Data Synchronization Implementation Guidelines

For Canadian Medical Device Data Providers
Data Synchronization Implementation Guidelines

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Introduction

About This Document
This document describes implementation guidelines for healthcare medical device manufacturers and distributors (data providers) who want to synchronize product data with Canadian healthcare providers (data recipients) electronically, using ECCnet Registry, Canada’s national healthcare product registry and/or GS1 Canada GDSN and/or any other GDSN data pool.

Executive Summary
Automation combined with accurate data is an essential key to enable a safe, effective, sustainable, and interoperable healthcare system. There has never been a time in the history of the Canadian healthcare system where efficiency has been more important or more necessary.

Healthcare providers are increasingly challenged to deliver high-quality patient care at a lower cost. Currently, many healthcare organizations dedicate considerable resources to sourcing product information and manually entering that information in their product master catalogue(s) for item master file management. Often this information is managed in the organizations Materials Management Information System (MMIS) and is not integrated with downstream clinical systems and Electronic Health Records (EHRs). This current use of non-standardized data in the healthcare supply chain results in costly errors, wasteful inefficiencies, and has implications for patient safety.

Launched in 2001, ECCnet Registry is the result of collaboration between GS1 Canada and the grocery, pharmacy, and foodservice sectors. The goal was to create a central source through which trading partners could share and manage product data accurately and efficiently. The result was the creation of a centralized repository of product data designed to meet the business process needs of an increasingly wide number of sectors. Today, the momentum has reached new proportions with healthcare executives nationally, through the Canadian Healthcare Supply Chain Standards Project, leading the transition to global data standards. Fully based on global standards, ECCnet Registry accepts data published by suppliers either through the Global Data Synchronization Network (GDSN) or loaded directly through Registry tools. Once the data is in the registry, trading partners access this data for a variety of business processes.

In addition, GS1 Canada also helps organizations maintain their competitive advantage at home and abroad through its GS1 Canada GDSN service. As a GS1-certified GDSN Data Pool, GS1 Canada GDSN enables you to electronically share product data with your trading partners anywhere in the world. This data pool service ensures that all trading partners always have the same product information in their systems, and any changes made to the data in one company’s system is automatically sent to all companies who do business with them.
About GS1®

GS1 is a neutral, not-for-profit organization dedicated to the design and implementation of global standards and services to improve the efficiency and visibility of 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 over 110 countries and GS1 System of Standards being used in 150 countries, with the Global Office in Brussels, Belgium. Learn more at www.gs1.org.

GS1 Standards

The GS1 System of standards is an integrated suite of global supply chain standards that allows accurate identification and communication of information regarding products, assets, services and locations. Using GS1 Identifiers, organizations around the world are able to uniquely identify physical things like trade items, assets, logistic units and physical locations, as well as logical things like corporations or a service relationship between the healthcare provider and patient.

About GS1 Canada

GS1 Canada is a member of GS1, the world’s leading supply chain standards organization. As a neutral, not-for-profit organization, GS1 Canada enables its more than 20,000 members – organizations of all sizes from over 20 sectors across Canada – to enhance their efficiency and cost effectiveness by adopting electronic supply chain best practices. Learn more at www.gs1ca.org.

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 and 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. Learn more at www.gs1.org/healthcare.

A healthcare provider is an individual or an institution that provides preventive, curative, promotional or rehabilitative healthcare services in a systematic way to individuals, families or communities.

About GS1 Canada Healthcare

Through the Carenet Strategy, the Canadian healthcare sector is leveraging the value of GS1 Standards to improve patient safety, enable supply chain efficiency, and drive the interoperability and sustainability of Canada’s healthcare delivery system.
Led by the GS1 Canada Carenet Healthcare Sector Board, the Carenet Strategy is the industry-driven strategy to modernize the Canadian healthcare supply chain using the GS1 System of standards. To date, over 625 healthcare providers, 350 leading suppliers, major Group Purchasing Organizations (GPOs), technology solution providers, as well as provincial and federal governments have engaged with GS1 Canada to drive this pan-Canadian transformation. By establishing a common framework for identifying products such as drugs and medical devices, or locations such as manufacturer addresses and hospital ORs, capturing data about them, and sharing this information with other organizations, GS1 Standards will result in:

- **Patient Safety Benefits**
  Efficient bedside verification, reduced medication errors, more effective product recalls, improved data integrity

- **Supply Chain Efficiency and Cost Savings Benefits**
  Improved order and invoice processes, improved service levels/fill rates and inventory management, system-wide visibility and traceability

- **Government Policy and Program Compliance**
  Medical device identification, efficient drug traceability, effective electronic health records implementation

**About GDSN**

The GS1 Global Data Synchronization Network (GDSN) connects trading partners to the GS1 Global Registry® via a network of interoperable GDSN-certified data pools.

Within this Network, trade items are identified using a unique combination of the GS1 Identification Keys called Global Trade Item Numbers (GTIN) and Global Location Numbers (GLN).

For more information, click one of the links below:

- [GS1 Canada GDSN](#)
- [GDSN-Certified Data Pool List](#)
- [GS1 Identification Keys](#)
- [GTIN (Global Trade Item Number)](#)
- [GLN (Global Location Number)](#)
About Data Synchronization

GS1 Canada enables organizations to exchange standardized product information through a process known as data synchronization. Through data synchronization, any changes that an organization makes to its product information stored in the data pool or centralized registry, are automatically sent to all of this organization’s trading partners. This automated approach to data management ensures that supply chain information is consistent across trading partners’ data management systems.

To enable this business process in support of Canadian industry, GS1 Canada operates two types of data management services:

- GS1 Canada GDSN
- National Registries and Registry Value-Added Services

GS1 Canada GDSN

This is a certified GDSN data pool that enables organizations to electronically share GS1 standards-based product data with trading partners anywhere in the world through the Global Data Synchronization Network (GDSN).

GS1 Canada GDSN ensures that you and your trading partners always have the same product data in your systems. Any changes made to the data in one company’s system are automatically sent to all companies who do business with them.

You can improve the integrity of your supply chain with the following benefits:

- Provides access to trading partners and markets in Canada and around the world.
- Reduces duplication in supply chain systems and procedures.
- Simplifies and improves order tracking and supply chain planning.
- Reduces cost for logistics due to improved accuracy in shipping and receiving.
- Reduces paperwork and manual management of product data.

GS1 Canada does not require members to engage in GDSN Data Pool Services.

National Registries and Registry Value-Added Services

Registry Value-Added Services, which operate outside of the GDSN network, have been designed in collaboration with suppliers and data recipients to support a broad range of industry-sponsored business process improvement initiatives, leveraging the data in ECCnet Registry. These services drive data integrity in the Canadian supply chain. Organizations access these registries to support specific business processes, including:

- Data synchronization and new item listing – ECCnet Registry, Canada’s national product registry
- Marketing, advertising and planogramming – ECCnet Image and Validation (I&V)
- Product recall – GS1 Canada Product Recall
- Marketing nutritional labeling – ECCnet Item Certification
• “Ship to” and “bill to” transactions – ECCnet Locations
• “Legal Entity” enables data synchronization for company and contact master file management.

Requirements for engagement in Value-Added Services are issued by data recipients as part of the trading partner relationship. GS1 Canada does not require members to engage in Value-Added Services or in GDSN Data Pool Services.

For more information, see GS1 Canada Value-Added Services.

GS1 Company Prefix License
In order to participate in data synchronization with your trading partners in Canada, you must have a valid GS1 Company Prefix License, which can be issued by the GS1 office in your country.

Organizations that already have a registered Company Prefix License with another GS1 Member Organization, such as GS1 US or GS1 UK, are eligible to engage in ECCnet Value-Added Services, subject to participation fees.

For information on participation fees, or to obtain a Company Prefix License in Canada, contact info@gs1ca.org or call 1.800.567.7084 ext. 3.

Data Synchronization Process Readiness
Before initiating the process of data synchronization, data providers are required to ensure that GTINs are assigned to each packaging level of a medical device. Only a product with a GTIN can be synchronized with data recipients in ECCnet Registry. To synchronize product information, the data provider must complete these steps:

1. Contact GS1 Canada to acquire an understanding of the data synchronization process and the available options. More details on these options are provided below.
2. Contact your data recipient to establish your trading partner relationship and inform them of your intention to synchronize product data with them.
3. Acquire an understanding of your recipient’s data retrieving method and system.
4. Evaluate, select and inform GS1 Canada of your data loading method. (See next section.)
5. Review data requirements for the selected loading method. Please see Appendix A for the list of medical device attributes.
6. For manufacturers without a GS1 Bar Code, a GTIN can be assigned and registered in GDSN/ECCnet before the GS1 Bar Code is physically marked. For more information, see GLN & GTIN Sunrise Dates for Healthcare.
7. Prepare product data for loading by ensuring that the data complies with requirements.
Maintaining Data Integrity

After you have established data synchronization with your trading partners, you can work with them to maintain the integrity of your data. The GS1 Canada GTIN Discrepancy Reporting (GDR) System is an online interactive message board and tracking system.

In some cases you will have to work out an agreement with your service provider around who should receive these messages and how you should take action around them.

For more information, see the Online GDR System Vendor User Guide.

Synchronizing Your Product Data

After data is loaded, data synchronization is enabled based on a publication-subscription model. For data synchronization to occur the data provider publishes data to ECCnet Registry or to a data recipient on a GDSN certified data pool and the data recipient subscribes to the provider’s data. After the subscription is completed, any updates that the data provider applies to their data are received by all subscribed data recipients.

There are three methods of loading and synchronizing product data:

1. Data Synchronization Through ECCnet Registry
2. Data Synchronization Through GS1 Canada GDSN
3. Data Synchronization Using Another GDSN Data Pool

1 Data Synchronization Through ECCnet Registry

ECCnet ProSYNC® loading options are unique to GS1 Canada and assist vendors with loading product data into ECCnet Registry and other related applications.

Other methods of loading data to ECCnet Registry include:

- EDI/DIY – Electronic data interchange “do-it-yourself” process using a Healthcare-specific Microsoft Excel® spreadsheet
- DIT – ECCnet ProSYNC® Data Import Tool

To synchronize data using ECCnet Registry:

1. Contact GS1 Canada for information on data synchronization terms and conditions. (ECCnetsupport@gs1ca.org or 1.800.567.7084 ext. 3)
2. Sign the appropriate agreements with GS1 Canada.
3. Prepare and load data to ECCnet Registry.

   Data acceptance is subject to automatic data validations based on Canadian Healthcare requirements. For more information about medical device attributes definitions, see the Healthcare Attributes Guide.

4. Publish data to the data recipient via ECCnet Registry.
By publishing data to a data recipient, you are granting them access to your product information.

5. Ensure appropriate data recipients are subscribed.

A data recipient, such as a hospital or Shared Service Organization (SSO), will “subscribe” to the supplier’s data in order to receive their suppliers’ product data in ECCnet Registry.

For more information on publishing data using ECCnet ProSYNC interface, see the ECCnet ProSYNC User Guide or contact ECCnetsupport@gs1ca.org.

**Making Changes to Product Data in ECCnet Registry**

As a data provider only you can update or correct product data in ECCnet Registry, all changes are automatically sent to the all of your data recipients. After you have published data for a product to a trading partner, you do not have to re-publish the data every time the product information changes. For more information about product updates, see the ECCnet ProSYNC User Guide.

**Delisting Products in ECCnet Registry**

If a product has been discontinued, the discontinued date can be added to the product data.

If a product is no longer available for any reason, or if you decide to stop sharing product data, you can stop synchronization by withdrawing the product.

Some healthcare products traded in Canada are subject to permanent assignment, also known as GTIN non-reuse. This means that once assigned, by the brand owner, these GTINS can never be re-assigned to another trade item. Permanent GTIN assignment rules supersede the normal rules of GTIN re-use. For more information please refer to sections 4.3.2 and 4.3.3 of Canadian Healthcare GTIN Allocation Rules at [http://www.gs1ca.org/files/Canadian_Healthcare_GTIN_Allocation_Rules.pdf](http://www.gs1ca.org/files/Canadian_Healthcare_GTIN_Allocation_Rules.pdf)

**2 Data Synchronization Through GS1 Canada GDSN**

GS1 Canada GDSN is a GDSN certified data pool that allows the synchronizing of GDSN compliant data with:

- ECCnet Registry data recipients, via a secure connection between GS1 Canada GDSN and ECCnet Registry
- GS1 Canada GDSN data recipients
- Other GDSN data recipients

To synchronize data with ECCnet Registry data recipients:

1. Contact GS1 Canada for information on data synchronization terms and conditions. ([ECCnetsupport@gs1ca.org](mailto:ECCnetsupport@gs1ca.org) or 1.800.567.7084 ext. 3)
2. Review GS1 Canada service requirements for successful data synchronization.
Synchronizing Your Product Data

GS1 Canada enables the connection necessary for data synchronization between the data provider in GS1 Canada GDSN and the intended data recipient in ECCnet Registry.

3. Sign the appropriate agreements with GS1 Canada
4. Enter or load data to GS1 Canada GDSN.

For help with loading data into GS1 Canada GDSN, contact ECCnetsupport@gs1ca.org or call 1.800.567.7084 ext. 3.

In ECCnet Registry, data acceptance is subject to automatic data validations based on Canadian Healthcare requirements.

5. Ensure appropriate data recipients are subscribed.

A data recipient, such as a hospital or SSO, will “subscribe” to the supplier’s data in order to receive their suppliers’ product data.

6. Publish data to subscribed data recipients.

After you load data to the GS1 Canada GDSN, you will receive one of two messages to the Catalogue Information Captain (CIC):

- CIC Accept – Data passed all validations; data is compliant and will flow to the data recipient
- CIC Review – Some data has not passed ECCnet Registry validations and needs to be corrected.

For more information on Healthcare Attributes requirements, you can request the Target Market Canada Attributes guide. To make this request, contact: ECCnetsupport@gs1ca.org or call 1.800.567.7084 ext. 3.

**Making Changes to Product Data in GS1 Canada GDSN**

When you update or correct product data in GS1 Canada GDSN, the updated information is automatically sent to the all of your data recipients. After you have published data for a product to a trading partner, you do not have to re-publish the data every time the product information changes.

**Delisting products in GS1 Canada GDSN**

If the product has been discontinued, then the discontinued date can be added to the product data.

If a product is no longer available for any reason, or if you decide to stop sharing product data, you can stop synchronization by withdrawing the product.

Some healthcare products traded in Canada are subject to permanent assignment, also known as GTIN non-reuse. This means that once assigned, by the brand owner, these GTINS can never be re-assigned to another trade item. Permanent GTIN assignment rules supersede the normal rules of GTIN re-use. For more information please refer to sections 4.3.2 and 4.3.3.
of Canadian Healthcare GTIN Allocation Rules at http://www.gs1ca.org/files/Canadian
Healthcare GTIN_Allocation_Rules.pdf

3 Data Synchronization Using Another GDSN Data Pool

To synchronize data with ECCnet Registry and GS1 Canada GDSN data recipients:

1. Request your home GDSN data pool service to contact GS1 Canada to enable data
   synchronization with ECCnet Registry data recipients. (ECCnetsupport@gs1ca.org or
   1.800.567.7084 ext. 3)

   Your home GDSN data pool service and GS1 Canada work together to enable the data
   connection.

2. Load data to your GDSN data pool service.

3. Publish data to specific data recipients.

   In ECCnet Registry, data acceptance is subject to automatic data validations based on
   Canadian Healthcare requirements.

   For more information on Healthcare Attributes requirements, you can request the Target
   Market Canada Attributes guide. To make this request, contact:
   ECCnetsupport@gs1ca.org or call 1.800.567.7084 ext. 3.

Making Changes to Product Data

When you update or correct product data in your home GDSN data pool, the updated
information may be automatically sent by your home GDSN data pool service to the ECCnet
Registry or GS1 Canada GDSN data recipient. Contact your home GDSN Data Pool service
provider to confirm.

Delisting products

If the product has been discontinued, then the discontinued date can be added to the product
data.

If a product is no longer available for any reason, or if you decide to stop sharing product data,
you can stop synchronization by withdrawing the product.

Some healthcare products traded in Canada are subject to permanent assignment, also
known as GTIN non-reuse. This means that once assigned, by the brand owner, these GTINS
can never be re-assigned to another trade item. Permanent GTIN assignment rules supersede
the normal rules of GTIN re-use. For more information please refer to sections 4.3.2 and 4.3.3
of Canadian Healthcare GTIN Allocation Rules at http://www.gs1ca.org/files/Canadian
Healthcare GTIN_Allocation_Rules.pdf
Useful Links

- Data Integrity in ECCnet Registry
- Standards for Data Synchronization
- GLN and GTIN Sunrise Dates for Healthcare
- Healthcare Product Description Standardization Guidelines
- GS1 Global Data Dictionary
- ECCnet Carenet Healthcare Resources and Collateral
- ECCnet Vendor Education
- GDSN Glossary of Terms
- ECCnet Registry Healthcare Attributes Guide
- Target Market Canada Healthcare Attributes (GDSN Users)