

# Physician-Focused Payment Model Technical Advisory Committee

## Committee Members

Lauran Hardin, MSN, FAAN,  
*Co-Chair*

Angelo Sinopoli, MD, *Co-Chair*

Lindsay K. Botsford, MD, MBA

Jay S. Feldstein, DO

Lawrence R. Kosinski, MD, MBA

Joshua M. Liao, MD, MSc

Walter Lin, MD, MBA

Terry L. Mills Jr., MD, MMM

Soujanya R. Pulluru, MD

James Walton, DO, MBA

Jennifer L. Wiler, MD, MBA

June 15, 2024

Xavier Becerra, Secretary  
U.S. Department of Health and Human Services  
200 Independence Avenue, SW  
Washington, DC 20201

Dear Secretary Becerra:

On behalf of the Physician-Focused Payment Model Technical Advisory Committee (PTAC), we are pleased to submit PTAC's report on Encouraging Rural Participation in Population-Based Total Cost of Care (PB-TCOC) Models. 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.

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. In some cases, the importance of an emerging topic may lead PTAC to consider how proposals the Committee has reviewed in the past may inform that emerging topic. For example, PTAC may wish to assess information in previously submitted proposals and other sources that could serve to further inform the Secretary, as well as PTAC itself on these topics. This is the case regarding the topic of rural participation in population-based total cost of care (PB-TCOC) models.

From 2016 to 2020, PTAC received 35 proposals for 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 specialty integration and managing care transitions. A key theme that emerged from these meetings related to the challenges that rural providers face in participating in

APMs and population-based models. Additionally, at least 11 of the proposals that have been submitted to PTAC included or targeted rural participants in their proposed model design.

For this reason, PTAC now sees value in further exploring elements in previously submitted proposals related to this topic, along with current information on encouraging rural participation in PB-TCOC models. To ensure that the Committee was fully informed, the Committee conducted a theme-based discussion on this topic during PTAC's two-day September 2023 public meeting. The theme-based discussion included an overview presentation by PTAC members; listening session presentations by previous submitters and other subject matter experts (SMEs) related to the challenges facing rural patients and providers, as well as opportunities for increasing rural health participation in PB-TCOC models. 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 addressing rural health challenges and encouraging rural participation in value-based care and PB-TCOC models. The information that PTAC has gleaned from a review of previous PFPM proposals and other literature that addresses 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's comments, which are summarized in the following broad topic areas in this report:

- Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities;
- Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care;
- Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care;
- Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas; and
- Topic 5: Addressing Social Determinants of Health for Patients in Rural Areas.

Key highlights include:

- Rural communities, patients and providers experience a variety of challenges that affect health outcomes.
  - Compared to non-rural counties, rural areas tend to have residents with lower incomes and health insurance rates; lower health literacy and educational attainment; higher age-adjusted mortality rates; fewer primary care providers, specialists, and ancillary providers; and reduced access to broadband and health information technology (HIT).

- There tend to be fewer primary care providers (PCPs) and specialists, ancillary service providers, and behavioral health providers in rural counties when compared with non-rural counties. Workforce shortages in rural areas can result in limited access to health care providers and greater rates of provider burnout, and these access issues may be worse in super-rural or frontier areas. The risk of more rural hospital closures places further risk on rural health ecosystems.
- Rural patients also experience more travel-related challenges to access health care, including poorer road infrastructure, as well as greater distances between where residents live and their health care providers.
- There are a variety of challenges that affect rural providers' ability to participate in value-based care.
  - Rural providers often lack the capital to invest in technology infrastructure, which can impact rural providers' participation and transition into APMs, including gathering and reporting reliable performance data.
  - There are several technical challenges that affect rural providers' participation in APMs, including: low patient volume in rural areas; challenges regarding patient attribution in rural areas; innovation fatigue; challenges in reporting performance measures in rural areas; and hesitancy among rural providers regarding the value of participating in APMs.
  - Additionally, the share of eligible rural beneficiaries enrolled in Medicare Advantage (MA) plans has nearly quadrupled since 2010, which can affect the number of rural beneficiaries that are available to participate in Medicare APMs and PB-TCOC models.
- Increasing rural participation in value-based care and PB-TCOC models provides an opportunity to increase the availability of consistent, sustainable funding streams through capitation and upfront payments.
- However, while value-based care often focuses on improving quality while reducing spending, achieving value in rural areas may require increasing spending.
- Increasing rural provider participation in APMs and PB-TCOC models requires development of a sustainable glidepath to value-based care that includes a multi-payer approach and a longer glidepath for taking on risk in rural areas.
- Additionally, based on insights from the various subject matter experts that participated in the public meeting, the Committee understands that effectively implementing PB-TCOC models in rural areas will also require some important supporting policies to assist in addressing the urgent challenges affecting rural communities, patients and health care providers. Implementing these supporting policies is likely to require a multi-

pronged approach that would seek to improve rural infrastructure, increase and enhance sustainable funding, enhance recruitment and training of rural health physicians and providers, increase community health organization capacity, and address health disparities – which could be characterized as a rural “moonshot” initiative.

- There is a need to improve the health technology infrastructure in rural communities to support data sharing, telehealth, and remote monitoring.
- Partnerships among rural health providers, facilities, and community organizations are important to foster a strong rural health ecosystem.
- Regionalization provides an opportunity to ensure that patients are able to receive certain services in their community while facilitating coordination with providers located outside of the community.
- Increasing the availability of community resources is important for addressing SDOH.

In addition to summarizing the Committee’s findings and comments related to these topics, the report also identifies areas where additional research is needed, issues for policy makers, and some potential next steps.

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,

//Lauran Hardin//

Lauran Hardin, MSN, FAAN  
Co-Chair

//Angelo Sinopoli//

Angelo Sinopoli, MD  
Co-Chair

Attachment

**REPORT TO THE SECRETARY OF HEALTH  
AND HUMAN SERVICES**

---

*Encouraging Rural Participation in Population-Based Total Cost of Care  
(PB-TCOC) Models*

JUNE 15, 2024

## 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 eleven of these proposals included or targeted rural participants in their proposed model design, PTAC now sees value in reviewing these elements in previously submitted proposals related to this topic, along with current information on rural providers in population-based models. To ensure that the Committee was fully informed, PTAC's September 2023 public meeting included a theme-based discussion on encouraging rural participation in PB-TCOC models.

This report summarizes PTAC's findings and comments regarding addressing rural health challenges and encouraging rural participation in APMs and population-based models. This report also includes: 1) areas where additional research is needed and some potential next steps; 2) a summary of the characteristics related to rural health from proposals that have previously been submitted to PTAC; 3) an overview of key issues relating to rural health and value-based care transformation; and 4) 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.

## Table of Contents

<b>REPORT TO THE SECRETARY OF HEALTH AND HUMAN SERVICES .....</b>	<b>i</b>
<b>SUMMARY STATEMENT .....</b>	<b>1</b>
<b>I. PTAC REVIEW OF RURAL PARTICIPATION IN POPULATION-BASED TOTAL COST OF CARE (PB-TCOC) MODELS .....</b>	<b>3</b>
<b>II. BACKGROUND: DEFINITIONS AND CONTEXT RELATED TO RURAL HEALTH.....</b>	<b>4</b>
<b>III. CHARACTERISTICS OF PTAC PROPOSALS THAT INCLUDED OR TARGETED RURAL POPULATIONS .....</b>	<b>6</b>
<b>IV. CHALLENGES FACING RURAL COMMUNITIES AND PROVIDERS .....</b>	<b>7</b>
IV.A. Differences in Rural Definitions .....	8
IV.B Understanding Access Challenges and Health Disparities in Rural Areas .....	9
IV.C. Supporting Rural Hospitals and Health Care Ecosystems.....	10
IV.D. Addressing Social Determinants of Health in Rural Areas .....	10
IV.E. Understanding Medicare Advantage and Rural Health Care Challenges .....	11
IV.F. Addressing Medical and Non-Medical Workforce Challenges in Rural Areas .....	11
IV.G. Addressing Infrastructure, Technology, and Data Challenges for Rural Providers.....	11
IV.H. Addressing Technical Challenges Related to Rural Providers Participating in Alternative Payment Models .....	13
<b>V. APPROACHES FOR ADDRESSING RURAL HEALTH CHALLENGES.....</b>	<b>14</b>
V.A. Developing a Multipronged Approach for Addressing Rural Health Care Challenges.....	14
V.B. Addressing Rural Health Workforce Shortages .....	15
V.C. Supporting Team-Based Care, Collaborations, and Partnerships in Rural Health .....	16
V.D. Addressing Social Determinants of Health in Rural Areas and Value-Based Care.....	18
V.E. Building Technology and Data Capacity in Rural Areas and Value-Based Care .....	18
<b>VI. COMMENTS FOR CONSIDERATION BY THE SECRETARY .....</b>	<b>19</b>
VI.A. Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities.....	20
VI.B. Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care ...	22
VI.C. Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care .....	25
VI.D. Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas .....	29
VI.E. Topic 5: Addressing Social Determinants of Health for Residents in Rural Areas.....	29
<b>APPENDIX 1. COMMITTEE MEMBERS AND TERMS .....</b>	<b>32</b>
<b>APPENDIX 2. CHARACTERISTICS OF SELECTED PTAC PFPM PROPOSALS THAT INCLUDED OR TARGETED RURAL POPULATIONS AND PROVIDERS.....</b>	<b>33</b>
<b>APPENDIX 3. ADDITIONAL RESOURCES RELATED TO PTAC’S THEME-BASED DISCUSSIONS ON ENCOURAGING RURAL PARTICIPATION IN POPULATION-BASED TOTAL COST OF CARE (PB-TCOC) MODELS .....</b>	<b>40</b>

**APPENDIX 4. SUMMARY OF PTAC COMMENTS ON ECOURAGING RURAL PARTICIPATION IN  
POPULATION-BASED TOTAL COST OF CARE (PB-TCOC) MODELS ..... 41**  
**REFERENCES..... 44**



## SUMMARY STATEMENT

From 2016 to 2020, PTAC received 35 proposals for PFPs 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 specialty integration and managing care transitions. A key theme that emerged from these meetings related to the challenges that rural providers face in participating APMs and population-based models. Additionally, at least 11 of the proposals that have been submitted to PTAC included or targeted rural participants in their proposed model design (see Appendix 2 for a summary of the 11 proposals).

For this reason, PTAC now sees value in further exploring elements in previously submitted proposals related to this topic, along with current information on encouraging rural participation in PB-TCOC models. To ensure that the Committee was fully informed, the Committee conducted a theme-based discussion on this topic during PTAC's two-day September 2023 public meeting. The theme-based discussion included an overview presentation by PTAC members; listening session presentations by previous submitters and other subject matter experts (SMEs) related to the challenges facing rural patients and providers, as well as opportunities for increasing rural health participation in PB-TCOC models. PTAC also requested public input during the meeting and through a Request for Input (RFI).

This report provides PTAC's findings valuable information on best practices for addressing rural health challenges and encouraging rural participation in value-based care and PB-TCOC models. The information that PTAC has gleaned from a review of previous PFP 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's comments, which are summarized in the following broad topic areas in this report:

- Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities;
- Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care;
- Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care;
- Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas; and

- Topic 5: Addressing Social Determinants of Health for Patients in Rural Areas.

Key highlights include:

- Rural communities, patients and providers experience a variety of challenges that affect health outcomes.
  - Compared to non-rural counties, rural areas tend to have residents with lower incomes and health insurance rates; lower health literacy and educational attainment; higher age-adjusted mortality rates; fewer primary care providers, specialists, and ancillary providers; and reduced access to broadband and health information technology (HIT).
  - There tend to be fewer primary care providers (PCPs) and specialists, ancillary service providers, and behavioral health providers in rural counties when compared with non-rural counties. Workforce shortages in rural areas can result in limited access to health care providers and greater rates of provider burnout, and these access issues may be worse in super-rural or frontier areas. The risk of more rural hospital closures places further risk on rural health ecosystems.
  - Rural patients also experience more travel-related challenges to access health care, including poorer road infrastructure, as well as greater distances between where residents live and their health care providers.
- There are a variety of challenges that affect rural providers' ability to participate in value-based care.
  - Rural providers often lack the capital to invest in technology infrastructure, which can impact rural providers' participation and transition into APMs, including gathering and reporting reliable performance data.
  - There are several technical challenges that affect rural providers' participation in APMs, including: low patient volume in rural areas; challenges regarding patient attribution in rural areas; innovation fatigue; challenges in reporting performance measures in rural areas; and hesitancy among rural providers regarding the value of participating in APMs.
  - Additionally, the share of eligible rural beneficiaries enrolled in Medicare Advantage (MA) plans has nearly quadrupled since 2010, which can affect the number of rural beneficiaries that are available to participate in Medicare APMs and PB-TCOC models.
- Increasing rural participation in value-based care and PB-TCOC models provides an opportunity to increase the availability of consistent, sustainable funding streams through capitation and upfront payments.

- However, while value-based care often focuses on improving quality while reducing spending, achieving value in rural areas may result in increased spending.
- Increasing rural provider participation in APMs and PB-TCOC models requires development of a sustainable glidepath to value-based care that includes a multi-payer approach and a longer glidepath for taking on risk in rural areas.
- Additionally, based on insights from the various subject matter experts that participated in the public meeting, the Committee understands that effectively implementing PB-TCOC models in rural areas will also require some important supporting policies to assist in addressing the urgent challenges affecting rural communities, patients and health care providers is likely to require a multi-pronged approach that would seek to improve rural infrastructure, increase and enhance sustainable funding, enhance recruitment and training of rural health physicians and providers, increase community health organization capacity, and address health disparities – which could be characterized as a rural “moonshot” initiative.
  - There is a need to improve the health technology infrastructure in rural communities to support data sharing, telehealth, and remote monitoring.
  - Partnerships among rural health providers, facilities, and community organizations are important to foster a strong rural health ecosystem.
  - Regionalization provides an opportunity to ensure that patients are able to receive certain services in their community while facilitating coordination with providers located outside of the community.
  - Increasing the availability of community resources is important for addressing SDOH.

In addition to summarizing the Committee’s findings and comments related to these topics, the report also identifies areas where additional research is needed, issues for policy makers, and some potential next steps.

## **I. PTAC REVIEW OF RURAL PARTICIPATION IN POPULATION-BASED TOTAL COST OF CARE (PB-TCOC) MODELS**

In developing the comments in this report, PTAC considered information from the theme-based discussion during the September 2023 public meeting and an environmental scan developed to provide information on Rural Participation in Population-Based Total Cost of Care (PB-TCOC) Models. PTAC also considered analysis that was conducted to assess differences in selected indicators of access to health care, utilization of services, and provider supply between rural and non-rural counties, nationally and by region.

PTAC formed a Preliminary Comments Development Team (PCDT) for the September 2023 theme-based discussion, which was comprised of Jay Feldstein, DO (Lead); James Walton, DO, MBA; and Joshua Liao, MD, MSc (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 also included panel discussions with stakeholders from five organizations who previously submitted physician-focused payment model (PFPM) proposals with rural components, perspectives from a diverse group of subject matter experts (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).

The Committee synthesized information from PTAC proposals, the environmental scan, the Request for Input (RFI), and panel discussions with SMEs and previous submitters at the September 2023 public meeting on encouraging rural participation in PB-TCOC models. This RTS provides an overview of challenges affecting rural communities and providers, approaches for addressing these challenges, and PTAC's comments for the Secretary, which are organized in five topics:

- Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities;
- Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care;
- Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care;
- Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas; and
- Topic 5: Addressing Social Determinants of Health for Patients in Rural Areas.

The remaining sections of this report provide information on the definition of rural health used to inform the theme-based discussion materials; a summary of the characteristics of proposals that were previously submitted to PTAC with components relevant to rural health (see Appendix 2); an overview of challenges related to rural health; a summary of potential approaches to address challenges in rural health; and a summary of PTAC's findings and comments, as well as areas where additional research is needed and potential next steps. Appendix 3 provides a list of additional resources related to PTAC's rural health theme-based discussion that are available on the Assistant Secretary for Planning and Evaluation (ASPE) PTAC website.

## **II. BACKGROUND: DEFINITIONS AND CONTEXT RELATED TO RURAL HEALTH**

There are a variety of definitions that are used for determining what constitutes a rural area that are used for different purposes. The criteria used to identify rural areas include geography, population size, population density, proximity to metropolitan areas, and geographic remoteness. The most remote areas that are sparsely populated and geographically isolated from population centers and services are often categorized as “frontier” areas. Frontier areas may face different challenges with health care access compared to other rural areas.<sup>1</sup>

PTAC is using the following working definition of “rural area” as a starting point:

- The Office of Management and Budget (OMB) identifies metropolitan areas as counties with 50,000 or more people, and rural areas as counties with fewer than 50,000 people.
- The U. S. Department of Agriculture (USDA)’s Rural-Urban Continuum Codes (RUCC) can be used to further identify differences in rural counties based on population size and proximity to metropolitan areas.

PTAC is using the following working definition of “rural patients”:

- A rural patient is a patient residing in a rural area.

Additionally, PTAC is using the following working definition of “rural providers”:

- Rural providers are providers, including independent practitioners and other types of providers, that are physically located in rural areas.
- Additionally, PTAC is aware that some rural communities have access to providers that are located in urban or suburban communities.

These definitions will likely evolve as the Committee collects additional information from stakeholders.

Rural providers differ in the services that they offer, and in statutory requirements. Some rural providers have special payment rates and methodologies created by statute. Rural providers may also have different resources depending on their relationship with a nearby hospital or integrated delivery system.

Rural providers include Critical Access Hospitals (CAHs), Federally Qualified Health Centers (FQHCs), Rural Health Clinics (RHCs), Medicare-dependent hospitals, and Rural Emergency Hospitals (REHs). Other types of providers serving rural areas may include independent practices that are not hospital-affiliated, independent practices that are hospital-subsidized, hospital-owned practices, Medicare-Dependent Hospitals, integrated delivery networks, mobile clinics, Sole Community Hospitals, freestanding emergency departments (FSEDs), Accountable Care Organizations (ACOs), pharmacists, and behavioral health offices or clinics.

### III. CHARACTERISTICS OF PTAC PROPOSALS THAT INCLUDED OR TARGETED RURAL POPULATIONS

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.<sup>i</sup> At least eleven of these proposals included or targeted rural populations and participants in their proposed model design. Specifically, eight PFPM proposals included rural health care providers in their model design; two PFPM proposals specifically targeted rural health care providers in their model design; and one proposal focused on rural providers. Many of the proposals that have been submitted to PTAC included several activities that may be effective in engaging rural providers. Some PTAC proposed models provided financial incentives for small practices, addressed availability of telehealth services and in-home medical care, or included strategies to reduce hospital readmissions and return ED visits.

The PTAC proposals that included or targeted rural providers are diverse in their specialties and the patient populations that they serve. Of the 11 proposals that included or targeted rural populations and participants, six of the proposals focused on primary care (including family medicine, general practice, geriatric medicine, pediatric medicine, and internal medicine), and one proposal addressed palliative care. Two proposals included ED physicians, including one proposal which indicated that the proposed PFPM could be extended to rural hospitals and CAHs. Additionally, two proposals included specialists or specialty practices, including specialists in single or multispecialty practices and nephrologists. For example, the Renal Physicians Association (RPA) proposal included nephrologists and nephrology groups irrespective of size or rurality.

Common care delivery innovations included engaging non-physician providers (six proposals; e.g., physician assistants, nurse practitioners, clinical nurse specialists, clinical social workers, and care coordinators). Several proposals included care delivery innovations that were specific to the proposed PFPM. One proposal noted that both physicians who were employed or independent were eligible for the proposed PFPM. Another proposal was specifically designed to be accessible to rural providers who may not be able to participate in models with a higher level of risk. A third proposal included flexibilities for rural providers to develop their provider networks under the model over a longer period of time, providing a longer "on-ramp" to full participation. Additionally, two proposals engaged rural providers by expanding care networks or forming new entities.

Five of the proposals implemented or leveraged telehealth to increase access and extend service availability to patients in rural and/or underserved communities. For example, the Avera Health (Avera) proposal used telemedicine to extend the geographic range of provider

---

<sup>i</sup> The 35 proposals submitted to PTAC represent an unduplicated count (i.e., proposals with multiple submissions are counted only once) of the number of proposals; 28 proposals were voted and deliberated on by the Committee, and seven proposals were withdrawn by submitters prior to deliberation (including one proposal that was withdrawn prior to any review by the Committee).

expertise. This proposal also noted that there are several federal grant programs that can provide financial assistance to rural practices to implement telemedicine infrastructure. Meanwhile, the Icahn School of Medicine at Mount Sinai (Mt. Sinai) proposal leveraged telehealth to provide inpatient level of care to patients in their homes. Additionally, the University of New Mexico Health Sciences Center (UNMHSC) proposal uses telehealth to connect neurologists and neurosurgeons to ED physicians in medically underserved and rural areas to provide consultations on cerebral emergent care.

All 11 of the proposals that included or targeted rural populations and participants also included performance measures relevant to rural health care, including hospital inpatient readmissions and/or ED revisits (five proposals), hospital inpatient and ED utilization (three proposals), medication documentation and/or reconciliation (three proposals), screenings (two proposals), and patient experience (two proposals).

Less than half (four) of the 11 proposals included financial incentives that could encourage rural provider participation in the PFPM. These incentives included up-front payments to support patient-centered care delivery and performance-based payments with no downside risk.

See Appendix 2 for additional information about the 11 proposals that included or targeted rural populations.

#### **IV. CHALLENGES FACING RURAL COMMUNITIES AND PROVIDERS**

During the public meeting, the subject matter experts and Committee members discussed many challenges specific to rural health care. These challenges make it difficult for rural providers to participate in APMs, resulting in lower participation rates when compared with non-rural providers. In 2019, 11.9 percent of providers in rural and Health Professional Shortage Areas (HPSAs) participated in advanced APMs (AAPMs) compared to 14.8 percent of providers in other areas.<sup>2</sup> Physicians participating in AAPMs in rural areas were most commonly in primary care specialties (e.g., family practice, internal medicine).<sup>3</sup> The challenges that affect rural communities, rural providers, and rural participation in APMs include:

- Differences in Rural Definitions;
- Understanding Access Challenges and Disparities in Rural Areas;
- Supporting Rural Hospitals and Health Care Ecosystems;
- Addressing Social Determinants of Health in Rural Areas;
- Understanding Medicare Advantage and Rural Health Care Challenges;
- Addressing Medical and Non-Medical Workforce Challenges in Rural Areas;

- Addressing Infrastructure, Technology, and Data Challenges for Rural Providers; and
- Addressing Technical Challenges Related to Rural Providers Participating in Alternative Payment Models.

#### **IV.A. Differences in Rural Definitions**

Panelists and Committee members discussed the varying definitions and interpretations of rural areas and rural providers, which may complicate efforts to address challenges in rural health care.

There are a variety of definitions and interpretations used in grants, research, and public policy to determine what constitutes a rural area. The criteria used to identify rural areas can include population size and density, proximity to a metropolitan area, geography, and geographic remoteness. For example, whereas the Office of Management and Budget (OMB) identifies metropolitan areas as counties with 50,000 or more people and rural areas as counties with fewer than 50,000 people,<sup>4</sup> the U.S. Census Bureau designates rural areas as those areas where the whole population, all housing, and all territory is outside of an urban area, and that encompass at least 2,000 housing units or have a population of at least 5,000 people.<sup>5</sup> In addition, there are different types of rural areas. As noted by the U.S. Census Bureau, super-rural areas are in the bottom quartile of non-metropolitan ZIP codes by population density<sup>6</sup>, and remote or frontier areas are the most geographically isolated and sparsely populated.<sup>7</sup> The National Rural Health Association recommends using definitions of rural that are specific to the purpose of any given program, and refers to “programmatic designations” rather than a common definition that is expected to work for all purposes.

Rural providers typically include independent practitioners and other providers physically located in rural areas. People residing in some rural areas, however, also have access to providers who are located in urban or suburban communities.

There can be substantial diversity in the conditions in which different provider types function. Whereas Critical Access Hospitals (CAHs) provide 24-hour emergency care services, Rural Health Clinics (RHCs) may provide only a particular set of primary care services.<sup>8,9</sup> Moreover, payment to rural providers with different designations may vary and are often governed by statute. For example, RHCs and CAHs are not paid by service codes and, therefore, may not be as accustomed to coding and billing as non-rural providers. One theme-based discussion panelist suggested that issues facing rural areas such as those related to resources, finances, and logistics can vary depending on their distance from health care services. Thus, effective ways to deliver care vary by rural area and provider type, and the successful use of financial incentives in paying to providers will also vary.

One panelist discussed the distinction between rural and frontier areas, particularly as it relates to commute time. The panelist noted that, in rural areas, a patient might have a hospital and



access to specialty care within an hour's commute, whereas patients in frontier areas may have to drive two or more hours to the nearest specialist or hospital.

#### **IV.B Understanding Access Challenges and Health Disparities in Rural Areas**

Stakeholders described the significance of health care challenges in rural areas, including:

- Access challenges in rural areas;
- Disparities in urban and rural health; and
- Underfunding of primary care in rural areas.

**Access challenges in rural areas.** Rural health care providers face challenges with addressing the needs of the complex patient population in rural settings. There tend to be fewer PCPs and specialists in rural compared to non-rural counties; per 100,000 people, rural areas have 37.9 PCPs and 46.5 specialists on average, whereas urban areas have 52.9 PCPs and 146.4 specialists on average.<sup>10</sup> Rural areas also face a shortage of ancillary service providers, such as ambulance services, home health providers, dialysis services, and ambulatory surgery centers.

The availability of some types of health care services may also vary depending on the type of rural area. For example, super-rural, remote, and frontier areas may have even fewer behavioral health providers compared to other rural areas. This is a particularly salient issue as residents living in super-rural, remote, and frontier areas tend to report higher rates of substance use than their rural and urban counterparts.<sup>11</sup>

**Disparities in urban and rural health.** There are a number of economic, social, and environmental challenges faced by rural health care systems, providers, and patients. Compared to non-rural counties, rural counties tend to be lower income, have a greater uninsured population, have residents with lower health literacy and educational attainment, have reduced access to broadband and health information technology (HIT), and have limited transportation options.<sup>12,13,14</sup> Americans living in rural areas are more likely to live below the poverty level, and the per capita income in rural areas is \$9,242 lower than the average per capita income in the U.S.<sup>15</sup> Compared to non-rural residents, residents of rural areas tend to be older; 17.5 percent of the rural population is over the age of 65, compared to 13.8 percent in urban areas.<sup>16</sup> Rural residents also experience higher rates of obesity, substance use disorder, and chronic disease, compared to non-rural residents.<sup>17,18,19,20</sup>

There are also disparities in outcomes between rural and urban patients. Challenges faced by rural residents have contributed to higher age-adjusted mortality rates among rural compared to non-rural counties.<sup>21</sup> Life expectancy for rural residents declined 0.2 years for women and 0.3 years for men between 2010 and 2019, whereas life expectancy for non-rural residents increased 0.6 years for women and 0.3 years for men.<sup>22</sup>

**Underfunding of primary care in rural areas.** Several panelists and Committee members indicated that primary care is underfunded in rural areas and suggested that a greater

percentage of the overall spending on health care should go to primary care, particularly in rural settings. Primary care often includes care for social and environmental needs, as well as physical needs, and is therefore vital to improving the health of rural residents.

#### **IV.C. Supporting Rural Hospitals and Health Care Ecosystems**

Panelists and Committee members discussed several issues related to the importance of rural hospitals, threats to their financial well-being, and policy efforts to support them. Although they are typically small, rural hospitals are important centers of health care in rural areas. Rural hospitals employ most of the primary care and specialist physicians in many rural communities and are therefore crucial to recruiting and retaining PCPs and specialists who offer services to rural residents. Patients are also more likely to use the emergency department (ED) and lack a PCP in rural compared to non-rural areas, making hospitals a focal point of rural health care.

Rural hospitals face the threat of closure. Over 100 rural hospitals closed between January 2013 and 2020.<sup>23</sup> Eleven rural hospitals have closed in 2023, and over 600 rural hospitals are at risk of closure.<sup>24</sup> Given the importance of rural hospitals in supporting the health of rural residents, avoiding hospital exposures is an important public policy goal.

The Consolidated Appropriations Act of 2021 established Rural Emergency Hospitals (REHs) as a new Medicare provider type to address the large number of rural hospital closures during and prior to the COVID-19 public health emergency (PHE). REHs are required to provide emergency and observation services and may provide other outpatient services depending on the needs of the community. REHs receive enhanced Medicare payments for certain outpatient services and an additional monthly facility payment.

#### **IV.D. Addressing Social Determinants of Health in Rural Areas**

Stakeholders noted challenges related to social determinants of health (SDOH) in rural areas, including transportation challenges and a lack of community-based services.

**Transportation challenges in rural areas.** Compared to people living in non-rural areas, people living in rural areas experience greater travel-related challenges to access health care, including poorer road infrastructure, as well as greater distances between where residents live and their health care providers. Thirteen percent of rural non-highway roads are ranked as poor by National Transportation Research.<sup>25</sup> A lack of transportation options can lead to delayed or missed appointments, disruptions in treatment for patients with chronic illnesses, and increased potential for poorer health outcomes.

Transportation challenges may differ depending on the type of rural area. For example, frontier areas have fewer public transportation options than their less rural counterparts. Moreover, in addition to potentially being farther away from health care services than rural areas, frontier areas may have poorer road infrastructure, which is exacerbated in areas with harsh weather conditions.<sup>26</sup> One panelist mentioned the importance of considering driving time in addition to distance. For example, driving through mountainous terrain might add time to a commute

regardless of distance. As it relates to what providers are reimbursed to do, one panelist noted that some rural PCPs are challenged by the additional windshield time required when going out to see patients living in rural areas.

**Lack of community-based services in rural areas.** Health care in rural areas relies on community-based relationships; however, panelists described a lack of community-based services in rural areas. Community-based organizations are important to rural settings because they can help to address patients' unmet health-related social needs (HRSNs) and the needs of the community. One panelist described a community health worker (CHW) program where CHWs provided effective interventions that not only reduced health care costs but also decreased hospital days, increased use of primary care and behavioral health services, provided older adults with access to resources, and improved patient and clinician satisfaction. The panelist noted, however, that CHW services are not currently reimbursed at viable rates, if reimbursed at all.

#### **IV.E. Understanding Medicare Advantage and Rural Health Care Challenges**

Panelists and Committee members discussed Medicare Advantage (MA) and related challenges in rural areas. While MA enrollment in rural areas is lower than MA enrollment in non-rural areas, it is growing at a fast pace. The share of eligible rural beneficiaries enrolled in MA plans has nearly quadrupled since 2010.<sup>27</sup> Panelists and Committee members expressed concern that with more rural patients enrolled in MA, there will be fewer patients eligible for alignment to Medicare APMs. Additionally, rural providers will have the burden of navigating more health insurance plans when they are already facing resource and time constraints.

#### **IV.F. Addressing Medical and Non-Medical Workforce Challenges in Rural Areas**

Panelists and Committee members discussed workforce challenges in rural areas, which face workforce shortages in the medical and non-medical fields related to health. Health care workforce shortages in rural areas can result in limited access to health care support providers and greater rates of burnout.<sup>28</sup>

Recruiting and retaining physicians may be more challenging in rural compared to non-rural settings. Rural PCPs tend to have higher workloads compared to non-rural PCPs, including working longer hours and completing more patient visits, and may not be compensated at the same level as PCPs in urban areas.<sup>29,30,31</sup> A number of factors influence the workforce shortages present in many rural areas, including a lack of health care training and education programs in rural areas, a greater demand for health care services in rural areas due to higher rates of chronic illnesses, and fewer opportunities for career advancement.

#### **IV.G. Addressing Infrastructure, Technology, and Data Challenges for Rural Providers**

Panelists and Committee members discussed challenges related to infrastructure, technology, and data experienced by rural providers, including:

- Lack of capital investment;
- Lack of broadband services;
- Lack of technology infrastructure; and
- Lack of access to data for rural providers.

**Lack of capital investment.** Capital investment is required for rural providers to implement team-based care and primary care needed to succeed in value-based care. One panelist indicated that rural providers who have success in APMs often have a progressive mindset, as well as buy-in and alignment among the community and clinicians, whereas rural providers who do not succeed in APMs often lack the capital to invest in technology infrastructure. One panelist suggested that some value-based models require small rural providers to take on the financial risk, which is often not feasible or sustainable because rural providers are challenged by a lack of infrastructure and resources.

**Lack of broadband services.** Some rural areas have limited broadband and cellular access. Limited and inconsistent broadband access is one reason for the lower HIT adoption rates in rural compared to non-rural areas, as a lack of broadband access and/or low digital literacy may prevent patients from engaging with HIT.<sup>32</sup> One panelist noted that telehealth and digital interventions could be a promising strategy to improve care and access in rural areas but are limited if broadband services are unavailable.

**Lack of technology infrastructure.** Lack of technology infrastructure can impact rural providers' participation and transition into APMs. Limited financial resources in rural areas can pose challenges for innovation and even basic integration of technologies. One reason for the lower HIT adoption rates in rural compared to non-rural areas is limited financial resources. Approximately 43 percent of RHCs report that their inability to shoulder the costs for HIT improvements prevents their participation in Accountable Care Organizations (ACOs).<sup>33</sup> In addition, a panelist indicated that rural providers do not have access to high-quality electronic health record (EHR) systems.

In addition, many providers lack staff with training in data analytics, financial modeling, and decision support systems needed to effectively use HIT to achieve the goals of value-based care.<sup>34</sup> The complexity and cost of EHRs, as well as a lack of high-speed internet, can hinder EHR adoption itself, which is a basic requirement for effective use of HIT.

**Lack of access to data for rural providers.** Gathering and reporting reliable data is a challenge for many rural providers. One panelist suggested that financial support is needed to help rural health care systems collectively afford access to higher-quality EHRs and timely, accurate data analytics. One panelist specifically described the lack of data to track the impact of SDOH in rural areas. The panelist suggested that this issue can be addressed by using data from screenings that could be regularly fielded to patients while they are in the ED or hospital.

#### **IV.H. Addressing Technical Challenges Related to Rural Providers Participating in Alternative Payment Models**

Aside from the challenges described above, there are other challenges related to rural providers participating in APMs. Panelists and Committee members discussed several technical challenges related to rural providers' participation in APMs, including:

- Low volume of patients in rural areas;
- Patient attribution in rural areas;
- Innovation fatigue;
- Challenges in reporting performance measures in rural areas; and
- Hesitancy among rural providers regarding the value of APM participation.

It is important to note that not all rural areas face the same challenges in terms of sustainable financing, measuring performance, and being able to participate in APMs. For example, rural areas with a shortage of providers may experience different challenges compared to rural areas with low patient volume or insufficient competition among providers.

**Low volume of patients in rural areas.** Rural areas tend to have a low patient volume. For example, 47 percent of rural hospitals have 25 or fewer staffed beds.<sup>35</sup> Low patient volume presents a number of challenges for providers in rural settings. Because patient volume often relates directly to payment, lower patient volume frequently results in rural providers lacking the financing to sustain their practice and may lead to their closure. Lower patient volume also pose challenges to demonstrating performance against measures which rely on adequate sample size.<sup>36</sup>

**Patient attribution in rural areas.** Participation in some APMs requires beneficiaries to be attributed to a PCP who serves as the patients' main source of care. In rural areas, where there is a dearth of PCPs, patient attribution can be particularly challenging. One panelist suggested that ACOs are built on a primary care relationship, yet many rural practices do not include a PCP. As a result, those rural practices do not contribute to attribution. Attribution can be lost due to nurse practitioner-only tax identification numbers (TINs). In addition, Federally Qualified Health Centers (FQHCs) tend to experience patient movement or churn, potentially leading to difficulty with maintaining attribution over time. One panelist mentioned that it is difficult to attribute patients to a particular ACO or provider when billing is done at a facility level.

**Innovation fatigue.** One panelist stressed the importance of considering innovative ways for rural providers to participate in APMs. However, the panelist also mentioned that rural communities are experiencing innovation fatigue. Rural providers who adopted programs that were later discontinued or altered may not choose to participate in programs in the future.

**Challenges in reporting performance measures in rural areas.** Low patient volumes and limited information technology are barriers to measuring and reporting performance in rural areas. Small sample sizes limit rural providers' ability to calculate reliable and valid performance

measurement results. Several Centers for Medicare & Medicaid Services (CMS) value-based programs exclude providers from public reporting based on low case volumes. In addition, rural patients tend to be disproportionately impacted by health conditions, making performance comparisons between rural and non-rural settings difficult. Rural areas also tend to have limited staff with experience performing data extraction and analysis or with using measurement results to inform quality improvement efforts.

**Hesitancy among rural providers regarding the value of APM participation.** A lack of financial reserves and uncertain financial stability can be barriers to afford the additional costs required for APM participation, such as costs related to building infrastructure and staff. These challenges can lead to hesitancy among rural providers to take on additional downside risk and participate in two-sided risk models.<sup>37,38,39,40</sup> Some rural providers also lack awareness and understanding of APMs.<sup>41</sup>

## **V. APPROACHES FOR ADDRESSING RURAL HEALTH CHALLENGES**

Panelists and Committee members discussed many approaches to addressing the rural health challenges described in the previous section. These approaches centered around five main topics:

- Developing a Multipronged Approach for Addressing Rural Health Care Challenges;
- Addressing Rural Health Workforce Shortages;
- Supporting Team-Based Care, Collaborations, and Partnerships in Rural Health;
- Addressing Social Determinants of Health in Rural Areas and Value-Based Care; and
- Building Technology and Data Capacity in Rural Areas and Value-Based Care.

For each topic, relevant issues are highlighted based on presentations, question-and-answer sessions, and discussions at the September 2023 public meeting.

### **V.A. Developing a Multipronged Approach for Addressing Rural Health Care Challenges**

Several panelists and Committee members agreed that the urgent state of rural health care in the United States requires a multi-pronged approach that would seek to improve rural infrastructure, increase and enhance sustainable funding, enhance recruitment and training of rural health physicians and providers, increase community health organization capacity, and address health disparities – which could be characterized as a rural “moonshot” initiative. Such an approach could bring together state and federal governments, including the various Health and Human Services (HHS) agencies that address rural health, as well as public and private payers, to make systematic changes in rural health care delivery and financing. Committee members noted the insufficiency of “tinkering around the edges” when there is a crisis in rural health workforce, access, and health outcomes. An essential component of this multipronged approach would involve addressing the need for infrastructure to support rural providers, especially PCPs, with the up-front funding and the robust data sharing and telehealth technology to provide optimal care.

**Practice transformation over payment reform in rural areas.** One Committee member suggested that practice transformation must occur before payment reform because practice transformation should inform how payment models are designed in rural areas. Because challenges vary by the type of rural area, each type of rural area requires a tailored solution to health care delivery transformation. One panelist suggested that commitment to innovation by local leadership is critical to facilitating care transformation.

## **V.B. Addressing Rural Health Workforce Shortages**

One consistent theme that emerged during the September 2023 public meeting was the need to increase the rural health workforce capacity. Panelists and Committee members discussed several strategies for improving the recruitment and training of rural health physicians and for expanding the workforce of medical and non-medical professionals to support physicians. These strategies include:

- Increasing outreach to potential medical students in rural areas;
- Promoting trainings and residencies in rural areas;
- Improving the financial viability of practicing in rural areas;
- Increasing the role of rural academic medical centers;
- Increasing the supply of non-physician rural health providers; and
- Expanding the scope of practice for rural providers.

**Increasing outreach to potential medical students in rural areas.** One panelist noted that the strongest predictor of whether a provider in training will practice in rural areas is whether that trainee is themselves from a rural community or has a significant life experience in a rural community. Therefore, efforts to increase the rural workforce should focus on encouraging young residents of rural areas to go into medicine, as early as grades K-12. Options include dual-credit training programs in high schools and distance learning options to keep rural students in their communities.

**Promoting trainings and residencies in rural areas.** Some panelists discussed the need to increase medical trainings and residencies in rural areas, as exposure to rural areas in medical training is associated with eventual practice in these areas. Ideally, medical students would have the opportunity to plant roots during their rural trainings and residencies so that they are amenable to staying in rural communities when they graduate.

**Improving the financial viability of practicing in rural areas.** Encouraging medical students to practice rural health is similar to the goal of increasing the supply of PCPs in general, in that financial incentives have to be attractive. One panelist noted that having advanced payments and predictable payment mechanisms in value-based care models could increase the supply of PCPs. Free or reduced tuition and loan forgiveness programs, grants, and scholarships may also attract more physicians to rural health settings. For instance, some states have programs in

which a student can go to medical school for free if they give four years of time to practicing in a rural area.

**Increasing the role of rural academic health centers.** Panelists commented on the dearth of academic health centers in rural areas. They noted that such institutions could provide much-needed multidisciplinary training resources to rural communities and would make practicing in rural areas more attractive to potential health care providers. For example, the FQHCs' graduate medical education programs for primary care can be replicated with academic health centers in rural areas to create pathways to health care training programs in medicine, social work, dentistry, or other professions.

Academic health centers with both urban and rural service areas can leverage economies of scale and bring more advanced services to rural patient populations. RHCs, EDs, and CAHs that operate only in rural settings have limited resources to provide the range of services rural patients need.

**Increasing the supply of non-physician rural health providers.** Panelists and Committee members discussed the importance of encouraging non-physician health care professionals to work in health workforce shortage areas, thus allowing rural physicians to practice to the top of their licenses. They noted that paramedics, CHWs, social workers, pharmacists, and others could provide services to manage many chronic and acute health and social needs.

**Expanding the scope of practice for rural providers.** One Committee member asked panelists about the potential of expanding the scope of rural PCPs to conduct additional functions that might typically be referred to specialists in areas with greater availability of providers. In response, panelists cautioned that increasing the expectations of providers who are already working with limited resources could increase burnout and would require major changes in practice culture, reimbursement, and medical malpractice law. One panelist opined that expanding the scope of rural PCPs might actually further reduce the provider workforce and that the medical community would not be welcoming to PCPs taking on the duties of specialists. Another panelist suggested that pharmacists might be good candidates for expanded scope of practice in shortage areas, since they are already trained to manage medications and have been taking on additional duties such as administering vaccines.

### **V.C. Supporting Team-Based Care, Collaborations, and Partnerships in Rural Health**

Panelists and Committee members frequently discussed the need for multidisciplinary, team-based care in rural health, both across professions and across organizations. Key topics related to this theme include:

- Supporting primary care;
- Supporting team-based care; and
- Supporting partnerships in rural communities.



**Supporting primary care.** Several panelists and Committee members emphasized the pivotal role PCPs play in rural health, and the need for capital investment in primary care infrastructure. PCPs have a comprehensive focus that is necessary for managing the needs of patients in rural areas and are best positioned to coordinate patient-centered care. A few panelists noted that primary and preventive care are essential in rural communities to avoid acute care, and the focus should not be on inpatient utilization to drive Medicare reimbursement. PCPs are especially important in areas where there are insufficient numbers of patients to attract specialists. Stakeholders also discussed the need to increase compensation for PCPs, particularly in rural areas. Better pay would improve provider recruitment in rural areas and incentivize team-based collaboration.

One panelist added that it is important to ensure the survival of rural hospitals, including CAHs and REHs, as it is difficult to recruit PCPs without hospitals. Another panelist noted that PCPs need the support of a rural hospital or health center because they lack sufficient resources to practice on their own. Similarly, panelists discussed the need to align incentives across primary care practices and EDs to encourage shared responsibility for chronic disease outcomes and preventive care utilization in rural areas. In this vein, communication between EDs and PCPs can be improved, and patients who seek emergency care can be directed to more appropriate settings, including telehealth care.

**Supporting team-based care.** While panelists and Committee members agreed that primary care should be at the center of rural health care, they noted the important role that other health care professionals play in supporting interdisciplinary team-based care across the continuum. Nurses, physician assistants (PAs), social workers, CHWs, nutritionists, behavioral health workers, and other providers can support care coordination for rural patients and ease the burden of PCPs.

Many of the needs of rural patients, including addressing SDOH, can be managed without professionally licensed staff. However, Medicare does not offer compensation for non-clinical staff such as CHWs. Panelists and Committee members widely concurred that non-medical staff should qualify for reimbursement in order to make interdisciplinary team-based care sustainable.

**Supporting partnerships in rural communities.** Many stakeholders discussed the importance of partnerships among rural health providers, facilities, and community organizations to foster a strong rural health ecosystem. Panelists discussed medical neighborhood models that include rural hospitals, clinics, or practices, as well as emergency medical services, long-term care, public health and behavioral health agencies, and social service organizations. They noted that rural communities can leverage their inherent connectedness and social capital to collaboratively approach rural health across the continuum of care. Panelists also described examples of hub and spoke models with FQHCs at the center and noted the potential for rural hospitals to be conveners of rural health collaborations. One panelist suggested that many rural hospitals bring stakeholders across health care and public health continuums together. In this case, hospitals do not solve financial problems directly, but offer a forum for organizations to

come together and plan on how to make the best use of available resources. Additionally, accountable health communities are an option for promoting collaborative care in rural areas.

#### **V.D. Addressing Social Determinants of Health in Rural Areas and Value-Based Care**

Panelists and Committee members discussed approaches to addressing transportation barriers and other SDOH in rural areas. Several panelists described the challenges of accessing community resources to address SDOH. Even when rural providers want to make referrals to community-based organizations, there may not be any located within a distance feasible for their patients to travel. Potential solutions for this challenge include rural hospitals acting as conveners of social service providers. One panelist described using Uber Health to provide transportation to rural patients. Panelists also described options for braiding funding from different sources to promote economic development in rural areas, support services addressing SDOH, and improve the livability of rural communities.

Panelists suggested screening for SDOH in EDs and hospitals to understand the needs of rural patients. One panelist described the Bridges to Care Model, which supported post-ED patient navigation and shared decision-making. The model used on-site patient engagement during an ED visit among frequent ED users and dealt with SDOH, substance use, and behavioral health issues. It was associated with reductions in subsequent ED visits and costs. The transition from acute care is an opportunity for intervention in rural health to promote longitudinal care coordination and address health equity.

#### **V.E. Building Technology and Data Capacity in Rural Areas and Value-Based Care**

Another theme that emerged from the September 2023 public meeting was the need to improve the health technology infrastructure in rural communities to support data sharing, telehealth, and remote monitoring. Topics related to technology and data include:

- Expanding health information technology;
- Ensuring funding and flexibility for telehealth; and
- Building mobile health capacity.

**Expanding health information technology.** Panelists and Committee members discussed options for expanding HIT capacity in rural communities. Panelists recommended that rural practices be equipped with comprehensive EHRs with timely and accurate data dashboards to track patients and manage their care. Such systems would ideally include admission-discharge-transfer (ADT) feeds that connect with health information exchanges (HIEs) to alert providers when their patients present at the ED or are admitted to the hospital. Some rural practices may not have the resources to access HIE with ADT-enabled EHR systems. Additionally, rural providers may lack broadband access, or they or their patients may have low digital literacy. Thus, up-front funding to support the necessary HIT and to train users is essential in rural areas.

**Ensuring funding and flexibility for telehealth.** Telehealth is an important resource to help rural patients access care when transportation is a barrier. Panelists observed that the expansion of telehealth during the COVID-19 PHE proved the utility of this service in remote areas. Telehealth is especially helpful to expand access to behavioral health, which typically does not require an in-person visit.

Approaches to expanding telehealth capacity include bonus payments to rural health providers to develop their telehealth infrastructure, incentives for rural providers to increase the proportion of telehealth visits, and funds to provide rural patients with access to necessary telehealth technology, including broadband access and cell phones or tablets. One panelist noted that approaches to expand telehealth should be sensitive to the trust issues that rural patients may have toward the medical profession, particularly without in-person interaction. Stakeholders also stressed the importance of maintaining legal flexibilities for telehealth that were expanded during the PHE.

**Building mobile health capacity.** Mobile health services can help expand access to health services in rural areas, especially those with a lack of local health providers. Participants described several examples of successful mobile health initiatives, including telestroke, remote monitoring for cardiovascular disease, and mobile dental clinics. One panelist suggested mobile integrated health strategies in collaboration with technical schools in rural communities. Another strategy suggested was a community paramedicine model in which emergency medical services (EMS) trucks in rural areas conduct home visits to patients when not assigned to a medical emergency. One panelist indicated that knowledge-based specialty care can be adjudicated through a mobile app or phone-based consultation. Policy changes and changes to Medicare reimbursement may be required to realize the full potential of mobile health services. Mobile applications will also need user-friendly interfaces to facilitate self-monitoring.

## **VI. COMMENTS FOR CONSIDERATION BY THE SECRETARY**

Based on findings from the Committee’s analysis of PTAC proposals; information in the literature; and information from listening session presentations and panel discussions involving a previous submitter and additional SMEs during the September 2023 public meeting, this section summarizes PTAC’s comments regarding increasing rural participation in population-based models. PTAC’s comments are organized in five topics:

- Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities;
- Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care;
- Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care;

- Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas; and
- Topic 5: Addressing Social Determinants of Health for Patients in Rural Areas.

For each topic, relevant issues are highlighted, followed by a summary of PTAC’s comments. Additionally, the Committee has 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’s comments.

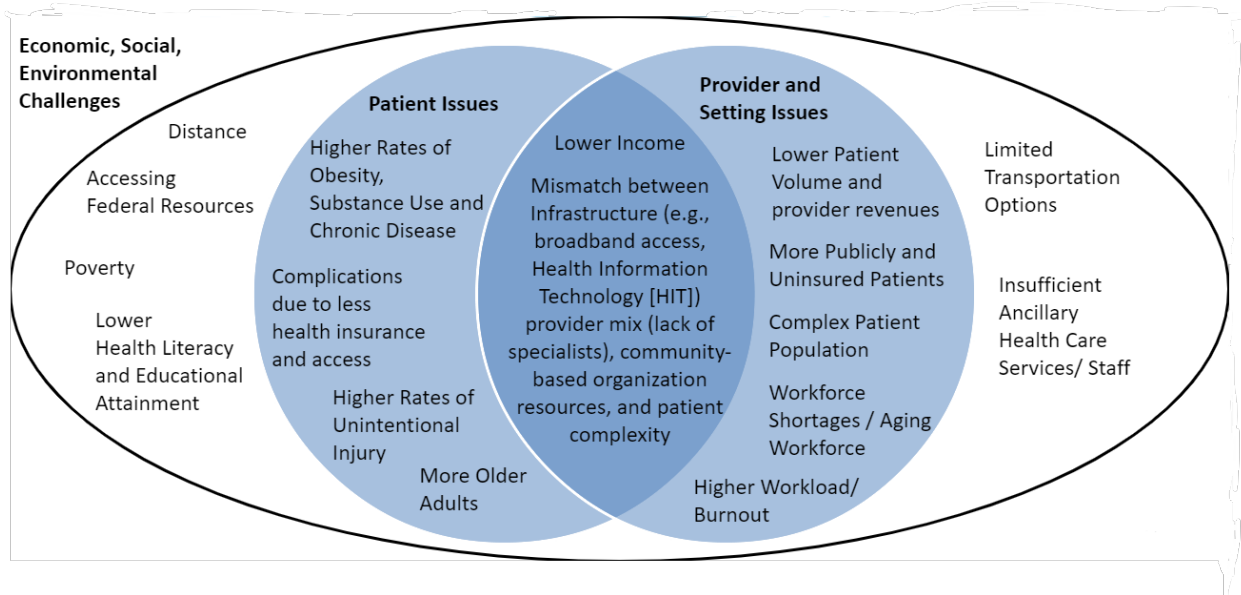
#### **VI.A. Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities**

Committee members discussed the importance of addressing the significant challenges affecting patients and providers in rural communities both for improving health outcomes and increasing readiness to participate in value-based care.

PTAC’s comments on the Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities are listed in Exhibit VI.2.

**Challenges affecting rural areas.** Subject matter experts and Committee members discussed several challenges affecting rural patients, providers and communities. These challenges can result in lower rural provider participation rates in APMs when compared with non-rural providers. Economic, social, and environmental challenges in rural areas include but are not limited to few transportation options; lower health literacy and educational attainment; poverty; and insufficient ancillary health care services and staff available in rural areas. Patient-level challenges in rural areas include but are not limited to higher rates of obesity and substance use; complications due to less health insurance; and a large proportion of older adults. Provider and setting-level challenges in rural areas include but are not limited to lower patient volume; more publicly and uninsured patients; complex patient populations; workforce shortages; and provider burnout. Exhibit VI.1 provides additional information about challenges faced by patients and providers in rural areas.

**Exhibit VI.1: Challenges Affecting Rural Patients, Providers and Communities**



Based on insights from the various SMEs that participated in the public meeting, the Committee understands that effectively implementing PB-TCOC models in rural areas will also require some important supporting policies to assist in addressing the urgent challenges affecting rural communities, patients and health care providers. Panelists and Committee members agreed that efforts to improve rural health care outcomes require a multipronged approach to improve rural infrastructure, increase and enhance sustainable funding, enhance recruitment and training of rural health physicians and providers, increase community health organization capacity, and address health disparities. Additionally, the SMEs and Committee members agreed that efforts to increase rural participation in value-based care and PB-TCOC models are likely to require an investment of additional resources. A key component of a multipronged approach would include addressing the need for infrastructure to support rural providers with up-front funding and robust data sharing and telehealth technology. One Committee member suggested that practice transformation should inform how payment models are designed in rural areas. Because challenges vary by the type of rural area, each type of rural area will require a tailored solution to facilitate health care delivery transformation.

**Exhibit VI.2: PTAC Comments**

**Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities**

**Comment 1A.** The urgent state of rural health care in the United States requires a multi-pronged approach that would seek to improve rural infrastructure, increase and enhance sustainable funding, enhance recruitment and training of rural health physicians and

providers, increase community health organization capacity, and address health disparities – which could be characterized as a rural “moonshot” initiative – both for improving health outcomes and increasing readiness for participation in value-based care.

## **VI.B. Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care**

Committee members identified areas where funding approaches and better access to resources can support value-based care transformation among rural providers. Comments address the challenges that were discussed in Section IV. and apply some of the approaches that were discussed in Section V.

Committee members and panelists identified the following key components, described in Section IV., relating to an effective approach for engaging rural providers in value-based care:

- Models of care that include high-touch, proactive, team-based care; a holistic approach to rural value-based care; screening for medical care, behavioral health, and SDOH needs; and supporting hospitals as conveners;
- Understanding the need for a multi-payer approach;
- Attribution challenges in rural areas;
- Low volume in value-based care for rural providers; and
- The problem with regional benchmarking for rural providers (i.e., the “rural glitch”) in value-based care.

PTAC’s comments on Identifying Effective Approaches to Engage Rural Providers in Value-Based Care are listed in Exhibit VI.3.

**Models of care that include high-touch, proactive, team-based care, a holistic approach, screening for medical care, behavioral health, and SDOH needs, and support for hospitals as conveners.** Panelists and Committee members discussed the need for multidisciplinary, team-based care in rural health. They noted the important role other health care professionals, such as nurses and CHWs, can play in supporting interdisciplinary team-based care across the continuum. Many needs of rural patients, including addressing SDOH, can be managed without professionally licensed staff.

Panelists recommended screening for SDOH in EDs and hospitals to understand the needs of rural patients. Rural patients may have limited access to community-based organizations and resources due to transportation barriers. One solution to address this challenge includes having rural hospitals serve as conveners of social service providers. For example, Uber Health can provide transportation to rural patients.

**Understanding the need for a multi-payer approach in rural health.** To encourage rural provider participation in value-based care, changes to the current payment policy landscape may be needed. Medicare- and Medicaid-only models may be insufficient to support value-based care transformation in rural health care, and multi-payer approaches may be needed to achieve population density for rural providers.

**Attribution challenges in rural areas.** Attributed panel sizes may impede rural providers' participation in APMs. The Committee noted that different mechanisms may be needed in rural areas to achieve scale for model participation. One panelist remarked that because primary care physician billing drives attribution, rural practices that do not include primary care physicians lose a substantial volume of patients that may be otherwise attributable. Rural providers may also face challenges maintaining attribution from year to year due to patient churn. Committee members and panelists suggested approaches to increasing the number of patients who may be attributed to rural providers, including multiyear approaches to attribution, counting telehealth visits the same as in-person visits for the purpose of attribution, and allowing attribution to certain non-physician primary care providers.

Another idea offered was to treat all services provided at RHCs and FQHCs as primary care services that qualify the visit for attribution, as described in the [21<sup>st</sup> Century Cures Act](#).<sup>42</sup> However, one panelist noted that these services are bundled at the CMS Certification Number (CCN) level with multiple RHCs potentially under one CCN, which may or may not be appropriate for APM attribution. Additionally, panelists noted challenges for attribution in rural areas based on primary care services as patients may forego regular primary care due, for example, to transportation burdens. One panelist proposed attributing patients to providers based on the population base the provider serves.

**Low volume in value-based care for rural providers.** Low patient volumes may impede rural providers' participation in APMs; for example, some models require participants to meet a certain patient volume threshold for participation. Rural providers who meet model requirements may face more challenges to remaining in the model than their non-rural counterparts because of the undue burden of outlier cases. Regionalization and risk pooling may be potential strategies to reduce financial risk of participation in value-based care for rural providers.

Panelists noted concerns that, with a small, attributed population, a few outlier cases can have a substantial effect on performance and potentially prevent rural providers from receiving payments under value-based care arrangements. Strategies to reduce this effect include increasing the number of patients attributed to a single provider (see above for additional detail); using more regional weighting of benchmarks;<sup>ii</sup> identifying alternative measures of

---

<sup>ii</sup> Refer to section below for additional detail on the “rural glitch” in regional benchmarking.

success, such as reducing spending over time as opposed to meeting annual spending benchmarks; and ensuring appropriate risk adjustment for or exclusion of events beyond the provider's control.

**The problem with regional benchmarking for rural providers (i.e., the “rural glitch”) in value-based care.** Regional benchmarking disadvantages rural providers relative to non-rural providers. Because rural providers practice in regions with lower population and provider density, any given rural provider comprises a larger portion of all providers in their region. This problem in regional benchmarking is known as the “rural glitch.” Panelists discussed challenges with this benchmark complication for rural providers.

Regional benchmarking does not adjust for market-level factors for rural health care providers in the same way that it does for non-rural providers. Under regional benchmarking methodologies, the “rural glitch” leads to rural health care providers being compared to a benchmark that largely reflects themselves, thus making it harder to show improvements relative to a valid benchmark. Panelists noted that rural health care providers are effectively competing against themselves. Panelists indicated that addressing this issue related to benchmarking is important to assessing changes in performance among rural and non-rural health care providers.

Panelists and Committee members noted the potential benefits of collaboration among rural providers in a given region. Such collaboration could offer multiple benefits, including the ability to spread fixed costs for participating in value-based care across a larger population and offer a greater pool of patients across which to balance downside risk. These approaches may help to support financial stability and lower the financial risk of participating in value-based care for any given provider.

### **Exhibit VI.3: PTAC Comments**

#### ***Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care***

**Comment 2A.** An effective model of care for rural health should include four main components: 1) high-touch, proactive, team-based care; 2) a holistic approach to rural value-based care; 3) screening for medical care, behavioral health, and SDOH needs; and 4) support for hospitals as conveners.

**Comment 2B.** Multi-payer approaches to value-based care or APMs may be necessary to achieve population density for rural providers and ensure stable funding streams via model performance.

**Comment 2C.** Setting attribution based on visits to a provider across multiple years, allowing telehealth visits to count as much as in-person visits, and allowing for attribution to non-



primary care physician providers may help address challenges with attribution for rural providers.

**Comment 2D.** When the number of attributed patients is small, a single outlier event can produce an outsized impact on performance. This may be addressed by considering use of different performance measures or measure constructions for rural providers, using appropriate strategies to adjust for factors outside of a provider’s control, and encouraging partnerships across rural providers to increase the number of attributed patients and reduce the impact of rare events on measured performance.

**Comment 2E.** Resolving the “rural glitch” is necessary to ensure that rural providers are not disadvantaged in models with regional benchmarking and to adequately differentiate rural and non-rural health care providers’ performance.

### **VI.C. Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care**

The Committee identified several potential solutions to support the funding of rural provider participation in value-based care, including:

- Identifying sustainable and stable funding in rural areas;
- Exploring alternative funding sources;
- Ensuring that finance drives function;
- Making value-based care arrangements more attractive to rural health care providers;
- Including up-front funding in model design;
- Exploring potential opportunities with global budgets;
- Implementing team-based reimbursement;
- Implementing standards for rural health practices; and
- Establishing glide paths to sustainable participation for rural providers in value-based care.

PTAC’s comments on Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care are listed in Exhibit VI.4.

**Identifying sustainable and stable funding in rural areas.** Panelists and Committee members highlighted the benefits of providing sustainable and stable funding to drive value-based care transformation among rural providers. In addition to the discussion in Section V., potential strategies to improve funding sustainability and stability included:

1. Improving the use of fixed costs to serve a broader rural population. Many rural providers face a fixed cost of operations such as infrastructure, connectivity, training,

and the implementation of team-based care processes. If rural providers are able to expand the areas where they offer services, these fixed investments, which do not increase as patient volume increases, can be used to improve value of health care provided in rural areas.

2. Subsidizing innovation in care delivery. Panelists identified several promising care delivery innovations that could be implemented to improve the value of health care in rural areas assuming the costs of implementing them can be subsidized. More resources could help rural hospitals invest in care coordination, use of peer recovery specialists, and SDOH screening to reduce avoidable ED utilization. With subsidization, smaller rural practices could support patients' access to ancillary service providers, and facilitate patient transportation, for example, through ride sharing programs.
3. Measuring cost plus value in lieu of total cost of care. One panelist recommended that performance-based reimbursement for CAHs should look at value outside of the context of total cost of care associated with a single provider by looking at measures such as avoidable health care utilization. Reducing avoidable utilization through care coordination can lead to increased quality of care and reduce avoidable costs over time and across the health care continuum.

**Exploring alternative funding sources.** Several panelists noted that rural health care providers may be able to mitigate challenges associated with unpredictable and insufficient reimbursement by braiding funding sources through collaborative financial arrangements with community-based organizations or non-health care government agencies. One panelist noted the opportunity to seek collaborative partnerships for funding through other federal agencies, such as the USDA, that offer economic development opportunities and loans.

**Ensuring that finance drives function.** One panelist noted the importance of aligning incentives and value structures for different types of providers (e.g., inpatient and outpatient providers) to promote cohesive delivery of care. They used the Pennsylvania Rural Health Model (PARHM) and Maryland Total Cost of Care (MD TCOC) Model as examples. For example, under PARHM, financial incentives bring providers (e.g., hospitals, EDs, primary care providers) together to increase the value of care delivered in a rural area; the panelist noted that different incentives for each provider type could lead to misalignment in objectives. The MD TCOC Model aligns use of incentives across providers and also requires use of a common incentive structure across payers.

**Making value-based care arrangements more attractive to rural health care providers.** A Committee member noted that value-based care arrangements can be made more attractive to rural health care providers. Multiple panelists remarked that rural providers' participation in

value-based care could be encouraged through up-front payments and lower risk options, especially in early years of value-based care participation.

**Including up-front funding in model design.** Panelists and Committee members stated that models that provide up-front payments (e.g., population-based prospective payments) give rural providers access to start-up funds. Rural providers can use these funds to hire additional staff or build infrastructure (e.g., for HIT) needed to expand care coordination and implement other innovations important to successful participation in value-based care arrangements.

**Exploring potential opportunities with global budgets.** One type of up-front payment, hospital global budgets, may support value-based care transformation and motivate providers to develop and grow partnerships with community-based organizations. Some global budget models, such as the forthcoming States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model, are open to rural providers, including CAHs. Global budget models allow for predictable payments and can encourage rural provider participation in value-based care arrangements. One panelist stated that global budget models typically include all payers, which further improves payment stability for rural providers. However, the Committee noted that participants and payers may face challenges in monitoring global budgets.

**Implementing team-based reimbursement.** Committee members and panelists noted the importance of team-based care and emphasized that team-based care should be incentivized and funded through capital investments; however, they remarked that a lack of funding for health professions outside of traditional medical providers is a challenge for designing payment structures for team-based care.

**Implementing standards for rural health practices.** Several factors can contribute to patients in rural areas experiencing lower quality of care compared to patients in non-rural areas. According to some panelists, establishing standards of care in areas such as telehealth, certification, care transitions, and continuity of care in rural areas can improve health care quality for these patients and reduce health care disparities between rural and non-rural areas. Panelists also noted that standards can lead to high-quality care without being overly prescriptive or limiting a provider's flexibility to adapt care delivery to their patients' needs.

**Establishing glide paths to sustainable participation for rural providers in value-based care.** Committee members recognized the importance of providing a glide path for rural providers to encourage participation in value-based care.

Committee members and panelists suggested model design approaches that include a glide path for rural health care providers to encourage their engagement and continued participation in value-based care arrangements. They proposed a clear and simple glide path with

accelerated risk (for example, from upside only or limited downside risk, to increased risk, to accountability for total cost of care) as participants gained experience in the model.

Panelists discussed the benefits of designing models that allow rural providers a longer period of time with relatively little financial risk to allow them to build infrastructure by adopting the necessary technology; recruiting and onboarding staff; developing or growing community-based and regional partnerships; and determining how those partnerships will function and evolve (e.g., identifying roles and responsibilities of local entities and dedicated staff) during the model. One panelist also noted the importance of using the glide path approach for performance measurement under value-based care arrangements.

#### **Exhibit VI.4: PTAC Comments**

##### ***Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care***

**Comment 3A.** Rural health care providers need viable options for sustainable and stable funding to support their engagement in value-based care arrangements. Rural health care providers can benefit from partnering within a region to spread risk across a larger patient population, and benefit more from fixed costs. Rural providers may also benefit from securing funding from non-health care agencies to address SDOH.

**Comment 3B.** APM design can support rural health provider engagement in value-based care by considering subsidies to support innovation in care delivery, tailoring performance measures to reflect value in a rural context, investing in team-based care and primary care, using prospective payment or other up-front payment approaches, and aligning financial incentives and value-based objectives across all providers in a rural area.

**Comment 3C.** Establishing standards of care for rural health care providers can improve quality of care without restricting flexibility. Over time, establishing and monitoring standards of care may help reduce or eliminate health care disparities between rural and non-rural areas.

**Comment 3D.** As a form of up-front payment, global budgeting models that allow providers to predict the timing of their access to resources may enable more rural providers to participate in value-based care arrangements.

**Comment 3E.** Models using glide paths that increase financial risk for rural providers over time as they gain more experience can encourage their engagement in value-based care arrangements.

#### **VI.D. Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas**

Several challenges described in Section IV., such as low patient or case volume and insufficient EHR technology, can create barriers to performance measurement in rural health care.

Committee members identified several strategies to support measuring and incentivizing value-based care in rural areas, including those that consider approaches to:

- Improving performance measure reporting among rural providers; and
- Pooling data for risk in rural areas.

PTAC's comments on Measuring and Incentivizing Value-Based Care in Rural Areas are listed in Exhibit VI.5.

**Improving performance measure reporting among rural providers.** Rural providers may be excluded from performance measure reporting due to low case volumes, which affect measure reliability. However, consistent measurement of clinical quality is needed for monitoring, and optional or sporadic participation in performance reporting hinders monitoring efforts.

**Pooling data for risk in rural areas.** As described in Topic 3, Committee members and panelists discussed the potential for rural providers located in the same region to combine, sharing risk for their populations. With larger denominators for performance measures, rare or outlier events would not have as much influence on provider performance and, subsequently, on the ability to meet benchmarks or earn performance-based payments.

#### **Exhibit VI.5: PTAC Comments**

##### ***Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas***

**Comment 4A.** Model designers can encourage rural health provider participation in value-based care by considering challenges that rural providers face, such as low patient or case volume and insufficient EHR technology, in selecting performance measures.

**Comment 4B.** Using incentives based on pooled data and where rural providers are able to spread financial risk across a region can encourage rural provider engagement in value-based care arrangements and reduce their exposure related to the impact of rare events in a small attributed patient population on measured performance.

#### **VI.E. Topic 5: Addressing Social Determinants of Health for Residents in Rural Areas**

Many of the same needs related to SDOH exist in both rural and non-rural areas. However, strategies to meet these needs can be vastly different in rural and non-rural areas, due in part

to limited access to services that can address SDOH in some rural areas. To address SDOH in rural health care, Committee members noted the importance of:

- Compensating community health workers; and
- Implementing wraparound payments for community health workers.

PTAC’s comments on Addressing Social Determinants of Health for Residents in Rural Areas are listed in Exhibit VI.6.

**Compensating community health workers.** CHWs are valuable members of multidisciplinary health care teams in rural areas. These providers can support a range of health care services, including screenings for SDOH needs. Panelists noted that care delivered by multidisciplinary teams (e.g., including nutritionists, social workers, and doulas) can support continuity of care across the continuum. However, there is no standard funding stream available to support development of health care partnerships with CHWs or ancillary providers.

Panelists advocated for sustainable sources of revenue to build partnerships with CHWs, fund the critical services and supports they provide to patients (e.g., building a response system to attend to SDOH needs), and incentivize innovative approaches to collaboration. Strategies to pay for teams to provide health care for communities include global capitation and risk adjustment payments per patient per month.

**Implementing wraparound payments for community health workers.** Committee members and panelists recommended adding wraparound payments<sup>iii</sup> to fund services provided by CHWs at FQHCs, RHCs, and other community-based organizations. To address variation in the scope of CHW practices, one panelist noted that wraparound payments could account for panel size and per member per month (PMPM) payments. Wraparound payments could be distributed on the basis that evidence-based services are available to the patient panel and any patients for whom providers receive capitated payments. Multiple payers could contribute to funding of wraparound payments for CHWs.

**Exhibit VI.6: PTAC Comments**

***Topic 5: Addressing Social Determinants of Health for Residents in Rural Areas***

**Comment 5A.** Dedicated funding streams are needed to pay for services and supports furnished by community health workers. This funding may also support development of partnerships between rural health care and community health workers.

---

<sup>iii</sup> Wraparound payments are used for cost-based reimbursement for RHCs and FQHCs. They cover actual costs of visits and are paid as a block fee to cover the differences between Medicare and Medicaid payments and actual costs.

**Comment 5B.** Wraparound payments for CHWs can help bridge the gap between Medicare and Medicaid payments and the actual costs of visits at RHCs and FQHCs.

## APPENDIX 1. COMMITTEE MEMBERS AND TERMS

**Lauran Hardin**, MSN, FAAN, *Co-Chair*

**Angelo Sinopoli**, MD, *Co-Chair*

### Term Expires October 2024

**Lawrence R. Kosinski**, MD, MBA

*Independent Consultant*

Scottsdale, AZ

**Soujanya R. Pulluru**, MD

*Independent Consultant*

Sarasota, FL

### Term Expires October 2025

**Lindsay K. Botsford**, MD, MBA

*One Medical*

Houston, TX

### Term Expires October 2026

**Jay S. Feldstein**, DO

*Philadelphia College of Osteopathic Medicine*

Philadelphia, PA

**Lauran Hardin**, MSN, FAAN

*HC<sup>2</sup> Strategies*

Maysville, KY

**Joshua M. Liao**, MD, MSc

*The University of Texas Southwestern Medical Center*

Dallas, TX

**Angelo Sinopoli**, MD

*Cone Health*

Greensboro, NC

**Jennifer L. Wiler**, MD, MBA

*UHealth Denver Metro and*

*University of Colorado School of*  
*Medicine*

Aurora, CO

**James Walton**, DO, MBA

*JWalton, LLC*

Dallas, TX

**Walter Lin**, MD, MBA

*Generation Clinical Partners*

St. Louis, MO

**Terry L. Mills Jr.**, MD, MMM

*Independent Consultant*

Tulsa, OK



## APPENDIX 2. CHARACTERISTICS OF SELECTED PTAC PFPM PROPOSALS THAT INCLUDED OR TARGETED RURAL POPULATIONS AND PROVIDERS

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<b>PFPM PROPOSALS THAT INCLUDED RURAL POPULATIONS IN THEIR MODEL DESIGN</b>			
<b>Proposals with an Advanced Primary Care Focus</b>			
<p><b>American Academy of Family Physicians (AAFP)</b></p> <p><a href="#">Advanced Primary Care: A Foundational Alternative Payment Model (APC-APM) for Delivering Patient-Centered, Longitudinal, and Coordinated Care</a></p>	<p><b>Clinical Focus:</b> Primary Care</p> <p><b>Providers:</b> Primary care providers</p> <p><b>Setting:</b> Primary care practices</p> <p><b>Patient Population:</b> Medicare beneficiaries</p> <p><b>Payment Mechanism:</b> Per beneficiary per month</p>	<p>Primary care medical homes work closely with patients’ other health care providers to coordinate and manage care transitions, referrals, and information exchange; to account for differences in rural practice patterns, E&amp;M visits used for attribution can be provided in multiple settings, not only ambulatory and/or office-based settings; applicable to physicians who are employed or independent</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Appropriate care for diabetes, preventive screenings, medication reconciliation, depression remission</p>
<b>Proposals with a Specialty Focus – Acute Management</b>			
<p><b>American College of Emergency Physicians (ACEP)</b></p> <p><a href="#">Acute Unscheduled Care Model (AUCM): Enhancing Appropriate Admissions</a></p>	<p><b>Clinical Focus:</b> Emergency department (ED) services</p> <p><b>Providers:</b> ED physicians</p> <p><b>Setting:</b> ED</p> <p><b>Patient Population:</b> Patients with qualifying ED visits</p> <p><b>Payment Mechanism:</b> Episode-based</p>	<p>Proposal calls for facilitating appropriate discharge, informing patients of treatment options, managing unscheduled care episodes by protocol, and arranging post-discharge home visits; eligible clinical staff include ED physicians, physician assistants, nurse practitioners, clinical nurse specialists, and clinical social workers; although not designed for rural providers, the Model can be implemented in rural hospitals and CAHs; rural hospitals would have to focus on appropriate transfers to other facilities; Model can be integrated into other APMs, and can be used regardless of employment model</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Percentage of eligible cases where an unscheduled ED revisit, hospitalization, or death did not occur within 30 days, compared to the prior reference period</p>

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<p>Icahn School of Medicine at Mount Sinai (Mt. Sinai)</p> <p><a href="#">"HaH-Plus" (Hospital at Home-Plus): Provider-Focused Payment Model</a></p>	<p><b>Clinical Focus:</b> Inpatient services in home setting</p> <p><b>Providers:</b> Physicians; HaH Plus providers</p> <p><b>Setting:</b> Patient home</p> <p><b>Patient Population:</b> Eligible patients in one of 44 diagnosis-related groups (DRGs) for acute conditions</p> <p><b>Payment Mechanism:</b> Prospective, episode-based payment</p>	<p>Multidisciplinary care around an acute care event; goal of reducing complications and readmissions; flexibility to accommodate non-participating physician consultants, using hospitalists if physicians in home care are scarce, and leveraging telehealth; to achieve critical mass of patient, services, staff, propose maximizing intake hours by staggering staff hours and developing policies (e.g., stocking own medications) for services dependent on vendors with delivery limitations; instituting HaH at Night, recruiting patients after hours and holding them in the ED or observation unit until the morning when home services can more readily be arranged; expanding the range of services provided; having program variants and flexibility in the payment model</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> Considering modifications to the payment methodology, such as lower stop-loss/stop-gain levels or upside-only risk to test the proposed PFFM in smaller practices</p> <p><b>Rural-Relevant Measures:</b> Inpatient readmissions, post-acute ED visits, medication documentation, medication reconciliation</p>

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<p><b>Personalized Recovery Care (PRC)</b></p> <p><a href="#">Home Hospitalization: An Alternative Payment Model for Delivering Acute Care in the Home</a></p>	<p><b>Clinical Focus:</b> Inpatient services in home setting</p> <p><b>Providers:</b> Admitting physician at facility receiving PRC payments; on-call physician; Recovery Care Coordinators</p> <p><b>Setting:</b> Patient home</p> <p><b>Patient Population:</b> Commercial and Medicare Advantage patients with acute conditions, based on approximately 150 DRGs</p> <p><b>Payment Mechanism:</b> Bundled episode-based payment</p>	<p>Hospital-level care being received at home mitigates risk to patients that typically occurs upon discharge from acute care facility; commercial and Medicare Advantage patients meeting clinical requirements; network approach may reduce concerns with adequate patient volume without unnecessarily admitting patients.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Percentage of episodes with follow-up PCP appointment scheduled within seven days, percentage of episodes with medication reconciliation</p>
<b>Proposals with a Specialty Focus – Chronic Management</b>			
<p><b>American Academy of Hospice and Palliative Medicine (AAHPM)</b></p> <p><a href="#">Patient and Caregiver Support for Serious Illness (PACSSI)</a></p>	<p><b>Clinical Focus:</b> Serious illness and palliative care</p> <p><b>Providers:</b> Palliative care teams (PCT)</p> <p><b>Setting:</b> Inpatient; outpatient; other palliative care settings</p> <p><b>Patient Population:</b> Patients with serious illness</p> <p><b>Payment Mechanism:</b> Per beneficiary per month</p>	<p>Two-track structure: Payment Incentives or Shared Savings and Shared Risk; capability to perform assessments and delivery services through interdisciplinary team; capability to respond on 24/7 basis to manage issues associated with patient’s health conditions and functional limitations (may use telehealth); non-billing clinicians can be included on the PCT; telehealth can be used to deliver more efficient care; Model is designed to be accessible to rural providers who may not be able to participate in models with a higher level of risk.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> Up-front payments allow for “robust delivery of needs- and preference-based palliative care services to patients.”</p> <p><b>Rural-Relevant Measures:</b> Percentage of patients who died and did not have any days in an ICU during the 30 days before death</p>

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<p><b>Renal Physicians Association (RPA)</b></p> <p><a href="#">Incident ESRD Clinical Episode Payment Model</a></p>	<p><b>Clinical Focus:</b> End-stage renal disease (ESRD)</p> <p><b>Providers:</b> Nephrologists, PCPs</p> <p><b>Setting:</b> Dialysis centers</p> <p><b>Patient Population:</b> Patients with chronic condition (incident ESRD)</p> <p><b>Payment Mechanism:</b> Episode-based</p>	<p>Condition-specific, episode-of-care payment model (Clinical Episode Payment—CEP) for incident dialysis patients; Medicare beneficiaries with ESRD requiring transition to dialysis therapies; nephrologists and nephrology groups of all sizes, in rural and non-rural areas; CEP requires little additional infrastructure creation that renders it feasible in rural regions; physician-provided, Medicare-covered services are reimbursed as they have been traditionally, under the current physician fee schedule payment methodology.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Advance care planning, home dialysis percentage</p>
<p><b>Avera Health (Avera)</b></p> <p><a href="#">Intensive Care Management in Skilled Nursing Facility Alternative Payment Model (ICM SNF APM)</a></p>	<p><b>Clinical Focus:</b> Primary care (geriatricians) in skilled nursing facilities (SNFs)</p> <p><b>Providers:</b> Geriatrician Care Teams (GCTs)</p> <p><b>Setting:</b> SNFs and NFs</p> <p><b>Patient Population:</b> SNF Residents</p> <p><b>Payment Mechanism:</b> Per beneficiary per month</p>	<p>Telemedicine and multidisciplinary team allow expertise to be shared over a wide geography; dually eligible beneficiaries are eligible for this model; smaller practices can increase their participation slowly over time as they recruit partner nursing facilities; telemedicine allows for sharing expertise over wide geography; to implement telemedicine infrastructure in rural practices, there are several federal grant programs that can provide financial assistance.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> Performance-based payment allows for smaller practices who may not be able to “weather the financial risk” in models with shared losses.</p> <p><b>Rural-Relevant Measures:</b> Percentage of short-stay residents who have had an outpatient ED visit, SNF 30-day all-cause readmission measure, percentage of long-stay residents who received an antianxiety or hypnotic medication, percent of short-stay residents who are newly administered antipsychotic medication</p>

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<b>Proposals with a Specialty Focus – Specialty Integration</b>			
<p><b>The American College of Surgeons (ACS)</b></p> <p><a href="#">The ACS-Brandeis Advanced Alternative Payment Model (APM)</a></p>	<p><b>Clinical Focus:</b> Cross-clinical focus</p> <p><b>Providers:</b> Single/multispecialty practices; groups of small provider practices</p> <p><b>Setting:</b> Inpatient, outpatient, ambulatory</p> <p><b>Patient Population:</b> Broad (includes 100+ conditions or procedures)</p> <p><b>Payment Mechanism:</b> Episode-based</p>	<p>The proposed episode model is based on shared accountability, integration, and care coordination as fundamental building blocks; the episode grouper automatically identifies most of the clinicians who are participating in the care for a patient during a defined episode of care; MIPS-eligible clinicians; rural providers can join with other providers under the umbrella of a new corporate entity or convener group</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Tobacco screening and cessation intervention, screening for high blood pressure and follow-up documented, unplanned hospital readmission within 30 days of principal procedure</p>
<b>PFPM PROPOSALS THAT FOCUSED ON RURAL POPULATIONS IN THEIR MODEL DESIGN</b>			
<b>Proposals With an Advanced Primary Care Focus</b>			
<p><b>Jean Antonucci, MD (Dr. Antonucci)</b></p> <p><a href="#">An Innovative Model for Primary Care Office Payment</a></p>	<p><b>Clinical Focus:</b> Primary care</p> <p><b>Providers:</b> Primary care providers, nurse practitioners</p> <p><b>Setting:</b> Primary care practices</p> <p><b>Patient Population:</b> Medicare beneficiaries</p> <p><b>Payment Mechanism:</b> Capitated PBPM with shared risk</p>	<p>Applies features of the Patient-Centered Medical Home model to a capitation model for outpatient services. Any primary care physician or independent nurse practitioner could participate, irrespective of practice size or geographic restrictions. Patient panel sizes would be limited to no more than 1,500 patients per physician; thus, under the proposed model, small practices would have the resources to expand, and all practices would have the resources to provide e-visits and telehealth.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Patient-reported experience with care</p>

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<b>Proposals With a Specialty Focus – Acute Management</b>			
<p><b>The University of New Mexico Health Sciences Center (UNMHSC)</b></p> <p><a href="#">ACCESS Telemedicine: An Alternative Healthcare Delivery Model for Rural Emergencies</a></p>	<p><b>Clinical Focus:</b> Cerebral emergent care; telemedicine</p> <p><b>Providers:</b> Neurologists and neurosurgeons; providers in rural and community systems</p> <p><b>Setting:</b> Inpatient; outpatient; or emergency department</p> <p><b>Patient Population:</b> Patients with neurological emergencies</p> <p><b>Payment Mechanism:</b> Additional one-time payment without shared risk</p>	<p>Within condition specialty care around an acute care event, including emergency medicine, hospitalists, family medicine, primary care, and internal medicine physicians in the rural setting, and telemedicine physician specialists in disciplines such as neurosurgery, neurology, and critical care.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> By keeping more patients at their own facility to continue and bill for treatment, the rural hospitals are able to experience economic gains that significantly outweigh consulting service costs.</p> <p><b>Rural-Relevant Measures:</b> Average cost savings per patient from transportation, average cost savings per patient from improved health, inpatient admission rate, imaging results for acute stroke patients within 45 minutes, timeliness of emergency medicine care, hospital-wide all-cause unplanned readmissions, patient satisfaction with telehealth</p>

Submitter and Proposal	Clinical Focus, Providers, Setting, Patient Population, and Payment Mechanism	Components Relevant to Rural Providers	Payment Design Features and Performance Measures for Rural Providers
<b>OTHER PROPOSALS THAT FOCUSED ON RURAL POPULATIONS IN THEIR MODEL DESIGN</b>			
<p><b>Mercy Accountable Care Organization (Mercy)<sup>iv</sup></b></p> <p><a href="#">Annual Wellness Visit Billing at Rural Health Clinics (RHCs)</a></p>	<p><b>Clinical Focus:</b> Primary/preventive care</p> <p><b>Providers:</b> Rural health clinic (RHC) providers</p> <p><b>Setting:</b> Outpatient</p> <p><b>Clinical Focus:</b> Primary care</p> <p><b>Patient Population:</b> Medicare beneficiaries</p> <p><b>Payment Mechanism:</b> Separately payable Medicare Annual Wellness Visit (AWV) for RHCs if performed on the same date of service as another billable service</p>	<p>Improve preventive care screening, increase the number of Medicare AWVs delivered to rural beneficiaries, and reduce burden on physicians. Provide a separate payment for this service and relax Medicare physician supervision rules in this setting to allow non-practitioners including Registered Nurses (RNs) to provide these newly separately paid AWV services without the involvement of a physician or non-physician practitioner.</p>	<p><b>Financial Incentives to Enhance Rural Provider Participation Specifically:</b> N/A</p> <p><b>Rural-Relevant Measures:</b> Beneficiaries Utilizing Free Preventive Services</p>

<sup>iv</sup> PTAC concluded that the criteria for PFPs established by the Secretary are not applicable to this proposal.

### **APPENDIX 3. ADDITIONAL RESOURCES RELATED TO PTAC’S THEME-BASED DISCUSSIONS ON ENCOURAGING RURAL PARTICIPATION IN POPULATION-BASED TOTAL COST OF CARE (PB-TCOC) MODELS**

The following is a summary of additional resources related to PTAC’s theme-based discussions on optimizing PB-TCOC models in APMs and PFPs. These resources are publicly available on the ASPE PTAC website:

#### **Environmental Scan**

[Environmental Scan on Encouraging Rural Participation in Population-Based Total Cost of Care \(TCOC\) Models](#)

[Rural Supplemental Analysis \(Forthcoming\)](#)

[Rural and Non-Rural Health Disparities Analysis \(Forthcoming\)](#)

#### **Request for Input (RFI)**

[Encouraging Rural Participation in Population-Based Total Cost of Care Models Request for Input \(RFI\)](#)

#### **Materials from the Public Meetings**

*Materials from the Public Meeting on September 18, 2023*

[Presentation: Encouraging Rural Participation in Population-Based Total Cost of Care \(PB-TCOC\) Models Preliminary Comments Development Team Findings](#)

[Presentation: Panelist Introduction Slides](#)

[Presentation: Subject Matter Expert Listening Sessions](#)

[Panelist Biographies](#)

[Panel Discussion Guide](#)

[Listening Session Facilitation Questions](#)

*Materials from the Public Meeting on September 19, 2023*

[Presentation: Subject Matter Expert Listening Sessions](#)

[Panelist Biographies](#)

[Listening Session Facilitation Questions](#)

#### **Other Materials Related to the Public Meeting**

Public Meeting Minutes

Public Meeting Transcripts



## APPENDIX 4. SUMMARY OF PTAC COMMENTS ON ENCOURAGING RURAL PARTICIPATION IN POPULATION-BASED TOTAL COST OF CARE (PB-TCOC) MODELS

The Committee’s comments have been summarized in the following broad topic areas:

- Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities;
- Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care;
- Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care;
- Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas; and
- Topic 5: Addressing Social Determinants of Health for Residents in Rural Areas.

<b>Topic 1: Importance of Addressing Challenges Affecting Patients and Providers in Rural Communities</b>	
1A	The urgent state of rural health care in the United States requires a multi-pronged approach that would seek to improve rural infrastructure, increase and enhance sustainable funding, enhance recruitment and training of rural health physicians and providers, increase community health organization capacity, and address health disparities – which could be characterized as a rural “moonshot” initiative – both for improving health outcomes and increasing readiness for participation in value-based care.

<b>Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care</b>	
2A	An effective model of care for rural health should include four main components: 1) high-touch, proactive, team-based care; 2) a holistic approach to rural value-based care; 3) screening for medical care, behavioral health, and SDOH needs; and 4) support for hospitals as conveners.
2B	Multi-payer approaches to value-based care or APMs may be necessary to achieve population density for rural providers and ensure stable funding streams via model performance.
2C	Setting attribution based on visits to a provider across multiple years, allowing telehealth visits to count as much as in-person visits, and allowing for attribution to non-primary care physician providers may help address challenges with attribution for rural providers.

<b>Topic 2: Identifying Effective Approaches for Engaging Rural Providers in Value-Based Care</b>	
2D	When the number of attributed patients is small, a single outlier event can produce an outsized impact on performance. This may be addressed by considering use of different performance measures or measure constructions for rural providers, using appropriate strategies to adjust for factors outside of a provider’s control, and encouraging partnerships across rural providers to increase the number of attributed patients and reduce the impact of rare events on measured performance
2E	Resolving the “rural glitch” is necessary to ensure that rural providers are not disadvantaged in models with regional benchmarking and to adequately differentiate rural and non-rural health care providers’ performance.

<b>Topic 3: Developing Financial Incentives and Glide Paths to Encourage Rural Participation in Value-Based Care</b>	
3A	Rural health care providers need viable options for sustainable and stable funding to support their engagement in value-based care arrangements. Rural health care providers can benefit from partnering within a region to spread risk across a larger patient population, and benefit more from fixed costs. Rural providers may also benefit from securing funding from non-health care agencies to address SDOH.
3B	APM design can support rural health provider engagement in value-based care by considering subsidies to support innovation in care delivery, tailoring performance measures to reflect value in a rural context, investing in team-based care and primary care, using prospective payment or other up-front payment approaches, and aligning financial incentives and value-based objectives across all providers in a rural area.
3C	Establishing standards of care for rural health care providers can improve quality of care without restricting flexibility. Over time, establishing and monitoring standards of care may help reduce or eliminate health care disparities between rural and non-rural areas.
3D	As a form of up-front payment, global budgeting models that allow providers to predict the timing of their access to resources may enable more rural providers to participate in value-based care arrangements.
3E	Models using glide paths that increase financial risk for rural providers over time as they gain more experience can encourage their engagement in value-based care arrangements.

<b>Topic 4: Measuring and Incentivizing Value-Based Care in Rural Areas</b>	
4A	Model designers can encourage rural health provider participation in value-based care by considering challenges that rural providers face, such as low patient or case volume and insufficient EHR technology, in selecting performance measures.
4B	Using incentives based on pooled data and where rural providers are able to spread financial risk across a region can encourage rural provider engagement in value-based care arrangements and reduce their exposure related to the impact of rare events in a small attributed patient population on measured performance.

<b>Topic 5: Addressing Social Determinants of Health for Residents in Rural Areas</b>	
5A	Dedicated funding streams are needed to pay for services and supports furnished by community health workers. This funding may also support development of partnerships between rural health care and community health workers.
5B	Wraparound payments for CHWs can help bridge the gap between Medicare and Medicaid payments and the actual costs of visits at RHCs and FQHCs.

## REFERENCES

- <sup>1</sup> Rural Health Information Hub. Health and Healthcare in Frontier Areas. November 2022. <https://www.ruralhealthinfo.org/topics/frontier>
- <sup>2</sup> Government Accountability Office. Information on the Transition to Alternative Payment Models by Providers in Rural, Health Professional Shortage, or Underserved Areas. GAO-22-104618. 2021. <https://www.gao.gov/assets/720/717649.pdf>
- <sup>3</sup> Government Accountability Office. Information on the Transition to Alternative Payment Models by Providers in Rural, Health Professional Shortage, or Underserved Areas. GAO-22-104618. 2021. <https://www.gao.gov/assets/720/717649.pdf>
- <sup>4</sup> Health Resources and Services Administration. Defining Rural Population. March 2022. <https://www.hrsa.gov/rural-health/about-us/what-is-rural>
- <sup>5</sup> United States Census Bureau. Urban and Rural. September 2022. <https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html#:~:text=Rural%20encompasses%20all%20population%2C%20housing,and%2For%20population%20density%20requirements>
- <sup>6</sup> Rural Health Information Hub. Health and Healthcare in Frontier Areas. November 2022 <https://www.ruralhealthinfo.org/topics/frontier>
- <sup>7</sup> Rural Health Information Hub. Health and Healthcare in Frontier Areas. November 2022 <https://www.ruralhealthinfo.org/topics/frontier>
- <sup>8</sup> Rural Health Information Hub. Critical Access Hospitals (CAHs). <https://www.ruralhealthinfo.org/topics/critical-access-hospitals>
- <sup>9</sup> Rural Health Information Hub. Rural Health Clinics (RHCs). <https://www.ruralhealthinfo.org/topics/rural-health-clinics>
- <sup>10</sup> NORC analysis of 2021-2022 AHRF and 2013 RUCCs.
- <sup>11</sup> McDonald, TW., Curtis-Schaeffer, AK, Theiler, AA, Howard, EKM. Providers' perceptions of prevalent mental and behavioral health problems: Differences and similarities across urban, rural, and frontier areas. *Journal of Rural Mental Health*, 2014;38(1), 36–49. <https://doi.org/10.1037/rmh0000009>
- <sup>12</sup> National Rural Health Association. About Rural Health Care. <https://www.ruralhealth.us/about-nrha/about-rural-health-care>
- <sup>13</sup> Prescott GM, Prescott WA. Health information technology utilization and impact on COVID-19 vaccination. *Journal of the American Pharmacists Association*. 2021;61(4):e230-e232. doi:10.1016/j.japh.2021.03.020
- <sup>14</sup> Pollard, K, Martinez, M. Digital Divide in High-Speed Internet Access Leaves Rural Areas Behind. Population Reference Bureau. December 15, 2021. <https://www.prb.org/articles/digital-divide-in-high-speed-internet-access-leaves-rural-areas-behind/>
- <sup>15</sup> National Rural Health Association. About Rural Health Care. <https://www.ruralhealth.us/about-nrha/about-rural-health-care>
- <sup>16</sup> Smith, A, Trevelyan, E. In Some States, More Than Half of Older Residents Live In Rural Areas. Census Bureau. October 19, 2019. <https://www.census.gov/library/stories/2019/10/older-population-in-rural-america.html#:~:text=More%20than%201%20in%205,to%2013.8%25%20in%20urban%20areas>
- <sup>17</sup> Okobi OE, Ajayi OO, Okobi TJ, Anaya IC, Fasehun OO, Diala CS, Evbayekha EO, Ajibowo AO, Olateju IV, Ekabua JJ, Nkongho MB, Amanze IO, Taiwo A, Okorare O, Ojinnaka US, Ogbeifun OE, Chukwuma N, Nebuwa EJ, Omole JA, Udoete IO, Okobi RK. The Burden of Obesity in the Rural Adult Population of America. *Cureus*. June 20, 2021;13(6):e15770. doi:10.7759/cureus.15770
- <sup>18</sup> Rural Health Information Hub. Substance Use and Misuse in Rural Areas. <https://www.ruralhealthinfo.org/topics/substance-use>
- <sup>19</sup> Centers for Disease Control and Prevention. Health, United States – Data Finder. Table 039. <https://www.cdc.gov/nchs/hus/data-finder.htm?year=2017&table=Table%20039>
- <sup>20</sup> Rural Health Information Hub. Chronic Disease in Rural America. <https://www.ruralhealthinfo.org/topics/chronic-disease>

- 
- <sup>21</sup> Centers for Disease Control and Prevention. Trends in death rates in urban and rural areas: United States, 1999–2019. September 21, 2021. <https://stacks.cdc.gov/view/cdc/109049>
- <sup>22</sup> utmb Health. Americans in rural areas do not live as long as their counterparts in urban areas. August 12, 2021. <https://www.utmb.edu/newsroomarchive/article13609.aspx>
- <sup>23</sup> The Cecil G. Sheps Center for Health Services Research. Rural Hospital Closures. <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>
- <sup>24</sup> The Cecil G. Sheps Center for Health Services Research. Rural Hospital Closures. <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>
- <sup>25</sup> TRIP. Rural Connections: Challenges and Opportunities in America’s Heartland. May 2020. [https://tripnet.org/wp-content/uploads/2020/04/TRIP\\_Rural\\_Roads\\_Report\\_2020.pdf](https://tripnet.org/wp-content/uploads/2020/04/TRIP_Rural_Roads_Report_2020.pdf)
- <sup>26</sup> Rural Health Information Hub. Health and Healthcare in Frontier Areas. November 2022. <https://www.ruralhealthinfo.org/topics/frontier>
- <sup>27</sup> Biniek, JF, Clerveau, G et al. Medicare Advantage Enrollment, Plan Availability and Premiums in Rural Areas. Kaiser Family Foundation. September 2023. <https://www.kff.org/medicare/issue-brief/medicare-advantage-enrollment-plan-availability-and-premiums-in-rural-areas/>
- <sup>28</sup> Rural Health Information Hub. Rural Healthcare Workforce. February 2023. <https://www.ruralhealthinfo.org/topics/health-care-workforce>
- <sup>29</sup> Telligen. Five Challenges for Rural Healthcare. <https://www.telligen.com/five-challenges-for-rural-healthcare-providers/>
- <sup>30</sup> Rural Health Information Hub. Rural Healthcare Workforce. February 2023. <https://www.ruralhealthinfo.org/topics/health-care-workforce>
- <sup>31</sup> Weeks WB, Wallace AE. Rural-urban differences in primary care physicians' practice patterns, characteristics, and incomes. *J Rural Health*. 2008 Spring;24(2):161-70. doi: 10.1111/j.1748-0361.2008.00153.x.
- <sup>32</sup> Prescott GM, Prescott WA. Health information technology utilization and impact on COVID-19 vaccination. *Journal of the American Pharmacists Association*. 2021;61(4):e230-e232. doi:10.1016/j.japh.2021.03.020.
- <sup>33</sup> Ortiz J, Bushy A, Zhou Y, Zhang H. Accountable care organizations: benefits and barriers as perceived by Rural Health Clinic management. *Rural Remote Health*. 2013 Apr-Jun;13(2):2417.
- <sup>34</sup> Clarke MA, Skinner A, McClay J, Hoyt R. Rural health information technology and informatics workforce assessment: a pilot study. *Health Technol*. 2023;13(3):427-435. doi:10.1007/s12553-023-00750-6
- <sup>35</sup> American Hospital Association. Fast Facts U.S. Rural Hospitals. <https://www.aha.org/system/files/media/file/2021/05/infographic-rural-data-final.pdf>
- <sup>36</sup> National Quality Forum Rural Health Committee. Performance Measurement for Rural Low-Volume Providers. National Quality Forum; 2015. [https://www.qualityforum.org/Publications/2015/09/Rural\\_Health\\_Final\\_Report.aspx](https://www.qualityforum.org/Publications/2015/09/Rural_Health_Final_Report.aspx)
- <sup>37</sup> Mueller K, MacKinney C, Lundblad J, Weng K. How to Design Value-Based Care Models for Rural Participant Success: A Summit Findings Report. *Rural Health Value*; 2020.
- <sup>38</sup> NORC at the University of Chicago. Evaluation of the Vermont All-Payer Accountable Care Organization Model: Second Evaluation Report. 2022. <https://innovation.cms.gov/data-and-reports/2023/vtapm-2nd-eval-full-report>
- <sup>39</sup> Zhu X, Huang H, MacKinney AC, Ullrich F, Mueller K. Medicare accountable care organization characteristics associated with participation in 2-sided risk. *The Journal of Rural Health*. 2023;39(1):302-308. doi:10.1111/jrh.12672
- <sup>40</sup> Kelley E, Lipscomb R, Valdez J, Patil N, Coustasse A. Medicare Access and CHIP Reauthorization Act and Rural Hospitals. *The Health Care Manager*. 2019;38(3):197. doi:10.1097/HCM.0000000000000267
- <sup>41</sup> Government Accountability Office. Information on the Transition to Alternative Payment Models by Providers in Rural, Health Professional Shortage, or Underserved Areas. GAO-22-104618. 2021. <https://www.gao.gov/assets/720/717649.pdf>
- <sup>42</sup> United States Congress. 21<sup>st</sup> Century Cures Act. 2016. <https://www.congress.gov/114/bills/hr34/BILLS-114hr34enr.pdf>