Physician-Focused Payment Model
Technical Advisory Committee

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December 17, 2025

Robert F. Kennedy Jr., Secretary
U.S. Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201

Dear Secretary Kennedy:

On behalf of the Physician-Focused Payment Model Technical Advisory Committee (PTAC), we are pleased to submit PTAC's report on Using Data and Health Information Technology to Transparently Empower Consumers and Support Providers. Section 1868(c) of the Social Security Act directs PTAC to: 1) review physician-focused payment models (PFPMs) submitted to PTAC by individuals and stakeholder entities; 2) prepare comments and recommendations regarding whether such models meet criteria established by the Secretary of Health and Human Services (HHS); and 3) submit these comments and recommendations to the Secretary.

PTAC's September 2025 public meeting focused on using data and health information technology to transparently empower consumers and support providers. The information that PTAC has gleaned from a review of previous PFPM proposals, other literature that addressed this important topic, as well as input received from the subject matter experts who participated in the public meeting, has informed the Committee members' comments, which are summarized in the following broad topic areas in this report:

- Topic 1: Promoting Patient Access to and Use of Their Data;
- Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools;
- Topic 3: Supporting Shared Decision-Making Between Providers and Patients;
- Topic 4: Optimizing Use of Artificial Intelligence (AI); and
- Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers.

Key highlights include:

- Ensuring access to patient health data is critical to empower patients and support providers.
    - Data interoperability efforts must continue to reduce data fragmentation and information blocking (that is, interfering with access or use of health data).
    - What is considered patient data should include provider-collected clinical data, patient-collected data from digital health tools such as patient wearables, and non-clinical data such as social drivers of health.
    - Implementing a federated identity is important to streamline data access across health systems and ensure availability of a patient's entire longitudinal record across providers.
- Beyond data access, patients and physicians need meaningful synthesis of their health information to support shared decision-making and care improvements.
    - Using game-like elements such as challenges and badges (gamification) can support patients' understanding of data and motivate them to modify behaviors.
    - Data must be easy for physicians to use and provide actionable insights.
- Integrated health data, supported by analysis such as from AI tools, can be used to shift the health care system from symptom-based and reactive to proactive and predictive.
    - Data from patient wearables should be integrated with clinical data to promote patient empowerment, early identification of health changes, and proactive care.
- Responsible use of AI can empower patients, support providers, and promote shared decision-making.
    - AI can create more personalized care information, and AI tools can assist patients with their own self-care.
    - AI can support coordination among the care management team by relieving administrative burden, analyzing patterns in data, and promoting patient communication.
- Alternative Payment Models (APMs) and other incentives can promote use of health data and patient empowerment.
    - Patients can be incentivized to engage in empowering behaviors through supplemental benefits and by reducing or eliminating cost-sharing and copays.
    - Payment models can include incentives to reimburse and promote lifestyle interventions.

  - Provider incentives should be aligned with the proliferation of health data, accounting for the volume of data physicians must navigate, and promote longitudinal care.
- Health data should be used only to improve patient health and support high-quality and cost-effective patient care.
  - Attention is needed to ensure that use of health data and AI does not have unintended consequences, such as facilitating health plans' denial of patient claims inappropriately.
  - Health data, apps, and wearables should be accessible to all patients and not limited by technology (e.g., broadband access) or cost, which could inadvertently create or promote health disparities.

The members of PTAC appreciate your support of our shared goal of improving the Medicare program for both beneficiaries and the physicians who care for them. PTAC members would be happy to discuss any of these observations with you. However, the Committee appreciates that there is no statutory requirement for the Secretary to respond to these comments.

Sincerely,

//Terry Mills//

Terry L. Mills Jr., MD, MMM
Co-Chair

//Soujanya Pulluru//

Soujanya R. Pulluru, MD
Co-Chair

Attachment

Physician-Focused Payment Model
Technical Advisory Committee

REPORT TO THE SECRETARY OF HEALTH AND HUMAN SERVICES

Using Data and Health Information Technology to Transparently Empower Consumers and Support Providers

December 17, 2025

About This Report

The Physician-Focused Payment Model Technical Advisory Committee (PTAC) was established by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) to: 1) review physician-focused payment models (PFPMs) submitted by individuals and stakeholder entities; 2) prepare comments and recommendations regarding whether such models meet criteria established by the Secretary of Health and Human Services (HHS); and 3) submit these comments and recommendations to the Secretary. PTAC reviews submitted proposals using criteria established by the Secretary in regulations at 42 CFR §414.1465.

Within this context, from time to time, it may be beneficial for PTAC to reflect on proposed PFPMs that have been submitted to the Committee to provide further advisement on pertinent issues regarding effective payment model innovation in Alternative Payment Models (APMs) and PFPMs. Given that, in the past, at least 25 of the proposals that have been submitted to PTAC met Criterion 8 (“Patient Choice”), and 22 proposals met Criterion 10 (“Health Information Technology”), PTAC now sees value in reviewing these elements in previously submitted proposals related to this topic, along with current information on using data and health information technology to transparently empower consumers and support providers. To ensure that the Committee members were fully informed, PTAC’s September 2025 public meeting included a theme-based discussion on using data and health information technology to transparently empower consumers and support providers.

This report summarizes PTAC’s findings and comments regarding using data and health information technology to transparently empower consumers and support providers. This report also includes: 1) a summary of the characteristics related to using data and health information technology to transparently empower consumers and support providers from proposals that have previously been submitted to PTAC; 2) an overview of key issues relating to using data and health information technology to transparently empower consumers and support providers and value-based care transformation; and 3) a list of additional resources related to this theme-based discussion that are available on the Assistant Secretary for Planning and Evaluation (ASPE) PTAC website.

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SUMMARY STATEMENT

From 2016 to 2020, PTAC received 35 proposals for physician-focused payment models (PFPMs) and voted on the extent to which 28 of these proposals meet the Secretary's 10 regulatory criteria. Nearly all of the 35 proposals that were submitted to PTAC addressed the proposed model's impact on quality and costs to some degree. Since 2022, PTAC has been conducting a series of theme-based discussions to explore care delivery and payment issues related to developing and implementing population-based total cost of care (PB-TCOC) models, including issues related to reducing barriers to participation in PB-TCOC models and identifying a pathway toward maximizing participation in PB-TCOC models. Key themes that emerged from these meetings related to data infrastructure challenges and opportunities and the use of patient empowerment strategies in Alternative Payment Models (APMs). Additionally, at least 25 of the proposals that have been submitted to PTAC met Criterion 8 ("Patient Choice"), and 22 proposals met Criterion 10 ("Health Information Technology").

For this reason, PTAC now sees value in further exploring elements in previously submitted proposals related to this topic, along with current information on using data and health information technology to empower consumers and support providers. To ensure that the Committee members were fully informed, the Committee members conducted a theme-based discussion on this topic during PTAC's two-day September 2025 public meeting. The theme-based discussion included an overview presentation by PTAC members and session presentations by previous submitters and other subject matter experts (SMEs) related to using data and health information technology to empower consumers and support providers. PTAC also requested public input during the meeting and through a Request for Input (RFI).

This report provides PTAC's findings and valuable information on best practices for using data and health information technology to transparently empower consumers and support providers. The information that PTAC has gleaned from a review of previous PFPM proposals and other literature that addressed this important topic, as well as input received during the theme-based discussion, will help to inform PTAC in its review of future proposals. This material has informed the Committee members' comments, which are summarized in the following broad topic areas in this report:

- Topic 1: Promoting Patient Access to and Use of Their Data;
- Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools;
- Topic 3: Supporting Shared Decision-Making Between Providers and Patients;
- Topic 4: Optimizing Use of Artificial Intelligence (AI); and
- Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers.

Key highlights include:

- Ensuring access to patient health data is critical to empower patients and support providers.
    - Data interoperability efforts must continue to reduce data fragmentation and information blocking (that is, interfering with access or use of health data).
    - What is considered patient data should include provider-collected clinical data, patient-collected data from digital health tools such as patient wearables, and non-clinical data such as social drivers of health.
    - Implementing a federated identity is important to streamline data access across health systems and ensure availability of a patient's entire longitudinal record across providers.
- Beyond data access, patients and physicians need meaningful synthesis of their health information to support shared decision-making and care improvements.
    - Using game-like elements such as challenges and badges (gamification) can support patients' understanding of data and motivate them to modify behaviors.
    - Data must be easy for physicians to use and provide actionable insights.
- Integrated health data, supported by analysis such as from AI tools, can be used to shift the health care system from symptom-based and reactive to proactive and predictive.
    - Data from patient wearables should be integrated with clinical data to promote patient empowerment, early identification of health changes, and proactive care.
- Responsible use of AI can empower patients, support providers, and promote shared decision-making.
    - AI can create more personalized care information, and AI tools can assist patients with their own self-care.
    - AI can support coordination among the care management team by relieving administrative burden, analyzing patterns in data, and promoting patient communication.
- APMs and other incentives can promote use of health data and patient empowerment.
    - Patients can be incentivized to engage in empowering behaviors through supplemental benefits and by reducing or eliminating cost-sharing and copays.
    - Payment models can include incentives to reimburse and promote lifestyle interventions.

    - Provider incentives should be aligned with the proliferation of health data, accounting for the volume of data physicians must navigate, and promote longitudinal care.
- Health data should be used only to improve patient health and support high-quality and cost-effective patient care.
    - Attention is needed to ensure that use of health data and AI does not have unintended consequences, such as facilitating health plans' denial of patient claims inappropriately.
    - Health data, apps, and wearables should be accessible to all patients and not limited by technology (e.g., broadband access) or cost, which could inadvertently create or promote health disparities.

I. PTAC REVIEW OF USING DATA AND HEALTH INFORMATION TECHNOLOGY TO TRANSPARENTLY EMPOWER CONSUMERS AND SUPPORT PROVIDERS

In developing the comments in this report, PTAC considered information from the theme-based discussion during the September 2025 public meeting and an environmental scan developed to provide information on using data and health information technology to transparently empower consumers and support providers.

PTAC formed a Preliminary Comments Development Team (PCDT) for the September 2025 theme-based discussion, which was comprised of Krishna Ramachandran, MBA, MS (Lead); Larry Kosinski, MD, MBA; Joshua Liao, MD, MSc; and James Walton, DO, MBA (see Appendix 1 for a list of the Committee members). The PCDT reviewed the environmental scan and delivered a summary presentation to the full Committee during the theme-based discussion. The theme-based discussion included sessions with stakeholders from organizations that previously submitted PFPM proposals which included patient empowerment, engagement, and choice, as well as health information technology components. The theme-based discussion also featured perspectives from a diverse group of SMEs, and an opportunity for public comments. At the end of the theme-based discussion, Committee members identified comments to be included in this Report to the Secretary (RTS).[i]

The Committee members synthesized information from PTAC proposals, the environmental scan, and sessions with a previous submitter and other SMEs during the September 2025 public meeting on using data and health information technology to transparently empower consumers and support providers. This RTS summarizes PTAC's comments from its findings, which are organized in five topics:

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[i] Henish Bhansali, MD, FACP, James Walton, DO, MBA, and David Tyson, MA were not in attendance at the September 8-9, 2025, public meeting. The PTAC appointment term for David Tyson started in November 2025.

- Topic 1: Promoting Patient Access to and Use of Their Data;
- Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools;
- Topic 3: Supporting Shared Decision-Making Between Providers and Patients;
- Topic 4: Optimizing Use of Artificial Intelligence (AI); and
- Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers.

For each topic, relevant issues are highlighted, followed by a summary of PTAC's comments. Appendix 2 includes information about proposals that were previously submitted to PTAC which addressed issues related to using data and health information technology to transparently empower consumers and support providers. Appendix 3 provides a list of additional resources related to PTAC's patient empowerment theme-based discussion that are available on the Assistant Secretary for Planning and Evaluation (ASPE) PTAC website. Appendix 4 includes a complete list of the Committee members' comments.

II. BACKGROUND: DEFINITIONS AND CONTEXT RELATED TO USING DATA AND HEALTH INFORMATION TECHNOLOGY TO TRANSPARENTLY EMPOWER CONSUMERS AND SUPPORT PROVIDERS

Many terms are used to describe concepts related to patient-centered care. These include patient activation, empowerment, enablement, engagement, involvement, and participation. Although definitions and use of these terms may vary, the underlying concepts encompass the ability to 1) have the knowledge and skills to understand and manage one's health; 2) have the confidence and motivation to be able to act and control one's health; and 3) actively take part in decisions and behaviors related to one's health.[1,2,3,4,5,6,7]

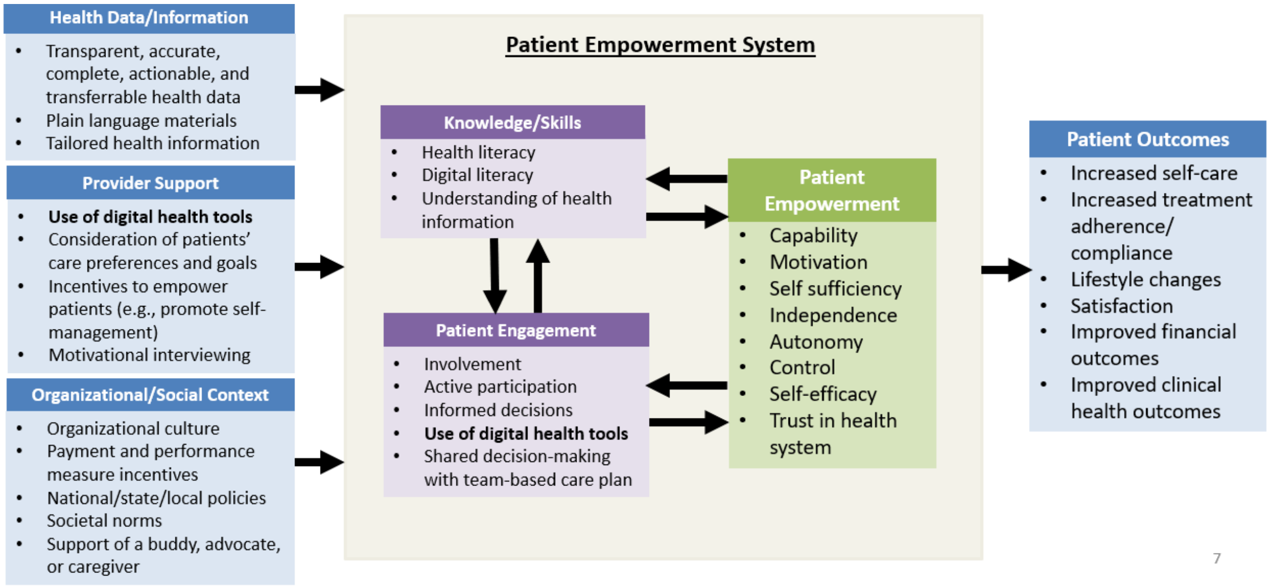
PTAC developed the following working definitions for patient empowerment and engagement:

> *Patient empowerment is the process and state whereby a patient acquires and has the ability (knowledge and skills) and motivation (desire and confidence) to control and make timely decisions regarding their own health and health care.*
>
> *Patient engagement is the process and state by which a patient actively communicates their health status, health care needs, and health care wishes; makes informed decisions regarding their health and health care treatments; and participates in shared decision-making regarding their health with their providers.*

Patient empowerment refers to a patient's ability and desire to have an active role in their own health and health care. Empowering patients to take control over the factors that influence their health and to work with their clinicians to make informed decisions about their health and health care is essential to patient-centered care.[8,9,10,11] Patient engagement is typically distinguished from patient empowerment by some level of active participation or involvement by the patient,[12] most notably emphasizing patient-provider interaction.[13] In contrast, patient empowerment is considered more generalized and internally patient-focused rather than tailored and externally patient/provider-focused.

Based on existing literature, PTAC developed a patient empowerment conceptual framework (Exhibit 1) that includes the inputs (health data/information, provider support, organizational/social context) and output (patient outcomes) to the patient empowerment system. The patient empowerment system, the middle of the framework, is comprised of three components (knowledge/skills, patient engagement, patient empowerment), which are circular and can influence each other (e.g., possessing knowledge/skills can make the patient feel empowered, which can then motivate the patient to seek further information about their care).

Exhibit 1. Patient Empowerment Conceptual Framework



Health Data/Information

- Transparent, accurate, complete, actionable, and transferrable health data
- Plain language materials
- Tailored health information

Provider Support

- **Use of digital health tools**
- Consideration of patients' care preferences and goals
- Incentives to empower patients (e.g., promote self-management)
- Motivational interviewing

Organizational/Social Context

- Organizational culture
- Payment and performance measure incentives
- National/state/local policies
- Societal norms
- Support of a buddy, advocate, or caregiver

Patient Empowerment System

Knowledge/Skills

- Health literacy
- Digital literacy
- Understanding of health information

Patient Engagement

- Involvement
- Active participation
- Informed decisions
- **Use of digital health tools**
- Shared decision-making with team-based care plan

Patient Empowerment

- Capability
- Motivation
- Self sufficiency
- Independence
- Autonomy
- Control
- Self-efficacy
- Trust in health system

Patient Outcomes

- Increased self-care
- Increased treatment adherence/ compliance
- Lifestyle changes
- Satisfaction
- Improved financial outcomes
- Improved clinical health outcomes

The use of digital health tools helps promote patient empowerment by providing patients with access to their health data, facilitating shared decision-making, and managing and personalizing care. The number of digital health tools on the market has rapidly grown to 337,000.[14] These tools serve different purposes. They may diagnose or treat health conditions, remotely monitor patients, or promote wellness, and they are designed to be patient- or provider-facing.[15]

Patient-facing digital health tools can include patient portals, mobile apps, and wearable health technology. These tools can use patient data (e.g., health history) to individualize the benefits and risks of a patient's treatment options and document a patient's health goals and preferences. Portals provide patients with web-based access to their electronic health records (EHRs) so that they can view their appointments, tests and treatments ordered, laboratory test results, immunizations, allergies, medications, and providers' notes. Patient portals also typically provide patients with a platform to communicate with their providers. Accessing the information in EHRs allows patients to be more informed and engaged in managing their own health care.

Another type of digital health tool is clinical decision support to assist health care decision-making. Clinical decision support can facilitate the shared decision-making process by serving several functions, including notifying patients that there is a medical decision to be made, helping the patient understand the benefits and risks of their treatment options, and ensuring that the decisions made align with the patient's health goals and preferences. Mobile apps and wearable health technology allow patients to actively participate in their own health and health care. These tools provide patients with access to real-time data, such as blood glucose, heart rate, blood pressure, physical activity, and sleep, which can help to empower patients to actively monitor and manage their health conditions.

There is an increasing role of AI to enhance and maximize the use of digital health tools. To support patients, personalized apps may be able to help patients better monitor their medical conditions by predicting symptoms and suggesting real-time interventions.[16] Patients may also be able to use chatbots or virtual assistants to receive answers to their medical questions.[17] To support providers, AI is expected to use patient data, such as information from monitoring devices, lifestyle factors, and genetics, to personalize medical treatment plans. In addition, smart implants and wearables may allow clinicians to remotely monitor patients in real time to provide better chronic disease management for patients.

There is limited but promising evidence showing that patient empowerment improves clinical outcomes, patient-reported outcomes, and patient experiences. Relative to less activated patients, more activated patients tend to have systolic blood pressure within the normal range, fewer emergency department (ED) visits, and fewer hospitalizations.[18] Among patients with chronic health conditions, more activated patients tend to better adhere to their recommended treatments, engage in regular at-home self-monitoring, and receive care for their chronic conditions (e.g., foot and eye exams for patients with diabetes) compared with less activated patients.[19]

There is also limited but promising evidence showing effective use of digital health tools to increase patient empowerment and improve clinical outcomes. Research indicates that digital health tools, such as decision aid digital tools, can lead to improved knowledge and awareness of treatment options, as well as increased patient activation scores.[20,21] Further, using digital interventions, such as mobile apps and wearables, has led to better management of cardiovascular diseases, improved hypertension control, improved pain management, and reduced depressive symptoms.[22,23,24,25,26]

Further, results from the Patient Reported Indicators Survey (PaRIS) U.S. sample, which targets people aged 65 and older with chronic conditions, showed that most beneficiaries report high levels of engagement with providers. Specifically, most beneficiaries reported that they participate in shared decision-making, felt motivated to understand their health conditions and risks, and felt confident that they are receiving the information needed to adequately manage their health. However, more than half of beneficiaries reported that they greatly rely on their providers to make health care decisions for them, and one-fifth of beneficiaries reported issues with comprehending their health information.[27]

Although these limited positive findings are encouraging, more research is needed to understand the association between using digital health tools, clinical outcomes, and patient empowerment.

III. CHARACTERISTICS OF PTAC PROPOSALS RELEVANT TO USING DATA AND HEALTH INFORMATION TECHNOLOGY TO TRANSPARENTLY EMPOWER CONSUMERS AND SUPPORT PROVIDERS

Between 2016 and 2020, PTAC received 35 proposed PFPMs submitted by stakeholders and voted on the extent to which 28 of these proposals meet the Secretary's 10 regulatory criteria, including "Patient Choice" and "Health Information Technology."[ii] The goal of the criterion on "Patient Choice" is to "encourage greater attention to the health of the population served while also supporting the unique needs and preferences of individual patients," and the goal of the criterion on "Health Information Technology" is to "encourage use of health information technology to inform care."

Committee members found that 25 of these proposals met Criterion 8 ("Patient Choice"), and 22 proposals met Criterion 10 ("Health Information Technology"). Seven proposals were selected for review for this public meeting topic: Four proposals describe specific strategies to support patient choice, and three proposals describe innovative health IT approaches that promote data standardization, interoperability, and transparency.

Of the four proposals that describe specific strategies to support patient choice, the clinical focus of each proposal varied with two proposals supporting inpatient services in the home setting, one proposal focusing on serious illness and palliative care, and one proposal focusing on chronic conditions. Of the three proposals that describe innovative health IT approaches, two proposals focus on oncology, and one proposal on cerebral emergency care and telemedicine.

Strategies to support patient choice included accommodating patient preferences, documenting patient goals, and using palliative care teams to conduct patient assessments.

Innovative health IT approaches included improving interoperability of EHRs, developing innovative telemedicine delivery, and creating dashboards to facilitate trusted decision support.

See Appendix 2 for additional information on the seven selected proposals.

[ii] The remaining seven proposals were withdrawn prior to the Committee's deliberation.

IV. COMMENTS FOR CONSIDERATION BY THE SECRETARY

Based on findings from the Committee members' analysis of PTAC proposals, information in the literature, and information from sessions involving a previous submitter and additional SMEs during the September 2025 public meeting, this section summarizes PTAC's comments regarding using data and health information technology to transparently empower consumers and support providers. PTAC's comments are organized in five topics:

- Topic 1: Promoting Patient Access to and Use of Their Data;
- Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools;
- Topic 3: Supporting Shared Decision-Making Between Providers and Patients;
- Topic 4: Optimizing Use of Artificial Intelligence (AI); and
- Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers.

For each topic, relevant issues are highlighted, followed by a summary of PTAC's comments. Additionally, the Committee members have identified areas where additional research is needed, as well as some potential next steps related to each topic. Appendix 4 includes a complete list of the Committee members' comments.

IV.A. Topic 1: Promoting Patient Access to and Use of Their Data

PTAC emphasized the importance of ensuring that patients' health care data are available and understandable to promote patient empowerment:

- Data must be liquid (easily and immediately accessible);
- Data must be usable and interpretable; and
- Evidence is needed that empowerment improves health outcomes.

PTAC's specific comments on promoting patient access to and use of their data from the Committee members' discussion during the public meeting are listed in Appendix 4.

Data must be liquid (easily and immediately accessible). PTAC discussed the need for health care data to be liquid—that is, readily accessible—to promote patient empowerment and agency, as well as to drive health care innovation and competition. Significant progress has been made to improve data accessibility, but more work needs to be done. Patient portals provide a means for patients to access their medical records, including the recent availability of lab results and physician clinical notes; portals also offer the ability to perform functions such as managing medical appointments and requesting prescription refills. Additional data types that could be made available to promote transparency and facilitate decision-making for patients include data on costs (e.g., the cost of medications and procedures) and data on the quality of individual providers (e.g., quality measures).

Experts described the importance of technology and infrastructure to promote data accessibility for both patients and providers. For example, many Americans, particularly those residing in rural and remote areas, have no or limited access to broadband, thereby restricting these individuals' ability to access health care data. Incentives and investment may be needed to promote widespread adoption and access to technologies that enable data access. One SME suggested the need for cross-stakeholder investment to accomplish this, noting that states may play a critical leadership role in fostering the necessary infrastructure. Software applications ("apps") also could be developed taking into consideration some patients' limited ability to use this technology, such as by allowing patients to share information with their caregivers. One Committee member noted that apps can also be useful to consolidate data from multiple sources, such as payer health care claims, clinician notes and tests, and patient-generated data. A challenge to data integration and accessibility is the dispersion of data across many sources (e.g., health plans/payers, health systems/providers, patients) and data systems. One expert asserted that patients are the true owners of their health care-related data, but the lack of consensus on this issue results in data silos, creating a barrier to transparency and accessibility.

PTAC and experts acknowledged the challenge of data integration, given that many health care data holders began digitizing their data before standards were established, resulting in thousands of different and proprietary data models. Data integration is critical for providers and patients to have access to the full range of health records to achieve optimal care. Data interoperability—the ability of different data systems to exchange and share data—is essential to this goal. Significant progress has been made over the past 15+ years to promote data interoperability, including establishment of federal regulations and laws (e.g., Health Information Technology for Economic and Clinical Health [HITECH] Act, Meaningful Use, Trusted Exchange Framework and Common Agreement [TEFCA], 21st Century Cures Act) and development of standards for health care data elements (United States Core Data for Interoperability [USCDI]) and data exchange (Health Level Seven [HL7] and more recently Fast Healthcare Interoperability Resources [FHIR]). However, experts noted that there is still significant fragmentation of data, with over 2,000 EHR systems in the United States, many of which are not required to comply with Meaningful Use or TEFCA (which is voluntary).

There are several impediments to data interoperability, including vendor compliance with regulations, vendor information blocking, trust among different parties, and integration of non-medical data. Experts shared concerns that some data system organizations are working only to comply with the minimum necessary regulatory requirements. Moreover, some EHR vendors, driven by economic and financial interests, may actually engage in active information blocking—that is, interfering with access or use of health data—such as by not sharing data. Data interoperability also may be limited by trust: trust between health plans and clinicians, as well as trust between physicians and patients. One expert suggested that value-based care may be improving this trust, as payers and providers work to improve patient care and lower costs. Aligned incentives and more timely payments to providers can also be used to promote trust.

Trust between payers and providers also may be promoted by clarifying where there are restrictions related to data sharing, such as data that are limited in use to only necessary organizational operations or data on behavioral health diagnoses. Providers also need to trust data that are received directly from patients, which could include data that patients obtain from other providers or health data they collect themselves (e.g., through wearables such as smartwatches), and use that data to help improve patients' health. Another interoperability challenge is integration of patient data on non-medical drivers of health, such as housing and food insecurity. Experts emphasized that continued investment in data interoperability is needed, including standardizing input and output of data from EHRs, having further federal actions against information blocking, and incentivizing payers and providers to share data.

Committee members and experts noted the important role of the application programming interface (API), which allows data to be exchanged between different software applications, to improve health care data interoperability and patient access to their data. The 21st Century Cures Act established open APIs as the standard for EHRs, providing patients with the ability to access their medical record without charge via third-party apps. Within Medicare, the Centers for Medicare & Medicaid Services (CMS) has implemented the Blue Button API that allows Medicare beneficiaries to readily view and download their Medicare health care claims data, as well as to share their data with third-party apps that enable patients to better control and manage their health.[28,29] As a next step, CMS is implementing an interoperability framework consisting of a shared data infrastructure and criteria for data sharing. Participants, which may include payers and providers, as well as EHR and digital health tool vendors, will be designated as CMS-Aligned Networks.[30] Patients will be able to access their data centrally across the network that will include both structured and unstructured data such as progress notes, images, and care plans.

One expert noted that data interoperability solutions will not be driven by EHR vendors, which may each house only a small portion of a patient's total health data. Rather, the solution may lie with Health Data Utilities (HDUs)—organizations that provide technology and services to facilitate the exchange of clinical (i.e., EHR) data and non-clinical data (thereby involving a broader set of health-related data than Health Information Exchanges [HIEs], which integrate only clinical data). HDUs and their predecessor HIEs are typically nonprofit state-based organizations (versus for-profit EHR vendors) that collectively cover nearly the entire United States.[31] As such, HDUs may be in the strongest position to work together to coordinate the exchange of data and to help ensure conformance with state and federal regulations.

PTAC and experts emphasized that simply having access to data is not sufficient; that data must be complete and of high quality to effectively empower patients and support providers. Given that patients may have multiple conditions, such as heart disease, diabetes, and mental and behavioral health conditions, having a 360-degree view of the patient through complete data is needed for optimal care. Experts noted challenges to data quality when data are highly dispersed, including the need to standardize clinical codes and provider identifiers across systems. HDUs are capable of assessing data quality before conducting analyses. Further, the Patient Information Quality Improvement (PIQI) Framework provides a means for data organizations to produce scorecards that rate the quality of their data.

Committee members and experts also expressed the need for a secure federated identity to promote patients' access to their health data. A federated identity—a single set of sign-on credentials that can be used to gain access to multiple systems—is necessary to overcome the barrier of data fragmentation and dispersion. Many patients, including those with multiple conditions and those who have relocated, have multiple health care portals that contain portions of their health care information, posing a challenge for patients to access, navigate, and manage their complete health care data effectively, a challenge that one expert termed "portalitis." PTAC recommended that health plans and systems adopt a federated identity verification service such as CLEAR or ID.me. These patient authentication technologies are being adopted by states, which may not have patient portals, to allow Medicaid patients a single sign-on method to access their data.

Patients are increasingly accessing data on their cell phones and via health data apps and digital tools, and they desire a simple user interface to do so. Biometric technology, such as facial recognition, can facilitate secure access to health care data, similar to current uses in other industries such as banking and airport security screening. Moreover, experts pointed to the next phase in data interoperability and accessibility for patients via their cell phones which could include portability of a patient's medical record to be able to provide and receive health data instantaneously on their phones, and digital insurance cards that patients can use to determine which data to share with providers and plans.

Data must be usable and interpretable. PTAC and experts stressed that ensuring access to data is not enough to empower patients and support providers; the data must be understandable. Patients may face significant information gaps to being able to understand their medical data or to navigate the health system. For example, patients may have a limited understanding of their conditions, treatment options, medications, or which specialties they may need to consult for their care. Educational tools and tailored information can improve patient autonomy and engagement. For providers, the large volume of data generated must be parsed and curated in a way to produce meaningful insights upon which physicians can act.

Committee members and experts pointed to the need to generate insights from patient health data to better support decision-making and impact care for both patients and providers. For example, information on a patient's cardiovascular health may be more meaningful when presented as a comparison between the patient’s cardiovascular and chronological ages rather than through a more technical metric such as pulse wave velocity.

Gamification—the use of gaming elements such as completing challenges and collecting points, badges, and rewards--can help make health data easier for patients to understand, motivate them to engage with their health information, and encourage them to modify their behaviors. For instance, rather than present patients with drastic lifestyle changes to undertake all at once, gamification can be used to break these behavioral changes into smaller pieces, with achievable milestones and rewards along the way for adopting healthy behaviors. Seeing data that show incremental evidence of health improvement can motivate patients to further pursue healthy behaviors. Similarly, the concept of just-in-time education suggests that it may be most effective to provide smaller chunks of information to patients at the point when it becomes relevant rather than providing them all possible information at once.

PTAC and experts identified the importance of data being actionable at the point of care. Clinical data are key in this regard as they have lower latency than claims data, are available usually months earlier, and may include historical information that is not available through claims data alone, such as obesity, which is significantly under-reported in claims data. Moreover, one expert noted that innovation is not about more data but about making the available data more meaningful for patients and actionable for physicians. Clinicians need data tailored for their particular clinical context, such as summaries that show trends and data alerts that flag when patients may need an intervention.

With the proliferation of health care data, Committee members cautioned that guardrails are needed to prevent intentional or unintentional misuse. The purpose of patients’ data and health information should be to solve a patient’s health care problems and not to deny treatment or payment. Similarly, with the technological requirements and health literacy needed for patients to access and use data through smartphone apps, caution is needed to ensure that health care data access does not create or exacerbate disparities in patient care or outcomes.

Evidence is needed that empowerment improves health outcomes. Ultimately, PTAC noted that it remains unclear to what extent using data to empower patients and support providers truly improves patient health outcomes. For instance, one SME shared that they have found no evidence that organizational adoption of patient portals improves patient experience, but noted that it may be too early in the portal adoption cycle to observe this impact. More information is needed.

Committee members and experts observed that it is not sufficient to provide patients with access to meaningful information; motivation is also critical. Patients themselves must choose to act on their health care information to improve their own health. Empowerment is different than accountability, and both play a role in whether access to health data actually improves health outcomes. PTAC also noted that even with information and agency, patients still need choices, which in some cases, such as with health plans and provider networks, may be limited.

Ensuring that patients understand the information provided may be an important step to taking ownership of their own health. For both patients and providers, the vast volume of data and myriad data tools available could be an impediment; consolidating all information through a single app may be needed. Additionally, some systems may provide too much information, with frequent system-generated messages overwhelming recipients. Synthesizing and processing the information is critical to its effective use. Tailored information and discussion among providers and patients may facilitate data effectiveness in improving health outcomes. Finally, PTAC and experts noted that measures of success are important but that development of new measures is not desirable as it further increases provider burden on data collection and reporting.

IV.B. Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools

PTAC conveyed the importance of leveraging data from patient wearables to promote patient empowerment:

- Health care data should be predictive rather than reactive;
- Data generated from consumer health apps should be more useable for clinicians;
- Ensure availability for all patients; and
- Evidence is needed that patient wearables improve outcomes.

PTAC's specific comments on leveraging data from patient wearables from the Committee members' discussion during the public meeting are listed in Appendix 4.

Health care data should be predictive rather than reactive. PTAC discussed the importance of using health care data to predict the occurrence of serious health care conditions and implement and personalize care pathways to prevent disease before it occurs. The use of patient wearable technologies (e.g., smartwatches, rings, odometers that monitor patient measures such as resting heart rate and sleeping patterns), as well as integrated health care data and AI, aids in shifting health care from being reactive to proactive.

One SME mentioned the adoption of the Predictive, Personalized, Preventive (PPP) model which incorporates data from patient wearable technologies to aid in predicting the likelihood of a person experiencing a stroke, heart attack, or Type 2 diabetes; this provides the opportunity to deliver proactive, preventive care before the patient presents as ill (i.e., reactive care). Another SME added that EHR and claims data systems report patient data retrospectively (i.e., the patient has already presented as ill and sought out care) instead of proactively, identifying or predicting health care needs before the patient presents as ill. Integrating data from patient wearable technologies and other digital health tools into EHRs will aid in predicting, and possibly preventing, illness before it occurs.

Data generated from consumer health apps should be more useable for clinicians. Committee members emphasized the importance of integrating data collected from digital health tools, such as patient wearables and remote patient monitoring (RPM) devices, into patient portals or EHRs to make data more useable for clinicians and to create a more complete picture of the patient's health. Patient wearables generate a large volume of data, and EHR systems do not yet have the capabilities to store all types of health data, including data from wearable devices. To promote proactive and high-touch care and increase patient empowerment, it is critical to address the challenges of integrating data from patient wearables into the EHR, moving data across EHR systems, and making the data useable for clinicians. Continued investment in interoperability is needed, including the adoption of FHIR and the USCDI—standards for electronically exchanging health care information.

Committee members and experts also discussed how to help providers and patients draw meaningful insights from the large volume of data produced by digital health tools, including patient wearables. To make the data more useable for clinicians, the data should be condensed into clinically relevant formats that focus on aggregated data summaries. For example, the data can be used to flag people who move out of the normal range for a certain condition and may require follow-up.

Ensure availability for all patients. PTAC commented that digital health tools, including patient wearables, that demonstrate improved clinical outcomes should be made available to all populations. One Committee member added that some Medicare Advantage (MA) plans may be willing to cover the costs associated with purchasing and using digital health tools, which could aid in validating and linking the tools to improved outcomes. Committee members noted the importance of addressing limitations in access to digital health tools for certain populations (e.g., limited access to broadband and technology, varying health literacy levels) that may lead to or worsen health disparities.

Further, one Committee member noted that patient wearables and other digital health tools have increased the amount of data available and suggested that this could potentially lead to these data being used in adverse ways, such as using data generated from patient wearables when determining payment in certain situations or for adverse event determinations. As digital health technology evolves, additional work is needed to ensure that these data are not used unfavorably.

Evidence is needed that patient wearables improve outcomes. PTAC commented that companies that are developing patient wearables and other digital health tools should also show how these tools improve outcomes. Although most companies are not incentivized to conduct outcomes research, some companies are starting to partner with MA plans and invest in clinical outcomes researchers to study the effects of these tools on outcomes.

More investment in showing how digital health tools improve outcomes is needed; however, there is limited but promising evidence showing these tools can be effective. One study showed that increased physical activity, tracked through patient wearables, can lead to cost savings in the Medicare population.[32] Other studies have reported improved knowledge and awareness of treatment options, increased patient activation scores, improved hypertension control, better management of cardiovascular diseases, improved pain management, and reduced depressive symptoms through the use of digital health tools.[33,34,35,36,37,38,39] Further, one expert stated that patient wearables can lead to increased patient engagement and may lead to better health outcomes. Experts emphasized the importance of expanding on the current evidence-based research showing digital health tools lead to improved outcomes.

IV.C. Topic 3: Supporting Shared Decision-Making Between Providers and Patients

PTAC discussed approaches to support shared decision-making between providers and patients to promote patient empowerment:

- Data must be harmonized across systems, meet individual patient needs, and be available in real time to facilitate shared decision-making; and
- Provider coordination can support shared decision-making.

PTAC's specific comments on supporting shared decision-making between providers and patients from the Committee members' discussion during the public meeting are listed in Appendix 4.

Data must be harmonized across systems, meet individual patient needs, and be available in real time to facilitate shared decision-making. Shared decision-making is when the patient and their clinicians work together to make informed decisions about the patient's health and health care.[40] Shared decision-making helps to ensure that medical decisions align with patients' personal health goals and fulfills patients' wishes to feel that they are on the same team as their health care providers. Experts noted that shared decision-making is fundamental to the provider-patient relationship as it builds trust, improves adherence and outcomes, and promotes inclusion.

Patient wearables and other digital health tools can facilitate shared decision-making; however, the data must meet certain conditions. First, data generated from patient wearables and other digital health tools must be harmonized across systems (e.g., EHR, claims data, lab data). Without data harmonization, the usability of the data for shared decision-making will be limited. Second, these data should be tailored specifically to meet individual patient needs. For example, condition-specific educational materials and tools (e.g., disease-specific apps) allow the provider and patient to have a focused discussion specific to the patient’s individual treatment options and care goals. Third, data from patient wearables and other digital health tools should be available to providers and patients as quickly as possible, with a feedback loop that allows for real-time updates to data based on the conversation taking place between the provider and patient.

Patient wearables and other digital health tools can enhance shared decision-making and lead to increased efficiency, better patient outcomes, and promotion of value-based care principles.

Provider coordination can support shared decision-making. Committee members discussed how provider coordination is an essential component to shared decision-making. Providers should share with their patients the specific roles that the patients’ specialists play in their care. Further, interactions between primary care providers and specialists should take place in front of the patient so that all providers are involved in discussions with the patient to make informed decisions. It is critical for providers to establish a shared context with patients so patients feel that they can trust their providers and that the providers personally know them. One expert noted that this shared context must include the patient’s provider and specialists across all care settings.

IV.D. Topic 4: Optimizing Use of Artificial Intelligence (AI)

PTAC discussed the role of AI in empowering patients and supporting providers:

- Use AI to empower patients;
- Leverage AI to support providers; and
- Balance new technology with negative consequences.

PTAC’s specific comments on optimizing use of AI from the Committee members’ discussion during the public meeting are listed in Appendix 4.

Use AI to empower patients. Committee members expressed the critical role that AI may play in health care because of its ability to integrate and analyze large data sets and to draw personalized insights from data. Experts noted that future uses of AI will likely focus on prevention. For example, AI assistants may use data from wearable technologies to help improve health outcomes. For example, AI assistants can integrate data from a patient’s chart and provider’s notes, which, combined with general knowledge, can help answer patient questions or indicate how test results may be impacted by patients’ existing conditions or medications. AI also offers the potential to assist with patients’ health-related social needs, such as transportation. For example, AI may be able to identify patients at high risk for transportation needs and help coordinate transportation on their behalf. One expert noted that such AI tools exist, but that financial incentives may be needed to encourage their use.

AI can be useful to personalize a patient's care information and assist with their own self-care. Large language models (LLM), which process and generate natural human text, can digest patient medical records and physician notes and assist with responding to an individual patient's questions or creating follow-ups and reminders related to the patient's personal care plan.[41] A smartphone-enabled AI advisor connected to a patient's health data can help a patient interpret and understand patterns in their health data over time, thereby assisting them with better managing their own health.

Leverage AI to support providers. PTAC identified the potential for AI to improve and support how providers use data, enabling them to make better clinical decisions at the point of care. One expert described the use of AI to identify a worsening condition, flag patients at risk of needing treatment such as dialysis, and spot changes in health patterns. Physician workflows may also incorporate AI that predicts when intervention is needed.

AI can facilitate shared decision-making between patients and providers. For example, pre-visit AI chatbots or avatars, or in-visit AI prompts, can help increase patients' comfort with disclosing private and sensitive information, such as medication adherence, that can then facilitate discussion with providers. Patients may bring information generated from a tool such as ChatGPT to their health care visit, providing an opportunity for the physician to facilitate patient engagement. Similarly, ChatEHR, which allows providers to readily query and obtain summary information from patients' records, can reduce provider burden and instill greater physician confidence, thereby facilitating communication about tailored care with patients. Experts noted, however, that these types of tools can facilitate shared decision-making only when they are used in a trusted environment where the patient is treated with empathy, dignity, and respect. AI can assist with educating and identifying insights from data, but human interaction is essential for empathetic care delivery.

PTAC indicated that AI also can be useful for promoting care coordination and supporting the care management team, the middle layer between the patient and physician. At the most fundamental level, AI tools can relieve the administrative burden of care managers who need to search through EHR data, synthesize information, review claims, and contact patients. One expert described how information from ambient recordings of patient visits can be integrated with other information in the patient record. This type of AI tool can be useful to facilitate the care team's communication with the patient. AI tools can analyze patterns and help detect subtle changes in patient health, and then alert care teams of the need for follow-up. This may be particularly important for patients with chronic conditions that involve episodic care events that may require a more dynamic approach to care.

Balance new technology with negative consequences. PTAC and experts emphasized that use of AI in health care should be purpose-driven and carefully balanced to avoid unintended consequences. AI provides an opportunity to move beyond existing tools and processes to an innovative technology that may help achieve the goals of higher quality and lower costs associated with value-based care. AI has the potential to shift the health care system from reactive to proactive, with AI tools capable of uncovering insights from a vast volume of data (e.g., EHRs, claims, patient registries, wearables) and predicting health issues that may require intervention before they become diseases. AI also offers the ability to create personalized support for patients and physicians that is both real-time and adaptive, and to bridge gaps between patients and providers who have different backgrounds and lived experiences, thereby achieving better patient care.

However, caution is needed to ensure that AI is appropriately used and does not have unintended consequences. AI should serve the public interest to improve patient health. AI should not be used in health care for other purposes, such as to facilitate denial of patient claims inappropriately. One expert recommended that AI be examined further in other industries before its expanded use in health care. A variety of factors must be considered before widespread adoption of AI in health care, including ensuring that AI-generated insights are robust and care teams are capable of managing the information, that there is a clear role for humans in processes that involve AI, and that regulatory and legal frameworks are established to keep pace with AI adoption, such as safe harbors for use of AI tools.

IV.E. Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers

Committee members discussed ways in which APMs and other incentives can promote patient empowerment and support providers. The discussion included these themes:

- Design APMs that integrate data and promote patient empowerment;
- Update benefit design to promote patient empowerment; and
- Identify approaches to encourage providers to support data/health IT that empowers patients.

PTAC’s specific comments on using APMs and other incentives to empower patients and support providers from the Committee members’ discussion during the public meeting are listed in Appendix 4.

Design APMs that integrate data and promote patient empowerment. PTAC indicated that integrating data and supporting patient empowerment are not about isolated solutions such as a reimbursement change. Rather, solutions need to be broader, considering the entire health system, and be scalable. One expert expressed that, with the increase in available data, technology, and the ability to integrate data (e.g., AI, data generated from wearable devices), the health system should be shifting from a reactive to a predictive model. This type of model—termed Predictive, Personalized, Preventive (PPP)—is being adopted in other countries, including the United Kingdom and India.

Experts also discussed how patient empowerment involves shifting from a reactive symptom and disease management system to a proactive lifestyle management system. The current short-visit model of symptom-focused care delivery is inadequate to address the root causes of lifestyle-related chronic conditions. Notably, clinical guidelines identify lifestyle changes as the first-line treatment for many chronic conditions.

However, the current payment and reimbursement system is not designed to support root-cause care, and the system may even penalize providers for disease remission (e.g., through reductions in patient panel risk scores). Payment model innovations could include compensation for lifestyle interventions such as nutrition counseling, group visits, and digital tools, as well as incentives based on patients' moving into disease remission and de-escalating medication use. Related, performance metrics could similarly be modified to include lifestyle improvement, quality of life, and patient activation. A metric such as health span—that is, the length of a patient's life in good health—should be the "north star" metric rather than point-in-time biomarkers such as Hemoglobin A1c (HbA1c) levels.

PTAC discussed the importance of ensuring that care models account for the multiple relevant stakeholders and that beneficiaries, caregivers, and the public derive value. One expert emphasized that strategies should be tailored to specific populations, including those who are more vulnerable, less educated, or older. Another expert expressed that incentives and new payment models are needed to promote innovation such as AI inclusion in value-based care. For example, reimbursement could be tied to measures of success in accomplishing a patient's care plan objectives, based on AI tools that can secure supporting documentation of that care from the source patient record. One Committee member noted the importance of ensuring that incentives focus on the responsible use of AI.

Committee members identified the need to address barriers to promoting patient empowerment in value-based care models. One approach is to increase the specificity and frequency of provider incentives. Experts also cited the need to address patient barriers, such as food and transportation issues, that can have substantial health care cost benefits by supporting patients' compliance with treatment plans. For example, without the means to obtain nutritious foods, patients cannot actively engage in the necessary dietary changes that can lead to improved health outcomes. Thus, concurrent consideration of other policies that may support the success of value-based care also is needed.

Update benefit design to promote patient empowerment. PTAC expressed that new incentives and changes to benefit design may be needed to encourage patient empowerment in value-based care. One approach is to ensure that patients' health care benefits cover items that patients can use to more actively engage in improving their own health. For example, one expert suggested that patients could be provided with no-cost access to health digital tools, such as wearables, blood pressure cuffs, digital scales, and other RPM tools to track and monitor various aspects of their health. Plans could view this as an investment in illness prevention rather than as a cost. Coordination to compensate for these tools through Flexible Spending Accounts (FSAs) and Health Savings Accounts (HSAs) also could be explored.

Another area suggested by experts where benefits could be designed to enhance patient empowerment and engagement is supplemental benefits, such as payment for transportation, food, over-the-counter (OTC) items, and other lifestyle management benefits. Such benefits have sometimes been treated by plans as marketing costs and used to attract patients, often healthier ones, to the plan. However, these costs could instead be managed as medical benefits and centered on the patient's treatment plan to cover the areas where they most need support to improve their health.

Use of a tool such as a smart card to administer these supplemental benefits, such as purchase of OTC vitamins, can reduce confusion about the patient's benefits and make it easier for them to access the care and products they need. Providers could be engaged in benefit design to ensure that targeted interventions for individual patients are covered through these supplemental benefits.

Committee members and experts identified the need to remove cost-sharing and co-insurance barriers to promote patient engagement. Copays discourage health care use, and low or no copays can be used to support patient engagement by encouraging use of low-cost and high-value health-promoting care, such as preventive care, care coordination services, and high-quality, efficient providers. One expert described an example where enrollment in a chronic care management (CCM) program increased significantly when copays were waived for patients receiving services, but enrollment declined again when the copay was reinstated. Copays can also be a barrier to therapeutic lifestyle change programs, such as group visits, which typically see a sharp drop-off after the first few visits due to ongoing copays for each visit.

Identify approaches to encourage providers to support data/health IT that empowers patients. Experts identified several important components needed to encourage providers to use data and health IT to empower their patients. First, trust is needed between providers and plans to encourage data sharing. This can be supported by ensuring that incentives are aligned between the parties and that timely payments are given to providers. Second, clinicians and IT should work as partners to determine the most appropriate data innovations to improve care. Third, data-based care models should be easy for clinicians to use—they should align with provider workflows, provide actionable insights, and minimize extraneous messaging.

PTAC and experts agreed that provider economics play an important role in where providers focus their efforts with patient care and APMs. To drive behavior change, it is important to deliver provider incentives close in time to actions, not a year or two after the fact. Further, misaligned incentives can produce sub-optimal outcomes. The current payment system has focused on payment for volume, that is, transactional, episodic interventions; rather, with the proliferation of chronic conditions, payment models should focus on the continuous and longitudinal patient-physician relationship. Even within value-based care initiatives, incentives have tended to focus on annual performance metrics; thus, providers may pay less attention to lifestyle interventions, which may take longer than the current performance year to yield observable health outcome improvements.

One issue that arises from the proliferation of health data collected, such as from siloed apps that report information from patient wearable devices, is how physicians should be reimbursed for their time reviewing this information outside of a patient office visit. The more time physicians spend analyzing patient data, the less time they have to spend on other aspects of patient care. Payment models should consider aligning provider incentives to account for the vast volume of data that providers face.

APPENDIX 1. COMMITTEE MEMBERS AND TERMS

Terry L. Mills Jr., MD, MMM, *Co-Chair*
Soujanya R. Pulluru, MD, *Co-Chair*

Term Expires October 2026

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Novant Health
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APPENDIX 2. CHARACTERISTICS OF SELECTED PTAC PFPM PROPOSALS IDENTIFIED RELEVANT TO USING DATA AND HEALTH INFORMATION TECHNOLOGY TO TRANSPARENTLY EMPOWER CONSUMERS AND SUPPORT PROVIDERS

Appendix Exhibit 2a. Key Value-Based Care Components of Selected PTAC PFPM Proposals That Describe Specific Strategies to Support Patient Choice

Proposal	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components
American Academy of Hospice and Palliative Medicine (AAHPM) *(Provider association/specialty society)* Patient and Caregiver Support for Serious Illness (PACSSI) Recommended for limited-scale testing, 3/26/2018	**Clinical Focus:** Serious illness and palliative care **Providers:** Palliative care teams (PCTs) **Setting:** Inpatient; outpatient; other palliative care settings **Patient Population:** Patients with serious illness	**Overall Model Design Features:** PACSSI proposes palliative care medical home services for high-need patients not yet eligible or not wanting hospice care. **Financial Methodology:** Monthly care management payments adjusted based on geographic location and site of care. There are two tracks: Track 1 – payment incentives, and Track 2 – shared savings and shared risk. **How Payment is Adjusted for Performance:** Payments would be adjusted based on performance on quality and spending. **Specific Strategies to Support Patient Choice:** PCTs would conduct several patient assessments (e.g., physical, social, cultural), identify patient goals, and develop coordinated care plans that include patient preferences in accordance with their identified goals. Further, PCTs would provide care to patients in their preferred settings (e.g., home).

Proposal	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components
Johns Hopkins School of Nursing and the Stanford Clinical Excellence Research Center (Hopkins/Stanford) *(Academic institution)* CAPABLE Provider Focused Model Recommended for testing as specified in PTAC comments, 9/6/19	**Clinical Focus:** Chronic conditions and functional limitations **Providers:** Interdisciplinary team of an occupational therapist, registered nurses, and a handy worker **Setting:** Home and community-based settings **Patient Population:** Medicare fee-for-service (FFS) beneficiaries with at least two chronic conditions and difficulty with at least one activity of daily living	**Overall Model Design Features:** A time-limited intervention performed by an interdisciplinary team to target specific functional goals, perform limited home repairs and modifications, and address common geriatric concerns. **Financial Methodology:** Partial bundled payment with partial upside, moving toward a fully capitated model of care. **How Payment is Adjusted for Performance:** A bonus for meeting quality metrics would be awarded. **Specific Strategies to Support Patient Choice:** Hopkins/Stanford proposes to identify patient goals, specifically goals for patients to reside at home in a safe capacity and with choice (e.g., patient sleeping on the second floor in their bed versus on the first floor on a couch).
Icahn School of Medicine at Mount Sinai (Mount Sinai) (*Academic institution*) "HaH-Plus" (Hospital at Home-Plus): Provider-Focused Payment Model Recommended for implementation, 9/17/2017	**Clinical Focus**: Inpatient services in the home setting **Providers**: Physicians and HaH-Plus providers, including nurse practitioners; registered nurses; social workers; physical, occupational, and speech therapists **Setting**: Patient homes **Patient Population**: Medicare FFS beneficiaries who have one of the 44 acute conditions	**Overall Model Design Features:** Multidisciplinary care for an acute care event to reduce complications and readmissions. **Financial Methodology**: Bundle payment covering the acute episode and an additional 30 days of transition services. Two components are in the payment model: 1) a new diagnosis-related group (DRG)-like HaH-Plus payment to substitute for the acute inpatient payment to the hospital and attending physician; and 2) the potential for a performance-based payment linked to the total Medicare spend for the entire HaH-Plus episode and the APM performance on quality metrics. **How Payment is Adjusted for Performance**: The APM entity's performance on quality metrics influences payment. **Specific Strategies to Support Patient Choice:** The proposal specifies that it would accommodate patient preferences, needs, and conditions.

Proposal	**Clinical Focus, Providers, Setting, Patient Population**	**Value-Based Care Components**
Personalized Recovery Care (PRC) (*Regional/local single specialty practice*) [Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home] Recommended for implementation, 3/26/2018	**Clinical Focus**: Inpatient services in the home setting or skilled nursing facility **Providers**: Admitting physicians at facilities receiving PRC payments; on-call physicians; recovery care coordinators **Setting**: Patient home or skilled nursing facility **Patient Population**: Commercial and Medicare Advantage patients with one of 150 acute conditions	**Overall Model Design Features:** This is a home hospitalization care model that proposes to provide inpatient hospitalization-level care and personalized recovery care (PRC) at home or a skilled nursing facility for patients with certain conditions through an episodic payment arrangement. **Financial Methodology**: Bundled episode-based payment not tied to an anchor admission, replacing FFS with shared risk. Bundled payment has two components: 1) risk payment for delivering care compared to the targeted cost of care; and 2) a per-episode payment made for care provided instead of an acute care hospitalization. **How Payment is Adjusted for Performance**: A portion of physician compensation is tied to quality metrics and outcomes. **Specific Strategies to Support Patient Choice:** It would provide a choice for the ill patient to receive care at home, as opposed to receiving care in the hospital, and would accommodate different patient characteristics and conditions.

Appendix Exhibit 2b. Key Value-Based Care Components of Selected PTAC PFPM Proposals That Describe Innovative Health Information Technology (Health IT) Approaches

Proposal	Clinical Focus, Providers, Setting, Patient Population	Value-Based Care Components
Hackensack Meridian Health and Cota, Inc. (HMH/Cota) *(Regional/local multispecialty practice or health system; Device/technology company)* Oncology Bundled Payment Program Using CNA-Guided Care Recommended for limited-scale testing, 9/8/2017	**Clinical Focus:** Oncology **Providers:** Clinicians with admitting privileges in the Hackensack Meridian Health (HMH) health system **Setting:** HMH health system that includes hospitals, home health, rehabilitation clinics, skilled nursing facilities, and mental health facilities **Patient Population:** Medicare patients with breast, colon, rectal, or lung cancer attributed to clinicians in the HMH health system	**Overall Model Design Features:** This is an oncology bundled payment model in which care choices are modulated by the prior outcomes of similar patients from real-world data. This process is called Cota Nodal Address (CNA)-guided care. **Financial Methodology:** Prospective payment is provided to HMH for patients participating in the model. HMH bears the risk of bundled payments and distributes payments to physicians. **How Payment is Adjusted for Performance:** Compensation is, in part, incentive-based and determined by the achievement of clinical quality and patient satisfaction outcomes. **Innovative Health IT Approaches:** HMH/Cota will ensure interoperability and standardization of EHRs by using one data system (Epic) across all providers. Further, HMH/Cota created a database to provide monthly cost of care and quality measure reports, and also has developed an innovative telemedicine program to improve communication between the patient and provider.

Proposal	**Clinical Focus, Providers, Setting, Patient Population**	**Value-Based Care Components**
Innovative Oncology Business Solutions, Inc. (IOBS) *(For-profit corporation)* Making Accountable Sustainable Oncology Networks (MASON) Referred for further development and Implementation, 12/10/2018	**Clinical Focus**: Oncology **Providers**: Oncologists, surgeons, primary care providers (PCPs), pathologists, radiologists **Setting**: Oncology practices **Patient Population**: Medicare FFS beneficiaries	**Overall Model Design Features**: Builds off the Community Oncology Medical Home (COME HOME) Innovation Center project. **Financial Methodology**: Determined by the oncology payment category (OPC), consisting of FFS payments for physician visits, imaging, lab, radiation therapy, surgery; infusion with a facility fee; ambulatory payment classifications (APCs) for hospital outpatient care; DRGs for inpatient care; and the patient-centered oncology payment (PCOP) for medical home infrastructure. **How Payment is Adjusted for Performance**: Two % of the OPC, which includes all expenses related to cancer care except drugs, is reserved for a quality pool. If quality measures are not met, the 2% is not rewarded. **Innovative Health IT Approaches:** All participants need to have advanced knowledge and use of EHRs as this would be necessary in order to create and update the OPCs; IOBS will also create dashboards to facilitate trusted decision support. The proposal also expresses the importance of data transparency and being able to access all data for a given patient.
The University of New Mexico Health Sciences Center (UNMHSC) (*Academic institution*) ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Emergencies Recommended for implementation, 9/16/2019	**Clinical Focus**: Cerebral emergency care; telemedicine **Providers**: Neurologists, neurosurgeons, and providers in rural and community systems **Setting**: Inpatient, outpatient, or emergency department **Patient Population**: Patients with neurological emergencies	**Overall Model Design Features**: Rural EDs can consult neurologists via teleconsultation and assess patients' condition when they present at the hospital ED. The model aims to reduce costs in hospital transfers and ambulatory medicine. **Financial Methodology**: Additional one-time payment without shared risk. **How Payment is Adjusted for Performance**: Performance is monitored but does not impact payment. **Innovative Health IT Approaches:** UNMHSC uses telemedicine delivery technology by NMXS, and all participants/sites use the same technology, ensuring consistency. UNMHSC will remain flexible to expansion in technology, such as phones or tablets. The proposal mentions that interoperability between the patient EHR and the remote neurologist could improve this model, but it is not a requirement.

APPENDIX 3. ADDITIONAL RESOURCES RELATED TO PTAC'S THEME-BASED DISCUSSION ON USING DATA AND HEALTH INFORMATION TECHNOLOGY TO TRANSPARENTLY EMPOWER CONSUMERS AND SUPPORT PROVIDERS

The following is a summary of additional resources related to PTAC's theme-based discussion on using data and health information technology to transparently empower consumers and support providers. These resources are publicly available on the ASPE PTAC website:

Environmental Scan

Environmental Scan on Using Data and Health Information Technology to Transparently Empower Consumers and Support Providers

Request for Input (RFI)

Using Data and Health Information Technology to Transparently Empower Consumers and Support Providers — Request for Input (RFI)

Materials from the Public Meetings

Materials from the Public Meeting on September 8, 2025

Presentation: Using Data and Health Information Technology to Transparently Empower Consumers and Support Providers — Preliminary Comments Development Team Findings

Presentation: Measures of Patient Empowerment for Medicare Beneficiaries: Evidence from the Patient Reported Indicators Survey (PaRIS)

Presentation: Session 1 Slides

Presentation: Session 2 Slides

Presentation: Session 3 Slides

Session Participants' Biographies

Session 1 Facilitation Guide

Session 2 Facilitation Guide

Session 3 Facilitation Guide

Materials from the Public Meeting on September 9, 2025

Presentation: Session 4 Slides

Presentation: Session 5 Slides

Session Participants' Biographies

Session 4 Facilitation Guide

Session 5 Facilitation Guide

Other Materials Related to the Public Meeting

Public Meeting Minutes

Public Meeting Transcripts

APPENDIX 4. SUMMARY OF PTAC COMMENTS ON USING DATA AND HEALTH INFORMATION TECHNOLOGY TO TRANSPARENTLY EMPOWER CONSUMERS AND SUPPORT PROVIDERS

The Committee members' specific comments from their discussion during the public meeting have been summarized in the following broad topic areas:

- Topic 1: Promoting Patient Access to and Use of Their Data;
- Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools;
- Topic 3: Supporting Shared Decision-Making Between Providers and Patients;
- Topic 4: Optimizing Use of Artificial Intelligence (AI); and
- Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers

Topic 1: Promoting Patient Access to and Use of Their Data	
1A	One Committee member emphasized the considerable amount of progress that has been made to make data more liquid and interoperable.
1B	The increase of liquid data may have the potential to drive innovation and competition to address barriers and increase agency over time.
1C	Person-centered health data apps can gather and consolidate information from multiple sources to improve patient empowerment and agency.
1D	The availability of data is leading to a Predictive, Personalized, Preventive (PPP) revolution in health. Data should accrue value for the groups that affect change, as well as for taxpayers and the people participating in the programs. One Committee member cautioned that different stakeholders may have different visions for data solutions.
1E	Regarding data interoperability, additional work is needed to understand what can be done with the data and how to make the data more presentable, understandable, and actionable.
1F	There are existing solutions that integrate, compile, and make available digitalized health care data. However, additional work is needed to put patient- and provider-level data into a digital format. There are many apps available that produce information, but the apps are not integrated, and some apps should not be integrated.
1G	Additional work is needed to understand how to use APIs to improve access. For example, Meaningful Use requirements could be enforced for API stacks rather than vendors.
1H	Data completeness is a critical component of data quality. For example, having only 60% of a patient's data will not provide a physician with a real view of the patient. It is critical to be able to quantify the amount of data available for a patient in the EHR at the point of care. Having a better understanding of data completeness is particularly important for electronic clinical quality measures (eCQMs).
1I	One Committee member expressed interest in federated identity given the high labor and operational needs for data.

Topic 1: Promoting Patient Access to and Use of Their Data	
1J	Identity management allows for patient consent that is seamless through multiple environments. This technology works and can be adopted today.
1K	The examples of federated identity methods described during the public meeting were in highly regulated, top-down systems. Additional work is needed to determine how to balance these methods with individualization.
1L	More work is needed to address portalitis. Health plans and systems should consider adopting federated identity, such as CLEAR or ID.me, to address this challenge.
1M	There is a large gap between data and how providers and patients understand the data. Additional work is needed to address barriers to improving the understandability of data.
1N	The most important choice a patient can make for their personal health care is selecting a health plan and provider. Additional work is needed to identify solutions that help patients understand the large amount of quality and cost data to make informed choices about providers.
1O	One Committee member emphasized the importance of using the data that are already available but in a more effective way.
1P	Black box solutions should be avoided. Transparency and safeguarding people in the use of data are important. Data presented to patients should be understandable.
1Q	Studying gamification could generate insights on how to address the challenge of digitalizing data at the patient and provider interface.
1R	One Committee member was encouraged by the solutions available that make a large amount of data more actionable at the point of care.
1S	There is a need to build guardrails into the system to ensure that disparities are not created in benefits or outcomes or used to deny payment for activities that deserve payment.
1T	Guardrails will be needed to ensure that data are not used to deny payment or suggest that a metric was not made.
1U	It remains unclear how empowering consumers and supporting providers with data and health information will be paid for. There is little evidence showing a link between empowering patients with data to health outcomes.
1V	Empowering and activating patients without making them accountable in their own health care might be insufficient in the transition to TCOC models. There is little evidence showing that empowering patients impacts outcomes, particularly in the Medicare population and the seriously ill population that drives a large amount of Medicare spending. Additional research is needed to develop an evidence base showing that patient empowerment and engagement improve quality and cost outcomes. There may be opportunities for the CMS Innovation Center to embed these technologies into payment models to achieve desired outcomes.
1W	Many tools and a large amount of data are about to be introduced in health care. There is a need to determine how to measure success without introducing more process measures that would add to burden related to reporting and documentation.
1X	Patient engagement is necessary but not wholly sufficient to transform the health care system. For patient engagement to be effective, patients need agency and the ability to make choices. Even if patients have information, there are still limitations in what they can choose, such as selecting networks or procedures.

Topic 2: Leveraging Data from Patient Wearables and Other Digital Health Tools	
2A	There is a new convergence in data between health care and retail products. For example, patient-facing data come out of health care while companies such as ŌURA have patient data that move into health care.
2B	One Committee member questioned whether companies that develop innovations will drive competition and innovation and determine what is best for the patient or consumer.
2C	When wearables and digital tools demonstrate improved clinical outcomes, the tools should be available to all populations, including Medicare, MA, and Medicaid populations, and not solely available to self-pay and commercial populations.
2D	One Committee member expressed concern about the potential for data to be used against an entity for the purpose of payment in value-based care. As wearables and other tools increase the amount of information available, additional work is needed to understand how the data might be used in adverse ways.
2E	In addition to aggregating and creating bundles of data, companies that develop wearables and AI tools should consider showing that the tools improve outcomes. There will be lessons learned from entities assuming risk and adopting wearables or other AI tools. These lessons learned could provide insights on potential improvements gained by wearables or other AI tools and how they may translate to other FFS or payment methodologies.
2F	Some MA plans may be willing to pay for digital tools. Payment for these tools by MA plans could help to validate the tools and link the tools to improved outcomes.

Topic 3: Supporting Shared Decision-Making Between Providers and Patients	
3A	One Committee member noted a lack of discussion on the interaction between PCPs and specialists engaged in shared decision-making with patients. Primary care is fragmented, and glucagon-like peptide-1 (GLP-1) inhibitors have contributed to this fragmentation. The interaction between primary and specialty care is an important component of care to consider when designing value-based care models.

Topic 4: Optimizing Use of Artificial Intelligence (AI)	
4A	AI holds the most promise in health care because it has the computational power necessary to tie in data sets. AI has the ability for personalization, such as through care management platforms. Personalization allows for the delivery of human-based care.
4B	AI should be made more human in value-based care. AI could make anticipatory care management more automated and less labor-intensive.
4C	Personalization must be balanced with speed, safety, novelty, and equity.
4D	There is potential to improve the use of data to better support providers. AI has demonstrated how rapidly technology is changing the practice of medicine.
4E	Using AI, different platforms can work with legacy platforms to assist providers with making better clinical decisions at the point of care.

Topic 4: Optimizing Use of Artificial Intelligence (AI)	
4F	Communication between care coordinators and managers with providers remains a challenge. There is an opportunity to leverage ambient recording to generate AI solutions to support care management.
4G	Care teams (e.g., nurses, social workers, care managers) work in the middle layer between the patient and physician to provide care coordination management. The care team is an important part in the process.
4H	It will be important to involve more team members and leverage AI to support care coordination.
4I	One Committee member expressed interest in the AI applications possible in physician reimbursement models. More exploration is needed to understand the possibilities of using non-traditional providers to develop AI models.
4J	Innovation should be purpose-driven. Data and technology must serve the public interest. Value for taxpayers, beneficiaries, and public programs should take precedence over enriching private interest.
4K	There is the potential of prediction in AI. However, at an aggregate level, some use case benefits may be overstated, monitoring is often limited, and there are potential unintended consequences of the technology.
4L	Innovations in AI are advancing at a pace that regulatory compliance and legal frameworks cannot keep up with. There are opportunities for CMS—through regulatory powers, waivers, and/or model design—to offer safe harbors for use of AI tools that drive value and lower costs, potentially through the Medicare Shared Savings Program (MSSP). If a tool increases value and quality of care, the tool should become the expectation.

Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers	
5A	There is a need for innovation and exploration to understand how to make markets work within policy and regulatory frameworks. Value should be accrued back to publicly administered programs and the beneficiaries and caregivers who pay into and benefit from the programs, such as Medicare and Medicaid.
5B	There are opportunities to responsibly test and incentivize AI to improve care coordination and create more capacity for the health care system.
5C	System solutions are needed rather than point solutions with different levels to consider, such as point data solutions and platform data solutions. Data themselves do not mean care delivery reform or reimbursement; there is a larger system to consider.
5D	Individualization is important. However, the Committee members are focused on payment models that can help full populations, not individual people.
5E	Additional work is needed to identify real, scalable solutions.
5F	One Committee member recommended increasing the frequency and specificity of incentives to change certain behaviors in regard to data in value-based care.

Topic 5: Using Alternative Payment Models and Other Incentives to Empower Patients and Support Providers	
5G	Some barriers that can be relatively simple to address continue to hinder value-based care and patient empowerment and engagement. The Committee members should consider identifying these barriers and discussing solutions to address the barriers, such as through waivers or benefit design improvements.
5H	There has been progress in increasing the amount of patient-mediated interoperability and data sharing, such as patients initiating queries and requests. There is a need to identify additional ways to encourage more liquidity in data, such as through benefit design or incentives.
5I	In the context of new tools and AI, there are cost sharing and co-insurance barriers for care coordination. There may be opportunities for waivers and existing programs to remove these barriers.
5J	Proactive care solutions should be considered first dollar coverage and not incur a copay, potentially through a waiver for the Chronic Care Management (CCM) and Transitional Care Management (TCM) codes.
5K	Organizations such as Harbor Health use data to help patients make the right choices, such as directing patients to higher quality and more efficient providers through the use of low or no copays.
5L	There are economics of change. Silos are not only technical, but they also reflect business models and structures. Breaking down these silos has consequences that should be managed.
5M	Although having more liquid data can drive improvements, having more data also requires more time, energy, and changes to workflows. Devoting more time to managing data can result in having less time to devote elsewhere. In the context of payment models, there are trade-offs between balancing fiscal responsibility with access, engagement, and high-quality care.
5N	Consideration should be given to ensure that payment aligns with the volume of data that PCPs will need to manage. While the goal is to shift toward TCOC payment models, interim solutions are needed to avoid overburdening the primary care workforce with data.
5O	Additional work is needed to determine how to reimburse physicians for interpreting and using the large volume of data produced by digital tools.

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