GS1 Global Trade Item Numbers (GTINs) in Healthcare
Unambiguous product identification:
unique, secure, global, cross-sectorial, user-driven, future-proof

Standards-based product identification will enable all Healthcare stakeholders to efficiently and effectively manage information about all products, and thus improve patient safety and supply chain efficiency in Healthcare.

The GS1 Global Trade Item Number (GTIN) is used for the unique identification of products worldwide, allowing supply chain partners to retrieve predefined information about the product (at each packaging level or directly marked on the product) whether it is read in a bar code or an RFID tag, exchanged via electronic messages (order, delivery, payment, etc.), accessed from an electronic product catalogue or from a traceability system.

While all GS1 Standards are voluntary, they are intended to drive consistent implementation in the global Healthcare community to the benefit of all stakeholders.

GTINs are unique

GS1 Company Prefixes and GTIN Allocation Rules allow brand owners to allocate and maintain globally unique product identification numbers in a straightforward way.

GTINs uniquely identify each packaging level, ensuring accuracy in the transaction quantities, down to an individual device if it is direct part marked.

GTINs are global

GTINs provide global reach, but also support local needs in Healthcare. Over 100 GS1 Member Organisations worldwide, with about 2,000 employees, support 1.3 million local and multinational companies worldwide to implement GS1 Standards.

GTINs are secure

Today, in various sectors (including Healthcare), over 6 billion transactions per day are enabled by GTINs, demonstrating its robustness.

GTINs have a **predictable structure**, which reduces risk for human misinterpretation. The fixed length of the GTIN (14 numerics) allows users to always assess whether a product identification number is complete or not.

GTINs are **all-numeric**, which reduces risk for human interface errors. When data has to be manually keyed, to either design a bar code or when a bar code fails, all-numeric strings are easier to key accurately, as humans can more easily remember several digits, especially when separated, periodically, with spaces.

Alphanumeric strings, such as A46GB8ZS52O0, tend to be much harder to key accurately. Furthermore, certain alphanumeric characters can easily be confused, e.g. 0 & O or 1 & I or 2 & Z or 4 & A or 5 and S or 6 & G or 8 & B.

GTINs have a check digit, which ensures data integrity. A check digit is a form of redundancy check used for error detection.

GTIN's are **non-significant**, which reduces risk for number management and processing. Including meaningful data, such as locations, catalogue numbers or names, into a product identification number adds risk for all stakeholders. It becomes more difficult to ensure uniqueness. For example, when customers are receiving different products from different suppliers with the same catalogue number embedded.

Furthermore, a separate, unique product identification number is required whenever any of the predefined characteristics of an item (such as strength, usage, net quantity or packaging configuration) is different. To avoid mix-ups, immediately re-using the previous product identification number is not an option.

GTINs are cross-sectorial

In today's complex markets, supply chain lines are blurring and channels of distribution for various sectors are overlapping. Using the same standard to identify Healthcare and non-Healthcare items ensures compatibility for Healthcare stakeholders sourcing a variety of items.

GTINs are user-driven

GS1 Standards are **developed and maintained by end-users**. The GS1 Global Standards Management Process (GSMP) ensures adequate representation from all supply chain stakeholders.

GTINs have already been **widely adopted** by Healthcare organisations. Many Healthcare suppliers already use GTINs to uniquely identify their products. Others are transitioning to GTINs. Leading Group Purchasing Organisations (GPOs) and Healthcare providers have indicated that they want to support GS1 Standards adoption through collaboration. Local Healthcare user groups, facilitated by GS1 Member Organisations worldwide, drive adoption and implementation by the local community.

GTINs are future-proof

GTINs provide **sufficient number capacity**.

GTINs are **foundational** in the GS1 System of Standards, providing an integrated suite of standards for automatic identification and data capture, electronic product catalogues, electronic communication and traceability.

GS1 works with other international standards bodies to **ensure compliance or compatibility** of standards, including HL7, ICCBBA (International Council for Commonality in Blood Bank Automation), ISO, ANSI, CEN, and more.

Many regulatory bodies have developed, or are developing, regulations that will require unique product identification. GS1 Standards can be **key enablers** to comply with these regulatory requirements.

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