Global challenges in communication strategies to ensure high reliability during patient handovers

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The past several years have seen a remarkable increase of interest in patient handovers. This interest has taken shape in the form of research, policies, guidelines and quality improvement efforts. Indeed, it could be speculated that improving patient handovers is one of the hottest topics in the global patient safety arena as evidenced by several national and international bodies—for example, the World Health Organization (WHO), The Joint Commission, the Australian Commission on Quality and Safety in Health Care (ACQSC).

Policies and guidelines for handovers include physician trainees as well.

The clinical handover serves as the basis for transferring responsibility and accountability of patient care from outgoing to incoming healthcare teams across shifts, across disciplines, and across care settings. In essence, interest in the communication act during a transition of care—whether we call it a handover, hand-off, or sign-out—has grown steadily over the past decade as researchers, hospital administrators, educators, and policy makers have come to realize that the potential break-down in communication during patient handover is a nidus for poor quality of care for patients.

As the research has burgeoned, there are several simple points on which most researchers agree:

- Handovers are a vulnerable time in patient care that is mostly still unrecognized as a gap in care;
- There is little standardisation and great variation across disciplines and healthcare organizations in the ways in which handovers are performed;
- Workforce constraints, and limits on physician duty hours leads to increased handovers;
- Handovers are not taught to doctors and nurses in a systematic way; and,
- Many adverse care events begin during ineffective patient handovers.

Clearly, the problems experienced during clinical handover are global. Systems issues are universal and at the heart of the breakdown in communication during the handover process which can lead to patient harm. Countless studies conclude that many of the current processes for conducting handovers are not effective. We are beyond the task of describing the problem. The most important contribution that future research on handovers can make is to present clear strategies and interventions that lead to more effective handover processes.

Several thoughts guide our recommendations for future research that is tailored to integrate the existing research on handovers into our efforts to improve handover care. Eleven recommendations emerge from cutting-edge work by a diverse set of researchers around the world.
1. Seek to understand handover communication as a complex adaptive process
Improving outcomes requires an appreciation of the inherent link between explicit processes and results. Focusing on the system, rather than the individual, directs attention to the processes and outcomes of care without blaming or shaming individual people.

2. Recognise the effect of culture as a key enabler for change and improvement
The impact of organizational culture on care coordination and transitions of care is critical to patient safety and professional responsibility. The culture of the care giving unit underpins all processes and all improvement of care. Efforts at quality improvement often have limited success because they ignore the local context. This is the problem when we try to transfer a best practice into another setting with adapting it to the local culture.

We found in the EU funded project HAN D O V E R, that while the prevailing handover practices differ across Europe, many of the identified referral and discharge barriers and facilitators appear to be similar—regardless of different countries, different care settings, different languages, and different cultures. The key themes underpinning the barriers and facilitators for patient discharge and referrals that emerged from the analysis include: communication content, process, and tools; attitudes; organizational factors; community resources; patient awareness, and patient empowerment.

3. Develop tools to make information readily accessible and transparent
Promote an effective use of computerization during handovers and sign-outs, both as aids (e.g., for medication calculations) and as support documentation of the handover process and content. Developing and maintaining decision aids requires an investment of effort and money. There may be a tendency to bypass or work around such information documentation activities if easier avenues for securing information can be identified. This highlights the need for well-designed, ergonomic solutions and consistent policies on the use of these resources so that we increase the chances that such tools will be successfully adopted.

4. Apply principles of human factors to clinical design
Address workspace and other human factors and ergonomics issues that can adversely impact upon the sign-out process and function from a socio-technical perspective. We need to develop a more detailed understanding of how human fallibility can become manifest during handovers and sign-out reporting and the potential effects of these types of human behaviors on patient outcomes. We can model a framework that demonstrates how the combined effects of risk factors can generate a particularly important type of failure mode in communication and how interventions can be targeted to serve as barriers to such events.

Workspaces can be designed that help reduce or eliminate interruptions during patient handover as we learn to better appreciate the impact of the built environment and its impact on patient outcomes. For example, the physical location of the handover, the protected, “sterile-cockpit” model adapted from aviation, and the lighting and attention protected spaces for optimal patient handovers.

5. Focus on training and sustaining
Handovers are rarely taught systematically, although recent efforts have started to focus on this need. The following principles can help to redress this:

• **Teach providers to tell a “better story”**. More effective integration of the quantitative outcomes data with the more qualitative contextual data will enhance the wisdom of carers and capture the complexity of patient stories.
• **Provide feedback**. Sustain the effort by giving feedback about individual performance and by setting performance expectations.
• **Couple inexperienced providers with experienced incoming and outgoing providers**. The experienced incoming provider can demonstrate proper inquiries about patient status and issues, and the experienced outgoing provider can demonstrate proper “story-telling” and methods. Capturing the wisdom of an 8-hour shift in a few moments is more complex than one might assume.
• Consider the use of videotaped simulated handovers and self-directed videotaping for reflexive learning. Use of these tools can improve handover. They can demonstrate the nature of false assumptions and omissions; the effects of interruptions; good versus poor patient problem descriptions; and the consequences of relying only on written information.

6. Develop and implement a competency-based handover training program for frontline clinical staff
For the most part, handovers are taught implicitly through “on the job training” with information carried down through generation of junior doctors. There is a need to develop formal training specific to teach these skills to incoming residents and nurses. Our efforts at University of Chicago highlight recent efforts at building handover training into new physician orientation. At the very least, residents and nurses need formal didactic instruction on the importance of the handover for patient safety, research highlighting ineffective handover communication, strategies for safe and effective handover communication, and the local expectations regarding handover process and content. Developing the template for such educational efforts can be facilitated by national or global medical education bodies who have a vested interest in improving handovers while work hours of medical trainees are shortened throughout the world. In order to improve and monitor handover practice among medical trainees, it is important to create a safe space for residents to practice their handover skills. In addition the training effort needs to be sustained monitoring and providing feedback about individual performance.

7. Incorporate new methods for improving quality of handovers
There are approaches to improving quality of care that may be particularly relevant for improving the complex handover phenomenon. Resiliency research could fit well with positive deviance, which is an approach that identifies innovative strategies from organizations that consistently demonstrate exceptionally high performance in the area of interest, in this case the clinical handover. Vignette analysis, artifact analysis and process mapping shed light on the complex process-outcome relationship and enable us to refine methods of handover and other strategies to assure safe, effective, and efficient transitions in given clinical populations.

8. Learn from errors and near misses
Near misses can be used to tell a story about the process of care. Outcomes in complex work depend on the integration of individual, team, technical, and organizational factors. Errors are rarely due to personal failure, inadequacies, and carelessness, but result from defects in the design and conditions of the work. The eight most common root causes of medical errors identified by analyzing near misses and patient harm include: (1) communication problems, (2) inadequate information flow, (3) human (or performance) problems, (4) patient—related issues, (5) organizational transfer of knowledge, (6) staffing patterns/work flow, (7) technical failures, (8) inadequate policies and procedures.

Focusing on data for near misses may add noticeably more value to quality improvement than a sole focus on adverse events, and emphasize perspectives of systems in data collection, analysis, and improvement.

9. Engage patient, families and other stakeholders to develop resilience in the healthcare system
All stakeholders, including patients, agree upon the need for an active patient role in the handover process. However, both patients and professionals are concerned about the amount of responsibility to be put upon patients. Everyone agrees with the facilitating role of the patient as a communication carrier, but they explicitly prefer the inter-professional communication as the standard because of various reasons. Family members are perceived as of great importance to facilitate handover, both by patients and professionals. The lack of awareness to different professional perspectives, inherent to primary and secondary professional domains, seems to influence the roles and responsibilities in patient diagnosis and treatment. Though most professionals think they carry a shared responsibility in this respect, in practice there is no shared responsibility. Because of multiple assigned roles and unclear responsibilities, especially with nursing professionals, the time of discharge can create barriers in handover.
10. Recognize the impact of the health delivery care model and finance
The fragmented delivery care model, misaligned payment systems and cultural differences at
the interface between the hospital and primary care play a key role in hindering effective and
safe handover practices. While we often don’t have the ability to directly affect these systems,
it is necessary to understand the potential effects and unintended consequences that they
have on day-to-day clinical care processes.

11. Identify the leadership required to improve handovers
Effective leadership (at microsystem, organisational and national levels) is crucial for addressing
systems issues and for creating the kind of “learning” organisation that is necessary for providing
safer care. Firstly, while standardisation of process and content are at the heart of effective
handover, there is also a need for local customisation so that clinicians own and champion the
handover process. Front-line care-giving teams need to adapt standardised protocols to meet their
needs, based on their unique set of constraints and enablers. Secondly, action research methods
that bridge the gap between research and practice are an effective way to engage front-line staff in
improving the handover process. Translating the recommendations into practice will involve adapting them to local needs determined by the people, process and patterns at work around the world.
The proof in these and other proposed solutions comes down to implementation. In translational
research, the handover phenomenon informs the research, and the research informs the practice.

1 CONCLUSIONS

There are many ways to improve handover processes to result in more effective communication
for the transition of patient care—the standard process and the core content, the foundation of
guidelines. The most difficult challenge lies in how to create the culture that supports the changes
that are required and facilitates the learning. Our future efforts will need to draw on all available
wisdom about what is needed to improve handovers, coupled with a systems approach to understanding and improving care at the front lines of care where patients and providers meet.

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