Health Care through a Six Sigma Lens

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AS I PARTICIPATED IN THE CONFERENCE THAT produced these fine papers by scholars of varying backgrounds, I was reminded of the aphorism, "Where one stands depends largely on where one sits." The calls for better information about quality, more research, regulation to fine tune the effects of competition, and improved financial incentives are all important recommendations. Given that I, too, am heavily influenced by where I "sit," I would like to add to the mix a sense of urgency and a vision that challenge us all to seek (even if we never quite achieve it) nearly error-free processes.

I work for General Electric. We purchase about one billion dollars of health care services for our U.S. employees and their dependents annually. Like other employers, we have an ethical and fiduciary responsibility to spend health benefit dollars wisely on behalf of our employees and their families in order to provide affordable access to high-quality care. At the same time, we have a responsibility to the company, which is competing in a very tough global economy, to purchase this health care efficiently. In our view (and as suggested by the error rates and inefficiencies reported by conference participants), both these goals would be well met by encouraging our employees and their families to seek their care from nearly error-free centers of excellence, if such places existed.

The Milbank Quarterly, Vol. 76, No. 4, 1998

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This conclusion arises, in part, from another aspect of “sitting” at GE. Like other leading companies, we are launched on a quality initiative called “Six Sigma Quality,” which has as its objective no more than 3.4 mistakes per million opportunities. We are applying these concepts to our service businesses as well as to manufacturing. Six Sigma starts by gaining an intimate understanding of customer expectations. (One does not want to embark on developing nearly mistake-free processes if the results are not important to the customer.) The work of Six Sigma is much like that of total quality management (TQM), perhaps with a more aggressive goal. It involves the application of a continuous cycle of Measure-Analyze-Improve-Control to processes, with the aim of continuously reducing defects. An important lesson is that nearly always the development of mistake-free, customer-oriented processes also reduces costs. (I am suggesting that there is an analogue for those who have financial access to health care. Clearly, additional financing is required for those who do not.)

In short, from where I sit, I would like to see us “raise the bar,” both in terms of the speed of progress and the level of quality we are seeking to achieve. Even if we never quite get there, a definite and aggressive goal, such as 3.4 mistakes per million, changes the discourse. “Ninety percent good” is no longer acceptable. We spend too much time, and valuable talent, attempting to explain variations in immunization rates based on differences in the populations served. Why don’t we take that same talent and focus on raising those rates toward 100 percent, regardless of the population served!

David Blumenthal and Charles M. Kilo have suggested that organizations must face a “near death experience” before they truly engage in TQM or other quality methodologies. I think these authors are correct. In today’s health care industry, the closest equivalent to a near death experience may be for a provider or plan to see its customers shifting to another organization because of differences in quality.

More Focus on the Enrollee/Patient

If we expect our respective enrollees, patients, and employees to switch health care organizations, we must provide the information that they, not we, would find compelling. Why does the evidence suggest, for example, that people largely pick health plans based on the price por-

tion of the value equation ($\text{value} = f[\text{quality/price}]$)? In short, we have not given them the types of information on quality that will affect their decisions. In part, this relates to the current structure of managed care. Managed care plans (e.g., HMOs, point-of-service plans, and PPOs) often have large, overlapping provider networks and roughly comparable benefit designs. In focus groups, our employees tell us that they want the health plans to pay their physicians promptly and to take the hassle out of patient referrals. They do not, for the most part, ask that the plans deliver excellent medical outcomes. Perhaps they are wiser than we are in understanding that, at this point, most health *plans* have a modest, at best, impact on the actual quality of care received. In essence, employees are telling us that if they have good access to their physician and hospital, along with reasonably effective administrative processes, then they are going to select among health plans based on price. They understand that true medical quality happens one layer down with the physicians and the hospitals. We need to glean from consumers more about what kind of information regarding quality would cause them to vote with their feet at that level. Furthermore, we should devote more of our attention to measuring the medical care that is delivered by physicians, hospitals, and medical groups.

First, More Restructuring

We can learn from industrial examples that true commitment to quality often follows major restructuring and downsizing. Organizations do the “easy” stuff first! Managed care as we now know it often consists of large, overlapping networks patched together with contracts and financial incentives. Although these arrangements have brought added value in leveraging excess capacity, they have not systematically produced organizations that are structured to yield the payoff from a true commitment to quality. Quality improvement must be focused on medical care processes. In addition, the doctors, nurses, and other participants in the process must have a shared economic future, leading them to see that it is in their mutual, continuing best interest to overcome the difficult hurdles along the path of improvement toward the achievement of nearly error-free performance. To do this, they must agree to adopt methods like consistent operating procedures, standardized equipment and supplies, and uniform information systems. A situation

in which the providers are patched together by financial incentives derived from a grab bag of payor contracts, in my view, cannot produce excellence.

Focus on Organizational Culture

Health care literature includes many examples of early TQM adopters. These pioneers are to be applauded. At the same time, the news from corporate America suggests that a commitment to quality is every bit as much a cultural commitment as it is a set of quantitative tools and methods. The organizational culture facilitates many critical aspects of quality improvement. A quality culture makes it OK to seek out (yes, seek out!) mistakes or defects as opportunities for improvement! It is an organizational culture that breaks down the barriers between functions and professions. Quality comes from improving *processes*, which invariably cut across professional and functional boundaries. We know well the challenge of bringing together multiple, often competing, discipline-oriented clinical departments in order to restructure an entire process, driven primarily by the needs of the patient.

Use What We Know Now!

If we cannot yet create near death experiences for our medical care organizations, we can certainly get started by creating important “market-share erosion” threats! To do so, we have to find the “sweet spot” of quality measurement that simultaneously meets the academic test of validity and encourages consumers and purchasers to change their sources of care. One area that currently meets this test is that of referral rules based both on scientific evidence regarding the relations between hospital outcomes and volume and on teaching hospital status. There are many procedures and conditions for which such relations are well documented in the literature. Recently, the Pacific Business Group on Health commissioned the Health Policy Institute at the University of California–San Francisco to identify such well-established relations. Sixteen conditions and treatments emerged. Why not start there? If the “managed care” companies are to bring added value in “managing care,” why not ask them to ensure that referrals within their provider networks

are guided by the scientific evidence? This could be accomplished by offering incentives and/or educating enrollees to select plans (and/or use the institutions) that apply this kind of safety-based channeling. Similarly, it seems clear that the installation of electronic systems for entering physicians' orders in hospitals can dramatically reduce the high level of adverse drug events and their substantial morbidity. Why don't we start informing the public about which hospitals have these systems and, as such systems become more widespread, which plans use that capability as a network credentialing standard?

Clearly, these approaches are crude compared with those we can all imagine in the future and compared with most other industries. At the same time, to attract more than the "early adopters," we have to begin to inject quality into the marketplace in a way that has a serious potential of moving volume.

In summary, we have a safety problem in health care. Despite having the best physicians, hospitals, and medical equipment in the world, our health care system produces more errors than any of us thinks is acceptable. Although we have a long way to go to develop the science, the organizational structures and culture, and the information to transform all aspects of quality into Six Sigma, we owe it to our patients, employees, and enrollees to look for ways to accelerate the rate of change.

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