Demonstrating success in healthcare

Implementing GS1 standards through a health records tracking solution at Barking, Havering & Redbridge University NHS Trust

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Barking, Havering & Redbridge University NHS Trust (BHRUT) needed to make quick but efficient improvements after a Care Quality Commission (CQC) report had challenged their health records management. With two main hospital sites – Queen's Hospital in Romford and King George Hospital in Goodmayes – 6,500 staff, 950 emergency admissions a day, 600,000 out-patient appointments a year and 950 beds, BHRUT is one of the biggest Trusts in East London.

They implemented FIND-IT – a project that allowed them to use GS1 standards, barcodes and RFID tags to track health records.

What was the problem?

It was in 2013 when BHRUT was put into special measures by the CQC and one area questioned was their labour-intensive traditional health records library model. Because of their limited understanding of the whereabouts and complex flows of the records, 40% were out of circulation at any one time and up to 10% weren't available at clinics. And this resulted in cancelled clinics.

Extra staff were employed to find the records, but that had heavy financial implications and resulted in poor staff morale and frustrated clinicians and patients.

With another CQC inspection looming, BHRUT knew they needed to make some real, tangible changes – and quickly. Health records was one good place to start.

How was the problem solved?

After a feasibility study by 6PM, a GS1 UK Industry Partner, BHRUT implemented FIND-IT. The project was a complete process change for them, replacing the management of records by terminal digit filing with a location based system. To BHRUT, this wasn't just a superficial 'add-on' of technology, it was a transformational change programme, enabled through IT. The project also had the added benefit of introducing GS1 standards, in line with the eProcurement Strategy mandate issued by the Department of Health (DH).

A project group led by key Trust and supplier stakeholders set the system up in just five months, on time and to cost, going live on 28 November 2015. The project combined Agile and PRINCE2 project methodology and included a blended training programme for 1,300 staff.

How were GS1 standards used to help deliver the solution?

All records and locations were identified and barcoded using GS1 standards. Using 6PM's iFit software and RFID technology, the tagging of case notes meant mounted readers and handheld scanners could track and locate health records at key locations around the building. They could even work out the direction of travel of the records as the system was updated in real-time with each tag scan.
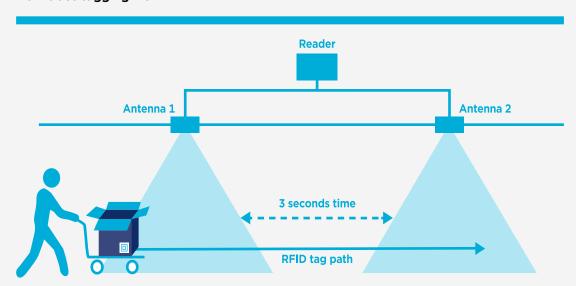
What are the benefits?

The main benefit has been that records are now available when and where they're needed. This has also had a positive effect on both staff and patients, as searching has become so much more efficient.

The new system reduced the amount of time records spent out of the main file and increased record filing speed – it's now 85 per hour, compared to 35 per hour before the system was implemented. Before iFit, it often took 4 or more staff as many as 5 days to file circa 2,000 records. Now 3 members of staff can file circa 2,000 records in a single day, allowing BHRUT to reallocate staff to other vacancies in the hospital.

The feasibility report and subsequent business case predicted a net saving of £1.4m across three years but they're now predicting a £2.4m return with 84% realised in the first year.

How does tagging work?

Reader

Antenna 1

Antenna 2

3 seconds time

RFID tag path

Readers are placed at key locations around the hospital and track records using GS1 GLNs showing direction of travel as the system is updated with tag movement.

Benefits pre and post the new system

ID	Benefit	Before FIND IT	Post FIND IT
B1	Unfunded Headcount	19	0
B2	Creation of Temporary Health records	85 per day	44 per day
B3	GS1 standards met	0	All keys
B4	Global Location Numbers (GLN) Issued	0	65,000
B5	Unavailability of health records at clinic	<10%	<3%
B6	Pulling records (efficiency) per hour	29	35 (20% increase in efficiency)
B7	Filing rate (per person/per day)	90	637 (700% increase in efficiency)
B8	Total financial realisation of the business case (at 3yrs)		84%

There were many other benefits, less easily measurable, such as:

- The increasingly high levels of available records, visibly improved both clinical decisions and patient experience

- Mitigation against any risk of not finding health records for potential legal claims through improved ability to track records

- Improved availability of records for clinical coding and audits as a result of improved ability to track and locate record

- Using RFID supports GS1 compliance and other tracking such as medical devices, beds, samples and pharmaceutical supplies

- Action to improve compliance following the CQC recommendations

- Improved compliance with DH retention policy as a result of new functionality and reporting

- Oversight of the Trust health records through improved reporting enabling visibility and performance

- Staff satisfaction improved as a result of having the right tools for the job

- Infrastructure now in place to support all 7 GS1 Identification Keys – this means they can tag other trust assets

- Improved user satisfaction – with the majority of users preferring the new system

''The new system is a user friendly programme that all staff can use. The hand held scanners are easy to use and give quick result. The tracking sensors throughout the hospital follow the case notes journey through the building and pin points their location. A great improvement on the speed and accuracy of our previous system''.

Sally Donoghue, Ward Clerk, BHRUT