

## **Bleep Free Protected Teaching Time: A Completed Quality Improvement Cycle**

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Dear Editor,

A common method of communication in hospital is through a bleep device. It is well recognised that doctors often must interrupt patient care to answer a bleep<sup>1</sup>, but what is not known is to what extent education and protected lunch breaks of junior doctors are interrupted by unnecessary bleeps. Quality improvement initiatives which reduce bleeps have been shown to improve quality of work life<sup>2</sup>, and ongoing improvements are likely to improve the formal training of junior doctors with less interruptions during protected teaching time.

Our hospital introduced a hospital bleep policy, excepting clinical emergencies, citing a bleep free period of one hour from 1300 hours daily for designated lunchtime in April 2018. We undertook a quality improvement change cycle and information was disseminated across the hospital to re-iterate the timing of protected teaching time for doctors. Consultant physicians answered all bleeps during teaching periods and explained about the bleep free teaching period. In phase one (April 2018 – May 2019) we collected the baseline data. In phase two of the change cycle (June 2019 to December 2019) emails were sent to all the clinical nurse managers to remind them of the policy and they were asked to educate all of staff in their respective wards. Areas which had accounted for a high proportion of bleeps in phase one were targeted with more directed reminders, with laminated information sheets displayed in these areas to act as ongoing visual cues. We compared data pre and post.

In the first phase of this project (April 2018 – May 2019) we collected data on 24 different teaching sessions. A total of 103 bleeps were made to doctors during this time period. The median number of bleeps was 5.5, range 1 to 11. In the second phase of this project (June 2019 – December 2019) we collected data on 13 different teaching sessions. A total of 63 bleeps were made to doctors during this time period. The median number of bleeps per session was 5, range 2-7. A linear regression analysis and found that during phase 2 of the change cycle there was a statistically significant decrease over time on the average number of bleeps per teaching session (p value 0.01, R<sup>2</sup> 47.5).

There were increases in the absolute proportion of bleeps from both the Day Wards, and general wards, but this was not statistically significant. There was a statistically significant decrease in the proportion of bleeps from the emergency department (15% vs 2.5%,  $p = 0.03$ ). There was no statistically significant difference in the proportions of bleeps across different healthcare professionals, or the absolute proportion of bleeps classified as urgent.

In conclusion, we found that a combined approach of consultant colleagues answering bleeps and targeted education of hospital staff resulted in a statistically significant reduction in the absolute number and proportion of bleeps in certain targeted areas of the hospital, indicating that change is possible and achievable. We believe this will translate into improvements in the quality of post-graduate education.

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