



## Hospitals Trust saves an estimated £220,000 annually with a digital paper & pen application and BlackBerry solution

Situated on the south coast of England, Portsmouth Hospitals NHS Trust (PHT) runs the new state-of-the-art Queen Alexandra Hospital and provides a full range of acute services to a population of over half a million people. It also provides specialist services to a wider area, extending as far as Dorset and Sussex.

### The Challenge

PHT delivers care in the community as well as acute services, and particularly home-care midwives and nurses. Caring for patients at home brings with it a large amount of administration and they have a long history of taking notes on paper forms. PHT needed to find a more efficient way for the midwives and nurses to take electronic notes, whilst on patient visits. It considered providing laptops equipped with 3G cards, but the idea encountered significant resistance from carers, who were uncomfortable with the technology as they felt it would get in the way of patient care.

Faced with these objections, Richard Sargent, ICT Specialist/Digital pen project lead at PHT wanted to find an alternative solution that would enable community nurses and midwives to take notes and complete paperwork more efficiently without disrupting patient care.

### The Solution

In November 2008, during a review meeting with PHT's mobile operator, Sargent noticed the account manager taking notes using an unusual looking pen. PHT had already deployed the BlackBerry® solution to a small group of users for mobile communications but Sargent had not seen this electronic note-taking solution. The mobile operator arranged a meeting with PaperIQ, a member of the BlackBerry® Alliance Program, which makes the digital pen and paper solution. Sargent discovered that BlackBerry® smartphones, coupled with the digital pen & paper, could facilitate secure, remote note-taking using existing forms.

### Benefits

**£220,000 in annual efficiency savings**

**Halved the amount of time spent by midwives on patient administration**

**Protection against mislaid, lost or stolen forms and against litigation**

**Compliance with government document management requirements**

**No significant change to current working practice**



"Because we were getting resistance on the laptop-based solution, we arranged a presentation to the team-leads at PHT. Immediately, the head of maternity liked what she saw," says Sargent. Maternity's midwives provide ante-natal care at home tracking everything they do in a booklet of forms. After filling out the forms, the booklet is left with the mother. The midwife then returns to the hospital and fills out the same forms again on the computer. Sargent continues, "By using the BlackBerry solution with PaperIQ, we could eliminate the double entry of information as digital notes are taken at the episode of care with the mother and then immediately and securely transferred to the patient record system. This means that no patient-identifiable information is carried with the midwife whilst they are in the community which protects against information getting mislaid, lost or stolen."

PHT conducted a proof of concept with the maternity department. It coupled PaperIQ digital pens and forms with various smartphones but settled on BlackBerry smartphones. As he explains, "We needed something simple for users that wouldn't need rebooting or require user intervention, and that encrypted data from end to end." The main reasons PHT originally chose the BlackBerry solution were stability, security and ease of use.

With the PaperIQ solution, when the user fills out the form, the pen captures a series of X and Y co-ordinates (in relation to the printed pattern of what has been written). When the midwife completes the form, the pen encrypts and sends the data to the BlackBerry smartphone via Bluetooth. Once the device receives the data, it encrypts and pushes it to the BlackBerry® Enterprise Server at PHT, where it is sent to the maternity records system. Transmission is automatic and requires no user intervention.

The next step was to run a field trial. "We chose six people who weren't very comfortable with technology," says Sargent. They were trained for 30 minutes on the BlackBerry smartphones and 90 minutes on the digital pen then sent into the field for six weeks. "After the trial period we practically had to pry the BlackBerry smartphones out of their hands they liked it so much. That was quite a big win for us."

BlackBerry smartphones have been deployed to 130 midwives.

## The Benefits

PHT estimates that the BlackBerry solution with PaperIQ for the midwives will yield £220,000 in annual efficiency savings. Across a typical midwife's schedule, it has halved the time spent on administration, from 98 minutes to 48 minutes.

"Everything is recorded and immediate. Midwives don't need to return to the hospital to input data. It's captured and transmitted in real time," explains Sargent. "We have freed up 'time to care' for midwives. The BlackBerry solution with PaperIQ will pay for itself and begin generating savings in the first year. In the second and third years it's all savings." With the reduced time for administration, the midwives are now able to provide more patient care within their schedules.

The BlackBerry solution with PaperIQ will also generate additional savings by protecting the PHT against the costs associated with litigation or failure to comply with government directives.

"By having patient records safely stored by the Trust, mothers are reassured that if their physical records booklet is lost or becomes damaged, their midwife can just request a new printed version of the notes which would contain full details of the check-ups and care given. The records system chronologically orders every episode of care together with any notes that are taken in exactly the state they were recorded, which is useful if a case of litigation was brought against the Trust," added Sargent.

[www.blackberry.co.uk/casestudies](http://www.blackberry.co.uk/casestudies)

"The BlackBerry solution with PaperIQ is a massive hit with clinical staff because we are not significantly changing any working practices. We have designed an ICT solution to fit around the way the midwives work rather than getting them to adapt to an ICT solution, meaning they can concentrate on patient care."

Richard Sargent  
ICT Specialist/Digital  
pen project lead  
Portsmouth Hospitals NHS Trust

Founded in 2005, DevelopIQ Limited is an Elite Member of the BlackBerry Alliance Program focused on developing enterprise software applications for BlackBerry smartphones. The award-winning PaperIQ data capture solution developed by the business is acknowledged as a leading digital pen solution for the BlackBerry platform. The business has a strong track record in the NHS as well as other public sector environments. To find out more visit [www.paperiq.com](http://www.paperiq.com)