

# **A Provider's Guide To System Readiness For GS1 Standards**

Hospital, supplier, and technology provider perspectives

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## **Overview:**

As the global healthcare industry embraces its most comprehensive effort to improve patient safety and supply chain effectiveness through a standard product and location identification system, providers in the U.S. are challenged not only to understand and implement the GS1 Standards methodology, but to ready their technology platform and update their overall approach to data to meet GS1 requirements.

While many resources exist to promote awareness of GS1 and its benefits, this guide aims to deliver a practical look at how hospitals, their suppliers and their system providers can work together to help ensure the necessary technology infrastructure and data best practices are in place to support a successful GS1 initiative.

# Introduction to the GS1 Healthcare Initiative

## Adopting a common language for global healthcare

### **Data standards will help improve patient safety and battle escalating supply costs**

The healthcare supply chain forms the backbone of our health and wellness system, supporting nearly every provider organization regardless of location or scale. Every operation, from vast networks of hospitals and clinics to the smallest medical facilities, understands that effective care requires the right supplies, for the right patient, at the right time.

Yet despite its crucial role, the global healthcare supply chain remains affected by inefficiencies, unnecessary expenses, and most troubling, a potential for errors that can impact not only organizational resources, but patient care and safety. While many leading providers have made great strides on their own to remedy these issues, a full solution can only occur when the entire industry adopts consistent product and location identification standards.

Industries of similar size, such as retail and grocery, put a common trade language in place many years ago, demonstrating the soundness and benefits of such an approach. Healthcare in the 21st century is just beginning its implementation of standards through GS1 Healthcare US. This organization is a voluntary, national industry user group that supports the adoption and implementation of global GS1 Standards for the healthcare supply chain. GS1 Healthcare US oversees the uniform set of data protocols for the healthcare supply chain, and provides leadership and resources to assist providers, suppliers, and manufacturers in adoption and utilization.

### **Custom methods hamper distribution, tax resources**

A lack of industry-wide product identification standards has hampered healthcare in its efforts to improve supply chain efficiency and accuracy. In most cases, each healthcare organization created its own product identification codes, set up proprietary tracking systems for inventory, and developed custom nomenclature for accounts and items. Other healthcare providers, suppliers – even separate facilities within the same organization – did the same, generating masses of inconsistent data that can lead to everything from supply outages to duplicate orders.

An identical product may exist with dozens of different product numbers and names, disparate machine readable codes, and even various language translations, all resulting in confusion and a greater chance of errors or exceptions. Likewise, individual locations can attain numerous labels, with each supplier and provider developing their own nomenclature for ship-to and bill-to entities, making it more difficult to ensure accurate shipments and pricing across the organization.

Every custom entry adds a level of complexity that not only clogs the supply chain, but can compromise patient care. Tracking contract pricing and rebates becomes an arduous task. The order cycle takes far longer than necessary. Critical safety checks like recalls can spiral into cumbersome organizational issues.

With supplies alone estimated to comprise a significant portion of the total cost of healthcare, and quality care always at the forefront of a healthcare organization's mission, the case for wholesale improvements becomes clear.

**Standardized methodology facilitates communication**

GS1 Healthcare US introduces for the first time a feasible infrastructure for worldwide healthcare. Applying data standards to the supply chain helps healthcare organizations to more accurately locate and identify supplies as they are ordered, received, distributed, and utilized throughout their facilities and across their supplier networks.

Its initial phase develops a standard hierarchy for organizing a provider's shipping, delivery, and billing locations, and creates a registry of unique location data for every U.S. provider, supplier and group purchasing organization (GPO) to access. Its second phase targets manufacturers with standards for clearly and uniquely identifying products by type, level of packaging and unit of measurement.

Benefits for healthcare organizations may include:

- Reducing supply costs.
- Attaining more accurate pricing.
- Reducing ordering, shipping and procurement errors.
- Improving patient care and safety.
- Ensuring critical supplies and resources are available at the point of care.

In addition, GS1 Standards will help streamline the resources required to comply with Food and Drug Administration (FDA) recalls and industry regulatory initiatives by instituting a common framework to identify product at all points in the supply chain.

GS1 Standards for healthcare will help:

- Further traceability and authentication systems to fight counterfeiting.
- Improve the product recall process.
- Promote AIDC systems all the way to point-of-care or point-of-sale.
- Support patient safety initiatives.
- Reduce medication errors.
- Support regulatory compliance.
- Increase overall supply chain efficiency.

Dennis Harrison, president of GS1 Healthcare US, summarizes the importance of standards. "As other industries have proven, adoption of a standard identification system yields a myriad of benefits, from increased accuracy and reduced costs to better communication and speed all across the supply chain," he says. "We're excited that healthcare organizations are seizing these advantages."

# GS1 Standards and your system:

## Technology plays pivotal role in adoption process

### Understanding the GS1 architecture

As healthcare begins its industry-wide adoption initiative, the technology required to support data standardization needs to be enhanced hand-in-hand with an organization's offline efforts. Likewise, it's critical that providers develop ongoing policies for data hygiene and updates, so the new GS1 information remains accurate and is highly integrated across systems, business processes, and departments.

As a first step, it's important to understand how the fundamental elements of the GS1 System of standards create a foundation not just for communications, but for your Enterprise Resource Planning (ERP) system.

### GS1 System components:

Item	Definition
<b>Global Location Number / GLN</b>	A unique 13-digit number for provider locations and supply chain partners that identifies a physical location, legal, or functional entity where a product may be stored or shipped. Each GLN includes attributes, such as name, address, and class of trade, that help users ensure each GLN is specific to just one very precise location within the world.
<b>GLN Registry for Healthcare®</b>	A comprehensive, "single-source" list of uniquely identified healthcare and healthcare-related facilities in the U.S., with corresponding Global Location Numbers. The Registry helps subscribers to access up-to-date, reliable information for industry manufacturers, distributors, retailers, hospitals, clinics, and retail or mail-order pharmacies.
<b>Global Trade Item Number® / GTIN®</b>	A unique 8, 12, 13 or 14-digit number that identifies a "trade item" such as a product or service that may be sold, delivered, or invoiced at any point in the supply chain. The attributes defined for each GTIN, such as size, weight, and packaging, help users ensure each GTIN is specific to just one very precise configuration, such as the difference between a blister pack of two aspirin tablets and a bottle of 100 aspirin tablets.
<b>Global Data Synchronization Network® / GDSN®</b>	A network of interoperable data pools connected by the GS1 Global Registry® and used to share product information among trading partners. Includes attributes for GTINs.

Each provider is responsible for ensuring the accuracy and completeness of its GLN location data in the GLN Registry for Healthcare, a process targeted for completion in the U.S. by December 2010, also known as 2010 GLN Sunrise. Manufacturers and distributors will next address product identification through GTINs, scheduled to be completed by December 2012, also known as 2012 GTIN Sunrise. All these data elements will be kept current and communicated across trading partner networks within the GLN Registry for Healthcare and synchronization with the GDSN.

For corporate IT departments and supply chain leaders, this means internal systems, EDI protocols, and company and vendor data files all need to support GS1 requirements – not necessarily an easy task given the wide variety of systems in use across the healthcare industry.

## Lawson well-equipped to handle new GS1 requirements

The latest version of the Lawson S3 Supply Chain Management suite incorporates functionality to support GS1 Standards, including Sunrise 2010 and 2012 milestones, helping to make it easier for healthcare organizations to apply data standards that can help reduce supply costs, reduce ordering and procurement errors, and improve patient care and safety.

Lawson 9.0.1.4 assists healthcare organizations in moving from custom account, location and product identifiers to new GLNs and GTINs that are standard across the supply chain, without requiring development resources for expensive and time-consuming system customizations.

### New Enhancements Help You To:

- Simplify management of Item Master files using standard GS1 identifiers.
- Store, search, and transact using GLNs and GTINs.
- Integrate GLNs and GTINs in EDI communications.
- Load, store and use GDSN attributes.
- Opt to configure individual trading partners for use of GS1 Standards.
- Scan barcodes within Mobile Supply Chain Management and Point of Use.

## Defining your approach

Just as no two patients are alike, every organization's approach to GS1 Systems implementation will differ. Internal resources, systems complexity, organizational size, and number of suppliers will all be factors in how quickly a provider can roll out GS1 Standards. However, there are common lessons that can be applied to help simplify and streamline rollout.

Regardless of scope, all providers should involve key stakeholders early on in the project. These include internal system managers, key distributors, your GPO, and your system providers. A collaborative approach with open lines of communication among all parties will help achieve the best results.

GS1 Standards should also be addressed hand-in-hand with a review of organizational policies on data. These standards create a strong foundation for accuracy and efficiency, but to best realize its benefits, providers need consistent, well-managed policies on data storage, maintenance, and usage across all levels of the organization.

Use these questions to help size your adoption project and to create a clear game plan with internal stakeholders, suppliers and your technology vendors.

- (1) How many systems will be involved in your GS1 implementation?
  - Identify all the software systems that comprise your inventory and materials management processes.
  - List your requirements for systems integration. Consider how your supply chain software will interface with functions such as clinical, patient billing, and financial accounting systems. Look at business processes and transactions that involve multiple departments or systems.
  - Determine the role of barcode scanners in current or future business processes. Review where scanners are or will need to be deployed.
- (2) What is your adoption schedule?
  - Assess your supplier network and determine which vendors to approach, and when. Prioritize your rollout based on volume, strategic nature of relationship, or supplier readiness. The GS1 US Healthcare Industry Readiness Scorecard can help you identify suppliers that have declared readiness.
  - Consider how quickly your organization wants to move toward full usage of GLNs and GTINs. Determine if your systems need to support both existing and new location and item numbers simultaneously.
- (3) What system updates are required?
  - Determine your preference for system customizations versus configuring standard software updates. Identify your tolerance for workarounds.
  - Talk to your system provider(s) about features and timing for any out-of-the-box functionality or software upgrades. Ask about additional GS1 adoption resources or support, such as implementation guidelines and data migration services.
  - If a system upgrade is needed, evaluate internal resources, develop a timeline, and engage your IT team as early as possible.

In addition, Lawson 9.0.1.4 fully integrates GS1 Standards into everyday activities and business processes, enabling providers to maximize the benefits of GS1 adoption. Updated applications include:

- Financials
- Procurement
- Requisitions Self-Service
- Strategic Sourcing
- Contract Management
- Mobile Supply Chain Management
- Point of Use
- EDI for Supply Chain Management

Within Lawson applications, users can opt to utilize a GLN and/or GTIN, or utilize custom identifiers for locations and items, enabling each organization to introduce GS1 Standards to suppliers on a case-by-case basis.

**GLN Functionality:**

- GLNs are displayed in multiple locations and assigned to:
  - Requisition locations
  - Ship to locations
  - Company
  - Vendor
  - Vendor purchase form
  - Manufacturer
- GLN hierarchies can be tracked.
- Transactions such as Purchase Orders (including EDI versions) now incorporate GLNs.

**Evaluating system readiness**

Next, assess GS1 System readiness across your organization. Your needs assessment should evaluate three core areas: your data, your system, and your transactions. Each area works together to support a standardized identification system.

**Data**

Your data includes your master item file, your location hierarchy, and transactional information such as purchasing, receiving, and inventory. GS1 Standards help allow you to assign standard GLNs to your locations and accounts, and GTINs to your items, which can help you to reduce the use of many custom numbers.

**Get started with data:**

GLNs

- 1) Request an export of your organization's location hierarchy from the GLN Registry for Healthcare.
- 2) Compare these locations to the existing Bill-to, Ship-to, and Deliver-to locations in your files, and those your suppliers and GPOs utilize. Look for duplicate entries and inconsistent presentation of data (such as St. John's vs. Saint Johns).
- 3) Create a standard hierarchy of locations that incorporates all your sites.
- 4) Assign an administrator to manage updates to your GLN list.
- 5) Obtain edit and approval rights to the GLN Registry for Healthcare.
- 6) Enumerate your final list of GLNs.
- 7) Communicate the need for compliance across your organization and with suppliers.

GTINs

- 8) Request GTINs from suppliers and manufacturers. You may contact suppliers and distributors directly, or sign up for a GDSN-certified data pool to obtain access to current GTINs. (Be aware that until GTIN Sunrise in 2012, every manufacturer will be issuing GTINs at a different pace, so all necessary GTINs may not be available immediately.)
- 9) Compare standard GTINs with the current product nomenclature in your master item file. Determine whether your application requires you to overwrite proprietary numbers with GTINs, or if you can associate both a GTIN and your existing item number simultaneously.
- 10) Import GTIN data into your systems. Test this functionality in your master item file, transactions such as purchase orders and requisitions, EDI communications, and in reports.
- 11) Develop maintenance procedures to regularly synchronize your GTIN data for accuracy and completeness. Ideally, data should be synchronized with the GDSN through your data pools. Alternatively, synchronize your data individually with your suppliers and GPOs.
- 12) Communicate the need for utilization and compliance across your organization and with suppliers.

**System**

GS1 readiness in your system starts with understanding where and how your system houses location and item data, then making sure these areas of the application are equipped to handle GS1 requirements.

**GTIN Functionality:**

- GTINs can be assigned for each unit of measurement.
- System can capture GTIN attributes directly from the Global Data Synchronization Network (GDSN).
- GTINs are displayed and available in:
  - Requisitions Self-Service
  - Requisitions
  - Purchase Orders
  - Accounts Payable
  - Mobile Supply Chain Management
  - Point of Use
  - Various interface files
- Transactions such as Purchase Orders (including EDI versions) now incorporate GTINs.

If you utilize a common platform across your supply chain, such as an ERP system, check with your technology provider about GS1 Standards readiness. Many system providers offer, or plan to offer, software updates that can help bring your system into compliance – without the effort of custom development.

**Get started with your system:**

- 1) Identify application areas where location and item data is stored, shared, communicated or reported. Make sure to evaluate not just your ERP system, but any other systems like barcode scanners or clinical interfaces that integrate or share information across the enterprise.
- 2) Determine if location fields can be associated with or store a 13-digit GLN. Common functions include procurement, requisitions, financials, and EDI.
- 3) Determine if item or supply masters can accommodate a unique GTIN of up to 14 digits. Evaluate whether the GTIN can be tied to a unique item and unit of measure. Common functions include the master item list, procurement, requisitions, financials, and EDI.
- 4) Evaluate how your system will store this new GTIN information. Will it enable you to associate a new GTIN to an existing, proprietary number (the simplest approach), or simply overwrite the proprietary number? Assess the impact of either approach.
- 5) Determine trading partner requirements. Will your system support some suppliers who use GLNs and GTINs, and others who do not, during your rollout process? Is this functionality automatic or does it require manual intervention?
- 6) Update systems as necessary. Contact your technology provider for software updates that support GS1 requirements, or custom development that may be necessary to support non-standard applications.

**Transactions**

A final area of system readiness involves how you will utilize GLNs and GTINs in transactions, business processes, reports, and communications both across your enterprise and with supply chain partners. Those organizations that integrate GS1 across their systems and into day-to-day business practices the most will likely realize the greatest benefits from a standardized identification system.

**Get started with transactions:**

- 1) Identify system activities and business processes that will include GLNs or GTINs (or where traditional location, account or item numbers are used today).
- 2) Make sure the technology will function appropriately with new, standard identifiers. The system should allow users to transact, store, search, and report using GLNs and GTINs, and may need to support both proprietary and new GS1 identifiers simultaneously during a phased rollout.
- 3) Review EDI configurations and test both inbound and outbound communications with suppliers using GLNs and GTINs.
- 4) If you utilize barcode scanners for inventory or at point-of-care, test hardware and software for automatic data capture of GTINs in GS1-formatted barcodes. Make sure new identification numbers and units of measurement carry through accurately.
- 5) Conduct system training with users, especially those in procurement and requisitioning.

## Case study: WellSpan Health

### Timeline:

#### 2007

- Internal preparations for GS1 Standards.
- Work with GPO to review location setup and internal validation.

#### 2008

- Register WellSpan GLNs in the GLN Registry for Healthcare.

#### 2009

- Collaborate with first supplier, Cardinal Health, to implement GLNs.
- Conduct pilot with Cardinal Health.
- Complete roll-out with Cardinal Health.

#### 2010

- Prepare for integrated transaction functionality in Lawson 9.0.1.4.
- Reach out to additional suppliers to adopt GLNs.

### Provider streamlines shipping, improves visibility to pricing with initial GS1 activities

#### Standards establish foundation for better supplier communication and compliance

WellSpan Health, a regional healthcare system supporting Pennsylvania and Maryland, sees GS1 Standards as a “big win” for their organization, their suppliers, and most importantly, their patients. The group eagerly embraced a common platform for supply chain efficiency, and began their preparations in early 2007.

Varlen Gibbs, logistics and data services administrator, and Kathy Todt, MMIS specialist, oversee WellSpan Health’s GS1 implementation project. Gibbs acts as project sponsor, and Todt handles day-to-day activities with internal departments, IT, and suppliers.

For WellSpan Health, GS1 Standards are a natural next step in the organization’s increasingly digital approach to the supply chain. They connect with more than 100 suppliers through EDI and the GHX and Metatrade platforms, and rolled out GLNs with Cardinal Health in 2009.

“The big win for us as part of using GS1 Standards is that it’s forced us to talk with our suppliers, and to synchronize our location files,” Gibbs notes. “Before, we definitely had inefficiencies, like multiple account numbers for each location. We were missing out on rebates. Contract pricing may not have been applied. Visibility to that has been a big plus.”

#### GLN reconciliation improves location accuracy

In one instance, data in Lawson Software, WellSpan’s ERP system, showed more than 30 WellSpan locations were placing orders with a specific supplier. However, in the supplier’s files only six WellSpan locations were actually receiving shipments. Further investigation revealed WellSpan staff were receiving and re-shipping product within the hospital system. Assigning unique GLNs and reconciling locations with suppliers eliminates these inefficiencies.

WellSpan started its implementation in 2007 by working with their GPO, Novation VHA, to set up their location hierarchy in the GLN Registry for Healthcare. Todt recommends other healthcare organizations reach out to their GPOs for assistance with this crucial first step.

“One of the easiest ways to synchronize your data is to get an extract from your GPO,” she notes. “It’s much faster than trying to search individually in the Registry.”

As part of the GLN process, Todt estimates WellSpan added 50 new locations out of 220 registered GLNs – additions which all key suppliers can now access for a more accurate and streamlined distribution process.

#### Collaboration and pilot program with Cardinal Health

Next, WellSpan verified with their EDI provider that each new GLN location mapped appropriately. Then, in 2009 they initiated a pilot program with Cardinal Health, WellSpan’s primary distributor.

“Cardinal was very open,” Gibbs says. “They’re our base business distributor and have a just-in-time program with us.”

### WellSpan At-a-Glance:

- Connected to over 100 suppliers electronically.
- Two hospitals and more than 40 locations.
- 220 registered GLNs.

### About WellSpan

WellSpan Health is an integrated health system serving the greater Adams-York county, Pennsylvania region. As a community-based, not-for-profit organization, WellSpan is dedicated to improving the health and well-being of the people it serves. WellSpan will assume a leadership role and develop partnerships with other organizations to improve access to coordinated, high-quality, cost-effective and compassionate health care services; educate the health care providers of tomorrow; promote healthy lifestyles and life-long wellness; and make its local communities healthier, more desirable places to live, work and play. [www.wellspan.org](http://www.wellspan.org)

The discovery and setup process went smoothly, Todt says. "We had calls with them regularly, we talked about what needed to be done on each side. We found five locations we knew were clean and started transacting with them, while we worked through the clean-up of the other lines."

### Advocating for standards among the supplier community

Gibbs sees each layer of data standardization as another positive result of the GS1 process.

"The real benefit from GS1 is that it forces compliance," Gibbs explains. "It forces organizations to work together to make sure they're synchronized, and to build efficiencies in the supply chain."

Moving forward, WellSpan plans to implement Lawson 9.0.1.4 in the coming year, which includes integrated functionality to support GS1 Standards. They continue to reach out to their supplier base. Their biggest challenge has been lack of awareness among some vendors.

"Providers need to bring the GLN process to suppliers," Gibbs says. "We're promoting it, we're advocates."

## Case study: Cardinal Health, Inc.

### Cardinal Health Medical Segment At-a-Glance:

- Delivers medical-surgical products to ambulatory care centers, physician offices, clinical laboratories and hospitals across the U.S. and Canada.
- Manufactures high-volume replenishable products such as gloves, gowns, surgical drapes, scrubs, and fluid management products.
- Includes surgical and procedural kitting operations which assemble all necessary single-use surgical products and apparel for specific procedures into one kit.
- Products and services utilized by 50% of all U.S. surgeries.
- Direct purchase of medical and surgical supplies by 25% of all U.S. ambulatory surgery centers.

### Health care services company teams with more than 50 providers to lead GLN adoption efforts

#### Collaboration, commitment and clear, four-step process guide projects

For Bill Zimmerman, director of enterprise information governance at health care services company Cardinal Health, Inc., data is a passion. He oversees strategy and management of the company's business data, interfaces with internal departments and trading partners, and represents Cardinal Health in GS1 US workgroups. Zimmerman and Cardinal Health colleague Mike Duffy, executive vice president, global manufacturing and supply chain, are also members of the leadership team for GS1 Healthcare US Leadership Team.

All this involvement helps explain the leading role Cardinal Health has taken in the practical implementation of GS1 Standards to promote the efficient sharing of medical product information among trading partners. Through the efforts of Zimmerman and his team, they've worked successfully with providers like WellSpan Health and have similar projects slated with some 50 other providers and more than a dozen leading suppliers in the industry.

"As a distributor of medical products, we knew we would have a central role to play in the successful adoption of standards," he says. "By getting involved early with trading partners, we have been able to meet some early goals, document what we learned, and help set the pace so that others will have a head start."

#### Proven approach for GLN implementation

Cardinal Health uses a concise, four-step approach with its Medical segment customers:

- 1) System Assessment
- 2) Reconciliation
- 3) Configuration and Mapping
- 4) Testing and Rollout

The Cardinal Health team includes a business analyst, two EDI analysts, and most importantly, the customer's sales representative or account manager. Because the sales rep conducts most day-to-day business with the provider; he or she typically speeds up GLN discussions with his or her in-depth understanding of the customer's organizational structure and business model.

"The initial assessment covers the provider's people, processes, and technology," Zimmerman explains. "We start by understanding the current state of the customer and determine what system changes or upgrades may be required to support GLNs on transactions."

He adds, "The systems assessment with our customers is essential. When we do encounter slowdowns or challenges, it's often due to the system changes required at the customer's sites. We encourage the provider to talk to their solution providers, to understand the impacts that are relevant to the GLN implementation process. It may be more than simply what version of an ERP or MMIS system they are using."

As part of its first implementations, Cardinal Health completed initial updates to its own systems to make them GLN-ready, supporting EDI transactions like purchase orders, advance shipping notices and acknowledgements that contain GLNs. They continue to enhance their functionality to support additional transactions.

## About Cardinal Health

Headquartered in Dublin, Ohio, Cardinal Health, Inc. (NYSE: CAH) is a \$99 billion health care services company that improves the cost-effectiveness of health care. As the business behind health care, Cardinal Health helps pharmacies, hospitals, ambulatory surgery centers and physician offices focus on patient care while reducing costs, improving efficiency and quality, and increasing profitability. Cardinal Health is an essential link in the health care supply chain, providing pharmaceuticals and medical products to more than 60,000 locations each day. The company is also a leading manufacturer of medical and surgical products, including gloves, surgical apparel and fluid management products. In addition, the company supports the growing diagnostic industry by supplying medical products to clinical laboratories and operating the nation's largest network of radiopharmacies that dispense products to aid in the early diagnosis and treatment of disease. Ranked #17 on the Fortune 500, Cardinal Health employs more than 30,000 people worldwide.

## Make GLN ownership a provider priority

The reconciliation step compares the provider's view of their data and locations with the account numbers and locations in the Cardinal Health system, and is the most important step, according to Zimmerman.

"An important prerequisite for this step is that the provider has taken ownership of their GLNs in the GLN Registry for Healthcare before, or at the same time, they start working with us," Zimmerman says, noting providers are responsible for ensuring their locations are enumerated appropriately.

"We suggest providers focus on enumerating their contracting and ship-to levels first," Zimmerman says. "GSI supports locations down to the 'put away' levels, but in the implementations we've worked on, we've tried to focus on the organizational view that trading partners will use most."

Cardinal Health next works with providers to configure and map historical location identifiers to the new GLNs, and to identify changes required on either side. Lastly, they conduct a series of tests before rolling out new processes.

## Involve strategic partners first

In the case of the WellSpan Health projects, Zimmerman credits success to the solid working relationship and strong communication between the organizations.

"WellSpan Health was extremely collaborative, and that collaboration with trading partners is important to success with GSI. They were passionate and committed, and that helped us work well together."

While the timeline for GLN Sunrise is fast approaching, he stresses there is still ample time for providers to take action. Zimmerman recommends starting with the most strategic trading partners, because they will understand the organization best. He also suggests providers appoint a single "point person" to streamline communication with the supplier.

"GSI Standards are a foundational element," he notes. "For providers, using GLNs will help improve contract pricing and rebates, and reduce errors – but the key is getting a broad base of adoption. The more trading partners that a provider works with using GLNs, the more benefits they'll realize."

The Cardinal Health Medical segment team plans to maintain a leading role in GSI Standards and is already planning for GTIN initiatives.

"Next for us is engaging with more providers and manufacturers, to gain broader GLN adoption," Zimmerman says. "We are also starting to look at GTINs and think about what it will take to enable those. We expect to follow a similar path and get out in front early so we can pass our learnings on to others."

## **Conclusion:**

### **Industry cooperation makes standards a reality**

GS1 Standards have the ability to revolutionize the healthcare supply chain with more accurate, efficient ordering and significant improvements in patient safety. Organizations of all sizes could see benefits at each step in the implementation process, and most of all, once the foundational elements are in place and widespread trade begins.

With those early adopting providers and suppliers reporting smooth implementations, the time is right for hospitals across the country to get started. By maintaining collaborative relationships and open lines of communication with trading partners and system providers, achieving technology readiness can be straightforward and beneficial.

## Resources

GS1 Healthcare US

[www.gs1us.org/healthcare](http://www.gs1us.org/healthcare)

- In-depth resources for GS1 Standards
- GLN Tool Kit
- GTIN Tool Kit
- Case studies

Lawson

[www.lawson.com/healthcare](http://www.lawson.com/healthcare)

Mayo Clinic / Cardinal Health

[http://www.gs1us.org/library?EntryId=1067&&Command=Core Download](http://www.gs1us.org/library?EntryId=1067&&Command=Core+Download)

- Whitepaper on GLN Implementation

## Glossary of Terms

### **Account Code / Account Number:**

An alpha-numeric designation for a provider location or entity that orders or receives products and services. As part of the GSI Healthcare US initiative, custom account codes will be converted to industry-standard Global Location Numbers.

### **Bill-to Location:**

Location where invoices are sent, most often an accounts payable function.

### **Data Standards:**

A common system for organizing information, regardless of platform, function or geography. Data standards can help streamline the supply chain by improving accuracy and making communication more efficient.

### **Data Synchronization:**

The process of comparing and reconciling information from multiple sources so it is consistent and accurate.

### **Deliver-to Location:**

Locations within the healthcare organization where supplies are routed, such as a nursing station, or specific department or floor.

### **EDI / Electronic Data Interchange:**

A set of messaging standards for the communication of information from computer-to-computer. EDI transactions facilitate the swift and accurate relay of orders among many healthcare providers and their distribution networks.

### **ERP / Enterprise Resource Planning System:**

A bundled set of applications that cover a variety of business areas, such as accounting, supply chain, and human resources, and operate on a common, integrated technology platform. An ERP system helps an organization to share data and information across company functions, and can help increase visibility to expenses, inventory levels, distribution cycles, and other key operations.

### **GDSN / Global Data Synchronization Network:**

A network of interoperable data pools connected by the GSI Global Registry and used to share product information, specifically GTINs and their attributes, among trading partners.

### **GLN / Global Location Number:**

A unique 13-digit number for locations and supply chain partners that identifies a physical location, legal or functional entity where a product may be stored or shipped. Each GLN includes attributes, such as name, address, and class of trade, that help users ensure each GLN is specific to just one very precise location within the world.

A **legal entity** describes a health system or corporation.

A **physical entity** identifies a location such as a warehouse, hospital wing or even a nursing station.

A **functional entity** identifies a location such as a hospital pharmacy or accounting department.

**GPO / Group Purchasing Organization:**

An association of similar businesses whose collective buying power helps them to obtain discounted purchases from industry suppliers.

**GS1 Healthcare US:**

A voluntary industry group that focuses on driving the adoption and implementation of GS1 Standards in the U.S. healthcare industry to improve patient safety and supply chain efficiency. GS1 Healthcare US brings together members from all segments of the healthcare industry to address the supply chain issues that most impact healthcare in the U.S. GS1 Healthcare US is one of 24 local GS1 Healthcare user groups around the world that support the adoption and implementation of global standards developed by GS1.

**GS1 Standards:**

Key components of the GS1 Healthcare US initiative include GLNs, GTINs and the GDSN.

**GS1 Organization:**

Leading global standards organization for the healthcare industry, responsible for development and administration of GS1 Standards.

**GLN Registry for Healthcare:**

A comprehensive, "single-source" list of uniquely identified healthcare and healthcare-related facilities in the U.S., with corresponding Global Location Numbers. The Registry helps subscribers to access up-to-date, reliable information for industry manufacturers, distributors, retailers, hospitals, clinics, and retail or mail-order pharmacies.

**GTIN / Global Trade Item Number:** A unique 8, 12, 13 or 14-digit number that identifies a "trade item" such as a product or service that may be sold, delivered or invoiced at any point in the supply chain. The attributes defined for each GTIN, such as size, weight, and packaging, help users ensure each GTIN is specific to just one very precise configuration, such as the difference between a blister pack of two aspirin tablets and a bottle of 100 aspirin tablets. GTINs are assigned by the brand owner of the product and identify products as they move through the global supply chain to the hospital or ultimate end user.

**Hierarchy:**

A structure for ranking and organizing a healthcare organization's locations. Within the GS1 Healthcare US initiative, it is recommended that GLNs be organized into one of four levels that are consistent across the healthcare system.

**Location Code / Location Number:**

An alpha-numeric designation for an entity that requisitions, purchases, ships, receives, or delivers products and services within the healthcare supply chain. As part of the GS1 Healthcare US initiative, these custom account codes will be converted to industry-standard Global Location Numbers.

**Master Item File:**

The comprehensive list of all products and supplies that an organization purchases, inventories and uses. GS1 Standards will facilitate tracking and ordering items by unique Global Trade Item Numbers rather than manufacturer-specific or customer item numbers.

**Ship-to Location:**

Location where a supplier delivers, typically a bulk receiving area such as a central warehouse, pharmacy or receiving dock.

**Sunrise Date:**

Target date for all U.S. healthcare supply chain partners to utilize GS1 Standards.

**December 2010** is the sunrise date for utilizing the GS1 Global Location Number (GLN) to standardize location identification.

**December 2012** is the sunrise date for implementing the GS1 Global Trade Item Number (GTIN) to standardize product identification.

**Supplier:**

A party in the supply chain whose role is to provide or distribute physical goods and services (the seller) to healthcare organizations (the buyer).

**UNSPSC® / United Nations Standard Products and Services Code®:**

A hierarchical set of categories used worldwide to classify products and services and enhance visibility to company spending across the supply chain.

## **About the Author:**

Keith Lohkamp is Lawson's Product Strategist for Supply Chain Management, responsible for setting the vision and roadmap for the Supply Chain Management Suite. At Lawson, he has helped to bring to market multiple applications including Mobile Supply Chain Management, Strategic Sourcing, Contract Management and Point of Use. He brings over 15 years in healthcare and software product management to his role, including previous product strategy roles at Neoforma and PeopleSoft. Currently, he also represents solutions providers on the GS1 Healthcare US Leadership Team. He has a bachelor's degree in International Relations from Stanford University and an MBA from the Haas School of Business at UC Berkeley.

## **About Lawson Software**

Lawson Software provides software and service solutions to 4,500 customers in equipment service management and rental, fashion, food & beverage, healthcare, manufacturing & distribution, public sector (United States), service industries, and strategic human capital management across 40 countries. Lawson Software is a global provider of enterprise software, services and support to customers primarily in three sectors: services, trade and manufacturing / distribution. Lawson's solutions include Enterprise Performance Management, Human Capital Management, Supply Chain Management, Enterprise Resource Planning, Customer Relationship Management, Manufacturing Resource Planning, Enterprise Asset Management and industry-tailored applications. Lawson solutions assist customers in simplifying their businesses or organizations by helping them streamline processes, reduce costs and enhance business or operational performance. Lawson is headquartered in St. Paul, Minn., and has offices around the world. Visit Lawson online at [www.lawson.com](http://www.lawson.com).

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