NATIONAL
QUALITY FORUM

Interim Report from the National Quality Forum: Priority Setting for Care Coordination—A Draft Conceptual Framework and Draft Environmental Scan

December 16, 2013

This report was funded by the U.S. Department of Health and Human Services under contract number: HHSM-500-2012-00009I, Task 5.

Contents

Project Purpose and Scope

Over the past ten years, the use of U.S. healthcare performance measurement has exploded, yet it is widely recognized that many gaps in important measurement areas still exist. Section 1890(b)(5) of the Social Security Act requires the National Quality Forum (NQF), as the consensus-based entity, to describe gaps in endorsed quality and efficiency measures in the Annual Report to Congress and the Secretary of the Department of Health and Human Services (HHS). Building on work done by NQF in 2011 and 2012 on the status of measure gaps more broadly, this project is intended to further advance the aims and priorities of the National Quality Strategy (Figure 1) by identifying priorities for performance measurement; scanning for potential measures and measure concepts to address these priorities; and developing multistakeholder recommendations for future measure development and endorsement.

Figure 1: National Quality Strategy Aims and Priorities

In 2013, HHS contracted with NQF to focus on five specific measurement areas, including:

- Adult Immunizations
- Alzheimer’s Disease and Related Dementias
- Care Coordination
- Health Workforce
- Person-Centered Care and Outcomes

The recommendations generated through this project will be instrumental in aligning broader measure development efforts by ensuring that financial and human resources are strategically targeted to lead us to the measures that matter to patients and families, and that will drive improvement in health and healthcare.

Setting Priorities for Care Coordination Performance Measurement

This project will support the goals of HHS to promote the integration of population health and primary care. With the majority of one's health and well-being determined by factors outside the healthcare system, there is a need to broaden the scope of care coordination and the performance measurement associated with monitoring progress. Thus, the care coordination topic area of this project is taking a special focus on examining opportunities to measure care coordination in the context of a broad "health neighborhood." The project will specifically explore coordination between safety-net providers of primary care and providers of community and social services that impact health.

The work is intended to broaden the current scope of care coordination performance measurement to account for the influence of social determinants of health. Socioeconomic status (SES) is often discussed as one of the most dominant social determinants, but it goes hand-in-hand with less-recognized and more discrete factors such as neighborhood geography, accessible transportation, food security/nutrition, education/employment, and local supply of behavioral health services and long-term services and supports (LTSS). Identifying opportunities to better measure the integration of primary care and community services that support health is essential.

The project will identify existing measures and measure concepts that could successfully measure care coordination in the targeted topic areas. It will also explore opportunities to link health information technology (HIT) with data systems used by community service providers in support of care coordination and measurement. A multistakeholder committee will use the draft conceptual framework presented in this report to examine available measures and prioritize remaining measure development needs.

General Approach and Timeline

NQF will use a common approach (Figure 2) across its 2013-2014 priority-setting projects to ensure consistency in methodology and final products, to the extent feasible.

Figure 2: Four Step Process for Care Coordination Priority Setting Project

Convene Multistakeholder Committee

NQF will convene a 21-member multistakeholder committee to provide expert guidance on the project objectives (Appendix A). The committee includes a range of experts, including individuals with experience in primary care, quality measure development and endorsement, social determinants of health, HIT data integration and interoperability, community-based services, health disparities, and pharmacy. NQF has ensured that the overall membership of the multistakeholder group is well-balanced and contains community-oriented perspectives. A small subset of the experts from the multistakeholder committee provided preliminary input on the scope of the project while the full committee was being seated.

Over the course of the project, NQF will convene three web meetings and one in-person meeting to obtain expert input and provide opportunities for other interested stakeholders to engage with the work. NQF also has involved a large group of federal government partners designated by HHS in a consultative role. The HHS partners have provided valuable upstream guidance on the project's approach and ultimate goals in order to ensure that products will be valuable to the Department once complete.

Identify a Conceptual Measurement Framework

Care coordination is a field rich with existing conceptual frameworks, domains, and definitions. Following the start-up activities to identify and engage external stakeholders, the NQF team has produced a draft conceptual framework for measurement based on current literature and expert input. The framework builds on the strong foundation of existing reports and measure scans related to care coordination, but has been refined to meet the needs of this project. Appendix B lists the resources consulted for framework development and modification. The framework, described in detail in the following section, specifically considers coordination between primary care providers and community resources, with particular focus on safety net providers and community-based services.

Environmental Scan of Measures and Measure Concepts and Analysis of Gaps

The third step of the approach, encompassing an environmental scan of measures and measure concepts that map to the conceptual framework, has produced initial results for this report but will continue to expand over the course of the next several months. The first-round environmental scan for measures, described in a later section of this report, will be subject to an initial review by the multistakeholder committee during a January 2014 web meeting. The committee will conduct an analysis of measure gaps by comparing the opportunities for measurement presented by the conceptual framework with the available measures identified by the scan.

Committee Recommendations and Priorities for Performance Measure Development

The multistakeholder committee will convene for an in-person meeting in April 2014 to develop recommendations to HHS. Deliberations will be dedicated to prioritizing gap areas for future measure development, endorsement, and implementation by considering potential measures' importance, underlying level of evidence, feasibility, and intended application. A final conceptual framework, expanded environmental scan, and draft report with recommendations will be available for public comment in June/July 2014. NQF will hold a public webinar to obtain additional feedback on the draft recommendations before finalizing them for delivery to HHS in August 2014.

Draft Conceptual Framework

A wide range of measures is needed to assess and improve the coordination of care between primary care and community services. This section provides an overview of the development of the project's draft conceptual framework. As described above, the multistakeholder committee will refine the draft framework and then apply it within the context of prioritizing measurement needs. The framework was developed by NQF in collaboration with a number of external advisors, and an HHS interagency team.

Definition of Care Coordination

The term "care coordination" means different things to different people, and a recent review identified more than 40 definitions.[1] Lack of consensus on the definition partially results from the varied perspectives of the stakeholders involved in coordinating care, including care recipients and their families, health professionals, and system representatives. Moreover, care coordination does not consist of a well-defined set of processes, especially when that coordination spans the health and human services systems. There is generally more agreement about the expected outcomes of high-quality care coordination (e.g., seamless transitions in care, clear bi-directional communication, no duplication of services) than about the methods used to achieve the desired results.

The Agency for Healthcare Research and Quality (AHRQ) has published a series of foundational reports related to care coordination and measurement. In the 2010 *Care Coordination Measures Atlas*, care coordination is defined as:

> *"…the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services. Organizing care involves the marshaling of personnel and other resources needed to carry out all required patient care activities and is often managed by the exchange of information among participants responsible for different aspects of care."*

NQF also has developed a consensus definition for care coordination through its work in performance measure endorsement. In the 2008 *Preferred Practices and Performance Measures for Measuring and Reporting Care Coordinat*ion, care coordination is defined as:

> *"… a function that helps ensure that the patient's needs and preferences for health services and information sharing across people, functions, and sites are met over time."*

For purposes of this project and its conceptual framework, the team has developed a hybrid definition of the previous two that also incorporates the important linkage to community services:

> *"Care coordination is the deliberate organization of activities and information to help ensure that patients' and families' needs and preferences for healthcare and community services are met."*

Definition of Community Services

Definitions for the terms "community" and "community services" are equally as numerous as those for "care coordination." In a population health context, community generally refers to "a group of people who have common characteristics; communities can be defined by geographic proximity, race, ethnicity, age, occupation, interest in particular problems or outcomes, or other similar common bonds."[2] The medical literature differs significantly in its use of the term community. One review found that 46 percent of articles reviewed from medical journals refer to everyone and everything outside of a hospital setting as "community."[3] In comparison, only 17 percent of public health articles used the term in this way.

For purposes of this conceptual framework, community services will refer to a range of health and social supports available outside of the formal healthcare delivery system. Examples include, but are not limited to: nutrition programs for vulnerable populations (e.g., mothers and children, home-bound older adults), peer-based groups to support recovery from substance abuse, screening and treatment of sexually transmitted infections delivered through the public health system, and personal assistance services for individuals with disability. These services are delivered by entities that are not typically considered healthcare organizations. Care coordination between primary care and community services is desired by many stakeholders but is not often observed in the current delivery system.

Contributions from AHRQ Reports

NQF began the literature review with the AHRQ Care Coordination Measures Atlas given the well-known and respected nature of the work. Another key concept considered was Clinical-Community Relationship Measurement (CCRM) as described in two subsequent AHRQ reports, the Clinical-Community Relationships Measures Atlas and the Clinical-Community Relationships Evaluation Roadmap. The CCRM seeks to explore how the characteristics of—and relationships between—primary care clinicians and clinics, patients, and community resources influence the effectiveness of linkages for the delivery of clinical preventive services. It further discusses how these relationships might vary in different circumstances and recommends methods and measures for improving and evaluating the effectiveness of these services.

Importantly, during development of the CCRM, AHRQ advisors urged a focus on the measurement of ongoing relationships rather than temporary, transactional links between providers. For example, handing a patient a flyer for a community service does not constitute coordination with that external service. Focusing on permanent relationships that exist across providers instead enables the CCRM to meaningfully explore structural challenges. In order for coordination between primary care and community settings to really work, primary care provider groups need a sense of services currently available in the community. At the same time, community-based providers and patients need to consistently bring information on external services to the primary care environment.

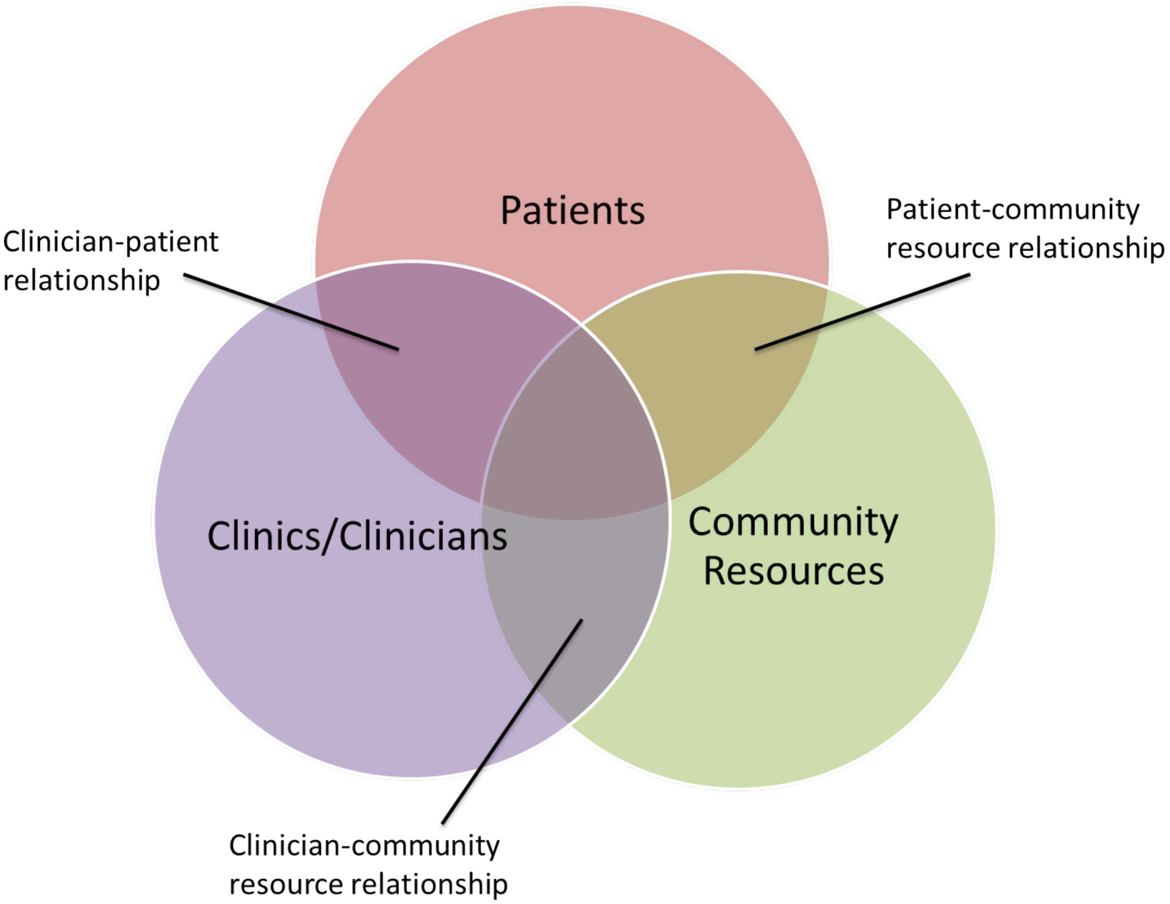
The CCRM framework describes six interrelated components that may influence the ability of a provider to effectively connect a patient with needed community resources. Figure 3 depicts the elements and relationships of the CCRM. It begins with three basic elements:

- Clinic/clinician;
- Patient; and
- Community resource.

The following dyadic relationships between the basic elements are then explored:

- Clinician-patient relationship;
- Clinician-community resource relationship; and
- Patient-community resource relationship

Figure 3: Foundation of the AHRQ CCRM Framework



The CCRM also contains numerous domains of measurement, listed in Appendix C. Collectively, the domains encompass opportunities to evaluate structure, process, and outcome indicators related to the three elements and the relationships among them. As this project continues, the NQF team intends to work with project stakeholders to hone the list of potential measurement domains to focus on those that present the best opportunity for measure development in support of improved care coordination. Additional domains may also need to be added. For example, the CCRM model assumes that patients have the capacity to contribute to the management of their own care. The scope of this work encompasses care coordination needs of all populations, including children, older adults, and others who may require a family member or other trusted individual to act on their behalf.

Given the project's emphasis on coordination between primary care and community resources, the CCRM's focus on the three-way relationship between patients, clinics/clinicians, and community resources is particularly germane. The NQF team embraced the original vision of the CCRM and expanded it to incorporate additional elements and domains more closely related to social determinants of health.

For example, this project framework will use person-centered terminology when possible and has replaced the term “patients” in the framework with “care recipients and families.”

The project’s framework considers that the most impactful area for future measure development lies in the “sweet spot” of the CCRM, in the middle of the relationships where all three aspects are interacting and functioning together. Consideration will also be given to certain instances in which two aspects are overlapping, such as coordination between primary care and the community. Such interactions will ideally reflect ongoing relationships rather than temporary, transactional ones. While not all measures will be relationship-based, they will have a connection to this dynamic interaction that is at the heart of the framework.

When coordinating care—and assigning responsibility for coordination through measurement—it is important to identify the central point of coordination. The care coordinator could be a paid employee of the health or social services system, but more often than not it is the care recipient or a family member who is performing this role. There is currently little consensus regarding the appropriate balance of involving patients and families in organizing the delivery of services and potentially overburdening them with complex responsibilities for which they have no training. Increasing the number of participants in coordination activities is desirable to advance team-based care, but it also increases the intricacy of the coordination and the associated measurements. In the end, the number of individuals and entities that need to be involved in care coordination would exceed the number that could ultimately be held accountable through measurement.

Contributions from Previous NQF Projects

NQF began to address the complex issue of care coordination measurement in 2006. At that time, sufficiently developed measures of care coordination could not be identified for endorsement as consensus standards. However, NQF did endorse a definition and a framework for care coordination measurement.[4] The framework identified five domains essential to the future measurement of care coordination:

- Healthcare Home;
- Proactive Plan of Care and Follow-Up;
- Communication;
- Information Systems; and
- Transitions or Handoffs.

In 2010, NQF published the *Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination Consensus Report*.[5] Recognizing the need to establish a meaningful foundation for future development of a set of practices with demonstrated impact on patient outcomes, NQF endorsed 25 Preferred Practices through this project, each situated within one of the five care coordination domains. These practices were evaluated based on their effectiveness, generalizability, potential benefit, and readiness. They are intended to be applied across care settings. In many cases, Preferred Practices specifications were purposely futuristic and envisioned as “stretch goals” that would accelerate the evolution of the field. The Committee recognized that for Preferred Practices to achieve widespread adoption, current payment models need to incentivize these approaches to care.

The Preferred Practices were reviewed for their relevance to this project; namely, those that emphasized coordination through primary care and the inclusion of community services were prioritized. The subset of the Preferred Practices that fit most closely with the work is listed below, beneath the domains under which they were endorsed. The most important domains for the purposes of this project are Healthcare Home and Proactive Plan of Care and Follow-Up. In addition, a number of concepts not captured in the Preferred Practices were identified through early advisor input. The Preferred Practices and additional areas of focus informed the inclusion and exclusion criteria used to conduct the environmental scan for measures.

In some instances, the original language of the NQF-endorsed Preferred Practices has been altered to reflect stakeholder input and the specialized focus of this project.

Healthcare "Home" Domain

Preferred Practice 2 – Original Language: The healthcare home or sponsoring organizations shall be the central point for incorporating strategies for continuity of care.

> ***Preferred Practice 2 – Revised:*** The healthcare home or sponsoring organizations shall be the central point for incorporating strategies for continuity of care between medical treatment, behavioral health services, long-term support services, and the community.

Preferred Practice 3 – Original Language: The healthcare home shall develop infrastructure for managing plans of care that incorporate systems for registering, tracking, measuring, reporting, and improving essential coordinated services.

> ***Preferred Practice 3 – Revised:*** The healthcare home shall develop infrastructure for managing plans of care and ensuring that those plans of care are delivered and received by all relevant entities. The infrastructure should incorporate systems for registering, tracking, measuring, reporting, and improving essential coordinated services.

Proactive Plan of Care and Follow-up Domain

Preferred Practice 6 – Original Language: Healthcare providers and entities should have structured and effective systems, policies, procedures, and practices to create, document, execute, and update a plan of care with every patient.

> ***Preferred Practice 6 – Revised:*** Healthcare providers and other entities involved with providing care and supports to an individual should have structured and effective systems, policies, procedures, and practices to create, document, execute, and update that person's plan of care.

Preferred Practice 7 – Original Language: A systematic process of follow-up tests, treatments, or services should be established and be informed by the plan of care.

> ***Preferred Practice 7 – Revised:*** A systematic process of preventive and follow-up tests, treatments, assessments, or services should be established and informed by the plan of care.

Preferred Practice 8 – Original Language: The joint plan of care should be developed and include patient education and support for self-management and resources.

> ***Preferred Practice 8 – Revised*****:** The development of the comprehensive plan of care should include education of the care recipient and support for self-management as appropriate. The plan of care should also consider natural supports such as family caregivers and other resources.

Preferred Practice 9 – Original Language: The plan of care should include community and nonclinical services as well as healthcare services that respond to a patient's needs and preferences and contributes to achieving the patient's goals.

> ***Preferred Practice 9 – Revised:*** The plan of care should include the entire array of community, nonclinical, behavioral, and healthcare services that respond to a person's needs and preferences and contribute to achieving the person's goals.

Communication Domain

Preferred Practice 12 – Original Language: All healthcare home team members, including the person and his or her designees, should work within the same plan of care and share responsibility for their contributions to the plan of care and for achieving the patient's goals.

> ***Preferred Practice 12 - Revised:*** All members of the healthcare home team, including the care recipient and his or her designees, should work within the same plan of care and share responsibility for their contributions to achieving the care recipient's goals.

Information Systems Domain

Preferred Practice 15: Standardized, integrated, interoperable, electronic, information systems with functionalities that are essential to care coordination, decision support, and quality measurement and practice improvement should be used.

Contributions from External Project Advisors

Advisors and the HHS interagency team provided early input on the scope of this project and how to reflect priorities for measurement through adaptations of existing conceptual frameworks. One of the first issues examined was how broadly or narrowly the framework should be structured. For example, should it target specific populations in need of care coordination or certain social determinants of health? Stakeholders generally concurred that a broad approach to the project and framework is preferred. Advisors prefer to generate a population-agnostic framework so that the results of the work can be flexible. Similarly, there was little interest in selecting one specific social determinant of health or set of community services as the central focus for coordination.

Advisors and the HHS team were also asked to consider their plans for using measures of care coordination for a specific purpose. For example, should measures be oriented to measuring population-level patterns or do they need to be applicable at the clinic or clinician level of analysis? The HHS team noted that few measures of care coordination are available at the population level and therefore it's a gap area. At the same time, stakeholders commented that measures applicable to health systems, primary care practices, and/or individual practitioners are much more actionable for the field and are likely a higher priority.

Advisors suggested that the primary care medical home model was an example of a "best practice" model in which care is expected to be person-centered and well-coordinated. In addition, large primary care clinics and Federally Qualified Health Centers (FQHCs) generally have the most staff capacity to perform care coordination functions and a sufficient volume of patients on which to base measurements. Advisors suggested consulting NCQA's Medical Home System Survey accreditation standards for domains and measures that could be adapted into the conceptual framework.

Stakeholders also discussed that care recipient activation and engagement are fundamental to facilitating meaningful care coordination and achieving positive results. Information about activation can be collected in a standardized format, but it would best serve as a baseline indicator rather than a performance measure. As the project continues, stakeholders will continue to explore the best way to incorporate measures of activation and outcomes. For example, a clinician or service provider may need to take a different approach to engage someone who is willing and able to actively take part in his or her own care compared to someone who is not. These different approaches may require different types of measures. One question that has surfaced during deliberations is whether it would be more productive to pursue care coordination measures specific to engaged participants or for individuals who are disconnected and potentially unable or unwilling to participate in their own care.

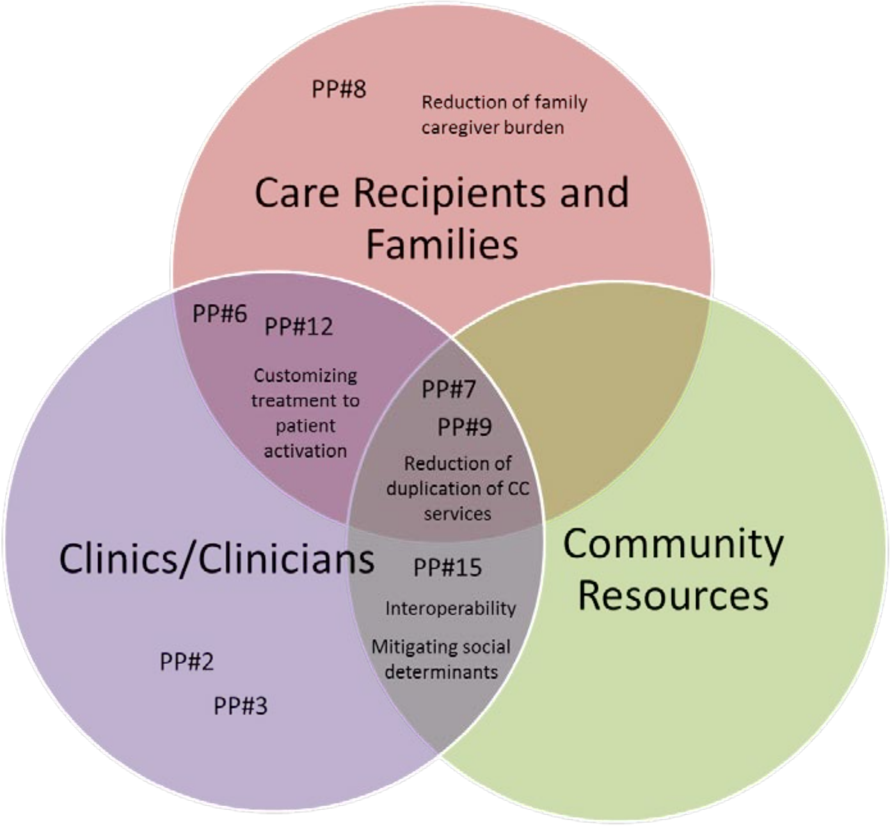
Additional Concepts and Mapping to CCRM Foundation

The project's conceptual framework builds on the CCRM and Preferred Practices, but is not limited to those inputs. The framework will continue to be adapted and refined based on feedback from the multistakeholder committee, the HHS interagency team, and other subject matter experts. Concepts suggested for consideration by external advisors that are not sufficiently captured by the CCRM and Preferred Practices include:

- System and data interoperability to support integration of non-medical human services information into person-centered plans of care (structural concept)
- Evaluating the care recipient's level of activation or engagement in care and customizing treatment accordingly (process concept)
- Acknowledging role of social determinants in health outcomes and working in partnership to mitigate them (process or outcome concept)
- Reduction of caregiver burden (outcome concept)
- Reduction of duplication of care coordination (outcome concept)

In Figure 4, below, the Preferred Practices and additional concepts are mapped to the foundation of the CCRM in order to illustrate where best practices apply within the three-way relationship dynamic. Only three items fell within the "sweet spot" of the framework in which all three elements – the patient, the provider, and community services – work together.

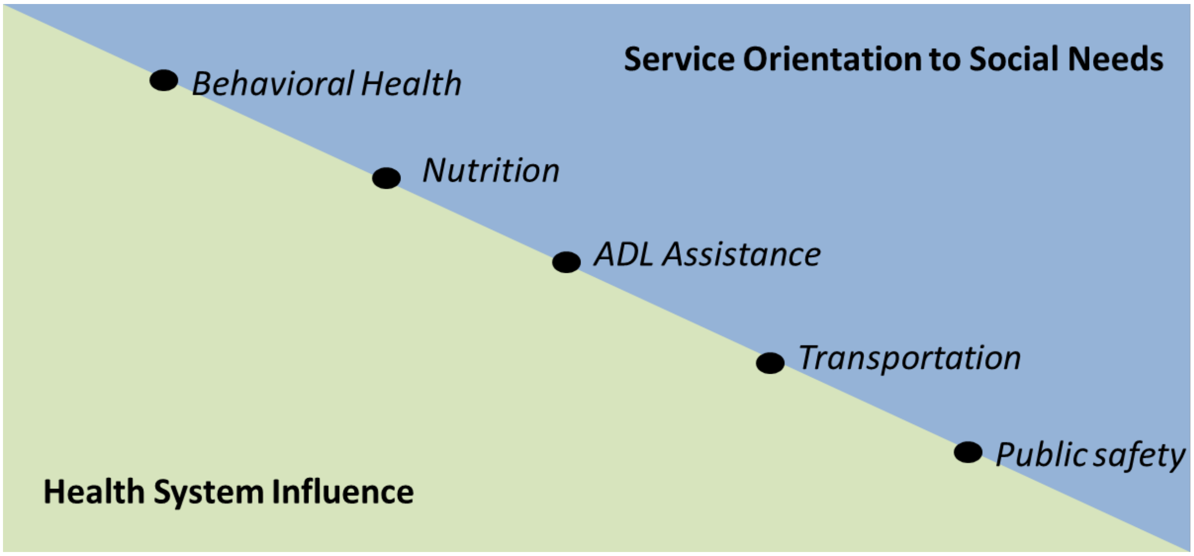
Figure 4: Selected Preferred Practices and Additional Issues Mapped to Modified CCRM Foundation



None of the Preferred Practices or concepts mapped to the Community Resources element of the CCRM or the relationship between Community Resources and Care Recipients and Families. Realistically, a measurement approach driven by the health system will have little opportunity to directly evaluate community-based services or their interactions with service recipients. Therefore, the lack of concepts in that area is appropriate for this context.

In contrast, six items map to the relationship between Community Resources and Clinics/Clinicians. Community resources also differ in how closely they relate to the healthcare system. Figure 5, below, illustrates a continuum of community services in which the health system's influence decreases as the services become increasingly oriented toward a care recipient's social needs. Services with a strong social orientation are the least likely to be coordinated with the primary care system.

Figure 5: Health System Influence Decreases As Service Orientation to Social Needs Increases



Draft Environmental Scan of Measures and Measure Concepts

Please reference the accompanying Excel spreadsheet for NQF's draft environmental scan of measures and measure concepts related to care coordination. The scan included a review of 5,962 measures imported from the sources listed in Appendix D. A total of 363 measures were identified as potential care coordination measures based on their broad applicability to this content area. Of these measures, a subset of at least 180 are calculated at a broad population level and would need significant modification before being applied to clinics, clinicians, and/or community-based providers. The population-level measures are included among the scan results primarily because they offer promising concepts for further exploration; they are displayed on a separate tab.

While the scan produced a significant number of measures relating to the general concept of care coordination, very few describe ongoing interactions between primary care and community-based service providers to support improved health and quality of life. In general, currently available measures are either too narrowly or too broadly designed to be actionable by providers of primary care. Further, no available measures directly apply to providers of community services. The measures clustered into several distinct types, each with its own strengths and weaknesses. Table 1 contains a selection of the most promising measures revealed by the scan. The measures and their limitations are further described below.

Table 1: Current Performance Measures Most Closely Matching Conceptual Framework

Measure Title	Supporting Information
Major depression in adults in primary care: percentage of patients who have a depression follow-up contact within three months of initiating treatment.	Measure Steward: Institute for Clinical Systems Improvement (ICSI) Data Source: Administrative clinical data, paper medical records

Measure Title	Supporting Information
HIV ambulatory care satisfaction: percentage of HIV positive adolescent and adult patients who reported whether their providers or case managers asked them about their life situation (housing, their finances, etc.), and made a referral if needed.	Measure Steward: New York State Department of Health AIDS Institute Data Source: Patient Satisfaction Survey for HIV Ambulatory Care
Plan of care includes at least one public and/or private community service/resource).	Measure Developer: PD Nordness, MH Epstein[6,7] Data Source: Wrap-Around Observation Manual—Second Version (Item 2)
Care planning: percentage of consumers with current completed care plans (including consumer involvement and signature) in the file, during the 6 month time period.	Measure Steward: Australian Council on Healthcare Standards Data Source: Administrative clinical data, paper medical record
Domestic violence: percent of adult and adolescent patients who screened positive for current or past intimate partner violence (IPV) for whom records indicate that specified intervention and treatment plans were offered.	Measure Steward: Futures Without Violence Data Source: Paper medical record
Changes in clinicians' knowledge of available services in the local community.	Measure Developer: RH Fortinsky, CG Unson, RI Garcia[8] Data Source: ASCP Physician Survey
Number of States and the District of Columbia health departments that have at least one health promotion program aimed at improving the health and well-being of people with disabilities.	Measure Steward: Office of the Assistant Secretary for Health Data Source: Periodic Survey of State Developmental Disabilities Directors
Increase in the proportion of children, adolescents, and adults who used the oral health care system in the past 12 months.	Measure Steward: Centers for Disease Control and Prevention Data Source: Medical Expenditure Panel Survey (MEPS)

Condition-Specific Measures

Large sets of care coordination measures were found related to single conditions, particularly in the areas of HIV/AIDS, oral health, mental health, and attention deficit hyperactivity disorder (ADHD). They often take the form of: "Did individual with condition *ABC* receive service *XYZ*?" Such basic process measures represent the bare minimum expectations for coordination and will not contribute to large-scale gains in quality.

A notable example in this category is the Patient Satisfaction Survey for HIV Ambulatory Care developed by the New York State Department of Health AIDS Institute. The survey is extensive and its six item sets are capable of producing 130 separate measures. The item sets cover case management, HIV ambulatory care, Medicaid managed care, mental health services, outpatient substance abuse, and women's health care. The survey offers some of the strongest examples of questions that assess individuals' experience of coordination between the clinic, case management services, and community supports. However, the instrument is extremely limited in its application to individuals who are HIV positive and receiving regular care. It was not apparent to the NQF team how the survey is currently used in the field. As the project proceeds, it may be valuable to assess the feasibility of expanding or adapting the survey tool and its measures for more general use.

Age-Specific Measures

Many measures in the scan were found to relate to coordination of care for pediatric populations. A majority of the pediatric measures were specifically focused on children who have significant chronic conditions. This is not surprising given that the earliest work in demonstrating the importance of care coordination between medical and supportive services in the context of a medical home largely focused on children with special healthcare needs.

The measure titled "Plan of care includes at least one public and/or private community service/resource" has a promising name but further inspection reveals it to be narrowly designed. It is calculated from an assessment instrument originally designed to be used with families and care teams receiving wrap-around services as part of an intervention for children with serious emotional disturbance. Further, the measure is derived from just one out of 50 items and will require further reliability and validity testing before being used independently.

International Measures

The AHRQ National Quality Measures Clearinghouse contains a large volume of measures designed and used outside of the United States. Helpfully, international measures often model very promising concepts. However, other nations operate their health systems very differently and measures may not be transferable due to differences in available data.

For example, the measure titled "Care planning: percentage of consumers with current completed care plans (including consumer involvement and signature) in the file, during the 6 month time period" describes one of the key features of coordinated, person-centered care. The measure specifications note that "a care plan is a tool used collaboratively by a clinician and a consumer to identify aspects for the consumers' health, social, vocational, spiritual and emotional life for which they require support and direction and includes specified goals. A completed care plan must be signed by the consumer (where applicable)." The denominator population included in the measurement is the total number of consumers who are registered with the mental health service system during the six month sampling window. Behavioral health services in the U.S. are not organized into a structured system.

One-Way Referral Measures

Measures commonly assess whether an individual who needs additional services beyond the scope of primary care is offered a referral. While a necessary first step, process measures that stop short of evaluating whether the recipient was able to access the community resource are not adequate.

Several measures in the scan relate to screening and referral to mitigate intimate partner violence. One of the strongest measures evaluates whether the person seeking care is offered information on safety planning, an option to speak with an advocate, information about the health impact of abuse, referral to culturally and linguistically appropriate services, and/or a follow-up appointment with a community-based service provider. There are no measures of whether the referral was successfully completed, much less whether the victim's safety was ultimately improved. In addition, the measure can only be obtained through the expensive and labor-intensive process of abstracting paper medical records.

Measures Derived from Surveys and/or Research Evaluations

Measures calculated based on the results of surveys or program research evaluations also bring limitations. Mode of survey distribution, periodicity of data collection, and sampling methodology are among the factors that must be considered to produce reliable and valid data. Often, data collected via survey is subjective, and this is only appropriate if the outcome of interest is an experience or perception. The measure "Number of States and the District of Columbia health departments that have at least one health promotion program aimed at improving the health and well-being of people with disabilities" is evaluating an important public health structure, but a survey of state staff is likely not the most effective mode of data collection. Process or outcome measures on this topic would have a much greater impact.

Similarly, the measure "Changes in clinicians' knowledge of available services in the local community" is derived from a survey instrument originally designed to test whether physicians experienced a change in knowledge of community resources for dementia following participation in an Alzheimer's Service Coordination Program. Again, the intention of the measure aligns with the conceptual framework but the pre-/post-design and orientation to a specific intervention limit its applicability.

Population-Level Measures

Early in the project, expert stakeholders suggested that the methodology exclude broad population-based measures because they are not sufficiently actionable by individuals and entities in the health system. The NQF team agrees with this point of view. However, several population-level measures evaluate promising concepts and remain in the sample so that the committee will have the opportunity to explore potential modifications to the level of analysis.

The Centers for Disease Control and Prevention has developed a significant portfolio of population-level measures. One example, titled "Increase in the proportion of children, adolescents, and adults who used the oral healthcare system in the past 12 months," has the strengths of being an outcome measure of improvement and incorporating all age groups in the denominator. However, there is no way to attribute performance of a measure that is calculated based on a representative sample of the national population.

Next Steps

Committee Input to Finalize Framework

The care coordination multistakeholder committee will meet via web on January 16, 2014. At that time, the group will provide feedback on the draft conceptual framework. The group will consider options for addressing measure gaps that draw on promising practices for care coordination. The committee will be asked to consider the following questions:

- What are the most important domains of measurement for care coordination measurement between primary care and community services?
- How much reliance is appropriate to place on care recipients and caregivers to serve as the coordinators between the medical and non-medical systems?
- Shared decision-making is certainly a desirable activity, but is it relevant to the measurement of care coordination? Should it be added as a domain in the care coordination framework and how does this relate to care planning?
- What are direct outcomes of care coordination (e.g., improved patient/family experience)?
- To what other outcomes does care coordination contribute (e.g., improved health status, progress toward the NQS)?

NQF also will continue to obtain input from HHS stakeholders on refining the conceptual framework.

Continuation of Scan for Measures and Measure Concepts

The multistakeholder committee will also review the results of the draft environmental scan during the January web meeting. The committee will assist with identifying additional sources for potential measures and concepts for consideration. Following the web meeting, NQF staff will perform further scanning to identify measures to address the framework.

Additionally, in early 2014 NQF will begin soliciting measure concepts from developers through NQF's new Measure Inventory Pipeline. This pipeline will serve as an important source of information for HHS and other stakeholders on current measure development within the broader healthcare community. NQF staff will conduct outreach to specific stakeholder groups to encourage the submission of measures that may address specific measure gap areas, and will encourage the committee to assist with this outreach.

Committee Recommendations on Priorities for Performance Measurement

Using the conceptual framework and environmental scan results, the committee will consider which opportunities for measure development and endorsement are the highest priorities. The research questions in Table 2, below, were established to help guide and scope the initial phase of the project and will continue to be used to determine whether information of interest is appropriate for consideration in the ultimate prioritization of measure gap areas.

Table 2: Research Questions for Care Coordination Evidence Review and Gap Prioritization

Dimension	Research Questions to Inform Prioritization
Potential for improving outcomes	• What are the opportunities for care coordination to improve: o Individuals' health outcomes? o Individuals' experience/engagement? o Family/caregiver experience/engagement? o Quality of life or functional status? o Person-centeredness? • Are there evidence-based interventions that would improve the outcomes above?
Potential for reducing disparities in care	• Is there evidence that care coordination varies by the service recipient's race, ethnicity, or socioeconomic status?
Potential for improving performance and/or reducing performance variation	• Is there evidence of performance deficits or variations that present opportunities for improvement? • What are the consequences of these deficits or variations?
Potential for reducing cost, overuse, and waste	• Are there cost implications for people, families, employers, and governments? • Are there effective strategies or mechanisms to reduce overuse or waste?

The deliberations on gap prioritization will primarily take place at the group's April 2014 in-person meeting. This convening will be a collaborative working meeting for the group to apply the conceptual framework and make recommendations on measures with the greatest potential for improving the provision of healthcare and community-based services to individuals across the lifespan.

A draft final report containing the completed conceptual framework, expanded environmental scan, and draft recommendations will be available for public comment in June/July 2014. NQF will hold a public webinar to obtain additional feedback on the draft recommendations before finalizing them for delivery to HHS in August 2014.

Appendix A: Care Coordination Committee Roster

COMMITTEE MEMBERS	
David Ackman, MD, MPH	Amerigroup
Richard Birkel, PhD, MPA	National Council on Aging
Don Casey, MD, MPH, MBA	American College of Medical Quality
David Cusano, JD	Georgetown University Health Policy Institute
Woody Eisenberg, MD, FACP	Pharmacy Quality Alliance
Nancy Giunta, PhD, MSW	Silberman School of Social Work, Hunter College, City University of New York
Carolyn Ingram, MBA	Center for Health Care Strategies, Inc.
Gerri Lamb, PhD, RN, FAAN	Arizona State University
Russell Leftwich, MD	State of Tennessee, Office of eHealth Initiatives
Linda Lindeke, PhD, RN, CNP	University of Minnesota, School of Nursing
Rita Mangione-Smith, MD, MPH	Seattle Children's Research Institute
Sharon McCauley, MS, MBA, RDN, LDN, FAND	Academy of Nutrition and Dietetics
Judy Ng, PhD, MPH	National Committee for Quality Assurance
Michael Parchman, MD, MPH	MacColl Center for Health Care Innovation
Fred Rachman, MD	Alliance of Chicago Community Health Services
Mark Redding, MD	Community Health Access Project
Susan Reinhard, PhD, RN, FAAN	AARP
Robert Roca, MD, MPH, MBA	American Psychiatric Institute for Research and Education
Vija Sehgal, MD, PhD, MPH	Waianae Coast Comprehensive Health Center
Daniel Stein, MBA	Stewards of Change
Ilene Stein, JD	Service Employees International Union

DEPARTMENT OF HEALTH AND HUMAN SERVICES REPRESENTATIVES	
Cille Kennedy	Office of the Assistant Secretary for Planning and Evaluation
Samantha Meklir	Health Resources and Services Administration

NATIONAL QUALITY FORUM STAFF	
Sarah Lash	Senior Director, Strategic Partnerships
Lauralei Dorian	Project Manager, Performance Measurement
Severa Chavez	Project Analyst, Strategic Partnerships
Karen Adams	Vice President, Strategic Partnerships
Wendy Prins	Senior Director, Strategic Partnerships

Appendix B: Framework References

Agency for Healthcare Research & Quality (AHRQ). AHRQ Technical Review on Care Coordination. A Critical Analysis of Care Coordination Strategies for Children with Special Health Care Needs. Rockville, MD:AHRQ; 2007.

Agency for Healthcare Research & Quality (AHRQ). Coordinating Care for Adults with Complex Care Needs in the Patient-Centered Medical Home: Challenges and Solutions. Rockville, MD:AHRQ;2012.

Agency for Healthcare Research & Quality. HIT Enabled Quality Measurement. Rockville, MD:AHRQ;2013.

Agency for Healthcare Research & Quality (AHRQ). Prospects for Care Coordination Measurement Using Electronic Data Sources. Rockville, MD:AHRQ;2012.

Agency for Healthcare Research & Quality (AHRQ). The Roles of Patient-Centered Medical Homes And Accountable Care Organizations in Coordinating Patient Care. Rockville, MD;2010.

American Nurses Association (ANA). The Value of Nursing Care Coordination. Silver Spring, MD:ANA;2012.

Anderson RM. Revisiting behavioral model and access. J Hlth Soc Behav. 1995;36(1):1-10.

Antonelli RC, McAllister JW, Popp J. Making Care Coordination A Critical Component of the Pediatric Health System. A Multidisciplinary Framework. New York, NY:The Commonwealth Fund;2009.

Buckley DI, McGinnis P, Fagman LJ et al. Clinical-Community Relationships Evaluation Roadmap. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2013. AHRQ Publication No. 13-MO15-EF.

Peikes D, Taylor EF, Lake T, et al. Coordinating Care in the Medical Neighborhood: Critical Components and Available Mechanisms. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2011. AHRQ Publication No. 11-0064.

Dymek C, Johnson Jr M, Mardon R et al. Clinical-Community Relationships Measures Atlas. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2013. AHRQ Publication No. 13-00334-EF.

Etz RS, Cohen DJ, Woolf SH, et al. Bridging primary care practices and communities to promote healthy behaviors. Am J Prev Med. 2008;35(5S):S390-S397.

HHS. Office of the Assistant Secretary of Health. Priority Areas for Improvement of Quality in Public Health by OASH. Washington, DC:HHS;2010.

Institute of Medicine (IOM). Primary Care and Public Health: Exploring Integration to Improve Population Health. Washington, DC: National Academies Press, 2012.

Jacobson DM, Teutsch S. An Environmental Scan of Integrated Approaches for Defining and Measuring Total Population Health by the Clinical Care System, the Government Public Health System, and Stakeholder Organizations. PLACE: Public Health Institute.

Liss DT, Chubak J, Anderson ML, et al. Patient-reported care coordination: associations with primary care continuity and specialty care use. Ann Fam Med. 2011;9(4):323-329.

McDonald KM, Schultz E, Albin L et al. Care Coordination Measures Atlas. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2010. AHRQ Publication No. 11-0023-EF.

National Quality Forum (NQF). Input to the Secretary of Health and Human Services on Priorities for the National Quality Strategy. Washington, DC:NQF;2011.

National Quality Forum (NQF). Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination. Washington, DC:NQF;2010.

Porterfield DS, Hinnant LW, Kane H, et al. Linkages between clinical practices and community organizations for prevention: a literature review and environmental scan. Am J Pub Health. 2012;102(suppl 3):S375-S382.

Reinhard SC, Kassner E, Houser A et al. Raising Expectations: A State Scorecard on Long-Term Services and Supports for Older Adults, People with Physical Disabilities, and Family Caregivers. Washington, DC AARP: 2011.

Schoen C, Radley D, Riley P, et al. Healthcare in the Two Americas. New York, NY:The Commonwealth Fund;2013.

Appendix C: AHRQ CCRM Measurement Domains and Definitions

Domain	Definition
Ability to access primary care	The degree to which a patient has or perceives that he/she has the ability to access primary care services
Ability to access the community resource	The degree to which a patient has or perceives that he/she has the ability to access the community resource
Accessibility	The degree to which the attributes of the clinic/clinician or the community resource affect how accessible its services are (e.g., open scheduling and open hours)
Assessment and goal setting	The degree of interaction between a clinic/clinician or referred community resource and a patient to develop a plan of action for preventive services
Capacity for self-management	The degree of environmental support that a patient has for his/her health management, which could include family, community, psychological, and social support
Clinician experience	The level of utility from a clinic/clinician's perspective of participation in the clinical-community resource relationship
Communication and follow through/follow-up	The level of interaction between a community-based resource and patient after the initial connection between them
Community resource experience	The level of utility from a community resource's perspective of participation in the clinical-community resource relationship
Cost/efficiency	The amount of resources, time, energy, and productivity associated with the provision of the services and activities connected with the relationship
Delivery of service	The rate of completion or receipt of services
Delivery system design	The scope of professional services provided and how those services are provided by a clinic/clinician and/or community resource (i.e., this domain contains measures of the presence or degree to which certain professional services exist as well as measures of the methods of providing such services)
Feedback and communication	The level and means of communication between the community resource and the clinic/clinician
Health literacy	The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions
Information technology infrastructure	The degree of availability and use of relevant aspects of information technology within a clinic/clinician organization, patient, or community resource
Informed and activated patient	The level of trust and increase in level of information a patient has (or is perceived to have) for participating in a relationship
Knowledge of and familiarity with community resources	The clinician's and/or patient's degree of awareness of the availability, range of services, level of cultural competency, and quality of services provided by various community resources

Domain	Definition
Marketing of services	The level of action and effort taken by a community resource to share information with clinics/clinicians and patients about the availability and types of preventive services provided
Marketing results	The results of marketing activities that a community resource could be engaging in
Nature and strength of the inter-organizational relationship	The level of intensity of a relationship between a clinic/clinician and community resource (based on Himmelman's definitions of networking, coordinating, cooperating, and collaborating). This includes the degree to which the relationship can overcome common barriers of working together— time, trust, and turf (Himmelman, 2002).
Organizational infrastructure	The way in which a clinic/clinician and/or community resource organizes the people and office process components of its business; the degree to which it is supported by a sustainable business model and governance structure (i.e., this domain contains measures of the presence or degree to which such organizational infrastructure exists)
Outreach to obtain knowledge of and familiarity with community resources	The level of action and effort taken by a clinic/clinician to learn about the availability of community resources and the services provided
Patient-centeredness	The degree to which attributes of whole-person care, family-centered care, respectfulness, cultural sensitivity, and advocacy for a patient exist
Patient experience	The level of utility from a patient's perspective of participation in the clinician-patient or patient-community resource relationship
Proactive and ready clinician	The level of involvement a clinician provides in a clinical-patient relationship
Proactive and ready community resource	The level of involvement a community-based resource provides in a patient-community resource relationship
Readiness for behavior change	The level and/or type of activity that a clinic/clinician, patient, or community resource engages in to prepare for behavioral change that might be affected by a referral to a community resource
Referral process	Data (e.g., frequency) related to the process of developing, obtaining, and confirming a referral among all of the relationships
Self-management support	The level of interaction between the clinician and the patient aimed at helping patients stay informed about recommended clinical preventive services, and overcoming any barriers to the receipt of services that would prevent them from being active participants in their own care
Service capacity	The level of capacity, including amount of staff, resources, etc. that a clinic/clinician and/or community resource has to provide preventive services as well as manage the relationship(s)
Shared decision making	The level of clinician-patient information sharing regarding the preventive health services being addressed and the level of patient expression of his or her preferences and values

Domain	Definition
Stage of behavior change	The level, movement, or degree of sustainability achieved by a clinic/clinician, patient, and/or community resource among the various stages of readiness for behavioral change (i.e., pre-contemplation, contemplation, preparation, action, and maintenance)
Timeliness	The amount of time it takes for clinical preventive services to be delivered when clinicians make referrals to community resources
Training	The level of education and/or competency of individuals within a clinic/clinician and/or community resource to provide preventive services

Appendix D: Environmental Scan References

Agency for Healthcare Research and Quality (AHRQ). National Quality Measures Clearinghouse web site. http://www.qualitymeasures.ahrq.gov/index.aspx. Last accessed December 2013.

Agency for Healthcare Research and Quality (AHRQ). Department of Health and Human Services Measure Inventory web site. http://www.qualitymeasures.ahrq.gov/hhs/index.aspx. Last accessed December 2013.

Booz Allen Hamilton, Synthesis of Evidence Related to 20 High Priority Conditions and Environmental Scan of Performance Measures, report prepared for NQF; January 2010.

Booz Allen Hamilton, Environmental Scan of Pipeline Performance Measures, report prepared for NQF; January 2011.

Buckley DI, McGinnis P, Fagman LJ et al. *Clinical-Community Relationships Evaluation Roadmap*. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2013. AHRQ Publication No. 13-MO15-EF.

Centers for Medicare & Medicaid Services, List of Measures under Consideration for December 1, 2013. http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=74245. Last accessed December 2013.

National Center for Health Statistics. Health Indicators Warehouse web site. http://healthindicators.gov. Last accessed September 2013.

National Quality Forum. Quality Positioning System web site. http://www.qualityforum.org/QPS/. Last accessed December 2013.

Endnotes

---

[1] McDonald KM, Sundaram V, Bravata DM, et al. Care coordination. In: Shojania KG, McDonald KM, Wachter RM, and Owens DK, eds. *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies*. Rockville, MD: Agency for Healthcare Research and Quality; 2007. AHRQ Publication No. 04(07)-0051-7.

[2] Turnock BJ. Public Health: What It Is and How It Works. Jones and Bartlett; 2009.

[3] Liburd, LC. *Diabetes and Health Disparities: Community-Based Approaches for Racial and Ethnic Populations*. New York, NY: Springer; 2010.

[4] NQF. *NQF-Endorsed Definition and Framework for Measuring Care Coordination*. Washington, DC: NQF; 2006.

[5] NQF. *Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination*. Washington, DC:NQF; 2010. Available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=935. Last accessed December 2013.

[6] Nordness PD, Epstein MH. Reliability of the Wraparound Observation Form—Second Version: An instrument designed to assess the fidelity of the Wraparound Approach. *Mental Health Services Research.* 2003;5(2):89-96.

[7] Epstein MH, Nordness PD, Kutash K, et al. Assessing the wraparound process during family planning meetings. *Journal of Behavioral Health Services & Research*. 2003;30:352-362.

[8] Fortinsky RH, Unson CG, Garcia RI. Helping family caregivers by linking primary care physicians with community-based dementia care services: The Alzheimer's Service Coordination Program. *Dementia: The International Journal of Social Research and Practice*. 2002;1(2):227-240.