

MedE-Handover: Development of an electronic handover system to improve the safety and reliability of weekend handover on medical wards in a major acute teaching hospital

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Aims

This project aimed to develop a robust and effective handover system to standardise the transfer of information between wards and out-of-hours clinicians, thus improving continuity of care and patient safety on medical wards.

Methods

Electronic handover tools have been advocated as a potential strategy for enhancing the quality of handover. This project saw the design of a locally peer-reviewed Microsoft Excel database entitled 'MedE-Handover' which included scripts allowing semi-automation and standardisation of handover data. Replacing uncoordinated handwritten notes previously compiled separately by each ward, MedE-Handover was designed to allow efficient population of patients and tasks by ward teams onto individualised ward tabs, while also collating all tasks for all wards into a master handover for on-call teams. The system incorporated the ability to sort data by ward, the nature of task (for example patient or investigation review) and by clinician grade intended to perform the task. MedE-Handover was stored on the medical directorate secure drive allowing access via the clinician's individual password-protected trust login, with preservation of an audit trail through weekly automated backups. During the 4-month phased implementation of MedE-Handover across eight medical wards, clinicians were asked to provide feedback on their experience with MedE-Handover, compare it with previous handover methods and advise how MedE-Handover could be developed in parallel with its implementation.

Results

Direct clinician feedback was obtained on a continual basis and qualitative analysis showed multiple benefits from MedE-Handover which was universally preferred to previous handover methods. Designed using Microsoft Excel and semi-automated, clinicians

found the software familiar with MedE-Handover easy to navigate and self-explanatory to use. Ward doctors reported feeling reassured that MedE-Handover was robust and reliable with continuity of care for their patients maintained over the weekend period. On-call teams described the standardised documentation as clearer, well summarised with workload across the hospital more visible, allowing for a more structured working day and appropriate distribution of jobs within the on-call team. All clinicians felt MedE-Handover had improved patient safety.

Conclusion

The introduction of MedE-Handover has significantly improved the safety of patient handover for weekends in our hospital by providing a platform that is robust, reliable, standardised and auditable. The project has led to changes in clinical practice with some wards now incorporating team meetings to formalise weekend plans and populate MedE-handover as a multidisciplinary team. Further work will focus on continued development of the database and expansion to include implementation of MedE-Handover across other hospital sites within the trust. ■

Conflict of interest statement

None declared.

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