GETTING PHYSICIANS ONBOARD WITH QUALITY IMPROVEMENT: AN INTEGRATED DELIVERY SYSTEM'S EXPERIENCE

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SUMMARY

Although there have been phenomenal advances in medical knowledge and technology, the health care industry has lagged behind other industries in the practice of modern quality philosophy. Manufacturing and service industries introduced ideas of the quality movement in the mid-eighties as a key strategic tool to compete in a global economy. Health care, for many reasons, is a good ten years behind these industries. One reason is that health care has been insulated, not suffering the same international pressures of consumer based companies. Additionally, the structure, the service delivery, and the culture are very different.

Physicians are highly motivated and intelligent, but conservative when adopting methodologies outside their discipline. Yet, without physician buy-in, a quality effort in the health care setting will ultimately fail. Scott & White is an integrated heath care delivery system in Central Texas. We have learned what methods and techniques are useful in engaging physicians to quality-based methods. This paper demonstrates proven techniques for moving quality from a buzzword to a way of practice. It is not a short course in quality methodology, but a presentation of how the quality philosophy can be adapted to use in a health care setting.

KEY WORDS

change, health care, quality methods

BACKGROUND

Scott & White has been committed to quality for over a century, but only in the last decade has the process of systematic measurement and formalized multifunctional teams been developed and implemented. Part of the formalization was influenced by outside accrediting bodies requiring paper trails (JCAHO, NCQA) and having senior staff, designated as quality champions, attend national programs on quality theory. These quality champions then returned to Scott & White and worked to put the theory into practice. Examples of these national programs are Dr. Don Berwick's Institute for Healthcare Improvement and Dr. Brent James' Advanced Training Program for Healthcare Executives. Initially, most efforts were focused on improving administrative and service processes. In the mid 1990s, efforts were refocused on using quality theory to improve the way clinical care is delivered.

Scott & White has four defined strategic quality goals. These include:

- Improve clinical outcomes
- Increase customer satisfaction
- Increase organizational effectiveness
- Reduce cost

Scott & White's 100-year group practice culture is built on information sharing, communication, and working together in a collaborative way to coordinate patient care. Scott & White has not adopted a "one-size-fits-all" technique of quality improvement. We advocate three fundamentals: measurement, the Plan-Do-Check-Act cycle (small changes studied over time), and customer focus, but do not require teams to follow any rigid methodology. Many things we have learned have been a result of trial and error. We have placed major effort on acquisition and analysis of data. We have committed considerable resources to build information systems that will provide staff with the information they need to make appropriate changes to their practice behavior. Finally, and possibly most importantly, quality champions are groomed, and their efforts supported. When we decide to address a particular quality problem we first ask, "prove it" (with data) and "is there someone that will champion the effort." If either of these are lacking, the project has a low chance of success.

We have not depended on large-scale dissemination of practice guidelines or critical pathways within our organization to decrease clinical variation (presently, we have ten). We use data to understand variation, and provide that data to clinicians so they can share knowledge about their practice within their organizational units. Over time, practice variation decreases as clinicians learn from each other and share "best practice." For us, a "one-size-fits-all" approach does not work. The following are some of our efforts to date.

Clinical Practice Improvement

This effort has as its cornerstone the merging of clinical and administrative data into information and subsequent knowledge that can lead to improved quality and reduced cost. Thus far, most of the efforts of clinical practice improvement have focused on high cost, high volume hospital-based diagnoses. As Scott & White's information systems have matured, we have been able to integrate administrative and clinical data to analyze variations in care.

We use various commercial software packages to help us analyze hospital-specific costs. For example, we have a financial and decision support system from Transition Systems Inc. (TSI) and operational and clinical benchmarking systems from HBS International (HBSI ACTION and HBSI EXPLORE). These systems allow us to analyze internal variation in practice and get this information in the hands of decision makers. It also gives us the capability to know how we compare with other similar institutions. It provides both the opportunity to identify worthwhile project and gives us the information to make these projects successful.

In addition to commercially available predefined systems, we have built internal systems to improve the availability of information and transfer of knowledge. An example is a data warehouse to look at information generated from our on-line transaction processing systems (SMS Invision, Signature, and EAD). This information is stored in an Oracle relational database which is accessed via a Microstrategy DSS Agent interface. This interface allows very flexible access to data elements and allows tops down relational on-line analytical processing (ROLAP) technology. The system name is MIDAS for Medical Information Data Analysis System.

A list of the 1999 CPI DRG projects are given in Table 1.

Table 1. 1999 CPI DRG projects.

Project
DRG 106/107 Coronary bypass with and without cardiac catheterization
DRG 148 Major small and large bowel procedures with C.C.
DRG 174/175 G.I. hemorrhage with and without C.C.
DRG 209/471 Major joint and limb reattachment procedures of lower extremity
DRG 372/373 Vaginal delivery with and without complicating diagnosis
DRG 430 Psychoses
Pediatric otitis media

Chronic Disease Management

Scott & White has approached the area of disease management from the perspective of what will help the physicians better take care of their patients. A physician champion was asked to develop pilot programs that could be replicated throughout the system if the programs proved to be successful. Two teams were assembled with physicians from four primary care clinics, the medical specialty involved and a facilitator from the Quality Resource Department. These working groups then reviewed current literature on the topic, developed goals, and agreed upon guidelines for care. These guidelines were then endorsed by the organization and a physician leader from each primary care clinic carried the plan back to their respective clinics. Goals included improvement in clinical parameters, economic outcomes, i.e., reductions in Emergency Department visits and hospitalizations, as well as improvements in HEDIS parameters. Registered nurse case managers were hired to work in each clinic and were instrumental in developing a database on all diabetic and CHF patients. These databases were designed to initially provide the clinicians with patient-specific data that encouraged compliance with the guidelines. Ultimately, the databases were used to generate reports for the clinicians that gave them feedback on their care in comparison to their peers. Although still very early into the program, preliminary results have revealed an improvement in emergency and hospitalization utilization, as well as improved compliance with guidelines. These improvements seem to be driven by sensitizing the physicians to common goals and providing them with feedback.

Clinical Data Analysis Lab and Data Analysis Support Team

To support aggregate clinical data analysis on a permanent and comprehensive basis, a Clinical Data Analysis Laboratory (CDAL) was created in 1996 and staffed with data analysts, statisticians, and biometrists. The CDAL approach serves also as the primary data analysis pathway for clinical and graduate medical education research at Scott and White. Information extracted by the CDAL methodology from the source document databases is automatically ported to relational databases, as needed, for further analysis.

Access to data or analysis of data was sometimes limited and often fragmented in nature. To address the need for data, analysis of data, and the visual display of information, a new Data Analysis Support Team (DAST) was created. Currently the team consists of sixteen members from across the hospital, health plan and clinic. Members have access to all the large systems within the institution and some are specially trained in data analysis.

Scott & White Health Plan QI Committee

Scott & White Health Plan (SWHP) is a not-for-profit, community-based HMO founded in 1979 as a group model contracting with the Scott & White Clinic to provide clinical care for enrollees. In 1995, after the first attempt at NCQA accreditation, it was recognized that the SWHP had to have a separate QI structure with a formal process of measurement and implementation of projects impacting the total SWHP membership. The projects selected were in prevention (childhood immunization, breast cancer screening) or in areas of high frequency or chronic disease (UTI, ASCVD, diabetes mellitus, childhood asthma). The Scott & White Health Plan is a leader in quality. Within the health plan various efforts have been made to use data from the Amysis Computer System, medical record reviews, HEDIS™ evaluations, and DataMedica reports to assist clinicians in understanding their practice and reducing variation. Scott & White Health Plan has developed some practice guidelines that are being tracked using data being captured through the Amysis System. The health plan has been a leader in addressing quality improvement and variation analysis within the Scott & White system. They were the first to forward data to physicians regarding their outpatients' ambulatory practice, HEDIS measures and specialty resource utilization.

Patient Complaints

Patient complaints are another source of data systematically tracked, categorized and provided in readable formats to make change. This process was integrated in 1997 under the Associate Medical Director for Medical Operations who sits on the Medical Staff Quality Improvement Committee and Chairs the Scott & White Health Plan Quality Improvement Committee. Each complaint is reviewed. Focusing on improving communication skills and decreasing waiting times in the Emergency Department are examples of two projects that were selected as a result.

Scott & White Dashboards

In 1996–1997, an aggressive effort was begun to communicate graphical measures across the Scott & White system. The goal is to keep all staff focused on the fundamental measures of success in our health care system: the Scott & White mission and the strategic quality goals. These measures also educate staff about the different aspects of the Scott & White enterprise, and teach what it takes to be a successful healthcare organization in the next millennia. The quality council wants measures that make the organization stronger by playing to our strengths and eliminating our weaknesses. These measures are displayed on institutional Intranet sites, specifically the Scott & White clinic board Intranet site, developed by the medical director and the associate medical director for quality. These measures are freely accessible to all senior staff, and are frequently updated and disseminated electronically throughout the large Scott & White system.

When parts of an organization have different numbers and different goals, it is like having a crooked spine. The organization is constantly in pain. The fundamental purpose of the dashboard effort is to help place the various parts of the organization in alignment. We use a process similar to one described by Drs. Kaplan and Morton (Kaplan and Norton 1996). To achieve organizational alignment, whether in an office, a department, or a large healthcare system, you have to be willing to be honest, to open up, and to share.

We want all staff to see the "big picture." Everyone has to know what they are doing, why it is important, where they are going, and how Scott & White is helping them get there. Our dashboard measures describe how well the organization is doing at meeting the mission and strategic quality goals of Scott & White. It is Scott & White's effort at "open book management." This method promotes both learning and organizational alignment, allowing staff to learn more about drivers of organizational success and respond accordingly. Examples of the kind of data that are found: health plan hospital days per 1000, Scott & White admissions per 1000, total complaints, complaints area-specific, average number of patients seen per day, surgical volume, etc, etc.

National Collaborative QI Activity

Our collaborative association with the Institute of Healthcare Improvement in three national collaboratives is an example of clinical improvement. These collaboratives are: improving outcomes and reducing cost in cardiovascular surgery; improving care in the Emergency Department; and reducing medication errors. In this method, data points are tracked over time and changes made in a Plan-Do-Check-Act (PDCA) approach. Measures and the process are studied to learn what changes work to achieve the preplanned goal. We have applied the learning from participation in these collaboratives to other clinical services in an "in house" fashion and have had substantial success.

SWHP Physician Profiling

Use of physician profiling reports compiled through DataMedica offers the potential to see opportunities for practice improvement in the Scott & White health care system. DataMedica reports are not report cards. The data enables us to compare utilization of medical resources among patients grouped by diagnosis, medical procedure, or geographic location. When consistent differences are apparent, further analysis and discussion by physician groups can provide a means of establishing "best practices."

Reports are based on claims data from the Scott & White Health Plan. Based on reports received from DataMedica, we compile aggregate data to allow comparison by group or clinic site. We compare resource utilization of panels of patients and also of patients in specific medically related groups (MRGs) and procedurally related groups (PRGs).

For primary care providers (PCPs), DataMedica makes three adjustments to the data to make it comparable: 1) adjustment for catastrophic cases; 2) age and sex adjustment and most importantly; and 3) case mix. Case mix looks at multiple diagnosis groups to determine combinations of diagnoses. Currently there are 36 diagnostic groups used in their adjustment. Specialists are divided into two groups, MRGs and PRGs.

Quality Improvement Training

Quality improvement training is provided to staff in a variety of formats. Most training is just-in-time training, provided at points where specific quality tools or techniques can assist the champion or team in answering specific questions. On a broader scale, quality training is provided in the form of printed material in monthly staff publications and "brown bag" lunch seminars. The organization will soon be experimenting with web-based, interactive

training for staff. This can be provided in a convenient format for all staff that can be tailored to the time schedules and the background knowledge of the staff members.

CONCLUSION

Where is Scott & White going in the next millennia? Quality improvement will be corporate culture. Data and learning will drive change. Strategic measures will align the organization. Web based communication will provide staff relevant, timely, and accurate information. Interactive web-based quality improvement training will be available for all staff. There will be increasing emphasis on customer and patient satisfaction measures and accountability. Finally, credible, understandable information will be available to patients to make appropriate choices for health care.

Michael L. Millenson (1998) points out that there are just three ways to reduce cost in healthcare: 1. drive down unit cost of service (negotiate a better price); 2. do less (limiting resource consumption, i.e. preauthorization); and 3. economic efficiency (improve quality and thereby eliminating duplication and quality waste). Scott & White is betting its future on option three.

However, quality improvement provides people the "**How-To**," not necessarily the "**Want-To**." Opening the book on performance, sharing data and measures, and sharing the bigger picture on what matters gives everyone in this organization the "**Want-To**." That is why quality improvement and opening the book on performance go hand-in-hand. Ultimately, we want everyone and every process in this organization to execute effectively. Proper process execution is where the rubber meets the road. Generals, football coaches, and the harried managers of Subway sandwich franchises know the truth: No matter how brilliant the plans, no matter how smart the strategy, nothing gets accomplished unless everyone in the organization executes. Physicians, nurses, secretaries, medical records technicians, everyone must improve every day. It is what they think about and how they work together as a team that determines success. Measuring how things are done, reducing unintended variation in performance, and improving each day in a patient focused way is what it is all about. We must do all of this with a sense of urgency, because change is occurring too fast to delay.

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