Flex Monitoring Team
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Critical Access Hospital-Relevant Measures for Health System Development and Population Health

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INTRODUCTION

The Medicare Rural Hospital Flexibility (Flex) Program has long recognized the central role of Critical Access Hospitals (CAHs) in their communities and local systems of care. Through funding to State Flex Programs, the Federal Office of Rural Health Policy (FORHP) has supported the development of local systems of care with CAHs as the hubs of those systems, and encouraged the development of initiatives to address local health priorities as one of five core program areas to support: 1) quality improvement; 2) operational and financial improvement; 3) health system development and population health, including integrating EMS in regional and local systems of care; 4) designation of CAHs; and 5) integration of innovative health care models.[1]

The Flex Monitoring Team (FMT) provides monitoring and evaluation support for the Flex Program. In this role, it has developed financial and quality measures and monitoring reports used by CAHs, state Flex Programs, FORHP, and others to understand the performance of CAHs and the Flex Program more generally. The FMT's health system development and population health monitoring work has focused on identifying and quantifying the impact of CAHs on their communities, community benefit activities of CAHs including charity care and uncompensated care, the use of community health needs assessments by CAHs, and, more recently, the involvement of CAHs in population health strategies to improve the health of the residents of the communities in which they are located.

PURPOSE

This policy brief describes the development of the health systems development and population health performance measures that will be included in the FMT's forthcoming integrated performance reporting system. In addition to reviewing the individual measures that comprise the measures set, we discuss how the measures can help CAHs, State Flex Programs, and FORHP benchmark and improve performance by targeting technical assistance and support to CAHs and rural communities.

BACKGROUND

In its earlier work on health system development and population health, the FMT developed a framework that identified the ways in which CAHs monitor the health and health system needs of their communities, and engage with other community organizations and stakeholders to address those needs. The core components of this framework included: (1) identifying unmet community needs; (2) addressing unmet community needs; (3) prevention and health improvement; (4) building a continuum of care; and (5) building community health system capacity.[2]

Hospital involvement in community or population health implies a move away from the traditional provider focus on acute and "sick" care for individual patients to a more expansive community-oriented view that (1) encompasses all ages and population groups within a community; (2) addresses problems of uncoordinated care, poor chronic disease management, lack of access to behavioral health, prevention, and wellness services, and unhealthy behaviors that contribute to increasing health care utilization and costs, and (3) addresses community and social problems that impact the health of the community. This view of population health often

blurs long-standing boundaries between social services, public health and healthcare delivery systems.

Involvement in population health represents a significant shift in strategy and responsibilities for many hospital administrators and boards. In its work in this area, the FMT has emphasized that while CAHs cannot be solely responsible for the health system development and population health needs of their communities, they are critical community partners that can play an important role in conducting community health needs assessments, convening community organizations and leaders, and developing collaborative strategies to address identified needs. This evolving role of rural hospitals in population health is reflected in the American Hospital Association's, Health Research and Educational Trust's concept of the "community responsive hospital," which called for hospitals to expand beyond the delivery of medical care to a greater role in the following:[3]

- Community issues (substance abuse, domestic violence);
- Critical health issues (oral health, mental health, obesity);
- Health care equity (barriers to access, health disparities);
- System barriers (limited public health infrastructure); and
- Community engagement and involvement in improving health (involve residents in addressing above issues, reducing risky behaviors).

States and state hospital associations are undertaking similar efforts to expand hospital involvement in population health. For example, the Washington State Department of Health and the Washington State Hospital Association partnered in 2014 to convene stakeholders known as the Rural Health or "New Blue H" workgroup to develop strategies to maintain and improve access to health care services in rural Washington communities with focused attention on population and community health improvement objectives, including: ensuring access to integrated quality health care services in rural communities, enabling aging in place, addressing rural health disparities, and achieving the objectives of the Triple Aim[a] in rural communities.[4]

This evolving expectation that hospitals will assume a more active and collaborative role in population health improvement aligns well with the FMT's community health improvement and engagement framework described earlier, as well as the Flex Program's focus on health system development and population health as a core program area. In undertaking the development of a set of measures to monitor CAH performance in this program area, we sought to identify measures that can be used by CAHs as part of their community and population health assessment and improvement strategies as well as by State Flex Programs and the FORHP to assess, monitor, and target the provision of technical assistance to support CAHs in improving the health of the communities and populations they serve.

APPROACH

Guided by the community health improvement framework described above, we enlisted the advice of a national panel of community benefit, community health improvement, population health, and rural health experts to assist with the development of a set of health systems development and population health measures relevant to the CAH and rural community context.[b] Prior to engaging the expert panel, we conducted an extensive review of the literature on measuring community benefit and community health improvement. The team also reviewed relevant secondary data sources and identified an extensive list of community health and health system performance measures. Through an iterative process, and using the CAH community impact framework discussed earlier as a guide, we worked with the expert panel to narrow the list to a targeted set

a. The three dimensions of the Institute for Healthcare Improvement's Triple Aim are: 1) improving the patient experience of care (including quality and satisfaction); 2) improving the health of populations; and 3) reducing the per capita cost of health care. http://bit.ly/1OupAYw

b. Members of the expert panel: Bethany Adams, Senior Program Manager, National Rural Health Resource Center; Kevin Barnett, Senior Investigator, Public Health Institute; Maureen Byrnes, Lead Research Scientist, Department of Health Policy, George Washington University; Dave Palm, Administrator, Office of Community Health and Performance Management, Nebraska Department of Health and Human Services; Tim Size, Executive Director, Rural Wisconsin Health Cooperative; Julie Trocchio, Senior Director, Community Benefit and Continuing Care Catholic Health Association; and Alice Yoder, Director, Community Health & Wellness, Lancaster General Hospital.

of measures most relevant to rural communities.

Our measures set is constructed on secondary data obtained from three primary sources: (1) the Centers for Medicare and Medicaid Services' Healthcare Cost Report Information System; (2) the American Hospital Association (AHA) Annual Survey of Hospitals; and (3) the Robert Wood Johnson Foundation-sponsored County Health Rankings data set developed by the University of Wisconsin Population Health Institute (see Tables 1 and 2). As with most secondary data sets, there are methodological limitations associated with each data source. For example, the response rate for the AHA Annual Survey of Hospitals averages approximately 85 percent.[5] The AHA uses complex statistical models and past historical data to estimate missing data. County Health Rankings also has some data limitations including the timing of available data to construct the measures as well as problem of "small numbers" and/or missing data, particularly for very small counties.[6] County Health Rankings addresses these issues by using multiple years of data. As a result, County Health Rankings can be used to distinguish between places that are healthy from those that are not but cannot be used to set objectives and track progress from year to year. These limitations do not impair the use of these measures in our community measures set as it is designed to provide a high-level overview of community and hospital issues and should be supplemented with locally available community data when used by hospitals and communities as part of their community assessment process.

RESULTS

The FMT's Health Systems Development and Population Health measures set contains three subcategories of measures, each with a different focus and intended use: (1) charity care and bad debt (Table 1); (2) community health improvement, essential community health services, and community benefit (Table 1); and (3) community health needs and issues (Table 2).

Part 1 – Charity Care and Bad Debt: The two measures

Table 1. Health Systems Development and Population Health Measures Set, Parts 1 and 2

Part 1: Charity Care and Bad Debt[a]
Charity and discounted care expenses as a percentage of adjusted revenue
Bad debt as a percentage of adjusted revenue
Part 2: Community Health Improvement and Essential Community Services - Wellness and prevention services[b]
Immunization programs
Tobacco treatment/cessation programs
Part 2: Community Health Improvement and Essential Community Services – Essential community services[b]
Alcohol-drug abuse/dependency services
Mental health outpatient services
Dental services
Part 2: Community Health Improvement and Essential Community Services - Primary care access[b]
Indigent care clinic
Rural Health Clinic
Urgent care clinic
Part 2: Community Health Improvement and Essential Community Services-Cultural/linguistic diversity for patient care[b]
Have/plan to develop, execute or evaluate a diversity strategy or plan?
Strategic plan goals to improve quality of care of culturally/linguistically-diverse populations

a. Data source: Medicare Cost Reports
b. Data source: AHA Survey

in this category capture the broad uncompensated care activities of CAHs as a percentage of adjusted revenue. This important area of CAH community benefit activity focuses on the provision of services to vulnerable populations. Charity and discounted care represents the provision of free and discounted care to individuals that cannot pay for their care based on the hospital's eligibility criteria. Bad debt represents the provision of care to individuals that are able to pay for their care but later fail to do so. Monitoring the balance between these two forms of uncompensated care is particularly important given Affordable Care Act changes to the Internal Revenue Service's tax code designed to bring improved transparency and consistency to hospital billing and financial assistance policies.

Part 2 - Community Health Improvement and Essential Community Health Services: The ten measures in this section focus on hospital level activities and performance related to the provision of key wellness, pre-

Table 2. Health Systems Development and Population Health Measures Set, Part 3

Part 3: Community Health Needs and Issues (County Level) - Socioeconomic factors[c]
High school graduation (% ninth grade cohort that graduates in 4 years)
Unemployment (% population age 16+ unemployed but seeking work)
Children in poverty (# children under age 18 in poverty)
Part 3: Community Health Needs and Issues (County Level) - Environmental issues[c]
Recreational facilities (Rate of recreational facilities per 100,000 population)
% of population with limited access to healthy food
Part 3: Community Health Needs and Issues (County Level) - Health outcomes[c]
Premature death (Years of potential life lost before age 75 per 100,000 population)
Poor or fair health (% of adults reporting fair or poor health)
Low birth weight (% of live births with low birthweight -< 2500 grams)
Part 3: Community Health Needs and Issues (County Level) - Health behaviors[c]
Adult smoking (% adults that report smoking >= 100 cigarettes and currently smoking)
Adult obesity (% adults that report a BMI >= 30)
Physical inactivity (% adults aged 20/over reporting no leisure time physical activity)
Excessive drinking (% adults reporting binge plus heavy drinking)
Motor vehicle crash death rate (Motor vehicle crash deaths per 100,000 population)
Sexually transmitted infections (Chlamydia rate per 100,000 population)
Teen birth rate (Teen birth rate per 1,000 female population, ages 15-19)
Part 3: Community Health Needs and Issues (County Level) - Clinical care and access to Care[c]
Primary care physicians (Ratio of population to primary care physicians)
Dentists (Ratio of dentists to population)
Uninsured (% of population under age 65 without health insurance)
Mammography screening (% female Medicare enrollees receiving mammography screening)
Diabetic Screening (% diabetic Medicare enrollees that receive HbA1c screening)
Preventable hospital stays for ambulatory care sensitive conditions/1,000 Medicare enrollees
% of Individuals without a personal doctor/provider
% needing to see a doctor in past 12 months but did not due to cost

c. Data source: County Health Rankings.

vention, and essential community services, as well as the extent to which CAHs have implemented strategies to improve the quality of care provided to culturally and/or linguistically-diverse patient populations. The section measures the extent to which CAHs are involved in providing services that are key to the functioning of local systems of care (i.e., primary care access and wellness/prevention services) as well as essential community services that are often difficult to obtain in rural communities (i.e., alcohol and drug abuse and dependency services, mental health outpatient services, and dental services). It also measures the extent to which CAHs have developed plans and strategies to serve and improve the quality of care for culturally/linguistically diverse patient populations in their communities, as these populations often experience access barriers and difficulties negotiating health care systems.[c]

Part 3 – Community Health Needs and Issues: This section contains 23 measures focused on the health and health-related problems in the communities in which CAHs operate. These measures provide important context and allow insight into the issues facing CAHs as they work to address the health care needs of their communities. The first two categories (socioeconomic factors and environmental factors) are not directly within the influence of CAHs but are important to understanding the disparities present in the communities in which CAHs operate. The remaining three sections (health outcomes, health behaviors, and clinical care and access to care) are important measures of community health that CAHs can influence in partnership with other community organizations.

Benchmarking and Improving Community Performance

The goal of this project was to create a set of measures that CAHs, State Flex Programs, and FORHP can use to benchmark different aspects of CAH community performance and to monitor trends in state and national level performance of the Flex Program. In the case of CAH users, benchmarking differences in performance on any one measure or set of measures does not necessarily indicate a specific problem. Rather, the measures provide a means by which hospitals can track trends in performance, identify potential problems and the reasons for them, and guide further exploration of community health issues. In this final section, we provide examples of how these measures can be used to monitor and improve community performance.

Understanding and Monitoring Rates of Charity Care and Bad Debt: Prior work by the FMT on CAH charity and uncompensated care performance has discussed the relationship between charity care and bad debt and the implications of high or low rates (Gale, et al. 2015). For example, lower rates of charity and discounted care and higher rates of bad debt suggest the need to analyze the types of patients represented in the hospital's charity/discounted care and bad debt categories. If patients with incomes at or near the hospital's eligibility criteria are heavily represented in the bad debt category, the hospital might review and possibly revise its financial assistance policies to reflect the economic status of the hospital's patient population and increase eligibility for charity and discounted care. As illustrated in this example, the measures related to charity and uncompensated care can be used diagnostically to assess hospital policies and practices and to target actions to improve accurate reporting of charity care and bad debt.

Access to Essential Community Services: Measures indicating gaps in access to necessary primary care, preventive/wellness, or essential services within the community can be used by CAHs to evaluate options and strategies to address these gaps. While CAHs cannot be responsible for offering all services needed by their community, they can use these measures to engage community partners in assessing stakeholder capacity and developing potential strategies for addressing gaps in needed services. This may entail developing partnerships with organizations both within and outside of the community, including other hospitals or primary care providers. Such an assessment may also highlight

c. The original measures set contained four measures from the American Hospital Association (AHA) Annual Survey of Hospitals that focused on community benefit planning and operational issues. These questions have since been eliminated from the AHA Annual Survey. Consistent with our focus on addressing community and population health needs, we have substituted two measures from the AHA Annual Survey focusing on the extent to which hospitals have developed plans and strategies to serve and improve the quality of care for culturally/linguistically diverse patient populations in their communities.

opportunities for the use of technologies such as telehealth to address service gaps. Other measures can be used to identify options to improve care coordination and transitions across the continuum of care, support the adoption of population health strategies to better serve vulnerable patients, encourage early intervention in health problems, and reduce unnecessary utilization of high cost inpatient and emergency department services.

Health Outcomes, Health Behaviors, and Clinical Care/Access to Care Measures: These can be used for a variety of purposes, including to inform community health needs assessments or to provide community-level data for grant proposals for community health improvement initiatives. As with the other measures in this set, deficiencies in performance and potential solutions call for a collaborative approach between CAHs, public health, other community providers, local government, businesses, and community members. CAHs can provide leadership by convening key local providers and marshalling resources to examine potential causes of and solutions for poor performance through a variety of strategies including community interviews, examination of additional relevant state and/or local data, and inventories of local resources that can be used to address the problem. CAHs can also access state resources through the State Flex Program to identify potential partners and relevant evidence-based interventions.

Use of the Measures by State Flex Programs and FORHP

State Flex Programs can use the aggregated state-level data to identify and target technical assistance and support to address issues common to all CAHs or subsets of CAHs. For example, if a number of CAHs have issues related to charity care and bad debt performance, the Flex Program might target technical assistance and support to assist those CAHs in identifying the root causes and implementing policies and revenue cycle strategies to improve performance. Likewise, if a number of communities in which CAHs are located have gaps in access to essential services such as mental health care, Flex Programs can support hospitals to network with other providers or expand the use of telehealth. The measures will also provide rural stakeholders, including FORHP and State Flex Programs, with an important contextual "snapshot" of the socioeconomic, environmental, and health challenges faced by the communities in which CAHs operate, thereby reinforcing the essential role of CAHs in their local systems of care as key service providers, collaborative partners, conveners, leaders, and major employers.

Relationship of the Measures to the FMT's Data Query System

The FMT is currently developing a web-based data query system called the Critical Access Hospital Measurement and Performance Assessment System (CAHMPAS) that will include the health systems development and population health performance measures described here, along with CAH financial and quality data. CAHMPAS will allow individual CAHs to compare their performance to a defined set of state- and national-level peer groups. CAH administrators and their community partners can use the system to assess hospital and local health system performance in improving the healthcare system delivery and population health. The system will also allow State Flex Coordinators and FORHP to monitor CAH and health system performance at the community level and target CAH and community-focused technical assistance and interventions designed to improve the health system and health status of rural communities. ■

For more information on this study,
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