

Managing complications in maternity and acute medicine **King's PSSQ project summary**

Spotting when a patient is becoming sicker is part and parcel of good hospital care. But recognising the early warning signs and understanding what should be done about them, be it keeping an eye on the patient, alerting other health professionals or giving treatment, are steps that leave room for error - with potentially fatal results.

Thousands of patients' lives might be saved if changes are made to the way acutely ill patients are looked after. Smart technologies, charts, checklists and other safety 'tools' and systems are available to help health staff notice and respond more quickly to a patient whose condition is deteriorating. Early warning systems, for example, flag up signs that should trigger a reaction (such as abnormal changes in blood pressure) and guide staff in what to do next.

We have been investigating the use of two safety systems on medical wards in two acute teaching hospitals to find out what works well in which circumstances. One hospital used a paper system, including an observation chart and rules about what actions to take in certain circumstances, together with a response team that was dedicated to reviewing patients who were at risk. The other trialed an 'intelligent assessment system' (IAS) employing handheld 'personal digital assistant' computers, PCs and the hospital's intranet. Staff could input information about patients' vital signs (such as heart rates) and get prompts about any necessary action. The computerised system was networked, so that other staff could see what was happening, even if they were not at the bedside. Both systems were designed to flag up emergencies and prompt staff about what to do and how to hand over information in consistent way.

We found that:-

- Ward staff need to respond fast to emergencies and a dedicated response team means they have access to specialist skills.
- While safety tools are valuable and solve problems they are not in themselves the solution.

The IAS, for example, reminded staff who forgot to check breathing rates with a computerised prompt and supported less qualified staff in recording vital signs. On the other hand, experienced nurses might well spot something before anything could be picked up by a computer. Moreover, any system could encourage a 'checkbox' mentality with staff relying on what they saw on paper or screen rather than what they saw in the patient.

Our recommendations include:-

- Ensuring staff understand that tools and systems do not provide all the answers.
- Giving ongoing training so that all staff can detect and care for an acutely unwell patient.

"It was very useful to work with the PSSQ team. Their research supported work we're doing to observe patients and ensure we notice and treat anyone who is becoming sicker," said a hospital manager involved in the study.

Next steps:

- We are carrying out similar research into complications during labour on two maternity wards in two different hospitals.
- We are finding out from patients and their relatives how they can contribute to their safety when patients become acutely unwell.
- We are working with the National Patient Safety Agency and World Health Organization to improve mother and baby care.