Patient Safety Issue

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Academic Year-End Transfers of Outpatients From Outgoing to Incoming Residents
An Unaddressed Patient Safety Issue

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TRANSFERS OF PATIENT CARE FROM ONE PHYSICIAN to another (handoffs) are ubiquitous in health care.1 Two recent developments have focused increased attention on physician handoffs: the emergence of the hospitalist field2 and the restriction of resident duty hours by the Accreditation Council on Graduate Medical Education. Handoffs are often accompanied by communication failures, which can lead to medical errors and harm.3,4

This potential for harm has prompted interventions to improve patient safety,5 many of which were adapted from industries with high-risk transitions such as nuclear power and aviation.6 At the same time, the Institute of Medicine has recommended enhanced training for residents regarding handoffs and the Joint Commission has mandated a standardized approach to handoff communications.

Research, to date, has addressed transitions necessitated by patient transfer to a different setting7 (eg, hospital discharge) or by the end of a physician shift.8,9 We are aware of no study that has focused on patient safety during the care transition that occurs in academic ambulatory clinics every year in the United States when residents either advance to a higher level of training or graduate (year-end transfers). We describe unique features of year-end transfers and propose strategies to improve patient safety and resident education.

Magnitude of the Year-End Transfer
Based on 2007 program sizes in family medicine, internal medicine, pediatrics, and psychiatry, an estimated 12 800 residents transferred their outpatient panel en masse that year, either due to graduation or advancement from their continuity clinic.10 Assuming an average resident’s panel size of 50, 100, and 150 patients, the number of patients affected yearly would be 640 000, 1.28 million, and 1.92 million, respectively. These estimates demonstrate the huge volume of patients who may experience this transfer of care every year.

Unique Features of the Year-End Handoff
Year-end transfers have several distinguishing features, most conspiring to amplify risk. First, patients’ (physical and emotional) symptoms can increase during year-end transfers, especially if the transfer involves the loss of a treatment relationship that has developed over months to years.11

Second, unlike end-of-shift handoffs, incoming clinicians typically are far less experienced and skilled (in both clinical and administrative matters) than graduating or advancing residents. Moreover, the experienced graduating resident may communicate clinical information in a highly condensed manner that a relative novice cannot appreciate, particularly if neither has received training on effective transfer communication.

Third, although routine inpatient handoffs occur frequently throughout the year, the year-end transfer simultaneously affects large numbers of patients accumulated over time by residents stationed in continuity clinics. This surge greatly increases the administrative and clinical burdens of coordinating the handoffs, which further increases the risk of poor follow-up after transfer.

Many programs already use basic strategies to prevent new residents from being overwhelmed by a large panel of new patients—most commonly by giving incoming trainees longer appointment slots and by augmenting faculty supervision. We know of no studies regarding the risks of year-end transfers or published recommendations of specific ways to improve patient safety and trainee education. We therefore offer the following proposals.

Improving Patient Safety in the Year-End Transfer Process
Given these potentially risky features of year-end handoffs, several approaches may be helpful to improve patient safety and trainee education. We have organized these recommendations according to the categories used by the current literature on other types of clinical handoffs (especially end-of-shift).
Content. The handoff literature stresses the importance of effectively transmitting certain categories of information, including administrative data, new clinical issues, pending tasks, clinical severity, and contingency plans. However, electronic medical records are that are easily accessible and linked to the electronic medical record.  

Furthermore, the literature recommends use of computer-based, standardized templates that work best with the patient. These categories are generally relevant to year-end transfers, but the type of information for each category will be quite different (eg, "chronic hypoxemia as an ongoing clinical issue rather than "pulse ox is 89%")). Because the incoming physician receives a relatively large panel of patients in year-end transfers, a system is needed to identify those patients for whom acuity, complexity, or both require priority attention. As compared with inpatient handoffs, additional types of clinical information (such as past medical history and family contact information) may be important to transmit. In the chronic disease management setting, receiving clinicians need orientation to long-term goals (eg, smoking cessation or weight loss) and short-term ones, accompanied by an assessment of patient progress with respect to the goals, and communication and motivational strategies that work best with the patient.

Medium. For routine inpatient handoffs, the literature recommends use of computer-based, standardized templates that are easily accessible and linked to the electronic medical record. However, electronic medical records are currently uncommon in outpatient clinics and systems. Whether the information system is electronic, paper, or some hybrid, every clinic should replace unstructured resident off-service notes with a standardized handoff template that prompts for the essential information described previously; sophisticated ambulatory electronic medical records will allow some of this information, such as problem and medication lists, to be imported from the existing record. The template should include a flexible text field that allows the outgoing resident to enter information best conveyed via narrative format. The transfer note should be placed in the medical record; however, training may be required to ensure that sensitive information (eg, Mrs Smith's daughter can be difficult) is transmitted in a manner appropriate for an ongoing medical record. Outgoing trainees should have protected time to complete these notes before their departure.

Communication Processes. Like other physician handoffs, year-end transfers of care would ideally be accomplished through a structured, face-to-face sign-out in a quiet place. If it is not practical to have such a sign-out (eg, incoming interns arrive after outgoing residents have departed), programs should arrange for transfer sessions via telephone. Depending on the number of patients being transferred, these sessions may need to focus exclusively on higher-risk patients. If the transfer also results in a change of supervisor, a parallel process for faculty sign-out should be developed.

Second, incoming residents often inherit a large caseload of patients, many of whom they will not see until months into the academic year or, sometimes, not at all. This creates a possible agency problem, in which the physician does not act in the best interest of the patient because the physician does not (yet) fully assume responsibility for the patient's care. One strategy to minimize this problem is to have incoming residents phone each new patient during the first days to weeks on service. This may have multiple advantages: it can help new residents internalize responsibility for their patients, screen for acuity, and establish a therapeutic relationship. Trainees need protected time for such phone calls. To facilitate this task, programs may develop a templated phone note that prompts the trainee on topics to cover and allows for efficient documentation.

Organizational Culture and Processes. The handoff literature stresses the importance of valuing teamwork, promoting communication across authority gradients, and acknowledging errors. These principles apply to year-end transfers as well. First, the expertise gradient makes it more difficult for the less experienced residents to understand and contextualize whatever information they are given and can contribute to an authority gradient that inhibits junior trainees from asking questions during sign-out that challenge earlier decisions. Program directors should train graduating residents in communicating effectively across these gradients and train incoming residents on how to contextualize and prioritize clinical information. Programs should also consider how faculty preceptors or nurses can enhance continuity during the transition period.

Careful attention should be given to incoming residents’ caseloads. When acute or complex patient cases become overly concentrated in certain caseloads, incoming residents may become overwhelmed, increasing patient risk while simultaneously preventing other residents from receiving crucial experience managing difficult cases. Program directors should develop mechanisms to construct resident caseloads that are roughly comparable in acuity and complexity. Most programs currently reduce initial caseload size, allowing increases over time. Caseload reduction strategies can include assisting outgoing trainees in transferring to community physicians those patients no longer requiring specialized care in an academic clinic, or transferring some patients to more senior (but not graduating) residents who will continue practicing in the clinic.

Program directors should consider creating a set of didactic sessions and augmented supervision that focus on the key clinical and professional tasks related to year-end transfer. Outgoing residents need training and supervision on how to educate patients about the transfer, address the loss and its meaning, plan for any anticipated problems, prepare patients for their new caregivers, and identify patients who need priority scheduling. While there are no data on how these kinds of interventions affect patient safety, they do predict...
higher patient satisfaction. Similarly, incoming residents need instruction on how to establish new therapeutic relationships including how to address the loss directly with patients, elicit patients’ feedback on their prior treatment relationship (eg, what did and did not work well), and establish goals. New residents also need help in prioritizing initial tasks, triaging concerns, and deciding when to intensify outpatient treatment.

Clinics and programs must develop mechanisms by which those patients identified as priority by the outgoing clinicians receive expedited scheduling.

**Broader Policy Implications.** The year-end overnight transfer of care likely poses significant risks to patient safety. To hasten the adoption of practices that may improve both safety and education, accreditation bodies should evaluate the unique learning needs and specialties, the frequency and types of errors that occur, the unique handoffs that have not been studied but may pose risks to patients. Future research should specifically assess the adequacy of sign-out for patient care and consider increasing the focus on them. Programs and clinical services should implement mechanisms to assess performance with process and outcome measures, including trainee and patient satisfaction.

Although the focus of this article is on the year-end transfer unique to academic medical centers, these issues may generalize beyond academia. All systems of care undergo the departure of more experienced clinicians in outpatient settings (eg, through retirement). These departures necessitate handoffs of large panels of patients to different clinicians over short periods of time. Even without an appreciable experience or skill gradient from veteran clinicians to new ones, many patient safety risks identified here and the proposed recommendations may be applicable to these settings as well.

**CONCLUSION**

The academic year-end transfer is a unique and common type of handoff that has not been studied but may pose risks to patients. Future research should specifically assess year-end transfer practices across different institutions and specialties, the frequency and types of errors and patient harms that occur, the unique learning needs of trainees, and interventions that optimize patient care and medical education.

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**REFERENCES**