Is Ambulatory Patient Safety Just Like Hospital Safety, Only without the "Stat"?

When I was a resident in internal medicine 2 decades ago, we spent virtually all of our time in the hospital and very little of it in the ambulatory setting. This structure reflected the traditions of medical residency training, the relative importance that chairs of medicine and the Residency Review Committee placed on the 2 settings, and the economic realities of residency funding. However, it also reflected a premise that a physician well trained in the care of the very ill could easily translate these skills into excellent care in an environment where the pace was slower, the patients were less sick, and the word "stat" was rarely heard.

We later came to realize that this logic was flawed. We now understand that the ambulatory environment is so different from the hospital environment that expertise in hospital care might not predict excellent outpatient care and might even create skills and instincts that are harmful in the ambulatory care environment. In the ambulatory world, most patients are well or have stable or gradually deteriorating chronic illness. Many symptoms resolve with time; prevention is the core activity; and patients are anything but captive, supine beings in flimsy gowns. These differences are not trivial; indeed, they are fundamental. Thankfully, our residency accreditors now insist on more and better training in ambulatory care (1). Newly graduated residents continue to have a steep learning curve on entering primary care practice, but at least they are not starting nearly at square one, as many of the physicians of my generation did.

As patient safety has become a consuming issue for both seasoned practitioners and new graduates, we are beginning to understand the nature of medical errors in a variety of environments. The study by Gandhi and colleagues in this issue (2) uses settled malpractice claims to help us better understand the nature of diagnostic errors in the ambulatory setting. Their findings—that such errors are common (59% of all outpatient claims) and are due to an array of both individual and system factors—are sobering, since they do not offer a single target and the promise of a magic bullet. Nevertheless, the study helps point the way to changes in training, practice, and systems that might prevent many of these errors.

For example, the most common errors in the study were ones that led to missed or delayed diagnoses of cancer (with breast cancer accounting for about 42% of these cases). Typical process breakdowns included failure to order the appropriate diagnostic or laboratory test (59% of missed cancer cases), incorrect interpretation of tests (46% of missed cancer diagnoses), and inappropriate or inadequate follow-up (48% of missed cancer diagnoses). One can envision an electronic health record that would prompt the physician to perform mammography at the appropriate time, provide evidence-based recommendations regarding how to act on various mammography results, and generate automatic notifications if the patient misses scheduled follow-up visits or a consultant's note is late in coming (3, 4).

This article comes on the heels of several studies that are helping us begin to understand the nature of ambulatory care errors (5–9). Just as we came to appreciate that strong hospital training does not automatically create a competent office-based clinician, the question arises: Does what we have learned about hospital patient safety apply to the ambulatory setting? Since the patient safety world has focused on hospital care heretofore, this question is very important. As we begin to learn about patient safety in the office setting, we should take account of several differences between hospital practice and office practice.

The first difference is in the nature of the errors. The hospital patient safety movement has emphasized the prevention of errors related to treatment: medication errors; surgical errors (wrong-site surgery, retained sponges and instruments); handoff and communication errors; and hospital infections, falls, and blood clots. When we examine the overlap between ambulatory and hospital mistakes, it is clear that medication errors beset both settings, but even here the issues are often different (administration errors and those involving intravenous pumps are common in the hospital and unusual in the outpatient setting) (10). The relatively few studies of diagnostic errors have generally focused on errors in the emergency department and in training environments (11, 12). Missed diagnoses of cancer, the main problem found by Gandhi and colleagues, are uncommon in the hospital, partly because so many diagnoses (particularly of cancer) are made in the office and the patient comes to the hospital to receive treatment or complete a complex work-up.

The second major difference is in the nature of the patient–provider relationship. Because the patient is neither passive nor captive in the office, patient adherence is far more important than in the hospital (Gandhi and colleagues found that 46% of errors involved significant patient factors, with nearly half of these reflecting nonadherence). In office practice, the focus of attention is the patient's understanding of and agreement with the plan, which requires an appreciation of the patient's health literacy and any possible language barriers. Talk about hospital patients being active participants in their own safety is often an empty promise (particularly in the case of the confused or desperately ill patient). On the other hand, involving the patient actively is sure to be a key component of ambulatory safety efforts (13).

A difference that is perhaps even larger than these 2

differences is the organizational structures of hospitals and clinics. Take the not-so-simple matter of implementing an electronic medical record. In most hospitals, a team of computer experts would handle this problem aided by clinicians with specialized expertise in informatics and time carved out of their clinical schedules. Although the process would engage "user groups," no one would expect a rank-and-file doctor to double as "the IT guy." However, in all but hospital-associated or huge ambulatory practices, a clinician must take the lead role when an office practice transitions to an electronic medical record (14). Similarly, hospitals can afford to have staff with specialized expertise in various types of errors (such as pharmacists for medication errors) or in human factors, root-cause analysis, and legal medicine. The hospital cross-subsidizes these positions, which do not generate revenue, with profits from the clinical operation. Contrast this lavish staffing with the 3-person ambulatory practice, in which the physician (or nurse) is likely to also be "the human factors guy" (or woman), "the root-cause guy," and "the malpractice guy." And what profits are available for cross-subsidy? Get serious.

Finally, we should consider the macropolitical and organizational issues. Hospitals are visited regularly by regulators (such as the Joint Commission on Accreditation of Healthcare Organizations) and are embarrassed by errors that make the headlines and by unfavorable quality or safety data published on the Web (15). Such scrutiny is highly unlikely for the small ambulatory office, in which the malpractice system (for all its many flaws) represents the only tangible incentive, other than sheer professionalism, to catalyze safety efforts. The other drivers of safety initiatives, such as legislation (for example, California's mandatory hospital nurse-to-patient ratios) and public campaigns (for example, the Institute for Healthcare Improvement's recent campaign to save 100 000 lives), target the hospital environment. This diverse and powerful set of incentives makes "doing patient safety" far easier in the hospital than in the office.

On the other hand, the office has unique advantages in promoting patient safety. In general, physicians and the other providers and staff share close quarters and often have a collegial working relationship (however, physicians are likely to employ the staff, which they do not in the hospital, so it's more difficult to dampen down hierarchies, a goal of most efforts to improve safety culture [16]). Physicians enjoy longitudinal relationships with patients, making collaborative safety efforts and patient engagement more likely to take hold. Patients are healthier and so are much more likely to take an active role in improving their own care. Making substantive changes does not require the assent of dozens of hospital committees or the consensus of a diverse medical staff. (Remember the old joke: What do you call a 99-to-1 vote of the medical staff? Answer: a tie). Finally, because many patient safety initiatives involve standardizing and simplifying complex care processes (17), office practitioners may well see an economic advantage to improved efficiency from thoughtfully applied safety efforts.

I believe that the initial emphasis of the patient safety movement on hospital care was appropriate given the high stakes, the intense media and public scrutiny, and some relatively low-hanging fruit. Despite significant progress, we certainly have not solved all of the problems in hospital safety—far from it (18). However, work undone in the hospital is no excuse for continuing to neglect safety research, training, systems, and regulations in the office setting, where most patients receive their care. As we turn our attention increasingly to the ambulatory environment, aided by such important insights as those provided by Gandhi and colleagues, we must take advantage of what we have learned in the hospital while remembering that the office setting is a whole different world.

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