

Rapid Integration of Care Toolkit

Introduction

Emergency physicians will be measured on care coordination practices that necessitate exceptional handoffs to a disparate group of health care providers. To succeed in this evolving and challenging practice environment, we will be expected to synthesize greater amounts of information and coordinate patient care transitions to different care venues.

The following resource was created as a tool for the practicing emergency physician to manage a variety of transitions and coordination of care from the ED. The references and annotations describe current practices in the rapid integration of care from the prehospital setting to patient discharge from the ED.

EMS to ED

[Transfer of Patient Care Between EMS Providers and Receiving Facilities](#), ACEP policy statement, October 2013

Koenig GJ, Galvagno SM. [Effective communication between providers and physicians improves patient handoffs](#). *JEMS* Website. April 2012.

This article emphasizes the importance of the handoff and provides a mnemonic for the handoff report.

Iowa Department of Public Health - Iowa Trauma System: [Patient Care Transfer Reporting Form](#)

New Jersey: [Universal Patient Transfer Form](#)

Pennsylvania: [EMS Transfer of Care Form - Enterprise Portal Information](#)

South Carolina Department of Health and Environmental Control Division: [EMS Handoff Forms](#)

ED to ED Communication

ACEP [Transitions of Care Task Force Report](#), 2012 (transitions within the ED)

- Types of transitions (all three need to happen for effective handoff)
 - Information transfer
 - Responsibility transfer
 - Authority transfer
- Barriers to effective transitions
 - Too much or too little information
 - Cognitive bias (“inheriting someone else’s thinking,” diagnosis momentum, triage cueing, framing effect, ascertainment effect)
 - Failure to transfer authority—when the departing provider sticks around after sign-out, when the receiving provider avoids “getting involved”

Cheung DS, Kelly JJ, Beach C, et al. (all the participants from the ACEP QIPS section). [Improving handoffs in the emergency department](#). *Ann Emerg Med*. 2010;55(2):171-178.

- Three “stages” of care transition and the risks for error at each stage
 1. Preturnover—organizing and reviewing plans by off-going provider
 2. Meeting—the actual handoff
 3. Post-turnover—New provider acts on handoff information provided
- Conceptual frameworks, risks during each, and proposed interventions (similar to Patterson, below)
 1. Information processing—ensure accurate data/information is shared
 2. Stereotypical narratives—need to distinguish typical vs atypical disease presentations
 3. Social interaction—encourage questioning of the presented plan/joint brainstorming rather than anchoring on the initial provider’s diagnosis
 4. Resilience—cross-check one last time with Q&A period
- Figure 1 is a great conceptual model for different potential barriers to each stage of handoff
 - Patient →Interview →Physician 1 →Handoff →Receiving physician (physician 2)

- Patient—language barriers, poor historian, mental status ED environment (loud, interruptions, boarding or long LOS) can impact the initial interview and the handoff
- Major barriers
 - Signal-to-noise ratio;
 - balance of conciseness versus completeness;
 - no standard approach to handoff;
 - ambiguous period post-transition when a nurse may communicate new information to the off-going provider who acts on it without informing the receiving provider;
 - cognitive bias—receiving provider overly relies on the departing provider’s assessment;
 - incentives of the group (eg, RVU-pay will discourage handoffs whereas hourly pay may encourage sloppier or earlier handoffs)
- Models for handoff (more evidence needed)
 - Multidisciplinary—Provider to provider, nurse to nurse, each handing off in silos is not most effective
 - Location (bedside versus computer)
 - Standardized written tools/aids
 - Mnemonics (SBAR, 5-Ps, I PASS the BATON, HANDOFF, SIGNOUT)
 - Electronic assistance

Foster S, Manser T. [The effects of patient handoff characteristics on subsequent care](#): A systematic review and areas for future research. *Acad Med*. 2012;87(8):1105-1111. (Not ED specific)

- Systematic review—quality of existing evidence is poor.
- Use of a standardized handoff sheet was the only intervention tested in more than one study. In 7 of 12 studies testing the handoff sheet, it led to significant improvements:
 - decrease in lost information about a patient over time,
 - increased retention of information by receiving physician,
 - decreased adverse events.

Patterson ES, Wears RL. [Patient handoffs: standardized and reliable measurement tools remain elusive](#). *Jt Comm J Qual Patient Saf*. 2010;36(2):52-61.

Literature review of approximately 400 relevant articles led to the identification of seven primary functions for patient handoffs, each of which implies different interventions to improve them:

- Information processing is the most prevalent in the patient handoff literature;
- Stereotypical narratives, emphasizes highlighting deviations from typical narratives, such as a patient who is allergic to the preferred antibiotic for treating his or her diagnosed condition;
- Resilience, takes advantage of the transparency of the thought processes revealed through the conversation to identify erroneous assumptions and actions;
- Accountability, emphasizes the transfer of responsibility and authority;
- Social interaction, considers the perspective of the participants in the exchange;
- Distributed cognition, addresses how a transfer to a new care provider affects a network of specialized practitioners performing dedicated roles who may or may not be transitioning at the same time;
- Cultural norms, relates to how group values (instantiated as social norms for acceptable behavior) in an organization or suborganization are negotiated and maintained over time.

Riesenberg LA, Leitzsch J, Little BW. [Systematic Review of Handoff Mnemonics Literature](#). *Am J Med Qual*. 2009;24:196-204.

- Systematic review of handoff mnemonics 1987-2008. Quality of existing evidence is poor
- SBAR (Situation, Background, Assessment, Recommendation) is the most frequently cited mnemonic (69.6%).

[Safer Sign Out](#) (QIPS) (ED-specific)

Record -use a standardized sheet including chief complaint/diagnosis, potential safety issues such as allergies, pending items, likely disposition. Specific form developed.

Steps

- Review—the standardized sheet and the EHR/Results
- Round together—at the bedside
- Relay to the team—let the nurses know the handoff has occurred (they may add new information at this point)
- Receive feedback—any questions/suggestions to the plan?

Best Practices:

- Pre-round to let your patient know you're leaving and tie up loose ends
- Confirm mutual understanding (step 5 above)
- Minimize interruptions
- Establish a reliable QA process (consider using the standardized handoff forms to review)

The [Joint Commission Hand-Off Communications Project: SHARE Method](#)

- Standardize critical content
- Hardwire within your system (checklist, standard forms, have the patient and EHR present)
- Allow opportunity to ask questions
- Reinforce quality and measurement
- Educate and coach—trainings, staff engagement, just-in-time coaching

ED to Inpatient

Apker J, Mallak LA, Applegate EB, et al. [Exploring emergency physician-hospitalist handoff interactions: development of the Handoff Communication Assessment](#). *Ann Emerg Med*. 2010;55(2):161-170.

This is an observational, qualitative, convenience sample study. Fifteen ED-hospitalist telephone audio handoffs at a community teaching hospital were analyzed. Discourse coding tools were used to assess the communications.

- 43.6% of handoff talk related to patient presentation issues
- 36% was physician discussion of professional environment
- 20.3% was assessment issues

Language forms:

- 90.7% information giving—emergency physician
- 8.8% information seeking—hospitalist

Observed handoffs were mostly spent with the ED physician stating information without much time spent on questions and answers.

Beach C, Cheung DS, Apker J, et al. [Improving interunit transitions of care between emergency physicians and hospital medicine physicians: A conceptual approach](#). *Acad Emerg Med*. 2012;19:1-8.

Concept article focuses on gaps in cross-specialty handoffs between emergency and hospital medicine physicians. The authors explore dynamics of transition communication between specialties to propose content and style principles to improve transition communication. Strong relationships improved efficiency. Important to mitigate change of shift risk. Standardization to develop normative standards to create higher level content in clinical assessments, anticipatory guidance and level of diagnostic uncertainty.

Best practice recommendations for style and form:

Emergency physician

- Highlight synthesis and interpretation rather than data
- Highlight degree of diagnostic certainty
- Summarize current condition and expected near term
- Responsibility for patient and pending tasks clearly delineated
- Focus on big picture

Hospital medicine physician

- Read back or clarify key information/data
- Question areas of uncertainty
- Accept responsibility for patient and pending tasks explicitly

Recommendations for handoff content outlined.

Potential measures of transitions were outlined to address timely and efficient, effective and safe transitions.

Horwitz LI, Meredith T, Schuur JD, et al. [Dropping the baton: A qualitative analysis of failures during the transition from emergency department to inpatient care](#). *Ann Emerg Med*. 2009;53:701-710.

Survey of ED residents, IM residents, hospitalists, PAs at urban, academic medical center to assess failed transition from ED to inpatient focusing on inadequate communication. The response rate was 53% with 40 (29%) reporting adverse or a near miss event including errors of diagnosis, treatment or disposition. Six patients out of 40 required upgrade to ICU. Numerous contributors to errors.

Reduce errors by focusing on areas of communication, environment, workload, IT, flow, and responsibility. Improve system to improve patient safety. Focus on communication rather than information transfer.

Horwitz LI, Parwani V, Shah NR, et al. [Evaluation of an asynchronous physician voicemail sign-out for emergency department admissions](#). *Ann Emerg Med*. 2009;54:368-378.

A voicemail-based semistructured sign-out of routine (non-ICU) admissions was implemented at an academic medical center with outcome measures of utilization, physician perception, and accuracy (transfers to ICU from floor within 24 hours). Outcomes were assessed by pre- and postintervention surveys of utilization, rate of transfer to ICU. No change in rate of ICU transfers.

Survey results: Signout easier, 72%; more accurate, 43%; interaction worse, 69%. Voicemail signout may be okay for stable ED patient. Signout easier for admissions, study limited by subjectivity, single center, response rates less than 60%.

Kessler C, Scott NL, Siedsma M, et al. Interunit handoffs of patients and transfers of information: [A survey of current practices](#). *Ann Emerg Med*. 2014;64(4):343-347. (ED to hospital admit handoff specific)

Surveyed 750 EM (51%) or IM (56%) physicians in 10 different EDs across country. Had one focus group presenting and discussing survey results.

- Only 18% have standardized handoff tools (29% have a computer template, 19% have a paper template, 7% have a mnemonic) and of those that have it, they're only using it in 25% of their patient handoffs.
- Only 30% of residents receive formal training in handoffs
- Important factors for successful handoff:
 - Identify high-risk patients during the handoff
 - Uninterrupted time to perform the handoff
 - Content
 - Treatment given in ED
 - Abnormal physical exam findings
 - Current vital signs
 - Test/lab results
 - Likely diagnosis/differential dx
- Best practices for structure of signout (from focus group):
 - Bedside
 - Face-to-face communication with hospitalist
 - Include patient and family
 - Review real-time results/EHR

ED to Community

Carrier E, Yee T, Holzwart RA. [Coordination Between Emergency and Primary Care Physicians](#). National Institute for Health Care Reform, Research Brief No 3, February 2011.

This was a survey of emergency physicians and primary care physicians in the community to determine factors related to communication and coordination between the ED and clinic. Both groups of providers discussed the importance of communication in providing quality care and also discussed some of the barriers to coordinating care in the clinical environment. Some proposed solutions include changing reimbursement to allow payment incentives for communication, changes in meaningful use criteria for EMR, and malpractice liability reform.

Katz EB, Carrier ER, Umscheid CA, Pines JM. [Comparative effectiveness of care coordination interventions in the emergency department: a systemic review](#). *Ann Emerg Med*. 2012;60(1):12-23.

This review looks at 23 studies with interventions to improve ED-based care coordination. Nearly half found a reduction in subsequent ED revisit rates. This article provides a good background for potential solutions for coordination of care and also offers a good reference of those topics.

Li P, Ali S, Tang C, et al. [Review of computerized physician handoff tools for improving the quality of patient care.](#) *J Hosp Med.* 2013;8:456-463.

A review of studies of the use of computerized physician handoff tools for hospitalized patients. Evidence that these tools improve care is limited. Further evaluation with controlled study design is needed.

Patterson ES, Roth EM, Woods DD, et al. [Handoff strategies in settings with high consequences for failure: lessons for health care operations.](#) *Int J Qual Health Care.* 2004;16(2):125-132.

This article investigates 21 handoff strategies that are used during personnel changes in high-consequence-for-failure handoff environments. It includes space shuttle mission control, nuclear power generation, railroad dispatching, and ambulance dispatching.

Watkins LM, Patrician P. [Handoff communication from the emergency department to primary care.](#) *Adv Emerg Nurs J.* 2014;36(1):44-51.

This article outlines a quality improvement project addressing the gaps in follow-up care for low-risk chest pain patients. An electronic “Emergency Provider Written Plan of Discharge” template was implemented to notify PCPs that follow-up care is needed for their patients. Follow-up care improved significantly with implementation.

Other Resources

Internet e-learning materials were developed by The [University of Virginia Health System](#) providing FAQs concerning handoffs, standard elements for handoff communications, when handoff communication occurs, and facility-specific procedures.

The [Patient Safety Network](#), on the Agency for Healthcare Research and Quality (AHRQ) website provides background and resources on handoffs and signouts.

Potential Measures

Quality and efficiency measures are developed to assess care provided. The CMS [List of Measures under Consideration for December 1, 2014](#) for transitions of care and care coordination released by CMS include the following:

- Timely Evaluation of High-Risk Individuals in the Emergency Department
- Coordinating Care -Emergency Department Referrals
- Coordinating Care -Follow-Up with Eligible Provider
- Administrative Communication

Beach C, Cheung DS, Apker J, et al. [Improving interunit transitions of care between emergency physicians and hospital medicine physicians: A conceptual approach.](#) *Acad Emerg Med.* 2012;19:1-8.

This article outlines some potential measures to address timely and efficient, effective and safe care for consideration.

*Created by members of the Emergency Medicine Practice Committee
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