

Bar code trial aims to boost transfusion safety

A one year project to test the effectiveness of using bar code technology to reduce the risk of patients getting the wrong blood transfusion is under way at the John Radcliffe.

It is part of a continuous effort by the National Blood Service to improve the safety of blood transfusions, and another similar scheme is being tested at Addenbrookes Hospital in Cambridge.

The Oxford project is being led by Dr Mike Murphy, Consultant Haematologist and co-ordinated by Research Nurse Claire Turner.

"There are lots of steps in giving the right blood to the right patient" said Claire, "and there is the chance for things to go wrong at any stage.

"At the moment our system relies on staff reading aloud and cross referencing information from the blood pack and a report form. They also ask patients to confirm their identity, and check it with the ID wrist band.



Using the hand held computer to scan the wristband. The two dimensional code on the right is used to hold more information than the linear code.

"Because of the way the human mind works we make things fit into familiar patterns. For example most people reading

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do not notice that the word "the" appears twice. In the same way people checking labels or wristbands can see what they want to see, not what is actually there. Fortunately serious mistakes are rare, but when a patient is given the wrong blood it can be very damaging."

The bar code project involves the use of handheld computers (palm pilots) to scan information at the bedside. Patients are given a bar-coded wristband (like those already in use in parts of the hospital). When a sample is taken for cross matching the member of staff scans their own

badge, to record who took the blood, and the patient's wrist band and confirms their name and date of birth. The computer prints duplicate bar codes which are stuck on the sample.

When cross matched blood is allocated by the blood bank the patient's bar code is stuck on the pack. Before the transfusion is given, the bar codes are scanned again and the computer prompts a series of checks. If the bar codes match - and the other identity checks are correct - transfusion can go ahead. If they don't, the computer flashes a warning.

"The final bedside check is the last point at which we can pick up a mistake" said Claire. "My job has been to plan and manage the project, providing education and training for staff and liaising with the suppliers of the technology. We did a baseline audit and we are now monitoring the impact and finding that the technology has improved compliance with procedures and is preferred by staff."

The bar code system is being tested in the haematology day clinic and the phlebotomy department and is soon to start in the haematology ward, SE.

Identifying patients correctly is central to health care and the system could have applications over a wider area than blood transfusion. Links with other developments such as electronic patient records and electronic prescribing are being explored.

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