GHX

CASE STUDY

NHS National Services Scotland

"We've been able to see real value added, not just in terms of cost savings, but, most importantly, in gaining back clinical time."

— GORDON OATES

TRANSFORMING INVENTORY MANAGEMENT ACROSS AN ENTIRE HEALTH SYSTEM

NHS National Services Scotland and GHX take the transformation of a region's complex processes to the next phase with automated inventory management.

NHS National Services Scotland is made up of 14 territorial NHS Boards which are responsible for the protection and improvement of the population's health, and for the delivery of frontline healthcare services. Additionally, there are eight National NHS Boards, one of which supports the territorial NHS Boards by providing a range of important specialist and national services.

RESULTS

Between eight and 13 hours a week saved for Health Care Support Workers on purchase order creation. This equates to >£1,200 per week and gives that time back to clinical activities.

At least two days a month (~£13,500 pa) Senior Clinical Management time is now being saved as time-consuming analyses aren't necessary due to automation.

Adherence to pre-defined catalogues on the eProcurement system increased to 89% in 2018/19 from 62% in 2017/18. This reduces the chance of higher priced non-contract spend.

System-generated data analysis / reporting means more management time is released for making better informed decisions.

Stock counts are now digitised resulting in a one-off saving of £800-£900 overtime on the day of the annual count.

When continuous stock counting is implemented, there is the potential to remove the remaining cost of ~£200-£300 on every proposed future count.

Goods are now delivered direct to a sub-site satellite facility and stock can be remotely controlled. This negates the need for a physical visit, freeing up time and saving money.

SITUATION

Transforming a region's processes is complex and relies on understanding the intricacies of what's already in place. GHX and NHS National Services Scotland have already established a collaborative working relationship having worked together on previous projects over nearly two decades. This has continued with GHX being asked to guide and advise on the next phase of Scotland's transformation — Inventory management.

This has seen an overhaul of Scotland's inventory management process through the introduction of a national Top Up Service served by the region's National Distribution Centre (NDC, the equivalent of NHS Supply Chain in England) — enabling a move away from the previously laborious manual procurement process. The GHX solution instead enables orders to be transmitted electronically to the NDC.

In addition, the new inventory management process also allows items to be procured in bulk and stored centrally by the NDC warehouse. From here, hospital Top Up Service staff throughout the country can undertake stock control and re-ordering activities using intuitive technology — namely a barcode reader — resulting in a fully automated inventory management process powered by GHX.

Unsurprisingly, moving to an automated process frees up time as well as reducing the opportunity for human error. All 14 Health Boards in Scotland now use the same automated system which is fully interfaced into their national eProcurement system.

To take this one step further, NHS National Services Scotland has now set its sights on rolling out a GS1-capable inventory management system across the whole of Scotland to improve patient safety, free up additional time for clinical care and realise even greater cost savings.

Pilot to transform hospital stock management with GS1 standards:

In addition to the mandatory requirement to be able to track and trace medical devices and implants, the new system needed to include:

intelligent inventory management; and

automation of the Purchase Order placement and Goods Receipts/Returns process

Gordon Oates, Technology Enhancement Programme Manager at NHS National Services Scotland, led the pilot project on behalf of NHS Scotland:

"The current stock management system had reached end of life stage — support was provided manually and it was running on Windows XP. Operating the system was a cumbersome, time-consuming process and we had a critical and unsustainable degree of risk; it was apparent that action was needed.
In selecting a system which would underpin the objectives of the project, already having a solid working relationship with GHX and knowing their solutions to be efficient and intuitive, we trusted them to help find a suitable secure system solution to provide inventory management functionality incorporating GS1 capability."

"The system allows real time recording of procedures and increased transparency of what is being used. Reports, generated at the click of a button can be tailored to the examination, consultant or items used. We have confidence in maintaining accurate patient records as items are scanned at the point of use."

Elizabeth McSorley, *Modality Lead in Interventional Radiology*

SOLUTION

GHX worked closely with the Scottish team to create a durable solution to meet all the objectives, with the aim of controlling expenditure and releasing time for clinical activities while enhancing patient safety.

February 2018 saw the start of the first pilot, which emulated the Scan4Safety initiative in England, in the Interventional Radiology department at Queen Elizabeth University Hospital, NHS Greater Glasgow and Clyde.

The sophisticated inventory management solution implemented for the pilot had many advantages. In addition to automatically reordering stock, it has also allowed the capture of additional attributes including serial numbers, expiry dates and batch numbers. This enhanced data capture has huge implications for patient safety, enabling items to be tracked, even if they have already been used on a patient; a necessity in the event of a recall.

Transformational results

The GS1 Inventory Management Pilot has seen Interventional Radiology capture and cost 3,420 procedures and raised 2,019 Purchase Orders in the first full financial year of operation.

There is now a sophisticated stock management system in place. This uses hand-held scanners to record details of each procedure (Procedure Unique ID, OPCS code, Consultant) from the barcode and text on the procedure sheet produced by the Radiology system. The scanner is then used to capture the GTIN, batch code and expiry date from the barcodes on the packaging of all the higher value consumables and implantable devices used during the procedure.

Following the procedure, the radiologist transmits the information wirelessly from the handset to the system where it becomes a Patient Issue transaction ready for final update into the database. Once the Patient Issue transaction is complete, a Health Care Support Worker 'releases' it using the GHX application installed on a PC. The system then down-dates the stock levels for each of the products recorded in the procedure and finalises the transaction.

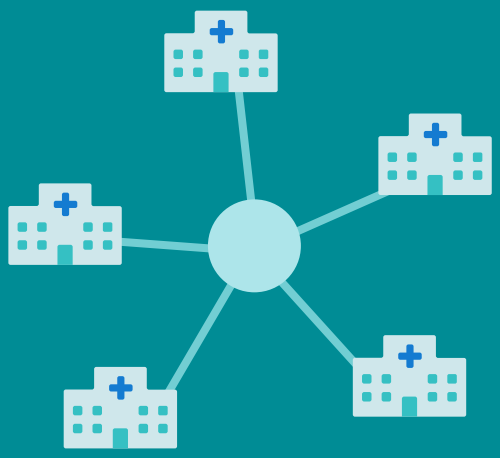
The digital control of stock means less stock holding and wastage. Each day, a stock replenishment routine is run by the Health Care Support Worker. This automatically generates a purchase order proposal for all stocked products that have fallen to, or below,

their pre-defined re-order level. This proposal can be reviewed if necessary, but if re-order levels and re-order quantities have been carefully calculated, the resultant purchase orders (raised to all appropriate suppliers) can be set to be exported immediately to the eProcurement system. From there, they are transmitted to the supplier.

Once goods arrive from the supplier, staff at the central receiving point then transport them to the Interventional Radiology Department. Here, a Health Care Support Worker scans each item to capture the identifying GTIN, batch or lot number and the item expiry date, before physically storing it in the stock location defined on the system.

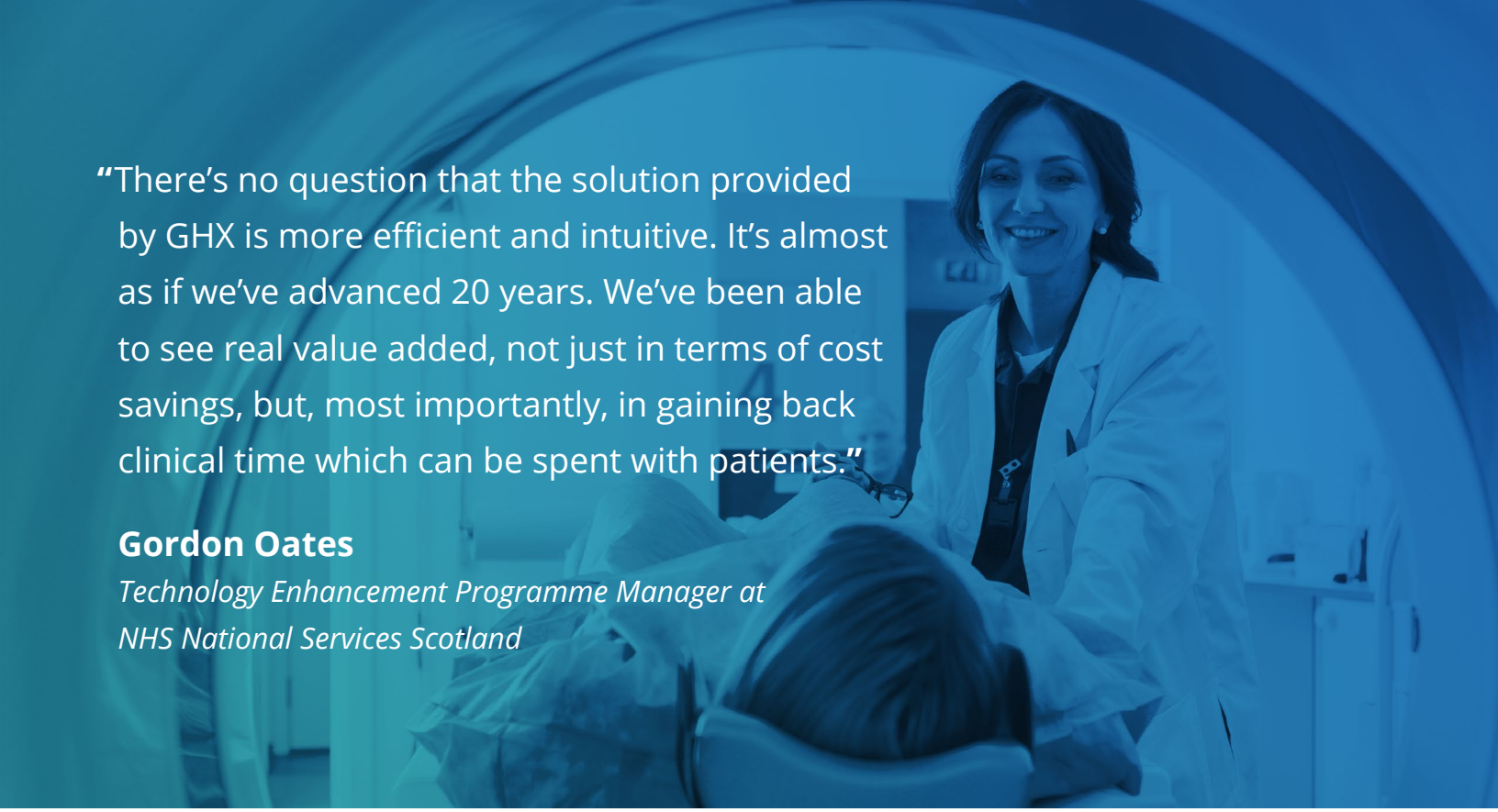
Sub-site stock at the Department's satellite facility at Gartnavel General Hospital, five miles away on the north side of the River Clyde, is now remotely controlled just as effectively as the main store, with suppliers delivering direct to the location when necessary. Product stock levels and shelf life are readily monitored, and replacements can be ordered without the previously necessary time-consuming physical visit to evaluate the requirement.

The rich source of available data related to theatre procedures is also providing a foundation for constructive engagement between clinicians, finance and procurement managers. There is now the ability to compare costings to procedure/consultant/surgeon to identify opportunities for greater efficiency. This data helps monitor clinical variation — one example being the variation in the usage of stents for the same procedure.



"We have implemented the system across multiple sites within the Interventional Radiology service in Glasgow, enabling visibility of all stock items on each site. This has reduced wastage of stock, removed duplication in the stocking of high cost items and enabled rationalisation of stock — leading to financial savings."

Mary MacFarlane
Interventional Service Lead



"There's no question that the solution provided by GHX is more efficient and intuitive. It's almost as if we've advanced 20 years. We've been able to see real value added, not just in terms of cost savings, but, most importantly, in gaining back clinical time which can be spent with patients."

Gordon Oates
Technology Enhancement Programme Manager at NHS National Services Scotland

NEXT STEPS

Given the positive results coming out of the pilot the next objective could be to support a roll-out to all 14 territorial Health Boards across Scotland, and the potential to create a truly centralised process for inventory management.

Ultimately, as proven by Scan4Safety, the application of global standards supports clinicians in providing error-free care, putting patient safety at the heart of the process.

"It was totally apparent that a significant change to the way we did things was needed. We had an out-dated system that's unnecessary in this digital age when the technology is there waiting to transform and streamline processes. Of course, this is an area where we can benefit from external expertise from companies like GHX. If there were to be a national roll-out across Scotland it would make such a difference to our entire healthcare system and the benefits to patients and staff would be huge," concluded Gordon Oates.

GHX

Learn more about Inventory Management
at ghxeurope.com