



How better procurement can save time, money and lives

Chris Slater, head of supplies and procurement at Leeds Teaching Hospitals NHS Trust, and the trust's e-business manager **Graham Medwell**, explain its pioneering work on e-enablement, inventory control, materials management and freeing up clinicians for frontline work.

Back in 2002, Leeds Teaching Hospitals NHS Trust became the first hospital in Europe to trade electronically with its major suppliers through the Global Healthcare Exchange (GHX).

The trust has long been a leader on e-enablement for procurement and supplies, and its approach to the use of materials management, inventory management, e-catalogues, barcoding and tracking technology has released critical nursing and clinical time back to the frontline.

Managing the end-to-end supply chain

Head of supplies and procurement, Chris Slater, told NHE: "We've tried to move away from clinicians being involved in anything to do with ordering, replenishment and the supply chain. A materials manager in those areas can manage the end-to-end supply chain from re-ordering to receipting to putting away the products needed on a day-to-day, week-to-week basis. That means we've released as much critical nursing time as possible back to frontline activities and taken those responsibilities away from clinicians."

The trust has a non-pay annual spend of about £300m, of which £160m is controlled or influenced by Slater and his team within central procurement (the exceptions are pharmaceuticals and aspects of estate

management). In total, the trust has 15,000 whole-time equivalent staff, 2,000 beds across five sites (six including the Leeds Dental Institute), with a forecast 2014-15 turnover of just over £1bn.

Slater's team includes about 15 people working in contracting and procurement, and e-business manager Graham Medwell's team of five. The materials management team includes a further 40-45 people who deal with the day-to-day supply chain issues across 59 active theatres and the roughly 320 departments and wards that are part of the materials management process.

Materials management

Slater said: "A number of organisations are now realising the benefit of central materials management – it is being rolled out. If you look at the standard KPIs (key performance indicators) that the Department of Health has issued for procurement, it's seen as best practice."

Slater is clear that the increased digitisation of the supply chain and ordering process has benefits not just in terms of cost, but also with patient safety and risk management.

"Everybody initially thinks it's all about price. Obviously price is in there – in terms of clean

ordering, accuracy of orders, making sure we're asking for the right thing at the right time – but really this is very much about improved patient safety and product visibility down the line. It's not just about the procurement, which is the front-end of the process.

"It is about being able to look at the whole supply chain through to our patients. If we start talking about product recall – for example, with the PIP implants a few years ago, [the NHS] didn't really understand who had got what and it cost the supplier and the NHS and ultimately the patient a lot of aggravation and a lot of money.

"Whereas by linking the data through to the product, and tracking the product through to the patient using the barcode, we've got an end-to-end supply chain right through to patient level now. That's the key driver: to ensure we've got a safe environment for the patient."

AIDC in action

Tracking of products at Leeds is also possible via AIDC (automatic identification and data capture) technologies like the WaveMark RFID 'smart cabinets', which count their own inventory levels.

Medwell said: "It means we know precisely where a lot or batch is located within the



hospital. If you get a field notification relating to a safety aspect, you're able to go directly to those products, instead of looking through thousands and thousands of products to try to find those lot and serial numbers. It's more akin to a retail operation than healthcare, and a big time saving for the nursing staff."

The trust has moved away from paper-based requisition processes. Slater said: "We've come up with a set of solutions, by using the barcode and by getting the staff to enter the barcode electronically, that mean we've managed to set up inventory management in all the major areas within the hospital now. So, effectively we're able to scan the product, scan the patient and then everything in the background is electronic, based on order quantity re-order levels. Most of our major areas and specialities – trauma, spine, neuro-, orthopaedic, cath labs, radiology – are covered."

That means that of the 25,000 different lines of products that the trust orders, multiplied by the number of times each is ordered, 94% are now electronic using barcodes or eDC through materials management.

"We believe that if an average nurse spends an hour per shift looking for products, trying to find products, re-ordering products, then we've saved about £19m of nursing time since 2002," Slater said. "We've built up the accuracy of ordering so RMAs [return merchandise authorities, returning unwanted goods] are virtually non-existent now."

These new processes have also enabled a reduction of 46% in the number of staff needed

to process forms and orders, saving the trust money for re-investment elsewhere.

Stock check

Each go-live with inventory management has revealed about 25-30% more stock than anticipated, Slater said, valued against the year-end stock check.

"That's because stock is often squirreled away – put on top of cabinets, below cabinets – people don't always count it in the proper way. So, importantly, we start to see better practice around stock control, returns and out-of-date stock."

Once inventory management is in place, a clampdown on ordering tends to follow – although Slater admitted that can upset the account managers at the supplier companies, who see ordering patterns dropping in the short term.

"Take one area, trauma, within Leeds: we've got circa £1.5m of stock in there. Between going live in January 2010 and May 2014, the stock value went down by £434,000 – yet we're still providing 99.9% availability on items the Major Trauma Centre department requires."

Another example would be elective orthopaedic stock: since its go-live in August 2008, stock value is down by £424,000, while still providing availability levels of only just under 100%, and on a stock value of £1.8m plus consignment.

Automating the orthopaedic supply chain helped Leeds win the European Supply Chain

Excellence Award in 2009.

Slater said: "In total, we control circa £12m worth of inventory through automated inventory management: that doesn't include the materials management that's going through barcoding."

A complete roll-out will take another three to five years, he said, though he added that the trust would reach a point of diminishing returns based on product value. "Very simplistically, if an item costs below £25, in my view you don't need to be controlling that through formalised inventory [management]. But until we get to that level, where we've got concentration of product and value, we'll continue rolling this out."

Transparent processes

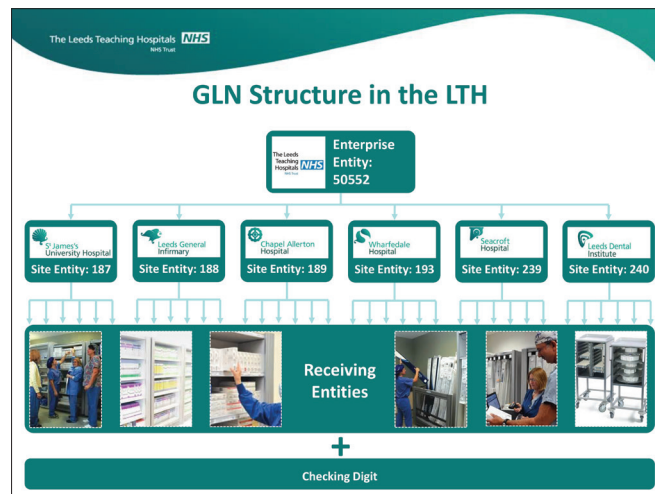
Medwell explained that the cataloguing of products via the GHX Nexus data repository (which contains the trust's catalogue information with secure shared access for both them and their suppliers) also includes lots of information about the attributes and specifications for each product, similar to the retail sector.

"It's all so transparent," he said. "Within the NHS, you can see the products that are actually being used, because you're scanning the patient and then scanning the product into the system. We're also able to look at products excluded from the national tariff, and possibly be able to claim back the cost of those products after tracking their use through to patients and

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Above: The Jubilee Wing at Leeds General Infirmary. Right: A slide from Graham Medwell's presentation.



giving the details to the commissioning team.”

Working with GS1

In June, Medwell gave a presentation on Leeds' progress to the GS1 UK Healthcare Conference in Loughborough.

Leeds has been working with GS1 and its predecessor body for 10 years, submitted case studies to the Department of Health's 'Coding for Success' in 2006, and the team were also involved in the e-enablement strategy with the now-defunct NHS Purchasing and Supply Agency.

The introduction of Global Location Numbers (GLNs) trust-wide is a particular success, Medwell said, and it has been working with Central Manchester University Hospitals NHS FT to implement the same thing there.

NHE spoke to Slater and Medwell on the morning that a new Oracle ERP solution went live at the trust, and Medwell said: “The GLNs are used as part of the new system that's gone live today, so we're able to use the 13-digit GLN to identify all our requisitioning points.”

NHS should make better use of existing technologies

Talking about existing e-enablement technologies and those on the horizon, Medwell said that if the GHX Exchange didn't exist, someone would have to invent it. With that global method of transacting business in place, trusts and suppliers build on it with the use of catalogues, the data pool, and the global synchronisation network to pull information through into a system that already exists.

Slater said: “The technologies that the NHS needs today are out there and are available. Whether the NHS is using those technologies is another matter, at the moment. We've got different catalogue providers, different inventory solution providers; I don't think we're short of technology. However, from our point of view as Leeds Teaching Hospitals, we're always looking at what's in the wings. For instance, we keep an eye on the retail sector – we're probably 10 or 15 years behind retail.”

Supplier compliance

As NHE found when talking to other

procurement managers around the country, one concern is ensuring suppliers take the same steps on compliance that the NHS does.

Slater said: “Suppliers will only do it when they see some benefit for the supply chain, and there is benefit for the supply chain. If we're putting out clean orders, there's a reduction in cost for the supplier, for instance. If we're not having to return goods, there's a saving there. If we're getting invoice prices matched, there's a benefit there.

“The problem is that the standards alone aren't going to give you those benefits. The standards are just an enabler to implement the systems and solutions.

“GS1 is only one of the main building blocks or foundations of e-enablement. Unfortunately, people say ‘I've adopted GS1 standards...away we go’: but no, once you've put the systems in place to use those standards, you've then got to educate the end-users.”

Slater said any barcode-based system, whether in retail or healthcare or any other sector, depends on the end-user scanning it correctly and every time. “At a supermarket, if the operative doesn't put your product across the barcode reader then a) you don't get charged for it, and b) the replenishment of the supply chain does not happen.

“That's exactly the same here; unless you've got their hearts and minds, they can forget to scan in – that causes a problem.”

He noted that clinical staff always need to be won over to trust the system. “If they can't see 10 [of the product] on the shelf – they're not comfortable. Despite what you tell them and show them in terms of back order history, they only feel comfortable with physical stock on the shelf.

“So the data standards are only one part of it; the change management process is the big thing that we as a hospital have to do.”

Supplier relationships

Medwell said: “I've got relationships with supplier representatives in the supply chain, rather than just purely in the traditional area of customer relationships. We have a common thread with supply chain managers in the

private sector, and that all revolves around the data. It's a matter, in many cases, of trying to ‘restrict the creativity’ of other people – because we're trying to ensure there's a flow of information between the two organisations.”

Medwell said that one of the suppliers at the “good end” of the spectrum in terms of data standards is Cook Medical, whose vice president and chief information officer Chuck Franz writes for NHE on page 31.

“The relationships we have with Cook are excellent,” Medwell said. “We're able to link through to their catalogues, they work with us on those, and whenever we create a contract, that information is fed in. Both sides – ourselves and Cook – can see the same data through a portal. So any changes to that have to go through both sides and be agreed by both sides.

“We've worked with them to take dispute resolution from the end of the process, where it normally is – when an invoice comes in and doesn't match – to the beginning of the process when you're creating a contract. That makes an awful lot of difference to the data flowing through, and that's how you link into the standards and ensure clean data – paperless, touchless – from the start to the end.”

Cook Medical took its first steps in moving from separate product portfolios to a single global product catalogue back in 2001, and has been making progress ever since, using the GS1 Standards, Global Trade Item Numbers (GTINs), GLNs, and a GS1 Global Data Synchronisation Network (GDSN)-certified data pool.

Slater added: “I think we at Leeds have got probably one of the slickest order-to-cash processes in the NHS with Cook, because of the systems we've put in place.”



Chris Slater



Graham Medwell

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