Improving Ambulatory Patient Safety: The Role of Family Medicine

Melly Goodell, MD

When the Institute for Healthcare Improvement launched its 100,000 Lives Campaign in 2004 it sounded a clarion call to improve patient safety. However, its scope was confined to the inpatient setting: emphasizing rapid response teams, and preventing central line infections, surgical site infections, and ventilator associated pneumonia.[1]

A dozen years have passed and hospitals have made great strides. Yet, ambulatory safety initiatives lag far behind. Amazingly, we lack robust data and research on patient safety efforts in the ambulatory arena- even though that is where the lion's share of patient encounters occur. Although ambulatory errors are generally less harmful than inpatient errors, the number of ambulatory visits far exceeds hospitalizations. In 2012, there were 36.5 million hospital stays in the United States and 928.6 million physician office visits, 382.5 million of which were to a PCP. [2,3] This factor of 25 has ambulatory safety dwarf inpatient safety in potential patients harmed as well as aggregate cost.

In 2012, MedStar Health, our ten hospital academic health system, set out to become a high reliability organization (HRO). We have come far, cutting serious safety events in half. However, intense HRO efforts were predominantly inpatient. When we implemented a safe surgery checklist, it initially only applied to operating room cases. Several near miss events in our clinics ultimately highlighted the need for a similar checklist. Our family health center participated in patient safety activities, but use of our event management system was sporadic, and investigations were reactive not proactive—initiated only when patients voiced complaints or staff or providers noticed a significant issue. It was informal, uncoordinated, and without cohesion. In early 2013, an event awoke us from our slumber. We saw a 5-month old infant for a well-child check. When the medical assistant documented the routine shots in the electronic medical record (EMR), she realized she had given the Human Papilloma Virus (HPV) vaccine instead of Haemophilus influenza type b (Hib). A 5-month old had received a shot intended for teenagers. We were stunned this could happen at our site.

This proved to be a highly effective catalyst to improve patient safety. We conducted a root cause analysis (RCA). Some of our team had been involved in inpatient RCAs, but we had never conducted an *ambulatory* RCA. We gathered data, interviewed all the staff and providers involved, and conducted a 2-hour interdisciplinary meeting to review findings and decide on next steps. We determined that a key contribution to the error was the misplacement of the HPV vial in the wrong row of Hib vaccines in the refrigerator. The assistant had not double-checked the label after she grabbed the vial. More importantly, the process uncovered significant inconsistencies in our vaccine administration process: a lack of double checks, lack of adherence to standard medication safety practices, education and training deficits among staff and providers, and attitudes and behaviors contrary to key HRO principles.

Our patient safety efforts are more robust, though opportunity for improvement always exists. We have fostered a culture of transparency—our use of the event management system increased significantly, and staff and providers are more at ease disclosing errors to supervisors, patients,

and families. MedStar cultivated a just culture: discipline is administered only for willful disregard of policy and procedure, rather than as a punishment for human error or system failings. All meetings across MedStar—hospital or outpatient, begin with a "safety story." We review every occurrence at our monthly Process Improvement meeting, which is attended by all staff, residents, and faculty. We celebrate "good catches"—times when someone applied our HRO principles or whose alertness prevented patient harm. Our incoming first-year residents dedicate a half-day in orientation to patient safety and HRO training. Residents are required to use the event management system and document this in their portfolio. Third-year residents must also present a conference dedicated to an ambulatory patient safety event, to provide balance to the inpatient-centric morbidity and mortality conferences that had previously made up the core of their experience in discussing harm or unexpected outcomes. Their recent cases have included a spectrum of topics: a HIPAA violation, prescribing amoxicillin to a penicillin allergic patient, a delay in notification of a positive Chlamydia result, a missed opportunity to order a mammogram on a patient later diagnosed with breast cancer, erroneous Tylenol dosing instructions telephonically relayed to a pediatric patient's mother, mislabeled lab specimens, and a hospitalization that resulted when an insulin refill was faxed to a lab site instead of the pharmacy (the result of an EMR flaw). The emphasis of these conferences is not the case itself, but the process of analyzing the error and determining the root contributions to the error: technology, communication, training and education, lack of policy or process, distractions, and others. We then take steps to prevent future occurrences. Our goal is to prepare residents so they can effectively analyze, investigate, and help prevent ambulatory patient safety issues in their future workplaces.

This is only local progress however, and much more needs to be done nationally. Even the 2017 National Patient Safety Goals for Ambulatory Health Care, released by The Joint Commission, seem inadequate, with a focus limited to patient identifiers, hand hygiene and surgical site infections, anticoagulant treatment and medication reconciliation.[4] While important, these do not bring attention to the many types of patient safety risks encountered daily in ambulatory primary care.

With family physicians conducting such a vast number of outpatient visits, we have an obligation to increase our attention to safety. We must improve our own skills and train our students and residents to identify, report, and investigate safety issues. We must hold a lens up to our health centers and our training sites. What formal reporting mechanism exists for ambulatory events? Are all unexpected events or deviation from standards reported? Is there a structured process for analyzing error? What ambulatory patient safety training is provided? Has your site ever conducted an ambulatory root cause analysis? How does ambulatory patient safety fit into your medical student and resident curricula? Finally, we must encourage and support research on ambulatory patient safety—not only to understand the true scope of the issue but, more importantly, to reduce patient harm. We need to work harder to achieve the goal outlined in the World Health Organization's Patient Safety Program vision statement: Every patient receives safe health care, every time, everywhere.

References

1. Berwick DM, Calkins DR, McCannon CJ, Hackbarth AD. The 100,000 Lives Campaign: Setting a goal and a deadline for improving health care quality. Journal of the American Medical Association. Jan 2006;295(3):324-327.

2. Weiss AJ (Truven Health Analytics), Elixhauser A (AHRQ). Overview of Hospital Stays in the United States, 2012. HCUP Statistical Brief #180. October 2014. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb180-Hospitalizations-United-States- 2012.pdf.

3. https://www.cdc.gov/nchs/fastats/physician-visits.htm, National Ambulatory Medical Care Survey, 2012.

4. https://www.jointcommission.org/assets/1/6/NPSG_Chapter_AHC_Jan2017.pdf