

BJC HealthCare's Global Data Standardisation Initiative: Putting supply chain data to work

ABSTRACT

BJC HealthCare, one of the largest nonprofit Healthcare organisations in the U.S., is seeking a way to automate the process of tracking products from the point of manufacture to the point of use in order to help improve patient outcomes and reduce supply chain costs. This case study details how BJC successfully worked with GHX and GS1 Healthcare US to implement the use of Global Location Numbers (GLNs) to identify organisations and locations and Global Trade Item Numbers (GTINs) to identify products in business transactions with suppliers and other Healthcare trading partners. Today, BJC is using GLNs in all of its purchase orders transmitted through the GHX exchange and is prepared to transact with GTINs as its vendors enumerate their products with this standard.



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The need for consistent data

Accurate, consistent purchasing data is key to BJC HealthCare being able to reduce costs while improving patient outcomes. The Healthcare system realised that it could improve the quality of its data if all of the parties with which it transacts use the same unique numbers to identify organisations, locations, and products. Toward this end, BJC chose to adopt GS1 Global Location Numbers (GLNs) and Global Trade Item Numbers (GTINs) for organization/location and product identification, respectively.

Defining the project scope

Before BJC could begin using GLNs and GTINs, it had to define the scope of its standards enablement project. Not only did the organisation want to enumerate its bill-to and ship-to locations with GLNs, it also wanted to successfully use both GLNs and GTINs in business transactions. This required BJC to closely collaborate with its trading partners and technology vendors so that it could communicate its needs and all parties could agree on the rules that would govern the transactions.

Members of BJC's materials management team worked with GS1 Healthcare US® and BJC's e-commerce partner GHX to define what it would need in terms of staffing, technologies and financial resources to carry out such a comprehensive project. They then developed a standards enablement plan that outlined the process from start to finish.

Defining the data

The first step was for BJC to define which locations it wanted to enumerate with GLNs. It chose to enumerate those bill-to and ship-to locations that it used in transactions with trading partners. It then narrowed the focus by omitting locations for Just-In-Time (JIT) and desktop deliveries.

BJC's materials management team then had to determine which locations were active. They generated a report that included all of BJC's ship-to and bill-to locations. They shared the list of ship-to locations with the organisation's distribution department and the list of bill-to locations with its accounts payable department to validate which locations were truly active and ensure that no active locations were missing. From there, they deleted inactive locations from BJC's systems and added any new sites identified. Through this process, they determined that BJC had approximately 100 active ship-to locations and three active bill-to locations.





Validating the locations

BJC's group purchasing organisation (GPO), Novation, had enumerated BJC on its behalf in the GS1 US GLN Registry for Healthcare®. It was BJC's responsibility to validate its enumerated locations within the Registry to ensure they were accurate.

BJC's materials management team generated a report containing BJC's active bill-to and ship-to locations and compared this list to the locations that Novation had enumerated in the Registry. They found that there were active locations missing from the Registry, as well as locations that were enumerated in the Registry but missing from BJC's internal list. When they found an enumerated bill-to or ship-to location in the Registry that was not on BJC's list of active locations, they called the location to determine if it was owned by BJC and then confirmed the validity of the location with the organisation's finance department. If it was a valid location, they would add it to BJC's internal list.

Once the team had reconciled BJC's locations within the Registry, they built a cross-reference table to establish a one-to-one relationship between BJC's GLNs and its ship-to and bill-to locations. This table would serve as a crosswalk to bridge the ship-to and bill-to locations to the GLNs during BJC's electronic transactions with trading partners.

Location Name	Street Address	GLN
ALTON MEMORIAL HOSPITAL	ONE MEMORIAL DRIVE, ALTON, IL.	1100003663918

Reconciling GLNs with trading partners

The next step was to reconcile BJC's GLNs to its trading partners' data values, including its GPO membership identification numbers (IDs), supplier account numbers and its e-commerce partner's facility IDs. BJC improved the accuracy of its supply chain data by correcting errors, deleting duplicate or inactive locations, adding missing locations, and consolidating multiple account numbers.

Reconciling GLNs with a GPO

The team reconciled BJC's GLNs with Novation's membership roster by establishing a one-to-one relationship within its cross-reference table between BJC's ship-to and bill-to locations, GLNs and GPO membership IDs and submitting the table to Novation, which was then able to ensure that it was using the correct GLNs for BJC's locations in its roster.

Location Name	Street Address	GLN	GPO ID
ALTON MEMORIAL HOSPITAL	ONE MEMORIAL DRIVE, ALTON, IL.	1100003663918	123

They found instances where Novation's membership roster contained locations that BJC had not accounted for during its GLN reconciliation. In some cases, these were ship-to locations for affiliates that BJC does not own but for which it receives rebates. They added these locations and their corresponding GLNs to BJC's cross-reference table to ensure that the organisation did not lose its rebates. In other cases, where they identified affiliate locations for which BJC did not receive rebates, Novation took control of the GLNs for these locations and BJC removed the locations from its cross-reference table.

Reconciling GLNs with suppliers

BJC then reconciled its GLNs with its suppliers. For each supplier, the team added its supplier-assigned account numbers to the corresponding locations, GLNs, and GPO IDs in its cross-reference table and then sent this table to the supplier to verify that its systems contained the same account number/location matching.

Location Name	Street Address	GLN	GPO ID	Supplier Account Number
ALTON MEMORIAL HOSPITAL	ONE MEMORIAL DRIVE, ALTON, IL.	1100003663918	123	12345

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The team found that, in some cases, BJC had between four and six supplier-assigned account numbers for the same ship-to locations. With 100 ship-to locations and 4,600 suppliers, they faced the possibility of managing over 1 million account numbers. This caused a variety of issues, including products shipped to the wrong locations, increasing costs for both BJC and its suppliers.

Instead of replacing all of its supplier-assigned account numbers with GLNs, BJC engaged its suppliers in a reconciliation process whereby it eliminated any account numbers that did not serve a legitimate business purpose. When it was deemed necessary to keep more than one account number for the same location, BJC would assign a new GLN to this account number so that there was always a one-to-one relationship between account numbers and GLNs.

Reconciling GLNs with an e-Commerce partner

The final step was for BJC to reconcile its GLNs with its e-commerce partner. The team worked closely with GHX to ensure that BJC's cross-reference table met the necessary requirements for e-commerce.

Transacting with suppliers using GLNs

BJC participated in a GLN enablement programme with GHX to use GLNs in transactions sent through the exchange. One of the challenges was that most of BJC's suppliers are not yet ready to accept and process GLNs in electronic transactions.

To address this issue, BJC can send both its GLNs and its supplier's account numbers on 850 purchase orders (POs) to suppliers. When BJC submits an electronic data exchange (EDI) transaction through the exchange, its enterprise resource planning (ERP) system selects and transmits both the GLN and account number for the specified location. If a supplier cannot accept the GLN, GHX suppresses it so that the supplier receives only the account number.

While BJC initially reconciled GLNs with its suppliers, GHX now performs this process for the organisation. For those suppliers that can accept GLNs in electronic transactions, GHX also works with both the supplier and BJC to ensure that transactions are successfully processed. BJC's EDI coordinator works with GHX and the supplier to complete the re-boarding process through which BJC and the supplier reconcile BJC's GLNs with the supplier's active account numbers. Each time BJC begins transacting with a supplier using GLNs through the exchange, GHX tests the initial transactions sent by the trading partner pair to ensure that each party has the data it needs to successfully transact.

For suppliers that do not conduct business electronically, BJC works directly with them to transition from account numbers to GLNs. When a supplier is ready to accept GLNs, BJC inserts a GLN in the address field of the transaction so that it prints on the paper PO, which is manually delivered to the supplier.

Preparing for GTINs

For the past 10 years, BJC transacted with three of its vendors using a different industry standard for product identification. As a result, BJC was set up to hold product identifiers and had no trouble preparing its systems to store and process the GTINs. BJC's current ERP system features an item number field that can store the 14-character GTIN and output it on 850 PO transactions. As a result, BJC is prepared to conduct business transactions with trading partners using the GTINs as soon as suppliers begin using this standard in place of proprietary item numbers.

BJC is upgrading to a new ERP system, which has the ability to tie multiple GTINs under one BJC item number. This will enable BJC to use GTINs to manage its inventory by specific packaging levels. Once a supplier enumerates products with GTINs at each specific packaging level, BJC can record that it has received a case of a specific product, and using a bar code scanner, account for the fact that it has decremented its inventory by a box or by an individual item. BJC will also tie its ERP system into other internal systems to automate additional supply chain functions. For example, when a product is scanned and used, a PO could be automatically generated and sent through GHX to reorder that specific item.

GLN/GTIN status today

Today, BJC is transmitting GLNs on all transactions sent to suppliers through the exchange. It has completed the GLN reconciliation process with 15 of its suppliers, 10 of which have the capability to accept GLNs in EDI transactions. GHX is currently suppressing GLNs and sending only account numbers for those suppliers who are not yet capable of processing transactions containing GLNs. This keeps electronic transactions flowing through the exchange while preparing BJC to transact with GLNs. Although none of its suppliers have indicated that they are prepared to transact with GTINs at this time, BJC will be ready when they are.

The ultimate solution

As an organisation dedicated to continually improving the delivery of Healthcare, BJC has adopted GS1 Standards to not only address current challenges in operational management and patient care, but also to set the stage for future advancements. The BJC materials management team is working to achieve the "Ultimate Solution," an integrated network of systems through which the Healthcare industry could track product usage and patient outcomes and automate supply chain processes to increase operational efficiency, reduce costs and improve patient care.

In order to achieve BJC's vision, all supply chain partners need to take an active role in product tracking. Manufacturers and distributors would feed sales tracing reports to a central data repository. These reports would include GLNs for the providers who purchased the products and GTINs for the products sold. Providers would integrate their bedside, operating room, supply chain, billing and medical records systems so when a clinician

scans a product at the point of use, the information contained within the GTIN would be automatically transmitted to each of these systems to facilitate a broad range of processes – from decrementing the provider's inventory to recording product usage in the patient's electronic medical record.

Scanning every product used on a patient and automatically documenting product details would improve efficiencies by reducing the manual labor currently required for these tasks, increase patient safety by better managing product recalls and help providers enhance the quality of patient care.

Conclusion

For over 30 years, retailers have been using the Universal Product Code (U.P.C.) to uniquely identify consumer products, which has enabled the retail industry to achieve greater supply chain accuracy, efficiency and visibility. While the Healthcare industry can look to the retail sector for best practices in standards adoption and product tracking, trading partners must first address the complexities inherent to our industry, including the fact that we have thousands of facilities, thousands of departments, hundreds of software platforms and millions of people utilizing these systems and functions. Collaboration is

key to overcoming this challenge. In order for the Healthcare industry to make progress in this area, providers, suppliers and technology vendors need to come together, communicate their needs and develop a mutually beneficial solution.

ABOUT THE AUTHOR

Tom Stenger, Manager, MMIS & Analysis, BJC HealthCare

Tom Stenger is responsible for the development, integration, training and support of material services technologies for BJC HealthCare. Under his direction, the system successfully converted to a single MMIS from seven different programmes and nine different databases. He also developed an item master database that manages the systems contracts. A long-time proponent of supply chain standards adoption, Stenger participates in numerous industry standards groups and is a pioneer in adapting technology to enable the use of standards in business transactions. He holds a Masters of Science in Finance, with honors, from St. Louis University.

