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Conference Abstract

Innovation of communication technology to improve information transfer during handover

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Abstract

Background: Efficient information transfer during handover is a key part of high quality care. Handover represents a transition point in the patient pathway where there is susceptibility to communication failure, this can threaten patient safety. Existing communication technologies are sub-optimal and require innovation in line with modern technology in use by clinicians and the general public. The advent of web-based instant messaging and rapid app development in the mHealth arena provide better functionality for the consumer compared to old methods of communication. The healthcare industry should take advantage of this innovative time. This study aims to provide evidence-based, user-informed recommendations for the development of an application-based communication system (ABCS) tailored for use during patient handover.

Methods: Phase 1: A systematic literature review aiming to identify best evidence exploring interventions in the handover process. Phase 2: Ethnographic, inter-professional observations to uncover issues surrounding patient handover in UK hospitals. Phase 3: Focus group sessions with

26 surgeons and nurses from 3 UK hospitals were conducted to uncover desirable features to include in an ABCS for surgical handover. Both homogenous and heterogeneous sessions were organised, to ensure methodological rigour. Focus groups were recorded and transcribed verbatim before being subjected to independent thematic analysis.

Results: Phase 1: Analysis of 19 articles revealed that existing evidence for handover interventions is sparse with no exploration of patient outcome. All handover interventions were based on protocols or guidance templates; there were no app-based interventions and limited use of technology. Observation sessions lasted 3 hours and were conducted on 6 separate occasions on surgical wards by a mixture of designers and clinicians. Observation was performed during both night and day sessions to ensure comprehensive data capture. They revealed issues surrounding absence of junior staff co-ordination, confusion over patient locations, lack of feedback for nurses when contacting doctors and a lack of communication between teams outside normal working hours. The focus group sessions revealed great enthusiasm for communication technology innovation. Participants identified 6 themes detailing user perceptions of current communication technology and attitudes to smartphone technology. They felt that the pager device was outdated. The participants produced, via consensus agreement, 9 key recommendations to include in development of an ABCS:

1. Communication triage by senior staff
2. Communication triage based on clinical urgency
3. Feedback to establish a closed communication loop
4. Structured data input to include demographics and patient location
5. A team conversation function
6. Robust security systems to maintain confidentiality
7. Mobile devices for doctors and ward-based devices for nurses
8. Staff training
9. A flexible operating system allowing profiles for normal hours and out of hours working.

Conclusions: This mixed-methods study showed that UK nurses and surgeons were in favour of an ABCS over current communication technology for handover, despite concerns surrounding confidentiality and information governance. A guide for development of an ABCS was produced, informed by published evidence and end-user opinion.

Keywords

innovation; technology; handover; communication; mhealth

PowerPoint presentation:

https://www.conftool.pro/digital-health-care-2014/index.php?page=adminPapersDetails&path=adminPapers&form_id=61
