or linear process. The particular vulnerability and complex care needs of this population influence the development and subsequent identification of performance measures, generally, and transitional care measures, specifically. These include characteristics of the LTSS population, the role of families in providing care, and both workforce and technology implications.

Vulnerability and Complex Care Needs in this Population

The population of individuals receiving LTSS is often characterized by multiple co-morbidities and a trajectory of functional decline. The care delivery system and the measurement of its performance must balance disease-specific outcomes with more comprehensive, holistic outcomes. Among this population, there are many dually eligible individuals, a sub-population with multiple chronic conditions with a diverse range in health conditions, function, and need for assistance in personal care, social, and financial domains. Many, if not most, persons receiving LTSS would benefit from palliative care and a subset (those with a prognosis under six months) are eligible for hospice, creating an overlap in care design and measurement with this population, particularly around person/family experience with care. Compounding the challenge is the increasing diversity among older adults in the United States, and the critical need for assuring culturally appropriate and inclusive care for all older adults that reflects both cultural values and individual/family preferences.

Further, the population receiving LTSS commonly experiences multiple transitions across settings in a non-linear fashion, as chronic disease conditions and functional status evolve with the trajectory of health. The personal disruption for the individual and the system requires navigating different providers,

a variety of settings, diverse models of care, and often, siloed health records that lack a common minimum data set.

Older adults and long term care are inextricably linked with costly and avoidable patient safety and utilization problems (e.g., medication errors, infections, falls, and readmissions). Solutions, such as preventing iatrogenic illnesses, enhanced discharge planning, post-discharge follow-up, interprofessional team-based care, utilization of community resources (i.e., care transition interventions) have been an integral component of clinical geriatrics since its inception. Geriatrics and its firm embrace of interprofessional collaboration is particularly well situated to be part of health system transformation for the LTSS population. Evidence-based solutions that span multiple providers and sites of care and better match services to individual and population needs are essential to assure that our fractured care system does not increase the risk of vulnerable groups (such as those receiving long-term services and supports) to errors and other adverse events.

Family Members Providing Care

Family caregivers play the majority role in care for the LTSS population. Predominant approaches to care, particularly in the acute care setting, do not take into account the complexity of family involvement or their multiple and often fluctuating roles in care. Despite the expectation that families provide the majority of care, many older adults do not have family support and the institutional system does not adequately recognize or respond to fill this gap.

The Workgroup repeatedly affirmed the importance of the perspective of the person/family in quality measurement by going beyond patient/family satisfaction to assure that care plans are concordant with well-informed individual and family goals, incorporate individual and family engagement, capacity for self-care, understanding of the health condition and plan of care, and inclusion of advance health care directives that reflect preferences and goals. Sources of data in this area are not readily available, though the NQF palliative care measures review committee identified and approved several relevant measures that are likely to be endorsed within the year. The committee concurred that it is critical to begin with a view that optimal care occurs when care received and outcomes obtained are concordant with informed and achievable person/family-determined goals for care. This forms the basis for optimal measurement of quality and safety.

Workforce and Technological Considerations

There are significant workforce implications as measures drive processes and require competencies to accomplish the goals of care. Assuring effective care transitions involves communication, collaboration, and negotiation across multiple stakeholders. This has implications for the preparation of the health care team in executing new approaches to care as well as in adequately staffing the various settings in which LTSS are provided.

A major challenge in measuring care transitions is the lack of common terms, definitions, and uniform data sets from which performance measures can be constructed as well as the absence of a national data repository to which all LTSS providers and settings contribute. While performance measurement, public reporting, and quality improvement within discrete settings has advanced, measurement across LTSS settings lags. Standardization of performance data and collection through interoperable electronic health records are necessary to advance capacity in measuring performance across diverse settings.

KEY ACTIVITIES AND METHODS

In conducting its work, the LTQA Quality Measurement Workgroup undertook an array of activities organized in four major phases and relied on an iterative, stepwise process (see Figure 1). The phases are elaborated on below.

Phase 1: Identify candidate measures

In the first phase, the Workgroup conducted a broad scan of existing measures and a scan of the transitional care literature which yielded key domains—and their specific definitions—for measuring transitional care processes and outcomes among older adults receiving LTSS. The three key domains are: person- and family-centered care, transitional care processes, and performance outcomes. Table 1 provides definitions and key elements of these domains. (See Table 1)

It is not accidental that "person- and family-centered care" is prominent in the domain architecture since the Workgroup viewed it as the hallmark of effective transitional care. In defining this

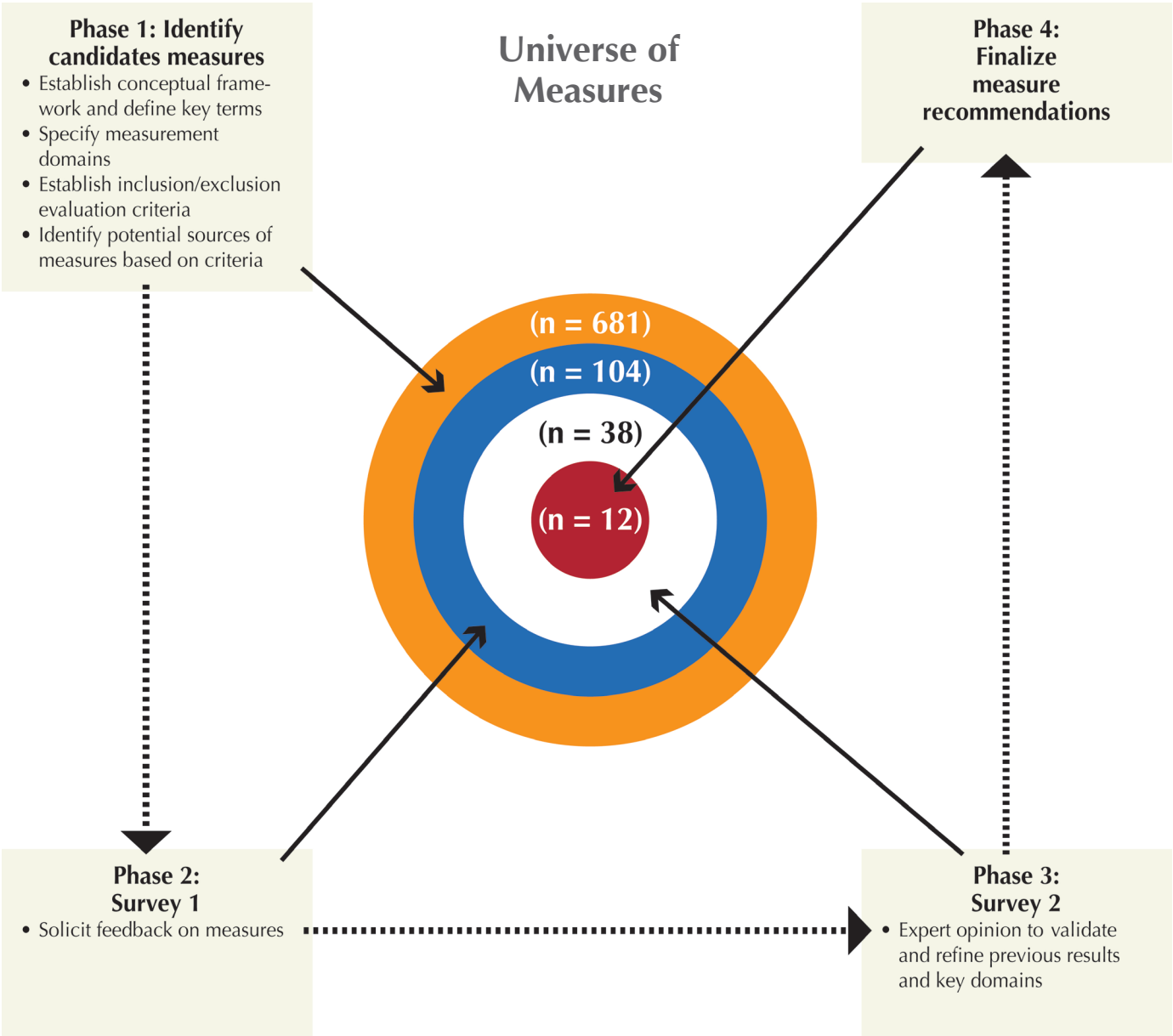

Figure 1. LTQA Quality Measurement Workgroup iterative consensus process

DOMAINS FOR MEASURING TRANSITIONS IN LTSS			IOM AIMS
DOMAIN	DEFINITION	KEY ELEMENTS	
1	**Person- and Family-Centeredness** "Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions"[20]	• Based on the goals, preferences, and values of each individual and his/her family • Results in a plan of care that reflects these goals, preferences and values • Recognizes the involvement of family members as caregivers and honors individual and family dignity, cultures, traditions, strengths and expertise • Enables individuals and family caregivers to identify and access a mix of services/supports that assists them in achieving personally-defined outcomes consistent with their goals, preferences, and values	Safe Effective Patient-Centered
2	**Transitional Care Processes** "A broad range of time-limited services designed to ensure health care continuity, avoid preventable poor outcomes among at-risk populations, and promote the safe and timely transfer of patients from one level of care to another or from one type of setting to another."[21]	• Designed to ensure the coordination and continuity of care as individuals transfer within and across settings • Includes multiple levels of care, providers, locations, and/or communities • Aspires to seamlessness during life transitions including physical transitions, health changes involving self-management, and end of life transitions • Reflects systematic and evidence-based approaches to care	Timely Efficient
3	**Performance Outcomes** Measurable endpoints of LTSS with a particular emphasis on economic, utilization, and clinical complications.[22]	• Aligns with the needs, preferences, and values of adults with physical and/or cognitive functional limitations and their family caregivers • Increases the likelihood of improvements in health-related quality of life • Decreases potentially avoidable hospitalizations, rehospitalizations, and emergency department visits • Reduces total health care costs	Equitable

Table 1. Measurement domains, definitions and key elements of transitional care in LTSS

domain, the Workgroup specifically refers to health care practices that integrate older adults' health care needs and experiences with individual and family caregiver life situations and outcomes of care as well as the societal need for providing care that reduces waste and health care costs.[23] In the Workgroup's review, the importance of measuring assistance provided to help older adults and family caregivers navigate changes in health within the contexts of their lives and fragmented care systems assumed a central role. The Workgroup also recognized the importance of measuring approaches to care that integrate delivery systems in an effort to improve the piecemeal, fragmented, and redundant approaches to providing care across settings and providers of care. As identified in Table 1, we have retained the IOM definition of patient-centered care with modifications for this purpose.[24] Specifically, the original term for our domain name, "patient-centered care," was altered to "person- and family-centered" to recognize the whole person and not solely the recipient of services[25] as well as the need for services to address care and support for family members who bear the greatest burdens for care of older LTSS recipients[26].

The second domain that emerged in our search, "transitional care processes," refers to the existing evidence-based services and care processes that providers implement to ensure (a) continuity of care, (b) safe and timely transfers of LTSS recipients during pivotal transitions in care, and (c) protection from preventable poor outcomes such as falls, medication errors, and loss of functional capacity during such exchanges.[27 28] Transitional care intervention trials have shown that a cluster of health care practices—often delivered by specially trained nurses—reduce complications that arise during transitions and improve health care outcomes for older adults.[29 30 31]

These practices include:

- comprehensive assessment,
- individualized care planning,
- patient and family teaching,
- medication reconciliation,
- discharge planning,
- scheduled transitional care home visits[32 33 34]

With its effective, component parts identified, measurement of these transitional care processes in LTSS will be essential for establishing and maintaining supports for older adults and their family caregivers.

"Performance outcomes," the third domain of transitional care, recognizes the centrality of assessing care endpoints.[35] Because of their adverse consequences on the health system, broadly, and recipients of LTSS, narrowly, economic outcomes such as cost effectiveness, utilization outcomes (e.g., readmissions), and clinical complications assumed precedence.

As conceptualized by the Workgroup, each domain reflects and relates to one or more of the IOM aims for health care quality improvement[36].

Once consensus at the domain-level was achieved, the Workgroup identified potential sources of measures. They also agreed on three general principles to guide measure prioritization:

1. Quality measures should, where possible, be based on the best available evidence and must be related to the key domains of transitional care in LTSS;
2. Only measures for which data exist and are being collected through some national-level initiative/program should be included; and
3. Parsimony in the number of measures, to the extent that they can be used to collectively assess the value of transitional care in LTSS, should be maintained.

POTENTIAL SOURCE	EXAMPLES OF CANDIDATE MEASURES/MEASURE SETS
GOVERNMENT AGENCIES:	
Agency for Health Care Research and Quality (AHRQ)	AHRQ Prevention, Inpatient, Patient Safety Indicators CAHPS Surveys National Quality Measures Clearinghouse™
Centers for Medicare & Medicaid Services (CMS)	Minimum Data Set 2.0 OASIS
ACCREDITORS:	
NCQA	Healthcare Effectiveness Data and Information Set (HEDIS)
The Joint Commission	National Quality Core Measure Sets
ASSOCIATIONS, PROFESSIONAL ORGANIZATIONS/SOCIETIES	
American Nurses Association	National Database of Nursing Quality Indicators (NDNQI)
PRIVATE ORGANIZATIONS	
RAND Corporation	Assessing Care of Vulnerable Elders (ACOVE)
OTHER	
National Quality Forum (NQF)	All performance measures endorsed as national voluntary consensus standards

Table 2. Sources and selected measurement sets

Table 2 provides examples of identified sources and selected measurement sets from those sources.

Based on these identified sources, an initial list of candidate measures was assembled for consideration (n=681). Although many other performance measures are available, the focus was to identify measures that address transitional care in LTSS.

Concurrently, through discussion and consensus, the Workgroup established inclusion/exclusion/evaluation criteria for screening candidate measures (Table 3).

Finally, candidate measures were screened using the domain definitions and the inclusion/exclusion criteria, yielding 104 measures that were considered most relevant (Appendix C). These measures were examined more closely in phase 2.

Phase 2: Identify and recommend relevant transitional care measures (survey 1)

Using an on-line survey, these 104 measures were evaluated by the Workgroup. Members were asked to rate each measure according to the following scale: (1) definitely include in further discussion, (2) may be useful, (3) do not include in further discussion and (4) I'm not familiar with this measure. Based on tallied responses, a threshold level of interest was set to prioritize measures for further consideration. Specifically, if more than 85% of respondents replied with a combination of "definitely include" and "may be useful," the measure was considered

INCLUSION CRITERIA	EXCLUSION CRITERIA
Endorsed by the National Quality Forum and/or	Not related to any domains for measuring transitions in LTSS and/or
Developed/broadly used from different agencies but not NQF endorsed	Not related to LTSS and/or
AND	Focus on a specific disease or condition ("condition-specific") and/or
Cover service events across older adult population (> 65y), or	Used only in research studies/pilots
National data are available and/or	
Cover types of service events across settings/providers and are relevant to settings beyond hospitals and/or	
Address adverse events and/or	
Met at least one of the IOM aims for quality improvement	

Table 3. Inclusion and exclusion criteria to identify candidate measures

to have met the threshold. In consideration of the substantial expertise, by exception, measures could be nominated to be retained or added by Workgroup members. Together, this resulted in 38 measures being retained for further consideration.

Phase 3: Validation and refinement of measure selection (survey 2)

Following discussion of these findings, a second on-line survey was conducted to rate and rank potential measures that addressed similar concepts and to create overall parsimony. The survey solicited Workgroup members' rank order preferences of measures by domain. Once again, a threshold was set to identify the most relevant subset of measures. In this case, the established threshold was at least 60% of respondents ranking a measure as "definitely include" or "may be useful" OR at least two respondents—out of a minimum of at least three—ranking the measure as "definitely include."

Based on this threshold, 13 measures were identified as most relevant. Following their identification, two duplicate measures that both addressed medication reconciliation were discussed and the measure with NQF endorsement was selected, yielding a final set of 12 retained measures (see Table 4).

RECOMMENDED MEASURES	DOMAIN
Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (NQF 166)[37]	Person/ Family-Centered Care
Client Perceptions of Coordination Questionnaire (CPCQ)[38]	
3-Item Care Transition Measure (CTM-3) (PCPI®) (NQF 228)[39]	Transitional Care Processes
Percentage of patients aged 65 years and older with a history of falls who had a plan of care for falls documented within 12 months (AGS/NCQA/PCPI®)[40]	
Percentage of Medicare members 65 years of age and older who received at least two different high-risk medications (NCQA HEDIS® 2011)[41]	
Percent of discharges from Jan 1st to Dec 1st of the measurement year for members 66 years of age and older for whom medications were reconciled on or within 30 days of discharge (NCQA HEDIS® 2011) (NQF 554)[42]	
Mean change score in basic mobility of patient in a post-acute-care setting assessed (AM-PAC) (CREcare) (NQF 429)[43]	
Mean change score in daily activity of patient in a post-acute-care setting assessed (AM-PAC) (CREcare) (NQF 430)[44]	
Percent of patients who need urgent, unplanned medical care (HHC) (OASIS) (CMS)[45]	
Percentage of patients, regardless of age, discharged from an inpatient facility to home/ any other site of care from whom a transition record was transmitted to the facility/ primary physical/other health care professional for follow-up-care within 24 hours of discharge (PCPI®) (NQF 648)[46]	
Advanced Care Plan (NCQA) (NQF 326)[47]	
All-cause readmission (risk adjusted) (NQF 329) (HEDIS® 2011)[48]	Performance Outcomes

Table 4. Recommended measures

Phase 4: Identify gaps in relevant transitional care measurements and finalize recommendations

Based on the measures being recommended, the Workgroup engaged in further discussions about the gaps in measurement and areas for future measure development and testing. Using a final on-line survey, the Workgroup provided feedback and suggestions regarding the gaps that exist within the identified domains as well as the disposition of candidate measures that did not meet selection criteria but that warrant further research. A draft of the report and recommendations was circulated to the LTQA Board and Member Organizations of the LTQA for comment. The following gaps were identified:

- Only two of 12 measures (17%) were specific to person- and family-centeredness, and much development and testing are needed to address this major gap in extant transitional care measurement. As defined in the Institute of Medicine report "Crossing the Quality Chasm" (IOM, 2001) patient-centered care "informs and involves patients in medical decision-making and self-management; coordinates and integrates medical care; provides physical comfort and emotional support; understands the patient's concept of illness and their cultural beliefs; and understands and applies principles of disease prevention and behavioral change appropriate to diverse populations." Thus, further development of measures is necessary to assess aspects that contribute to quality for individuals and their families that are broader than clinical outcomes, including measurement of outcomes such as quality of life, autonomy, relationships, compassion, social supports, and emotional well-being. Measure development is also indicated to assess personal experience with transitional care (e.g., personal transition process, self-care management abilities).
- Measure development is necessary to more completely assess family caregivers' roles and experiences with transitional care (e.g., degree of burden, extent of support, adequacy of skills and care management abilities including assessment, monitoring, and care coordination, needs and experiences of families caring for special populations such as cognitive impairment/dementia).
- Much further research is required to develop and test measures that capture the unique needs, care processes and outcomes for broad sub-populations, including:
  - Populations experiencing heath disparities
  - Special populations and their family caregivers, including those with cognitive impairment, MRDD, and those at the end of life/receiving hospice. It will be essential to develop transitional care measures for persons with Alzheimer's disease and other dementias who will be entering the Medicare and Medicaid health care system in large numbers in the next few years.
- Existing measures do not assess the care for older adults who appear in emergency departments and hospitals for treatment of chronic health conditions, then return home home with no follow-up care for Medicare-covered services, or who are never admitted to the hospital and are sent home from an emergency department. This is an overlooked population subset that would benefit greatly from person-centered care planning, in light of the complicated care planning needed to manage chronic illness in the home setting, the multiple layers of supports needed, isolation due to ignorance or fear of the medical system, and transportation or access issues.

- Potential measures for future evaluation might include those that capture (a) increase or maintenance of functional and instrumental activities of daily living; (b) reduction of older adult and/or caregiver depression; (c) increase in positive interactions with others; (d) increase of engagement in activities, learning, family contacts; (e) reduction in psychotropic medications in persons with Alzheimer's disease; (f) management of diabetes within individually chosen parameters; (g) use of community-based alternatives (e.g., services in group setting that includes meals and respite for caregiver, adult day care, adult day health care)

  Much research is needed to develop and test measures of palliative care during transitions including issues such as pain and other symptoms, occurrence and documentation of discussions about goals of care.

- New measures of transitional care processes are needed, including:
  - Transitional care management across each episode of care (e.g., accountability across care settings; assessment of risk, needs and preferences; utilization of long-term services and support; individual-family education)
  - Discharge readiness and social support (e.g., engagement, roles and responsibilities; needs and burden; extent of family caregiver support; access to community and professional services; shared accountability between family/informal caregiver)
  - Preventive care for those in transition
- Research is needed to develop and broaden measures of transitional care efficiency including:
  - Access to transitional care for all persons and special populations
  - Cost and cost-effectiveness of transitional care
- And finally, research is needed to test the recommended measure set as a bundle to determine whether this set yields meaningful information for quality improvement and consumer selection. Further testing and development of measures that were viewed as priorities but failed to meet the inclusion criteria — e.g., possess strong evidence and alignment with the conceptual domains but lack widespread use/generalizability.

Recommendations

The Measurement Workgroup respectfully submitted the following recommendations to the LTQA Board of Directors in September 2011 for its consideration:

1. Recognize and promote the 12 measures recommended (Table 4). Specifically, further evaluation of the 12 recommended measures for use among more diverse populations particularly older adults dually eligible for Medicare and Medicaid, and those with multiple co-morbidities and cognitive impairment should be vigorously pursued;
2. Promote further testing and evaluation of measures that possess strong evidence and high alignment with the conceptual domains but lack robust generalizability;
3. Optimize measurement testing and implementation within the Innovative Communities Initiative;
4. Advocate for investments in research to address the major gaps in quality measures (developing new measures to address gaps in transitional care measurement addressed in this report, or testing and broadening applicability of existing measures); and
5. Identify the workforce implications of adoption of these quality measures including strategies that address potential training, dissemination, and practice integration.

Concluding Thoughts

These recommendations represent an initial set of measures that can serve as a springboard for ongoing discussion among stakeholders and will benefit from further refinement. There are a several limitations to this preliminary contribution, including:

Urgency. The Workgroup's task was to identify measures that could be used in LTSS to improve care transitions. Because of the urgency of developing recommendations for immediate use, all of the candidate measures considered for this purpose had to exist within current data sets. In this way, this set of 12 measures was constructed from the measures already developed, in widespread use, or NQF endorsed. The Workgroup recognizes that if it had undertaken a normative process and developed a set of measures that ***should be*** used de novo—in the absence of that which currently exists—the construction of the measure set could have been entirely different. For example, many of the gaps identified in this report would have been addressed.

Limited Scope. In order to be efficient with resources and timely in response to the environment, the scope of this initial effort was deliberately narrow in scope. LTSS represents a diverse set of providers and recipients of services that are not all reflected in these recommendations. For example, measures of palliative care, hospice and end of life care, those addressing a younger disabled Medicaid population, and those reflective of individuals receiving only social supports without health-related services were deliberately not the emphasis of this initial effort. It is not accidental that none of the 12 measures address these populations.

Existence of Parallel Efforts. Furthermore, the Workgroup was aware of parallel activities being conducted by other organizations that could have served as the foundation for these recommendations (e.g., NQF's endorsement of palliative care measures). In an ideal world, measure recommendations formulated by other bodies (for example, the other alliances, NQF, the Measures Application Partnership (MAP)) should have informed and influenced the Workgroup's activities. But because of timing and issues of scope, the LTQA was unable to take full advantage of such recommendations.

Data Restrictions. Notwithstanding the scope and timing issues, the 12 recommended measures were developed by an array of sources. Definitions are not necessarily harmonious, data sources vary, and the measures cannot be derived from a single, existing national data source. In practicality, additional resources will be needed to "retrofit" existing data sources and/or data repositories to collect information specified in the 12 measures.

Comprehensiveness of the Set. While the 12 measures relate to each of the three domains, there are obvious limitations in the recommendations. For example, an imbalance exists between the number of measures in the transitional care process domain compared to the single measure that addresses performance outcomes. Additionally, the measures in this set largely indicate the presence of negative outcomes rather than focusing on that which is positive (e.g., prevention approaches, health and functional improvements, positive outcomes). Finally, while the measures address the majority of the IOM's quality improvement aims, equity and efficiency are aims that are not addressed by this measure set. Recognizing the importance of correcting for disparities and reducing health care spending, these omissions cannot be overlooked.

The approval of these 12 measures and the accompanying recommendations marks an important contribution by LTQA to the transparency and accountability landscape. Not only do these recommendations signal consensus from LTSS on a set of measures—from those that are currently available—which can be used to improve care transitions and reduce readmissions, but it synchronizes and aligns with the NQF and Measures Application Partnership's (MAP) roles in recommending to CMS measures that are suitable for use in the ACA's implementation. Additionally, initial testing of this set of measures can begin through additional LTQA programs including the launch of the Innovative Communities Initiative.

Appendixes

Appendix A: LTQA — Mission, Goals, Board of Directors and Members

Appendix B: Long-Term Quality Alliance Quality Measurement Workgroup

Appendix C: Identified and Recommended Measures

APPENDIX A

LTQA — MISSION, GOALS, BOARD OF DIRECTORS AND MEMBERS

LTQA Mission

To improve the effectiveness and efficiency of care and the quality of life of people receiving long-term services and supports by fostering person- and family-centered quality measurement and advancing innovative best practices.

LTQA Goals

The LTQA wants to identify and foster quality measures that reflect what is important to consumers and family caregivers receiving long-term services and supports and position providers to apply best practices to enhance quality of life, improve care, and reduce costs. The Alliance will focus initially on how to improve transitions in care and avoid unnecessary hospital admissions among frail and chronically ill people receiving long-term services and supports. These are two areas that offer great promise for improving quality, consumer experiences, and efficiency, as well as reducing costs.

LTQA Board of Directors

CHAIR: **Mary D. Naylor**, PhD, RN, FAAN
Director, New Courtland Center for Transitions and Health at the University of Pennsylvania, School of Nursing

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Gail Gibson Hunt
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Gail Kass
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Mary Jane Koren, MD, MPH
Vice President, The Commonwealth Fund, Long-Term Care Quality Improvement Program

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Director of the Families and Health Care Project, United Hospital Fund

Sandy Markwood
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Mark B. McClellan, MD, PhD
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Paul McGann, MD
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President and CEO, LeadingAge (formerly AAHSA)

Mark Parkinson
President and Chief Executive Officer, American Health Care Association

Carol Raphael
President and Chief Executive Officer, Visiting Nurse Service of New York

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Senior Vice President, Strategic Partnerships National Quality Forum

Leonila Vega, Esq.
Executive Director, Direct Care Alliance

LTQA Members

AARP
Alliance for Quality Nursing Home Care
Alzheimer's Association
American Academy of Home Care Physicians
American College of Health Care Administrators
American Health Care Association (AHCA)
American Seniors Housing Association (ASHA)
ARC and UCP Disability Policy Collaboration
Assisted Living Federation of America (ALFA)
CCAL – Advancing Person-Centered Living
Center for Excellence in Assisted Living (CEAL)
Columbia University School of Social Work
Commission on Accreditation of Rehabilitation Facilities (CARF)
Direct Care Alliance
Engelberg Center for Health Care Reform, Brookings Institution
Institute for Healthcare Improvement (IHI)
LeadingAge (formerly AAHSA)
Long Term Care Pharmacy Alliance (LTCPA)
Medicaid Health Plans of America
National Alliance for Caregiving
National Association of Area Agencies on Aging (n4a)
National Association of State Units on Aging (NASUAD)
National Association of Long Term Care Administrator Boards (NAB)
National Center for Assisted Living (NCAL)
National Committee for Quality Assurance (NCQA)
National Investment Center for the Seniors Housing & Care Industry (NIC)
National PACE Association
National Quality Forum (NQF)
NewCourtland
Optum Health Care Solutions
PHInational
Rush University Medical Center
The Commonwealth Fund
The Green House Project
The SCAN Foundation
United Hospital Fund
University of Pennsylvania School of Nursing
Visiting Nurse Service of NY

APPENDIX B

LONG-TERM QUALITY ALLIANCE QUALITY MEASUREMENT WORKGROUP

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Joe Francis, MD, MPH; Department of Veterans Affairs

James Gardner, PhD; The Council on Quality Leadership

David Gifford, MD, MPH; American Health Care Association

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Tom Valuck, MD, JD; National Quality Forum

APPENDIX C

IDENTIFIED AND RECOMMENDED MEASURES

CANDIDATE MEASURES N=104	DOMAIN	SURVEY ONE N=38	RECOMMENDED MEASURE SET
1. Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (NQF 166)[49]	Person/Family Centered	•	•
2. Client Perceptions of Coordination Questionnaire (CPCQ)[50]	Person/Family Centered	•	•
3. 3-Item Care Transition Measure (CTM-3) (PCPI®)(NQF 228)[51]	Transitional Care Processes	•	•
4. Percentage of patients aged 65 years and older with a history of falls who had a plan of care for falls documented within 12 months (AGS/NCQA/PCPI®)[52]	Transitional Care Processes	•	•
5. Percentage of Medicare members 65 years of age and older who received at least two different high-risk medications (NCQA HEDIS® 2011)[53]	Transitional Care Processes	•	•
6. Percent of discharges from Jan 1st to Dec 1st of the measurement year for members 66 years of age and older for whom medications were reconciled on or within 30 days of discharge (NCQA HEDIS® 2011) (NQF 554)[54]	Transitional Care Processes	•	•
7. Mean change score in basic mobility of patient in a post-acute care setting assessed (AM-PAC) (CREcare) (NQF 429)[55]	Transitional Care Processes	•	•
8. Mean change score in daily activity of patient in a post-acute care setting assessed (AM-PAC) (CREcare) (NQF 430)[56]	Transitional Care Processes	•	•
9. Percent of patients who need urgent, unplanned medical care (HHC) (OASIS) (CMS)[57]	Transitional Care Processes	•	•
10. Percentage of patients, regardless of age, discharged from an inpatient facility to home/any other site of care from whom a transition record was transmitted to the facility/primary physical/other health care professional for follow-up-care within 24 hours of discharge (PCPI®) (NQF 648)[58]	Transitional Care Processes	•	•
11. Advanced Care Plan (NCQA) (NQF 326)[61]	Transitional Care Processes	•	•
12. All-cause readmission (risk adjusted) (NQF 329) (HEDIS® 2011)[60]	Performance Outcomes	•	•
13. Home CAHPS® (CMS) (AHRQ)[61]	Person/Family Centered	•	
14. Percentage of patients aged 65 years and older discharged from any inpatient facility and seen within 60 days following discharge by the physician on-going care who had a reconciliation of the discharge medications with the current medication list in the medical record documented (NQF 97)[62]	Transitional Care Processes	•	
15. Percent of medical patients 65 years or older who have had their cognition assessed (AMTS or MMSE) during 6-month time period (ACHS)[63]	Transitional Care Processes	•	

CANDIDATE MEASURES N=104	DOMAIN	SURVEY ONE N=38	RECOMMENDED MEASURE SET
16. Percent of patients diagnosed with dementia whose care has been reviewed in the previous 15 months (BMA)[64]	Transitional Care Processes	•	
17. Improvement in bed transferring (HHC) (NQF 175)[65]	Transitional Care Processes	•	
18. Improvement in management of oral med (OASIS) (CMS) (NQF 176)[66]	Transitional Care Processes	•	
19. Percentage of patients, regardless of age, discharged from an inpatient facility to home/any other site of care, who received a transition record at the time of discharge including, at a minimum, all of the specific elements (PCPI®) (NQF 647)[67]	Transitional Care Processes	•	
20. Percent of patients, regardless of age, discharged from an inpatient facility to home/any other site of care/caregiver who received a reconciled medication list at the time of discharge including, at a minimum, medications in the specific categories (PCPI®) (NQF 646)[68]	Transitional Care Processes	•	
21. Percentage of patients, regardless of age, discharged from an ED to ambulatory care, home health care, or their caregiver who received a transition record at the time of ED discharge including, at a minimum, all of the specific elements (PCPI®) (NQF 649)[69]	Transitional Care Processes	•	
22. Adult hospital patient who did not receive good communications about discharge information (NQMC11)[70]	Transitional Care Processes	•	
23. Percent of patients with a medication list in their medical record (NCQA) (NQF 019)[71]	Transitional Care Processes	•	
24. Home Management Plan of Care was given to the patient/caregiver prior to or upon discharge (NQF 338)[72]	Transitional Care Processes	•	
25. Hospital discharges with a readmission within 30 days which have a clinician visit between index discharge + readmission (within target community) (CMS O-2a) [73]	Performance Outcomes	•	
26. Hospital discharges without readmission within 30 days which have a clinician visit within 30 days of discharge (within target community) (CMS O-2c) [74]	Performance Outcomes	•	
27. Rate of readmission within 30 days of discharge from an acute care hospital per 1000 eligible beneficiaries (CMS O-4) [75]	Performance Outcomes	•	
28. Hospital-specific 30-day-all-cause risk-standardized readmission rate for AMI among Medicare beneficiaries aged 65 years or older (NQF 505)[76]	Performance Outcomes	•	
29. 30-day post-hospital AMI discharge care transitions (NQF 698) (OT-016-09)[77]	Performance Outcomes	•	
30. Proportion of patients hospitalized with AMI that have a potentially avoidable complication (during index stay or in 30-day post discharge period) (NQF 704) (OT1-030-09)[78]	Performance Outcomes	•	
31. 30-day-all-cause risk-standardized readmission rate for Medicare patients discharged from the hospital with a principle diagnosis of heart failure (NQF 330)[79]	Performance Outcomes	•	
32. 30-day post-hospital HF discharge care transitions (NQF OT-017-09)[80]	Performance Outcomes	•	
33. 30-day-all-cause risk-standardized readmission rate following pneumonia hospitalization (NQF 506) [81]	Performance Outcomes	•	

CANDIDATE MEASURES N=104	DOMAIN	SURVEY ONE N=38	RECOMMENDED MEASURE SET
34. Proportion of patients hospitalized with pneumonia that have a potentially avoidable complication (during index stay or in 30-day post discharge period) (NQF 708)[82]	Performance Outcomes	•	
35. Proportion of patients with a chronic condition that have a potentially avoidable complication during a calendar year (NQF709)[83]	Performance Outcomes	•	
36. Proportion with more than one ED visit in the last days of life (NQF 211)[84]	Performance Outcomes	•	
37. Proportion with more than one hospitalization in the last 30 days of life (NQF 212)[85]	Performance Outcomes	•	
38. Emergency care for improper medication administration, med-side effects (OASIS)[86]	Performance Outcomes	•	
39. CAHPS Home Health Care Survey (NQF 517)[87]	Person/Family Centered		
40. Supplemental items for CAHPS® 4.0[88]	Person/Family Centered		
41. Home health care patients' experiences (AHRQ) (CMS) (Home CAHPS®)[89]	Person/Family Centered		
42. ACOVE continuity of care (RAND)[90]	Person/Family Centered		
43. ACOVE dementia (RAND)[91]	Person/Family Centered		
44. ACOVE end of life care (RAND)[92]	Person/Family Centered		
45. CAI Family Involvement Scale (MIRECC)[93]	Person/Family Centered		
46. 15-Item Care Transition Measure (CTM-15)[94]	Transitional Care Processes		
47. Rate of patient understanding of education (ambulatory) (IHS)[95]	Transitional Care Processes		
48. Competency Assessment Instrument (CAI) (MIRECC)[96]	Transitional Care Processes		
49. Percent of heart failure patients to whom (or to their caregiver) written or verbal instructions or educational material were given on/during the clinic visit addressing one or more of the following: activity level, diet, medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen (ICSI)[97]	Transitional Care Processes		
50. Percent of home health episodes in which patient was 65 or older and assessed for risk of falls at start or resumption of home health care (NQF 537)[91]	Transitional Care Processes		
51. Percent of patients 65 years or older and who were screened for fall risk (2 or more falls in the past year or any fall with injury) at least once within 12 months (AGS) (NCQA) (PCPI®)[99] (NQF 101)[100]	Transitional Care Processes		
52. Percent of patients aged 65 years and older who were screened for future fall risk at least once within 12 months (AGS) (NCQA) (PCPI®)[101]	Transitional Care Processes		

CANDIDATE MEASURES N=104	DOMAIN	SURVEY ONE N=38	RECOMMENDED MEASURE SET
53. Percent of pt 65 years or older who had a fall or problems with balance in the past 12 month, who were seen by an MAO practitioner and received fall risk intervention (NCQA HEDIS® 2011)[102]	Transitional Care Processes		
54. Rate of inpatient falls per 1000 patient days (ICSI)[103]	Transitional Care Processes		
55. Rate of inpatient falls with injury per 1000 patient days (ICSI)[104]	Transitional Care Processes		
56. All documented patient falls with an injury level of minor (2) or greater (NQF 202)[105]	Transitional Care Processes		
57. Percent of Medicare members 65 years and older who received at least one high-risk medication (NCQA HEDIS® 2011)[106]	Transitional Care Processes		
58. Percent of Medicare members 65 years and older who have a history of falls and a prescription for tricyclic antidepressants, antipsychotics or sleep agents (NCQA HEDIS® 2011)[107]	Transitional Care Processes		
59. Fall-related death rate[108]	Transitional Care Processes		
60. All documented falls, with or without injury, experienced by patients (NQF 141)[109]	Transitional Care Processes		
61. Percentage of patients aged 75 and older who reported that their doctor/health care provider talked with them about falling or problems with balance or walking (NQF 35)[110]	Risk/Falls Transitional Care Processes		
62. ACOVE falls and mobility[111]	Transitional Care Processes		
63. HEDIS® 2011 Fall-Risk Management[112]	Transitional Care Processes		
64. Percent of patients aged 65 years and older discharged from any inpatient facility and seen within 60 days discharge in the office by the physician providing on-going care who had a reconciliation of the discharge med with the current medications list in the outpatient medical record documented (AGS) (NCQA) (PCPI®)[113]	Transitional Care Processes		
65. Percent of adults who reported whether their home health care provider addresses specific care issues related to pain and medication (AHRQ) (Home CAHPS®) (CMS)[114]	Transitional Care Processes		
66. Percent of patients with stabilization in management of oral medications (OASIS) (CMS)[115]	Transitional Care Processes		
67. Percent of patients who get better at taking their med correctly by mouth (OASIS) (CMS)[116]	Transitional Care Processes		
68. Improvement in management of oral med (NQF176) (OASIS) (CMS)[117]	Transitional Care Processes		
69. Percent of adult hospital patients who reported how often hospital staff communicated well about medications they received in the hospital (HCAHPS®) (AHRQ) (CMS)[118]	Transitional Care Processes		
70. Adults age 65 and over who received potentially inappropriate prescription medications (MEPS) (NHQR)[119]	Transitional Care Processes		
71. Percent of providers who affirm that in their unit/area changes in patients medications are always communicated clearly/ rapidly to all professionals involved (SAHQ)[120]	Transitional Care Processes		

CANDIDATE MEASURES N=104	DOMAIN	SURVEY ONE N=38	RECOMMENDED MEASURE SET
72. Patients discharged on multiple anti-psychotic medications (HBIPS-4) (NQF 552)[121]	Transitional Care Processes		
73. Patients discharged on multiple anti-psychotic medications with appropriate justification (HBIPS-5) (NQF 560)[122]	Transitional Care Processes		
74. Percentage of adults 65 years and older who had a medication review (COA) (NQF 553)[123]	Transitional Care Processes		
75. ACOVE medication use[124]	Transitional Care Processes		
76. HEDIS® 2011 Medication Reconciliation Post-Discharge[125]	Transitional Care Processes		
77. HEDIS® 2011 Use of High-Risk-Med in the Elderly[126]	Transitional Care Processes		
78. JCAHO NPSG 03.06.01 Reconciling Medication Information[127]	Transitional Care Processes		
79. (CAI) provider's mean score on the "medication management" scale (MIRECC) (CNI) (ValueOptions) (RAND)[128]	Transitional Care Processes		
80. Percentage of patients with improvement in ability to do laundry (OASIS) (CMS)[129]	Transitional Care Processes		
81. Percentage of patients with stabilization in ability to do laundry (OASIS) (CMS)[130]	Transitional Care Processes		
82. Percentage of patients with improvement in ability to do shop (OASIS) (CMS)[131]	Transitional Care Processes		
83. Percentage of patients with stabilization in shopping (OASIS) (CMS)[132]	Transitional Care Processes		
84. Percentage of patients with stabilization in transferring (OASIS) (CMS)[133]	Transitional Care Processes		
85. Percentage of patients with improvement in cognitive functioning (OASIS) (CMS)[134]	Transitional Care Processes		
86. Percentage of patients with stabilization in cognitive functioning (OASIS) (CMS)[135]	Transitional Care Processes		
87. Percentage of patients who are confused less often (OASIS) (CMS)[136]	Transitional Care Processes		
88. Percentage of patients with improvement in housekeeping (OASIS) (CMS)[137]	Transitional Care Processes		
89. Percentage of patients with stabilization in housekeeping (OASIS) (CMS)[138]	Transitional Care Processes		
90. Percentage of patients with improvement in telephone use (OASIS) (CMS)[139]	Transitional Care Processes		
91. Percentage of patients with stabilization in telephone use (OASIS) (CMS)[140]	Transitional Care Processes		
92. Percentage of patients with stabilization in management of oral med (OASIS) (CMS)[141]	Transitional Care Processes		
93. Percentage of patients with stabilization in transferring (OASIS) (CMS)	Transitional Care Processes		

CANDIDATE MEASURES N=104	DOMAIN	SURVEY ONE N=38	RECOMMENDED MEASURE SET
94. Physical activity in older adults: percentage of Medicare members 65 years of age and older who had a doctor's visit in the past 12 months and who spoke with a doctor or other health provider about their level of exercise or physical activity (NCQA HEDIS® 2011)[142]	Transitional Care Processes		
95. Post-acute care functional status: mean change score in applied cognitive function of patients in a post-acute care setting as assessed using the "Applied Cognition" domain of the Activity Measure for Post-acute Care (AM-PAC)[143]	Transitional Care Processes		
96. Need for help with daily activities (MDS3.0) (CMS)[144]	Transitional Care Processes		
97. Percent of carers involved in developing care plans (6-month period) (ACHS)[145]	Transitional Care Processes		
98. Care provided after ED visits (Terrell et al. 2009)[146]	Follow-up		
99. Assessment of health-related quality of life (NQF 260=DIALYSIS & NQF OT1-019-09=COPD)[147]	Performance Outcomes		
100. HEDIS® 2010 Health Outcomes Survey (NCQA) (CMS)[148]	Performance Outcomes		
101. HEDIS® 2011 Care for older adults (NCQA)[149]	Performance Outcomes		
102. OASIS MO100 & M200 (CMS)[150]	Performance Outcomes		
103. Number of designated annual clinical performance goals met (IHS)[151]	Performance Outcomes		
104. Hospital discharges where beneficiary has a clinician visit between index discharge + readmission (within target community) (CMS O-2b)[152]	Performance Outcomes		

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