



# Provider Implementation Guidelines for ECCnet Registry, Canada's healthcare product registry





## Contents

1.	INTRODUCTION: .....	3
2.	ABOUT GS1 .....	3
3.	ABOUT GS1 STANDARDS: .....	4
4.	WHAT IS A GTIN? .....	5
5.	WHAT IS ECCNET REGISTRY?.....	5
6.	BENEFITS: .....	6
7.	ROLL-OUT:.....	6
8.	ROLL-OUT STEPS:.....	7
9.	HOW WILL IT WORK: .....	7
10.	PRICING:.....	8
11.	HOW TO START: .....	8
12.	APPENDIX: ATTRIBUTES LIST .....	9



## 1. INTRODUCTION:

As a healthcare provider\*, have you ever had to take time away from patient care or productive efforts to relabel products or use cross-reference tables to keep track of multiple product identifiers? The current use of non-standardized product information in the healthcare supply chain results in costly errors, wasteful inefficiencies, and has implications for patient safety.

The purpose of this document is to provide guidance to Canadian healthcare providers for implementation of GS1 Global Trade Item Numbers (GTINs) in order to meet the Canada/U.S. 2012 GTIN sunrise date. In October 2009, the GS1 Canada Carenet Healthcare Sector Board announced the decision to implement a common business language across the Canadian healthcare sector for product identification: the GS1 GTIN standard, part of the GS1 System of Standards. The GS1 System facilitates 6 billion GTIN transactions per day among organizations around the world.

This document introduces and explains the implementation process for GTINs, and describes how this globally-unique identification code facilitates reliable and efficient management of supply chain processes. In addition, the benefits to patient safety, operational efficiency and supply chain management are discussed. Finally, this document provides detailed steps for implementing GTINs in your organization.

## 2. ABOUT GS1

### **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 1 million companies, who execute more than 6 billion transaction a day with the GS1 System of Standards. GS1 is truly global with local Member Organizations in 110 countries and representing over 150 countries, with the Global Office in Brussels, Belgium. Learn more at [www.gs1.org](http://www.gs1.org).

### **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](http://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](http://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.



### 3. ABOUT 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.

#### **Global Location Number (GLN)**

The Global Location Number (GLN) is the globally-unique GS1 Identifier for locations and supply chain partners (parties). The GLN can be used to identify a *legal entity* (like a regional health authority or shared services organization), a *function within a legal entity* (like a hospital pharmacy or accounting department) or a *physical entity* (like a warehouse or hospital wing or even a nursing station). The attributes defined for each GLN [e.g., name, address, location type (e.g., Ship To, Bill To, Deliver To, etc.)] help users to ensure that each GLN is specific to one unique location within the world.

#### **Global Trade Item Number (GTIN)**

The Global Trade Item Number (GTIN) is the globally unique GS1 Identifier for "trade items" (i.e., products and services that may be priced, ordered or invoiced at any point in the supply chain). GTINs are assigned by the brand owner of the product, and are used to identify products as they move through the global supply chain to the hospital or other end user. The GTIN uniquely identifies a product at each packaging level (e.g., a blister of two aspirin tablets; a bottle of 100 aspirin tablets; etc.).

#### **Data Synchronization**

GS1 Canada enables organizations to exchange standardized product and location information by publishing and retrieving such information from central registries, through a process known as data synchronization. Through data synchronization, any changes that an organization makes to its product or location information in the central registry are automatically and immediately provided to all of this organization's trading partners. This automated approach to data management ensures that supply chain information is identical among trading partners, increasing data accuracy and driving costs out of the supply chain.

In Canada, an organization's GLNs are stored in TrueSource® Locations, managed by GS1 Canada and accessible to all GS1 Canada members. This central, online database ensures up-to-date, accurate and precise location information for any trading partner transaction where location information is required.

Similarly, GS1 Canada's ECCnet Registry, Canada's healthcare product registry will be the source of truth for the Canadian healthcare sector in accessing accurate product information. This registry of medical device product information will be complemented with information from other categories – such as foodservice and pharmaceuticals. Acting as a one-stop-shop for accessing clean, consistent data, ECCnet Registry will save healthcare organizations time and ensure data accuracy. To support Canadian organizations to more effectively engage in data synchronization with their international trading partners, GS1 Canada also provides access to the GS1 Global Data Synchronization Network™ (GDSN).



## 4. WHAT IS A GTIN?

A GTIN is a numerical identification code that is used to identify a product as it moves through the global supply chain to the hospital or ultimate end user. GTINs are used to identify:

- Individual trade item units (*e.g. a box of 15 Brand X tissues*); and
- All of their different packaging configurations (*e.g. a carton of six boxes of Brand X tissues*).

GTINs are assigned by the brand owner or manufacturer of the product. GTINs are already being used across the healthcare sector today, from prescription drugs, to medical devices, to healthcare supplies, to foodservice.

GTINs help healthcare trading partners:

- Reduce confusion by accurately identifying specific products with specific numbers;
- Improve information quality by ensuring that product data is identical among supply chain partners;
- Free up staff time by eliminating the use of cross-reference tables to keep track of multiple proprietary identification numbers;
- Enable automation, such as bar code scanning from the receiving dock to bedside care;
- Increase the efficiency of payment and reporting processes; and
- Facilitate spend analytics.

GTINs, among other product data, are stored in ECCnet Registry.

## 5. WHAT IS ECCNET REGISTRY?

ECCnet Registry, Canada's healthcare product registry, will launch in the healthcare sector in Fall 2011. Canadian healthcare industry representatives contributed their expertise to roll out ECCnet Registry to the healthcare sector to improve patient safety, prevent medical errors, drive cost savings and improve supply chain efficiencies across the Canadian healthcare system.

ECCnet Registry is the most comprehensive, perpetually updated and continually validated registry of healthcare product data of its kind in Canada. GS1 Canada members have been utilizing ECCnet Registry since 2002 for synchronized product data exchange. Product listing through ECCnet Registry is already a standard term and condition of trade in the Canadian grocery, pharmacy and foodservice sectors.

The new category of medical device product data will join existing categories already available in ECCnet Registry. ECCnet Registry is based on global GS1 supply chain standards and has been built according to GS1 Canada's proven model for driving data accuracy. ECCnet Registry ensures that only validated users gain access to this secure, auditable system.

This document supports healthcare providers' adoption of ECCnet Registry by outlining GS1 Canada's recommended implementation plan to assist healthcare providers with utilizing the product information that is loaded by healthcare suppliers into ECCnet Registry.



## 6. BENEFITS:

Global standards provide a common business language for product and location information that can be used by any supply chain partner, in any industry, in any location around the world. Global standards support healthcare business processes and can bring many benefits to the healthcare sector, such as:

- Fewer medication errors through efficient automated identification: the right product for the right patient at the right time through the right route and in the right dose;
- More effective product recalls;
- Efficient traceability;
- More time with patients, less time spent on manual documentation;
- Cost reduction through increased supply chain efficiency;
- Improved order and invoice processes;
- More efficient receiving;
- Reduced inventory;
- Increased productivity in business processes;
- Improved shelf management;
- Improved service levels/fill rates;
- Improved management of manufacturing/supply costs;
- Elimination of the need for re-labeling with proprietary codes; and
- Regulatory compliance.

Patient safety and supply chain efficiency are the ultimate implementation goals. There are numerous and ever-evolving tools to support providers in achieving these goals. However, in order to work, those tools must be built on a strong foundation. This is where standards come into play. Standardized product identification, along with standardized location identification and standardized product definitions provide the foundation for developing the tools and applications that healthcare providers use to improve patient safety and supply chain management.

## 7. ROLL-OUT:

- ECCnet Registry will be the single point of access between healthcare trading partners for exchanging accurate, standardized, perpetually updated product data.
- ECCnet Registry will launch in the healthcare sector based on a “Jumpstart” approach – mass loading, by GS1 Canada, of approximately 100,000 GTINs. In collaboration with industry, GS1 Canada will accomplish this mass loading stage by leveraging suitable product information from two existing sets of Canadian healthcare product data currently being utilized by GS1 Canada members in the healthcare sector:
  - a catalogue currently being used by a national distributor
  - a database created by the Ontario Hospital Association during an Operating Room supply chain project
- A minimum set of medical device product data attributes (fields) – consistent with existing Global Data Synchronization Network™ (GDSN) healthcare attributes – will be the first set of data required. Please refer to the Appendix for a list of attributes.



- The following product data attributes will be identified as **MS1** (minimum set of medical device product data attributes):
  - 25 mandatory data attributes
  - 26 optional data attributes (Note: each trade item may or may not require all the optional attributes.)

***Important Note on Data Validations***

For the Jumpstart phase, the validations on MS1 data will be basic data validations – limited automatic system settings that will flag discrepancies, such as packaging hierarchy inconsistencies.

- Launch of the full attribute data set and data validation processes in ECCnet Registry will be determined based on industry-identified use cases, data integrity protocol adoption strategies and timelines. This includes the number of attributes required in the full data set.
- A cost recovery model for this full use-case data set will be developed with GS1 Canada Carenet Healthcare Sector Board input, through a transparent process.

## 8. ROLL-OUT STEPS:

- First Step Healthcare providers, distributors, group purchasing organizations (GPOs) and shared services organizations (SSOs) will sign an agreement with GS1 Canada to use ECCnet Registry as their single source for healthcare product data.
- Second Step Healthcare providers, distributors, GPOs and SSOs will determine their data retrieval plan and sign a Participation Agreement consistent with their chosen option.

Healthcare providers, distributors, GPOs, SSOs and/or their designated agents will access ECCnet Registry and subscribe to the MS1 data set.

## 9. HOW WILL IT WORK:

- **Load Data:** A supplier will register their company with GS1 Canada and load their product data to ECCnet Registry, either by using a standards-based product listing form for direct loading, or loading through the Global Data Synchronization Network (GDSN). The supplier will maintain this product data on an ongoing basis.
- **Request Subscription:** A data recipient, such as a hospital or SSO, will register their organization with GS1 Canada and subscribe to receive their suppliers' product data in ECCnet Registry.
- **Publish Data:** The supplier will note the subscription and grant the data recipient access to the requested information.
- **Pull Data:** The data recipient, such as a hospital or SSO, will then be able to access, on an ongoing basis, the standardized product data loaded and perpetually maintained by the supplier, using it to populate their item master files and manage their internal operations.



- **Confirm and Inform:** A confirmation will be sent to the supplier to inform them of any action when data is accessed.

## 10. PRICING:

As GS1 Canada is a not-for-profit association, the costs and operation of ECCnet Registry are based on cost recovery. Only licensed GS1 Canada members may access ECCnet Registry; therefore, an annual GS1 Canada License fee applies. These fees range from \$500 - \$1,045, depending of the size of the organization.

## 11. HOW TO START:

Contact GS1 Canada at 1.800.567.7084 ext. 3 or [info@gs1ca.org](mailto:info@gs1ca.org) to obtain a GS1 Canada Licence if your organization is already a GS1 Canada member, or to become a member and obtain a licence.



## 12. APPENDIX: ATTRIBUTES LIST

Canadian Attribute Name	Healthcare Common Definition	Canadian Healthcare Minimum Data Set (Mandatory OR Optional OR Dependent OR System)
Brand Name - English	The brand owner's trade name of the product in ENGLISH. The recognizable name used by a brand owner to uniquely identify a line of trade items or services.	MANDATORY
Brand Name - French	The brand owner's trade name of the product in FRENCH. The recognizable name used by a brand owner to uniquely identify a line of trade items or services.	MANDATORY
Global Product Classification (GPC) Brick Description (EN/FR)	Description of the Global Product Classification (GPC) associated to the brick number	System Managed to Medical Device
Global Product Classification (GPC) Brick Number	The Global Product Classification (GPC) is a unique 8-digit code used to group products globally by category. The foundation of the GPC is the Brick Code, which defines categories of like products.	MANDATORY
UNSPSC Additional Classification Agency Name	A globally used classification hierarchy for product and services. The United Nations Standard Products and Services Code (UNSPSC) provide an open, global multi-sector standard for efficient, accurate classification of products and services.	OPTIONAL: Use ONLY when applicable  <u>Note:</u> Other classifications may be used
Channels of Distribution - CDN Med Surg	Indicates the channels in which the trade item/product is sold: healthcare (medical device), foodservice, grocery, etc.	System Managed to Medical Device
ECCnet Classification Code	The ECCnet Classification Code identifies healthcare medical device products. This is a 6-digit code.	System Managed to Medical Device



Canadian Attribute Name	Healthcare Common Definition	Canadian Healthcare Minimum Data Set (Mandatory OR Optional OR Dependent OR System)
Selection Code (aka Product Line)	Selection Code is a 3-digit code assigned by suppliers/vendors to group together 'like' products into sub-groups.	System Managed
Cancel Date	The date the master data is no longer available. This product was never launched and did not enter the supply chain.	OPTIONAL: Use ONLY when applicable
Discontinue Date	The 'Last Order Date' after which the item is no longer available for order.	OPTIONAL: Use ONLY when applicable
Effective Date	Date on which the master data becomes valid for the product.	MANDATORY: System will generate date effective to = date data loaded or updated UNLESS data source populates a future date.
Description Short - English	Describes in a brief text format what the trade item is named or referenced as in ENGLISH.	MANDATORY
Description Short - French	Describes in a brief text format what the trade item is named or referenced as in FRENCH.	MANDATORY
Functional Name - ENGLISH	Describes the use of the product or service to help clarify the product function associated with the trade item in ENGLISH. It answers the question What does the product do?	MANDATORY
Functional Name - French	Describes the use of the product or service to help clarify the product function associated with the trade item in FRENCH. It answers the question What does the product do?	MANDATORY
Base Unit	The GTIN identifying the start of the hierarchy level of a product. It is an indicator identifying this is an item that is at the lowest level of a hierarchy. This can be but is not always the same as the consumer unit.	MANDATORY: All 6 unit attributes must always be completed
Consumer Unit	The trade item is at the consumption level for the user. It is an indicator identifying this is an item that can be sold at the retail level as a single unit to the consumer. There can be more than one consumer unit in a hierarchy.	MANDATORY: All 6 unit attributes must always be completed



Canadian Attribute Name	Healthcare Common Definition	Canadian Healthcare Minimum Data Set (Mandatory OR Optional OR Dependent OR System)
Invoice Unit	An indicator identifying that the information provider will include this trade item on their billing or invoice. This may be relationship dependent based on channel of trade or other point to point agreement. This is a Y/N (Boolean) attribute field; Y indicates the trade item is an invoicing unit.	MANDATORY: All 6 unit attributes must always be completed
Orderable Unit	An indicator identifying that the information provider considers this trade item to be at a hierarchy level where they will accept orders from customers. This may be different from what the information provider identifies as a dispatch unit. This may be a relationship dependent based on channel of trade or other point to point agreement. This is a Y/N (Boolean) attribute field; Y indicates the trade item is an ordering unit.	MANDATORY: All 6 unit attributes must always be completed
Shipping Unit	An indicator identifying that the information provider considers the GTIN to be a Shipping Unit. This may be trading partner-dependent based on the channel of trade or other point-to-point agreement.	MANDATORY: All 6 unit attributes must always be completed
Variable Weight Unit	Indicates that an article is not a fixed quantity, but that the quantity is variable. Can be weight, length, volume. Trade item is used or traded in continuous, rather than discrete, quantities.	MANDATORY: All 6 unit attributes must always be completed
Additional (Product) Trade Item Identification - Assigned by Manufacturer (Manufacturer's Internal Vendor Number)	A manufacturer's/vendor's internal number used to additionally identify the trade item. Manufacturer's Part Number. An additional (legacy) method for identifying the item (besides the GTIN) that can be populated. This might be a vendor's item number or manufacturer's catalogue number. This number can be any other externally assigned identification number for the item.	MANDATORY
Child GTIN	The Global Trade Item Number (GTIN) of the next lower level of trade item that is contained in the item hierarchy. The GTIN for the current item which is a child item of another item.	OPTIONAL: Use ONLY when applicable



Canadian Attribute Name	Healthcare Common Definition	Canadian Healthcare Minimum Data Set (Mandatory OR Optional OR Dependent OR System)
DIN (Drug Identification Number)	Trade Items that have been assigned a Drug Identification Number (DIN) or contain "active" ingredients that have a DIN assigned by Canadian Health Protection Branch	OPTIONAL: Use ONLY when applicable
GTIN (Global Trade Item Number)	The Global Trade Item Number (GTIN) identifies the unique GS1 assigned number for the trade item.	MANDATORY
GTIN Type	Indicates the trade item is physically bar-coded and identifies the type of Global Trade Item Number (GTIN) used.	MANDATORY: Dependent on GTIN, which is Mandatory
Medical Device Class	Medical Device Class (MDC) specifies the Medical Device Class (I,II,III or IV) and is associated with a specific Medical Device License Number (also known as the MDL when Class is II or higher). Regulated by the Therapeutic Products Directorate of Health Canada.	OPTIONAL: Use ONLY when applicable
Medical Device License Number	The Medical Device License (MDL) Number identifies the license number of the medical device that the trade item represents or contains and is assigned according to Health Canada's regulations.	OPTIONAL: Use ONLY when applicable  <u>Note:</u> Dependent on Medical Device Class = 2 or higher
Product Type	Identifies the level of the trade item.	MANDATORY
Replaces GTIN	Used to identify the Global Trade Item Number (GTIN) of the product that has been replaced by this GTIN. This is a substitute GTIN.	OPTIONAL: Use ONLY when applicable
Latex Content	Indicates if the item is made from or contains latex.	MANDATORY
Marked with Lot Number	The trade item packaging is marked with a lot number.	OPTIONAL: Use ONLY when applicable
Returnable Package	The trade item packaging is marked that it can be returned. Such packaging would then be reused or recycled for reuse in packaging other items.	MANDATORY
Gross Weight	Used to identify the gross weight of the trade item. The gross weight includes all packaging materials of the trade item.	*DEPENDENT: Becomes MANDATORY when Orderable Unit or Shipping Unit is True (need for hierarchy)
Gross Weight Unit of Measure (UOM)	The metric measuring unit of the gross weight of the packaging at this level.	*DEPENDENT: Becomes MANDATORY when Orderable Unit or Shipping Unit is True (need for hierarchy)



Canadian Attribute Name	Healthcare Common Definition	Canadian Healthcare Minimum Data Set (Mandatory OR Optional OR Dependent OR System)
Height	Vertical dimension of the object measured, as per the GS1 Product Measurement Guidelines.	OPTIONAL: Use ONLY when applicable
Height - Unit of Measure (UOM)	The metric measuring unit of the height of the trade item packaging.	OPTIONAL: Use ONLY when applicable
Length/Depth	Length/Depth measurement from the front to the back of the object measured. as per the GS1 Package Measurement Guidelines.	OPTIONAL: Use ONLY when applicable
Length/Depth UOM	The metric measuring unit of the length of the packaging at this level.	OPTIONAL: Use ONLY when applicable
Net Content	The amount of the trade item contained by a package, usually as claimed on the label.	*DEPENDENT: Becomes MANDATORY when Consumer Unit is True (need for hierarchy)
Net Content Unit of Measure (UOM)	Net Content has a Unit of Measure relating to the size of the consumer item.	*DEPENDENT: Becomes MANDATORY when Consumer Unit is True (need for hierarchy)
Width	Width measurement from the left to the right of the object measured. as per the GS1 Package Measurement Guidelines.	OPTIONAL: Use ONLY when applicable
Width - Unit of Measure (UOM)	The metric measuring unit of the width of the packaging at this level.	OPTIONAL: Use ONLY when applicable
Brand Owner GLN	Unique Global Location Number (GLN) identifying the brand owner. May or may not be the same entity as the information provider, which actually enters and maintains data in data pools.	MANDATORY
Brand Owner Name	Name of the party who owns the brand of the trade item.	MANDATORY: DEPENDENT on Brand Owner GLN
Manufacturer GLN	Global Location Number (GLN) for the manufacturer of this product.	MANDATORY
Manufacturer Name	The operating name of the source manufacturer of the trade item.	MANDATORY: DEPENDENT on Manufacturer GLN
Publisher GLN (Information Provider Of Trade Item)	The Global Location Number (GLN) of the company or entity publishing the product information.	System Managed



Canadian Attribute Name	Healthcare Common Definition	Canadian Healthcare Minimum Data Set (Mandatory OR Optional OR Dependent OR System)
Target Market Country Code	The country in which the item is intended to be sold. In the Global Data Synchronization Network (GDSN), the list of the geographical regions or countries is defined by the ISO-3166-1 code system. The value used is the 3-digit numerical code.	MANDATORY
Quantity of Next Lower Level Trade Item	This is the actual quantity of child items contained in this item. This is specified for EACH child GTIN.	DEPENDENT: Use ONLY when Parent GTIN contains Child GTINs
Total Units	This represents the TOTAL quantity of all individual trade items in this packaging level. This is specified for EACH GTIN in the hierarchy.	MANDATORY



### **Toronto Office**

1500 Don Mills Road,  
Suite 800  
Toronto, ON M3B 3K4  
T 416.510.8039  
F 416.510.1916  
Helpdesk 1.800.567.7084  
E [info@gs1ca.org](mailto:info@gs1ca.org)

### **Montreal Office**

7780 Metropolitan Blvd. East  
Montreal, QC H1K 1A1  
T 514.355.8929  
F 514.356.3235  
E [eccnetlandV@gs1ca.org](mailto:eccnetlandV@gs1ca.org)

### **Calgary Office**

720-28th Street N.E.,  
Suite 110  
Calgary, AB T2A 6R3  
T 403.291.2235  
F 403.291.2240  
E [eccnetlandVcalgary@gs1ca.org](mailto:eccnetlandVcalgary@gs1ca.org)