

# reviving patients records

West Dorset General Hospital NHS Trust (WDGH) was established in 1991 and manages the Dorset County Hospital in Dorchester, where it provides the majority of its services. It is a major local employer in the area with over 2,200 staff and more than 500 beds.

Dorset County Hospital has been recognised by the Department of Health as an Exemplar site, of which there are only eight such sites in the UK. The hospital was chosen because of the high quality of the patient environment it provides through all its services. One of the Trust's key performance objectives is to continue to monitor and improve the standard of care given, and technology is playing an increasingly important role in addressing this.

## getting wired

At the hospital, a quick response to patient emergencies and enquiries is paramount. In order to provide an effective patient service, a high level of data integration and availability is required. To achieve this, the hospital went live with an on line results reporting system in 1995, which gives all clinicians access to diagnostic results and reports in real time. The Trust has also recently installed a new fully integrated patient administration system which keeps track of a patient's journey during their contact with the hospital and provides an integrated clinical record in A&E, Maternity and Neo Natal. In addition it automatically updates departmental clinical systems, such as Cardiology and Renal, with patient information.

The Trust is now determined to be one of the leaders in the implementation of EPR. It has recognised that to achieve this it was essential to provide a first class wireless network to deliver a seamless, fast service to those remotely accessing the mission critical EPR system.

To support the implementation of EPR, and develop an appropriate wireless system, Dorset County Hospital selected Voyager Networks, already the Trust's established network maintenance contract holder, to initiate a full site survey. As part of this consultancy, Voyager also undertook an extensive security analysis, as it recognised the importance of ensuring the resulting wireless network provided the highest level of security to protect the data integrity of something as sensitive as patient records.

Voyager recommended a Cisco wireless infrastructure utilising Cisco Aironet 11 MBS hubs sited throughout the hospital which is up linked to the existing 3Com Core Switched LAN. Voyager also recommended the use of mobile hardware which included IPAQ Compaq pocket PCs, with Cisco PCMCIA cards slotted in. A more unusual recommendation was the use of mobile IP Spectralink phones, to enable medical staff to make calls and be contacted by other staff.

## recommendations

The hospital then agreed to a pilot scheme which ensured the recommended wireless network and hardware worked effectively. This has led to a comprehensive deployment of the system over a large portion of the hospital.

Brian Stalker, ICT Technical Support manager, said: "We selected Voyager as they could offer completely vendor-independent consultancy so we knew what they recommended would be the best fit for our needs. Voyager has provided us with the most cost-effective solution with the variety of features and level of scalability to make the system future-proof. We are also assured that Voyager is capable of tailoring its services and products completely to suit our hospitals' often unusual requirements."

## delivering medical flexibility

The wireless network has proved a vital part of the EPR system as it has significantly increased the mobility and ability of medical staff to respond more quickly to patient needs.



## breathing life into a wireless network

Consultants can now use handheld and laptop devices to access the central database to automatically download and update patient records on ward rounds. This can include prescribing drugs, ordering X-rays, setting up blood tests and arranging patient appointments. This has not only improved the working flexibility of the consultants but has also significantly improved the efficiency of ward staff.

Each ward has two desktop PCs that are continually in demand from staff. Previously, consultants would have used the desktop PCs to update the system, thereby reducing the accessibility of ward-based desktop PCs to other staff. As the consultants now use a mobile solution this negates the need for them to use the PCs and allows ward staff, such as ward sisters, to continue with their PC-based duties without disruption from consultants.

The new wireless solution is extensively used by anaesthetists attending patients in theatre who wish to remotely monitor other patients in their care. The system also allows theatre staff to get immediate access to pathology results as soon as they are posted onto the network. Previously this would have been delayed by sending someone to the Pathology Department, or by making regular calls to Pathology until the results were available. As soon as the results are posted onto the EPR system, the theatre staff can immediately review the results, often saving precious time in terms of delivering appropriate treatment.

The integration of IP mobile phones into the hospital system now allows consultants and anaesthetists complete mobility, as they are no longer dependent on using fixed line phones for communication. When they are bleeped on their pager they can call in straight away or can be contacted directly on their phone, regardless of their location in the hospital, and respond immediately. They can also use the phones on ward rounds to call other departments while at the patient's bedside. This means patients get an immediate response as consultants are not distracted by other demands, as they no longer have to leave the patient's bedside to make calls from the ward phone.

Stalker continues: "The wireless solution has significantly increased the response times of medical staff, ensuring patients' needs are resolved quickly which is one of our core objectives. It has also allowed our staff increased flexibility in their work which not only motivates them but also means patients receive more personal and efficient bedside care. The wireless network has brought boundless benefits and, most importantly to us, we know it is highly secure with the latest wireless security technologies being deployed to protect the confidential information we hold on our patients."

### extending the benefits

The proven success of the wireless system means that WDGH NHS Trust now wants to extend it across the entire Dorset County Hospital site, including more

extensive coverage for theatre support as well as a link to A&E. This will be especially important to the Coronary Care unit as the new system will allow A&E to use a laptop to immediately update the system with patient details during the admission process. This will mean the Coronary Care unit can immediately access that information and be ready with the appropriate treatment before the patient reaches its ward. Stalker also hopes that the system will be extended to the two other main Dorset hospitals, in Poole and Bournemouth, so visiting consultants can access information in the same way.

Stalker believes that Dorset County Hospital's return on investment in Voyager has been high: "We are delighted that this system has proved itself both in terms of increasing efficiency of the hospital and cost savings. As IT plays an increasingly important role in the life of a hospital it is vital that the right solutions are put in place to enable rather than hinder our work. The Voyager wireless system has done just that and we are now keen to not only extend it across our hospital but to share it with our sister trusts so they and their patients can benefit from this innovative system."

### The benefits of wireless for WDGH:

- Delivering a seamless fast service
- Significantly increased the mobility and ability of medical staff
- Immediate access to patient records
- Patients are receiving personal and immediate response from consultants.
- Increased efficiency of the hospital and reducing costs

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 are critical to success"

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