

# Enhancing Ambulatory Healthcare Using Health Effectiveness Data

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**Abstract:** This report presents the Health Effectiveness Data Information Set (HEDIS) as a means to measure health and promote quality care in a Georgia pediatric clinic. The primary factors under evaluation related to patient compliance, outcomes and follow-ups. HEDIS was developed by the National Commission on Quality Assurance (NCQA). The value of the HEDIS model lies in its use of national quality benchmarks and indicators – for a wide variety of health conditions. Traditional models of quality management and control are also presented using selected health centers and related legislation. This report also addresses provisions of the Affordable Care Act which was designed to promote healthcare quality and access; meanwhile reducing healthcare costs. As the Affordable Care Act, continues to unfold, quality models such as HEDIS will be useful in promoting national quality initiatives in various health systems.

**Index Terms:** Health Quality, HEDIS, Measurement, Quality Control

## I. INTRODUCTION

The ASQ Quality Organization defined quality as the characteristic of a product/ service that is free of deficiencies. The organization further states that health providers can use quality improvement techniques to reduce medical errors and help to ensure patient safety.<sup>1</sup> Quality measures can also increase patient handling capacity and flow, which decrease wait times and potentially harmful delays in care. The results include more efficiency, cost effectiveness and better satisfied patients and health workers.<sup>2</sup>

Most Americans have access to health services. However, in 2007, 8% of adults, 18-64 yrs of age reported that they didn't get needed medical care due to costs.<sup>3</sup> Governmental programs such as Medicare and Medicaid were specifically designed to increase access to healthcare services.

On March 23, 2010, U.S. President Barak Obama signed the Affordable Healthcare Act. The new law included comprehensive health insurance reforms that took place by 2014.<sup>4</sup> The act also includes strategies and concerted efforts to improve the quality of care that Americans receive.<sup>5</sup> The act has regulatory aspects that pressure markets to improve quality healthcare.<sup>6</sup>

Roskiv and McClellan (2011) purport that better data on the quality of healthcare being delivered in the United States are urgently needed if efforts to reform the nation's healthcare are to succeed.<sup>7</sup> Quality measurement and reporting have emerged as important tools that providers, health plans, and other stakeholders can use to identify gaps in quality and focus resources on improving care.<sup>8</sup>

## II.HISTORICAL OVERVIEW

Quality improvement in healthcare has a long history that includes epic figures such as Ignaz Semmelweis, the nineteenth century obstetrician who introduced hand washing to medical care; and Florence Nightingale, the English nurse who determined that poor living conditions were a leading cause of death of soldiers at army hospitals.<sup>9</sup> Over the past fifty years, many approaches have been taken to promote quality healthcare with limited success.<sup>9</sup> The desire to improve quality has prompted an increase in performance measures.<sup>10</sup>

Traditional models of quality began in the corporate setting and were later utilized in hospitals and other healthcare settings. The Joint Commission, founded as the American College of Surgeons, is one of the major accrediting bodies promoting healthcare quality and efficiency. Some of the traditional models of healthcare quality include: total quality control, continuous quality improvement, Little Q and Big Q, Performance Improvement, Zero Defects, The DMAIR (Design, Measure, Assess, Improve and Redesign), and Quality Circles / Quality Control.<sup>11</sup>

## III.THEORETICAL FRAMEWORK

The ultimate measure of the quality of the healthcare system is the health status of the community. Determination of quality of health in an area can be derived from indices of unnecessary disease, unnecessary disability and unnecessary untimely death.<sup>12</sup> Many definitions of quality refer to quality control which can be defined as the sending of messages which effectively control the behavior of the recipient. Quality control can also be referred to as a function of the system which provides direction in conformance to a plan, or in other words, the maintenance of variations from system objectives within allowable limits. Components of a control system include:

- A monitored characteristic or operational variable
- A monitoring device or method or
- A standard of performance for each monitored characteristic.<sup>13</sup>

There are extensive accounts of U.S. health care organizations undertaking quality improvement projects or techniques. For example:

CSC Healthcare, a St. Louis based non-profit healthcare system increased its market share to 18% over three years while three of its five competitors lost market share using quality improvement processes. Saint Luke Hospital of Kansas City's financial performance steadily increased for three years and client satisfaction scores ranked Saint Luke 35<sup>th</sup> out of 4,500 hospitals nationwide. Thibodaux Regional Medical Center, an acute care facility in southern Louisiana implemented an accounts receivable project which increased cash flow by \$2 million per year. An inventory reduction at the medical center achieved an annual cost savings of \$450,000 and a medication management project decreased defects by 42%. Likewise, Baptist Hospital, a Florida based healthcare provider's overall patient satisfaction rate rose into the 99<sup>th</sup> percentile for several years.<sup>2</sup>

In the late eighties, with the need for a wider spectrum of quality measures, the National Commission on Quality Assurance (NCQA) was founded.<sup>14</sup> NCQA accredits managed care organizations. It also developed and placed emphasis on measures of population health and overall effectiveness of healthcare called the HealthEffectiveness Data Information Set - HEDIS.<sup>14</sup>

HEDIS, specifically, is a tool used by more than 90 percent of American healthcare plans to measure performance on important dimensions. Altogether, HEDIS consists of 75 measures across 8 domains of care. The widespread use of HEDIS makes comparability possible among similar health care organizations.<sup>15</sup>

Some of the HEDIS measures address health issues such as:

- Asthma Medical Use
- Persistence of Beta Blockers
- Treatment after a Heart Attack
- Controlling High Blood Pressure
- Comprehensive Diabetes Care
- Breast Cancer Screening
- Anti-depressant Medication Management
- Childhood and Adolescent Immunization Status
- Childhood and Adult Weight / BMI Assessment.<sup>15</sup>

#### IV.CASE EXAMPLE

In 2010, a pediatric clinic located in a semi-rural Georgia community began utilizing HEDIS to assess the quality of care provided to its patients. Many of the clinic's patients were from impoverished families relied on sources such as Peach State to finance their healthcare services. More specifically, health studies have shown an association between income and health.<sup>16,17</sup> The median household income in county was \$30,934 – as compared to \$41,994 at the state level.<sup>18</sup> More specifically, the CDC reported that 2,605 people died in the county in 1999-2001. The county's death rate was 9 per 1,000, compared with 8 per 1,000 statewide. Cancer rates for the county were also higher than the state rate for the same period.<sup>19</sup>

In the general healthcare sector, quality improvement measures such as six sigma, Continuous Quality Improvement and Total Quality Management have been useful in enhancing healthcare quality– and tangentially reducing costs and minimizing diseases.<sup>11</sup> The pediatric clinic at the direction of the Medicaid providers, began using HEDIS to track patient compliance, health behaviors, health outcomes and adherence to follow up care schedules.

With a modest staff and a steady stream of patients (up to 120 weekly), the health providers wanted to make sure that their patients were receiving quality care. An electronic record keeping system was used for reviews. The reviews included the currency of pediatric immunizations, physicals, health checks, follow up visits and overall well-being. The health providers emphasized the effectiveness of a random listing of approximately fifty patients in the review cycle. Feedback of the reviews was communicated using HEDIS. Patients with less than optimal outcomes were contacted for re-entry into the pediatric clinic – to increase their treatment compliance levels and promote their health and well-being. While, the system is a quality enhancement / health promotion measure primarily, consequences for non-compliance led to reduced healthcare coverage for the patients. As a major benefit, the system allows for comparison of outcomes with clinics of the same type.

This introductory quality measure (HEDIS) is ongoing with aspirations for steady improvements in patient compliance, health promotion and health care service delivery.

## V.SUMMARY

Quality measurement and reporting have emerged as important tools that providers, health plans and other stakeholders can use to identify gaps in quality and focus resources on improving care.<sup>8</sup> Even so, novel methods and innovations are being explored to address the quality issue in healthcare. Even, the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) required the Department of Health and Human Services to identify and publish data on healthcare quality measures for the Children's Health Insurance Program (CHIP) or Medicaid.<sup>20</sup>

McKethan, et al. 2011,<sup>21</sup> reported the Beacon Communities' (17 communities) efforts to enhance quality and efficiency in health care using a nationally coordinated collaborative project. Internationally, countries such as Israel have even begun to systematically monitor quality of care.<sup>22</sup> Comparability among plans is a central issue in quality measurement.<sup>8</sup>

The Health Effectiveness Data Information Set (HEDIS) provides a broad spectrum of indicators, is widely used and offers comparability among users. A Georgia pediatric clinic is making great strides in its use of HEDIS to improve healthcare quality and patient health. This model may be useful resource for many other healthcare organizations that aim to enhance the level of quality in their institutions.

## REFERENCES

1 Basic Concepts. ASQ.org. 2010. Retrieved 9/ 21/2010, from <http:asq.org/glossary/q.html>

2 Quality in Healthcare. ASQ.org. 2010; Retrieved September 21, 2010 from

[http://asq.org/healthcare-use\\_why\\_quality/case-for-quality.html](http://asq.org/healthcare-use_why_quality/case-for-quality.html)

3 Health, US, Executive Summary, 2009. 2009, Retrieved May 13, 2013, from [www.cdc.gov/nchs/data/abus/abus09.pdf](http://www.cdc.gov/nchs/data/abus/abus09.pdf)

4 What Changed and When. HealthCare.gov. 2011; Retrieved September 30, 2011, from

<http://www.healthcare.gov/law/timeline/index.html>

5 Honor A. P., Wright D., Berwick D. M., Clancy C. M., Lee P., Nowinski J., Koh H. Creating a framework for getting quality into the public health system. Health Affairs, 2011; 30 (4), 737-45.

6 Pauly M. W. The trade-off among quality, and cost: how to make it-if we must. Health Affairs. 2011;30 (4), 574-80.

7 Roskiv J. and McClellan M. Measuring healthcare performance now, not tomorrow: Essential steps to support effective healthcare reform.

Health Affairs. 2011; 30 (4), 682-689.

8 Higgins A., Zeddies T. and Pearson S. Measuring the performance of individual physicians by collecting data from multiple health plan:

- The results of a two-state test. *Health Affairs*, 2011; 30 (4), 673-681.
- 9 Chassin M. and Loeb, J. The ongoing quality improvement journey : Next Stop, High reliability. *Health Affairs*, 2011; 30 (4), 559 – 68
- 10 Pronovost P. J. and Lilford R. A road map for improving the performance of performance measures . *Health Affairs*. 2011; 30 (4), 569-73.
- 11 Dunn R. *Dunn and Haimann’s Healthcare Management*. Chicago: Health Administration Press; 2010,pp. 301 – 321.
- 12 Rutstein D. D. *Blueprint for Medical Care*. Cambridge, MA: MIT Press, 1974.
- 13 Johnson R. A. , Kast F.E. and Rosenweig J.E. *Theory and Management Systems*. New York, New York: McGraw-Hill; 1963.
- 14 Griffith J. and White K. *The Well Managed Healthcare Organization*. Chicago: Health Administration Press; 2002, p. 20.
- 15 What is HEDIS.? NCQA. Org. 2011; Retrieved September 30, 2011, from <http://www.ncqa.org/taqbid/187/Defaultt.aspx>
- 16 Smith J. P. Healthy bodies and thick wallets: the dual relation between health and economic status. *Journal of Economic Perspectives*. 1999; 13 (2), 145-166.
- 17 Wu S. The effects of health events on the economics status of married couples. *Journal of Human Resources*. 2003;38(1), 219 – 30.
- 18 County, Georgia County Information. Epodunk.com. 2010. Retrieved September 21, 2010 from <http://www.epodunk.com/cgi-bin/genInfo.php?locIndex=7914>
- 19 City health info . Epodunk.com. 2010. Retrieved September 21, 2010 from <http://www.epodunk.com/cgi-bin/healthInfo.php?locIndex=777>
- 20 MacTaggart P. , Foster A. and MarkusA. Medicaid statistical information system (MSIS): A data source for quality reporting for Medicaid and Children’s Health Insurance Program (CHIP). *Perspectives in Health Information Management*. 2011; 8(2), 1- 10.
- 21 McKethan A., Brammer C., Fatemi P., Kim M., Kirtane J., Kunman J., Rao S., Jain S. H, et al. *Health Affairs*. 2011; 30 (4), 782-788.
- 22 Rosen B., Pawlson I. G., Nissenholtz R., Benbassat J. , Porath A., Chassin M., Landonn E. *Health Affairs*. 2011; 30 (4), 764-72.

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