

System for Electronic Notification and Documentation (SEND)

Using in-house IT resources alongside human factors, engineering, and clinical expertise from the University of Oxford, the Oxford University Hospitals Foundation Trust (OUH) has developed bespoke 'early warning' software that integrates with the electronic patient record.

Recognising the limitations of a paper-based approach to routine vital signs recording, OUH determined that an electronic solution could further improve patient safety. The team, which includes members from both the OUH Trust and the University of Oxford, has designed an electronic early warning system to help clinical staff make the best decisions for their patients.

Patient notes could previously only be reviewed in one location. SEND now allows multi-disciplinary teams to access the information they need from different places within the Trust.

This avoids medics noting readings on a piece of paper to transcribe to charts later, thus avoiding transcription errors. Any errors on the electronic record can be corrected immediately.

SEND also automatically calculates the 'trigger' score for each patient, and offers clinical decision support through links to hospital escalation protocols, and real-time audits that facilitate clinical governance processes.

The easy-to-use interface uses human factors expertise that fits the task to the human, so that systems flow intuitively. The tablet expects inputs in the same order that staff work, saving around three minutes per observations set. Staff are able to use this extra time to complete other patient care tasks.

The team is now looking to take the principles of SEND further. HAVEN, a new research project funded by the Department of Health and Wellcome Trust Health Innovation Challenge Fund, will test the process of issuing alerts using algorithms that monitor not just vital signs but blood tests results, demographic information and medication.



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SEND team, including project leader Dr Peter Watkinson at centre, back row.

