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About GS1®

GS1 is a neutral, not-for-profit organization dedicated to the design and implementation of global standards and solutions to improve the efficiency and visibility in supply chains. GS1 is driven by more than a million companies, who execute more than six billion transactions a day with the GS1 System of Standards. GS1 is truly global, with local Member Organizations in 111 countries, with the Global Office in Brussels, Belgium.

About GS1 US™

GS1 US is the Member Organization of GS1 that serves companies in the United States. As such, it is the national implementation organization of the GS1 System dedicated to the adoption and implementation of standards-based, global supply chain solutions in the United States. GS1 US currently serves over 200,000 U.S. member companies -- 16,000 of which are in healthcare.

About GS1 Healthcare

GS1 Healthcare is a global, voluntary healthcare user group developing global standards for the healthcare supply chain and advancing global harmonization. GS1 Healthcare consists of participants from all stakeholders of the healthcare supply chain: manufacturers, wholesalers & distributors, as well as hospitals and pharmacy retailers. GS1 Healthcare also maintains close contacts with regulatory agencies and trade organizations worldwide. GS1 Healthcare drives the development of GS1 Standards and solutions to meet the needs of the global healthcare industry, and promotes the effective utilization and implementation of global standards in the healthcare industry through local support initiatives like GS1 Healthcare US in the United States.

About GS1 Healthcare US®

GS1 Healthcare US is an industry group that focuses on driving the adoption and implementation of GS1 Standards in the healthcare industry in the United States 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 United States. Facilitated by GS1 US, GS1 Healthcare US is one of sixty-six local GS1 Healthcare user groups around the world that supports the adoption and implementation of global standards developed by GS1.
Overview

In response to error-prone and inefficient location identification across U.S. healthcare, the industry has rallied around the adoption of standardized location identifiers, specifically GS1 Global Location Numbers (GLNs). In fact, the industry-led initiative to use GLNs in lieu of custom account/location numbers across U.S. healthcare is well underway. The goal of this initiative is industry-wide use of GLNs to promote accurate and reliable location identification across the U.S. healthcare supply chain. In order to accelerate wide-scale adoption and implementation, an industry-accepted “sunrise” date (known as the “GLN Sunrise”) was established. The GLN Sunrise called for the adoption and use of GLNs in lieu of custom account/location numbers by December 31, 2010. Although the GLN Sunrise date has passed, implementation continues.

Today, many healthcare companies are using GLNs and the GLN Registry for Healthcare to facilitate correct identification of their locations and to support numerous business transactions from purchase orders to rebates and chargebacks. The industry continues to drive GLN implementation in order to fully realize the benefits of standardized location identification in U.S. healthcare. To that end, the GS1 Healthcare US® Location Identification (GLN) Workgroup developed this document to describe the actions needed for each supply chain partner to meet the industry’s on-going implementation goals. The purpose of this document is to provide:

- a definition of GLN implementation goals,
- an implementation plan with specific actions for each supply chain partner, and
- a list of the GLN implementation resources available.
U.S. Healthcare Industry Call for Standards

Standards-based numbering systems are essential for efficient and effective communication of location information in supply chains. Without a standards-based approach, supply chain partners assign their own proprietary account/location numbers. This results in multiple proprietary numbers to manage and maintain for the same location, which is time-consuming, error-prone and inefficient. Despite all of the effort, this approach to location identification undermines patient safety and supply chain management.

In response, many industry associations, advocacy groups, organizations, and companies throughout U.S. healthcare have announced their support to adopt GS1 Standards for location and product identification in order to improve patient safety and supply chain efficiency. To accelerate wide-scale adoption and implementation, industry-accepted “sunrise” dates were established to standardize location and product identification throughout the U.S. healthcare supply chain. These industry sunrise dates include:

**2010 GLN Sunrise** which called for adoption of GS1 Global Location Numbers (GLNs) in lieu of custom account/location numbers to standardize location identification by December 31, 2010.

**2012 GTIN Sunrise** which calls for adoption of GS1 Global Trade Item Numbers (GTINs) in lieu of custom product numbers to standardize product identification by December 31, 2012. [Includes use of GS1 Global Data Synchronization Network (GDSN) to store and communicate product attributes associated with each GTIN.]

The industry-wide initiative to adopt GS1 Standards for location and product identification will help to ensure that the correct products are delivered to the correct locations at the correct time -- creating a safer, more efficient, and less expensive supply chain.

**Industry Goals for GLN Implementation**

Although the GLN Sunrise date has passed, implementation continues. Today, many healthcare companies are using GLNs and the GLN Registry for Healthcare to facilitate correct identification of their locations and to support numerous business transactions from purchase orders to rebates and chargebacks. The industry continues to drive GLN implementation in order to realize the benefits of standardized location identification in U.S. healthcare. The goal is industry-wide use of GLNs in lieu of custom account/location numbers, which means that:

- GLNs are assigned by location owners.
- GLNs are used in appropriate business transactions and processes between trading partners.
- GLN hierarchy is defined and maintained by location owners.
- GLN Registry for Healthcare is used to facilitate correct location identification.

In order to achieve these goals, the Location Identification Workgroup worked together to identify specific actions to be taken by each supply chain partner. From these recommendations, the workgroup created the GLN Roadmap, a collaborative industry implementation plan for use by all U.S. healthcare stakeholders.
Executive Summary of the GLN Roadmap

The Location Identification Workgroup developed a collaborative industry implementation plan to help healthcare providers and suppliers transition to GLNs. Known as the GLN Roadmap, this plan provides a phased approach to implementation that identifies specific actions to be taken by each supply chain partner and major milestones to measure progress. (An executive summary of the GLN Roadmap is provided in Diagram 1 below.) There are five phases in the GLN Roadmap: Awareness, Enumerate, Reconcile, Transact, and Maintain. The remainder of this document describes each phase and the specific actions to be taken by each supply chain partner. A full graphical presentation of the GLN Roadmap is provided in the Appendix.

Diagram 1: Executive Summary of the GLN Roadmap – a phased approach to adoption
Phase One: **Awareness**

Communicate and educate on the GLN implementation process.

Providers / Distributors / Manufacturers / GPOs

An organization’s supply chain leaders and staff know about GLNs and their benefits, as well as standards in general, and commit to implement.

1: Understand benefits.
2: Inform organization and supply chain partners.
3: Commit to implement.

Phase Two: **Enumerate**

Access the GLN Registry for Healthcare and ensure all entities are enumerated.

An organization accesses the GLN Registry for Healthcare, establishes users/approvers, and reviews their hierarchy.

1. **Data quality is critical.** Demographics such as name, address, and location type need to be continually maintained in the GLN Registry. Before creating a new GLN, be certain that no GLN already exists for that location.

Providers

1: Declare the accuracy of data and maintain in real-time as business partners rely exclusively on the accuracy of this data.
2: Assume responsibility for enumeration of locations for Order-by/Sold-to, Ship-to, Bill-to, and Paid-by levels with GLNs.

Distributors / Manufacturers

1: Declare the accuracy of data and maintain in real-time.
2: Enumerate the Order-from and Pay-to/Remit-to locations with GLNs.

GPOs

1: Initially enumerate locations at Ship-to level until the provider assumes responsibility.
2: Assist provider members with education, hierarchy design and general enumeration strategy.
3: Display Ship-to locations with GLNs within the roster.
4: Assist with member adjudication, understanding that the final decision is made by the provider.
Initially, the actions in Phase 3 and Phase 4 should be taken with one business partner at a time. Transacting with GLNs will require a provider / distributor / manufacturer / GPO to plan and implement with each of their business partners one at a time.

### BEST PRACTICES: Enumeration

**For All**
- Initial hierarchy within the GLN Registry should follow the GPO roster.
- To speed adoption, limit your effort to the *Ship-to* and *Bill-to* level initially.
- P.O. Boxes must not be used for *Ship-to* locations.
- Make eligibility determinations via the GPO roster, not the GLN Registry.
- “Class of Trade” (COT) in the GLN Registry is based on provider and GPO criteria. Eligibility criteria for membership are still subject to trading partner interpretation.
- Consult Best Practice guidance published on www.GS1US.org/healthcare.

**Providers**
- Manage your own GLNs.
- Only manage owned facilities.
- Modify the initial hierarchy as necessary.
- Declare your readiness to trade GLNs.

**GPOs**
- Manage GLNs for affiliates until you can transfer responsibility to the affiliates themselves.
- Maintain unique identifiers *and* GLNs for a transitional period of time to speed adoption. GLNs appear on GPO rosters.

### Phase Three: Reconcile

Align GLNs to current proprietary numbers.

Organizations commit to utilize the GLN Registry for rosters/membership maintenance.

**Providers**
1. Maintain data in the GLN Registry in real-time.
2. Begin to utilize GLNs to identify business partners in internal systems.
3. Work with business partners to align existing account numbers to GLNs.

**Distributors / Manufacturers**
1. Begin to utilize GLNs to identify business partners in internal systems.
2. Work with business partners to align existing account numbers to GLNs.
3. Align existing account numbers and GPO proprietary IDs to GLNs, where applicable.

**GPOs**
1. Work with business partners to align existing internal account numbers to GLNs.
BEST PRACTICES: Reconciliation

GLNs in GPO rosters refer to Ship-to locations. When replacing custom account numbers with GLNs in business documents, supply chain partners should match the GPO Ship-to GLNs as follows:

- GPO: match to provider
- Distributor: match to internal account numbers
- Manufacturer: match to internal account numbers

Phase Four: Transact

Use GLNs in transactions in lieu of proprietary account numbers.

Organizations use GLNs in transactions to identify themselves and their business partners, replacing the use of proprietary account numbers. (Recommendations for how to prioritize EDI transactions for GLN implementation are provided on the next page.)

Providers / Distributors / Manufacturers / GPOs

1: Agreements between the manufacturer/distributor and GPO should specify that membership rosters should be submitted with the GLN as the identifier, and that payments back to the GPO should also include the GLN.

2: Agreements between the manufacturer and IDN/Single Facility should reference the customers covered using the customer’s GLN.

3: Agreements between the manufacturer and distributor/wholesaler should detail electronic transactions. The use of 832 (Price Sales Catalog), 867 (Sales Reporting), 845 (Price Authorization), and 844 (Rebate) should reference GLNs.

4: Agreements between the distributor/wholesaler and IDN/Single Facility should use GLNs. Provider agreements with their trading partners should include location (address) listing as appropriate.

5: Recommend GLNs replace custom identifiers in the following processes for both electronic and EDI transactions. This should be your first priority as it is scalable and repeatable.

- 850 [Purchase Order (PO)]
- 855 (Reply to PO)
- 810 (Invoice) later in process
- 856 [Advanced Ship Notice (ASN)]

6: Replacement of GLNs in paper transactions should follow as business partners are technically capable.
Based on input from all segments of the healthcare supply chain, the Location ID Workgroup recommends the following prioritization of EDI transactions for GLN implementation.

## EDI Business Transaction Priority

### First Priority

<table>
<thead>
<tr>
<th>Code</th>
<th>EDI Business Transaction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>850</td>
<td>Purchase Order</td>
<td>Purchase order submission from buyer to seller; also accommodates stand-alone, consignment and blanket order business scenarios</td>
</tr>
<tr>
<td>855</td>
<td>Purchase Order Acknowledgment</td>
<td>Response from seller to buyer on processing of the purchase order</td>
</tr>
</tbody>
</table>

### Second Priority

<table>
<thead>
<tr>
<th>Code</th>
<th>EDI Business Transaction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>856</td>
<td>Advance Ship Notice/Manifest</td>
<td>Identification of product in a pending shipment from the seller to the buyer</td>
</tr>
<tr>
<td>810</td>
<td>Invoice</td>
<td>Request for payment from seller to buyer</td>
</tr>
<tr>
<td>867</td>
<td>Sales Reporting/Product Transfer/Resale Report</td>
<td>The transaction set can be used to: (1) report information about product that has been transferred from one location to another; (2) report sales of product from one or more locations to an end customer; or (3) report sales of a product from one or more locations to an end customer, and demand beyond actual sales (lost orders). Report may be issued by either buyer or seller</td>
</tr>
</tbody>
</table>

### Third Priority

<table>
<thead>
<tr>
<th>Code</th>
<th>EDI Business Transaction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>832</td>
<td>Price/Sales Catalog</td>
<td>Exchange of product and product price information from the seller to the buyer; may also be used to load a product catalog</td>
</tr>
<tr>
<td>844</td>
<td>Product Transfer/Account Adjustment</td>
<td>An exchange of data in the form of a debit, credit, or request for credit relating to pre-authorized product transfer actions</td>
</tr>
<tr>
<td>845</td>
<td>Price Authorization Acknowledgment/Status</td>
<td>A vendor or manufacturer transmits data relative to the status of or changes to outstanding price authorizations</td>
</tr>
</tbody>
</table>

### BEST PRACTICES: Rebates/Chargebacks

Recommend that GLNs replace custom identification numbers in all rebate/charge back processes, electronic transactions and documents:

- 867 Sales Reporting, Product Transfer, Resale Report
- 844 Product Transfer, Account Adjustment
Phase Five: Maintain

Maintain in real-time.

Data is maintained in the GLN Registry in real-time to facilitate ongoing data quality and transactional efficiency.

**Providers**

1: Maintain your GLN hierarchy in the GLN Registry in real-time, resulting in database of record for business partner communication.
2: Become final arbiter of GLN (i.e., all disputes are adjudicated via the provider).

**Distributors / Manufacturers**

1: Maintain information in systems utilizing GLN (i.e., ship/order; sales tracing; contracts).
2: Access the GLN Registry to maintain location information.
3: Accept final judgment of provider on accuracy of GLN.

**GPOs**

1: Maintain roster membership lists using only GLN, and have reporting/fees done by GLN.*
2: Assist with member adjudication, understanding that the final decision is made by the provider.

* The GPO proprietary identifier and the GLN will be maintained on the GPO roster for a transitional period of time.
GLN Resources

GLN Implementation Resources:
www.gs1us.org/hcglnresources

Links to all of the GLN resources listed below and more are available on this web page.

Tools & Resources

● GLN Healthcare Provider Tool Kit
● GLN Healthcare Supplier Tool Kit
● Healthcare Provider GLN Quick Start Guide
● Healthcare Supplier GLN Quick Start Guide
● GLN Registry for Healthcare Website (click on “Sign Up” to subscribe)
● Best Practice Guide: Building a GLN Hierarchy
● GLN Industry Readiness Scorecards

Case Studies

● Success Story: How Intermountain Healthcare Successfully Took Ownership of its GLNs and is Embracing GS1 Standards
● Case Study: BD and Mercy/ROi: Perfect Order and Beyond
● Success Story: Healthcare supplier Steris implemented GLNs in record time to stay in the forefront of GS1 Standards adoption
● Case Study: BJC Healthcare GS1 Standards Implementation
● Mayo Clinic / Cardinal Health GLN Implementation White Paper
● Success Story: Print Media, Inc. Leveling the Playing Field

Education

● GS1 Healthcare US Webinars
GLN-related Meetings

GS1 Healthcare US Location ID Workgroup
- Weekly
- GS1 Healthcare US members

GLN Registry Steering Committee
- Monthly
- GLN Registry subscribers
- Membership by Charter

GLN Registry Technical User Subcommittee
- Monthly
- GLN Registry subscribers
- Membership by Charter

GLN Registry User Group
- Monthly, 2nd Tuesday, 11AM ET
- open to all

To learn more about any of the GLN meetings listed here, contact GS1 US at GS1HealthcareUS@gs1us.org
### Appendix: GLN Roadmap – a collaborative industry implementation plan for U.S. healthcare

<table>
<thead>
<tr>
<th>Phase One</th>
<th>Phase Two</th>
<th>Phase Three</th>
<th>Phase Four</th>
<th>Phase Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicate and educate on the GLN implementation process.</td>
<td>Organization accesses the GLN Registry, establishes users/approvers, and reviews their hierarchy.</td>
<td>Organizations commit to utilize the GLN Registry for rosters/membership maintenance.</td>
<td>Organizations use GLNs in transactions to identify themselves and their business partners, replacing the use of proprietary account numbers.</td>
<td>Data is maintained in the GLN Registry in real-time to facilitate ongoing data quality and transactional efficiency.</td>
</tr>
</tbody>
</table>

#### Provider
- An organization’s supply chain leaders and staff know about GLNs, their benefits, and standards in general and commit to implement.
- Certify the accuracy of data and maintain in real-time as business partners rely exclusively on the accuracy of this data.
- Assume responsibility for enumeration of locations at the Ship-to, Bill-to, and Pay-from levels with GLNs.

#### Supplier
- Certify the accuracy of data and maintain in real-time.
- Enumerate the Order-from and Pay-to locations with GLNs.
- Begin to utilize GLNs to identify business partners in internal systems.
- Work with business partners to align existing account numbers to GLNs.
- Align existing account numbers and GPO proprietary IDs to GLNs, where applicable.

#### GPO
- Initially enumerate locations at Ship-to level until the provider assumes responsibility.
- Assist provider members with education, hierarchy design and general enumeration strategy.
- Display Ship-to locations with GLNs within the roster.
- Provide adjudication assistance to members, understanding that the final decision is made by the provider.

#### GLN Roadmap - Collaborative Industry Implementation Plan for U.S. Healthcare

- **Phase One: Communicate**
  - Awareness
  - Educate on the GLN implementation process.
  - Utilize the GLN Registry to establish users/approvers.
  - Review hierarchy.

- **Phase Two: Enumerate**
  - Organization accesses the GLN Registry.
  - Establish GLN user/approvers.
  - Review hierarchy.

- **Phase Three: Reconcile**
  - Organizations commit to utilizing the GLN Registry for rosters/membership maintenance.
  - Use GLNs in transactions to identify business partners.
  - Replace proprietary account numbers.

- **Phase Four: Transact**
  - Organizations use GLNs in transactions.
  - Identify business partners.
  - Replace proprietary account numbers.

- **Phase Five: Maintain**
  - Data is maintained in the GLN Registry.
  - Facilitate ongoing data quality and efficiency.
  - Ensure real-time updates.

**GLN Roadmap Objectives**
- **Phase One**
  - Awareness: Understand GLNs, benefits, and standards.
  - Commitment: Implement GLNs.

- **Phase Two**
  - Commitment: Review hierarchy.

- **Phase Three**
  - Reconciliation: Commit to GLN Registry for rosters/membership.
  - Commitment: Utilize GLNs in transactions.

- **Phase Four**
  - Transaction: Use GLNs in transactions.
  - Commitment: Replace proprietary account numbers.

- **Phase Five**
  - Maintenance: Update GLN Registry.
  - Commitment: Facilitate ongoing data quality and efficiency.
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