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HEALTHCARE VALUE HUB

Measuring Healthcare Value at the State Level: Advocates' Guide

Many Americans find it alarmingly difficult to get good value for their healthcare dollar. According to numerous reports, we overpay for much of our healthcare and get uneven quality in return. Excess healthcare spending crowds out other important purchases and burdens individuals, employers and governmental budgets.

Because the specific conditions that give rise to high prices, unnecessary services and uneven quality vary tremendously between and within geographic areas states are the key system actors likely to be at the forefront of meaningful progress on healthcare cost and value issues.

States are underpowered to address poor healthcare value. The absence of timely and reliable data limits the ability to identify healthcare cost drivers, poor-quality hot spots and whether or not interventions designed to improve healthcare value are working. Aggregate data on quality and spending can ensure that we aren't fixing one area while breaking another and show us whether the state's overall

healthcare bill is in line with the overall economic growth and quality improvements. Detailed data allows policymakers to understand what drives disparities and to design and implement appropriate interventions. In short, we cannot improve the cost and quality of healthcare without the support of robust data.

For the most part, healthcare value is not now measured at the state level. To address this shortcoming, this guide describes the major domains of healthcare value measurement and points to readily available state-level data resources that can begin to show states are performing on healthcare value. It also identifies the key data that are lacking.

What are the Domains of Healthcare Value?

Healthcare value is getting good quality care for a fair price. We must stop overpaying at the household, employer or governmental level because, at the end of the day, the consumer pays the bill.

It is also about enabling consumers to navigate the healthcare system safely and confidently. This means that data on price and quality is trusted, actionable and readily available so that the risk of encountering poor performers, or an outrageously inflated price, is minimized.

Finally, a properly working healthcare system is sensitive to consumers' varying ability to pay for the care they need. Healthcare, after all, is not a luxury, but a vital service necessary for life and quality of life.

With this description of healthcare value in mind, we believe states should use the following broad categories to measure healthcare value for their residents:

- Spending and Cost

- Affordability

- Health Outcomes

- Medical Harm

- Patient Experience

SUMMARY

This guide describes the major domains of healthcare value measurement and identifies readily available data resources that begin to fill in the healthcare value picture at the state level.

While currently available data provides a pretty robust starting point for healthcare value measurement, this nationally collected data is insufficient if states are to take a data-driven approach to addressing healthcare value for their residents.

The Hub's companion report, *Measuring Healthcare Value at the State Level: A Call to Action*, details the additional data needed and provides case study examples of states that already collect this critical data.

Spending and Costs: *What Data Do We Have?*

It's important to measure total annual healthcare spending in a state for the most complete picture of progress on healthcare value, but it is also important to separate spending growth into its utilization and price components. Data should answer questions such as: Are we overspending on low-value care? Or perhaps under-spending on high-value care? Where are the particular price or utilization "hot spots" (specific services, geographic areas or populations) that need attention within a state?[1]

Compared to other dimensions of healthcare value, it is generally difficult to obtain detailed state-level spending data.

- Readily available utilization data often reflects just the Medicare-enrolled population.

- Premium data is not a good substitute for data on underlying medical costs as changes in average premium also reflect changes in benefit design and provider network composition.

Nonetheless, the following data can begin to paint a picture (see Table).

Measure	What is It?	Primary Data Source
Per capita personal healthcare consumption expenditures (PCE)	Per person healthcare spending, by state, by year. Estimates include nursing home care spending. The Bureau of Economic Analysis website offers an interactive data viewer	U.S. Bureau of Economic Analysis (BEA)
Use of Low-value care: Potentially avoidable emergency department visits among Medicare beneficiaries	There are many conditions that should rarely result in trips to the ER when appropriate ambulatory care is provided. Avoidable admissions are therefore a measure of the quality of ambulatory care in a state. Available by state from the Commonwealth Fund's U.S. Health System Data Center	Medicare Standard Analytic Files (claims data)
Use of high-value care: Adults ages 50 and older who received recommended screening and preventive care	Use of preventive care in adults. Somewhat older data is available for the use of preventive care in children. Available by state from the Commonwealth Fund's U.S. Health System Data Center	The Behavioral Risk Factor Surveillance System (BRFSS)

Note: The table on page 8 provides the web addresses for data aggregator tools referenced in this report.

Spending and Costs: *What Data are Missing?*

States need to do a better job separating health spending growth into its utilization and price components. While there has been significant attention paid to waste.[2] in our system, other analysis show that rising unit prices is a much bigger driver of year-over-year increases in healthcare spending.[3] In particular, states need to understand how much spending can be attributed to low-value services (for example, prescribing an antibiotic for a viral infection) and whether use of high-value services is in line with benchmarks (for example, recommendations from the U.S. Preventive Services Task Force).

Medicare claims data can be used to investigate these issues but analysis of this data requires technical skills and Medicare price and utilization patterns are generally not a good predictors of variation in the privately insured population.[4]

A handful of states have all-payer claims databases that contain data from all insurers and provide a rich repository of spending and utilization data, but far too many states don't have this critical resource.

Finally, states should begin to ask the question, how would we establish a fair price for services, drugs and devices that seems widely divergent from the basic cost to deliver the service or product?

Affordability: *What Data Do We Have?*

Data on spending tells us nothing about the affordability of healthcare. Unaffordable prices for care and unaffordable premiums can lead consumers to delay getting needed care, cause unwelcome budgetary tradeoffs, medical debt and sometimes bankruptcy.[5]

Our nation doesn't have a standard definition of affordability for healthcare, and few states have taken up the question. For now, the metrics below serve as strong signals of affordability problems. For example, delaying care due to concerns about cost is a fairly direct signal of affordability problems. Not having health insurance or being under-insured are also strong indicators of possible affordability problems (see Table).

Measure	What is It?	Primary Data Source
Lack of insurance coverage	Reliable estimates of rates of uninsurance, private insurance and public insurance can be derived from the American Community Survey (ACS). Available from the SHADAC data center which allows users view specific rates by income, race, ethnic and other demographic characteristics	American Community Survey (ACS)
Adults who went without care because of cost in past year	The percent of adults in a state who at some point during the year went without healthcare due to cost Available by state from the Commonwealth Fund's U.S. Health System Data Center. Available for sub-state areas from the CDC's Chronic Disease and Health Promotion Data & Indicators interactive data viewer	The Behavioral Risk Factor Surveillance System (BRFSS)
Individuals under age 65 with high out-of-pocket medical costs relative to their annual household income	Measures the debt burden placed upon working age Americans by healthcare costs. Available from the Commonwealth Fund's U.S. Health System Data Center	Current Population Survey—Annual Social and Economic Supplement (CPS)
Made changes to medical drugs because of cost in past year	Measures the degree to which the cost of care prevents patients from obtaining and using drugs as prescribed by their physician. Available from the SHADAC data center.	The National Health Interview Survey (NHIS)
Trouble paying medical bills in past year	Measures the burden of medical debt in a state. Available from the SHADAC data center.	The National Health Interview Survey (NHIS)

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Affordability: *What Data Are Missing?*

It is imperative that state activity to address high healthcare costs and uneven quality translates into care that is affordable at the point of service and lower premiums. To track progress on this issue, states need to develop some standards for what constitutes affordability and develop a system for tracking it. These data will need to reflect sample sizes large enough to better understand how the burden of affordability is distributed across state residents. Put another way, the ability to afford healthcare must be broadly distributed across income, racial and ethnic groups.

Health Outcomes: *What Data Do We Have?*

We cannot address our spending and affordability problems without controlling for healthcare outcomes. Health outcomes in our country too often lag those of other nations and too many of our residents experience disparities in outcomes.[6] Finally, we must ensure that changes to our health system intended to address spending do not compromise quality.

Fortunately, compared to other dimensions of healthcare value, we have myriad data describing state level population health outcomes. These data range from fairly direct measures of outcomes (such as premature deaths) to more indirect signals, such as those that look at the use of potentially avoidable care. Potentially avoidable care can signal unnecessary spending and poor outcomes due to mismanagement of the underlying condition (see Table).

Measure	What is It?	Primary Data Source
Premature deaths that could have been prevented with effective and timely health care	Measures deaths from thirty three conditions such as pneumonia that should not result in death if a person receives timely and appropriate medical care. Also known as "mortality amenable to healthcare". Available from the Commonwealth Fund's U.S. Health System Data Center	CDC National Vital Statistics System: Mortality Restricted Use File
Infant mortality, deaths per 1,000 live births	The rate of deaths that occur during birth or prior to an infant's first birthday. Available from the Commonwealth Fund's U.S. Health System Data Center	CDC National Vital Statistics System: WONDER
Hospital admissions for pediatric asthma, per 100,000 children	The rate of readmissions for children who present to a hospital for asthma related symptoms. Since most symptoms can be managed with proper treatment and guidance, high readmission rates indicate lower quality of care. Available from the Commonwealth Fund's U.S. Health System Data Center	Healthcare Cost and Utilization Project (HCUP)
Medicare 30-day hospital readmissions, rate per 1,000 beneficiaries	Medicare beneficiaries readmitted within thirty days of an acute hospital stay. Excludes transfers between hospitals. Available from the Commonwealth Fund's U.S. Health System Data Center	Chronic Conditions Warehouse (CCW)/CMS Geographic Variation Public Use File

Note: The table on page 8 provides the web addresses for data aggregator tools referenced in this report. More outcome measures are listed (with links) on the Hub website at *www.healthcarevaluehub.org*.

Health Outcomes: *What Data is Missing?*

Nationally collected data doesn't always contain a sufficient sample to permit detailed demographic analysis that would allow us to measure progress on disparities in health outcomes (for example, income group, insurance status, race, ethnicity, etc.).

Also, several measures rely on data for those enrolled in traditional Medicare, which is not always a good predictor for the non-Medicare population and sometimes not for the Medicare Advantage population.[7]

Finally, quality measurement is a still evolving science. Current outcome metrics are not all highly predictive but continued development is a priority for many stakeholders, especially with the growing number of providers adopting value-based payment arrangements.

Medical Harm: *What Data Do We Have?*

Medical harm refers to all types of medical errors and healthcare-acquired infections. By some estimates, medical harm is the third leading cause of death in the United States.[8] Medical harm, by definition, is largely preventable, causes injury to patients and was proximately caused by the delivery of care. It therefore deserves special attention as a measure of healthcare value.

Among other things, medical harm includes:[9]

- Serious Reportable Events—more commonly called "Never Events;

- healthcare acquired conditions;

- healthcare-acquired infections;

- medication errors; and

- diagnostic errors.

In 1999, the Institute of Medicine (IOM) called on states to create mandatory reporting systems as part of a strategy to identify and learn about medical errors and ultimately to improve patient safety.[10] This guidance has not yet been put into place nationally but 27 states and the District of Columbia require some form of reporting,[11] often accompanied by targeting improvement levels for medical harm events. This data is often available only at the hospital or provider level. While useful for consumers shopping for the best place to get their care, the absence of state aggregation makes it difficult to measure overall progress—or backsliding—overtime.

Just one key area of medical harm is collected nationally and reported at the state level (see Table).

Measure	What is It?	Primary Data Source
Healthcare-associated infections (HAI)	Healthcare-associated infections data includes: • central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), • select surgical site infections (SSI), • hospital-onset Clostridium difficile (C. difficile) infections, and • hospital-onset methicillin-resistant Staphylococcus aureus (MRSA) bacteremia (bloodstream infections). The CDC has state-level annual reports on HAI progress	Centers for Disease Control (CDC)

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Medical Harm: *What Data is Missing?*

Quite simply, states need to measure all forms of medical harm at not only the provider level but also at the aggregate state level. We also need systematic validation of the reported data, to counteract any tendencies to under-report harm. Finally, we need to expand the data on harm that is collected to include non-hospital-based measures of harm.

Patient Experience: *What Data Do We Have?*

Consumers deserve to receive healthcare in a manner and setting that is focused on their needs. Patient experience in healthcare attempts to capture patient's preferences, documenting the aspects of care that often matter most to patients—such as timely access to care, good communication, respect, and courtesy.

Much like the need to include outcomes in state tracking of healthcare value, we cannot address spending without ensuring that the patient experience is also a priority. Indeed, many interventions, such as Patient Centered Medical Homes, make patient experience a centerpiece of the initiative.

For a few measures, this data is already being collected at the state level (see Table).

Measure	What is It?	Primary Data Source
Medicare fee-for-service patients whose health provider always listens, explains, shows respect, and spends enough time with them	Available, by State, from the Commonwealth Fund's U.S. Health System Data Center	Consumer Assessment of Healthcare Providers and Systems (CAHPS)
Hospitalized patients who reported hospital staff always managed pain well, responded when needed help to get to bathroom or pressed call button, and explained medicines and side effects	Available, by State, from the Commonwealth Fund's U.S. Health System Data Center	Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

Note: The table on page 8 provides the web address for data aggregator tools referenced in this report.

Patient Experience: *What Data is Missing?*

We need to expand the collection of patient experience data to include the non-Medicare population and non-hospital settings, as well as sample size and demographic detail to permit assessment of disparities in patients' experience.

Putting It All Together

The very exercise of quantifying progress on healthcare value refocuses our policy conversations in a useful way. Below is a sample profile for readily available data from the state of Ohio.

Sample Healthcare Value Profile - Ohio

Measure	Most Recent Year	Prior Year	Baseline (national average)
Spending, Price and Utilization			
Per capita personal healthcare consumption expenditures	$7,146 (2015)	$6,818	$6,436 (2015)
Use of Low-Value Care: Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries	214 (2013)	219	181 (2013)
Use of high-value care: Adults ages 50 and older who received recommended screening and preventive care	39% (2014)	41% (2012)	40% (2014)
Affordability			
Lack of insurance coverage	8.3% (2014)	10.9 %	11.6% (2014)
Adults who went without care because of cost in past year	13% (2014)	15%	14% (2014)
Individuals under age 65 with high out-of-pocket medical costs relative to annual household income	15% (2013-2014)	No Data	15% (2013-2014)
Made changes to medical drugs because of cost in past year, ages 19-64	27% (2014)	30%	31% (2014)
Trouble paying medical bills in past year	35% (2014)	31%	29%
Health Outcomes			
Premature deaths that could have been prevented with effective and timely healthcare, per 100,000 people	94 (2012-2013)	96 (2010-2011)	84 (2012-2013)
Infant mortality, deaths per 1,000 live births	7.9 (2013)	7.5	6 (2013)
Hospital admissions for pediatric asthma, per 100,000	128 (2012)	143	143 (2012)
Medicare 30-day hospital readmissions, rate per 1,000 beneficiaries	30 (2013)	34	30 (2013)
Medical Harm			
Rate of healthcare-acquired Clostridium Difficile infections (reported as a Standardized Infection Ratio)	0.92 (2014)	0.93	0.92
Patient Experience			
Medicare fee-for-service patients whose health provider always listens, explains, shows respect, and spends enough time with them	76% (2013)	No Data	76 (2013)
Hospitalized patients who reported hospital staff always managed pain well, responded when needed help to get to bathroom or pressed call button, and explained medicines and side effects	68% (2013)	68%	68% (2013)

Data Aggregation Tools

Several organizations have developed state-level data "report cards" make it easy to find the much of the data described above. They present data in an accessible and visually-appealing way. Here are three of the best and sample metrics you'll find.

Data Source	Spending	Affordability	Outcomes	Medical Harm	Patient Experience
U.S. Health System Data Center, The Commonwealth Fund *http://www. datacenter. commonwealthfund. org/*	Medicare reimbursements per enrollee, total single premium per enrolled employee at private-sector establishments that offer health insurance	Adults who went without care because of cost in past year, Individuals under age 65 with high out-of-pocket medical costs relative to their annual household income, Uninsured rate for adults and children	Hospital admissions for pediatric asthma, hospital readmissions, Medicare 30-day hospital readmissions, potentially avoidable ER visits among Medicare beneficiaries, mortality amenable to healthcare, and infant mortality	None	Some limited results from survey data
SHADAC Data Center, State Health Access Data Assistance Center *www.datacenter/ shadac.org/Profile*	None	Made changes to medical drugs because of cost in past year, needed but delayed medical care due to cost in past year, needed but did not get medical care due to cost in past year, trouble paying medical bills or paying off bills over time in past year, insurance coverage by demographics and family type, average total premium by plan type, employee contributions to premiums by plan type.	None	None	None
State Snapshots, Agency For Healthcare Research and Quality *https://nhqrnet. ahrq. gov/inhqrdr/ state/select*	None		Deaths per 1,000 adult hospital admissions with pneumonia Hospital patients with heart failure discharged home with written instructions or educational material, Avoidable admissions for bacterial pneumonia, Avoidable admissions for angina, Avoidable admissions for chronic obstructive pulmonary disease or asthma , Avoidable admissions for hypertension	None	Adults who had an appointment for routine health care in the last 12 months who sometimes or never got appointments for routine care as soon as wanted, Percent of adults who reported being told what care and services they would get when they first started getting home health care, *and more…*
CDC Healthcare-acquired infections Progress Report *http://www.cdc.gov/ hai/surveillance/ progress-report/ index.html*	None	None	None	Six healthcare-acquired infections tracked	None

Conclusion

This guide describes the major dimensions of healthcare value measurement and walks advocates through readily available data resources that begin to fill in the healthcare value picture at the state level.

Currently available data provides a pretty robust starting point for healthcare value measurement—enough to get the ball rolling in all states. However, this nationally collected data does not contain enough detail to sufficiently arm states to take a data driven approach to addressing healthcare value in their state. To support and protect their residents, states will have to augment the data currently available.

Several states have their own data collection and analysis efforts designed to paint a more complete picture of healthcare value. A future issue brief will describe these state-level efforts and delve into what to advocate for in your state to fill remaining gaps.

Notes

1. A 2009 article by Atul Gawande explored the reasons behind the fact that spending per Medicare member per year was 86 percent higher in McAllen than in El Paso, Texas. After controlling for age, sex, and race, he concluded that the nearly two fold difference in per capita Medicare spending between the two cities was a change in McAllen during the mid-1990s, when healthcare providers adopted a greater "entrepreneurial spirit" and a "culture of money." Further, researchers narrowed down the problem to post-acute care, not inpatient hospitalizations, as driving McAllen's high cost. Gawande, Atul, "The Cost Conundrum," *New Yorker* (June 1, 2009).

2. Yong, Pierre, Robert Saunders and LeighAnne Olsen, *The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary*, Institute of Medicine, 2010

3. For example, the Health Care Cost Institute uses a large claims database to show that nationally, for the commercial population, rising prices accounted for nearly all our growth in inpatient spending, outpatient spending, professional procedures and brand drugs. Only for generic drugs was utilization an important contributor to increases in total spending. See HCCI's Health Care Cost and Utilization Reports for 2014 and other years.

4. Luisa Franzini, Osama I. Mikhail and Jonathan S. Skinner, "McAllen and El Paso Revisited: Medicare Variations Not Always Reflected in the Under-Sixty-Five Population," *Health Affairs*, Vol. 29, No. 12 (December 2010).

5. *Why are Healthcare Costs an Urgent Problem?*, Easy Explainer No. 2, Healthcare Value Hub, Consumers Union (May 2015).

6. Gary Claxton, et al., *Measuring the Quality of Healthcare in the U.S.,* Kaiser Family Foundation (Oct. 10, 2015); See also, AHRQ, National Healthcare Quality & Disparities Reports.

7. Neuman, Tricia, Giselle Casillas, and Gretch Jacobson, *Medicare Advantage and Tradition Medicare: Is the Balance Tipping?*, Kaiser Family Foundation (Oct. 20, 2015).

8. James, John T., "A New, Evidence-Based Estimate of Patient Harms Associated with Hospital Care," *Journal of Patient Safety*, Vol. 9, No. 3 (September 2013).

9. A complete description of each type of harm is included in *Medical Harm: A Taxonomy*, Research Brief No. 9:, Healthcare Value Hub, Consumers Union (2015).

10. Kohn LT, Corrigan JM, Donaldson M, eds., T*o Err Is Human: Building a Safer Health System*, Institute of Medicine (1999).

11. Hanlon, Carrie, et al., *2014 Guide To State Adverse Event Reporting Systems*, National Academy for State Health Policy, Washington D.C., (January 2015).

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