Watchpoint: an NHS-grown electronic communication system shown to improve patient safety

Authors: Pree Jareonsettasin,[A] Lisa Wright[A] and Ian Gooding[A]

Introduction

The safe function of an out-of-hours hospital presupposes the coordination of its staff. Colchester General Hospital has deployed 'Watchpoint', an effective new electronic communication system developed entirely by front-line NHS staff. It is shown to significantly reduce the number of preventable adverse outcomes resulting from failures in continuity of care.

Clinical tasks must be identified, evaluated, allocated and actioned by the relevant team. Failure is possible not only within but between each step, as a result of miscommunication. The main mechanisms for preventing this are high quality handovers, standardised and formal allocation and escalation procedures, and each team's awareness of the number and scale of remaining tasks, particularly concerning unwell patients.

Specific problems addressed

Electronic handover systems have been developed in many hospitals globally, with varying effectiveness. The following problems prompted Watchpoint's development:

- The lack of a system to identify and handover patients requiring review. Paper patient lists were lost or difficult to access, outdated, and of variable information.
- The take list: staff lacked up-to-date appreciation of the take list, particularly its size.
- Task management: bleep-related inefficiency, particularly interruption of the bleep holder.

Materials and methods

The aim was to achieve a robust, efficient and formal handover of patients for review, and tasks, both during nights and weekends. We envisaged staff members using a large screen showing a list of unstable patients as a focal point of the handover meeting.

Features thus included: colour-coded lists, with red lists denoting sick patients requiring review and blue lists denoting patients requiring daily weekend review; a take list, displaying the clerking status of to-be-admitted patients; and a task management system (allowing central allocation of tasks). Moreover, we installed Watchpoint on phones, ensuring its secure and efficient access.

Authors: [A]Colchester General Hospital, Colchester, UK

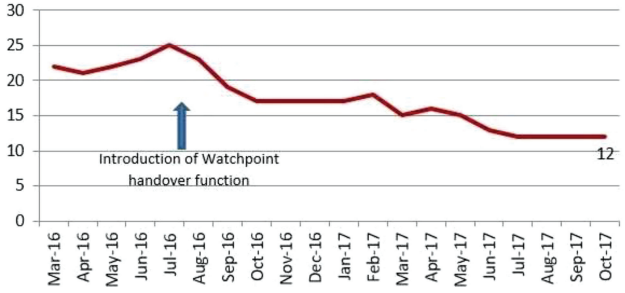

Fig 1. Serious incidents relating to deteriorating patients. Rolling 12 months.

The project was conceived in March 2014. By mid-2015, take list functions were installed; by August 2015, task management functions, and August 2016, handover functions. It was fully operational in 2016–17.

The development team (entirely Trust personnel: one consultant physician, junior doctors, project nurse, site team service manager, and two computer programmers) constantly received informal feedback from doctors. Total cost of development was £70,630; for comparison, commercial alternatives price at £250,000, with £70,000 updates. Finally, audit of clerking times by Deteriorating Patient Group.

Results and discussion

Since the introduction of Watchpoint, a marked reduction in preventable adverse events was measured.

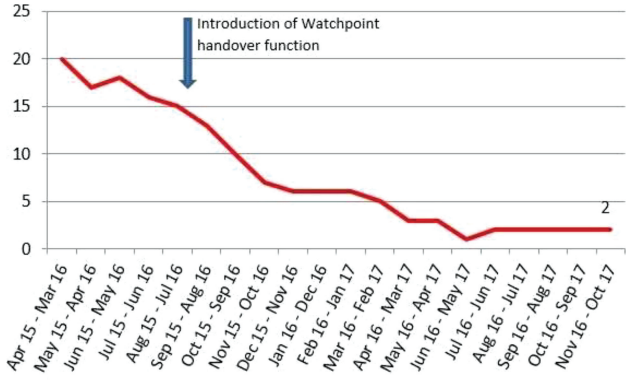

Fig 2. Avoidable cardiac arrests due to failure to escalate. Rolling 12 months.

- 52% reduction in serious incidents involving deteriorating patients. ($p<0.004$; Fig 1)
- 87% reduction in cardiac arrests resulting from failure to escalate. ($p<0.001$; Fig 2)

Take list: there has been a reduction in clerking waiting time of 158 to 102 minutes ($p=0.012$) following introduction in 2015.

Task management: 100 ward nurses were asked to evaluate Watchpoint (numbers denote: 0 = strongly disagree, 10 = strongly agree). Median ratings were ease of use (10), reliability (9), speed of contacting doctors vs. bleeping (7), speed of escalation to senior doctor (8), overall patient safety (9).

Conclusion

This case highlights NHS staff addressing the needs of clinical teams through delivering a highly cost-effective product demonstrated to improve patient safety by systematic, electronic facilitation of communication. ■

Conflicts of interest

None declared.