Data: Foundation of Improving Quality and Value

Lessons Learned by the Robert Wood Johnson Foundation's National Program Office for Aligning Forces for Quality

Background

Measuring and reporting the quality of care that doctors and hospitals deliver is a cornerstone of the Aligning Forces for Quality (AF4Q) program. To do this, AF4Q Alliances must collect and aggregate data across multiple sources so they can be used for public reporting, quality improvement, and payment reform. Alliances then analyze the data and report findings to consumers, providers, health plans, employers, and other stakeholders through consumer-friendly public reports and provider feedback reports.

The Robert Wood Johnson Foundation emphasized this portfolio of work with the understanding that data are power. Data are the raw material that post-Affordable Care Act (ACA) health care systems need to rebuild care and payment systems that deliver value rather than volume. Data are what engaged consumers use to make informed decisions about their care, what payers and purchasers use to design value-based benefit packages, and what government and public health entities use to make policy decisions. All of these players need access to uniform, actionable data in order to effect change.[1] But data alone are not valuable. Value comes from aggregating data across payers and systems and from analyzing the data to facilitate quality improvement and payment reform strategies.

Entities at the federal level, including the Centers for Medicare & Medicaid Services (CMS) and Congress, recognize the importance of complete and actionable data as they set payment and improvement priorities, award grants, align measures, and engage in the rulemaking process. At the state level, state governments, Medicaid, all-payer claims databases (APCDs), accountable care organizations (ACOs), Qualified Entities (QE), insurance marketplaces, Quality Improvement Organizations (QIO), and Health Information Exchanges (HIE) are among the many players who recognize the power of data aggregation. While these efforts have resulted in an exponential increase in the amount of data available, they also have resulted in a corresponding increase in measurement and reporting requirements, with providers primarily bearing the burden.

As neutral conveners in their respective communities, Alliances are able to bring stakeholders to the table that may not have historically engaged with one another to access and combine clinical or claims data from multiple sources.[2] These aggregated data sets can be a powerful catalyst for action by providing a more complete picture of health care quality and costs. Aggregated data also improve measure validity and reliability and allow Alliances to push for population-level improvements in quality and cost that cannot be achieved without collaboration across payers and providers.

Despite the proliferation of data collection and reporting requirements, the federal government historically has faced challenges in storing, analyzing, and disseminating this information because of the volume and fragmentation of the data.[3] Although progress is being made in data storage and processing technologies

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[1] Toussaint, J., Shortell, S., and Mannon, M. (2014). Improving the value of healthcare delivery using publicly available performance data in Wisconsin and California. *The Journal of Delivery Science and Innovation*, 2(2):85-89.

[2] Ibid.

[3] http://content.healthaffairs.org/content/33/7/1195.full#ref-2.

that allow for more nuanced analyses, CMS and other agencies have relied primarily on a policy of "liberating data," looking to the public to access and use health care data to drive value.[4] As a result, organizations such as AF4Q Alliances have an opportunity to serve as regional data aggregators, provide analytic services, and streamline data collection and reporting to reduce provider burden. And as government and foundation funders look to these efforts to generate revenue rather than continuing to rely on grant funding, the question of how a community can realize economies of scale and value in data aggregation has become paramount.

Data Use Agreements: The Stepping Stones Along the Measurement and Reporting Path

Data use agreements are the foundation of data aggregation efforts. These agreements dictate if and how the data can be used to build value and generate revenue. Narrow data use agreements can help to build trust among partners, especially for new and unproven efforts. However, narrow agreements limit the flexibility to explore new areas of measurement and improvement, as well as new partnerships, and may limit the data aggregator's ability to monetize the data and ultimately sustain the data aggregation effort.

An example of how best to leverage data use agreements can be found by looking at the Health Collaborative in Cincinnati, OH. The Health Collaborative recognized early on that earning the trust of providers and payers was a necessary first step in building a regional data aggregation and quality improvement enterprise, and having credible data is essential to building trust. To do this, Cincinnati created master services agreement, which set firm rules that limited data use to agreed-upon purposes, but also allowed for great flexibility in establishing and modifying the scope of work the Collaborative could undertake within those boundaries. The master services agreement assured payers and providers that use of the data would be governed by these rules, while giving the Collaborative the freedom it needed to respond quickly and appropriately to changes in the market by eliminating the need to negotiate a separate data use agreement each time scope of work evolved.

Delivering Value Through Combined Data Streams

Generally speaking, the core commodities of data aggregation are clean and normalized data, analysis, and clinical integration. To remain competitive in this space, AF4Q Alliances have either developed these commodities in-house or partnered with organizations with complementary capabilities to meet all the data needs of potential customers.

Many AF4Q Alliances, therefore, have built sophisticated and important data analysis capability and data aggregation infrastructure that has made them competitive for federal grants and contracts, attracted interest from commercial payers, and helped build a business case around selling components of the infrastructure. This infrastructure is an important path to sustaining overall improvement work.

In Oregon, for example, the Oregon Health Care Quality Corporation (Q Corp) has developed the most comprehensive administrative claims database in the state. Since 2008, the Alliance has been aggregating

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[4] www.healthdata.gov/unleashing-power-data-and-innovation-improve-health.

claims data from multiple payers to produce quality and utilization reports for consumers, providers, health plans, policymakers, and employers. Their claims database includes 80 percent of the state's fully insured commercial population, 100 percent of the Medicaid population, and 92 percent of the Medicare population. Information on more than 30 quality improvement and utilization measures is available to the public through this work.[5]

Because of this comprehensive data set, Q Corp has become one of the state's most reliable organizations for health information and has proven itself invaluable to state regional health reforms. Q Corp is a critical partner to the Oregon Health Authority (OHA), working to establish and validate performance metrics for the Coordinated Care Organization, a network of providers working together to better serve Medicaid patients. Q Corp also partners with OHA to lead the Patient-Centered Primary Care Institute, which helps primary care providers and practices improve quality, access, coordination, patient experience, and clinical outcomes—and thereby fulfill Oregon's vision for the Triple Aim outcomes of a healthy population, extraordinary patient care, and reasonable costs. Additionally, Quality Corp provided quality ratings, benchmarks, and health plan ratings for Cover Oregon, Oregon's state-run insurance exchange from 2013-2014, before the state moved to a federally facilitated exchange.

In 2012, Q Corp became one of the first three organizations in the United States to become a certified Qualified Entity to receive Medicare Fee-for-Service and Medicare Part D data, along with two other AF4Q Alliances, Cincinnati's Health Collaborative and the Kansas City Quality Improvement Consortium. To date, six of 13 Qualified Entities are AF4Q Alliances.

Finally, Q Corp was chosen in 2013 by the Network for Regional Healthcare Improvement (NRHI) to be one of five communities in a pilot to measure total cost of care. This program, called the Healthcare Cost Measurement and Transparency Project, seeks to break new ground by producing health care cost information and benchmarks. The information will allow communities to better understand health care cost variation across their own regions and provider groups, and also make comparisons on cost to other regions across the country. The project is also hoping to identify regional health care cost drivers and develop strategies to reduce spending at the community level. Other participating communities include Minnesota Community Measurement; the Center for Improving Value in Health Care, located in Colorado; the Midwest Health Initiative, located in the St. Louis region; and the Maine Health Management Coalition.

The Maine Health Management Coalition (MEHMC) and Quality First (QF), which together form the AF4Q Alliance in the state of Maine, also have become integral partners with the state of Maine's health care transformation efforts. The Alliance's database is unique in the state for its ability to provide access to timely clinical and multi-payer claims data and perform aggregate or detail-level analysis across members in order to track health care costs, influence market forces, and inform policy. It provides easy drill-down features that can quickly identify issues, trends, and variations from benchmarks to support practice-level improvements and value-based insurance products.[6]

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[5] http://q-corp.org/our-work/measurement-reporting.

[6] http://www.ehcca.com/presentations/pfpsummit6/mitchell_pc3.pdf.

Recognizing the value of these capabilities, the Dirigo Health Agency's Maine Quality Forum, a state agency, began partnering with MEHMC and QF in 2010 to run a patient-centered medical home pilot and has since worked closely with the state to align the pilot with the larger statewide Health Homes Initiative. Due in part to the success of these medical home efforts, Maine was selected as one of just eight states to participate in Medicare's Multi-Payer Advanced Primary Care Practice (MAPCP) demonstration, for which MEHMC and QF provide support to identify and care for the highest-cost, highest-needs patients. Together, these efforts are now treating and providing care coordination to an estimated 360,000 people in Maine, or more than 25 percent of the state's 1.3 million people. The Alliance also is also a key partner in the Maine State Innovation Model—one of six testing grants awarded nationwide—aimed at creating an innovative health care system that is more transparent, uses data to guide decision-making, reforms payment, and assists patients in managing their health.[7,8] In each of these efforts, MEHMC and QF have used their rich multi-payer database of clinical, claims, and cost data to provide analytics support to practices to drive internal improvement efforts and payment reforms, publicly report quality measures, and develop value-based insurance products.[9]

In Washington, the state Health Care Authority has recognized the value of the infrastructure and database the Washington Health Alliance has built by partnering with the Alliance to build an all-payer claims database to improve health care pricing transparency. The proposed database would contain information on price and quality from hospitals, physicians, and other providers around the state. Although the state hospital association, the medical association, the Seattle area chamber of commerce, the National Federation of Independent Business, and most health plans operating in the state support this effort, two large regional plans oppose this level of transparency and have resisted its progress through legislation, preventing a full mandate for all payers in the state to participate and contribute priced claims.[10] The legislation passed requires only payers who insure the state's public employees and the Medicaid population to submit data, and it includes restrictions on how the data may be compiled and the fees that can be charged for reports and extracts. Despite these hurdles, the Alliance's efforts represent a substantial step toward transparency, and the Alliance is continuing to engage closely with the state Health Care Authority to continue the work.[11]

- In a different vein, the Wisconsin Collaborative for Health Quality (WCHQ) has long been concerned about the competitive threat posed to voluntary, private-sector regional health improvement collaboratives—like WCHQ—by federal data reporting mandates flowing from the economic stimulus (American Reinvestment and Recovery Act) and health reform (ACA) legislation. Recently, the Centers

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[7] http://www.mehmc.org/news-events/mhmc-in-the-news/sim-grant/.

[8] http://www.maine.gov/dhhs/sim/documents/SIM%20docs/plan%20docs/ops%20plan/Maine-SIM-OPS-PLAN-v19.pdf.

[9] http://www.maine.gov/dhhs/sim/documents/B%20_LETTERSFILE_FINAL.pdf.

[10] Moore, D. (2014). *The Long Road to Lower Health Care Costs*. Princeton, NJ: The Robert Wood Johnson Foundation. http://www.rwjf.org/en/research-publications/find-rwjf-research/2014/04/the-long-road-to-lower-health-care-costs.html?cid=xem_a8201&rid=NlKKQ6Qe5Mdq0mpDvQ4M9Q.

[11] Tri-Annual Report 1, 2014.

for Medicare and Medicaid Services (CMS) responded to these concerns by recognizing WCHQ as a Qualified Clinical Data Registry (QCDR) for submission of performance data under its various programs, including Meaningful Use and Physician Quality Reporting System (PQRS). This recognition was a result of WCHQ's Repository Based Data Submission (RBS) tool, a pioneering method for direct submission of patient data files. RBS is a key element of WCHQ's ability to measure and report on the care Wisconsin patients receive, regardless of who is paying their health care bill. And as a result, members of WCHQ who participate in these federal programs can efficiently report their quality outcomes to qualify for financial incentives from CMS. This opportunity has strengthened the connection between WCHQ's measurement and reporting work and provider efforts across the state, and complements WCHQ's strategy to be positioned as both a measurement and improvement organization.

Competition vs. Collaboration

Although the ACA and subsequent state and federal health reforms have increased demand for data aggregation and analysis services, so, too, have they increased competition among organizations seeking to do this work. And, in many states or regions, data aggregation is becoming a crowded space, with multiple organizations competing for the same data and revenue streams, as well as for the attention of the same providers, payers, and purchasers. This situation poses a threat to Alliances' ability to realize economies of scale and the cost advantages realized by scaling up an operation in size or scope.

Alliances that have been able to establish a method to partner with competing organizations are better able to use community resources efficiently, minimize provider reporting burden, and realize the full value of data aggregation. For example, the Wisconsin Collaborative for Health Quality has recognized that its unique dataset provides valuable insights, which are used across the state to inform strategies for improving the quality of care. The Alliance engaged in many difficult conversations, recognizing each stakeholder's established agenda and revenue streams. These conversations led to the division of responsibilities and stakeholder consensus on the role each organization would play in efforts to transform the delivery system. In recognizing the reality of existing markets and investments of other players, WCHQ was able to make progress by coordinating closely with other data aggregation and quality improvement efforts in the community to reduce competition among those organizations.

In Cincinnati, The Health Collaborative was able to coordinate efforts with its partners by combining operations and management with The Greater Cincinnati Health Council and HealthBridge in a 2012 reorganization. As the region's positive reputation for leadership in health care transformation has been enhanced through the work of all three organizations, so, too, has the volume and complexity of the work. Under The Health Collaboratives' new structure and governance, the three organizations are better able to coordinate resources for community health improvement initiatives. The Health Collaborative has positioned itself for continued growth, with the ultimate goal of making health care a competitive advantage for the greater Cincinnati region.

Building a Data Aggregation Infrastructure

Aggregating data is expensive, and no organization can afford to build the infrastructure on its own. Generally, AF4Q Alliances are faced with two choices when it comes to selecting an approach to aggregating data—build or buy. If a regional collaborative chooses to build proprietary data aggregation infrastructure, it can achieve economies of scale either by sharing the risk across partner organizations or by selling access to or use of that infrastructure once it is built.

The Greater Cincinnati Health Collaborative, for example, bought access to Minnesota Community Measurement's direct data submission platform to enable Cincinnati physicians to submit clinical data to the Health Collaborative. Buying this off-the-shelf product from Minnesota accelerated Cincinnati's efforts at public reporting and supported its quality improvement and payment reform activities. It also enabled Minnesota to realize economies of scale in building the portal and helped it to sustain its work.

Alliances that choose to buy data aggregation infrastructure have found an opportunity to leverage group purchasing power. Buying a product off the shelf or outsourcing the building of data aggregation infrastructure is neither scalable nor flexible. Much redundancy occurs, both within a given community and across the country. Economies of scale can be realized if Alliances work together to use their collective purchasing power in dealing with vendors.

For example, HealthBridge, a partner of the Health Collaborative in Cincinnati, has partnered with the Quality Health Network (QHN) of Colorado to co-develop analytics capability, which reduces costs for both communities. As part of the agreement, QHN will acquire access to the data analytics and business intelligence tools HealthBridge built. Working together, they are able to accelerate the innovation cycle in both regions and make rapid progress toward high-quality care. Through this collaboration, QHN has been able to expand and strengthen its robust clinical data exchange infrastructure; allow more effective integration of actionable clinical data at the practice level; facilitate improvements in cost, quality, and population health outcomes for area patients; and provide reporting and analytics platforms that help clinicians, payers, public health, and businesses improve health care delivery and payment systems. The revenue this partnership generates will allow HealthBridge to enhance existing infrastructure. This, in turn, will allow for better information sharing, and improved technologies will ensure the resource is available for community improvement efforts for years to come.[12]

The Challenges of Working with Vendors

Alliances face a number of challenges in working with vendors to purchase data aggregation infrastructure. Alliances and other regional health care improvement collaboratives are unusual clients for vendors, who are used to having a single client with a single purpose. Alliances' needs to serve multiple audiences with different levels of data granularity make it difficult for vendors to standardize their product. This is problematic for vendors, as their preferred mode of work is to sell one set of analytics multiple times. Currently there is no off-the-shelf solution in the market for integrating clinical and claims data.

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[12] http://www.healthbridge.org/Portals/0/QHN_HealthBridge%20Press%20Release%202012-4-24%20v5%20final.pdf.

This lack of standardization also poses a problem to vendors when it comes to pricing—Alliances are both atypical and high-intensity clients. Because Alliances work with multiple stakeholders, the questions requiring data analysis are constantly evolving. This is a positive sign for Alliances because it indicates stakeholder engagement, but it has proven difficult for vendors to plan for this level of agility.

Such required flexibility also complicates vendor management. Often the contracts in place do not allow for an iterative process, and Alliances have had to wait for vendors to complete work with other clients before addressing tweaks and changes to data analytics. This is problematic for Alliances that are trying to address follow-up questions from stakeholders and conduct analysis in a timely manner.

Alliances and vendors also encounter challenges relating to data. Alliances tend have higher data quality standards than vendors because there are direct links between data analysis and Alliances' reputation and level of trust in the community. Some Alliances have found major lapses in the quality assurance of vendor analyses and are exploring opportunities for a neutral body to provide data quality audits to make sure that claims are complete and consistent. Additionally, because of data sharing restrictions, Alliances are not always able to obtain the right level of data.

At a macro level, vendors are often far removed from the realm of health care quality, let alone broader community health. They lack an in-depth understanding of what communities need, and this affects Alliances' abilities to address those needs most effectively.

Generating Revenue Through Data Aggregation Outputs

In addition to realizing economies of scale in the inputs to data aggregation (i.e., infrastructure development and maintenance), Alliances have delivered value to stakeholders through data analysis. Analysis provides meaning and direction on how to use the data to drive improvements in quality and value, reform payment systems, and reduce disparities. Interest in aggregated and analyzed data crosses many stakeholder groups, including academia, policy, and public health. Direct sales of these outputs is only one way to monetize them; they can also be used in quality improvement and value-based purchasing and for benchmarks that provide a valuable "member benefit" for individual providers and health care systems when compiled at patient, physician, practice, and system levels. In general, the key to building a sustainable business model for regional data aggregation is to know who your customer is and what they want. Figure out who derives value from the data aggregation and who has the ability to pay, and adjudicate cost appropriately.

In Cleveland, for example, providers find value in the data aggregation efforts of Better Health Greater Cleveland. The Alliance has gone to great lengths to gather data via electronic health records, which are a trusted source among the community and add to the Alliance's credibility as a neutral entity able to rise above competitive market forces in providing data aggregation and analysis. In addition to providing data, the Alliance's provider partners pay membership dues in return for clear and timely information on opportunities to improve care for patients and sub-populations. Additionally, these data serve as regional benchmarks for provider achievement, further motivating improvement. Stakeholders also find the data

aggregation efforts valuable because they provide information on uninsured and underserved populations whose health outcomes have often been neglected in terms of measurement.[13]

From a regional perspective, the data provide the greater Cleveland community with information about health care quality and disparities in care and outcomes across the region and over time. The community has been able to mark their progress over the past seven years with longitudinal data that tell a story of impact to date and identify where continued attention is needed. Additionally, this ability to demonstrate improvement using data generates revenue for the Alliance by strengthening proposals to government agencies and local funders. Data analyses have also resulted in peer-reviewed publications.

The Data Aggregation Journey

Despite the progress AF4Q Alliances have made in streamlining data aggregation and analysis efforts, for many this work is still in its infancy. When AF4Q began, RWJF gave Alliances much leeway regarding the conditions they would focus on and the measures they would report. Each community's focus was determined largely by what sources for health care quality data were available. There are limited options for collecting performance data that reflect care delivery across a community—performance measures can be created from clinical data, claims data, or some combination of the two. Clinical data are often considered to be the preferred data source, especially for looking at health care outcomes. Claims data tend to be more readily available and more useful for looking at care processes and at utilization. Claims data, however, often lag in availability behind clinical data by a year or more and have limited utility for clinical quality improvement.[14] (See Key Learning 2).

By February 2010, 14 of 16 AF4Q Alliances were publicly reporting measures of physician quality; all 16 were reporting by early 2011. Eleven Alliances started reporting with claims data only, three with clinical data, and two with a combination. As of November 2014, six were still focused primarily on measuring quality and cost using claims data only, one continued to report only clinical data, and the remaining nine Alliances accessed both clinical and claims data. No Alliances have yet integrated clinical and claims data, which will ultimately be important to these efforts' sustainability, as maintaining multiple streams of data (e.g., segregated claims and clinical data and data segregated by payer type) minimizes the ability to take advantage of economies of scale. Many see the future of data aggregation to be in merging clinical and claims data, which will provide a more complete picture of service use and clinical context across multiple providers and settings of care, in order to coordinate care. This is increasingly important as systems move to value-based payments and assume more of the risk in keeping patients healthy.

Measure selection is also an iterative process. Many Alliances have begun their data aggregation work with a limited measure set. As providers have become more comfortable with the data collection and validation process, and with transparency in general, Alliances have moved on to report additional measures and

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[13] Japsen, B. (2014). *From Competition to Collaboration: A Cleveland Success Story*. Princeton, NJ: The Robert Wood Johnson Foundation. http://www.rwjf.org/en/research-publications/find-rwjf-research/2014/03/from-competition-to-collaboration--a-cleveland-success-story.html.

[14] http://forces4quality.org/af4q/download-document/3014/633.

conditions. Minnesota, for example, began with Healthcare Effectiveness Data and Information Set (HEDIS) measures and quickly moved to electronic health record-based and outcome-based measures. The Alliance progressed from reporting from groups to the clinic-site level, added a number of patient-reported measures as well as patient experience measures, and later this year will report on total cost of care.

Over time, Alliances have found value in establishing a common measure set across payers and regulatory agencies, although strictly adhering to a common measure set may stifle innovation and limit provider engagement, especially in newly established efforts. In many cases, measuring and reporting on a common measure set is ideal because doing so reduces provider reporting burden; allows for comparisons to be made across organizations, payers, and communities; and helps focus resources and improvement efforts. Reaching consensus on a common measure set is a difficult and time-consuming process, however. Many regional collaboratives rely instead on an iterative approach to build trust and provider buy-in over time.

- CMS's Qualified Entities are working together to establish an initial common measure set for the program. NRHI, with the support of the AF4Q National Program Office, is leading the effort to bring together the 11 Qualified Entities that are either AF4Q communities or NRHI members to achieve this goal. Data experts from three organizations—Pittsburgh Regional Health Initiative, California Healthcare Performance Information System, and Q Corp—serve on a measurement subcommittee to identify the measures that qualified entities plan to report using Medicare data in an effort to find areas of overlap and collective interest. Work is underway to agree on a handful of measures common across all of the NRHI- and AF4Q-affiliated Qualified Entities.