



## Suppliers and GPOs

# Automating inventory management with GS1 EDI standards

When a fellow healthcare professional remarked about the German healthcare system on Facebook, the University Medical Centre Hamburg-Eppendorf (UKE) decided it was time to take action. The medical centre considered the situation as a good opportunity to finally address issues that had grown over time: increasing costs, time pressures and regulatory compliance requirements. UKE issued an invitation to tender for a vendor-managed inventory (VMI) solution with the goal of “stock optimisation with readily available supply.” With a VMI, a supplier would assume responsibility for the medical centre’s inventory. Johnson & Johnson Medical GmbH proposed taking “the bull by the horns,” no longer accepting half measures, no more Excel lists and no more manual entry.

*By Rüdiger Forster*



## Stock replenishment based on consumption

“Maintaining documentation required for invoicing gets in the way of my work and takes up time that I used to have for my patients,” said an operating theatre nurse with over 20 years of experience. The nurse also mentioned cost pressures and personnel shortages—challenges that would not be easily solved.

Yet, the University Medical Centre Hamburg-Eppendorf decided to take a closer look at areas for potential improvements—processes that impacted patients such as logistics and medical device inventory management. The hospital and one of its major suppliers, Johnson & Johnson, set out to tackle the significant challenges in the inventory management processes and simply abolish list-making.

The strategy included a fully automated process cycle that would calculate on a daily basis which medical devices had been removed from the storeroom. It also provided information about

which of these were “shelf warmers” and which were “fast sellers” or frequently used. With this approach, Johnson & Johnson Medical GmbH was awarded the contract to implement a VMI software solution with Electronic Data Interchange (EDI) based on GS1 standards.

Today, the EDI-based solution is fully operating. It is different from other inventory management systems in that it reports what stock has been actually consumed—versus what products have simply been removed from stock.

Data about stock consumed is accumulated, evaluated and then translated into an optimised order. This allows Johnson & Johnson to deliver precisely the needed quantity for replenishment, at exactly the time needed.

“To do this, only an automated system could master this complex task,” advises Christina Otto, Project Manager, with the Logistics department, University Medical Centre Hamburg-Eppendorf. “The ‘human factor’ could mean responding too late or even incorrectly.”



While the road to implementation wasn't always smooth, the team developed a common strategy and built a partnership based on trust.

## Master data and GS1 standards as the foundation

To enable digital communication between the manufacturer and hospital, data needed to be exchanged directly between their systems. This was implemented with help from a Trinovis subsidiary, GSG Gesellschaft für Standardprozesse im Gesundheitswesen (GSG).

When the hospital staff scans the GS1 barcode on a product's package, the consumption of the product is automatically recorded in the inventory management system. By scanning barcodes, the hospital staff has been able to save 90 percent of the time once required when entering the information manually. As soon the product's inventory level starts to drop, the system notifies the inventory management system to calculate a new level of stock and it automatically places a new order.

As mentioned earlier, GSG was instrumental in establishing the foundation for this process by providing the EDI infrastructure. "As a supplier, we played a key role by increasing the quality of our master data to 100 percent complete and accurate, as the basis for introducing an EDI ordering process," explains Rüdiger Forster, Customer Connectivity & Project Manager with Johnson & Johnson Medical GmbH. "We are also applying GS1 unique device identifiers encoded in barcodes on 100 percent of our medical device products for ease of scanning."

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**Rüdiger Forster**, Customer Connectivity & Project Manager, Johnson & Johnson Medical GmbH

## Positive across the board

The benefits for UKE have been positive across the board.

Stock levels have been reduced by streamlining the mix of products to levels that are actually needed, while achieving just-in-time delivery. As a result, the medical centre now benefits from higher stock availability, the ability to plan, a reduction in inventory levels and an electronic process that includes a history of products consumed.

In addition, the foundation for meeting regulatory requirements has also been established. Compliance with the German Ordinance on the Dispensing of Medical Devices (MPAV) and the new EU Medical Device Regulation (MDR), including the use of the Unique Device Identifier (UDI), is now achievable with time- and labour-saving processes based on accurate master data and electronic documentation procedures.

In turn, Johnson & Johnson Medical GmbH has benefitted from a reliable revenue stream as a result of long-term contracts with the medical centre. Having optimised available inventory levels and the ability to respond quickly in the event that a product is changed has led to the improved identification of discrepancies and fewer errors overall.

## Trust is elementary

A triple-win situation has been achieved since time savings for caregivers translates into more time dedicated to patients. "With all the conflicting priorities that hospitals must deal with today, achieving this goal highlights the importance of upstream and downstream processes in the hospital's daily operations," says Forster. "This is where changes need to be made."

What are the key contributors of a successful implementation? Johnson & Johnson Medical GmbH advises that putting patients and their best interests first, followed by closely collaborating with the hospital are key contributors. These two strategies not only guarantee a successful implementation of a comprehensive VMI, but also enable a supplier to fulfil the mutual goals that it has with the hospital. This flagship project for the UKE is an ideal example of a supplier-hospital partnership in action.

## By the numbers

Based on the new inventory management processes enabled by GS1 EDI standards, the University Medical Centre Hamburg-Eppendorf and Johnson & Johnson Medical GmbH are experiencing the following benefits:

- ✓ **75 percent fewer errors in the EDI process**, thanks to verified and continually updated master data that can be reliably mapped to hospital-specific data
- ✓ **40 to 60 percent less work involved in the ordering process** based on the automated consolidation of consumption notifications
- ✓ **75 percent fewer errors in the EDI process** due to bad master data
- ✓ **40 percent reduction in inventory levels**
- ✓ **44 percent fewer deliveries**

### About the Author



**Rüdiger Forster** works as Customer Connectivity & Project Manager for Johnson & Johnson Medical GmbH with a focus on Customer Service, Supply Chain & Logistics. He has created a successful EDI business based on GS1 standards to optimise order-to-cash and delivery processes

as his strong contribution in diverse customer projects over the last four years, thus improving the customer experience in end-to-end processes.

### About Johnson & Johnson Medical GmbH

Founded in 1956, **Johnson & Johnson Medical GmbH** is based in Norderstedt, Germany and operates as a subsidiary of Advanced Sterilization Products Services Inc. It manufactures and markets medical products and solutions for wound closure, general surgery, gynecology, minimally invasive procedures, and for metabolic surgery. The company offers needle and mesh production, braiding, finished goods production, sterilization, and research and development.

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### About the University Medical Centre Hamburg -Eppendorf

**The University Medical Centre Hamburg-Eppendorf (UKE)** is one of Europe's most modern hospitals. It has over 1,700 beds, and every year its 10,000 staff treats approximately 95,000 inpatients and some 335,000 outpatients. Specialists in different disciplines collaborate, maintaining close links between medicine, research and teaching. Many specialist fields are available in the diagnosis and treatment of highly complex diseases in the areas of oncology, transplants, cardiac diseases, neurosurgery, systemic diseases in childhood, urology and many others.

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