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## **Principles/guidance for undertaking a linkage between SNOMED CT and GTINs (v0.09)**

### **Draft for trial use**

The following are international principles/guidance for linking SNOMED CT and GS1 GTINs (Global Trade Item Number). The scope of the work is Medicinal Products with the purpose of enabling interoperability between clinical data on medicinal products to the data required for supply chain and regulation, e.g. by reading barcodes and linking this directly to clinical content. The principles apply to linkage of the master data and do not imply additional information in the data carrier (barcode).

The principles/guidance are based on best practice and input from stakeholders who are planning or have undertaken this linkage work or related work.

The decision to undertake this work is based on feedback from SNOMED International member countries as well as GS1 member organisations that such guidance is needed to ensure a consistent approach and also to avoid duplication of effort by countries. At this time, it is not envisaged to develop or enrich a global database – each country has a different approach to healthcare provision and terminology for medicinal products. Medicinal products often differ between countries, thus GTIN allocation is often also on a country basis, though governed by the global standards and guidelines.

### **Principles:**

#### **Use Case for the linkage:**

1. Linking SNOMED CT and GTINs is recognised as necessary for clinical and supply chain harmonization in medicines
2. Linkages should be developed based on Use Case(s) – some rules applied to developing, maintaining and updating the linkage may be Use Case specific (example Use Cases are available as part of the drafting of these Principles)
3. Be clear about what the Use Case and linkage will NOT support, i.e. scope of Use Case must be clearly defined
4. Identify a SNOMED CT set (e.g. list of vaccines) for the Use Case which then forms the basis for the linkage

**Governance:**

1. Identify key partners/stakeholders and their responsibilities
2. Put in place an open and transparent governance process that includes all stakeholders in maintenance, update and usage of the linkage
3. Identify a responsible owner (organisation/individual) of the linkage and its verification process, with identified and agreed responsibilities

**Technical:**

1. Based on the Use Case, an Editorial Policy will be required for developing, maintaining and updating the linkage between SNOMED CT and GTINs
2. The editorial guidelines should include managing 1:Many and Many:1 relationships in a consistent and safe manner
3. The map direction should be asserted for use case/each use case (SCT to GTIN, GTIN to SCT or bi-directional)
4. A nationally defined data structure for the linkage to ensure consistency and interoperability across all use cases.

**Manufacturers:**

1. Create a National agreement with manufacturers to provide data for the linkage table that is:
  - a. Accurate
  - b. Up to date/timely
  - c. Reliable
2. Identify key drivers to gain conformance from manufacturers e.g. Regulation, Trading etc.

**QA and safety:**

1. System in place for managing 1: Many and Many : 1 instances. QA must allow for noting exceptions, identifying failures and have in place an escalation process (e.g. duplicate GTINs).
2. Suppliers and their customers should allocate GTINs as per “Healthcare GTIN allocation rules” and have in place a mechanism to link to the local Master database (e.g. GDSN) where it exists. GS1 Member Organisation provide necessary support to ensure the rules are strictly implemented
3. Error reporting system in place for users of the linkage table with agreed timelines for responses and updates
4. In the jurisdiction, there must be a mechanism in place to ensure that the same GTIN cannot be allocated to more than one product (the Global Data Synchronisation Network (GDSN) may be one solution for this)

**Documents:**

The following is a list of documents that should be considered in order to develop, maintain, update and advise on implementation of the SNOMED CT/GTIN linkage. These should be made available in the public domain:



- Editorial policy for the linkage
- Technical Specification of model and format of linkage
- Process for maintaining and updating
- Error reporting system
- GS1 Healthcare GTIN allocation rules
- QA process/verification
- Technical specification of the release format/data files
- User guidance/implementation guidance

#### Reference materials

- SNOMED CT and GTINs Use Case document
- <http://www.gs1.org/how-gdsn-works>

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**Note** – for any queries or feedback, please contact Jane Millar [jmi@snomed.org](mailto:jmi@snomed.org) at SNOMED International and Christian Hay [christian.hay@gs1.ch](mailto:christian.hay@gs1.ch) at GS1