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Paul Jones, Clinical System Architect

BlackBerry Case Study

Addenbrooke's Hospital, Cambridge
Healthcare

The Challenge: Up-to-date patient records

Addenbrooke's BlackBerry implementation won the 2005 E-Health Innovation Award "Best use of mobile technology". The award recognises innovative IT projects in the healthcare industry that improve the efficiency and effectiveness of delivering patient care.

Addenbrooke's is one of the UK's leading NHS hospitals and an international centre for treatment, research and education. Its transplant unit is a regional centre for liver and kidney transplantation, which in 2004 carried out 176 transplants.

Across the health service consultants need to make precise diagnoses and fast decisions to save lives. To be able to react quickly and accurately, staff need immediate access to the latest patient records, whether they are on-site or out on call. In the organ transplant department at Addenbrooke's this requirement is even more crucial as donor alerts usually come without warning and often while the intended recipient is being treated as an out-patient, not in the hospital. To ensure treatment can proceed the transplant team needs complete confidence in the accuracy of the patient information to hand.

Addenbrooke's patient records are stored centrally on the hospital server. Traditionally transplant consultants and coordinators printed records as they were required for off-site access. However, patients with long medical histories made for bulky paper files, and records were only updated when coordinators returned to site. Such a dated system also meant that coordinators could never have all patient records to hand while off-site.

Addenbrooke's transplant team realised that they needed a simple, streamlined system that would improve mobile access to information without incurring expensive development fees. The importance of the work of the transplant unit made downtime unacceptable so the implementation had to be smooth and seamless.



Implementing BlackBerry

Paul Jones, clinical system architect at Addenbrooke's, was tasked with identifying a way to give the team access to patient records on the move. Addenbrooke's was already using BlackBerry to give select staff mobile email, and Jones realised that making use of this existing resource would ensure that implementation and set-up costs would be minimal.

Jones identified that the Mobile Data Service (MDS) feature of BlackBerry would enable authorised users to connect to the hospital database from their BlackBerry device. All that was required was the development of a simple programme. Since MDS integrated with the existing database, Jones wrote the entire programme in just two days. While it took a little longer to assess and enhance the programme, Jones attests that they have not had to make any significant changes since they began using the system.

BlackBerry gives users direct access to the hospital server, so security and confidentiality of patient records is a priority. BlackBerry uses Triple DES encryption for data transmission so that data from all patient records remains secure throughout its transfer from BlackBerry Enterprise Server to BlackBerry device. Authorised staff can now view and amend patient records while they are off-site – letting them give their patients the best possible care.

As well as complete end-to-end encryption, BlackBerry integral security includes both passwords and PIN access. Every user has a personal password, which authenticates access rights on files, while each device can be locked, with PIN code entry required to re-access the device.

Looking to establish the usability, efficiency and popularity of BlackBerry, Jones arranged a beta with the transplant team. It very quickly became apparent that the solution was going to be a huge success:

"The great advantage of BlackBerry is that it is extremely quick and easy to master," said Jones. "Training was never an issue for us – if you have ever sent a text message from your phone, you will have no trouble with BlackBerry."

Ten members of the busy organ transplant team – both consultants and coordinators – are now equipped with BlackBerry, giving them mobile

access to patients records. The solution has had a huge impact on the efficiency of the transplant unit, as Jones explains:

"Previously anything the consultants couldn't physically carry wasn't available outside the hospital. Now, if they need a file they simply read it on their BlackBerry. This means clinicians can make the right decisions about patient care immediately, from wherever they are, at any time of the day or night. The result has been more effective treatment for patients and greater efficiency for the unit."

Future plans

Jones claims that the system is the first of its kind in the NHS, although he sees no reason why other hospitals and practices shouldn't follow suit. He believes that Addenbrooke's experience has proven the capability of BlackBerry for a host of similar applications designed to improve patient care, and he has already received queries about the system from other units within Addenbrooke's.

"NHS employees are off-site more than you might think, and need fast access to patient records", says Jones. "Take a GP on home visits for instance. On route to an emergency call, a doctor can't always stop by the surgery to pick up files. He has to get there quickly, but equally he needs immediate access to all the pertinent patient information – whether that's consultant letters, case histories or test results. If he could log onto a server while out on the road and pick up critical information, it would make a huge difference to the quality of care he is able to offer. Our project has just proven that."

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About BlackBerry

BlackBerry is an end-to-end solution developed by Research In Motion® Limited. Founded in 1984, Research In Motion is a world leader in the wireless communications market.

For more information

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