Editorial

Communication in clinical handover: improving the safety and quality of the patient experience

Suzanne Eggins,[1,2] Diana Slade[1,2]

[1]Faculty of Arts and Social Sciences, University of Technology, Sydney; [2]International Research Centre for Communication in Health Care, Sydney, Australia

«I've seen many, many examples of things that go terribly wrong, because the communication of handover information has failed in some way».
(Medical director, high dependency unit in an Australian hospital)[1]

Improved longevity and changing lifestyles are putting pressure on healthcare systems around the world. Hospitals must manage rapidly growing numbers of patients, who increasingly present with complex co-morbidities and chronic conditions. One indicator of these pressures is the high rate of avoidable patient harm in hospitals, which stands at 10% in developed countries and is significantly higher in developing nations.[2] In some developed countries patients are 40 times more likely to die as a result of being admitted to an acute care hospital than in a traffic accident.[3] It is estimated that in Australia alone, 500,000 people per year suffer from avoidable harm in hospitals.[4]

Ineffective communication is now a well-recognised contributor to patient harm in hospitals.[1,5-8] For some years, research has been suggesting that clinical handover is a critical site for communication problems. For example, a recent largescale European Commission project has found that handover communication is responsible for 25% to 40% of adverse events.[9]

Clinical handover (*clinical handoff* in North America) refers to *the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis*.[10] Estimates put the number of handovers each year at over 300 million in the USA,[11,12] more than 40 million in Australia and over 100 million in England,[13,14] making handover arguably the most frequent and significant communicative process between clinicians in the delivery of patient care.

Clinical handover is, by definition, an inherently communicative event. Handovers can only be achieved through linguistic exchange, by clinicians talking and writing to one another. So what goes wrong when clinicians communicate during handover? International research has pointed to the following problems: i) lack of systematic structure, including incomplete handovers;[15,16] ii) lack of adequate explanations about what has and will be done for the patient;[8,17] iii) excessive reliance on memory without reference to written documentation;[18-21] iv) lack of patient involvement;[22,23] v) poor quality of written medical records;[24-26] vi) multiple clinician involvement in a patient's continuity of care.[1]

Mounting evidence has led the World Health Organization to list improved communication in handover in its top five patient safety solutions.[2] Less clear is just *how* improved communication is to be achieved.

One response has been through moves to standardise the structure of handover communication. The most prevalent tool recommended is SBAR and its variants (iSBAR, iSoBAR etc).[27-30] In Australia the national standard on clinical handover specifically recommends the use of a standardised handover protocol.[31]

Structural recommendations have been accompanied by a more general emphasis on including the patient and their carers in the handover. Healthcare guidelines now promote models of patient-centred care, including in handover.[32-36] Research has linked such care to greater levels of patient satisfaction, better understanding of diagnosis and treatment, more informed participation in consultations, and higher adherence to treatment recommendations.[36-39]

However, evidence from clinicians' accounts,[1,8,40] adverse incident reports and coronial inquiries indicates that the situation is not improving.[41]

Efforts to improve handover communication have been hampered by the lack of empirical communication data of handover events. From surveys we know what people *think* goes wrong in handover. From interviews we know what people *say* they do or don't do in handover, and from observational research we have descriptions of what observers saw and heard. But we have very few actual examples of clinical handover interactions, spoken and written. In the absence of a solid empirical base, policies and intervention strategies designed to improve communication in clinical handover raise many unanswered questions.

For example, the lack of actual communicative data makes it impossible to determine just how practical and effective standardised handover protocols are. Anecdotal and interview responses suggest that compliance is low,[42] but to verify and understand this we need actual examples of handover interactions. What problems, if any, might clinicians have in applying standardised protocols? Are these problems to do with the communicative design of the protocols? Or do they lie in cultural resistance or inadequate training and support for the new practices?

Similarly, empirical research into patient-centred communication in handover is scant. What does patient-centred communication *really* mean? How do clinicians *do* patient-centred communication in the real world of the hospital ward? Does patient-centred communication during handover actually affect patient health outcomes?

Audio and video recorded data of routine handover interactions in real hospital contexts can help us answer these questions and can provide an evidence base from which to develop realistic policies and protocols. Our large interdisciplinary study across four states in Australia drew on 829 audio and video recorded handover events from diverse medical, mental health, nursing and allied health hospital contexts.[1] Socio-linguistic discourse analyses revealed the accumulation of three types of risk factors – contextual, informational and interactional – and led to the following recommendations to improve patient safety and satisfaction.

Manage the impact of the hospital context on handover communication. Our data show that the contextual constraints of the hospital environment often mitigate against effective communication general-

ly and can compromise clinical handover in particular. For effective handovers, clinicians and managers need to manage the key contextual factors of participants (who should be present), scheduling (how much time should be allowed), resources (availability of patient electronic or print records) and environment (noise, interruptions and space). Failure to manage these dimensions amounts to tacit tolerance of risk.

Recognise that effective handovers involve two simultaneous dimensions of communication: the interactional and the informational. Most studies of handover concentrate on handover's informational content. Yet actual communicative data reminds us that, unless the handover interaction unfolds collaboratively, the value of the information transfer may well be dubious. Our data show that far from *wasting time*, interaction is highly time-efficient. The immediacy and reciprocity of interaction mean that problems and errors can be noticed and resolved quickly. However, this can only happen if the patient and the receiving team are encouraged to ask questions, query, challenge and add information, and if clinicians giving handover actively check that their messages have been understood. Cultural shift may be needed to recognise the value of interactivity. We need to replace the conventional adage that *a short handover is a good handover* with *an interactive handover is a safe handover*.

Address informational risks through flexible but standardised protocols. Our understanding of effective communication, and the evidence from our data, indicate that if people consistently follow a structured sequence, they have a better chance of communicating complex information clearly.[31] A structured protocol helps the provider know what information to gather and organise; it helps the receiver to tune in, anticipate, expect, and therefore notice and query gaps immediately. A shared structure can therefore minimise unnecessary interruptions while also avoiding the risks of deferring and possibly forgetting to follow up queries. We recommend that clinicians use the iSoBAR protocol as glossed by Porteous and colleagues,[16] when delivering both spoken and written handovers, but any similarly structured protocol could be equally effective.

Address interactional risks by implementing an interactional protocol. Handover guidelines and protocols must be based on an informed understanding of how interaction works and how interactional risks can be managed. Creating an active, participatory handover team, resisting interruptions, managing digressions, and making written handover documents durable, compliant and legible promote shared understanding and collaborative problem solving. Involving the patient by applying an interactional protocol such as C-A-R-E (Connect, Ask, Respond, Empathise)[43,44] ensures that clinicians get the patient's story right and negotiate treatment decisions the patient understands and is motivated to comply with.

Ensure clinical staff receive training in explicit clinical handover communication strategies and frameworks. Our study revealed that low compliance with iSBAR and reluctance to participate actively or involve the patient in handover arose principally from lack of awareness and limited training in handover skills. Even just a two-hour training module produced statistically significant behavioural change.[44] Underpinning each of these recommendations is recognition that many problems in clinical handover are systemic. Our research suggested that tolerance for handover risk factors often becomes naturalised as a routine part of hospital health care. The assumption by individual clinicians and by organisations that later more effective handovers will compensate for earlier inadequacies is a gamble. As James Reason's Swiss cheese model of human error captures so powerfully, when errors in different parts of the system overlap, catastrophic outcomes become a real possibility.[45] However, systemic change, policy, guidelines, interventions and discussions of clinical handover need to be informed by linguistically sound models of effective communication that are based on actual communicative performance in real hospital contexts.

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