Time-motion analysis examining of the impact of Medic Bleep, an instant messaging platform, versus the traditional pager: a prospective pilot study.

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Abstract
Objectives: Efficient and accurate communication between healthcare professionals (HCPs) serves as the backbone to safe and efficient care delivery. Traditional pager-based interpersonal communication may contribute to inefficient communication practices and lapses in medical care.

Methods: This study aimed to examine the impact of Medic Bleep, a National Health Service (NHS) information governance-compliant instant messaging application, in an NHS Hospital Trust. We examined Medic Bleep's impact on participant time and workflow using time-motion methodology. Cohorts of doctors and nurses using both Medic Bleep and the traditional pager were compared. Secondary endpoints of our study were to assess whether efficient communications could lead to better resource utilisation, patient safety as well as better quality of work life for the end user.

Results: Assimilation of Medic Bleep corresponded to a reduction in mean task-duration that was statistically significant ($p < 0.05$) for To Take Out (TTO) and Patient Review categories. Nurses saved an average of 21 minutes per shift ($p < 0.05$), whereas doctors saved an average of 48 minutes ($p < 0.05$) per shift. Qualitative analysis suggested that HCPs benefited from better work prioritisation, collaboration and reduced medical errors enabled by an auditable communication workflow.

Conclusion: Medic Bleep reduced time spent on the tasks requiring interpersonal communication. Efficiencies were seen in Discharge Patient Flow, Patient Review and TTO categories. This improved HCP availability and response times to the benefit of patients. End users revealed that Medic Bleep had a positive effect on quality of work life.