

Royal Alexandra Hospital, Paisley

Using tracking technology to save time and resources

“The amount of money we have invested on installing this cutting-edge technology can be recouped through the substantial savings we will make in staff time and resources.”

Jason Britton - Clinical Scientist, Royal Alexandra Hospital



Background

The Royal Alexandra Hospital, part of NHS Greater Glasgow and Clyde, is situated in Paisley and serves a population of around 200,000 from a mix of urban and rural areas. The hospital provides a range of services including inpatient beds, general medical and surgical services, trauma and emergency surgery centre, HDU, medicine for the elderly, maternity hospital, Panda Children’s Centre and Accident & Emergency.

Airetrak was appointed to provide a medical device tracking solution that would work with the hospital’s new Wireless local area network (wireless LAN). Airetrak was the obvious choice for the Royal Alexandra Hospital as it was the only UK-based supplier that met their operational requirements.

Challenge: Time wasted looking for medical devices

Technical staff at the hospital spent a substantial amount of time searching for portable medical devices that needed to be serviced. This involved having to ask ward managers and nursing staff where items were and following the “loan” trail around the hospital.

Additionally, if the devices weren’t found, they could not be checked and maintained as often as required. This could then lead to a reduced level of service and increased exposure to risk for patients.

“Our technical staff spent as much as one man-year each year looking for misplaced items.”



“For practical reasons it was not feasible for us to have a supplier that was not based in the UK.”

Nursing staff and healthcare workers also experienced difficulty locating portable devices required to deliver healthcare. Items which were often moved between wards, such as infusion pumps, non-invasive blood pressure monitors and defibrillators, were difficult to locate when needed. Looking for these devices wasted time which could be more productively spent caring for patients.

Requirement: Asset Tracking

“Initially we searched for an RFID solution to track devices. The requirement mushroomed from there when we realised the technology could help solve a number of different challenges.”

The Royal Alexandra Hospital required an asset tracking system that would help them keep track of and locate portable devices used within the medical block. Initially covering seven wards - extending to cover 14 wards and Accident & Emergency. The long term plan is provide a wireless LAN across the whole hospital to create a virtual portable medical device library, without the need for a dedicated physical storage area.



Solution:
Airetrak ResourceView™

Airetrak provided ResourceView, a comprehensive tracking solution that makes use of the hospital's wireless LAN. ResourceView transforms the information received from the RFID tags and wireless network, converts it into meaningful information, and makes it available in an easy-to-access format. The location of devices can be viewed on a web-based portal. This allows users to see in real-time where the items are on a map of the hospital. It also provides detailed reporting and historical information which is useful when auditing usage and distribution of devices. An easy-to-use administration tool allows users to define zones and to assign tags to assets.

"The technology improves efficiency considerably because it reduces the amount of time clinical staff spend trying to find portable medical devices that are moved between different areas of the hospital."

Small RFID tags are attached to the portable medical devices. The tags send signals to the wireless network. By a process of triangulation the wireless network determines the position of the tags and therefore the portable medical devices.

Benefits:
Significant time and productivity gains

The Royal Alexandra Hospital is beginning to reap the benefits of using the Airetrak system. They have found that the more devices that are tagged, the greater the benefit in terms of time saving, staff productivity and efficiency.

"Time can then be used more effectively in concentrating on patient care. Maintenance staff also benefit as they will know exactly where equipment is when they need to do planned preventative maintenance."



Benefits to Royal Alexandra Hospital:

- Less time spent searching
- Increased productivity
- Improved equipment utilisation
- More time to spend with patients
- Items serviced when required
- Reduce risk of faulty devices



In the long term it is hoped that clinical staff spend less time searching for items. This will allow them to spend more time on patient care, besides the potential life-saving benefits of being able to locate devices quickly and efficiently. Furthermore, technical staff are able to locate items when they are needed for planned preventative maintenance. This ensures items are serviced when they need to be, reducing the risk of faulty items being used clinically.

Outcome:
User-friendly system up and running

The hospital has a tracking system that works well in the environment, is very easy for technical and clinical staff to use, and helps the hospital focus on managing the use and availability of devices.

"We have been able to demonstrate to management that we have a system up and running that is user-friendly. It was important for us to have a system that served as many stakeholders as possible and got buy-in from nursing and technical staff alike."

Once in operation, the Royal Alexandra Hospital will be able to take advantage of additional applications such as telemetry, providing information on temperature and other environmental conditions; motion sensors that notify when a device is being used; alarms when devices are moved out of a defined zone; anti-tamper technology that alerts if a tag is removed from a device; and call button technology that can be used in a patient emergency or for maintenance notification.

Ability to access additional applications:

- Temperature sensors
- Motion sensors
- Alerts and notifications
- Anti-tamper technology
- Call button for emergency
- Bed management

Airetrak

Airetrak provide asset tracking products and solutions for the Healthcare sector, providing hospitals and Trusts visibility of the key assets and resources being used across the organisation. This enables them to manage their assets in a more effective way, helping them to save time and allowing them to focus on improving patient care.

"The Airetrak solution will provide the Royal Alexandra Hospital with a return on its technology investment by dramatically cutting the time wasted searching for devices, improving the utilisation of existing equipment and ultimately helping the hospital to make improvements in patient care."

Roger Willmott, CEO, Airetrak Ltd