NATIONAL QUALITY FORUM

Finding Common Ground for Healthcare Priorities: Families of Measures for Assessing Affordability, Population Health, and Person- and Family-Centered Care

DRAFT REPORT FOR COMMENT

May 30, 2014

Public comments are welcome over the entire public commenting period from June 2-23. Those comments submitted by June 18th at 6 pm will be reviewed by the MAP Coordinating Committee during their meeting deliberations on June 20th. Comments received after June 18th at 6 pm and before June 23rd at 6 pm will be included in the final report, and this will provide an opportunity for the public to comment on the Coordinating Committee's discussions.

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Common Themes

Cross-Cutting Issues

- Measures need to be aligned with important concept areas, such as the aims of the National Quality Strategy, which will promote improvement across the broader health system.
- Families of measures provide a tool that stakeholders can use to identify the most relevant measures for their particular measurement needs, promote alignment by highlighting the most important measurement categories, and can be applied by other measurement initiatives.
- There are not sufficient measures assessing several priority areas, which highlights the need for further development of measures that matter in affordability, person- and family-centered care, and population health.

Affordability Measurement

- Rising healthcare costs are affecting all stakeholders, and all stakeholders have a shared responsibility for making care affordable.
- Current measures are limited in their ability to describe the full cost picture, so further work is needed to produce measures that comprehensively capture cost at multiple levels.
- Greater transparency of costs and prices is required for improving affordability.

Population Health Measurement

- Population health measures should align with the National Quality Strategy's long-term goals of engaging communities in promoting healthy living.
- Measuring the upstream determinants of health, in both clinical and community settings, is important for improving population health.
- Although it is important to focus on the health of the entire population, attention should also be given to health disparities and the unique needs of subpopulations.

Person- and Family-Centered Measurement

- Measurement should capture patients' experience of care as well as include patient-reported measures that evaluate meaningful outcomes for patients.
- Collaborative partnerships between persons, families, and their care providers are critical to enabling person- and family-centered care across the healthcare continuum.
- Future measure development should focus on patient-reported outcomes that offer a more holistic view of care, considering individuals' goals, needs, and preferences as well as their overall well-being.

Advancing Measurement in Priority Areas: Cross-Cutting Themes

Key Themes

- Measures need to be aligned with important concept areas, such as the aims of the National Quality Strategy, which will promote broad improvement across the health system.
- Families of measures provide a tool that stakeholders can use to identify the most relevant measures for their particular measurement needs, promote alignment by highlighting the most important measurement categories, and can be applied by other measurement initiatives.
- There are not sufficient measures assessing several priority areas, which highlights the need for further development of measures that matter in affordability, person- and family-centered care, and population health.

Measurement is an important tool for improving healthcare. It can be used to track progress, learn what works, and promote accountability for high-quality and better health outcomes. For example, one state-wide health initiative used core sets of measures to build out their electronic health record system; a hospital system used a common framework to identify best practices that achieve the best outcomes in cardiac surgery; and a regional health improvement organization shared measured performance with its members to help them identify areas to improve.[1]

While these examples demonstrate how measures can lead to improvement, current measurement does not fulfill its full potential. Clinicians and healthcare organizations feel burdened by the number of measures they have to report, and oftentimes report multiple metrics assessing the same concept.[2] For example, Massachusetts General Hospital and Massachusetts General Physicians Organization report over 120 measures to different external entities, and this reporting costs over 1 percent of its net patient service revenue.[3]

Beyond the administrative burden, the current measurement volume makes it difficult to identify the right measures for assessing improvement toward specific goals. For some priorities of the National Quality Strategy, there may be hundreds of measures that could be used to assess progress. However, measure availability is uneven, with some limited numbers available for several important priorities. Furthermore, even though there are many measures available, they may not be the right ones for gauging progress. Many metrics only assess clinical processes instead of broader outcomes, cannot be used to assess the health of populations, or do not take advantage of new data sources. More work is needed to advance the nation's measurement capabilities across all priority areas.

Seeking to help with these challenges, the National Quality Forum established the concept of families of measures. Families of measures are intended as a tool that stakeholders can use for assessing progress in important areas and a tool that can help promote alignment in measurement across the health system. Their capabilities are further described in the following sections.

Families of Measures: Tool for Assessing Progress

A family of measures is a starting place that stakeholders can use to identify the most relevant measures for their particular measurement needs. Stakeholders can use these families to assess National Quality Strategy concepts across care settings, levels of aggregation, and populations.

The NQF-convened Measure Applications Partnership (MAP) previously developed seven families, including cancer care, cardiovascular disease, care coordination, diabetes, dual eligible beneficiaries, hospice care, and patient safety. This report adds to this existing work by developing families of measures for affordability, person- and family-centered care, and population health. With this report, there are now families for assessing all parts of the National Quality Strategy.

In examining the use of all families of measures, it was found that approximately 80 percent of these measures are applied in at least one public or private program. This is likely a conservative estimate of measure use, considering that this assessment is based on only a subset of potential applications for the measures, and many of these measures are used in multiple programs. Evidence that measures in MAP families are in active use is important for establishing the practical significance of these measures in real-world applications. Moving forward, the utility of MAP measure families will need to be monitored and built upon based on feedback following practical experience with their application.

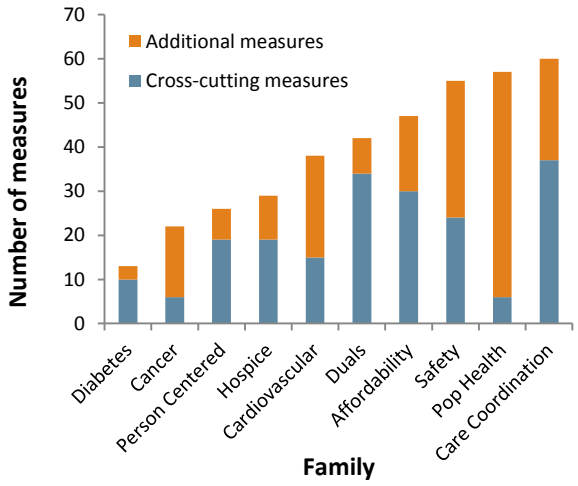
Families of Measures: Tool for Promoting Alignment

Families of measures are intended to promote alignment. By highlighting priorities for measurement and specific metrics to utilize for these priority areas, a consistent message can be conveyed to individuals and organizations about how to move toward a more aligned approach. Increased alignment of performance measures for health and healthcare may provide substantial benefits, including increased clarity on the most important areas, reducing confusion in interpreting the results of similar but slightly different measures, and decreased burden associated with data collection and reporting for various measures addressing similar topics.

Since their inception, measure families have started to drive alignment. The Measure Applications Partnership (MAP) uses families of measures to guide its pre-rulemaking recommendations on the selection of measures for specific federal programs. In addition, measure families can be a resource for the multiple efforts underway to identify core measure sets, as the families provide pre-screened measures in priority areas. For example, the Buying Value initiative has been bringing stakeholders together to identify key measures for alignment at the state and national levels, and the IOM Committee on Core Metrics for Better Health at Lower Cost is completing a study and report to establish a minimum set of relevant core measures. The results of these alignment initiatives can also help inform the next phases of measure families work.

One reason that measure families are useful tools for alignment is their cross-cutting nature, with each family including measures that span other families. As seen in Figure 1, the total number of measures and proportion of measures used in multiple families varies. For example, over 80 percent of measures in the Duals family are included in at least one other family, while this is true for around 10 percent of measures in the Population Health family. The reasons for this variability may be due to multiple factors, such as some families having a greater cross-cutting nature, and the balance between parsimony and comprehensiveness for the family. In the case of the Duals family, a very concerted effort was made to draw from other families when selecting measures. At the other end of the spectrum, the Population Health family focused on many upstream health determinants that were not as relevant to the healthcare orientation of other families. These findings demonstrate some of the key challenges in striving for balance in measure alignment while also taking a sufficiently broad approach.

Figure 1. Analysis of measures in MAP Families, showing the number of cross-cutting measures



Structure of Report

This report considers how to improve measurement by:

- Helping to ensure care is affordable,
- Driving improvements in health through wellness and prevention, and
- Centering care on the needs and preferences of patients, their families, and the broader public.

The measures for each area were reviewed by task forces and the MAP Coordinating Committee according to the approach outlined in Appendix A. Additionally, this report builds on prior analyses of gaps in the nation's measurement capabilities,4 and it articulates a clear vision on where measurement needs to be and outlines specific opportunities where progress can be made. This vision will be accelerated by new structures for measure development, such as a measure incubator, that can link measurement expertise with the necessary resources for creating metrics. The report concludes with a

series of appendices that provide further background on the Families selection process and more detailed results from the MAP deliberations.

Affordability Family of Measures

Key Themes

- Rising healthcare costs are affecting all stakeholders, and all stakeholders have a shared responsibility for making care affordable.
- Current measures are limited in their ability to describe the full cost picture, so further work is needed to produce measures that comprehensively capture cost at multiple levels.
- Greater transparency of costs and prices is required for improving affordability.

Rising healthcare costs are challenging the U.S. health system. They are hurting the competitiveness of U.S. businesses and leading to difficult choices for state and federal government. Families have seen their health insurance premiums increase by almost 130 percent in the past decade while their out-of-pocket spending has risen by almost 80 percent.[5] As a result of these increases, families' real income has been essentially flat for the past decade as all increases in people's wages and income have been consumed by growing healthcare costs.[6] Because of these challenges, the National Quality Strategy set a national aim of affordable care to reduce the cost of quality healthcare for individuals, families, employers, and government.

Measurement plays a critical role in improving affordability. This section describes the different perspectives on affordability and emphasizes how all stakeholders will need to be involved for sustainable progress. It then describes a suite, or family, of measures aimed at assessing current costs and affordability, as well as identifies the key drivers of costs. (Methodological details on how this family was constructed are included in Appendix A.) Given that cost measurement is in a nascent phase, this section also outlines opportunities for further measurement development. The section concludes by describing the importance of greater transparency in costs and prices, as that can lead to better affordability.

Multiple Perspectives of Affordability

Different stakeholders have different perspectives on affordability in healthcare. This is partially due to the fact that different groups are responsible for paying different costs. For example, patients may be concerned about their out-of-pocket costs while a payer would be interested in the total cost of care. Furthermore, the affordability of healthcare depends on the stakeholders' other competing priorities. State and national governments have to balance healthcare costs against other budget priorities, from education to economic development to tax rates; patients and people consider trade-offs in their family budget, such as between groceries, transportation, housing, and other expenses; and employers make trade-offs between total compensation, innovation, and profitability and overall competitiveness. While there are multiple perspectives, this project centered on affordability for patients and people by considering whether individuals were able to pay for the healthcare services they need. While the

project emphasized the importance of the patient perspective, success will depend on improving affordability for all stakeholders.

Different stakeholders and organizations have developed different language when discussing affordability concepts. For this project, the task force used definitions developed by a consensus-based process (see Box 1).[7] In addition, this project built on other existing work, including the National Quality Strategy; the Choosing Wisely initiative; AHRQ-sponsored research into efficiency measures; and prior NQF publications on cost, resource use, and efficiency.[8] Furthermore, this work drew from lessons learned by a portfolio of NQF projects on cost and affordability, including projects seeking to link cost and quality information, endorsing cost and resource use measures, understanding the optimal method for assessing the cost of a care episode, and a project focused on patient and consumer perspectives on affordability.

Box 1. Definitions of Important Affordability Terms

Charge. The dollar amount a provider sets for services rendered before negotiating any discounts. The charge can be different from the amount paid.

Cost. The definition of cost varies by the party incurring the expense:

- To the patient, cost is the amount payable out of pocket for healthcare services.
- To the provider, cost is the expense (direct and indirect) incurred to deliver healthcare services to patients.
- To the insurer, cost is the amount payable to the provider (or reimbursable to the patient) for services rendered.
- To the employer, cost is the expense related to providing health benefits (premiums or claims paid).

Price. The total amount a provider expects to be paid by payers and patients for healthcare services.

Reproduced from: HFMA, 2014, pp 2[9]

Stakeholders also have different levers at their disposal for improving affordability. For example, clinicians can help coordinate care, thereby limiting redundant tests and imaging; payers can help reduce administrative inefficiencies; and patients can select high-quality, high-value providers and services. Furthermore, many factors outside the traditional healthcare system affect health, and progress depends on coalitions of community organizations, first responders, local governmental agencies, public health, clinical care, patients, and others. Given the scope of the problem, all stakeholders will need to be involved to reduce waste and excess costs.

Framework for Selecting Measures of Affordability

As described in Appendix A on the general approach to measure selection, the task force and staff went through a multistage process to identify the most promising affordability measures. In particular, measures were selected in each of the opportunity areas based on evidence of impact, such as the leading causes of preventable death or the conditions associated with highest healthcare spending.[10,11] In addition, this project built on other MAP families of measures, including the existing safety and care coordination families and the simultaneous projects on population health and person- and family-centered care. The task force separated the measures it selected into two overarching categories—measures of current spending and measures of cost drivers.

Identifying Measures Describing Current Costs and Spending

Given the multiple perspectives on affordability, the task force sought to assess costs for different stakeholders and at different levels of the system. Further, they recognized that healthcare spending can be separated into two underlying concepts, as described by the following equation:

Healthcare Spending = Price x Utilization

iven the multiple perspectives and components of spending, the task force identified the following high-leverage opportunities for measuring costs:

- Total Spending – All stakeholders
- Spending by condition, episode, or intervention
- Spending by the patient
- Utilization
- Prices

Table C1 in Appendix C outlines the measures selected for each of these opportunity areas.

In selecting these measures, the task force found that cost measurement capabilities are currently limited. Yet, there are multiple data sources that could be leveraged—ranging from multipayer data sources, such as those reported by Minnesota Community Measurement; to national surveys, like the Medical Expenditure Panel Survey; to economic accounting approaches, like the National Health Expenditure Accounts—and these provide opportunities for short-term improvements in cost measurement.

Providing Tools for Reducing Waste and Excess Costs

Beyond understanding the current state of healthcare costs, the task force sought to provide tools that individuals and organizations could use for improving affordability. The group agreed that there were opportunities to reduce costs while improving healthcare quality or health outcomes. In particular, this project utilized the critical analysis of excess healthcare costs from the IOM's *Healthcare Imperative*, which identified 6 domains of waste: unnecessary services, prices that are too high, inefficiently delivered services, excess administrative costs, missed prevention opportunities, and fraud.[12] Drawing

from this framework, the task force identified the following high-leverage opportunities for measuring the drivers of healthcare costs:

- Overuse/underuse/appropriateness
- Efficient use of services, providers, and settings
- Person- and family-centered care
- Errors and complications
- Lack of care coordination
- Prevention

Table C2 in Appendix C outlines the measures selected for each of these opportunity areas.

One promising initiative for reducing unnecessary care is through the *Choosing Wisely* initiative, which seeks to reduce overuse of specific tests and procedures.[13] As the lists of tests and procedures have been reviewed by specialty societies, there is an opportunity to develop measures that assess appropriate use of procedures. However, there are multiple challenges, both logistical and conceptual, in developing such measures, and further work is needed.

Similarly, it can be difficult to identify whether care is appropriate or inappropriate for all patients. For example, discussions about end of life are fraught with cultural, emotional, political, and ethical considerations, and there is not one right approach for all patients. The appropriateness of many healthcare services will depend on an individual patient's goals and preferences, and the process of shared decisionmaking can ensure those factors are accounted for in the medical decision.[14]

Multiple Opportunities to Improve Cost and Affordability Measurement

The task force noted that the current measures are largely inadequate to address affordability from the perspectives of all stakeholders. However, many public- and private-sector initiatives are working to improve the affordability of healthcare, and the group recommended aligning with these efforts to continue to drive progress.

The task force highlighted that there are direct and indirect costs from disease and treatment. While current measures focus on direct costs, patients have many indirect costs, including the time spent navigating the healthcare system, transportation costs for traveling to appointments, and missed work or school. Additionally, caring for a loved one can place significant financial and time burdens on family members. Future measures should seek to capture and measure these opportunity costs and other indirect costs, as they determine whether people view care as affordable.

Another current limitation is the limited number of composite measures. Composite measures could provide consumers, payers, and purchasers with needed high-level information that allows them to track broader progress in affordability. To be useful for improvement, the composite needs to allow for detailed analysis of variations and the specific factors driving cost.

As multiple social and environmental factors could impact several of the identified affordability measures, there may be a need to adjust the measures for these factors. Risk adjustment could highlight disparities in cost and quality while accounting for differences in the patients seen by different providers. In addition, risk adjustment could highlight distinctions between high and low cost providers without jeopardizing resources to underserved and vulnerable populations.

Greater Transparency Required for Progress

The current system is opaque in terms of price and cost. This particularly challenges patients, who are responsible for greater portions of their healthcare costs,[15] yet they cannot necessarily find out in advance what any given healthcare service will cost. This opacity has multiple causes—prices are generally set by negotiations between each insurer and each provider, and these negotiated rates are confidential. Moreover, each insured patient pays different amounts out of pocket based on their insurance plan's benefit design. Yet to support consumers in their healthcare decisions, greater transparency is required.

There are multiple perspectives on transparency, so this project uses a definition drawn from a multistakeholder consensus process:

> *In healthcare, readily available information on the price of healthcare services that, together with other information, helps define the value of those services and enables patients and other care purchasers to identify, compare, and choose providers that offer the desired level of value.* [16]

While increased price transparency is an important goal, there are challenges in implementation. To avoid unintended consequences, transparency initiatives must monitor for anticompetitive behavior or increased prices.[17] However, there are opportunities to learn from existing state price transparency initiatives, such as the Massachusetts law requiring estimates on charges and out-of-pocket costs or the Minnesota HealthScores project on average cost by procedure or cost tiers by insurance plans.[18] As price transparency is evolving, the task force cautioned that the field needs the opportunity to innovate.

Implementation Considerations and Next Steps

To fully understand efficiency and value, cost measures must be considered in conjunction with measures of quality. This allows the measure user to understand the trade-offs between cost and quality and to avoid any potential unintended consequences.[19] Further, it allows the user to identify when cost can be reduced while maintaining or improving quality. In addition to pairing cost and quality, the task force considered whether measures of overuse should be balanced with underuse measures. Pairing these measures can help to ensure that patients are provided with appropriate types of care, but recognize the potential administrative burden of collecting data for additional measures.[20]

Finally, there is a need for more nuanced data sources that would enable improved assessment of affordability. Improved data will build on existing claims data sources, as well as the detailed clinical information contained in electronic health record systems. To better capture the patient experience of

affordability, there is a need to develop better patient reported data on spending and their experience of quality. Moreover, further capabilities are needed in administrative data sources that account for the production of healthcare, and can be used by improvement initiatives seeking to improve efficiency and value.

Population Health Family of Measures

Key Themes

- Population health measures should align with the National Quality Strategy's long-term goals of engaging communities in promoting healthy living.
- Measuring the upstream determinants of health, in both clinical and community settings, is important for improving population health.
- Although it is important to focus on the health of the entire population, attention should also be given to health disparities and the unique needs of subpopulations.

Population health has been defined as "the health outcomes of a group of individuals, including the distribution of such outcomes within the group."[21] Clinical care is estimated to account for about 20 percent of health outcomes; in comparison, health behaviors (30 percent) and social and economic factors (40 percent) together have a much larger influence on health.[22] These findings contrast sharply with the nation's very high monetary expenditures and strong focus on healthcare, relative to much smaller societal investments in maintaining health and well-being.

The public health system has traditionally led efforts to address the health of groups of people in geographic or geopolitical areas. However, there is also increasing recognition that healthcare providers and systems will need to focus on population-based outcomes, particularly under evolving care delivery models (e.g., Accountable Care Organizations) and value-based payment mechanisms. Broad and lasting improvement in population health requires the active participation of many stakeholders.

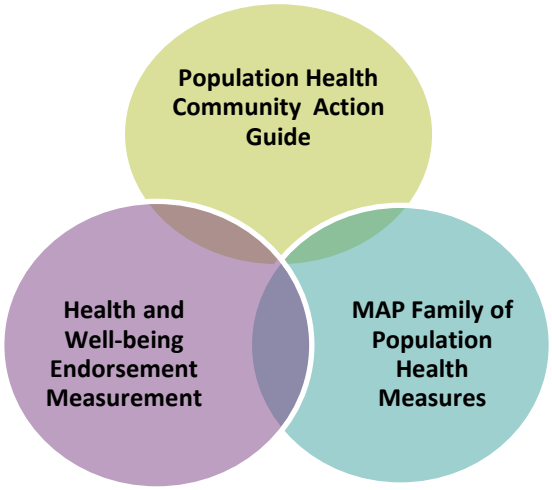
Underscoring the importance of population health, the National Quality Strategy included it as a central component, and promoting healthy people and healthy communities is specifically highlighted as one of the three National Quality Strategy aims. There are several long-term goals specified in the National Quality Strategy pertaining to working with communities on use of best practices to enable healthy living, focusing on interventions to improve social, economic, and environmental factors; adoption of healthy lifestyle behaviors across the lifespan; and ensuring that effective clinical preventive services are received in clinical and community settings. Quality measures can play an important role in assessing progress toward achieving all of these goals.

Consistent with this holistic approach, the MAP Population Health Task Force selected measures of clinical preventive services, such as screenings and immunizations, as well as many measures that address topics outside of the traditional healthcare system. Furthermore, the task force considered how measures could be used in nonhealthcare situations such as a community health needs assessment and public health activities. This approach coincides with efforts to shift more focus from individual sick care to the health and well-being of populations.

Current and Prior Work on Population Health at NQF

NQF's prior and current work on population health has emphasized alignment with the National Quality Strategy and seeks to utilize opportunities to advance stakeholder engagement on several related projects. A previous NQF project focusing on endorsement of population health measures resulted in an NQF-commissioned paper that served as a primer for this work, and has been foundational for various NQF population health projects.[23] As shown in Figure 2, two other ongoing NQF population health projects have benefited from the lessons learned from these separate but related efforts. The Health and Well-Being Measures project involves reviewing population health measures for new or continued NQF endorsement, and a Population Health Framework project is using NQF's multistakeholder, collaborative process to develop a common framework and practical guidance for groups seeking to improve population health in their communities.[24]

Figure 2. Current NQF Projects Related to Population Health



A common theme among these projects has been an emphasis on looking beyond the medical model to address conditions with a high preventable burden at the root causes, such as exposure to unhealthy or unsafe environments. Another cross-cutting issue is how to best balance use of measures of health for overall populations while not neglecting potentially vulnerable subpopulations, such as racial minorities or individuals with disabilities. In addition, each of the population health projects recognized the critical importance of measurement in identifying issues and tracking progress.

Conceptual Framework and Measure Selection Approach

The MAP Population Health Task Force began the task of selecting a family of population health measures based on the framework and broad measurement domains identified in a prior NQF-commissioned paper, which included measures of total population health, determinants of health, and health improvement activities.[25] The task force refined this conceptual framework to identify discrete

topic areas that address key aspects of population health, with the final groupings largely aligning with the Healthy People 2020 Leading Health Indicator topic areas.[26]

Each of the topic areas chosen encompasses high-leverage opportunities for health improvement. Some of the topics were more clinically focused, including: access to healthcare, chronic illness, and clinical preventive services. However, the majority of topic areas addressed behavioral, social, and environmental factors, such as nutrition, physical activity, and obesity; tobacco/smoking; community safety; family and social support; social determinants of health; and the physical environment.

Members of the Population Health Task Force recognized that population health can be very broadly defined, and therefore strove to find the optimal intersection between healthcare delivery and public health when selecting measures for the family. In addition, the task force considered both NQF-endorsed measures and measures used in major population health initiatives, such as the Healthy People 2020 Leading Health Indicators and the County Health Rankings measures.[27] The final topic areas and measures selected for the family are shown in Appendix D.

Implementing Measures to Advance Population Health Goals

During the course of discussions, the task force determined that more insight could be provided on how different measures and indicators in the population health family might be applied in potential use cases. This approach was intended to delineate applications for which the various measures might be most relevant. Ultimately, four use cases were chosen that span clinical and public health settings, and various levels of analysis:

1) federal programs for healthcare providers,
2) accountable care organizations,
3) community health needs assessment, and
4) public health.

These four use cases highlight different approaches to improving overall health. First, federal programs for healthcare providers was chosen as a use case given MAP's traditional role of reviewing measures proposed for use in federal programs, with most of these proposed measures assessing clinical concepts. Second, Accountable Care Organizations may provide a greater opportunity to measure large populations of patients at a system level, and address issues like high prevalence of obesity and low birth weight rates. Third, community health needs assessment offers a mechanism to bring together healthcare, public health, and community stakeholders to understand broader health issues, such as the occurrence of unhealthy behaviors in a community. Lastly, a public health use case was deemed useful for considering issues that are generally not covered through the healthcare system, such as air quality, education, and poverty. As an illustrative example, the types of measures that may be most relevant to each of these use cases are shown in Table 1. However, the task force recognized that there may also be overlap in how measures could be applied across the use cases.

Table 1. Illustrative Example of Measures Applied to Use Cases

Federal Program for Providers	**ACO**
Clinically focused measures attributable at the provider level, such as: - Adult and childhood immunizations - Blood pressure & diabetes control - Cancer screening - Counseling - Developmental screening - Preventive medical care visits	All measures applicable to providers, plus clinically oriented measures that might be better addressed at a system level, such as: - Admission rates for selected conditions - Effective care coordination - Low birth weight rates - Obesity rates
Community health needs assessment	**Public Health**
Measures that bridge clinical and community settings, such as: - Access to medical insurance - Prevalence of unhealthy (e.g., smoking) and healthy (e.g., physical activity) behaviors in a community - Issues that indicate community health concerns, such as prevalence of fatal injuries	Measures focused on geographic populations, particularly for upstream health determinants: - Measures intended for use at the national, state, or county level - Leading Health Indicators and County Health Rankings measures addressing: o Social determinants, such as education, poverty, housing, etc. o The physical environment, such as air and water quality

An overarching issue when implementing population health measures is whether measures should apply to the entire population, or if measures should be targeted to various subpopulations. Similarly, there are issues in how to best capture health inequities. The task force recognized the importance of both issues and emphasized that measure results should be stratified when relevant, with targeted assessments to consider subpopulations where needed.

Another important implementation challenge discussed by the task force is the availability of data. In many cases, data may not be available to assess progress at a local level, or different data sources do

not provide comparable information. These issues need to be taken into account by groups that plan to use measures to assess and track progress on the health of their communities.

Improving the Measures Used To Assess Population Health

In many important areas of population health, there are relatively few measures available. An example is the lack of well-established measures for certain subpopulations, such as the elderly or individuals with a disability. For instance, it may be difficult to meaningfully measure physical activity for individuals with severe intellectual or physical limitations without accounting for the particular adaptations needed by these individuals to readily obtain exercise.

However, the task force did not necessarily signal a gap when choosing to not select measures for some topic areas. Those areas may have been covered more extensively by other families of measures, or the group weighted parsimony over the need to assess a specific topic. For example, although cardiovascular disease is a leading cause of death, measures for heart disease were not chosen for the population health family since a cardiovascular family of measures was previously defined, and a more upstream measure on controlling blood pressure was instead determined to be more meaningful to include.

Overall, consensus was established that more and better measures are needed to effectively address population health. Stronger measures for social and physical environmental determinants of health, such as education, employment, the built environment, and air/water quality were considered high-priority gaps by a majority of the task force. Other topics identified as measurement gaps included nutrition, food security, home and community living, health of specific subpopulations, policy interventions such as smoke-free zones, productivity, and public health preparedness.

Person- and Family-Centered Care Family of Measures

Key Themes

- Measurement should capture patients' experience of care as well as include patient-reported measures that evaluate meaningful outcomes for patients.
- Collaborative partnerships between persons, families, and their care providers are critical to enabling person- and family-centered care across the healthcare continuum.
- Future measure development should focus on patient-reported outcomes that offer a more holistic view of care, considering individuals' goals, needs, and preferences as well as their overall well-being.

A growing body of literature suggests that patient engagement can lead to better health outcomes and improved quality and patient safety, and help control healthcare costs.[28] Family involvement has also been correlated with improved patient and family outcomes and decreased healthcare costs. For example, a family's presence in pediatric care has been shown to contribute to reduced anxiety during healthcare procedures, faster recovery, and earlier discharge in children.[29]

Given the positive impact that person- and family-centered care can have, as well as the commitment to center care around those who receive it, the National Quality Strategy (NQS) put forth the priority of "ensuring that each person and family are engaged as partners in their care."[30] This is further illustrated through three specific goals in the strategy: 1) improve patient, family, and caregiver experience of care related to quality, safety, and access across settings; 2) in partnership with patients, families, and caregivers—and using a shared decisionmaking process—develop culturally sensitive and understandable care plans; and 3) enable patients and their families and caregivers to navigate, coordinate, and manage their care appropriately and effectively.[31] The IOM reinforced these goals in the vision of a continuously learning healthcare system, including the need to anchor healthcare in patient needs and perspectives, and ensuring that patients, families, and caregivers are vital members of the care team.[32]

As healthcare organizations work to create care practices that support person- and family-centered care, it is essential to assess and monitor progress toward meetings these goals. This section describes the guiding framework that the Person- and Family-Centered Care Task Force used to define a family of measures that focuses on evaluating patient and family experience of care and outcomes that are most meaningful to patients. Accordingly, the task force recommended that future measure development should focus on patient-reported outcomes that offer a more holistic view of care, considering individuals' goals, needs, and preferences as well as their overall well-being. The approach on how this family was constructed is included in Appendix A.

Defining the Different People Involved in Receiving Care

One single term cannot apply to all individuals in all situations; in actuality, an individual with many needs may self-identify as a person, client, or patient at a single point in time. Given the many terms used to describe individuals receiving care, the task force agreed to use the word "*person*" as an overarching term to encompass the health and healthcare needs of all individuals, regardless of age, setting, or health status. Importantly, use of the term "person" conveys that the family of measures should address the needs of all individuals, and that terminology should not unintentionally limit measurement to certain populations to the exclusion of others. To span populations, time, and settings, the term "person" will be most inclusive, recognizing that in certain instances, a more specific, narrower term may be more appropriate. In addition, this report uses the terms "person" and "patient" interchangeably to refer to recipients of care regardless of setting.

The task force identified several other terms for important concepts. The term "family" connotes family members and caregivers as identified by the care recipient. The term "-centered care" is intended to encourage care that is centered on a person's priorities and goals and a commitment by providers to collaborative partnering relationships with care recipients and their families. Box 2 below illustrates the intended terms for person- and family-centered care.

Box 2. Illustration of Person-Centered Care Terminology

"Person" includes all individuals allowing for flexibility of terminology depending on setting, age, and health status. Examples:

- Patient (e.g., acute care; ambulatory; inpatient rehabilitation; home health)
- Resident (e.g., skilled nursing facility; group home)
- Client (e.g., community programs; mental health; behavioral health)
- Person (e.g., population health/primary prevention; disability community; otherwise healthy)

Other important concepts in person-centered care are:

"Family" includes individuals engaged in or responsible for the person's care (i.e., parents, children, and/or caregivers of the person's choosing).

"-Centered Care" implies that care is centered on the priorities and goals of the person/patient/family and that the relationship between persons and providers is one of a collaborative partnership.

Defining Person- and Family-Centered Care

Building on prior and current NQF work, including the patient-reported outcomes (PROs) domains developed through the Patient-Reported Outcomes in Performance Measurement project, and the person- and family-centered care definition and core concepts established in the Prioritizing Measure

Gaps: Person-Centered Care and Outcomes project, MAP used the following description as a touchstone for person- and family-centered care:

> *Person- and family-centered care is an approach to the planning and delivery of care across settings and time that is centered around collaborative partnerships among individuals, their defined family, and providers of care. It supports health and well-being by being consistent with, respectful of, and responsive to an individual's preferences, needs, and values.*

To aid in the selection of measures, the task force focused a significant amount of its discussion on refining the following high-priority topic areas for measurement, emphasizing that a primary mechanism for evaluating the person-centeredness of care will be through the capture of patient and family experience of care information. The priority measurement areas identified below also signal whether care received has helped them to achieve their desired outcomes, particularly in terms of functional status and quality of life—two critical areas for the use of patient-reported outcomes. The high priority topics and subtopics identified by MAP are listed in Table 2.

Table 2. Highest Priority Topics and Subtopics in Person- and Family-Centered Care.

High priority topics	**Subtopics**
Interpersonal relationships	○ Dignity, respect, compassion, trust, perception of equity ○ Communication and collaboration ○ Cultural and linguistic responsiveness
Patient and family engagement	○ Shared decisionmaking and informed choice ○ Advance care planning
Care planning and delivery	○ Establishment and attainment of patient/family/caregiver goals ○ Care concordant with person values and preferences ○ Care integration (coordination, transitions)
Access to support	○ Patient and caregiver needs and support ○ Timely and easy access to care and knowledge
Quality of Life	○ Physical and cognitive functioning ○ Behavioral, physical, social, emotional, and spiritual well-being ○ Symptom and symptom burden (e.g., pain, fatigue, dyspnea, mood) ○ Treatment burden (on patients, families, caregivers, siblings)

Building on Existing Work: CAHPS Surveys

Because of the potential to address many of the topic areas mentioned above, the task force recommended to include CAHPS measures as part of the family to be used in the settings for which they were developed. Although the surveys have limitations, the instruments—in particular certain constructs and questions—can serve as a mechanism for better understanding patient experience as a starting point for better assessing quality. The task force highlighted that CAHPS surveys are limited to predetermined survey options which may not fully capture patients' experience of care and other aspects of care important to patients. However, it was noted that AHRQ is currently investigating the use of qualitative components for inclusion in CAHPS. To better elucidate the extent to which the CAHPS instruments address the above topics, Appendix E (to be submitted with the final report) includes a crosswalk of each survey tool at the measure level to the priority areas.

Guiding Principles for Selecting Measures

The following guiding principles informed the discussions and decisions in developing this measure family:

- The task force emphasized the importance of measures that assess whether individuals' needs, preferences, and values are addressed, and whether they are treated with respect and dignity.
- The task force encouraged measurement through the persons' eyes to assess their interactions with care providers, to gauge their level of involvement and engagement in their care, and to assess whether they have received adequate and timely support to optimize their quality of life.
- Because of the interrelatedness of the high priority areas and their subcomponents, MAP used them as an organizing structure to guide its work rather than as specific items to which to assign measures. For example, the need for timely and easy-to-understand information is critical for engaging patients in their care and ensuring that they can make informed choices, but measures were not considered for each of these areas in isolation.
- The task force favored a parsimonious set of measures and cautioned against measures that could increase measurement burden without adding value or moving the needle.
- The task force recognized the importance of safe and evidence-based care as an overlay for delivering high-quality, person- and family-centered care, but deferred these as topic areas because they were previously addressed through the MAP families for safety, care coordination, and diabetes and cardiovascular disease. This measure family should be complementary and not redundant.

Selecting Measures in Key Person- and Family-Centered Care Areas

This section outlines the highest leverage opportunities for improving patient- and family-centered care, and identifies measures that could be used in each area. Table E1 in Appendix E highlights the measures selected by the task force for inclusion in the MAP family. A sample of CAHPS surveys and their respective measures are also included for illustrative purposes.

Interpersonal Relationships

Interpersonal relationships between persons, families, and their care providers are foundational for achieving other aspects of high quality care and are best measured through a patient's experience of care. The task force identified the following as important aspects of patient-provider relationships: being treated with dignity, respect, compassion, and equity; communication from and with their providers; and their level of trust. Cultural and linguistic responsiveness can also assess whether patients feel that their culture and language are respected and that they are treated in a dignified manner even if from a different culture or background. This high priority area was well represented by the majority of the CAHPS surveys. For example, the CAHPS Clinicians and Group survey measure of *"how well providers communicate with patients"* assesses whether providers show respect for what patients say and whether they spend sufficient time with their patients.

Patient and Family Engagement

Collaborative partnerships between persons, families, and their providers of care are critical to enabling informed choice and shared decisionmaking about the plan of care. A partnership based on open and engaging dialog and communication and a free flow of information will better encourage and empower patients to fully participate in their care. Involvement in decisionmaking is captured in several CAHPS surveys, including the *"parents' experiences with shared decisionmaking"* measure in the CAHPS Item Set for Children with Chronic Conditions, and the *"nursing home provides information/encourages respondent involvement"* measure in the CAHPS Nursing Home Family Survey. The task force noted a significant gap in patient-reported outcome data of shared decisionmaking.

In addition to CAHPS, the task force identified advance care planning as an integral component of patient and family engagement, and that measures should expand beyond end-of-life to encompass all persons with complex or chronic illness, especially those with advanced illness. The task force noted a gap in this measurement area and concluded that NQF-endorsed measure *#0326 Advance Care Plan* and other process and structural measures assess only whether a care plan is documented in the chart or people were offered advanced care planning. Future measure development should expand on this measure to ensure that advance care planning is more fully integrated to improve care planning and delivery.

Care Planning and Delivery

The establishment of patient goals is central to the care planning process. This should be informed by an assessment of patients' overall health status, and their values and preferences for care—what they would like to achieve, and how they would like their care to support them. For instance, a measure in the CAHPS Patient-Centered Medical Home (PCMH) Item Set Survey asks patients whether anyone in the provider's office talked with them about specific goals for their health.

Care integration is critical to the successful implementation of care plans, and can only occur when information flows easily between care teams, particularly during hands-offs and transitions. The updated HCAHPS survey includes the *3-Item Care Transition Measure (CTM-3)* as a patient-reported indicator of preparation for self-care for adult patients discharged from hospitals. The task force also supported two NQF-endorsed measures for this priority area, including *NQF #1641 Hospice and*

Palliative Care Treatment Preferences to assess whether patient preferences are elicited and recorded, and *NQF #0647 Transition Records with Specified Elements Received by Discharged Patients*.

Access to Support

Access in the broadest sense includes how quickly appointments can be made as well as timely and easy access to needed information—whether in person, telephonically, or online—to support patients in managing their own care. Access also needs to account for family caregivers, who play a critical role in delivering care. Therefore, they need support and education to help their loved ones while maintaining balance in their personal lives. Many CAHPS measures address support for patients yet do not address the needs of family caregivers. Therefore, the task force supported a measure that is not NQF-endorsed, *Dementia: Caregiver Education and Support*, noting that although limited to a specific condition, it addresses a growing population. Future measures should evaluate support for all family caregivers.

Quality of Life

An optimal quality of life represents an ideal outcome—and one which the aforementioned areas should support. The task force emphasized the importance of measures of behavioral, physical, social, emotional, and spiritual well-being; interventions designed to improve or maintain physical and cognitive functioning; alleviation of symptom and symptom burden (e.g., pain, fatigue, dyspnea, mood); and minimization of treatment burden on patient, families, and caregivers.

Overall, the task force favored patient-reported outcomes for this measurement area, and acknowledged opportunities in the CAHPS instruments to emphasize aspects of quality of life such as pain management in HCAHPS. The task force recommended several additional measures to assess and address depression, including NQF-endorsed measures *#0710/#0711/#0712 Depression Remission at Twelve and Six Months and Depression Utilization of the PHQ-9 Tool.* These performance measures track improvement over time for people over 18 with a diagnosis of major depression or dysthymia using the PHQ-9 tool and have been widely used across settings. The task force also recommended NQF-endorsed *#0418 Preventive Care and Screening: Screening for Clinical Depression and Follow-Up Plan* to include a measure applicable to adolescents and adults aged 12 years and older.

The task force recommended three outcome measures used in the Home Health Outcome and Assessment Information Set (OASIS) to assess improvement in patient mobility, pain interfering with activity, and management of oral medications as a foray into assessing quality of life. The task force supported NQF-endorsed measure *#0209 Comfortable Dying: Pain Brought to a Comfortable Level Within 48 Hours of Initial Assessment,* emphasizing the importance of managing pain. This measure is currently removed from the hospice program but is being used in ambulatory settings. The task force identified the evaluation of treatment burden as an important gap area in need of measure development.

Prominent Gaps in Person-Centered Care Performance Measures

Although the CAHPS survey instruments address many of the high-leverage opportunities identified by the task force, they do not sufficiently address each of the measure areas comprehensively. In particular, the availability of measures to address issues of quality of life remains quite low. In the home

health and nursing home settings, CAHPS measures begin to assess issues related to quality of life, but across the board, much more work is needed in this area. Tools to assess patient-reported outcomes, such as the National Institutes of Health's Patient Reported Outcomes Measurement Information System (PROMIS)—which measures patient-reported health status for physical, behavioral, and social well-being—offer a launching pad for the development of performance measures to fill remaining gaps and should be considered a high priority for measurement in the near term.

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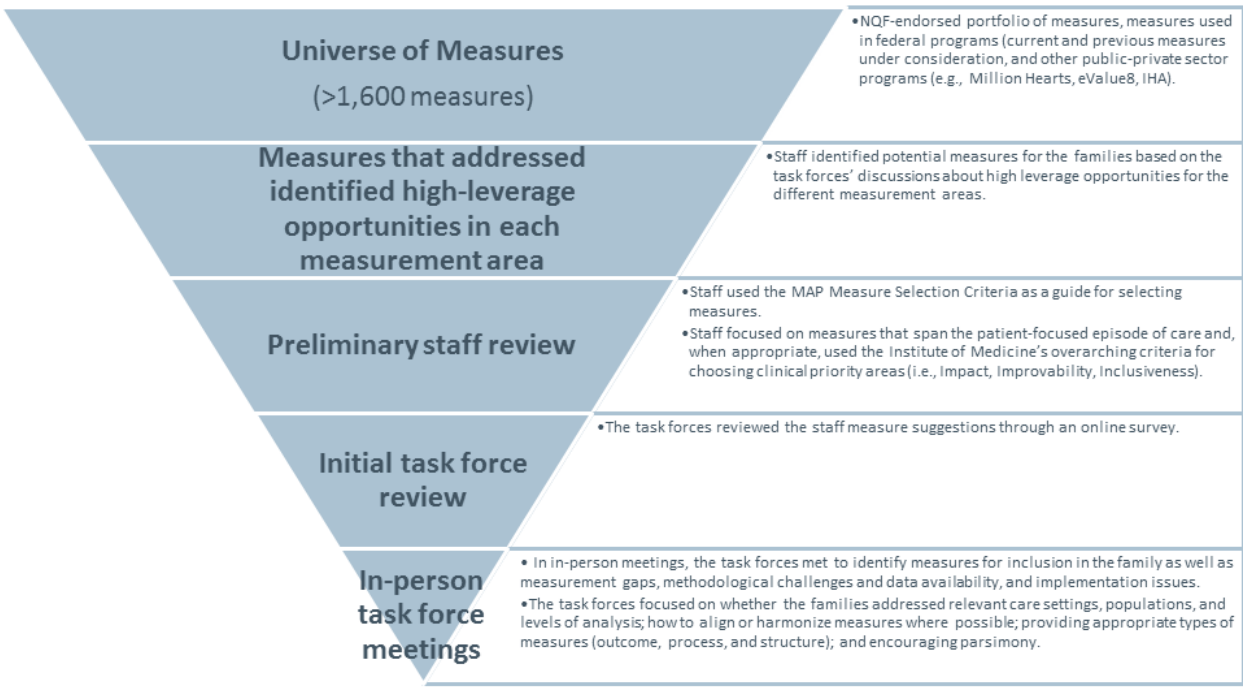
Appendix A: Approach to Identifying Families of Measures

MAP convened time-limited task forces, drawn from the membership of the MAP Coordinating Committee and four advisory workgroups, to advise the MAP Coordinating Committee on measure families for specific content areas (see Appendix F for the Coordinating Committee roster). Currently MAP has convened task forces to develop families of measures focusing affordability, population health , and person- and family-centered care (see Appendices G, H, I respectively for task force rosters). Previously MAP convened task forces to develop families of measures related to safety, care coordination, cardiovascular disease, diabetes, cancer care, dual eligible beneficiaries, and hospice care.

MAP developed a five-step process to identify a family of measures. The steps below outline the basic process to develop a family of measures; some task forces used a slightly modified approach described in the corresponding section for that family of measures. Additionally, MAP will solicit public feedback on its recommendations during a three-week commenting period.

Figure A1.Graphical Description of the Process for Developing a MAP Family of Measures



The task forces convened via web meetings and in-person meetings to identify each family—the Population Health and Person- and Family-Centered Care task forces each held 1 web meeting and 1 one-day, in-person meeting, while the Affordability task force held 2 web meetings and 1 two-day in-

person meeting. In addition to the meetings, the Population Health task force also conducted a post-meeting follow-up survey of task force members to verify the high-leverage opportunity topics and measures. All MAP meetings are open to members of the public; the agendas and materials for the task force and Coordinating Committee meetings can be found on the NQF website.

Scan For Currently Available and Pipeline Measures That Address the High-Leverage Opportunities

To begin, MAP scanned for available measures that address the high-leverage opportunities. The environmental scan included the NQF-endorsed portfolio of measures, measures used in federal programs (including current measures and measures under consideration during MAP pre-rulemaking deliberations), and measures used in other public- and private-sector efforts (e.g., eValue8, Million Hearts Campaign, IHA P4P, Bridges to Excellence, other purchaser and value-based purchasing programs, recognition programs, and Board certification programs).

Identify Measures for Each High Leverage Opportunity

Next, the task forces selected measures appropriate for assessing each high-leverage opportunity. Where appropriate, MAP used the Measure Selection Criteria as a general guide for considering factors such as: 1) how measures address relevant care settings, populations, and levels of analysis; 2) whether measures are harmonized across settings, populations, levels of analysis; 3) appropriate types of measures, including outcome, process, and structure measures; and 4) attention to parsimony, with the intent of identifying only the most important measures for driving change.

When developing a family of measures, MAP may note where currently available NQF-endorsed measures do not adequately address the high-leverage opportunities. Finally, MAP considered issues such as disparities and the needs of vulnerable populations.

Identify Measure Gaps and Limitations, Such as Implementation Barriers

When selecting available measures for each family, MAP identified the high-leverage improvement opportunities that lack adequate performance measures. When gaps were identified, MAP explored ways to promote gap-filling. In some cases, MAP generated potential measure concepts that could be developed to fill these gaps, as well as recommendations to measure developers for potentially modifying existing measures that do not adequately address the high-leverage opportunities but are currently considered the best alternative. MAP recognizes that modifications to existing measures require resources to develop, test, and submit the modified measures for NQF endorsement. MAP also explored implementation barriers such as limitations of available data and the challenges of attributing accountability for system wide issues impacting affordability, person- and family-centered care, and population health.

Appendix B: Alignment Table

Measures Included in Three or More MAP Families

NQF #	Measure Title	Families*
0005	CAHPS Clinician/Group Surveys - (Adult Primary Care, Pediatric Care, and Specialist Care Surveys)	CC; Duals; PFCC
0006	CAHPS Health Plan Survey v 4.0 - Adult questionnaire	CC; Duals; PFCC
0008	Experience of Care and Health Outcomes (ECHO) Survey (behavioral health, managed care versions)	CC; Duals; PFCC
0018	Controlling High Blood Pressure	CV; Diabetes; Pop Health
0028	Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention	CV; Diabetes; Duals
0097	Medication Reconciliation	Affordability; Duals; Hospice
0138	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure	Affordability; Cancer; Safety
0139	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome Measure	Affordability; Cancer; Safety
0166	HCAHPS	CC; Duals; PFCC
0171	Acute care hospitalization (risk-adjusted)	Affordability; CC; Hospice
0173	Emergency Department Use without Hospitalization	Affordability; CC; Hospice
0208	Family Evaluation of Hospice Care	Cancer; CC; Hospice
0209	Comfortable Dying: Pain Brought to a Comfortable Level Within 48 Hours of Initial Assessment	Cancer; Duals; Hospice; PFCC; Safety
0216	Proportion admitted to hospice for less than 3 days	Affordability; CC; Hospice
0258	CAHPS In-Center Hemodialysis Survey	CC; Duals; PFCC
0326	Advance Care Plan	CC; Duals; Hospice
0418	Screening for Clinical Depression	Duals; PFCC; Pop Health
0421	Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up	Affordability; CV; Diabetes; Duals; Pop Health

0517	CAHPS® Home Health Care Survey	CC; Duals; PFCC
0647	Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	CC; Duals; Hospice; PFCC
0648	Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	CC; Duals; Hospice
0691	Consumer Assessment of Health Providers and Systems (CAHPS®) Nursing Home Survey: Discharged Resident Instrument	CC; Duals; PFCC
0692	Consumer Assessment of Health Providers and Systems (CAHPS®) Nursing Home Survey: Long-Stay Resident Instrument	CC; Duals; PFCC
0693	Consumer Assessment of Health Providers and Systems (CAHPS®) Nursing Home Survey: Family Member Instrument	CC; Duals; PFCC
1598	Total Resource Use Population-based PMPM Index	Affordability; CV; Diabetes
1604	Total Cost of Care Population-based PMPM Index	Affordability; CV; Diabetes
1626	Patients Admitted to ICU who Have Care Preferences Documented	CC; Duals; Hospice
1632	CARE - Consumer Assessments and Reports of End of Life	CC; Duals; Hospice
1641	Hospice and Palliative Care – Treatment Preferences	Duals; Hospice; PFCC
1741	Patient Experience with Surgical Care Based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS)® Surgical Care Survey	CC; Duals; PFCC
1789	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)	Affordability; CC; Duals

*CC = Care Coordination; CV = Cardiovascular; PFCC = Patient- and Family-Centered Care

Appendix C: Affordability Tables

Table C-1. Measures of Affordability: Currently Endorsed Measures, Short-Term Opportunities for Developing Measures, and Longer-Term Vision for Assessment

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
Direct Measurements of Affordability	Total Spending – All stakeholders	• NQF #1604 Total Cost of Care Population-based PMPM Index	• Total cost of care measures from national surveys: ○ Medical Expenditure Panel Survey • National Health Expenditure Accounts • Per capita total cost for attributed patients	• Converging macro/national total cost data with provider-/setting-/service area-specific/patient-/third-party payer- total cost • Employer spending on employee health benefits
	Spending by condition, episode, or intervention	• NQF #1609 ETG Based HIP/KNEE REPLACEMENT cost of care measure • NQF #1611 ETG Based PNEUMONIA cost of care measure	• Minnesota Community Measurement cost per procedure episode grouper measures	• Managing chronic conditions (diabetes, arthritis, cardiovascular, some mental conditions, COPD, asthma, • Cancer care • Gastrointestinal condition care • Vulnerable populations (multi-morbidity with functional or cognitive impairment, frail elderly, or disabled) • Maternity (mother and baby) care • Trauma care
	Spending by the Patient	*No NQF-endorsed measures selected or available*	• Total out of pocket costs (synced with ACA definition of affordable care)	• Premiums • Deductibles

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
			○ Data could be derived from MEPS or Consumer Expenditure Survey	• Out of pocket costs • Healthcare costs as percent of income • Indirect costs (loss of wages, loss of function) • Disparities in access and affordability with regards to socioeconomic stats, race, and ethnicity, and geography • Access to specialists and community resources • Cost as a barrier to care
	Utilization	• NQF #2158 Payment-Standardized Medicare Spending Per Beneficiary (MSPB) • NQF #1598 Total Resource Use Population-based PMPM Index • NQF #1557 Relative Resource Use for People with Diabetes (RDI) • NQF #1558 Relative Resource Use for People with Cardiovascular Conditions • NQF #1560 Relative Resource Use for People with Asthma	• Radiology utilization • Utilization of outpatient care for priority conditions	• Addressing intense needs for care and support of medically complex populations (i.e., dual eligible beneficiaries, individuals with multiple chronic conditions, frail elders, and disabled) • Targeted utilization measures for most common conditions •
	Prices	*Opportunity for measure development*	• Medicare Part D Drug Pricing Measures • Overall price index (such as derived from total cost of care methodology)	• Structural measure on price transparency • Average differences in prices
Drivers of Affordability	Overuse/Underuse/	• NQF #0052 Use of Imaging Studies for Low Back Pain • NQF #0554 Medication	• Measures derived from Choosing Wisely	• Unwarranted maternity care interventions (C-section) • End of life care including inappropriate non-

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
	Appropriateness	Reconciliation Post-Discharge • NQF #0036 Use of appropriate medications for people with asthma • NQF# 0058 Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis • NQF #0309 Back Pain: Appropriate Use of Epidural Steroid Injections • NQF #0553 Care for Older Adults – Medication Review • NQF #0471 PC-02 Cesarean Section • NQF# 0654 Acute Otitis Externa: Systemic antimicrobial therapy – Avoidance of inappropriate use • NQF #0657 Otitis Media with Effusion: Systemic antimicrobials – Avoidance of inappropriate use • NQF# 0002 Appropriate Testing for Children With Pharyngitis (CWP) • NQF #469 PC-01 Elective Delivery		palliative services at the end of life • Cancer care • Shared decisionmaking • Appropriate Imaging: ○ Mammography recall ○ Minimal cancer detection ratios ○ Headache ○ Low back pain • Orthopedics ○ Back surgery for low back pain • Appropriate medication therapy ○ ADHD ○ Antipsychotics • Medication adherence ○ Asthma ○ Diabetes • Unnecessary overuse of antibiotics
	Efficient Use of Services, Providers, and Settings	• NQF #0173 Emergency Department Use without Hospitalization • NQF #0216 Proportion admitted to hospice for less than 3 days	• AHRQ ambulatory sensitive conditions measures • Availability of lower cost alternatives • Site of services measures	• Issues of access to lower intensity care ○ Focus on achieving equivalent outcomes • Access and use of palliative care, including hospice • Use of higher cost drug or device when a

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
		• NQF #0215 Proportion not admitted to hospice		lower cost alternative achieves equivalent outcomes
	Person- and Family-Centered Care[a]	*Opportunity for measure development*	• Shared decisionmaking • Patient activation: knowledge skills & ability to follow • Patient reported outcome measures	• through with treatment plan • Measure of lost productivity (i.e. school days missed, work days missed) • Connection to community services • Health literacy • Ensuring that care accords with treatment plan
	Errors and complications[b]	• NQF #0138 National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure • NQF #0139 National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome Measure • NQF #0363 Foreign Body Left During Procedure (PSI 5) • NQF #0267 Wrong Site, Wrong	• Composite measures (*Global trigger All harm index, Premier Administrative Harm Measurement Tool, Leapfrog Safety score)*	• Diagnostic errors • Medication errors • Patient reported outcome measure of harm • Culture of safety

[a] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.

[b] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
		Side, Wrong Patient, Wrong Procedure, Wrong Implant • NQF #0376 Incidence of Potentially Preventable Venous Thromboembolism • NQF #0140 Ventilator-associated pneumonia for ICU and high-risk nursery (HRN) patients • NQF #0201 Pressure ulcer prevalence (hospital acquired) • NQF #0181 Increase in number of pressure ulcers • NQF# 0530 Mortality for Selected Indicators • NQF# 0531 (PSI 90) Patient Safety for Selected Indicators • NQF #0532 Pediatric Patient Safety for Selected Indicators • NQF #0500 Severe Sepsis and Shock: Management Bundle		
	Lack of care coordination[c]	• NQF #1789 Hospital-Wide All-Cause Unplanned Readmission Measure (HWR) • NQF #0171 Acute care	• ACO 8 – Risk Standardized, All Condition Readmissions (adapted from NQF #1789) • ACO 11 – Percent of PCPs who	• Patient-reported outcome of care coordination • Reduce duplicative services (i.e imaging or lab test)

[c] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
		hospitalization (risk-adjusted) • NQF #0335 PICU Unplanned Readmission Rate • NQF# 0505 Hospital 30-day all-cause risk-standardized readmission rate (RSRR) following acute myocardial infarction (AMI) hospitalization. • NQF# 0506 Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following pneumonia hospitalization • NQF # 1768 Plan All-Cause Readmissions • ACO 9 – NQF#0275 – ASC Admissions: COPD or Asthma in Older Adults • ACO 10 – NQF#0277 – ASC Admissions: COPD or Asthma in Older Adults • ACO 12 – NQF#0097 – Medication Reconciliation • ACO 13 – NQF#0101 – Falls: Screening for Fall Risk	Qualified for EHR Incentive Payment • Common assessment tool such as the CARE tool. • Access to telemedicine	• Measure of care coordination for primary care, cancer care, EOL • Measure of care coordination with community (especially community organizations, like fire depts.)

Category	High-leverage Opportunity	Currently endorsed measures	Short Term Development Opportunities	Long Term Development Opportunities
	Prevention and Wellness[d]	• NQF #0421: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up • NQF #2020: Adult Current Smoking Prevalence • NQF #2152: Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling		• Smoking cessation • Obesity (Diet and Exercise) • Alcohol and drug abuse • Immunization • Behavioral health • Recommended and effective screenings (cancer, depression) • Disease Management • Follow up care • Overall health risk

[d] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.

Table C2. Rationale for Measure Selection for Each Opportunity Area

Category	High-leverage Opportunity	Measurement selection rationale
Direct Measurements of Affordability	Total Spending – All stakeholders	• There are few measures that track total spending, and further work is needed to understand total healthcare spending at different levels, including population, system, group, and individual provider level.
	Spending by condition, episode, or intervention	• For this opportunity, the group considered major episodes, conditions, and interventions that have a significant impact on costs, with a particular focus on episodes where consumers could shop between multiple options.
	Spending by the Patient	The task force sought measures that captured out of pocket spending by patients, although the group did not identify any endorsed measures in this area.
	Utilization	• The task force focused on the conditions that accounted for the leading causes of preventable death or the conditions associated with highest healthcare spending.[1,2] The task force further refined this list based on the conditions that could be improved with current clinical capabilities.
	Prices	There are not current outcome measures for prices, and future measures should focus on price transparency.
Drivers of Affordability	Overuse/Underuse/ Appropriateness	• The task force focused on a parsimonious set of appropriateness measures in priority areas that drive costs, balancing a focused set on important topics against systematic, consistent measurement of appropriateness. • The task force recognized that specific benchmarks are not possible in all cases, and that shared decisionmaking offers an opportunity to determine appropriateness based on individual patient's goals and needs.
	Efficient Use of Services, Providers, and Settings	• For this category, the group considered areas where alternatives existed at different prices but that achieved equivalent outcomes. • The deliberations also focused on improving care quality for patients near the end of life, and ensuring that these patients have the services they need.

Category	High-leverage Opportunity	Measurement selection rationale
	Person- and Family-Centered Care[e]	For this measurement area, the group considered the measures selected for the patient and family centered care family, with a focus on metrics that affect affordability.
	Errors and complications[f]	• For this measurement area, the group considered the measures selected for the safety family, with a focus on metrics that have the greatest impact on affordability. • For the future, the task force wanted to composite measures that reflect a safe environment, as opposed to specific metrics that assess relatively rare events.
	Lack of care coordination[g]	• For this measurement area, the group considered the measures selected for the care coordination family, with a focus on outcomes from poor care coordination that have the greatest cost implications.
	Prevention and Wellness[h]	• For many preventive services, there is unclear evidence whether they affect long-term cost. • The task force focused on measures that assess conditions associated with the highest healthcare costs, recognizing that these conditions have extensive direct and indirect costs.

[e] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.
[f] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.
[g] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.
[h] The MAP Affordability Taskforce sought to align with the work of the MAP Safety, Care Coordination, Population Health, and Person- and Family-Centered Care task forces. The Affordability Taskforce focused on identifying cost drivers from the high-leverage opportunities, measures, and gaps identified by those groups.

[1] Yoon PW, Bastian B, Anderson RN. Potentially preventable deaths from the five leading causes of death — United States, 2008–2010. *MMWR Morb Mortal Wkly Rep*. 2014;63(17);369-374.

[2] Agency for Healthcare Research and Quality Medical Expenditure Panel Survey website. Table 3. http://meps.ahrq.gov/mepsweb/data_stats/quick_tables_results.jsp?component=1&subcomponent=0&tableSeries=2&year=-1&SearchMethod=1&Action=Search. Last accessed May 2014.

Appendix D: Population Health Tables

Final Population Health Family of Measures by Topic Area

Topic Area	Measures*
Access to Healthcare	1) NQF #0719: Children Who Receive Effective Care Coordination of Healthcare Services When Needed 2) LHI 1.1: Percent of persons under age 65 years with health (medical) insurance
Chronic Illness	1) NQF #0728: Asthma Admission Rate (pediatric) 2) NQF #0018: Controlling High Blood Pressure 3) NQF #0059: Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)
Clinical Preventive Services	1) NQF #1959: Human Papillomavirus Vaccine for Female Adolescents 2) NQF #0034: Colorectal Cancer Screening 3) NQF #0041: Influenza Immunization 4) NQF #0617: High Risk for Pneumococcal Disease – Pneumococcal Vaccination 5) NQF #1407: Immunizations by 13 years of age 6) NQF #0032: Cervical Cancer Screening 7) NQF #0038: Childhood Immunization Status 8) NQF #0043: Pneumonia vaccination status for older adults 9) NQF #0431: Influenza vaccination coverage among healthcare personnel 10) LHI IID-8: Children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella, and PCV vaccines

Topic Area	Measures*
Community Safety	1) NQF #0720: Children Who Live in Communities Perceived as Safe 2) County Health Rankings: Violent Crime 3) NQF #0721: Children Who Attend Schools Perceived as Safe 4) LHI IVP-1.1 Fatal Injuries
Family & Social Support	1) County Health Rankings: Children in single-parent households 2) County Health Rankings: Inadequate social support
Maternal/Child Health	1) NQF #0717: Number of School Days Children Miss Due to Illness 2) NQF #1517: Prenatal and Postpartum Care (PPC) 3) NQF #1448: Developmental Screening in the First Three Years of Life 4) NQF #0278: Low Birth Weight Rate (PQI 9) 5) NQF #1392: Well-Child Visits in the First 15 Months of Life 6) NQF #1516: Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life 7) NQF #1332: Children Who Receive Preventive Medical Visits 8) NQF #1391: Frequency of Ongoing Prenatal Care (FPC)
Mental Health	1) NQF #1401: Maternal Depression Screening 2) LHI: Suicides (MHMD-1) 3) NQF #0418: Preventive Care and Screening: Screening for Clinical Depression and Follow-Up Plan 4) NQF #1394: Depression Screening By 13 years of age 5) NQF #1515: Depression Screening By 18 Years of Age

Topic Area	Measures*
Nutrition, Physical Activity and Obesity	1) NQF #1348: Children Age 6-17 Years who Engage in Weekly Physical Activity 2) NQF #1349: Child Overweight or Obesity Status Based on Parental Report of Body-Mass-Index (BMI) 3) NQF #0421: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up 4) LHI: Adults who meet current Federal physical activity guidelines for aerobic physical activity and muscle strengthening activity (PA-2.4) 5) LHI: Adults who are obese (NWS-9)
Oral Health	1) NQF #1388: Annual Dental Visit 2) NQF #1335: Children Who Have Dental Decay or Cavities 3) NQF #1419: Primary Caries Prevention Intervention as Part of Well/Ill Child Care as Offered by Primary Care Medical Providers 4) NQF #1334: Children Who Received Preventive Dental Care 5) LHI: Persons aged 2 years and older who used the oral healthcare system in past 12 months (OH-7)
Physical Environment	1) County Health Rankings: Drinking water violations 2) LHI: Air Quality Index (AQI) exceeding 100 (EH-1)
Reproductive and Sexual Health	1) LHI: Sexually active females aged 15 to 44 years who received reproductive health services in the past 12 months (FP-7.1)
Social Determinants	1) County Health Rankings: Severe housing problems 2) County Health Rankings: Children in poverty 3) County Health Rankings: Unemployment 4) County Health Rankings: High School graduation

Topic Area	Measures*
Substance Abuse	1) NQF #2152: Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling 2) LHI (SA-13.1): Adolescents (12-17 years old) using alcohol or any illicit drugs during the past 30 days
Tobacco/Smoking	1) NQF #2020: Adult Current Smoking Prevalence 2) LHI (TU-1.1): Adults who are current cigarette smokers 3) NQF #1346: Children Who Are Exposed to Secondhand Smoke Inside Home 4) LHI (TU-2.2): Adolescents who smoked cigarettes in the past 30 days

*Measures are listed in order of prioritization within each topic area per task force member responses on the post-meeting survey. NQF measures were all endorsed as of April 9, 2014. LHI = Leading Health Indicator.

Appendix E: Person-and Family-Centered Care Family of Measures Tables

Table E1. Person- and Family-Centered Care Measures by Topic Area

Topic Area	Measures
Interpersonal relationships	CAHPS Survey Instruments, for example: *#0005 CAHPS Clinician & Group* - *How Well Providers (or Doctors) Communicate with Patients* *#0258 CAHPS In-Center Hemodialysis Survey Core Composites* - *Nephrologists' Communication and Caring*
Patient and family engagement	CAHPS survey instruments, for example: *#0009 CAHPS Item Set for Children with Chronic Conditions* - *Parents' Experiences with Shared Decision-making* *#693 CAHPS Nursing Home Family Survey - Nursing Home* - *Nursing Home Provides Information/ Encourages Family Involvement (in Care)*
Care planning and delivery	#0647 Transition Record with Specified Elements Received by Discharged Patients #1641 Hospice and Palliative Care Treatment Preferences CAHPS survey instruments, for example: *#0166 CAHPS Hospital Survey* - *3-Item Care Transition Measure (CTM-3)* *#0009 CAHPS Item Set for Children with Chronic Conditions* - *Parents' Experiences with Coordination of Their Child's Care*
Access to support	Dementia: Caregiver Education and Support (not endorsed) CAHPS survey instruments, for example: *#1902 CAHPS Item Set for Addressing Health Literacy* - *Disease self-management*

Topic Area	Measures
Quality of life	#0418 Screening for Clinical Depression #0710/0711/0712 Depression: Utilization of the PHQ-9 Tool and Remission at 6 & 12 Months #0167 Improvement in Ambulation/ Locomotion #0177 Improvement in Pain Interfering with Activity #0176 Improvement in Management of Oral Medications #0209 Comfortable Dying: Pain Brought to a Comfortable Level Within 48 Hours of Initial Assessment CAHPS survey instruments, for example: *CAHPS Patient-Centered Medical Home (PCMH) Item Set (Not Endorsed)* - *Providers Pay Attention to Your Mental or Emotional Health (Adult only)*

A sample of CAHPS surveys and their respective measures are included in the above table for illustrative purposes. Final report will include a crosswalk of the following CAHPS survey tools at the measure level to the priority areas.

- #0005 CAHPS Clinician & Group
- #0258 CAHPS In-Center Hemodialysis Survey Core Composites
- #1741 CAHPS Surgical Care Survey
- #0006 CAHPS 4.0 Health Plan Survey
- #0517 CAHPS Home Health Care Survey
- #1902 CAHPS Item Set for Addressing Health Literacy
- #0008 Experience of Care and Health Outcomes (ECHO) Survey 3.0
- #0691 CAHPS Nursing Home Resident Surveys: Discharged Resident Instrument
- #1904 CAHPS Cultural Competence Item Set
- #0009 CAHPS Item Set for Children with Chronic Conditions
- #0692 CAHPS Nursing Home Resident Surveys: Long-Stay Resident Instrument
- CAHPS Item Set for People with Mobility Impairments
- # 0166 CAHPS Hospital Survey
- # 0693 CAHPS Nursing Home Family Survey
- CAHPS Patient-Centered Medical Home (PCMH) Item Set

Appendix F: Roster for the MAP Coordinating Committee

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Elizabeth McGlynn, PhD, MPP

ORGANIZATIONAL MEMBERS (VOTING)	REPRESENTATIVES
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American College of Surgeons	Frank Opelka, MD, FACS
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American Medical Association	Carl Sirio, MD
American Medical Group Association	Sam Lin, MD, PhD, MBA
American Nurses Association	Marla Weston, PhD, RN
Catalyst for Payment Reform	Suzanne Delbanco, PhD
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Federation of American Hospitals	Chip Kahn
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Maine Health Management Coalition	Elizabeth Mitchell
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National Association of Medicaid Directors	Foster Gesten, MD, FACP
National Business Group on Health	Shari Davidson
National Partnership for Women and Families	Alison Shippy
Pacific Business Group on Health	William Kramer, MBA
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The Joint Commission	Mark Chassin, MD, FACP, MPP, MPH

Appendix G: Roster for the MAP Affordability Task Force

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America's Health Insurance Plans	Aparna Higgins, MA
American College of Radiology	David Seidenwurm, MD
American Federation of State, County and Municipal Employees	Sally Tyler, MPA
American Hospital Association	Richard Umbdenstock, FACHE
American Medical Association	Carl Sirio, MD
American Society of Consultant Pharmacists	Jennifer Thomas, PharmD
Association of American Medical Colleges	Joanne Conroy, MD
Blue Cross Blue Shield of Massachusetts	Wei Ying, MD, MS, MBA
Kindred Healthcare	Sean Muldoon, MD, MPH, FCCP
Minnesota Community Measurement	Beth Averbeck, MD
Mothers Against Medical Error	Helen Haskell, MA
Pacific Business Group on Health	David Hopkins, PhD
Pharmaceutical Research and Manufacturers of America	Christopher Dezii, RN, MBA, CPHQ
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Appendix H: Roster for the MAP Population Health Task Force

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American Speech-Language-Hearing Association	Robert C. Mullen, MPH
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Appendix I: Roster for the MAP Person- and Family-Centered Care Task Force

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