

E.A. Codman and the Rhetoric of Battle: A Commentary

DONALD M. BERWICK

Harvard Community Health Plan

WHY HAVE WE NOT PURSUED ERNEST CODMAN'S vision to determine the end results of patient care? What he asks is simple—ineluctable. We intend to help out patients, he says, so let us find out how we are doing. Habit is not enough, he says, nor is impression, nor is seniority, nor is oath, nor is good intention. The key, he says, is learning—learning from our own well-intentioned experience. In uncharted terrain, he asks that we build compasses, simple ones of paper and pencil, checklists, tallies, counting, measuring, learning. He does not, in the main, doubt our sincerity; he doubts only our intuition. In darkness, an airplane can be upside down and the pilot unaware of it except for what his instruments tell him. Codman recommends instruments.

Why not? What stops us? I could perhaps negate my own question by citing Avedis Donabedian's own career and achievements. Or I could avoid it by listing counterexamples: the vision of Wennberg (1984), the discipline of Brook et al. (1977), the exhortation of Williamson (1971), the precision of Palmer et al. (1985), and Ellwood's resonant call for "outcomes management" (1988). I could speak of modern bioscience filling our journals with clinical investigations of increasingly correct design. That part of our post-Codman history, the

advance of clinical epidemiology, technology assessment, and the methods of outcome measurement, would please Ernest Codman.

But, to cite these new riches and be satisfied that we have realized Codman's vision would be to escape the more pervasive truth; namely, that in the regular assessment of the value of what we do, in the systematic gathering of objective data over time, and in the disciplined and continual search for improvement in clinical process, the average health care provider of today goes on as if Codman never lived. Ask a doctor about outcome measures; search a hospital for its end results recording system; study a nursing home for its continual improvement of process based on systematically acquired data from patients. Nearly a century after Codman began, none will be found.

Why not? Codman met in his time the resistance of arrogance, the molasses of complacency, the anger of the comfortable disturbed. Would he today find the same sources of resistance? I think he would find at least four, and we better honor his memory if we have the insight to see how we, too, resist the Codmans of today:

Ambiguity in our Objectives. It is, of course, a special form of arrogance to imply that people of an earlier time were somehow less complex than we of today. Multiattribute utility did not arrive with the term; it was here all along. Cavemen had it. Codman by no means trivialized outcome, but the risk of doing so is there among those who will not understand the richness of the clinical encounter—those who are too embarrassed to mention the poetry in what we clinicians do. We help people. The end results card for helping is not unimaginable; indeed, among the achievements of the past decades of health services research is the forging of good tools with which helping, itself, in its many dimensions, can be plausibly measured (Ware et al. 1981; Davies and Ware 1981). The outcomes of our care are not immeasurably complex, but they are complex. They are not 3-by-5, but 8-by-10.

That difference is crucial. Three-by-five outcomes are pocket-sized: dead or alive; walking with crutches, without crutches, or not at all. These, I assume, are on Codman's cards. Could Codman credibly exhort the doctor today to know and use the systems of measurement of 1910? No. But eight-by-ten outcomes are not pocket-sized, and are likely to include such items as: the "sickness impact profile" (Bergner et al. 1981); Rand's battery of measures of bio-psycho-social functioning (Stewart, Hays, and Ware 1988); disease-specific functional status measures of long pedigree (Nelson and Berwick 1989); risk-adjusted

mortality ratios (Blumberg 1986). In our measurement tools we follow his spirit, but no longer his method. We have outgrown his method, even while we have not yet matured to his spirit.

These methods take money and time. The marginal cost of measurement is not zero. It is part of our duty, but it is not free. Moreover, measurement forces upon us some uncomfortable awareness that in our multiattribute world we face choice.

An 84-year-old man lies in intensive care on a respirator, the victim of his fourth heart attack. "It is time," says the surgeon, "for a tracheostomy." "What are his chances?" asks his wife. "One in a hundred," the surgeon replies. "Please go ahead, then," she decides, "he's all I've got."

What will we write on Codman's card? What do we want? It is better not to measure, we are tempted to say. Codman rest in peace.

The Myth of the Physician as Process. Codman demands a great deal of the surgeon—"the hundred dollar surgeon"—and, in so doing, he celebrates his power. Good man, good outcome. Walk today with Codman's ghost through the Massachusetts General Hospital, down toward the operating suites. Double doors on the left open to the CT scanner and the MRI. The blood bank on the right. Upstairs the laboratories bubble and 'phorese. A dozen nurses circle the patient; a squad of consultants. The engineers built the laminar flow room. The techies built the computer. The monitor comes from Japan; the anaesthesiologist from Ecuador. The patch is Teflon; the purchasing agent bought it in bulk. The surgeon strides into the operating room. She snaps on her gloves, picks up her scalpel, and in one romantic transition, one Patton-like assertion of her authoritarian self, she becomes totally responsible for the patient.

Poppycock. Whose end results are we to study? The capacity for vagueness is frightening. We risk holding accountable for end results people who little more determine those results than the seven astronauts of Challenger determined the end results of the shuttle. It is not that physicians are never responsible for outcomes, but rather that we have so little to tell us when it is the doctors, and when it is the systems they work in, that make success and failure. Doctors are people acting in processes. Until responsibility for the process is fixed, and until we have sound theories of the sources of failure in those processes,

we cannot expect enthusiasm for the study of outcome (Berwick 1989). Everyone recites the myth of physician power; few who study quality on the ground believe in it.

Money. If David Eddy (1984) and John Bunker (1988) are correct, the emperor of health care is wearing fewer clothes, if clothes are measured by the yardstick of health status outcomes. Codman imagined a system in which the surgeon with poor results might be the one to suffer financially. Today, \$650 billion per year later, who loses if results are measured and found wanting? Doctors, still. But also corporate medicine, stockholders, the hospital supply industry, the instrument makers, pharmaceutical houses, Japanese miniaturizers, and the American architect. No part of the American economy is untouched by health care. When Codman's light is turned on, only a portion of medical practices will be found effective, and we do not know in advance which ones they will be. Codman, like Wennberg, would be welcome today in the board room of the American payer, though not among those who make health care. In the doctor's cafeteria, Codman still might dine alone. He will cost somebody money.

Fear. Codman would have about a 20 percent chance of being sued next year for malpractice. His own end results cards would be sought in discovery by opposing counsel. He would likely be on a salary in an HMO or hospital, whose chief executive officer, perhaps a nonphysician, would be doing or planning the form of his annual merit review, judging his contribution to the corporation—not for profit, but for loss, either—in part on outcomes. The Patient Care Assessment Committee of the Massachusetts General Hospital might be required by law to report his irresponsible behavior to the Massachusetts Board of Registration in Medicine, safe under the snitch provision, especially if the hospital contemplated disciplinary action. The *Boston Globe* would thereafter have access to his name as among those miscreant physicians reported to the board. He could not leave and start his own hospital because he could obtain neither a certificate of need, nor, I suspect, accreditation from the Joint Commission for Accreditation of Health Care Organizations. Codman would be pleased by the Health Care Financing Administration's release of mortality data on 5,500 American hospitals, but neither he nor anyone else would be confident of the severity adjustment surrogates in HCFA's calculations (DuBois et al. 1987; Blumberg 1987). Ernest Codman would be afraid today, not because he would doubt the wisdom of outcome measurement, but be-

cause he would doubt the wisdom of its use for censure, surveillance, accusation of the well-intentioned, and puffing of the proud. There is no hint of shyness in his character, but perhaps even he would hesitate. Perhaps even he would wonder, on the way to court, if the world he seeks to improve is showing the maturity to use the tools of improvement. Beyond the conflict, he would know, information has the capacity to heal, and daylight, to cure error; but, he would know too that the rhetoric of battle has little to do with real learning.

Codman looked ahead. He looked, indeed, beyond us. Seventy-eight years ago he began his life's work; forty-eight years ago he died. Are we ready for him yet?

References

- Bergner, M., R.A. Bobbitt, W.E. Pollard, D.P. Martin, and B.S. Gilson. 1981. The Sickness Impact Profile: Development and Final Revision of a Health Status Measure. *Medical Care* 14:57-67.
- Berwick, D.M. 1989. Continuous Improvement as an Ideal in Health Care. *New England Journal of Medicine* 320:53-56.
- Blumberg, M.S. 1986. Risk-adjusting Health Care Outcome: A Methodological Review. *Medical Care Review* 43:351-93.
- . 1987. Comments on HCFA Hospital Death Rates Statistical Outliers. *Health Services Research* 21:715-39.
- Brook, R.H., A. Davies-Avery, S. Greenfield, L.J. Harris, T. Lelah, N.E. Solomon, and J.E. Ware, Jr. (eds). 1977. Assessing the Quality of Medical Care Using Outcome Measures: An Overview of the Method. *Medical Care* 15(suppl.): 1-163.
- Bunker, J.P. 1988. Is Efficacy the Gold Standard for Quality Assessment? *Inquiry* 25:51-58.
- Davies, A.R., and J.E. Ware, Jr. 1981. *Measuring Health Perceptions in the Health Insurance Experience*. Pub. no R-2711-HHS. Santa Monica: Rand Corp.
- DuBois, R.W., W.H. Rogers, J.H. Moxley, D. Draper, and R.H. Brook. 1987. Hospital Inpatient Mortality: Is It a Predictor of Quality? *New England Journal of Medicine* 317:1674-80.
- Eddy, D.M. 1984. Variations in Physician Practice: The Role of Uncertainty. *Health Affairs* 3:74-89.
- Ellwood, P.M. 1988. Outcomes Management: A Technology of Patient Experience. *New England Journal of Medicine* 318:1549-56.

- Nelson, E.C. and D.M. Berwick. 1989. The Measurement of Health Status in Clinical Practice. *Medical Care* 27:S77-S90.
- Palmer, R.H., T.A. Louis, L. Hsu, H.F. Peterson, J.K. Rothrock, R. Strain, M.S. Thompson, and E.A. Wright. 1985. A Randomized Controlled Trial of Quality Assurance in Sixteen Ambulatory Care Practices. *Medical Care* 23:751-70.
- Stewart, A. L., R.D. Hays, and J.E. Ware, Jr. 1988. The MOS Short-form General Health Survey: Reliability and Validity in a Patient Population. *Medical Care* 26:724-32.
- Ware, Jr. J.E., R.H. Brook, A.R. Davies, and K.N. Lohr. 1981. Choosing Measures of Health Status for Individuals in General Populations. *American Journal of Public Health* 71:620-25.
- Wennberg, J.E. 1984. Dealing with Medical Practice Variations: A Proposal for Action. *Health Affairs* 3:6-32.
- Williamson, J.W. 1971. Evaluating Quality of Patient Care: A Strategy Relating Outcome and Process Assessment. *Journal of the American Medical Association* 218:564-69.

Acknowledgment: This commentary is based on remarks delivered at a symposium at the Harvard School of Public Health, Boston, Massachusetts, on November 15, 1988.

Address correspondence to: Donald M. Berwick, M.D., M.P.P., Vice-President for Quality-of-Care Measurement, Harvard Community Health Plan, 10 Brookline Place West, Brookline, MA 02146.