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The importance of the verbal shift handover report: A multi-site case study

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ABSTRACT

Objective: Shift handover is seen as a key tool in ensuring continuity of care yet a number of studies have highlighted the role of shift handovers in adverse events. This, combined with the increased frequency of shift handovers, has led to interest in providing technological support for handover to enhance safety. The aim of this paper is to describe current practices for the conduct of shift handovers and to use this as a basis for considering the role that technology could play in supporting handover.
Methods: A multi-site case study of handover was conducted. Data included observations of 15 medical shift handovers and 33 nursing shift handovers across three case sites.
Findings: The findings highlight the way in which the verbal shift handover report is practically focused, displaying the healthcare professional's ability to know what information is required and where further explanation is needed. As well as supporting teaching and team cohesion, shift handover can provide an opportunity to reflect on the previous shift and for discussion with patients and their families.
Conclusions: The benefits provided by a face to face handover suggest that technology should focus on supporting rather than replacing the verbal shift handover report, providing a flexible solution that allows handover participants to gather more information as it is required.

1. Introduction

Handover can be described as a process that involves the passing and acceptance of responsibility for some or all aspects of care for a patient, or group of patients, and the sharing of relevant information [1]. Shift handovers are a regular feature of healthcare work, taking place between oncoming and outgoing staff when there is a shift change.

Shift handover is a key tool in ensuring informational continuity [2], which in turn is essential for continuity of care [3]. Shift handovers are becoming more frequent, due to shorter working hours for doctors, a result of regulations such as the European Working Time Directive. However, a number of studies highlight the role of shift handovers in adverse events [4–7]. This, combined with the increased frequency of shift handovers, has led to interest in providing technological support for handover [2].

1.1. *Shift handover*

The process of handover is influenced by organisational factors, including the design of the coverage schedule, the information technology infrastructure, and the organisational

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culture [8]. The absence of protected time for handover and having large numbers of patients to hand over are organisational factors considered to have a negative impact on the process of handover [9].

Handovers also respond to the local context, with what counts as necessary or essential information to hand over varying according to the medical specialty, the clinicians' certainty about the patient's condition, the severity and stability of the patient's condition, and the workload of staff members [10]. Handovers should also be seen as situated within a particular spatial environment which has the potential to impact the communication. For example, handovers may take place in a room away from the ward or may take place in a more 'public space' such as by the bedside. One study suggests that a bedside handover allows oncoming staff to pose questions that may not arise away from the patient [11].

The information provided and the nature of the communication also depends on who is involved in the handover [12]. For example, the amount of information handed over may depend on whether or not an oncoming member of staff has previously cared for the patient [13]. Also important is the participants' place within the professional hierarchy and their level of experience and responsibility [11,14,15]. For example, junior doctors have been found to have a narrow definition of handover, focusing on tasks to be completed by the end of the shift [9].

While verbal face to face handovers predominate, and have been found to be preferred by clinicians [16], these do not always occur due to, for example, time constraints and patients being widely dispersed [17]. Some studies emphasise the conversational nature of handovers [10], with a two-way exchange of information between outgoing and oncoming staff [15]. However, other studies of both medical and nursing handovers have found questions being asked of the person giving the handover occurs infrequently, suggesting that, in those particular contexts, handover was more of a report and less of a conversation [8,18].

In many ways, the content of handovers has been found to be partial, with the use of abbreviations and jargon [14,19], missing key information such as the patient's current clinical condition [8], and containing 'global judgments', evaluations that are non-specific in nature [20]. Factors associated with increased content of the verbal handover include familiarity with the patient, sense of responsibility for the patient, presence of senior staff, and comprehensive handover documentation [8]. A range of practices exist for gathering information into written form in preparation for the handover [21–24]. However, important information may be provided verbally in the handover that is not recorded anywhere else [13,15,18,20].

Despite the limitations of current handover practices with regard to ensuring continuity of care, previous studies highlight other outcomes of handovers, such as providing training, team cohesion and support for staff [13,25]. Others have pointed to the 'surveillance' aspect of handovers, where oncoming staff members assess the completeness of the work of those handing over [11,26]. Shift handover can also be a time for outgoing staff to reflect on the shift [15] and a time for identifying problems due to the fresh perspective provided by oncoming staff [27].

1.2. *Technology to support handover*

Despite enthusiasm for such technology, there is limited research on the role that technology can play in supporting handover. Those systems that have been developed and evaluated have tended to focus on medical shift handovers. The introduction of a system that enabled junior doctors to enter their own notes about patients and details of tasks to be done and then produce a patient list automatically populated with recent vital signs and laboratory values was found to significantly reduce the amount of time spent on documentation to support handover [28]. The system was perceived by staff to result in better handover quality and improved continuity of care. However, this study does not report if and how the verbal handover changed as a result of use of the system. In an evaluation of a similar tool, which generates a paper form after automatically extracting data from the electronic patient record (EPR), junior doctors reported that the system supported handover but they emphasised the importance of face to face communication as part of the handover [29].

Another technology used to support shift handover are large displays that enable summary information to be viewed during the handover. In one study a photograph of the handwritten handover summary produced by the junior doctors was projected onto the wall during the medical shift handovers [26]. Staff felt the display helped them to maintain concentration during the verbal handover and to remember the information that was handed over. The number of clarification questions asked appeared to increase, with staff asking questions about information that was written on the summary but not mentioned in the verbal handover. However, junior doctors were less comfortable with the technology, feeling that it exposed their work to scrutiny by more senior medical staff. Another study found that projecting the EPR onto the wall during the nursing shift handover resulted in a change from oral presentation to collective reading [30]. Fewer pieces of information were missing during nursing handovers and fewer messages had to be passed on after the handovers.

Other changes to shift handover practice have resulted from the introduction of EPRs. One study of the introduction of an EPR found that the EPR was increasingly used to replace the verbal communication, so that supplementary information was only passed on via informal discussions [31]. In another setting, replacing the verbal report of the nursing shift handover with written documentation contained within the EPR was an explicit aim of introducing the EPR [15]. However, nursing staff introduced a new form of verbal report where, having read the information in the EPR, the oncoming nurses then updated each other about the state of the patients. A weekly written summary was also introduced by the nursing staff, in order to provide an overview that was not available within the EPR.

While existing research suggests that technology should be used to support the verbal report, rather than replace it, what is not clear is how best to do that. In this paper, we report a multi-site case study of shift handover, considering both medical and nursing shift handovers across three sites. The aim of the study was to identify implications for design of technology to support the verbal report that have relevance across a range of settings.