Improving the art and science of medical practice

Variation in practice performance appears to be the rule rather than the exception in health care: significant variation in performance is observed even when there are strong, evidence-based guidelines that are universally accepted by physicians, e.g., immunization of children under 2 years of age. Some organizations that have obtained and compared their immunization performance have been able to begin to work on the degree to which the observed variation is due to patient or parent-related factors, such as not bringing children in for routine, scheduled, well-child care versus physician or physician-office related factors, such as missing opportunities for immunization even when a child is in the office. Many parties responsible for pediatric immunization, ranging from individual physicians’ offices to large public health clinics, have discovered that with a variety of practice management techniques it is possible to improve results and obtain close to 100% immunization rates by the age of 2 years. The practice management techniques necessary to improve immunization performance and reduce variation have included case identification – sometimes facilitated by immunization registries, reminders to patients, reminders or prompts to physicians, and feedback of performance information. The point is that even in the circumstance where the guideline is not the issue, it appears necessary to understand the medical practice setting in which the guideline is to be applied and add specific performance improvement modalities to the normal routines of a practice to achieve the desired performance level.

The paper by Shye, Freeborn, Romeo, and Eraker in this issue of International Journal for Quality in Health Care [1] and a companion paper by the same group [2] present an even more interesting and complex set of issues. These authors had the experience of introducing a guideline for the management of low back pain, which arguably was evidence-based, and found that neither the guideline alone, nor the guideline plus feedback of imaging test ordering, decreased the overall use of tests or the variation in test usage by individual physicians. In the planning phase for their guideline and feedback study, they had conducted a series of focus groups among physicians to examine possible causes of variation in imaging test rates. In the present report they have returned to the results of the focus groups in the hope of shedding light on the negative results of their interventions. In particular, they focus on some characteristics of the patients, ambiguity in physicians’ knowledge, and, most importantly, the internal conflict experienced by physicians in assessing their obligations to the managed care organization for which they work and their obligations to the patients with whom they have, or would like to establish, a trusting relationship.

Lately, it has become fashionable to discuss the ‘ethics’ of managed care. This discussion generally revolves around the conflicting obligations physicians experience to the organizations for which they work and to their patients. Conflicts may be heightened by the financial incentive structure which has been imposed by the managed care organization or sought by the physicians who work for or contract with it. This is not a new issue; indeed, it has been discussed for decades. Physicians, who have natural tendencies to minimize risk-taking or sometimes to maximize income, can make ‘errors of commission’ characterized by excessive test ordering.

Managed care organizations have a natural market-driven tendency to minimize cost, which has led to their interest in guidelines, i.e. the specification of appropriate practice. What is new is that so many physicians who used to be in fee-for-service practices now find themselves in the managed care system in which the conflict exists. What also is new is that there is so much concern among the general public about the incentive structure of managed care that even physicians who have practised for a long time in managed care organizations and have hitherto enjoyed a trusting and trusted relationship with their patients find those relationships strained. This may have been the case for some of the Kaiser Permanente physicians studied by Shye et al.

It may be useful to distinguish between the ‘art’, the ‘science’, and the ‘non-science’ of medicine. The science of medicine is what determines the processes most likely to help a patient recover from a clinical condition, in short, what is necessary or appropriate. It is non-scientific for a physician to order something which is unnecessary or, worse yet, inappropriate for the assessment or recovery of the patient. One facet of the art of medicine is enhancing the ability of physicians to establish trusting relationships with patients, relationships that will enhance compliance with scientific practices and lead to better outcomes. Most physicians practicing today were not trained to have conversations with patients about why they are not writing a prescription or ordering a test. Some, probably many, physicians simply find it easier to order a test or treatment than to have a ‘difficult’ discussion with the patient.

There has always been a significant amount of variation in the application of scientific and non-scientific practices. For years, and long before the growth of managed care, infectious disease clinicians have been concerned about the over-ordering of antibiotics for patients who are likely to have viral respiratory infections, a non-scientific practice.
Clearly, physicians, as a group, have not bought into the notion that the risks of antibiotic reactions and selection of resistant organisms outweigh the benefits of giving the patient a prescription, as a symbol of treatment, as a time-saver during the clinical encounter, and as a way of avoiding a potentially unpleasant or difficult explanation. Furthermore, at the same time, there is variation in the degree to which individual physicians buy into the notion of avoiding unnecessary antibiotic use and in the degree to which individual physicians are willing to take on the role of educator or discussant versus prescription writer or treatment-giver. What the paper by Shye et al. should bring into our minds is how little we know about the factors that lead to this individual variation and what we can do to manage those factors.

Several years ago I was involved in a study of physicians who had available to them a ‘just-in-time’ prompt to stimulate their giving influenza vaccine to appropriate patients. We surveyed a group of physicians whose performance was outstanding and compared them with a group whose performance was at the low end of the scale. The physicians were not told why they were being surveyed, though they obviously knew about the system of prompts and also about their individual performance on influenza vaccination in the prior year. Interestingly, though not surprisingly, the group at the low end of the scale said they were not much influenced by prompts; whereas, the group at the high end of the scale said that they were influenced by prompts. The questions which we could not get at in that particular survey were why some physicians are more influenced than others by prompts (or guidelines, educational sessions, reminders, feedback, or cash incentives) or what, if anything, might stimulate better performance among the physicians who are not influenced by a given modality of performance improvement?

We are still at an early stage of development and implementation of practice performance improvement measures. There are examples where feedback of performance has not been effective at improving overall performance or in reducing variation in performance [2]. Yet, in general, feedback of performance to physicians has been effective in stimulating some improvement; and it appears that even though feedback is more effective when one is trying to increase performance, such as giving more immunizations, than when one is trying to decrease performance, such as not ordering unnecessary imaging tests, it can be effective in both directions [3]. The literature, which is likely to reflect the state of current research, still seems limited to reports of applications of relatively blunt instruments, e.g. dissemination of a guideline or one type of feedback to a whole group of physicians. There has not yet been significant attention on tailoring practice performance improvement techniques to the situation or individual.

From experiences such as the one we had with influenza vaccination prompts or the one reported by Shye et al. there appears to be an opportunity to develop a whole area of research on factors related to individual physician variation and ways to improve the performance of individual physicians. There are diverse opportunities in this area which should accommodate a variety of approaches, some directed at the specifics of the physician–patient relationship and physician–patient communication, the art of medicine, and others directed at organizational aspects of practice, the emerging science of medical practice. There is a lot of room to improve both the art and science of medical practice. Let’s do both!

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References