

A Summary of the Second Annual Workshop of AHRQ's Comparative Health System Performance Initiative

Summary

As part of the Comparative Health System Performance (CHSP) Initiative, the Agency for Healthcare Research and Quality (AHRQ) and the CHSP Coordinating Center hosted the Initiative's second annual workshop on September 14, 2017, to promote shared learning and advance the Initiative's objectives. Key staff from AHRQ, the three Centers of Excellence (CoEs), and the Coordinating Center attended the 1-day in-person workshop, along with Federal data stewards and members of the CHSP technical expert panel.

The workshop was dedicated to presenting and discussing the research and analyses undertaken by the CoEs, AHRQ, and the Coordinating Center during the past year, particularly their efforts to identify and describe health systems. Much of the agenda was dedicated to reviewing the Centers' approaches to this foundational task, presenting their preliminary findings, and discussing relative benefits and limitations associated with each methodology.

The workshop also featured presentations by CoE investigators studying system performance and their related exploration of measurement and definitions, a central focus of the Initiative. Finally, workshop participants reviewed priorities for the upcoming year and discussed next steps to achieving the Initiative's objectives. This brief is a review of the key themes that emerged from these presentations and group discussions.

Key Themes

Efforts to identify and describe health systems have advanced substantially over the past year, with the release of the publicly available Compendium of U.S. Health Systems and data from a variety of other sources.

- Concurrent with the workshop, AHRQ released the inaugural edition of the Compendium of U.S. Health Systems (2016), which combined data from several sources to identify and describe 626 U.S. health systems.¹ The Compendium is the first publicly available nationwide view of health systems in the United States, and it is intended as a resource for those who study various aspects of health systems.
- The three CoEs collected data from a variety of sources to identify and describe health systems in the United States:
 - » The Dartmouth CoE launched a National Survey of Healthcare Organizations and Systems to collect data on the external and internal characteristics of health systems.
 - » The National Bureau of Economic Research (NBER) CoE built an Enhanced Systems Database to identify systems and connect systems to their members by linking multiple administrative sources.
 - » The RAND CoE compiled secondary data on health system attributes and performance in four partner States (California, Minnesota, Washington, and Wisconsin) and collected primary data on 25 health systems through indepth interviews.

¹Technical documentation summarizing the approach to developing the Compendium is available at <https://www.ahrq.gov/sites/default/files/wysiwyg/chsp/compendium/techdocrpt.pdf>.



More work is needed to refine approaches to identifying systems that reflect the complex and changing nature of care delivery.

- The complexity of the health care delivery system, coupled with the limitations of existing data sources, make it both a conceptual and an operational challenge to identify and describe U.S. health systems. Organizations and researchers seeking to do so must balance the need to develop practical definitions that can be operationalized using existing secondary data sources with the goal of cataloguing for study the various types of provider organizations involved in patient care.

Characterizing health systems and their local environments is critical to measuring the effect of health systems on care delivery.

- Researchers seeking to measure health system attributes and the regulatory and competitive environments that systems function in should look beyond existing secondary data. For example, certain health system attributes, such as organizational culture and clinical integration, are multifaceted, may require additional measurement work, and likely are not fully captured in existing surveys and administrative data sources.

A variety of CHSP projects are tackling the challenge of identifying and quantifying the relevant characteristics and performance of health systems.

- The CoEs are using data they have collected (e.g., through surveys and interviews) to

build the foundation in this area. Their efforts will help researchers define and organize the health system attributes and contextual variables needed to comprehensively study health systems' role in delivering care in the United States. This work is occurring at the national and State level, which will enable comparison of characteristics and performance at these levels.

Studying health system performance remains a priority for the CHSP Initiative's upcoming research activities.

- Because a large proportion of physicians and hospitals in the United States are formally affiliated with health systems, researchers and policymakers need to understand how these affiliations influence key policy-relevant outcomes, such as quality and cost of care.
- To that end, the CoEs are working to identify relevant outcomes of health systems and to measure and define high performance. For example, just as any strategies to identify systems have to balance narrow and expansive definitions of health systems, the CoEs are grappling with what it means for a system to be high performing. Addressing this challenge requires operational determinations about whether high quality scores in one, several, or all possible quality domains should be classified as high performing. In addition, it is necessary to identify which parts of health systems contribute to those scores, how they contribute, and what incentives might lead systems to make changes that would affect their performance.

Introduction

To support the effective dissemination and use of patient-centered outcomes research (PCOR) among health care systems, the Agency for Healthcare Research and Quality (AHRQ) created the Comparative Health System Performance (CHSP) Initiative.² Beginning in 2015, AHRQ established Centers of Excellence (CoEs) at the Dartmouth Institute, NBER, and RAND Corporation, as well as a Coordinating Center at Mathematica Policy Research.

Over the 5-year initiative, the three CoEs and Coordinating Center are working together to:

- » Identify, classify, track, and compare health systems;
- » Study how health care systems use PCOR and other forms of evidence in practice; and
- » Identify the characteristics of high-performing health care systems.

As Sharon Arnold, Ph.D., AHRQ's Deputy Director, noted at the workshop's outset, the CHSP Initiative is "the marquee effort to support AHRQ's mission to produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable. It also plays a key role in AHRQ's ongoing emphasis on facilitating learning health care systems."

The second annual workshop was attended by staff from AHRQ, the CoEs, and the Coordinating Center, as well as Federal data stewards and members of the project's technical expert panel. The objectives were threefold:

1. The workshop stimulated communication between participating CoEs so they could

share findings and get feedback on their progress in developing databases to identify and examine health systems and launching multiple research studies in the first 2 years of the Initiative.

2. The workshop was designed to provide an updated understanding of what participating CoEs had planned for the coming year as a way to encourage dialogue on ways to coordinate their efforts and foster linkages between key researchers at different institutions.
3. The workshop was an occasion to discuss the direction of the entire Initiative moving forward.

In the past year, the CoEs made substantial progress on developing datasets to facilitate the study of health system performance. Notably, the Dartmouth CoE launched a National Survey of Healthcare Organizations and Systems, which is collecting data on external and internal characteristics of health systems based on a nationally representative sample. Dartmouth has also created claims-based measures for quality, utilization, and patient outcomes.

The NBER CoE built an Enhanced Systems Database, which identifies systems and connects them to their members by linking multiple administrative sources. NBER also developed a taxonomy of physician specialties.

The RAND CoE compiled secondary data on health system attributes and performance in four partner States (California, Minnesota, Washington, and Wisconsin). In addition, RAND convened an expert panel of health system leaders and academics to identify

²Details are available at <https://www.ahrq.gov/chsp/about-chsp/index.html>.

key attributes associated with health system performance and has begun collecting primary data on 25 health systems through indepth interviews.

Finally, AHRQ and the Coordinating Center created a publicly available database of health systems in the United States, the Compendium of U.S. Health Systems.ⁱⁱⁱ Together, the CoEs have advanced scholarship on (1) the identification and enumeration of health systems, (2) methods to characterize health systems and their local environments, and (3) approaches to measuring health system performance.^{iv}

The CoEs tried different methods to identify and describe U.S. health systems, and several themes emerged from discussions in which they compared and contrasted their experiences. In addition, AHRQ and the CoEs have conducted outreach to stakeholders to inform the development of the Compendium and enhanced data resources

Identifying and Listing Health Systems

AHRQ released the Compendium, which consolidates information from QuintilesIMS Healthcare Organization Services, SK&A Healthcare Databases, and the American Hospital Association's Annual Survey Database. The Compendium combines these three data sources with the aim of identifying health systems. For purposes of the Compendium, a health system is defined as including at

least one hospital and at least one group of physicians providing comprehensive care who are connected with each other and the hospital through common ownership or joint management.^v

Based on this definition, 626 U.S. health systems (2016) were identified. The Compendium is the first publicly available list of health systems in the United States. It is intended to be a resource for researchers, policymakers, and other stakeholders, and it can be used to answer questions about the relationships between systems, system attributes, and key outcomes.^{vi}

Operationalizing a Health System Definition

Workshop participants discussed the intricacy of health care delivery systems' structure and operations in the United States. Systems are diverse on every measurable dimension, including different measures of size (for example, number of beds, number of clinicians, and number of physical locations) and management structure. This diversity presents conceptual challenges in defining systems and operational challenges in applying those definitions to available data.

Participants articulated the need to define the types of entities that qualify as health systems more specifically. Doing so will mean refining the current definition of a health system, which could include:

ⁱⁱⁱ Available at <https://www.ahrq.gov/chsp/compendium/index.html>.

^{iv} See <https://www.ahrq.gov/chsp/reports/index.html>.

^v For more information about the methodology used to construct the Compendium of U.S. Health Systems, see the Compendium's technical documentation at: <https://www.ahrq.gov/sites/default/files/wysiwyg/chsp/compendium/techdocrpt.pdf>.

^{vi} See <https://www.ahrq.gov/chsp/compendium/index.html>.

- » Clarifying terms such as “comprehensive” and “connected,”
- » Defining the types of systems that come under the umbrella of a health system, and
- » Expanding the definition.

Refining the definition of a health system could help overcome operational challenges to applying the definition. For example, two CoEs may have different guidelines about the types and characteristics of systems to include. Thus, when identifying health systems from the same data source, the two CoEs could arrive at different decisions about including a potential system.

Refining the definitions also will help with, but not wholly resolve, challenges in identifying and describing health systems. One particular area of attention relates to subsystems and regional complexity. Some health systems with nationwide footprints include multiple subsystems that meet the definition of a health system in some regions but not in others. Detailed data are needed to support identification of whether national health systems are indeed operating as systems in all of their markets.

Leveraging Secondary Data Sources To Identify Systems

Workshop participants also discussed different approaches to using secondary data to identify health systems and observed that these differences may affect system identification. Specifically, it is possible to construct health systems from the top down by focusing on sources that explicitly include health system identifiers. Another option is to construct health systems from the bottom up—for example, by linking physicians to practices,

linking practices to hospitals, and then connecting the different layers to form systems.

Each approach has its own strengths and challenges. Top-down approaches have the benefit of starting with a list of distinct entities that are identified as health systems according to a predetermined definition of a health system. Bottom-up approaches that reflect empirically-identified connections may better reflect systems as entities made up of distinct members with complex relationships. A bottom-up approach is an option for future versions of the Compendium because it offers flexibility in defining the varied arrangements that constitute systems.

Enhancing and Expanding the Compendium

Recognizing the conceptual and operational challenges of defining systems, workshop participants proposed several ways to expand on the Compendium’s definition of health systems to encompass other organizational configurations that play a key role in patient care. Organizations that do not meet the current definition of a health system may play an important role in health care provision, and more investigation is needed to understand the extent of their involvement and the best way to include them in the Compendium.

Another issue participants raised was the evolution of health systems. Mergers and acquisitions are an example. Changes in any level of health care provision, from the health care provider to the hospital, can affect whether a given health care organization includes the number and type of providers needed to qualify as a health system for the Compendium. Further, keeping data and lists of systems current and comparable can be

an arduous task if it means linking multiple secondary data sources that are updated on different schedules. Workshop attendees shared possible strategies for overcoming these challenges, including incorporating datasets that focus on mergers and acquisitions.

Characterizing Health Systems and Their Local Environments

Discussions at the workshop also highlighted the importance of characterizing health systems and their local environments. Analysis of primary data collected by the CoEs through surveys and interviews, as well as secondary data, revealed the importance of understanding both the inner workings of health systems and the context in which health systems operate. These results provide valuable direction to the CoEs and others studying health systems. However, this work also revealed that available secondary data sources may not provide enough detail to comprehensively describe the health system attributes and market characteristics that are likely relevant to patient care.

Workshop participants noted that the complexity of health system attributes, such as organizational culture and clinical integration, compound the challenges of characterizing a system. For example, rich scholarship in organizational culture reveals the different perspectives that must be considered within an organization to capture its culture. Measurement challenges exist across domains in applying organization-level measures to systems, because new data collection and measures may be needed where organization-level measures do not adequately capture system-level issues.

Of note, no robust secondary data sources exist to capture key dimensions of health system culture. The CoEs' survey and qualitative data collection efforts have begun to address these gaps and will advance our understanding of these important dimensions of health care provision.

Regarding the role of the environment, workshop participants likewise noted the importance and the challenge of observing system characteristics at different levels. Therefore, health system trends at the national level may obscure State-level patterns and changes at the community level. Indeed, early findings from CoE work emphasize the importance of understanding the multiple levels at which market, regulatory, and payment factors influence these systems.

Measuring Health System Performance

Using a variety of methods and datasets, the CoEs found that a large proportion of U.S. providers practice within health systems. Because health systems are positioned to have a profound effect on modes of care delivery, it is critical for providers, researchers, and policymakers to better understand what these affiliations mean for policy-relevant performance outcomes. Measuring and defining high performance and how affiliations influence quality and cost outcomes are a priority for ongoing work.

Next Steps

A key next step in the CoEs' work is articulating relevant outcomes of health systems and determining the appropriate measurement strategy. For example, just

as system identification strategies had to balance narrow versus expansive definitions of health systems, CoEs must determine which combination of quality domains are indicative of high performance.

The Compendium provides a strong foundation for studying health system performance, providing a valuable resource for identifying health systems, and providing a baseline from which changes in health systems

can be monitored over time. The value of the resource will be significantly enhanced when the planned second phase that links physicians, hospitals, and other providers to health systems is released.

Progress on these and other issues will advance the CHSP Initiative's objective of understanding how health care systems promote more evidence-based, patient-centered care.



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Agenda for Second Annual Grantee Workshop
September 14, 2017
9:00 a.m.–5:00 p.m. (ET)
AHRQ, 5600 Fishers Lane, Rockville, Maryland

Registration will begin at 7:30 a.m., with an optional networking breakfast beginning at 8:00 a.m.

- I. Welcome (Sharon Arnold, AHRQ; 9:00–9:10)
 - II. Introduction (Mike Furukawa, AHRQ; Eugene Rich, Mathematica Policy Research; 9:10–9:30)
 - III. Session 1: Setting the Stage (9:30–10:30)
 - a. U.S. Health Care Delivery Systems in 2014 (Nancy Beaulieu, NBER; 9:30–9:45)
 - b. Which Health System Attributes Matter? Conclusions of the RAND Technical Expert Panel (Susan Ridgely, RAND; 9:45–10:00)
 - c. Population Health in the High Value Healthcare Collaborative (Nilay Shah, Dartmouth; 10:00–10:15)
 - d. Moderated Discussion/Q&A (Rick Kronick, University of California, San Diego/AHRQ; 10:15–10:30)
 - IV. Break (10:30–10:45)
 - V. Session 2: Identifying and Describing Health Systems Using Secondary Data Sources—Findings and Key Challenges (David Jones and Eugene Rich, Mathematica; 10:45–12:15)
 - VI. Networking Lunch (12:15–1:00)
 - VII. Session 3: Health System Integration (1:00–2:00)
 - a. Measures of Clinical, Structural, Financial and Relational Integration (Valerie Lewis, Dartmouth; 1:00–1:15)
 - b. Hospital-Physician Integration: Unpacking the National Trend (Chris Whaley, RAND; 1:15–1:30)
 - c. Consequences of the 340B Drug Discount Program (Sunita Desai, NBER; 1:30–1:45)
 - d. Moderated Discussion/Q&A (Mike Furukawa, AHRQ; 1:45–2:00)
 - VIII. Break (2:00–2:10)
 - IX. Session 4: Organization of Physician Practices and Care Delivery (2:10–3:10)
 - a. Physician and Practice Variation in End-of-Life Care (Mary Beth Landrum, NBER; 2:10–2:25)
 - b. What Is the Role of Provider Group Selection Into the ACO Model on Beneficiary Outcomes? (Marietou Ouayogode, Dartmouth; 2:25–2:40)
 - c. How Different Definitions of High Performance Affect Classification of Medical Groups (Cheryl Damberg/Paul Shekelle, RAND; 2:40–2:55)
 - d. Moderated Discussion/Q&A (Linda Bergofsky, AHRQ; 2:55–3:10)
 - X. Break (3:10–3:20)
 - XI. Session 5: Planning for the Future (3:20–4:50)
 - a. Possible Strategies To Address Data Needs for Identifying Health Systems (Mike Furukawa, AHRQ; David Jones, Mathematica; 3:20–4:05)
 - b. Year 3 Priorities and Collaboration Opportunities (Linda Bergofsky, AHRQ; Jessica Heeringa, Mathematica; 4:05–4:50)
- Wrap-Up (Mike Furukawa, AHRQ; 4:50–5:00)