

# CHAPTER 9 NEW STANDARDS FOR TRANSITIONS OF CARE: DISCUSSION AND JUSTIFICATION

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Continuity of care is an important aspect of quality, yet in the 24-hours-a-day, 7-days-a-week enterprise of the teaching hospital, which encompasses multiple specialties, clinical departments, and modalities of care, transitions of care between units and providers or provider teams (also called handoffs, handovers, or sign-outs) are a common and necessary occurrence. During these transitions, the physician or team handing over responsibility for care must accurately convey information about the patients under his or her care, and the physician accepting responsibility must receive, process, and interpret this information to make judgments about what actions must be taken in the immediate future.<sup>1</sup> In addition to “task lists,” this process frequently includes decisions about the degree of monitoring necessary for the patients’ acuity of illness to allow for the appropriate allocation of time, attention, and other resources.<sup>1,2</sup> These attributes of transitions are addressed in the ACGME standards.

## Transitions of Care

Programs must design clinical assignments to minimize the number of transitions in patient care.

This standard seeks to reduce the number of handoffs to the minimum needed to ensure coverage, with the understanding that each transition creates the potential for information to be lost or distorted.<sup>3,4</sup> A study of closed malpractice claims attributed a high percentage of errors in teaching settings to teamwork problems, with handoff errors being disproportionately more common in teaching settings.<sup>5</sup> Communication failures were also implicated in 60% of the sentinel events reported to the Joint Commission on the

Accreditation of Healthcare Organizations,<sup>6</sup> and the 2008 Institute of Medicine report<sup>7</sup> regarding resident hours and patient safety recommended that all residents receive education in patient handoffs.

Studies have shown that the frequency of transitions in patient care has increased since the 2003 institution of common duty hour standards. A consequence of the regulation of duty hours is that the responsibility for each patient may be transferred between 2 or more physicians 2 to 3 times during a 24-hour period. A study in the pediatrics inpatient setting found a small increase in medication errors after the institution of the duty hour limits and attributed this change to problems with patient handoffs.<sup>8</sup>

Sponsoring institutions and programs must ensure and monitor effective, structured handover processes to facilitate both continuity of care and patient safety. Programs must ensure that residents are competent in communicating with team members in the handover process.

In 2006 the Joint Commission added transitions in patient care to its National Patient Safety Goals, referencing the need for “a standardized approach to hand-off communications, including an opportunity to ask and respond to questions.”<sup>9</sup> Residents believe transitions are not adequately addressed in education and practice, noting that processes are haphazard, with no system of organized interaction.<sup>10,11</sup> Limits on resident hours have also increased the use of “cross-coverage,” defined as residents outside of the primary care team providing care in the absence of the primary team. This increase has been associated with an increase in the likelihood of unplanned changes in care and errors attributed to problems with the transfer of information.<sup>12</sup> In some surgical

programs, the limits may have increased the number of asynchronous handoffs without person-to-person interactions, a practice that is associated with even greater potential for handoff errors.<sup>1,13</sup>

An important reason for instituting common duty hour limits was to reduce the potential for errors attributed to resident sleep deprivation and fatigue. Improving transitions in patient care is critical to ensure that the common duty hour limits realize this aim and that reductions in errors due to fatigue are not offset by increases in errors due to inadequate information transfer. Large scale studies of the effect of the 2003 duty hour limits have not found significant improvement of morbidity and mortality.<sup>14–16</sup> Because these analyses have used administrative data, it is not possible to determine whether “technical problems” considered sensitive to improvements in resident alertness under reduced duty hours were offset by “communication errors” thought to result from lost information under more frequent care transfers.

The sponsoring institution must ensure the availability of schedules that inform all members of the health care team of attending physicians and residents currently responsible for each patient’s care.

This standard addresses coordination of care, which has traditionally been an important concept in continuity, with classic definitions of continuity including an understanding of who is responsible for patient care and communicating this information to the patient.<sup>17,18</sup> An added benefit of enhanced coordination is that transitions of care and handoffs are complex clinical acts, which benefit from supervision and coaching, particularly for junior learners. In addition, recommendations for transferring practices from high-reliability organizations have focused on how redundancy can reduce the risk of errors in transmission and how feedback to the presenter contributes to enhanced accuracy and learning.<sup>1</sup> This approach is congruent with

the concept of high-reliability organizations’ “preoccupation with failure” and may result in increased ability of the system to detect both deterioration of patients and errors and omissions in information transfer.<sup>19</sup> Other recent approaches for improving transitions have focused on supervision and provision of feedback for junior residents’ handoffs<sup>1,20</sup> and on the use of objective skills-based examinations to allow residents to test and practice handoff skills.<sup>21</sup>

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### References

- 1 Philibert I. Use of strategies from high-reliability organisations to the patient hand-off by resident physicians: practical implications. *Qual Saf Health Care*. 2009;18(4):261–266.
- 2 Mangrulkar RS. A seminar to improve the handover of patients. University of Michigan Health System, Department of Medicine; 2002; Ann Arbor, MI.
- 3 Scoglietti VC, Collier KT, Long EL, Bush GP, Chapman JR, Nakayama DK. After-hours complications: evaluation of the predictive accuracy of resident sign-out. *Am Surg*. 2010;76(7):682–686.
- 4 Arora V, Kao J, Lovinger D, Seiden SC, Meltzer D. Medication discrepancies in resident sign-outs and their potential to harm. *J Gen Intern Med*. 2007;22(12):1751–1755.
- 5 Singh H, Thomas EJ, Petersen LA, Studdert DM. Medical errors involving trainees: a study of closed malpractice claims from 5 insurers. *Arch Intern Med*. 2007;167(19):2030–2036.
- 6 The Joint Commission. Sentinel event statistics. Available at: [http://www.jcaho.org/accredited+organizations/sentinel+event/sentinel+event\\_statistics.htm](http://www.jcaho.org/accredited+organizations/sentinel+event/sentinel+event_statistics.htm). Accessed December 1, 2010.
- 7 Ulmer C, Wolman D, Johns M, eds; Committee on Optimizing Graduate Medical Trainee (Resident) Hours and Work Schedules to Improve Patient Safety, Institute of Medicine. *Resident Duty Hours: Enhancing Sleep, Supervision, and Safety*. Washington, DC: National Academies Press; 2008.
- 8 Landrigan CP, Fahrenkopf AM, Lewin D, et al. Effects of the accreditation council for graduate medical education duty hour limits on sleep, work hours, and safety. *Pediatrics*. 2008;122(2):250–258.
- 9 Arora V, Johnson J. A model for building a standardized hand-off protocol. *Jt Comm J Qual Patient Saf*. 2006;32(11):646–655.
- 10 Roughton VJ, Severs MP. The junior doctor handover: current practices and future expectations. *J R Coll Physicians Lond*. 1996;30(3):213–214.
- 11 Volpp KG, Grande D. Residents’ suggestions for reducing errors in teaching hospitals. *New Engl J Med*. 2003;348(9):851–855.
- 12 Petersen LA, Brennan TA, O’Neil AC, et al. Does housestaff discontinuity of care increase the risk for

- preventable adverse events? *Ann of Intern Med.* 1994;121(11):866–872.
- 13** Patterson ES. Structuring flexibility: the potential good, bad and ugly in standardisation of handovers. *Qual Saf Health Care.* 2008;17(1):4–5.
- 14** Volpp KG, Rosen AK, Rosenbaum PR, Romano PS, et al. Mortality among patients in VA hospitals in the first 2 years following ACGME resident duty hour reform. *JAMA.* 2007;298(9):984–992.
- 15** Volpp KG, Rosen AK, Rosenbaum PR, Romano PS, et al. Mortality among hospitalized Medicare beneficiaries in the first 2 years following ACGME resident duty hour reform. *JAMA.* 2007;298(9):975–983.
- 16** Prasad M, Iwashyna TJ, Christie JD, et al. Effect of work-hours regulations on intensive care unit mortality in United States teaching hospitals. *Crit Care Med.* 2009;37(9):2564–2569.
- 17** Fletcher RH, O'Malley MS, Fletcher SW, Earp JA, Alexander JP. Measuring the continuity and coordination of medical care in a system involving multiple providers. *Med Care.* 1984;22(5):403–411.
- 18** Banahan BF Jr, Banahan BF III. Continuity as an attitudinal contract. *J Fam Pract.* 1981;12(4):767–768.
- 19** Weick KE, Roberts KH. Collective mind in organizations: heedful interrelating on flight decks. *Admin Sci Q.* 1993;38:357–381.
- 20** Chacko V, Varvarelis N, Kemp DG. eHand-offs: an IBM Lotus Domino application for ensuring patient safety and enhancing resident supervision in hand-off communications. *AMIA Annu Symp Proc.* 2006:874.
- 21** Farnan JM, Paro JA, Rodriguez RM, et al. Hand-off education and evaluation: piloting the observed simulated hand-off experience (OSHE). *J Gen Intern Med.* 2010;25(2):129–134.