# HCP LAN
Health Care Payment Learning & Action Network

DATA SHARING

HCP LAN

ACCELERATING AND ALIGNING
POPULATION-BASED PAYMENT MODELS:

# DATA
# SHARING

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# Executive Summary

The Health Care Payment Learning & Action Network (LAN) was created to drive alignment in payment approaches across and within the public and private sectors of the U.S. health care system. To advance this goal, the Population-Based Payment Work Group ("the Work Group") was convened by the LAN Guiding Committee (GC) and charged with addressing issues critical to the success and accelerated adoption of population-based payment (PBP) models, specifically patient attribution, financial benchmarking, data sharing, and performance measurement. Composed of diverse health care stakeholders, the Work Group deliberated, incorporated input from LAN participants, and reached consensus on many critical issues related to performance measurement, the subject of this White Paper.
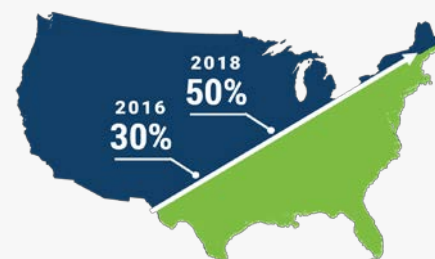
The Work Group acknowledges that moving payment incentives away from fee-for-service (FFS) toward shared-risk and PBP is necessary, although not sufficient in its own right, to create a value-based health care system. The existing FFS system creates incentives for additional volume of services, while also undervaluing certain services. The current FFS system is not conducive to the delivery of person-centered care because it does not systematically reward high-quality, cost-effective care. By contrast, population-based payment models offer providers the incentives and flexibility to strategically invest delivery system resources, treat patients holistically, and coordinate care. The Work Group believes that the health care system should transition toward shared-risk and alternative payment models (APMs), including population-based payments. The Work Group hopes the recommendations on performance measurement will provide an advantageous starting point for payers and providers committed to PBP models.

The Work Group believes that data sharing is foundational for operationalizing the components of PBP models (i.e., patient attribution, financial benchmarking, and performance measurement) because these activities cannot take place in the absence of data. The White Paper documents principles and recommendations that should guide approaches to data sharing in PBP models. The aim is

## Health Care Payment Learning & Action Network (LAN)

To achieve the goal of better care, smarter spending, and healthier people, the U.S. health care system must substantially reform its payment structure to incentivize quality, health outcomes, and value over volume. Such alignment requires a fundamental change in how health care is organized and delivered, and requires the participation of the entire health care ecosystem, including partnership with other sectors. The Health Care Payment Learning & Action Network (LAN) was established as a collaborative network of public and private stakeholders, including health plans, providers, patients, employers, consumers, states, federal agencies, and other partners within the health care ecosystem. By making a commitment to changing payment models, establishing a common framework, aligning approaches to payment innovation, sharing information about successful models, and encouraging use of best practices, the LAN can help reduce barriers and accelerate the adoption of APMs.

### U.S. Health Care Payments in APMs

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to share important patient data to inform clinical decision making, allow payers to assess provider performance, and support increased alignment across public and private payers.

Data sharing currently faces multiple challenges, including proprietary approaches to data collection and reporting, inconsistent and underdeveloped data architecture, a lack of funding and standards, and technical limitations to the collection of rich clinical and patient-reported data. In order to overcome these challenges, this White Paper describes the key characteristics of data sharing that can help sustain PBP models that meet the triple aim of health care. These characteristics will necessitate a shift in the current proprietary business model in order to ensure that patient- and population-level data are shared with the people who need to put it to use.

The White Paper provides guidance on the "who," "what," "why," and "when" (but not the "how") of data sharing in PBP models, with a goal of creating a set of consensus recommendations for use nationally. At a high level, the Work Group recommends the following principles for data sharing:

- Data sharing in PBP will need to be different than data sharing in FFS models;
- Personal data should follow the patient;
- Population-level data should be treated as a public good; and
- Widespread data sharing may necessitate third-party intermediaries.

The paper considers five "Use Cases" for data sharing, which provide concrete examples of who will share which types of data with whom. It concludes with some immediate next steps that stakeholders can take to advance the Work Group's recommended approach to data sharing in PBP models.

## Overview

The LAN established its GC in May 2015 as the collaborative body charged with advancing alignment of payment approaches across and within the private and public sectors. This alignment aims to accelerate the adoption of alternative payment models that reward quality and value in health care. CAMH, the federally funded research and development center operated by the MITRE Corporation, was asked to convene this large national initiative.

Parallel to the goals of HHS, the LAN aims to have 30% of U.S. health care payments in alternative payment models (APMs) by 2016, and 50% by 2018. One possible form of APM is population-based payment, in which providers[1] accept accountability for the health, care quality, and health outcomes for a patient population across the full care continuum. This is a particularly promising approach for creating and sustaining a delivery system that values quality, cost effectiveness, and patient engagement.

### *Work Group Charge*

In October 2015, the LAN Guiding Committee convened the Population-Based Payment (PBP) Work Group ("the Work Group"). The Guiding Committee charged the Work Group with prioritizing methodologies and exploring alignment issues in support of the development, adoption, and success of population-based payment models under which providers accept accountability for a patient population across the full continuum of care.

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[1] This paper defines "providers" as persons, groups, or facilities that offer health care services including prevention, diagnosis, and treatment typically covered by health insurance.

Recommendations throughout this paper refer to APMs that can be classified in Categories 3 and 4 of the APM Framework. In both Category 3 and Category 4 organizations, providers accept responsibility for the full continuum of care. However, Category 3 includes APMs that make use of FFS to compensate providers while Category 4 APMs compensate providers using population-based payments. The principles and recommendations presented in this paper apply to this particular subset of APMs, also referred to as PBP accountability models (Figure 1).

**Figure 1: APM Framework (At-a-Glance)**
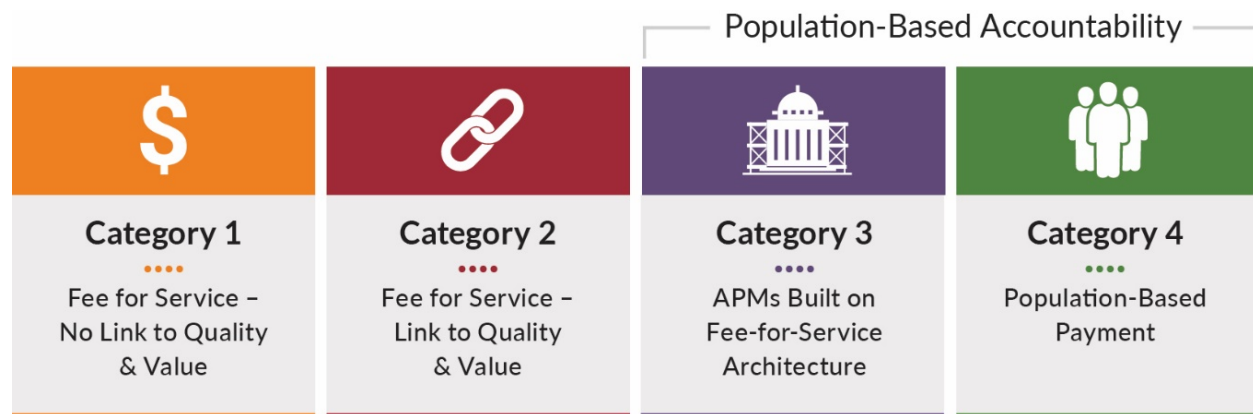


Source: Alternative Payment Model (APM) Framework and Progress Tracking Work Group

Regardless of payment structure, all PBP models share one key element: They involve provider accountability for a patient population across the full continuum of care, including preventive care, to end-of-life care, and everything in between—with the goal of achieving better quality and outcomes and lower total cost for the population involved. The Work Group determined that four priority issues are foundational for the success of population-based payments models. These include:

- Patient attribution;
- Financial benchmarking;
- Performance measurement; and
- Data sharing.

The PBP Work Group brings together public and private stakeholders to develop recommendations. Appendix A includes a roster of the PBP Work Group members. Though these individuals represent the diverse constituencies brought together by the LAN, they participate in this effort as individuals, and not on behalf of their respective organizations.

## Purpose and Scope of the White Paper

Data sharing lies at the heart of two important and ambitious goals of PBP models and APMs:

1. It promotes the availability and use of real-time comprehensive, patient-level data and information to inform clinical care, decision making, enable true integration of care, and improve care delivery and outcomes; and
2. It improves the health care market, such that care is purchased on the basis of transparent and reliable assessments of cost and quality performance for populations.

For PBP models to meet these goals, data sharing will need to dramatically and quickly expand the known universe of readily accessible, standardized data. This expanded data sharing will necessarily change the business models that providers and payers adopt. It will also change the way that they

interact with each other, as well as how they interact with purchasers and patients, as relationships among stakeholders become increasingly defined by the data these groups share, and by how they use it.

At a minimum, data sharing is needed to operationalize the design elements of PBP models that are discussed in the accompanying Work Group papers on Patient Attribution, Financial Benchmarking, and Performance Measurement. Chief obstacles to data sharing include:

- Proprietary approaches to data that stymie the free sharing of information;
- The establishment and dissemination of meaningful standards;
- The lack of funding to develop and maintain data-sharing initiatives;
- Legislative and policy barriers to the sharing of specific data sets;
- Privacy and security concerns among patients leery of who will access their data and for which purposes their data will be accessed; and
- Technical and infrastructural gaps that limit the collection and transmission of rich clinical and patient-reported data in electronic health records (EHRs).

This paper considers the interests of a broad spectrum of stakeholders and recommends the purposes and types of data sharing arrangements needed to sustain PBP models over the long term. Without data sharing of the types described in this paper, providers and payers cannot successfully achieve the PBP model goals of better care, better health, and lower cost. Additionally, purchasers and patients cannot access the information needed to ensure that these models are delivering what they promise.[2] Moreover, as APMs (in Categories 3 and 4 of the APM Framework) are implemented across payers and cover a larger proportion of providers' patient populations, it will become increasingly important for providers to have a full understanding of cost and quality across all patients that are attributed to APMs and not limited to a single payer view of performance. With the current pace of change and uptake of APMs in the market across payers and providers, it is important to plan for data infrastructure that will both scale up to increasingly high levels, and support providers' initial and sustained success in these
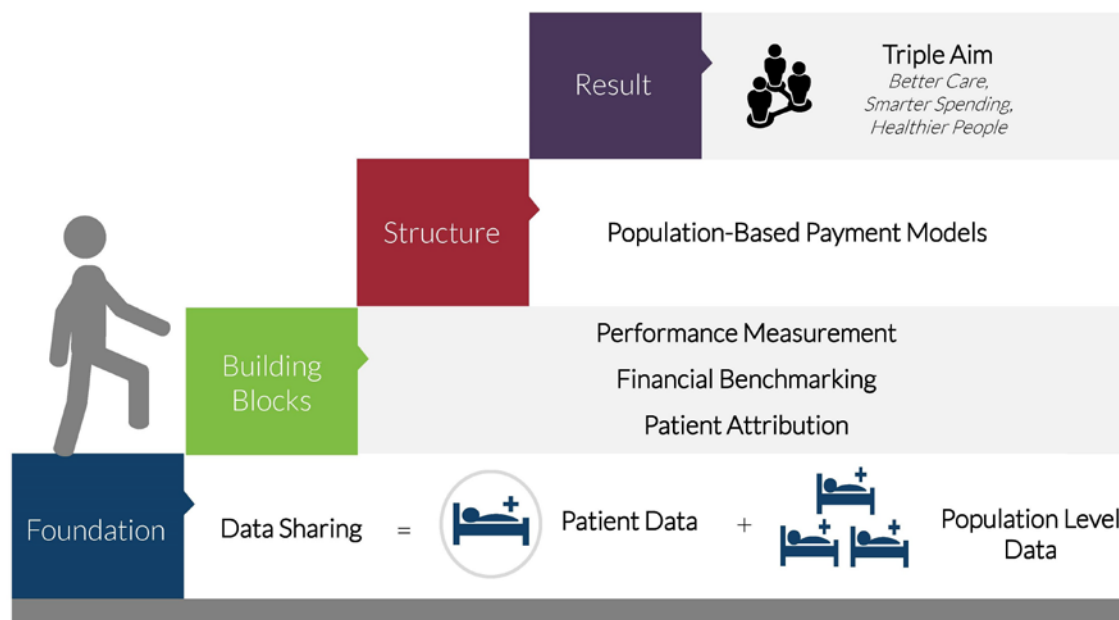
### Definitions

**Patient-Level Data**: The entire range of diagnostic, clinical, utilization, experience of care, and patient-reported data that is attributed to a particular individual, irrespective of where the data were collected. Such data are stored in a cyber-secure, HIPAA-compliant environment to address security and privacy concerns and can be reported in both patient-identified and de-identified views.

**Population-Level Data**: An aggregation of patient-level data, which is attributed to higher-level entities for reporting, such as plans, provider organizations, and patient populations in different geographic regions**.**

arrangements across payers.

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[2] Recognizing that payment reform must ultimately serve the interests of consumers and patients, the LAN Guiding Committee endorsed a set of Principles for Patient- and Family-Centered Payment. These principles, prepared by the LAN Consumer and Patient Affinity Group, are intended as guideposts so that new payment models and implementation activities can address the needs and priorities of patients and families. The principles are reflected in this White Paper, and the text is included in Appendix D.

**Figure 2: Data Sharing is Foundational for Population-Based Payment**



To fundamentally redesign the sharing of data for PBP models, it is critical to recognize that stakeholders use different types of data and information for fundamentally different purposes and require different types of sharing arrangements. Therefore, this paper draws an important distinction between "personalized, patient-level data" and "depersonalized, population-level data." Patient-level data represent the entire range of diagnostic, clinical, utilization, experience of care, and patient-reported data that is attributed to a particular individual, irrespective of where the data were collected. To address security and privacy concerns, such data are stored in a cyber-secure environment that is compliant with the Health Insurance Portability and Accountability Act (HIPAA). By contrast, population-level data are measures of performance at the provider, system, population, or subpopulation level, which make it possible to meaningfully compare similar entities, and guide actions that can lead to improvement. Although certain certified users may need to disaggregate and re-identify portions of these data to better understand summary results, it is critical to take steps to prevent unauthorized users from doing so because aggregate data may not reside in secure environments and are often publically reported.

Key health care stakeholders have compelling interests in expanding the availability of patient- and population-level data and information used in PBP models. Understanding the purposes to which different stakeholders will use the data is therefore a critical consideration in redesigning data-sharing arrangements. The following list identifies some of the most critical interests for each stakeholder group.

- **Patients and caregivers** have an interest in easily accessing and sharing personal data to effectively partner with providers to manage their health, and they need to access provider, procedure/service, facility, and population-level data to make informed decisions about plan, provider, and treatment choices.
- **Providers** in PBP models need a 360-degree view of the patient that is only possible if payers and other providers share data; this panoramic view helps providers thrive in PBP models and deliver high value care to their attributed panels of patients and consumers. Providers also need

a population-level view of provider-level performance data (including their own) to identify best practices for population health management, to monitor progress against quality and utilization benchmarks, and make referrals based on quality and value. Providers will struggle to put data to these uses if payers and other providers do not share data in standard ways.

- **Payers** must have patient-level data to score provider performance on cost, quality, and outcome metrics, and to pay claims. Payers may also want to access population-level data from their own and other plans on utilization, spending, and quality trends, in order to compare performance across providers and plans.
- **Purchasers** have an interest in de-identified, population-level level information on the performance of plans and providers at the system-level, as well as provider, practice, and facility-level cost data, in order to inform purchasing decisions and help employees make good provider and plan choices. Self-insured employers have an interest in this data, as well as the patient-level data discussed above, because their needs overlap with the needs of both payers and purchasers.

The Work Group firmly believes that existing data-sharing *capabilities* are sufficient to initiate the transition from FFS to PBP models, but we also believe that considerable improvements in the scope and types of data shared will be essential to establish the data sharing *arrangements* that can sustain PBP models over the long term.

Establishing these arrangements will be an enormous challenge; stakeholders will need to make collective decisions about issues in which deep-seated values and interests come into conflict. As the Work Group has discovered over the course of pursuing this topic, reaching consensus on core issues related to data sharing in PBP models will not be easy. Nevertheless, the establishment of consensus among stakeholders is a pre-condition for making collaborative enterprises—such as data sharing—work in practice. Consistent with the LAN's overarching, multi-stakeholder approach, we believe that the establishment of consensus, wherever it may be at a given point in time, is valuable and can serve as the basis for deeper agreement as the process moves forward.

It is in this spirit that the Work Group intends to strike new ground by examining the full spectrum of data sharing, and by providing a consensus statement on *what kinds* of data sharing are needed to sustain PBP models over the long term. While vitally important, issues related to developing the underlying data infrastructure required to support the data sharing arrangements recommended by the Work Group are beyond the scope of this paper. A subsequent LAN Work Group will address these issues and consider more operational questions about the complex data sharing necessitated by PBP models. The positions staked in this paper are significant because they represent deliberately negotiated consensus amongst the stakeholders who have the most to gain or lose from data sharing, and because they provide the foundation for subsequent work that the LAN is actively pursuing.

This paper establishes a set of principles that the Work Group believes should guide the future development and refinement of data-sharing arrangements in PBP models. These principles, if achieved, would require specific kinds of data sharing, in which specific partners exchange specific types of data. These requisite arrangements are summarized in the section on Use Cases, which examine the "who," "what," "why," and "when" (but not the "how") of each arrangement—both in the current and in the future state.

As the Use Cases detail, the gap between the present state and the future objective is quite large. The paper's recommendations offer initial steps to address gaps identified in the Use Cases. The paper concludes by outlining immediate actions that health care stakeholders can undertake today to begin to create the data sharing arrangements needed to sustain PBP models in the future.

# Guiding Principles for Data Sharing in PBP Models

This draft White Paper establishes six guiding principles for data sharing in PBP models. These principles highlight the need for changes at the point of care as well as at the system level, if PBP models are to achieve quality health outcomes for patients and consumers over the long term.

> *Principle 1: Data sharing is foundational for the successful operation of PBP models and makes it possible for stakeholders to carry out their respective roles.*

Access to timely data is foundational to the success and sustainability of population-based payment models, as it is required for patient attribution, performance measurement, and financial benchmarking. These requisite components of PBP models require stakeholders to assess whether targets for quality and outcomes, population health, and cost of care are met, and to make informed decisions about the course of care for populations and individual patients. To make these determinations, data that are currently collected and maintained independently by separate stakeholders (purchasers, payers, and providers) need to be appropriately leveraged and made available to those who are expected to take actions based on analysis of the data.

> *Principle 2: Data sharing in PBP models will need to be fundamentally different from data sharing in traditional FFS models.*

Providers in PBP models require a 360-degree view of that population because they are accountable for total cost of care, quality, and outcomes for that population. In this context, a 360-degree view of the patient means that providers are easily able to access the full spectrum of information about a patient's current and past medical history, health, and care. This requires new kinds of data sharing among payers and providers, which, in turn, will enable providers to more efficiently and effectively manage the health of populations and make fully informed clinical decisions. For example, providers and payers in PBP models will want to ensure that patients receive appropriate preventive services—and receive the appropriate follow-up care after a hospital discharge. To do this, they will need to be able to access data across provider and community settings on patients' clinical histories, and receive and send notifications when their patients are discharged from their respective hospitals. Similarly, patients and family caregivers require comprehensive information about patient health status, as well as aggregated information about provider cost and quality performance, to make informed decisions about provider selection and treatment options. By contrast, traditional FFS models (i.e., those in Category 1 of the APM Framework) imply only minimal expectations that providers will coordinate care or assume accountability for affecting positive health outcomes for populations. As a result, data sharing in these models is relatively limited (primarily revolving around the submission of claims for payment), and many provider organizations lack data and analytic infrastructures to coordinate care or manage patients outside of office visits.

In some cases, larger, well-resourced health systems and payers have invested in data capabilities and infrastructure. For the most part, however, these entities have gained competitive advantages by restricting access to their large internal databases, rather than using them to support improved coordination with the payers and providers who are also involved in serving these patients. This lack of transparency creates imbalances in the market. Sharing data in a way that affords providers a 360-degree view of the patient will require new business models where competitive advantage goes to those

who make the best use of widely available data. Although this may prove to be detrimental to some stakeholders in the short term, the advantages that would accrue to everyone participating in a transparent market where care is constantly improved outweigh the risks involved. Most importantly, this approach to data sharing properly recognizes that providers and payers are ultimately responsible to the same group of constituents—whether these individuals are referred to as members, beneficiaries, or patients.

> ***Principle 3:*** *Data sharing for PBP models requires multi-stakeholder relationships built on trust, cooperation, and transparency.*

Providers, payers, purchasers, and patients in PBP models will need to enter into fundamentally new relationships based on their mutual interests and quality and cost goals. Trust is the cornerstone of these relationships; absent trust, payers and providers will not be comfortable sharing the patient- and population-level data needed to deliver high value care to patients in PBP models. In the context of existing legal and regulatory frameworks, trust can be instilled through explicit agreements that establish responsibilities for and limitations on which data are shared. For example, fair and comprehensive data use agreements and trusting relationships allow payers and providers to comply with privacy and security regulations as well as restrictions that patients impose on the sharing of their personal health data, while at the same time sharing personal data to the extent needed to deliver patient-centered care.

In this context, the Work Group believes that a strong commitment to performance transparency is especially important for meeting the needs of the multiple stakeholders who participate in PBP models. All results, both negative and positive, will need to be shared effectively in a well-constructed process to foster an environment of rapid improvement. Providers should commit to transparency for agreed-upon metrics, and payers should report on PBP model and provider performance as widely as possible.

> ### Principle 4: *Identifiable, patient-level data should follow the patient.*

Allowing personal health data to follow and be organized around the patient—regardless of provider, payer, or site of care—is essential not only for provider success in PBP models, but also for the achievement of patients' personal health goals. For providers, possessing a 360-degree view of the patient's care, history, past diagnoses, and chronic illnesses helps inform treatment plans that bring about the best care possible and facilitates broader accountability in quality measurement. This is particularly the case for patients with multiple chronic conditions, or with conditions that would contraindicate what might otherwise be preferred treatments. Easy and timely access to clinical and patient-reported data could also reduce duplication of tests and give providers a person-centered perspective, rather than one seen through the lens of a given specialty.

Access to patient-level cost data could also help providers better manage resource allocations by identifying high-cost patients for effective care coordination activities. Additionally, allowing personal health data to follow the patient can help assure patients and family caregivers that their providers will have visibility into patients' medical history, including earlier diagnoses and ongoing conditions, drugs prescribed to them, and other information that would affect the course of care. Patients and authorized family caregivers should have full access to and use of their individual health data. Easy access to this data would also allow patients and family caregivers to play a more active role in setting and achieving goals for care and health, as well as in making informed decisions about specific treatment options.

The Work Group maintains that providers, payers, and others accessing data must comply with privacy and security policies, recognizing that continual refinement in these policies will be needed, as innovation generates new personal and administrative data sharing best practices. Nevertheless, the Work Group also believes that it can be permissible, under existing statutes and regulations, to share identifiable, patient-level data with providers and anyone else responsible for managing a particular patient's health and illness.

The Work Group recognizes that patients and consumers are reluctant to share their personal health information due to concerns that it could impact them detrimentally or in fraudulent ways. We believe that these concerns are valid and that they will need to be addressed. Accordingly, the Work Group believes that steps need to be taken to build trust among patients and consumers, and this is best achieved by building transparency into data sharing agreements and giving patients control of who has access to the data and for what purposes (see Recommendation 3).

> ### Principle 5: *De-identified, population-level data should be treated as a public good.*

Achieving shared population-based goals will require all stakeholders to treat population-level, de-identified performance data as a shared asset. Because this type of data does not contain personally identifiable information or personal health information, regulatory restrictions on sharing it are greatly reduced, as compared to the identifiable data addressed in Principle 4. Widespread availability of population-level data would substantially benefit all stakeholders in the health care system. For example, wide distribution of population-level data would give purchasers information on their employees (e.g., major health conditions), which they could use to invest in particular suites of health services, or to make informed decisions about plan and provider selection. Many different entities, including those that are not directly participating in PBPs, can use population-level data to identify

quality improvement opportunities and public health targets, thereby fueling and informing delivery system innovation. And purchasers and patients should also be able to use population-level performance data to make decisions about plan and provider selection.

The Work Group recognizes that this mode of data sharing cuts against many existing business models, in which exclusive access to large data sets is a competitive advantage for providers, payers, and purchasers. We nevertheless believe that a business model in which organizations compete on the basis of their ability to analyze and interpret (as opposed to acquire) data will provide a much more stable foundation for the health care system as a whole, particularly as it transitions toward greater investments in advanced payment models.

> *Principle 6: Providers who participate in PBP models with multiple payers will need to receive, use, and share data with each of them, giving rise to complexities that may benefit from collaboration with third-party data intermediaries.*

There are many successful examples of data sharing between distinct provider organizations, and between payers and the providers in their networks. The Work Group maintains that these examples of successful relationships are sufficient to sustain the transition from the FFS-dominated data sharing that exists today, and the types of data sharing envisioned in this paper. However, as providers engage in PBP arrangements with multiple payers, the scope and complexity of the data sharing needs will likely outstrip current one-to-one data exchange arrangements. At present, many approaches to data sharing are being evaluated on their ability to give providers actionable information based on multi-payer data.

Many of these approaches involve third party intermediaries, which take a variety of forms. Some third-party intermediaries, such as regional networks, locally house and securely transmit data. For example, the Center for Healthcare Transparency, which has adopted a multi-faceted, hybrid approach to data sharing, works with local stakeholders to standardize data reporting, collect data from multiple sources, automate processes, store and securely transmit, aggregate, share both patient- and population-level data with the parties who need it, and incrementally move in the direction of greater standardization. Other approaches and technology channels, such as Health Information Exchanges (HIEs) and cloud-based application programming interfaces (API) do not locally store data (and patient-level data in particular). Rather they possess the capacity to access it from multiple sources, aggregate it to various degrees, and share with those who possess the proper permissions. Still other types of third-party intermediaries involve third-party vendors who directly contract with particular provider groups to collect and analyze clinical, patient-reported, and claims data for population-health management.

Registries operated by specialty societies, such as the Society of Thoracic Surgeons' (STS) National Database, could also play a productive role in accelerating data sharing.

The Work Group does not believe that sufficient evidence exists at present to recommend one approach over another. Rather, the benefits and drawbacks of these alternate arrangements vary unpredictably across health care markets and will be more or less useful to different stakeholders. The Work Group believes that it is critical that data sharing arrangements as a whole are capable of fulfilling, at a minimum, the following functions:

**Essential Functions for Data Sharing**

- Ensure that data are collected and reported accurately and in a standardized manner that supports further analysis, use, and reporting.
- Ensure that sensitive data are securely stored and transmitted, and that only authorized users (including family caregivers) are allowed to access it.
- Ensure that data are available when needed, either at the point of care or in time to act on information about cost and quality performance.
- Ensure that data are organized efficiently, easily accessible, and presented in a manner that maximizes its utility.
- Allow for the possibility of aggregating and reporting data across payer and provider organizations.
- Allow for the possibility of accurately aggregating and mapping data of different types (e.g., claims, EHRs, patient-reported outcomes, and experiences of care).
- Share patient-level clinical data with providers who need it at or beyond the point of care.
- Share population-level cost data with entities that need it for financial benchmarking.
- Share population-level quality, experience, and health outcomes data with entities that need it for performance measurement.
- Share patient-level enrollment and utilization data with entities that need it for patient attribution.
- Share population-level cost, quality, experience, and health outcomes data with entities that need it to evaluate different payers and providers on results.

The Work Group recognizes that the cost and administrative burden of accomplishing these functions via third-party data intermediaries will likely be considerable for payers and providers, and may also run counter to long-standing business models that derived competitive advantage from exclusive access to large datasets. Nevertheless, the Work Group also believes that the ultimate success of PBP models hinges on the fulfillment of these functional requirements for data sharing. Therefore, the long-term, collective benefit of widely available, reliable, standardized health data will ultimately outweigh the short-term costs for some stakeholders.

## Use Cases for Data Sharing

The Work Group maintains that payers, providers, and purchasers should be collectively accountable for ensuring that the health care system delivers the highest possible value and that consumers and patients play vital roles, as well. There can be significant financial risk involved in PBP adoption, particularly for providers entering into these types of agreements for the first time. In order for providers to accept accountability for total cost of care, care quality, and health outcomes for a population across the full care continuum, payers will need to share up-to-date data with providers on the populations attributed to them. Conversely, providers will need to share, as needed, patient-level

data with payers in order to operationalize patient attribution, financial benchmarking, and performance measurement approaches for PBP models. Additionally, consumers and purchasers will need access to population-level data in order to make informed choices about providers and plans, and patients will need access to their own data in order to better manage their health and make informed decisions at the point of care.

To meet the aspirations embodied in the principles laid out in the previous section, the Work Group identified five Use Cases that data sharing arrangements will need to accomplish. As summarized in Table 1, each Use Case:

1. Identifies an abstract data-sharing arrangement between distinct partners;
2. Lists the types of data exchanged;
3. Summarizes how the arrangement currently operates and how it should work in the future;
4. Examines whether the arrangement is used for financial benchmarking, patient attribution or performance measurement; and
5. Establishes connections to the principles described above and the recommendations described below.

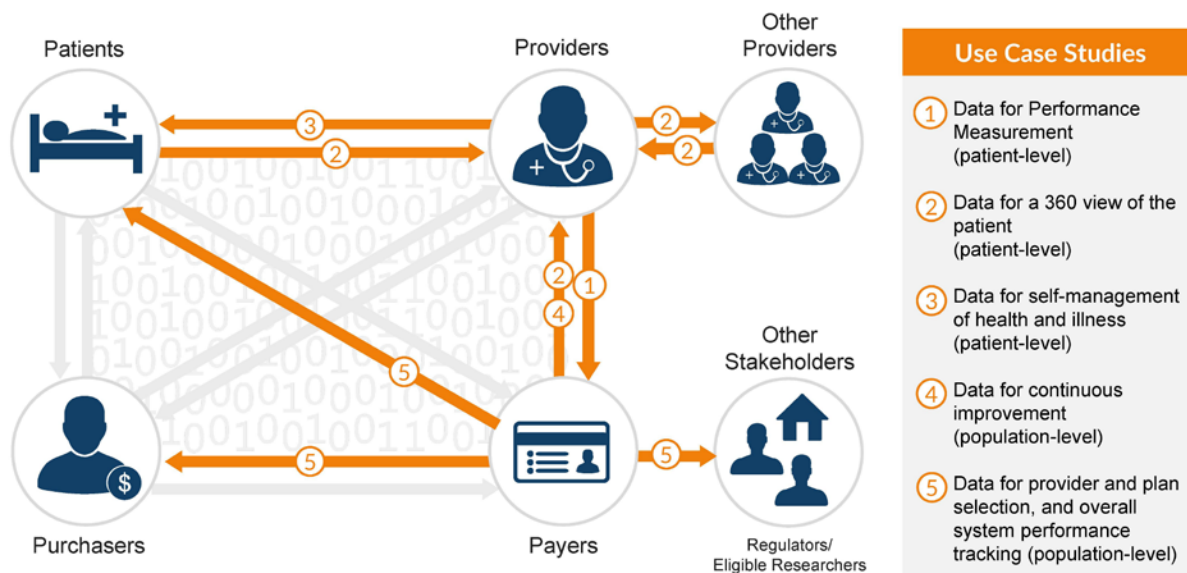**Figure 3: Data Sharing Use Cases at a Glance**

**Table 1: Use Cases for Data Sharing for PBP Models**

| Use Case Study 1: Data for performance measurement (patient-level) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Originator** | **Recipient** (Possibly via Intermediary) | **Purpose** | **Types of Data Shared** | **Application in PBP Components** | **Current State** | **Future State** | **Associated Principles and Recommendations** |
| **Providers** | Payers | To calculate performance on quality and cost, providers need to share clinical and cost data with payers. | • Claims, cost, and utilization data<br><br>• Rich clinical data<br><br>• Patient-reported outcome data<br><br>• Patient experience of care data | • Patient Attribution<br><br>• Financial Benchmarking<br><br>• Performance Measurement | Some clinical data are shared for the purpose of scoring process and outcome measures, but reported data are largely limited to claims data, and infrastructure insufficient to capture and share data for "big dot" measures. | Providers will capture and share rich clinical and patient-reported data as needed and with less burden, and enhanced data-sharing capacities will simplify and standardize the collection and reporting of data from providers. | **Principle 3**<br><br>**Recommendation 1**<br><br>**Recommendation 2**<br><br>**Recommendation 3** |

## Use Case Study 2: Data for a 360-degree view of the patient (patient-level)

| Originator | Recipient (Possibly via Intermediary) | Purpose | Types of Data Shared | Application in PBP Components | Current State | Future State | Associated Principles and Recommendations |
|---|---|---|---|---|---|---|---|
| **Payers, patients (and family caregivers), and other providers** | Providers | To effectively manage their patients' care, providers must possess a 360-degree view of their patients and attributed populations. | • Claims, cost, and utilization data<br><br>• Rich clinical data<br><br>• Patient-reported outcome data<br><br>• Patient experience of care data<br><br>• Patient enrollment and attribution data | • Patient Attribution<br><br>• Financial Benchmarking<br><br>• Performance Measurement | Patient-level clinical and utilization data are typically negotiated for exchange by point-to-point contracts between payers and providers, making it difficult in many cases for providers to access data needed for clinical decision-making when it is collected outside their practices. | Payers and providers will share the data needed to create comprehensive, up-to-date, longitudinal health records, and providers with the appropriate permissions will be able to access these records securely, in the form of actionable information. | **Principle 3**<br><br>**Recommendation 1**<br><br>**Recommendation 2**<br><br>**Recommendation 3** |

## Use Case Study 3: Data for self-management of health and illness (patient-level)

| Originator | Recipient (Possibly via Intermediary) | Purpose | Types of Data Shared | Application in PBP Components | Current State | Future State | Associated Principles and Recommendations |
|---|---|---|---|---|---|---|---|
| **Providers** | Patients (and family caregivers) | To better manage their own health and make informed decisions at the point of care, patients need to be able to share their data with their doctors. | • Claims, cost, and utilization data<br><br>• Rich clinical data<br><br>• Patient-reported outcome data<br><br>• Patient experience of care data<br><br>• Patient enrollment and attribution data | N/A | Some innovative approaches to data sharing are beginning to emerge, but patients often have a difficult time accessing personal health data. When they can, data are often not standardized and are difficult to interpret, not available in languages other than English, and difficult to access from mobile devices. Providers typically are not equipped to collect patient-reported data, especially outside practice settings. | Patients will much more easily (and freely) access and report a wider range of personal data, which will be presented in a manner that informs decision-making and behavior change, and ultimately leads to the achievement of patient goals. | **Principle 4**<br><br>**Recommendation 2**<br><br>**Recommendation 3** |

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## Use Case Study 4: Data for continuous improvement (population-level)

| Originator | Recipient (Possibly via Intermediary) | Purpose | Types of Data Shared | Application in PBP Components | Current State | Future State | Associated Principles and Recommendations |
|---|---|---|---|---|---|---|---|
| **Payers** | Providers | To adjust work flows to more efficiently and effectively deliver care to patients, providers need provider-specific and benchmarking data on cost, quality, experience, and health outcomes performance. | • Provider performance on clinical measures<br><br>• Provider performance on outcome measures<br><br>• Provider performance on PRO measures<br><br>• Provider performance on patient experience measures<br><br>• Provider performance on cost and utilization measures | • Patient Attribution<br><br>• Financial Benchmarking<br><br>• Performance Measurement | Although there are several examples of successful data-sharing arrangements between payers and providers in PBP models, many providers are only made aware of their performance on measures after the end of the period of performance. In addition, they may be unable to easily access current spending data. It can also be challenging to make meaningful comparisons with other providers. | Providers will receive quality and cost performance data on a monthly or weekly basis with experience and health outcomes data on appropriate intervals. These data will permit meaningful comparisons with similar providers, and they will be presented in a manner that stimulates practical delivery system reform. | **Principle 3**<br><br>**Recommendation 1**<br><br>**Recommendation 4** |

## Use Case Study 5: Data for provider and plan selection, and overall system performance tracking (population-level)

| Originator | Recipient (Possibly via Intermediary) | Purpose | Types of Data Shared | Application in PBP Components | Current State | Future State | Associated Principles and Recommendations |
|---|---|---|---|---|---|---|---|
| Payers | Purchasers, patients, regulators, eligible researchers, public health and/or community | To make informed decisions when selecting plans, products, and providers, patients and purchasers need to consult data on quality and health outcomes performance and per unit total cost of care data. | • Payer, plan, and provider performance on clinical measures<br><br>• Payer, plan, and provider performance on outcome measures<br><br>• Payer, plan, and provider performance on PRO measures<br><br>• Payer, plan, and provider performance on patient experience measures<br><br>• Payer, plan, and provider performance on cost and utilization measures | N/A | Although some purchasers are beginning to share cost and quality data from plans and providers, there is wide variability across the country; it is sometimes possible to access cost data via state-based all-payer claims databases, but purchasers and other interested parties generally cannot access this information. | Purchasers will base purchasing decisions on robust cost and quality information on every provider in their market (including the methods used by payers and self-insured purchasers to form their network arrangements); patients will be able to access provider cost data when making decisions about where to seek care; and researchers, regulators, public health, and the community will be able to use robust performance data to develop evidence-based approaches to care delivery and public health interventions. | **Principle 5**<br><br>**Recommendation 5**<br><br>**Recommendation 6** |

# Recommendations

The Use Cases summarized above illustrate the wide gap between the current state of data sharing and a future state that is consistent with the guiding principles outlined at the beginning of the paper. Accordingly, the following recommendations reflect the Work Group's consensus opinion on some immediate, short-term steps that stakeholders can take to advance data sharing in PBP models.

> **Recommendation 1:** *Payers and providers should identify in advance aligned approaches and policies for data sharing to support PBP models.*

As discussed in Use Cases 1 and 2, providers need to have a 360-degree view of the patient to succeed in PBP models. When entering into PBP models, payers and providers should explicitly agree to data sharing requirements that will be needed to sustain the model, such as the types of data that will be exchanged, the formats in which the data will be delivered, the frequency of sharing, and the avenues for sharing—whether through a third party or other mechanism. These agreements should stipulate requirements for providers to share data with and receive data from other providers, inside and out of the PBP model. They should also ensure that payers receive the data they need to meet their obligations to purchasers, as discussed in Recommendation 5. Payers and providers must also establish, in advance, the business model that will support data sharing initiatives. Implementing these recommendations will go a long way in laying the bedrock of data needed to operationalize essential design elements for PBP models, as discussed in the context of Principle 1.

## *Data Sharing: Organizational Profiles*

The draft White Paper's Guiding Principles for Data Sharing in PBP Models and Use Cases for Data Sharing capture the vision of the role data sharing plays in advancing adoption of PBP models. We include here five profiles of organizations and entities throughout the U.S that have achieved far-reaching data and information sharing goals. These profiles illustrate how disparate organizations have overcome significant barriers and achieved data sharing goals, all the while ensuring care quality and patient outcomes remain front and center in their planning.

The Work Group recognizes that achieving the trust and transparency integral to success will entail dramatic changes in organizational behavior and culture. These organizations and entities defined their data sharing priorities early and worked diligently with a wide array of stakeholders, often over many years. These examples demonstrate that effective data sharing can be structured and achieved on both a large and relatively small scale. The Work Group hopes that these success stories will help inspire other organizations to define and begin working toward their own data sharing goals.

### MyHealth Access Network, Tulsa, Oklahoma (Appendix B-1)

MyHealth Access Network established a partnership to build a consolidated medical records system for a large geographic area. The Network serves as a trusted third party merging claims and clinical data and conducts aggregation and value assessment for all partners. Benefiting patients and providers by maintaining current and comprehensive medical records, and delivering benchmarked quality assessment data to providers and payers, it has created an infrastructure to enable the transition from FFS care to value-based payment models.

> *Recommendation 2: For data to follow the patient, payers and providers should collaborate on approaches to patient identifiers that enable mapping across systems and data types (e.g., clinical, administrative, and patient-reported data). This effort should be scalable.*

As discussed in Use Cases 1-3, providers need to be able to share patient-level data with a variety of partners to be accountable for cost, quality, experience, and health outcomes targets, and to manage care collaboratively with their patients. Data sharing should include all the providers that may treat a patient population, even if these data reside in systems that identify patients differently. There are multiple ways to accomplish this, but payers and third-party intermediaries should assume responsibility for constructing patient maps that accurately link a patient's data between different data sources, and ultimately ensure that information from a patient's clinical record is not omitted because it has been misidentified. In the process of constructing local mappings, payers and third-party intermediaries (with input from patients and patient advocates) should also identify ways to scale local approaches into nationwide patient-matching programs. This is consistent with the imperative for data to follow the patient, as discussed in Principle 4.

### Aria Health, Northeastern Philadelphia, Pennsylvania (Appendix B-2)

Aria Health is a provider network that recognized that to move toward value-based reimbursement for ambulatory care, it would need to ensure that all providers have the information they needed in an easy-to-read and actionable format. Aria providers worked with a vendor to design a dashboard display of patient and performance data. Armed with the new data, providers were able to improve within one year on 16 out of 22 quality measures.

### The Health Collaborative (THC), Cincinnati, Ohio (Appendix B-3)

THC was established as an independent non-profit collaborative to provide information and tools to improve health care within a geographic region. THC is part of the Comprehensive Primary Care (CPC) Initiative and is actively working toward payment reform. Using its master patient index, it was able to aggregate claims data from nine providers, which in turn allowed it to assess quality, cost, and utilization metrics.

### Delaware Health Information Network (DHIN) (Appendix B-4)

DHIN is a statewide data exchange serving providers and patients. It offers providers a complete and comprehensive view of patients' clinical histories and its patient portal is planned to launch in 2016. Also in process is a mechanism to alert providers when their patients are moved to post-acute care facilities.

### Oregon Health Care Quality Corporation (Q Corp) (Appendix B-5)

Q Corp is one of five regional multi-stakeholder health improvement collaboratives piloting work on cost of care measures. It is a state-based neutral entity that produces a multi-payer report aggregating and benchmarking cost of care data across Oregon's commercial payers serving adults under age 65. Providers can access patient-level data available over a secure web portal to assist in care plan development.

> **Recommendation 3:** *Payers, providers, purchasers, and patients should convene a multi-stakeholder group to recommend solutions that assure patients that their personal data are appropriately used.*

As addressed in Use Cases 1 and 3, having a clear and complete picture for a patient at and beyond the point of care enables patients to self-manage their health and well-being, and helps providers and patients collaboratively make informed decisions about treatment options and care plans. Patients have valid concerns that information in their personal health records might be shared and used in ways that they do not approve of. Therefore, patient, payer, provider, and purchaser representatives should form a multi-stakeholder group (or utilize an existing one) to reach a deep understanding of patients' concerns about the sharing and use of personal health data, and to develop a series of stipulations for data sharing that adequately—in the minds of patients—address these concerns.

> **Recommendation 4:** *Requirements for data sharing should be made explicit in agreements between purchasers and payers that participate in PBP models.*

As discussed in Use Case 5, purchasers require performance information on plans and providers in order to make informed decisions about which products to offer their employees. Accordingly, when buying PBP products, purchasers should ensure that payers provide the data needed to support these decisions, and these requirements should be explicit in formal agreements between the two parties. Such agreements may include the types of data to be exchanged; the formats in which the data will be delivered; the frequency of sharing; and the avenues for sharing – whether through a third party or other mechanism. Purchasers may also consider using this mechanism to encourage payers to participate in third-party data repositories.

> **Recommendation 5:** *Payers should give patients and purchasers easy access to information on what it costs to see different providers for the same, common procedure, alongside relevant quality indicators.*

As discussed in Use Case 5, purchasers and patients/family caregivers have a compelling need to access cost data and use this information to help create a market imperative for high quality care at reasonable costs. Because payers alone have access to this data, they will need to compile and share cost data with purchasers and patients in a format that is easily understood. However this is accomplished, the solutions will need to include cost, quality, experience, and health outcomes data together (so that the value relationship is clear), and they will need to provide accurate information about out-of-pocket costs for patients. This is consistent with the imperative for transparency in performance information, as discussed in the context of Principle 3. It will also create more equitable relationships among payers, purchasers, and patients because the latter two would be able to assess ahead of time the cost and value of the insurance product or health care service that they are buying.

These solutions will be successful if payers share data on costs to payers and on out-of-pocket expenses, in a manner that allows purchasers and patients/family caregivers to "comparison shop" for medical care. For example, transparent data would allow purchasers and patients to compare price information

for a given procedure, and use this information as one of several considerations when deciding with whom to contract or where to obtain medical care. Purchasers and payers will need to collaborate to identify viable business models to support these solutions.

> **Recommendation 6:** *Payers, providers, and purchasers should actively participate in pilot programs to evaluate approaches to the sharing of data across multiple payers and providers.*

As discussed in Principle 6, the Work Group believes that the underlying data architecture will need to be enhanced substantially to support the types of data sharing put forward in this paper. Innovative approaches to the sharing of data across multiple payers and providers are currently being evaluated on the basis of their ability to execute Use Cases 1, 2, 3, and 5. As stated above, the Work Group does not believe that there is sufficient evidence to recommend one approach over another; we, therefore, urge payers, providers, and purchasers to collaborate and pilot novel approaches to data sharing. We also believe that these pilot programs should include scalability as a critical criterion, with the ultimate goal of placing no restrictions on the patient-level data that providers need to obtain a 360-degree view of their patient, or on the performance data that purchasers and consumers need to deliberatively select plans and providers.

Payers will need to create and align around incentives and/or expectations for data sharing among providers in PBP models. The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) will facilitate this in part through requirements for use of certified health information technology for participation in advanced APMs. Providers will need to continue to invest in solutions and change care processes to enable data sharing and incorporate data into their normal workflow.

The need for providers and payers to have an efficient data architecture to support the sharing of claims, clinical, performance and patient-reported data will become increasingly important as PBP models become the predominant form of payment. Given the complexity of national and regional insurance markets, sharing data may demand scalable solutions that move beyond one-to-one arrangements between providers and payers and between providers in different delivery systems. Business arrangements and technical solutions for data aggregation will need to evolve and scale in a way that both permits a comprehensive view of a patient's health across payers, and is efficient for payers to participate in. Lessons learned from Colorado, Oklahoma, Maine, Ohio, and other innovative regions in the country will facilitate a better understanding of how third-party solutions can enhance multi-payer and provider collaboration. Many of these successful models will necessarily move beyond treating data as a proprietary asset to a public good, and differentiate themselves instead on the use and analytics derived from the data. Piloting additional models based on best practices learned from early adopters will accelerate this type of data sharing and generate further, applicable insights.

# Conclusion

The Work Group is committed to the concept of transitioning from FFS to PBP models as a critical component of health care transformation to achieve better quality and outcomes and lower costs. The recommendations in this White Paper lay out an approach to data sharing that can be used nationally by commercial and public PBP models. The Work Group believes that, over time, alignment between public and private programs is highly desirable and should be possible.

*Advancing the Work Group's Data Sharing Recommendations*

The White Paper outlines a set of recommendations for data sharing that the Work Group believes are critical to aligning PBP models. Stakeholders can help accelerate the adoption of this approach to financial benchmarking by taking the following actions:

- ***All stakeholders*** can participate in efforts to:
  o Address patient concerns about data privacy and security;
  o Establish and evaluate approaches to data sharing among providers in multiple networks; and
  o Establish regional and nationwide patient identifiers.
- ***Purchasers and patients*** can begin to familiarize themselves with how they can put various types of data to use, and communicate their desires for health data to providers and payers.
- ***Payers*** can take many steps to advance data sharing, including:
  o Establishing the means to share data on quality and out-of-pocket and payer costs for common services with patients and purchasers;
  o Entering into explicit agreements about data sharing with payers; and
  o Beginning to discuss, with providers and other payers, common policies and approaches that can be used to give providers a 360-degree view of the patient.
- ***Providers*** take many steps to advance data sharing, including:
  o Acquiring EHRs that capture rich-clinical and patient-reported data;
  o Entering into explicit agreements about data sharing with payers;
  o Beginning to discuss, with payers and other providers, common policies and approaches that can be used to give providers a 360-degree view of the patient.

# Appendix A: Roster

## *PBP Work Group Co-Chairs*
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CAMH, sponsored by CMS, is a federally funded research and development center operated by the MITRE Corporation. MITRE is chartered to work in the public interest.

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# Appendix B: Profiles

The White Paper's Guiding Principles for Data Sharing in PBP Models and Use Cases for Data Sharing capture the vision of the role data sharing plays in advancing adoption of PBP models. The Work Group includes here five profiles submitted by organizations and entities throughout the U.S that have successfully achieved far-reaching data and information sharing goals. These profiles illustrate how disparate organizations have overcome significant barriers to data sharing, while still ensuring care quality and patient outcomes remain front and center in their planning.

The Work Group recognizes that achieving the trust and transparency integral to success will entail dramatic changes in organizational behavior and culture. These organizations and entities defined their data sharing priorities early and worked diligently with a wide array of stakeholders, often over many years. These examples demonstrate that effective data sharing can be structured and achieved on both a large and a relatively small scale. The Work Group hopes that these success stories will help inspire other organizations to define and begin working toward their own data sharing goals.

## Appendix B-1:

### *MyHealth Access Network, Tulsa Oklahoma*

**Overview**

Spanning the divides between claims and clinical data, and between payers and providers, MyHealth Access Network has built a successful, far-reaching partnership within the health community in Oklahoma. The product of this partnership is a consolidated patient medical record system that supports and protects patients and ensures that every patient has their comprehensive medical record available

> **MyHealth Access Network**
>
> - More than 4000 participating providers
> - More than 855 locations
> - More than 370 participating organizations including seven major health systems, five tribal health systems, and 350 clinics
> - Includes both claims and clinical data from most major health plans and providers in the state

wherever and whenever it is needed for decisions about their care. As members of MyHealth, payers and purchasers form half of the partnership that makes up a trusted third-party arrangement with providers. As the trusted third party, MyHealth serves as an independent, non-biased entity to support data aggregation and value assessment. Local Native American tribes, first responders, behavioral health providers, medical universities, health systems, public health, independent pharmacies, and optometrists are included in the network. This partnership is the outcome of many years of building relationships and a strong trust framework.

MyHealth Access Network was established in 2009 as independent non-profit organization with commitment to health improvement and transparency. Conceptually constructed as a public good, MyHealth is supported by a base of usage fees from all users. Recognizing that most participants view analytics and other secondary data uses as the primary value proposition, MyHealth minimizes fees for interoperability and information exchange and now derives most of its revenue from analytics products and services in support of value-based payment models and other value-focused programs.

**Value Proposition**

- Provides infrastructure to enable providers to successfully transition from fee for service care to value based payment models.
- Makes available single comprehensive medical record on each patient that is accessible by providers on behalf of their patients. Direct patient access will be provided in the future.
  - Consolidates and organizes data on diagnoses, observations, and treatments across all providers for each patient.
  - Provides convenient point of care access to help providers highlight care gaps and reduce duplication.
- Ensures secure access to clinical and claims data to support care coordination and care management.
- Enables near-real time assessment of patient admissions, discharges and transfer across dozens of hospitals and hundreds of clinics.
- Delivers benchmarked quality assessments and other performance data to providers and payers to support ongoing assessment.
- Aggregates community level data, such as ER utilization and immunizations, enabling public health leaders to monitor near-real-time de-identified public health assessments, which enables them to be more responsive to immediate health threats and target areas for improvements in population health.

**Responsive to Patients' Needs**

- Patient privacy is protected through policies to enforce the minimum necessary access standard of the HIPAA privacy rule, and patients may opt-out at any time.
- Committees, which are open to all participants and patients, meet in public settings where they manage privacy and security, finance, operations, and clinical quality. Working together, these committees establish policies regarding data use by network participants including providers and payers.
  - More than 100 community members representing their organizations sit on various MyHealth committees. Over the life of the organization, more than 1000 different Oklahomans have participated in the governance of MyHealth.

**Foundational Elements for Success**

- Governance is critical to the success of broad community efforts. Although many think HIE is a technical effort, it is not. Rather, it is a process of building trust among providers and other organizations who share the responsibility for the health of a population, and it takes hard work and time to build trust. MyHealth leadership often say that bad technology can be fixed with good governance—but the opposite is not true.
- Rally behind a vision. MyHealth's "burning platform" was and is to make Oklahoma a model for health and health care delivery system improvement. Unsatisfied with perennially poor health rankings, Oklahomans rallied behind the MyHealth vision to establish unprecedented collaborations and partnerships focused on improving health and care delivery while reducing costs.
- Take the time for an open and inclusive planning process. Each organization has unique needs and challenges, and what works for one coalition of organizations often needs adjusted to work for another. Those who help create the plan rarely refuse to participate later.

- Include all necessary stakeholders in the planning. Having payers at the table with providers enables important (and sometimes intense) conversations. As organizations put their concerns on the table in an open forum, frank discussion with facilitation and patience has enabled common strategies to emerge, resulting in common ground on which all parties can agree. Strategies developed in this way have proven much more resilient than efforts conceived unilaterally by government, health systems, payers, or vendors.
- Establish and maintain active forums for addressing hard problems. Be rigorously transparent about discussions and decisions that are made, and open all conversations to the public. Member organizations can raise their concerns and leverage the expertise of all their peers to overcome their obstacles. MyHealth regularly holds public meetings for decision-making about clinical, quality, privacy, security, and analytics issues, in addition to regular operations and board meetings. These forums have enabled broader community engagement and the development of trust.
- Technology is a tool, and technology vendors are not stakeholders. Their products should be evaluated on the basis of whether they solve the problems the community decides upon. After attempting to create our solution with three different vendors, MyHealth brought in expert help from other industries, including banking, to help create a new kind of tool set for health information exchange. Built from the ground up by a health information exchange for use by health information exchanges and community data aggregators, MyHealth's new software system has been transitioned into a private company to enable its use by other organizations.
- When in doubt, ask what is best for the patient. The correct decision will be clear.

**David Kendrick**, MD, MPH, is CEO of MyHealth Access Network, chairs the Department of Medical Informatics at the University of Oklahoma's School of Community Medicine. He serves on the board of directors for the National Committee on Quality Assurance (NCQA), the Strategic Health Information Exchange Collaborative (SHIEC), and on the board of advisors to the Carequality effort for the Sequoyah Project.

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**Appendix B-2:**

*Aria Health, Northeast Philadelphia*

**Overview**

Aria Health, the largest health care provider in Northeast Philadelphia and Lower Bucks County, initiated a new data-sharing infrastructure to help prepare the organization for the pivot from FFS to a value-based reimbursement arrangement with a specific payer. To achieve target ambulatory care value benchmarks, Aria recognized that they would need to provide actionable data on

| **Aria Health** |
| --- |
| • 51 practices |
| • 73 physicians |
| • 20,650 member lives |

quality and cost metrics to primary care physicians. With the assistance of a vendor, they designed and developed individual practice dashboards that displayed current performance metrics for providers and tools that enabled both Aria and the affiliated provider practice staff to review patients' claims history and assess its own performance. This data, in conjunction with the supporting infrastructure incorporated by management, helped primary care providers improve dramatically on quality measures. While the platform currently uses claims data, they plan to expand clinical data availability by using it to aggregate electronic health record data.

**Value**

- Dashboard data identifies monthly progress in reaching care and quality goals.
- Historical patient claims data is available at point of care.
- Additional analysis can be performed in-house, rather than depending on payers to provide limited reports.
- Different quality measures can be identified for monthly improvement, based on prior months' aggregated reports.
- Contract performance and provider/patient engagement is analyzed together with the payer at quarterly meetings, allowing operational issues to be addressed in a timely manner.
- Management team conducts monthly practice visits to review local performance and highlight areas for quality improvement.
- Improved on 16 out of 22 quality measures between 2014 and 2015.

**Responsive to Patients' Needs**

- Active follow-up on individual patients, based on information from dashboard.
- Centralized team is dedicated to outreach to difficult-to-reach patients in order to encourage them to see their physician for recommended care.
- Pre-visit planning and patient outreach is supported by a detailed workflow model for system-wide primary care practice staff.

**Foundational Elements for Success**

- Provider Engagement Strategy was key to data review, enhancing practice understanding of value based contracts, and gaining practice buy-in and partnership in development of individualized action plans.

- Regularly scheduled visits are essential to understanding challenges faced and to provide real-time feedback, as well as an opportunity to address issues.
- Standardizing workflows and processes on pre-visit planning and outreach accelerated improvement in quality metrics.
- Setting expectations that all practice staff are key to accomplishing goals, including receptionists, medical assistants, advance practice practitioners, physicians, and office managers.
- From the outset, fully integrate efforts between population health team and practice operations teams, and clearly define roles and responsibilities.

**Kathleen Kinslow**, CRNA, EdD, MBA, is CEO and President of Aria Health System.

For more information, visit  https://www.ariahealth.org/about-aria

**Appendix B-3:**

*The Health Collaborative (THC), Cincinnati, Ohio*

**Overview**

THC is an independent not-for-profit organization whose mission is regional stakeholder collaboration to improve health care, specifically in the areas of transparency, interoperability, analytics, and payment reform. In one of the seven regions of the country where CMS is collaborating with other payers to advance payment reform in primary care through the Comprehensive Primary Care initiative (CPC), THC leads the convening of multiple stakeholders for practice and learning diffusion for this initiative in the southwest Ohio and northern Kentucky areas.

> **The Health Collaborative**
>
> - 75 practices
> - 350 providers
> - Nine health plans, including Medicare
> - ~ 500,000 commercial, Medicaid, and Medicare enrollees

To manage a project promoting payment for value, THC recognized it needed a mechanism to measure value. To be meaningful, the tool had to be able to measure a provider practice across all of its membership, rather than one payer population at a time. Through its master patient index, THC was able to aggregate claims data from all nine participating payers, calculate quality, cost and utilization metrics, track attribution, and provide payer and provider reports. As a result, payers can see the performance of practices at the individual beneficiary level for their populations compared to an aggregated population for the practice's performance across all payers. Likewise, providers can see their performance at their individual patient level in comparison to an aggregated and de-identified view of other practices' performance. Production of comprehensive data reports offering practice-wide data at patient- level detail required: system-wide adoption of a trusted national measure set; a provider /payer jointly owned and jointly financed data aggregation and analysis process, and a trusted third party to manage the data and analytics.

**Value**

- Over the two-year span between 2013 and 2015:
  - Reduced overall hospital admissions by 8%; and
  - Reduced primary care treatable admissions by 24%.
- Built trust relationships between payers and providers, allowing visibility into shared data.
- Provided practices with clear data-driven insights on where they can improve quality.
- Provided payers with a robust, comprehensive view of a practice's performance compared to their peers to help guide decisions about network inclusion and payment.
- Provided practices with the ability to track payer attribution over time and thus gain insight into the movement of patients among health plans and its impact on per-member/per-month (PMPM) care management payments.

**Foundational Elements for Success**

- Invest in training to ensure all payers and providers can take full advantage of the data analysis and linkages available; how the data can best be applied; and opportunities to conduct further analysis on their own.
- An ownership perspective by clinicians of the process increases acceptance and accountability for the data results, and provides for a quicker transition to improving the outcomes.
- Plan for eighteen-month lead-time to complete necessary review, contracts, data use agreements, business associate agreements, and other agreements.
- Requires close attention to HIPAA regulations and constraints, especially if relaying mental health or substance abuse diagnoses.
- Requires considerable investment of resources in providing secure environment for storage and transmission of protected health information data.
- Calculating total cost of care is complicated and requires a payer by payer understanding of amounts paid, allowed, charged, and more.

**Future Directions**

Building on previous experience in the public reporting of clinical outcome metrics (see http://yourhealthmatters.org/), THC will begin to link cost and utilization metrics with patient outcomes. This will improve the management of sub-populations within a practice, and will allow for example, comparing the clinical control of a practice's diabetic population with the utilization and costs associated with that level of control. Ultimately this could lead to the ability to match patient experience with the Triple Aim for a given individual or sub-population of individuals. Subsequently, the measures could also be made available to help consumers make informed decisions in selecting providers and to help providers further assess their own performance.


**Craig Brammer** is Chief Executive Officer, and **Richard Shonk,** MD, PhD is Chief Medical Officer of THC.

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**Appendix B-4:**

*Delaware Health Information Network (DHIN)*

**Overview**

DHIN was established to be able to share patient electronic records among providers within an integrated "electronic ecosystem" known as the *Community Health Record*. This network concept is referred to as a "federated data model," a more cost effective and reliable mechanism to share data than each provider attempting to achieve an information exchange model independently.

DHIN is currently focusing data sharing efforts to capture care transitions – movement of patients to long-term post-acute care facilities and to behavioral health facilities. DHIN engaged a technology vendor specializing in long-term post-acute care to build a mechanism that allows transfer patient clinical data from the long term care facilities to the Community Health Record. They have recently also successfully implemented cohort tracking for at-risk patients.

From its launch, DHIN invited all stakeholder groups, including consumer groups, state health department, medical societies, and hospital

| DHIN Participation |
| --- |
| • Data Senders:<br> o All acute care hospitals<br> o All major reference labs in and most freestanding labs<br> o All hospital-based imaging centers in Delaware<br>• Data Receivers:<br> o 98% of physicians and outpatient providers<br> o All Federally Qualified Health Centers<br> o All skilled nursing facilities<br> o 90% assisted living and 59% home health<br> o 47% of behavioral health<br> o 836 end user organizations participate, with 97% of practices that make clinical orders receiving results exclusively through DHIN (467/482) |

associations to participate in developing this new data sharing network. Delaware also partnered with nearby Maryland facilities who submit data for Delaware residents being treated there. DHIN has been fully self-sustainable since 2012, being paid by its customers (hospitals, labs, radiology firms, payers, state agencies, etc.) for the products and services it delivers.

**Value**

- Statewide savings exceeded $10M through reduced duplication of labs and services in 2013.
- Hospitals and labs saved ~$6.9M in results delivery, compared to traditional paper-based methods in 2013.
- Saved practices $900K by enabling certified results delivery interfaces through 2013.
- Reduced test duplication by at least 24% for radiology studies and 64% for lab studies between 2009 and 2013.
- Established pilot for Common Provider Scorecard to standardize quality indicators for payers to determine reimbursement rates for providers.
- Streamlined provider workflow and improved quality as a result of access to complete patient medical records.

- Developing consumer-based fraud detection tools in 2016.
- Launching a patient portal in 2016 so patients can access directly with their health information and to facilitate communication with clinical providers.

**Responsive to Patients' Needs**

- Providers have full picture of patient clinical history, so patients do not need to remember dates and locations of prior treatment and testing
- Patients' immunization histories readily available.

**Foundational Elements for Success**

- During the 10 years prior to launch in 2007, medical providers, consumers, and health executives developed consensus on DHIN's primary role: DHIN would serve as the community health record for the state of Delaware, supporting the safe and secure delivery of clinical results.
- Two factors helped to promote DHIN's relevancy to the healthcare community:
  - Being an opt-out state,
    - Patients are assumed opted-in to the health exchange until they opt-out; and
  - Launching query functionality in 2009,
    - Demonstrated that DHIN is a valuable tool allowing physicians who do not have an established patient relationship to obtain information about patients presenting for care to key providers, such as emergency room doctors.
- DHIN was allowed time to mature as a private-public partnership before being spun out from the state in 2011 as a corporate-modeled non-profit with a self-sustaining business model.

**Jan Lee** is CEO and **Mark Jacobs** is CIO of DHIN.

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## Appendix B-5:

### *Oregon Health Care Quality Corporation (Q Corp)*

**Overview**

Oregon Health Care Quality Corporation (Q Corp) is a not-for-profit, independent organization in Oregon that produces reports, and promotes state-based community collaboration around health care affordability, quality, and utilization. Q Corp was one of the five initial regional multi-stakeholder health improvement collaboratives piloting work on cost of care measures. This initiative is led by the Network for Regional Healthcare Improvement with funding from the Robert Wood Johnson Foundation.

> **Q Corp**
> - More than 175 primary care clinics participate
> - 472,000 covered lives, 22% of Oregon's commercially-insured population

In conjunction with this effort, Q Corp has produced a multi-payer report aggregating data across seven of Oregon's commercial payers, and delivering to primary care clinics a comprehensive report on their cost of care and quality performance over 12 months relative to their state average. In these reports cost refers to the amount paid by the payer and patient combined – not the cost to the provider to deliver the care.

Developed by HealthPartners, the two measures used are the Total Cost Index (TCI) measure, which looks at the overall cost effectiveness of managing patient health, and the Resource Use Index (RUI) measure, which looks at the frequency and intensity of services used to manage patient health.

Data breakdowns include: total cost of care (per patient/per month), utilization and cost by service category, professional services, inpatient care including top admission diagnosis-related group codes, and outpatient care including emergency care, chronic conditions, pharmacy, and more. Cost reports include attributed patients between the ages of 1 and 64, and are risk-adjusted, with any annual cost per patient exceeding $100,000 excluded from the analysis. Cost reports are given to providers for validation and usefulness before reporting to public. In the future, a cost of care methodology will be created for the Medicaid and Medicare patient populations.

**Value**

- Providers receive clinic-level cost, resource utilization, and price index data and can compare themselves to aggregate–level state averages.
- Providers can see practice patterns from aggregated data across multiple commercial plans.
- Reports identify variation among clinics.
- Reports measure quality of care using aggregated claims data for the state.
- In the future, audience-appropriate reports will be available to a variety of stakeholders.

**Responsive to Patients' Needs**

- Hosts a public-facing website that reports on a variety of primary care quality measures
- Patients are included on Q Corp's Cost of Care Steering Committee and Measurement & Reporting Committee.

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- Issues public reports and quality guides for patients and consumers.
- Provides information on recommended and appropriate care for a variety of conditions.
- Providers can access patient-level data available over secure web portal to develop care plans.
- Planning to collect, standardize, and report patient experience data.

**Foundational Elements for Success**

- Essential to collaborate with all health care stakeholders, who contribute valuable feedback on health care costs and provide a diversity of opinions.
- A neutral, trusted platform provides an ideal framework for discussion of sensitive issues around costs.
- Address the "why" early on. Framing the cost of health care in terms of what community needs could be met if we were to shave off a percent or two of our health care bills resonates with multiple audiences.
- Entails long lead time. Due to the complexity of the cost of care measures and the risk adjustment, expect to repeat your messages frequently and in different ways.
- Working together with NRHI and seven regional health improvement collaboratives and states across the country was valuable in obtaining technical assistance, in shared learning and support, and in scaling a common approach to a key element of the Triple Aim.


**Mylia Christensen** is Executive Director of Oregon Health Quality Corporation.

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# Appendix C: LAN Related Content

The LAN has written a suite of papers to help align payment reform efforts. The first, the Alternative Payment Model Framework, describes four categories of alternative payment models. The papers referred to in this appendix include recommendations on the design of two payment reforms— population-based payments and clinical episode payments—from the two most comprehensive categories defined in that framework.

These recommendations are the result of input from a wide variety of persons and organizations with either direct experience with implementing one or the other payment reform or deep experience in the health care field.

The Guiding Committee of the LAN convened two Work Groups—the Population-Based Payment Work Group and the Clinical Episode Payment (CEP) Work Group—to develop recommendations for the implementation of population-based payment and clinical episode payment models. Their recommendations focus on specific design elements, many of which overlap and upon which there was much common agreement even as the Work Groups deliberated separately. Each of the four PBP White Papers described below focus on a separate design element—financial benchmarking, patient attribution, performance measurement, and data sharing—in a PBP context. In a PBP arrangement an accountable entity takes responsibility for the care for a defined population over a specified period of time (typically a year) for the full continuum of care.

These design elements should be considered as a whole for effective PBP implementation, as they interact considerably. For example, in order to determine the financial benchmark, it is critical to know precisely which patients are being attributed to the PBP model. Further, most PBP initiatives will require performance on certain measures to be one factor in considering whether the accountable entity has met the benchmark. Data sharing is critical for the providers to effectively target their efforts, for payers and purchasers to monitor performance, and for patients to be empowered to be active in their care.

The CEP Work Group also divided their recommendations into design elements, and included ten design elements along with several operational considerations. The recommendations were included in chapters in the comprehensive White Paper applying them to three clinical areas where clinical episode payment models would be most effective: elective joint replacement, maternity care, and coronary artery disease (CAD). While the clinical focus is more targeted here, the underlying concepts for setting the episode price (including the level and type of risk), defining the population and services included in the episode, patient engagement and quality metrics, and the data infrastructure are similar to those of the four PBP White Papers.

The following provides links and a brief overview of each of the papers written by the LAN Work Groups. By reading the full suite of products, readers of this paper will be better able to make decisions about the most effective payment model(s) to implement and the key issues to consider when designing those models. Visit our website (https://www.hcp-lan.org) for an up-to-date list of LAN work products and for a glossary of terms. *(Last updated 6/27/2016)*

### Population-Based Payment (PBP) Models:

### *Accelerating and Aligning Population-Based Payment (PBP): Patient Attribution*

The Patient Attribution White Paper describes the method by which patient populations are assigned to providers who are accountable for total cost of care and quality outcomes for their designated populations in a PBP model. The paper recommends that active, intentional identification or self-reporting by patients should be considered first. The paper also outlines nine additional recommendations that payers and providers can use when making decisions on attribution in their PBP models.

### *Accelerating and Aligning Population-Based Payment (PBP): Financial Benchmarking*

The Financial Benchmarking White Paper describes approaches for setting an initial benchmark and updates over time and also addresses risk adjustment considerations. The White Paper discusses the need to balance voluntary participation with the movement toward convergence in a market with providers at different starting points.

### *Accelerating and Aligning Population-Based Payment (PBP): Performance Measurement*

The Performance Measurement White Paper offers both short-term action recommendations and a longer-term vision for accelerating alignment around APMs. The paper offers a way forward that could lead to radical change in how performance is measured across the board in order to enable effective population-based payments. The White Paper describes how to evolve from granular measurement systems of the full continuum of care, which focus on narrow and specific care processes, to more macro-level measurement systems oriented on outcomes. The paper also makes strong recommendations for immediate action steps by describing four key performance measurement principles and seven recommendations for building and sustaining a performance measurement system that supports and encourages collaboration among stakeholders.

### Clinical Episode Payment (CEP) Models:

### *Accelerating and Aligning Clinical Episode Payment (CEP) Models*

This paper provides high-level recommendations for designing clinical episode payment models. A clinical episode payment is a bundled payment for a set of services that occur over time and across settings. The paper outlines design elements and operational considerations for three selected clinical areas: Elective Joint Replacement, Maternity Care, and Coronary Artery Disease. Recommendations are organized according to design elements and operational considerations. Design elements address questions stakeholders must consider when designing an episode payment model, including the definition, the duration of the episode, what services are to be included, and others. Operational considerations relate to implementing an episode payment model, including the roles and perspectives of stakeholders, data infrastructure issues, and the regulatory environment in which APMs must operate.

Several key principles drove the development of the recommendations across all three episodes: 1) Incentivizing **person-centered care**; 2) Improving patient outcomes through **effective care coordination**; 3) **Rewarding high value care** by incentivizing providers and patients, together with their family

caregivers, to discuss the appropriateness of procedures; and 4) **Reducing unnecessary costs** to the patient and to the health care system.

The recommendations are designed to speak to a multi-stakeholder audience with the goal of supporting broad clinical episode payment adoption.

## *Elective Joint Replacement*

The elective joint replacement recommendations emphasize using functional status assessments (both pre- and post-procedure) and shared decision-making tools to determine whether a joint replacement is the appropriate treatment for a given patient.

## *Maternity Care*

The maternity care recommendations emphasize the need for patient engagement, education, and parenting support services (in addition to clinical maternity care), to achieve a number of critical goals. These include increasing the percentage of full-term births and the percentage of vaginal births, while decreasing the percentage of pre-term and early elective births, complications, and mortality.

## *Coronary Artery Disease*

The coronary artery disease recommendations are based on a CAD condition-level episode, which includes a "nested" bundle for procedures like percutaneous coronary intervention (PCI) and coronary artery bypass graft (CABG). The recommendations emphasize overall condition management designed to reduce the need for procedures, and strong coordination and communication between the surgeons who perform cardiac procedures and the providers who deliver follow-up and long-term cardiac care.

# Appendix D: Principles for Patient- and Family-Centered Payment

The following principles, produced by the LAN's Consumer and Patient Affinity Group, are intended to help guide the development of new payment strategies. They provide guidance and aspirational direction to ensure that we address the needs and priorities of patients and families as we transition to value-based payment. The principles rest on the conviction that consumers, patients, and families are essential partners in every aspect of transforming health care and improving health.

**Consumers, patients, families and their advocates should be collaboratively engaged in all aspects of design, implementation, and evaluation of payment and care models, and they should be engaged as partners in their own care.**

The collaboration in design of payment and care models should include oversight, governance, and interface with the communities where care is delivered. At the point of care, patients and families should be engaged in ways that match their needs, capacities and preferences. Collaborative care should be aligned with patient goals, values, and preferences (including language), and should reflect shared care planning and decision making throughout the care continuum.

**Positive impact on patient care and health should be paramount.**

The central consideration in all payment design should be improving patient health outcomes, experience of care, and health equity, while also ensuring the most effective use of health care resources.

**Measures of performance and impact should be meaningful, actionable, and transparent to consumers, patients and family caregivers.**

New payment models should be assessed using measures that are meaningful to patients and families. They should prioritize the use of measures derived from patient-generated data that address both care experience and outcomes. Measures should also address the full spectrum of care, care continuity and overall performance of specific models. Measures should be granular enough to enable patients to make informed decisions about providers and treatments.

**Primary care services are foundational and must be effectively coordinated with all other aspects of care.**

Payment models should foster this coordination, particularly between primary and specialty care, in order to promote: optimal coordination, communication and continuity of care; trusted relationships between clinicians and patients/families; concordance with patient goals, values and preferences; integration of non-clinical factors and community supports; and coordination of services delivered through non-traditional settings and modalities that meet patient needs. Effective delivery and coordination of primary care services should promote better care experience, optimal patient engagement, better health outcomes, and increased health equity.

**Health equity and care for high-need populations must be improved.**

New payment models should foster health equity, including access to innovative approaches to care and preventing any discrimination in care. They should collect data that allows for assessment of differential impacts and the identification and redress of disparities in health, health outcomes, care experience, access, and affordability.

**Patient and family engagement and activation should be supported by technology.**

New payment models should promote use of information technology that enables patients and their designated caregivers to easily access their health information in a meaningful format that enables them to use the information to better manage and coordinate their care. The technology should also enable patients to contribute information and communicate with their providers, and it should foster patient-clinician partnership in ongoing monitoring and management of health and care.

**Financial incentives used in all models should be transparent and promote better quality as well as lower costs.**

Financial incentives for providers and patients should be fully disclosed so that patients and consumers understand how new payment approaches differ from traditional FFS models, and how certain incentives may impact the care providers recommend or provide. Financial incentives should be developed in partnership with patients and consumers in order to reflect how patients define value, to reduce financial barriers to needed care, and to ensure that patients are not steered to lower cost care without regard for quality.

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