



## Healthcare providers

# Mercy advises that collaboration is the best medicine

GS1 standards are providing the Mercy healthcare system with the needed foundation for automating its operations. And, as its cross-functional team demonstrates, collaboration is the mortar that is enabling its steady digital transformation to address challenges from compliance to care to cost containment. As a result, Mercy has increased its operational efficiency and productivity while continuing to focus on improved patient safety and outcomes. Case in point: Charge capture in its highest cost area—surgery—has improved by 28-30 percent. This has resulted in more than a \$340 charge capture per procedure and the documentation of tens of millions of charges not previously captured.

*By Betty Jo Rocchio and Matthew Mentel*



## Care, cost containment and compliance

For more than a decade, the healthcare industry has endeavoured to meet the challenges of improving patient care with an expanded focus on outcomes, cost containment and the ever-growing demand of regulatory compliance. As specialised care has, in many instances, become much more customised—treatments tailored to a single patient's genome rather than to a widespread disease—the need for increased efficiencies has become more urgent than ever before.

While healthcare providers continue to focus on the delivery of improved patient outcomes and safety, they are also making significant changes to streamline processes while striving to comply with emerging regulations.

To this end, healthcare providers and suppliers alike are partnering with GS1 US as well as one another to champion industry initiatives and help

government agencies to formulate regulations. The connection between voluntary initiatives and government regulations is increasingly evident as compliance moves from suppliers to healthcare providers. (See sidebar on page 61.)

For hospitals that are now on the frontlines of compliance and improving long-held processes in the interest of visibility, safety and efficiency, new relationships within their own institutions are being forged. This is especially evident at Mercy, the fifth largest Catholic healthcare system in the United States.

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## Change requires collaboration

“For collaboration to be successful, there must be a partnership between all aspects of operations, including clinical, supply chain, finance, revenue and other relevant functions,” says Matthew Mentel, Executive Director for Business Transformation and Integration at Mercy.

Mentel leads a centre of excellence team that focuses on driving improvements throughout Mercy’s operations. “Our team concentrates on finding new and better ways of helping our staff and clinicians work—improving processes that will deliver better outcomes to what our coworkers do on a daily basis,” continues Mentel. “Our focus is to improve patient care and the clinical experience.”

Mentel’s clinical colleague and collaborator agrees. “Before I came to Mercy, my vision of the supply chain organisation was that they simply assisted us in what we needed in the operating room (OR), so that we could take care of patients,” says Betty Jo Rocchio, Chief Nursing Optimization Officer. “I didn’t appreciate the complexity of the supply chain nor did I view it as a strategy. Processes like inventory management were somewhat foreign to me.”

“ We’re working to optimise our inventory, ensuring that the products we are bringing into the OR are managed by our supply chain colleagues and that the cost per case and the charges are accurately captured and documented. This is huge for us because it’s how we both measure ourselves financially and, most importantly, document how we cared for the patient.”

**Betty Jo Rocchio**, Chief Nursing Optimization Officer, Mercy

## System preferences

The collaboration between Rocchio’s perioperative team and Mentel’s team began in earnest when Rocchio was trying to find efficiencies to optimise Mercy’s preference cards, the “recipe card” of the operating room that provides a set of instructions for the supplies and equipment required for every case or surgical procedure.

### At the centre of compliance

The 2013 Drug Supply Chain Security Act (DSCSA) mandated adopting lot-level standards among all supply chain partners, manufacturers and distributors. The DSCSA is now moving toward item-level serialisation, which can be accessed by healthcare providers for patient safety in the next two years.

In 2013, the US Food and Drug Administration (FDA) established the Unique Device Identification regulation to “adequately identify medical devices through their distribution and use.” When fully implemented by the 2020 deadline, the label on most devices will include a unique device identifier (UDI) in human- and machine-readable forms, ultimately readable by the caregiving community.

Healthcare providers have been at the forefront of the transition to Electronic Health Records (EHRs) as part of a mandate within the American Recovery and Reinvestment Act enacted in 2009. An important part of the EHR regulation provides criteria for doctors and other caregivers to be certified for “meaningful use.” The Meaningful Use Stage 3 requirements make it a requirement to capture UDI on implantable devices, beginning in 2018.

Throughout the evolution of these programmes and regulations, GS1 standards have provided the needed foundation for enabling compliance by pharmaceutical and medical device manufacturers, supply chain participants including distributors, warehouses and shippers, and by healthcare providers—all with a focus on better patient outcomes and safety.

**GS1 standards in OR workflow**



**1** A surgical case is scheduled and matched with a preference card.



**4** Upon procedure completion, the case cart contents are verified via two-way confirmation.



**2** Preference card items are picked and scanned, including products required, those that may be needed, and those that are supplementary.



**5** Unused products are scanned and returned to inventory.



**3** Case cart enters the OR and product required and scanned are used during the procedure. Products that are needed and add-on products may be used, requiring a barcode scan before use.



**6** Consumed products are replenished as directed.

Each surgeon may have a unique set of requirements spelled out for the procedures performed. Mercy’s 259 operating rooms within its 45 healthcare facilities in Missouri, Oklahoma and Arkansas, are governed by preference cards for its thousands of cases.

“What I have come to learn is that preference cards really represent inventory management, not merely items on a list that we use in surgery,” Rocchio says. “I turned to Matt’s centre of excellence team to examine the problem to see if there was any technology that could assist us in ‘cleaning up’ the preference cards.”

As the two teams began to tackle the preference card process, both recognised the value of taking a holistic approach. “Each of our functions had a different approach to the problem,” Mentel says. “The challenge became, how do we do something that allows all points of view to come together for an integrated solution.”

“We expanded our scope and looked at enhancing our operational work flows, both clinical and supply chain. That was key,” Rocchio says.

The work of Mentel’s and Rocchio’s teams dovetailed with the concurrent need to adopt processes surrounding UDI that were moving from healthcare manufacturers’ production lines into healthcare providers’ operations such as the OR.

In addition to leveraging the benefits of UDI in their systems, the inventory management aspects

of the improvements are not inconsequential. Mercy’s ORs hold the dual distinction of being among the highest cost centres as well as the highest revenue-generating centre for the non-profit system.

“We’re working to optimise our inventory, ensuring that the products we are bringing into the OR are managed by our supply chain colleagues and that the cost per case and the charges are accurately captured and documented,” Rocchio says. “This is huge for us because it’s how we both measure ourselves financially and, most importantly, document how we care for the patient.”

No one remains naïve to the increases in healthcare costs. Institutions that can efficiently deliver superior care while they control their costs will best serve their communities. And because surgical care is the most expensive, its cost-of-care makes it among the most obvious areas for improvement.

### Surgical precision

“Perioperative services represent from 40-50 percent of any hospital’s revenue stream. It’s essentially a business within a business,” explains Rocchio. “You have to deliver quality care to be successful in that business, but once you hit the quality care mark, you need to look at the cost of that care. And the very most

successful organisations today and in the future are going to be delivering that same or higher quality for less cost.”

Being able to identify the exact products that an OR is using in every single case helps establish the cost and reduce risk to the patient. “GS1 standards and barcodes allow us to consume a product, capture it in a highly technological system, identify any product expiry or recall and understand our true cost of care,” Rocchio says. “Mercy wants to know the cost of delivering that care so we can tie it to a quality outcome for comparative effectiveness.”

A new product may have clinical advantages, but it may be a device never seen before in the OR. A surgeon about to perform a complex procedure with an instrument or product never seen before can affect an unknown outcome. “That’s a lot of variability to work through,” Rocchio says. “There is a lot to consider—a contracting strategy, an item management approach and a preference card process.”

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A unique product identifier like the GS1 Global Trade Item Number® (GTIN®) helps the system track the product’s origin, its attributes, including expiration date, and once consumed, its cost and contribution to patient well-being 30, 60 or 90 days post-surgery. Post-market surveillance of the patient is impossible if data is not linked. And data can be linked with help from barcodes based on GS1 standards.

“Product identification becomes so important in this instance. The reality is that on the clinical side, it’s not about cost. It’s about ‘how do I make sure I reduce risk and provide the best possible care to the patient?’ Using barcodes based on standards allows us to deliver healthcare consistently and into the future,” says Rocchio.

“An accurate barcode that can be quickly and simply scanned by caregivers, so they can focus their complete attention on the patient and not try to interpret what was said by someone who manufactured that product three cycles ago,” Mentel adds. “These are the things that are important.”

## A full circle

But the true measure of its success is the widespread collaboration Mercy has achieved. Hospital representatives proudly tell the story of the surgeon who asked to use a product before it was scanned. The circulating nurse stopped the surgery and said, “Doctor, please recognise we’re scanning a product to make sure it’s been properly identified, to see if it’s been recalled or expired before you put it in that patient’s body. Do you want to go around that process?” He said: “I do not. Scan the product. I can wait.”

There are still obstacles to seamless operations, in both senses of the word, some of which are occurring upstream. Manufacturers may not be applying the proper barcodes to products or are applying multiple barcodes that can be a source of confusion in the OR. Some suppliers are using a single GTIN for several similar, but not identical, products. These issues associated with the implementation of standards and barcodes are being corrected throughout the healthcare supply chain and will eventually impact providers like Mercy.

Rocchio has high praises for the changes being realised by the use of GS1 standards in product identification. She urges the improvement of the preference cards themselves—the roadmap to any surgical procedure, some of which may not have changed in years.

“Charges are taken from the preference card. Now we have a system for keeping preference cards cleaned up. We have a system for scanning products. And the back half of the system checks us to make sure what we brought into the room is consumed and charged or it shows up to be put back in inventory. It goes full circle to make sure we’ve obtained charge capture,” Rocchio says.

Rocchio believes this ultimately leads to improved clinical user satisfaction. She also stresses: “I’m not making any more money by optimising charge capture, but what I am doing is being able to provide the true cost of care in every single procedure.”



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### Bottom-line benefits

Both Mentel and Rocchio stress how standards are helping in the important area of inventory management - not expending labour to pull unneeded product that then has to be returned to inventory.

“It may seem a low priority, but the amount of time spent on a redundant activity increases your risk of inaccuracy. And obviously optimally managed inventory is huge for everybody. You must have complete visibility to what you have if you want to optimise it,” Mentel says.

The partnership between business operations and clinical operations is clearly one of the keys to Mercy’s ongoing success in adopting GS1 standards throughout the system, not just as a means of compliance, but leveraging standards to make vast system improvements. More than just generating data, barcodes accelerate pre-op and post-op processes because information is instantly available and inventory replenishment is vastly improved.

“We’ve already noticed a 28-30 percent improvement in the identification of supply charges being captured per [surgical] case. These are products that we thought we were capturing that we weren’t. We have much better visibility into our cost per case now,” Mentel says.

The charge capture improvements equal more than \$340 in additional charge capture per surgical case. With over 250 operating rooms doing multiple procedures every day of the year, the cost capture improvement equates to tens of millions of dollars now documented by Mercy.

“You can’t have this unless you have unique product identification. It’s the barcodes that facilitate this capture and reduces the burden on operations,” Mentel concludes.

Rocchio adds: “Healthcare systems cannot afford to ignore GS1 standards for UDI and so much more. It’s going to be the foundation of our business, our future.”



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**Matthew Mentel**, Executive Director for Business Transformation and Integration, is responsible for identifying, designing and implementing creative solutions as well as leveraging current technology to drive efficiency and expense reduction throughout Mercy. He oversees several key initiatives that seek to optimise the use of tools, technology, process improvement and metrics across the entire care continuum, driving more predictive and outcome-based decisions that help improve and enrich the Mercy experience for caregivers and patients.

Matthew has more than 25 years of experience in healthcare, including 17 years in supply chain and information technology. His career includes service to a variety of other healthcare providers, including ROI (Resource Optimisation & Innovation), SSM Healthcare System, BJC Healthcare and St. Louis University Hospital, as well as a healthcare consulting/accounting firm.

#### About the Authors



**Betty Jo Rocchio**, Chief Nursing Optimization Officer, has oversight and leadership accountability for 45 plus clinical and procedural areas across four states within Mercy. She manages the quality, service and financial initiatives for Perioperative Services, Cath and EP Labs, and GI

Labs. This includes a \$2.8 billion revenue stream and \$550 million cost structure.

Betty Jo has more than 26 years of experience in healthcare, including 20 years in various leadership positions in Perioperative Services and Procedural Areas. These include Chief Nurse Anesthetist, VP Nursing and CNO, System Director of Surgical Services, and now Vice President of Perioperative and Procedural Areas. At Mercy, Betty Jo is focused on developing the Triple Aim strategy for her areas and advancing the three key operating paths—clinical, operational and financial—to help successfully position Mercy for the next phase in healthcare.

#### About Mercy

**Mercy** was founded by the Sisters of Mercy in 1986, but its heritage goes back more than 185 years. It began with an Irish woman named Catherine McAuley, who wanted to help the poor women and children of Dublin. Though Catherine had a modest upbringing, she received an unexpected inheritance that allowed her to fulfil her dreams. In 1827, she opened the first House of Mercy in Dublin, intending to teach skills to poor women and educate children. Many volunteers came to help. A few years later, Catherine founded the Sisters of Mercy, the first religious order not bound to the rules of the cloister, whose Sisters were free to walk among the poor and visit them in their homes. By the time Catherine died in 1841, there were convents in Ireland and England, and in 1843, the Sisters of Mercy came to the United States. In 1871, they traveled to St. Louis and from there throughout the Midwest, beginning what would, today be known as Mercy.

[www.mercy.net](http://www.mercy.net)