A Brief History of "Report Cards"

By John Steen

Florence Nightingale's historic breakthrough achievement during the Crimean War -- pioneering the modern administrative role of nurse superintendent with measurable outcomes supported by irrefutable data – first established the principle of accountability for the results of medical practice. However, it wasn't until a physician, Ernest Amory Codman, M.D., advanced what he called the "end result idea… merely the common-sense notion that every hospital should follow every patient it treats, long enough to determine whether or not the treatment has been successful, and then to inquire, if not, why not, with a view to preventing a similar failure in the future," (1910) that the principle became institutionalized.

Reports on hospital processes and outcomes have been produced for private consumption since the 1980s. Among the best known are those of the Maryland Quality Indicator Project which began among Maryland hospitals in 1985, and Cleveland Health Quality Choice which issued its first report in 1993. But the production of public, statewide reports in a sustained effort is a function of state governments.

In 1991, New York *Newsday* published an article that listed the names and mortality records of doctors doing heart bypasses throughout New York State. The information came from a New York State Health Department report never intended for public information. The State's intention was to improve the outcomes of all its open-heart surgery programs and surgeons by sharing information with all of them on their performance. The results of doing so were so positive that Pennsylvania, California, and New Jersey soon followed suit.

It's been over fifteen years since that process of public reporting began, and researchers at the Harvard School of Public Health recently reported on its continued efficacy in influencing professional practice in the state. They found that more than 20 percent of surgeons who received scores in the lowest quarter for New York State stopped performing cardiac-bypass surgery within two years of the report's release, compared with 7 percent of surgeons who received grades in the middle, and just 5 percent of physicians who received grades in the top quarter. Some surgeons who stopped practicing cited continual pressure from colleagues and department chairs to improve as their reason for their decisions. As for outcomes, they found that patients who picked a top-performing hospital or surgeon from the latest available report (33 hospitals, 168 surgeons) had approximately half the chance of dying as did those who picked a hospital or surgeon from the bottom quartile, but those outcomes did not have a corresponding effect on market share.*

In the state's first report (1990), its risk-adjusted mortality rate for 1989 was 4.2 percent. In its very next report just two years later, the rate for 1992 had dropped to 2.5 percent, a 41 percent reduction in three years. This occurred even though the number of CABGs rose to 16,028 in 1992 from 13,946 in 1990, and despite a pool of patients in 1992 with higher pre-operative risk scores than their 1990 counterparts. So marked an improvement captured national attention, an improvement the state's health commissioner attributed to use of the DOH reports by the state's 31 CABG hospitals for quality improvement efforts. In its latest report (2003 data for 36 hospitals), that rate had declined to 1.61 percent. The New York State Department of

Health uses logistic regression to calculate risk adjustment considering approximately 40 risk factors, and coronary angioplasty is included. The report cards are available free from the New York State Department of Health by calling an 800 number or by going to the state's website.

Pennsylvania has been issuing hospital performance reports (providing information on 49 conditions and procedures) since 1989, and CABG reports on hospitals and surgeons since 1992. The state passed a law in 1986 which specifies that cost data may not be disclosed unless accompanied by data on quality. This legislation also established the Pennsylvania Health Care Cost Containment Council (PHC4). Its reports are by far the most comprehensive ever issued, covering volume, mortality, length-of-stay, and other outcome information for 75 diagnostic groups at all 187 hospitals, with more-detailed reports on coronary-bypass surgery at 62 licensed hospitals, heart-attack care, and Cesarean-section rates.

California passed a law in 1991 under which statewide hospital outcomes data were collected by the state's Office of Statewide Health Planning and Development (OSHPD) and released in 1993. In 1995, it established a voluntary program designed to collect and report CABG mortality data for participating California hospitals. It represented a public-private partnership between the OSHPD and the Pacific Business Group on Health, a statewide coalition of purchasers of care. The first CABG report appeared in 2001, based on 1997-98 data. It was replaced by a mandatory program that began collecting CABG data in 2003 from all hospital cardiac units, and it reports risk-adjusted outcomes annually at the hospital level and bi-annually at the surgeon level. The reports provide volume and mortality information on coronary-bypass surgery for 79 of 118 hospitals that perform it, and mortality information for 398 of 400 hospitals admitting heart-attack patients.

Florida's Agency for Health Care Administration issued a statewide report in 1994 on outcomes from 213 acute care hospitals using 1992 data. New Jersey issued its first cardiac surgery report on hospitals and surgeons in 1997, and it also issues reports on HMO performance. Its latest report provides volume and mortality information for 16 hospitals. In 2003, the Vermont Legislature passed legislation requiring Vermont hospitals to publish annual hospital community reports containing information about quality, patient safety, financial health, costs for services, and other hospital characteristics. This includes volume and mortality results by individual hospital for seven procedures including CABG during 2002, 2003 and 2004. Texas issues volume and mortality information for 25 procedures, and Virginia provides volume and mortality rates for open-heart surgery, invasive cardiology, and medical cardiology.

Massachusetts has reported on CABG and angioplasty for six years, but it has never released data on individual surgeons. The state's most recently reported mortality rate for CABG (2003 data) was 2.25 percent. Officials are now considering whether to issue reports for individual surgeons.

Ohio has just passed a law requiring all of its hospitals to report to the Ohio Department of Health information on dozens of scientifically based quality indicators. Hospitals will have to report the costs of the top 60 inpatient and outpatient procedures they perform. The new law takes effect in November, but it will take the Ohio Department of Health until the middle of next year to create the database and to provide access on its Web site.

The real significance of this kind of state reporting is in its ability to further two fundamental goals of health planning: measurement of quality, and education of the public about healthcare delivery. These states can be seen as acting upon a principle grounded in medical ethics, that public access to data is a civil right. They have operationalized a consumer entitlement to information, and a provider imperative to improve through collaborative peer review processes. It is the certificate of need process that regionalizes specialized medical procedures enabling the development of proficiency, and report cards that measure and report the results of that process.** With optimal regionalization, one of the goals of health planning can be achieved – uniformly superior outcomes in *all* hospitals. This was achieved for CABG surgery in New York State a decade ago.***

As shown by the *Health Affairs* study, report cards assist in this process by encouraging continuous quality improvement and even reshaping professional practice patterns. They were instrumental in causing low-volume hospitals in New York State to voluntarily abandon open-heart surgery in favor of new referral alignments with higher-volume hospitals. A comparison of New York State and Massachusetts, each of which has effectively regionalized CABG surgery for decades, revealed that it was the progress in the practice of cardiac surgeons that was principally responsible for their superior outcomes, and regionalization greatly assisted in that process. But Massachusetts, without "report cards," has never achieved quite so low a risk-adjusted mortality rate as New York.**** There is conflicting information concerning whether they stimulate "gaming" to show better outcomes at the expense of the sickest patients, but this can be prevented if report cards are based on all patients with an illness, not those receiving a procedure.

The role that state report cards play in good public policy is that of stimulating improvement in healthcare delivery, and reporting those achievements as a function of state oversight that obviates need for "consumer-directed" shopping.

_____

* The predictive accuracy of the New York State coronary artery bypass surgery report-card system. Ashish K. Jha and Arnold M. Epstein. *Health Affairs*, 25, no. 3 (2006): 844-855. http://content.healthaffairs.org/cgi/content/abstract/25/3/844.

** This effect is better observed in longitudinal studies of the same hospital over time than in cross-sectional studies of many different hospitals at one time. See Farley DE, Ozminkowski RJ. Volume-outcome relationships and inhospital mortality: the effect of changes in volume over time. *Med Care* 1992; 30:77-94.

*** Sollano JA, et al. Volume-outcome relationships in cardiovascular operations: New York State, 1990-1995. *J Thorac Cardiovasc Surg* 1999; 117:419-428.

**** Ghali WA, et al. Statewide quality improvement initiatives and mortality after cardiac surgery. *JAMA* 1997; 277:379-382.