

Delivering data: Using quality management web-based tools, report cards and e-learning to improve care

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Objective:

To improve and standardize care, through establishing “Quality Metrics” across ten hospitals, the Quality Management Department developed a series of graduated web-based data reports that are easily accessible, interactive, and utilize E-learning to target different levels of responsibility from the CEO to the clinician in the office and at the bedside.

Methods:

Over a four-year period leadership invested in the development of a sophisticated quality data warehouse, web-technology platform and interactive E-learning teleconferences. Data were collected from different sources. Primary sources include the medical record, disease-specific and patient safety quality measures which include infection, pressure injuries, falls, unplanned readmissions rates, as well as results of the Hospital Quality Alliance and Pay for Performance initiatives. These data were then linked to secondary sources, administrative databases which correlate demographic and clinical information. Quality management analysts interpret the data and post results immediately on the web-site for concurrent review. These data are accessible by individual units, service lines, physicians, and at the hospital and System level. The Quality Metrics or report cards are shared in many forums: hospital, system, and board of trustee level performance improvement committees. Unit managers, risk management, finance, pharmacy and other administrative and ancillary departments have access to data on disease-specific measures for immediate decision making. These internal report cards compare ten hospitals to each other and against the state and national benchmark to identify opportunities for improvement and best practices. To improve communication and education Quality Management presents two teleconferences a month which has the advantage of time efficiency and productivity with a large audiences concentrating on how to improve processes and outcome data. In addition, clinicians and managers learn the importance of data, prioritization of measurements and how to build measurement metrics through the Corporate University, the Center for Learning and Innovation. More than 520 students have attended quality courses.

Results:

As a result of having readily available data, uniformly defined and measured, unit managers and clinicians use the information to target improvement for their service. The composite scores in the Quality Metric revealed improvements in the care delivered from the second quarter 2003 to the third quarter 2005 for heart failure (83% to 89%), pneumonia (75% to 88%) and surgical patients (78% to 80 %). For the Institute for Healthcare Improvement bundle compliance for ventilator associated pneumonia and central line infection prevention is close to 100%. Skin care rates across the System remain below the national benchmark of 2.3%. Infection complications in bariatric surgery have decreased to below 1%. Through innovative data development and analyses the Quality Management Department has improved data collection using web-based tools, validated data processes, data aggregation, automated statistical analyses and report generation. There is better knowledge dispersal and time savings by using the System’s Quality Management reporting tools. By having access to reliable internal data the System Quality Management is able to validate and respond to external bodies that produce quality reports. Through the teleconferences over 160 people can be educated and communicate at one time. This enabled adaptation of the national patient safety goals, core measures and bariatric surgery practices to be implemented across the System through the sharing of best practices.

Conclusions:

The project has achieved its objective to improve the reporting of and access to quality information and can be implemented at other institutions around the world. This has resulted in increased communication, accountability and oversight of care across the continuum. The success of these innovative quality and performance improvement applications has led the ten hospital health care system to expand access to data to the faculty and voluntary physicians, other regional health care institutions, home care, long term care, behavioural health and ambulatory care providers and ultimately improve patient care and safety