Zen and the Art of Physician Autonomy Maintenance

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"Knowing is not enough. We must apply."

Johann Wolfgang von Goethe

Among the most highly valued characteristics of any profession is its autonomy—a privilege of self-regulation granted by society. During the 20th century, medicine rose to an unprecedented level of economic, political, and clinical autonomy (1), due to a number of factors, not the least of which was the extraordinary impact of science on the effectiveness of medical practice. (2)

Our compact with society changed during the last two decades, as evidenced by insurers' review of care plans; (3) calls for public reporting of physician errors and quality indicators; (4) and an ever-increasing level of administrative oversight of documentation, billing, and clinical management.(5) One purpose of these activities has been to identify and sanction incompetent or crooked physicians. Another purpose has been to influence physicians to practice evidence-based medicine i.e. to make effective use of the very science on which we base our profession, and which earned us autonomy in the first place.

While the optimal balance between autonomy and regulation is uncertain, *some* autonomy would appear to be necessary, unless society believes it can somehow direct the day-to-day practice of medicine through legislation, regulation, and commercial contracts. To physicians' eyes, the autonomy pendulum has already swung quite far in that direction, (6) with considerable harm to the special "gift relationships" that form the bonds between physicians and patients. (7) While some part of medicine is regulatable science, much of it is unregulatable art—an art which depends on our ability to build relationships with patients and families, to set answers to patients' questions into the context of their lives, and to heal, even when our science cannot cure. Physicians' fierce attachment to clinical autonomy has a basis in this truth: no two patients, and no two doctors, are the same, and that the art of medicine happens somehow in the relationship between those individuals.

If some clinical autonomy is a good thing, and we wish to regain it, one part of our strategy should be straightforward: we should do a better job of policing our own profession, by dealing firmly and effectively with those of our colleagues who do not fulfill their professional obligations of quality and integrity. Kassirer has made this case convincingly.(8)

Cleaning up our own mess is undoubtedly necessary, but it would not be sufficient. Our patients, certainly, would add other tasks to our list, based on their perceptions of how much time we spend with them, and how well we listen to their needs and preferences. (9-11) They want us to practice the art of medicine, altruistically.

They also expect us to practice the science of medicine, consistently. This task might be framed by the public (if not by our patients, certainly by the regulators and legislators who represent them) as follows: "You claim that your profession is based on science. We have given you a lot of freedom as a profession because of the miracles science has worked for us. Please show us that you can use all the science you know, for our benefit."

We are not using all the science we know

The period beginning with Wennberg's studies of practice patterns, (12) and ending with the 1999 publication by the Institute of Medicine of *To Err is Human,* (13) marks two decades during which the public learned of our apparent inability to apply all the science we know. The evidence is clear: unexplainable variation across physicians and regions, and widespread quality and safety problems of overuse, underuse, and misuse. (14) These are not problems caused by a few incompetent, greedy, or uncaring doctors. These are problems of an entire profession.

Why, if we claim to be a science-based profession, and have scientific knowledge of the best known way to treat asthma, diabetes, myocardial infarction, or pneumonia, do we fail to implement that knowledge reliably and consistently? Why, if 65% of American internists believe that clinical practice guidelines (CPGs) will improve the quality of care, do only 18% change their practices to conform with CPGs? (15) Why, if Canadian and French critical care specialists pride themselves in bringing the most effective clinical science to the ICU bedside, do they not apply the best knowledge? (16) The answers often cited include uncertainties in the science of medicine, uneven quality of the CPGs themselves, practitioners' lack of knowledge of the science, variables in the practice setting, lack of incentives, patient factors, and lack of computerized support systems (17-20). These factors are all influential, and need to be addressed. But, within our professional culture itself, there another reason for the embarrassing gap between what we know and what we do: our deeply-held view that clinical autonomy is defined and must be maintained at the individual physician level.

Individual clinical autonomy and the Tower of Babel

Consider a typical "grand rounds" in a major medical center. A brilliant lecturer reviews the current clinical evidence for a common condition such as asthma, or coronary artery disease, concluding with a description of the best way to manage the condition. After a vigorous question period, the physicians leave the hospital auditorium, with the overwhelming consensus that the lecturer has it right. What happens next?

Typically, there is no formal translation of this consensus into reliable, consistent implementation. Rather, the hospital relies on each individual physician to apply the new knowledge. The result is a wide range of individual actions, from no discernible change in practice, to major revision of standing orders. As time passes, new evidence appears in the literature, and is "integrated" into the practice of individual physicians in a similarly variable fashion. The cumulative effect of this process, repeated hundreds of times for hundreds of conditions for hundreds of physicians, is that clinical practice in the hospital resembles the Tower of Babel more than a scientifically-grounded activity.

Infection control provides another illustration. We have accepted the evidence that sterile technique is important to prevention of infections in surgery, and practice it, together, as

a profession. It would therefore be unheard of for a surgeon to perform surgery without scrubbing, gowning, and gloving. But infection control has moved far beyond sterile technique. For instance, recent evidence strongly suggests that rigorous blood glucose control reduces post-operative infections in critically ill surgical patients, (21) yet few hospital medical staffs have weighed the evidence on tight glucose control, and decided about it one way or the other *with intent to implement any decision hospital-wide as a group of professionals*. Presuming that the evidence for both infection-control practices is reasonably solid, why would the same patients who can expect to be treated in the operating room by a gowned surgeon with scrubbed hands inside sterile gloves, not also routinely expect to be managed in the ICU with a tight blood glucose control regimen?

These examples illustrate a pattern in our professional processing of clinical scientific evidence. We regularly engage in vigorous conversations about clinical evidence with our colleagues. But we seldom enter into those conversations with the clear understanding that any conclusions we reach will be translated into a system of standing orders, reminders, measurements, feedback loops, and other steps to implement any consensus that emerges from the dialogue, *because to do so would infringe on individual clinical autonomy*.

Medicine, Freidson has pointed out, is much more than a scholarly profession. It is a consulting profession. Our clients are patients, and we serve them only insofar as we *use* our knowledge to address their concerns. Put another way, society gives us no credit for scintillating discussions of our knowledge with our colleagues. We have professional value, and earn clinical autonomy, only when we competently apply what we know. (22)

Unfortunately, our prevalent cultural pattern—discussing knowledge in groups large and small, but applying it as individual practitioners—is perfectly designed to produce the results we now see: delays in the implementation of new knowledge, and wide variation in practice. This variation, in turn, adds complexity--a breeding ground for errors (23) -- to the work of nurses, pharmacists, and physicians who share in the care of our patients. The result is a wide gap between the science that is known and what we order, as well as a high error rate between what we order and what is done.

Practicing the science of medicine, *together*

Physicians in various settings are beginning to address these problems by practicing clinical science as teams of professionals. For example, the development of computerized order entry systems has forced medical staffs to consider questions such as "What should our default order sets for common conditions be?" and, "What automatic reminders for monitoring treatment, and triggering screening, should be embedded in the computer system?" (24)

Computer systems are helpful, but not necessary for us to practice clinical science as teams. Some hospitals have dramatically improved treatment of myocardial infarction and other conditions by making evidence-based medicine "the easiest thing to do," using medical staff-approved paper standing order sets. (D Abelson, personal communication) Still other medical staffs have gone so far as to approve automatic substitution of orders that run counter to best evidence. For example, in some hospitals a physician may order meperidine, but the patient will receive a less toxic and more effective pain medication. (B Dennis, personal communication). To support these kinds of activities, hospital

medical staffs are establishing bylaws, structures and methods to govern clinical care together as a staff, rather than as individual practitioners. (25)

The common feature of these processes is a group review of the evidence base with intent to apply it to practice. And the common consequence is some loss of individual clinical autonomy, at least as far as the science of medicine is concerned, in deference to the judgment of a larger group of one's colleagues.

A number of arguments could be advanced for why physicians should embrace, rather than resist, this change in our professional culture. A growing body of evidence suggests that it produces better care outcomes. (26-28) An organized process of considering and implementing new evidence would be likely to drive more rapid adoption of effective innovations, and discarding of old, ineffective practices. In many instances, creating an evidence-driven "baseline" for care of common conditions would free up time for us to do the difficult custom-crafting of care (the art) that every patient needs. Nurses, pharmacists, and others who work derivatively from our orders would find their work considerably simplified, and medication and other errors would be less likely to occur. And with regard to professional autonomy, we would be doing this activity for ourselves, rather than having it done to us.

The implications of this idea for our professional culture, and our organizations, are profound. Our medical schools and training programs would design curricula and experiences to teach us how to apply scientific medicine as a team, and simultaneously, how to practice the art of medicine as individuals. Our academic health centers would not be satisfied with simply generating new knowledge, and would take the lead in teaching us how to apply that knowledge. Our group practices and independent practice associations would adopt processes to govern the science of clinical care, maintain and update best practices, and take accountability for performance. Our medical and specialty societies would spend less time defending individual clinical and economic autonomy, and lead us in the process of taking accountability for our performance as an entire profession. (29) And most important, we as individual physicians would recognize that sharing clinical autonomy with our colleagues, at least for the science-based aspects of medicine, would be a big step toward returning pride and satisfaction in our daily work.

Yes, but…

Physicians have been peculiarly resistant to evidence-based guidelines and protocols, even when using them would improve care and free up precious time for the art of medicine. Some of the common objections are listed below, along with counter-arguments:

We can't agree on all the science: Of course we can't, and we never will. The evidence base for many practices is not firm, and is always changing. The question is, "What science *can* we agree on?" Given the imperfections and uncertainties of the evidence base, it might even be argued that, rather than waiting for perfect evidence, we should make good judgments using what evidence we have, implement those choices together, monitor the results, and thereby use our practices to extend our knowledge base of what works and what doesn't.

Specialties will make self-serving judgments about the science: Transparency and accountability for results, combined with the use of systematic, cross-disciplinary evidence reviews, would be the best antidotes for this concern. Each hospital, medical group, specialty society, and other evidence-weighing/deciding/implementing body could use national systematic reviews as the starting points for its deliberations, and publish its decisions, implementation plans, and results on an ongoing basis, so that patients, physicians, and others could see for themselves the extent to which the scientific evidence is truly considered, and effectively implemented. Self-serving judgments and sub-optimal performance would quickly become apparent.

Protocols stifle innovation: Practicing clinical science together need not stifle innovation, and could even promote learning at a more rapid rate. To a large extent, pediatric oncology already uses this sort of system. Virtually every child with cancer is placed either on the best known treatment according to the evidence, or on the next potential advance in treatment. The results of the two protocols are compared, and the next cycle of learning and innovation begins, with outstanding results over time. (30) If our care for common conditions such as asthma, osteoporosis, and myocardial infarction were consistently delivered based on the current best science, our day-to-day practices would become much like the control arm of a research trial, and form a strong backdrop against which to compare the results of new ideas.

Guidelines expose us to legal risks: This is a serious concern, but it is difficult to imagine the malpractice situation getting worse than it is already, just because of a concerted professional effort to consistently implement the best known science. Thus far, experience with guidelines suggests that they are at worst a neutral factor in liability risk, and that the risk declines as the implementability of the guidelines improves. (31)

It's cookbook medicine: Yes, guidelines are something like a cookbook. All great chefs use cookbooks. Expert pilots use checklists before takeoff. And diners and flyers all over the world are grateful that their experience will not depend on memory, and will not be created entirely from scratch each time. Perhaps it would help if we thought of guidelines as jazz scores, rather than cookbooks. As practitioners, we would work from a basic chord structure and melody line (clinical science) with a great deal of latitude for improvisation (the art of medicine.)

Guidelines are unprofessional. The obligation to act *individually* in the best interests of each patient is deeply embedded in our professional culture. But so is our commitment to science. The *Annals* recently set forth a superb Charter on Medical Professionalism, in which one of our professional responsibilities is described as the Commitment to Scientific Knowledge, including "…a duty to …create new knowledge and ensure its appropriate use." (32) We seem to have been far more successful at generating new knowledge than applying it. If individual clinical autonomy is one of the impediments to fulfilling the Commitment to Scientific Knowledge, perhaps it is time for vigorous debate on the value of this deeply held professional belief?

Conclusion

We are losing our clinical autonomy in part because the public has learned that the basis for it, the full power of our scientific knowledge, is not being consistently applied for their benefit. We will not regain that autonomy by lamenting its loss, or by making shrill

cries to preserve it. The most effective approach, the *professional* approach, would be to join together with our colleagues, in venues large and small, to decide on and apply the best science together, as a profession. The Zen paradox of clinical autonomy is that by giving it away to our colleagues, we gain it as a profession.

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