



SOCIETY OF ACTUARIES

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New Research Study

Measurement of Health Care Quality and Efficiency: Resources for Health Care Professionals

by Sara Teppema

Last June the New Yorker published an article by Atul Gawande called “The Cost Conundrum,” which explored geographical variations in the cost and delivery of health care. The article has received considerable attention from the Obama administration and Washington policymakers as the United States gears up for health reform and seeks to find savings in the system. The findings in Gawande’s article are based on data from The Dartmouth Atlas, a project which has been analyzing health care cost and utilization disparities for years. The fact that this research is currently in the mainstream spotlight reinforces the critical need to address the opportunities to improve the U.S. health care system’s quality and efficiency.

Likewise, the decentralized nature of the health care system, often poorly aligned payment structures and the complexity of roles assumed by service providers, as well as the current economic crisis, make quality and efficiency programs, and their measurement, especially relevant.

Many organizations have developed a multitude of programs and metrics to address and measure quality and efficiency. The number of organizations continues to expand, and programs are evolving very quickly. Increased standardization and innovation has been facilitated by the following emerging trends in quality and efficiency:

- Greater collaboration and coordination across key industry players;
- Continued enhancements of hospital quality measures – more measures in greater depth from more locations leading to improved results;
- New metrics to measure physician quality using evidence-based medicine;
- Improved versions of efficiency metrics using episodes of care and member risk-adjustment to create a framework that links micro clinical measures and macro population measures;
- Launch of diverse pay-for-performance pilots and initiatives; and
- Alternative networks offered to members in major locations based on quality and/or efficiency.

Research Project and Results

To help capture a snapshot of this highly complicated area, the Society of Actuaries Health

Section and Solucia Consulting have co-sponsored a research project to review and inventory the wide range of quality and efficiency measures currently available. Researchers Sheryl Coughlin, Ian Duncan and Greger Vigen identified 83 organizations and over 150 programs/products that measure the quality and efficiency of physicians and hospitals.

The objective of the report is to serve as a resource about quality and efficiency measures that demonstrate the performance of hospitals and physicians. Besides outlining key areas of consideration for quality and efficiency measurement, the report also describes future opportunities for actuaries and other health professionals interested in this evolving area.

Actuaries can bring a unique skillset to the table, by leveraging their deep analytic and measurement background. According to Duncan, “There is a potential role for actuaries here, but this isn’t a given and we will have to do considerably more work to position ourselves and our role with more research such as this, and development of appropriate tools.”

The end-product of the research includes a descriptive report plus a comprehensive reference document. The report provides an executive summary of the research team’s findings; a discussion of the importance of quality and efficiency measurement; a discussion of limitations and measurement challenges for quality and efficiency programs; and an overview of stakeholder organizations with examples of their quality and efficiency programs.

The report’s sections on the importance of quality and efficiency measurement and on the limitations and measurement challenges are themselves a valuable resource for someone seeking to familiarize him or herself with quality and efficiency issues and programs. These sections discuss varying approaches to measurement, changes and innovations in measurement, challenges to measurement across populations, the difficulty of defining “quality,” and diversity in approaches among stakeholders.

The reference document, included as an Appendix to the full report, is the heart of this research. It summarizes information from many organizations involved in quality and efficiency efforts, and was

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extracted from publicly available information on the organizations' Web sites. The following information is provided for each of the described organizations/programs.

- **Summary** – gives the reader an understanding of the organization or metric including background and descriptive information.
- **Methodology** – provides the reader with an understanding of any particular procedure or set of procedures used in data collection and/or analysis, technical specifications, methodological constraints, and target population. The reader may determine the applicability and relevance to his or her particular areas of interest.
- **Results** – gives the reader an understanding of whether there is evidence that the organization or product has achieved its objectives, and undertaken any formal or informal evaluation of efficacy.
- **Publications** – In some cases only marketing materials were accessible via the Web site.

Where possible, the researchers attempted to include peer reviewed materials, white papers and other formal analyses if available.

Each entry also identified an organization as belonging to one or more of the following key categories:

1. Accreditation, Certification;
2. Analytics, Decision Support, Health Care Data Technology;
3. Incentives, Rewards Programs;
4. Performance Ratings, Reports, Scorecards, Benchmarking (actual performance);
5. Standards Setting, Industry Organizations (measurement structure);
6. Summary for Public, Consumer, Infomediaries.

Research Methodology

The search was restricted to information contained on Web sites and was conducted between November 2008 and March 2009. The list of organizations and measures is by no means an exhaustive list, but

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rather one intended to canvass a wide range of those active in health care quality and to then inventory a cross-section of organizations. Inclusion in the inventory was driven by the primary focus of the measure or activity. Rather than listing every state program and insurance carrier, the report presents a few representative examples from organizations that illustrate particularly interesting approaches, innovations or programs.

The depth of the Web sites reviewed varied considerably. Some Web sites offered a comprehensive outline of measures, products or services with downloadable documentation such as technical specifications, white papers or peer-reviewed papers. Other Web sites offered primarily marketing or publicity materials with limited descriptive and technical detail. Access to some Web sites (such as health plans or employer sites) was restricted to members. In a few cases where there was a dearth of information, supplemental Internet searches were performed to augment the materials.

As knowledge about quality and efficiency measurement accumulated, the search fields were further narrowed. As the research was conducted over a period of several months, the Web sites of some organizations profiled in this report were re-visited several times in order to ensure that the most current information was captured.

Research Team Reactions

The researchers—Coughlin, Duncan and Vigen—were surprised by the lack of coordination of effort among stakeholders, and the lack of an overarching national strategy to channel research and develop-

ment efforts. They believe that this report is the first single comprehensive source that inventories quality and efficiency measures. They hope that the report will become the “go to” resource for those looking for additional resources, or who want to learn more about this important topic. Although the reference document describes a broad array of organizations and measures, related links and publications are provided to enable the user to find additional detailed information if needed.

Actuaries can benefit from the report regardless of their level of expertise. Those who are new to quality and efficiency measures can read the report, become familiar with the reference document, and consider how they can apply the tools to their own company’s initiatives. Actuaries with more experience can use the links and publications to learn more about the underlying techniques, particularly risk adjustment and predictive modeling.

The researchers caution that the reference document may go out of date quickly as the field is changing rapidly. The links provided will help readers obtain the most current information, and the SOA is looking into ways to keep this research current and accessible. ■

Note: As of this writing, the research report has completed a public comment period and is being finalized based on comments received. The SOA expects to issue the final report in Fall 2009. When posted, the report will be available on the SOA’s Web site at: <http://www.soa.org/research/research-health.aspx>