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BleepPod: using smartphone technology to streamline telecommunications in an NHS setting

Authors: Christopher Rajkumar, Elinor Warner, Mark Kinirons and Amit Thakrar

Aims

Efficient interdepartmental communication is critical to patient safety and service provision within the NHS. Traditional telecommunications, including pager systems, currently predominate in most trusts. Delays are commonly experienced when the correct contact number is not available and the switchboard is busy. We aimed to streamline and modernise this process by integrating smartphone technology into the telecommunications system.

Methods

To define the problem, a web-based questionnaire was sent to all junior doctors at Guy's and St Thomas' NHS Foundation Trust. A local panel of experts agreed an audit standard, ie that all contact details should be available within 60 seconds. Our intervention comprised a novel, innovative smartphone application, 'BleepPod'. This contained a comprehensive database of key extensions and bleep numbers. Additionally, the application had the functionality to directly dial any extension or page any 'bleep-holder' at the touch of a button, directly from the smartphone. Trust approval was obtained and BleepPod was launched on Apple's 'AppStore'. Ten junior doctors participated in a trial of efficiency, whereby the time taken to obtain a randomly selected contact number was recorded. 50 contacts were randomised to BleepPod, and 50 contacts to traditional methods – using the hospital's switchboard or voice recognition service.

Results

88% of survey respondents stated that the need to obtain an unknown contact number occurs multiple times per day. 65% of junior doctors claimed that this takes in excess of 1 minute each time. Additionally, when questioned how much their inability to obtain a contact number in a timely fashion impacts on patient care, 69% responded either 'a fair amount' or 'a lot'. In the first 3 weeks following the launch of BleepPod, it was downloaded by 112 junior doctors and used a total of 675 times. On efficiency testing, the time taken to obtain an unknown contact number was significantly reduced using BleepPod compared with traditional means (median 6.17 s (interquartile range 5.00–9.54 s) vs median 51.6 s (interquartile range =22.7–123 s) respectively, $p<0.001$). The audit standard of 60 seconds was accomplished in all cases using BleepPod, but failed by traditional methods of obtaining contact details (100% vs 60%, respectively).

Conclusions

BleepPod has provided an elegant solution to a common cause of delay and frustration on the wards. In doing so, the utility of smartphone technology in healthcare is demonstrated, with potential to increase efficiency and augment patient safety in a busy NHS trust.

Conflict of interest statement

CR and AT have subsequently received funding via a local 'Fit for the Future' competition to develop this product for the Android and Windows markets. ■

Authors: Guy's and St Thomas' NHS Foundation Trust, London, UK