# Fragmented care in the era of limited work hours: a plea for an explicit handover curriculum

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## ABSTRACT

The current challenge in surgical residency education, preserving a sense of accountability in an era of limited work hours and multiple transitions of care, can be accomplished through the promotion of effective handovers. Approaches include increasing the transparency of handovers, enhancing the 'situational awareness' of individuals involved, and incorporating narratives and social interactions, and expanding common ground among professionals who collectively have responsibility for patient care. Done well, handovers can preserve the physician-patient relationship and provide a continuity bridge during a vulnerable time for patients.

As a surgical resident in the era of duty hour limits (in my case the US Accreditation Council for Graduate Medical Education's 2011 duty hour standards), I have seen the changes in the healthcare system and bear witness to the importance of effective handovers. In an era when healthcare depends on the effective exchange of information among individuals and teams who collectively provide care for patients across time and different healthcare settings, the importance of the handover is growing. In the European Community, which has work hour restrictions for all healthcare professionals, and where the healthcare system separates primary care and the hospital setting, handover skills are of paramount importance. Taking pride in continuity of care expressed by an effective handover elevates patients above their disease processes and considers their individuality, despite multiple professionals and settings involved and the increasing reliance on technology.

While standardisation can be an effective way to deal with the increasingly complex hospital environment, adopting checklists and tools without teaching residents the principles of risk management, systems thinking and effective handovers does not solve the problem.[1] Impressing the importance of handovers by making them part of the explicit educational curriculum is the answer.

## PRINCIPLES OF EFFECTIVE HANDOVERS

Handovers are complex and multifaceted events that occur daily in the inpatient setting and between the hospital and the patient's primary care setting.[2 3] Handovers within the hospital span a variety of settings, including transitions from the emergency department to the operating room, the operating room to the intensive care unit, and the intensive care unit to the inpatient floor. In all of these contexts, the purpose of the handover is to safely effect a transition of care; promoting patient continuity and safety in a specific physical and cultural environment. A handover is more than the passive transfer of information; a *decisive feature* is the transfer of responsibility for the patient's care among the participants.[4] Data elements important to effective handovers include patient identification, a diagnostic summary, current condition and disease trajectory, plan of care, a list of care task (the to-do list), and a plan for anticipated events and contingencies.[5] An effective handover is a bidirectional conversation whatever the setting or context, and includes active involvement of the sender and the receiver.[6–8]

## FRAGMENTATION OF CARE: THE UNINTENDED CONSEQUENCE OF SHIFT WORK AND DISTRIBUTION OF MEDICAL SERVICES

Physicians several decades ago often cared for their patients across the different settings, following them through the acute care admission, to home and upon return to the ambulatory clinic for follow-up. The growing

boundaries between specialisation and the separation of primary care and hospital services have resulted in the responsibility for continuity of care being shared by many professionals. Work hour restrictions, designed to improve patient care, have resulted in less time with the patients, shorter shifts and successive transfers of responsibility for the patient among multiple professionals, further contributing to fragmented patient care.[9] When a patient presents to the hospital with an illness, it takes time for physicians to understand the precipitating events, gather medical records, order tests, etc. This process is called *sensemaking*, the activity of gathering information to accomplish a task.[10] In the hospital setting sensemaking involves bringing the incoming provider up to speed to facilitate a smooth transition of care at admission or during shift change.[11]

The initial investment to 'process' the patient in the inpatient context can be a substantial one. Understanding a patient's disease trajectory helps his or her physicians anticipate likely and less expected contingent events and deal with the inherent uncertainty of taking care of an ill patient. If the initial time and effort spent can be considered the *investment*, then establishing a plan of care is the *return on investment*. This may be a reason why some physicians who trained in the era before work hour restrictions look fondly upon these experiences. They feel that the time invested getting to know a patient was time well spent. Conversely, a frequent complaint is that junior residents trained in the current work-restricted era do not know their patients. A similar complaint emerged from the healthcare professionals participating in qualitative studies conducted as part of the European HANDOVER Project.[12] Primary care physicians lamented that time constraints and disconnectedness between the hospital and the primary care settings that cared for patients following discharge resulted in haphazard information exchanges that did not allow them to know their patients. Healthcare professionals in the hospital cited time constraints as reasons they were not able to make a full 'investment' in their patient at discharge, such as a consultation that assesses the patients' preparedness for discharge, and the provision of timely and detailed information to the primary care physician. Another study found that transfers between intensive care and a regular nursing floor were haphazard, and critical personnel were routinely absent during this important exchange.[13] The root causes of these common complaints about discontinuity of care are threefold: the investment of getting to know the patient is perceived to be too great; time constraints prevent a meaningful exchange of information that allows for sensemaking; and/or the relatively short exposure contributes to a lack of emotional connection with the patient, leading to a relative disinterest on the part of the healthcare professional in gaining more detailed knowledge and building trust.

## IMPORTANCE OF SURGICAL HANDOVERS IN THE TWENTY-FIRST CENTURY

Traditionally, surgical care continuity has involved minimising handovers, often at the cost of prolonging hours at work in the name of professionalism.[14] Generations of surgical trainees have provided continuity irrespective of hours worked. However, in an era of limits on residents' duty hours, sick patients can be very inconvenient to a resident nearing the end of a shift. The issue is continuity of care, and experts on the topic argue that even a fatigued intern with detailed knowledge about a patient may be able to render more appropriate care than a well rested one who is less familiar with the patient and also busy admitting other patients to the hospital.[15] How can this be possible? Transitions of care create vulnerability, and these moments of vulnerability may contribute to patient adverse events, near misses and duplicative work by healthcare providers.[16] However, the benefits of effective handovers are plentiful, including providing a fresh perspective when insight is greatly needed and more humanistic and supportive learning conditions.[17]

In spite of their proven importance and ubiquity, most surgery residency programmes lack an explicit handover curriculum. I learnt how to perform handovers from a chief resident who understood their importance and taught me an implicitly effective method. While this approach worked on an individual basis, the approach to handover education in residency training is hit or miss and unreliable. Had I been on service with a different chief resident, I might have learned a less effective technique or received no guidance at all. Rather than accepting a haphazard approach to educating physicians about handovers, this fundamental skill in the twenty-first century should be formally integrated into the residency programme curriculum and assessed, potentially using entrustable professional activities.[18]

Learning about shift changes when patients are at high risk offers insight into improving transitions of care. One approach involves increasing the transparency of handovers, and enhancing the 'situational awareness' of the individuals involved.[19] Recent research has shown that incorporating narratives, social interactions, and cultural norms can be enabling factors in designing an effective handover, and a growing body of literature aims to improve communication.[20] As the vast majority of communication breakdowns are verbal rather than written, a computerised sign-out list is a valuable adjunct to the process.[21–23] Other options to increase the reliability of handovers include overlapping shifts and expanding common ground by formally including other caregivers into the exchange of handover information,[10] or by reducing abbreviated 'coded' communication

terms when third parties may become unintended recipients of handover information shared with data systems or the electronic health record.[24] We also understand more and need to be prepared for addressing how various factors such as personality and experience of incoming or outgoing provider could impact the effectiveness of communication during handover.[7]

In conclusion, if a Spartan ethos enabled the twentieth century resident to live at the hospital and provide uninterrupted patient care, then team work and effective handovers are the modern tools empowering the twenty-first century resident to maintain a sense of accountability and patient ownership in an era of increasingly fragmented care.[25] Handovers preserve the physician–patient relationship and provide a continuity bridge during a vulnerable time for patients. It is time for physician training programmes and education programmes for other health professions with responsibility for patient care to make training in handovers an explicit part of their curriculum, elevating this essential twenty-first century skill to the heightened status to which it belongs.

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