

Demonstrating success in healthcare

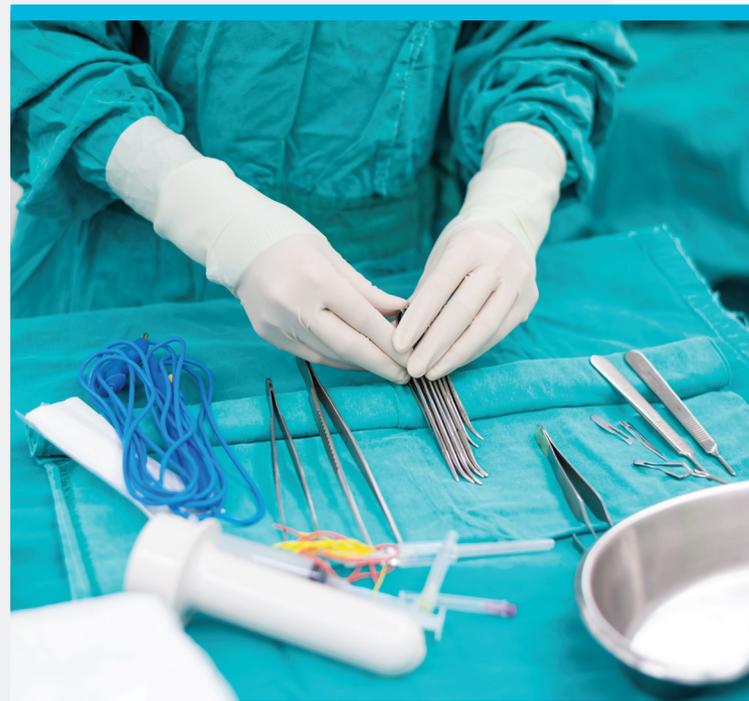
Medical equipment management at Cambridge University Hospitals NHS Foundation Trust

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Background

Cambridge University Hospitals (CUH) is one of the largest and best known hospitals in the UK. The Trust comprises Addenbrooke's and the Rosie, offering general and specialist and women's and maternity care respectively. As well as delivering care through Addenbrooke's and the Rosie, it is also:

- A leading national centre for specialist treatment for rare or complex conditions
- A government-designated biomedical research centre
- One of only five academic health science centres in the UK with a worldwide reputation
- A partner in the development of the Cambridge Biomedical Campus
- CUH's vision is to be one of the best academic healthcare organisations in the world



What was the problem?

The clinical engineering team at CUH had a problem tracking mobile medical devices, spending unnecessary time manually locating and recording each device; time that should have been spent focusing on their core tasks of maintenance, repair and delivery of medical devices to the wards. Clinical staff were also spending time looking for devices, when they should have been providing patient care. And because equipment couldn't always be found, additional stock was held, or ad-hoc equipment purchased at short-notice. This all meant unnecessary costs.

How was the problem solved?

The clinical engineering team realised the problem could be solved by automating the process of tracking mobile medical devices – using RFID (Radio Frequency Identification). Medical engineers use specially designed trolleys fitted with powerful RFID readers. With a read range of up to 11 meters, these trolleys automatically record the date, time and location of any tagged devices within range. The team also has a small mobile handheld reader with a read range of six meters – used when they perform specific equipment searches or to audit wards.

As of July 2015, a total of 7,500 higher-value medical devices have been fitted with RFID tags and work has begun to fit the remaining 32,500 assets with tags.

How were GS1 standards used to help deliver the solution?

CUH are using unique GS1 GIAI (Global Individual Asset Identifier) keys to identify all devices. GS1 EPC standard tags are used on all these devices to store this information. Before fitting the tags, a thorough test was undertaken to understand where the best location was on each type of device – ensuring maximum performance.

What are the benefits?

As a result of this programme, device utilisation levels have increased – reducing the need to purchase additional equipment and saving considerable unnecessary costs.

Audits now take far less time – down from a typical 90 minutes per ward to just eight minutes. This frees up staff time to focus on other work.

And because the location accuracy of devices is considerably improved, it means clinical staff are now more confident that they are going to receive a device when they request it. Average times for supplying a device to a ward is down to approximately 12 minutes. And increased confidence means clinical staff are less likely to hoard equipment.

The team also have better information about equipment movement and usage, providing vital management information for decision makers at the Trust.

The use of RFID also highlighted potential patient safety issues. For example, the A&E department used to have specific settings on syringe drivers. This sometimes caused problems when these devices were moved to wards where staff were unfamiliar with these settings. Now all 475 syringe drivers have a generic setting and staff are all trained to use them.

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