Hospitals Trust improves patient care and confidentiality of records for transplant surgeons with BlackBerry solution

University Hospitals Birmingham NHS Foundation Trust (UHB) is the leading university teaching hospital in the West Midlands region of the United Kingdom. As one of the largest acute care hospitals in the UK, it treats half a million patients every year. It has the largest solid-organ transplantation programme in Europe, and is the largest centre in the UK for liver transplants.

Benefits

- **Improved patient care through a more streamlined process**
- **Real time information available to surgeons and co-ordinators**
- **Eliminated confidentiality risk**
- **Ease of use**
- **Reliable and secure solution**

The Challenge

The liver transplant team is comprised of six surgeons and five transplant recipient co-ordinators, who carry a copy of the liver transplant waiting list with them at all times. This means that they can respond immediately when an offer of a donor liver is made and enables the selection of a suitable candidate from the waiting list. Traditionally, the list was an anonymised paper printout.

There were two specific issues with the paper list. Firstly, ensuring data protection was maintained in case the list was mislaid, and secondly, the list was not intuitive: given the average of 100 records there was no way to query the list to quickly find the most suitable candidates. Furthermore, version control was a concern as the paper copy wasn't always up to date, since it was only as current to the date it was printed. Faced with these challenges, the medical director asked the Trust's IT department to find a solution.

The Solution

The IT team went looking for "a vehicle which provides the security we need and the ability to see real time information," explains Dean Grinham, Programme Delivery Manager at UHB. They didn't have to look very far. UHB had already deployed BlackBerry® smartphones to the Trust's managers to provide them with mobile email, calendar and contacts. It started with Trust executives and then spread to senior managers and clinical service leads, but rollout has increased to many of the Medical staff.

BlackBerry®

Grinham knew the BlackBerry® solution well. In particular, he knew that it provided the end-to-end encryption and device security he needed, as well as the push technology for email and data. "We were also aware that the technology for developing BlackBerry applications existed," says Grinham.

Working with Airpoint, a member of the BlackBerry® Alliance Program, that specialises in providing tailored mobile applications, UHB IT Project Manager, Rachel Brazier, UHB Transplant Recipient Co-ordinator Peter Ashcroft and the Liver Transplant Consultants and Transplant Recipient Co-ordinator teams developed a BlackBerry application using BlackBerry® Mobile Data System that enables the users to query the waiting list using an agreed search criteria. The list is stored securely on the smartphone and is updated any time the database is modified. The list is encrypted and the smartphones are password protected. End-to-end encryption ensures the confidentiality of the information being sent and in the event a device goes missing, UHB can wipe data from it remotely.

During a three-month development and testing phase, surgeons and co-ordinators were issued with BlackBerry smartphones to give them the time to become accustomed to using them. Then the application was installed over the air straight onto the devices.

During a short transition phase the surgeons were allowed to carry both the BlackBerry smartphones and the paper list. Then after a month, the specialty announced that they would stop publishing the paper version. "The specialty came back to me and said 'actually we don't want the paper version any more'. That's when Grinham knew the deployment had been successful and the solution had been adopted.

The Benefits

The BlackBerry solution has improved the speed with which the surgeons can reply to offers of donor organs. The application's interface and search functionality makes looking up and viewing the records very convenient, and faster than in the past. Moreover, since they carry their BlackBerry smartphones for all their mobile communication needs, including email and voice, surgeons are less likely to leave it at home, and therefore always have the list with them. Also, the reliability of the BlackBerry solution and the widespread coverage of its operator's mobile network make it easier to reach the surgeons. "No matter where they are, whether it's in the hospital, in the supermarket or at home, the co-ordinator can reach the surgeons," says Grinham. "Deploying the BlackBerry solution has improved the speed of matching the most appropriate recipient for each donor," he continues.

The BlackBerry solution has also helped improve the quality of the information available. The surgeons no longer have to remember to print out copies of the list; the latest version is automatically pushed out to their BlackBerry smartphones and since the list is stored on the device, the surgeon can consult it even if he's in an area with no mobile coverage.

The success of the BlackBerry solution for liver transplant patients has opened a door to the future for UHB. This includes examining the possibility of extending the application to other transplant teams, such as kidney; replacing the hospital paging service with BlackBerry smartphones; and even planning to integrate the BlackBerry solution into its emergency preparedness plans, by taking advantage of the built-in high availability and reliability architecture and tools of BlackBerry® Enterprise Server 5.0.

> "The BlackBerry solution has improved the speed of matching the most appropriate recipient for each donor."
>
> Dean Grinham
> Programme Delivery Manager
> University Hospitals Birmingham

www.blackberry.co.uk/casestudies

© 2010 Research In Motion Limited. All rights reserved. The BlackBerry and RIM families of related marks, images and symbols are the exclusive properties of and trademarks or registered trademarks of Research In Motion Limited. RIM, Research In Motion and BlackBerry are registered marks and can be registered or under registration in other countries. All other brands, product names, company names, trademarks and service marks are the properties of their respective owners. The specifications and features contained in this document are subject to change without notice.

BlackBerry®