

Attributes

For a Product

- Product Description - The recognizable functional description of a product. This definition is a functional equivalency for Items in a supply chain which abstracts supplier, brand, etc. e.g. Ibuprofen, 500mg, Tablet.
- Unit of Measure - The smallest unit by which the product is counted. Usually Piece, Each, Pair, etc. The packaging hierarchy builds up from here.

For an Item

Attribute names are the GDSN names, and where applicable they include unit of measure. Use the [GDD](#) to lookup an attributes description. A good reference in how they are being used is GHSC-PSM's [attribute guide](#).

1. gtin
2. Quantity of Base Unit of Measure
3. tradeItemUnitDescriptorCode
4. brandName
5. functionalName
6. tradeItemDescription
7. inBoxCubeDimension
8. dosageFormTypeCodeReference
9. dosageRecommendation
10. routeOfAdministration
11. netContent
12. nonFoodIngredient
13. ingredientStrength
14. totalQuantityOfNextLowerLevelTradeItem
15. minimumTemperature
16. maximumTemperature
17. gpcCategoryCode
18. 2,3 or 4 pairs for classification systems:
 - a. additionalTradeItemClassificationSystemCode
 - b. additionalTradeItemClassificationSystemCodeValue

Others:

- activeIngredient(s)
- storage
- handling
- authorized substitutions (don't believe this is in GDSN)
- usage guidelines

FHIR

What's the use-cases for adding Items to FHIR?

1. As a resource reference to a product when using other FHIR resources
2. To convey the definition of the product to other IT systems (e.g. reference in metrics/indicators)
3. As a reference for supply-chain operations (e.g. those that are concerned with packaging, resupply, traceability, recall, etc)

What's currently in FHIR (R4):

- Medication - prescribing, dispensing, administration (use-case #1)
 - CodeableConcept used to reference "product"
- Immunization - similar to Medication (use-case #1)
 - CodeableConcept used to reference "product"
- NutritionOrder
 - CodeableConcept used to reference "product"
- CatalogEntry
 - Wraps an "item" in a catalog, adding only those things that aren't specific to the "item". Here "item" could be anything in a catalog: products, services, devices, etc.
- MedicinalProduct and MedicinalProductPackaged
 - These are early drafts - maturity level 0

- Pharmacy focused
- They include the regulatory authorization
- With packaging they could be good candidates for our use-case 2 and 3, if they were less pharmacy focused.
- It's unclear if a MedicinalProduct would be good for general supply chain things (like bandages).
- Why are these being added? What's the relationship to other resources such as Medication?

Take away:

- It would be useful if we had a clear resource that was for an Item, and another for a Product. Inventory counting and/or request for new supply is usually done at the functional equivalency - the Product. Whereas traceability and regulatory use-cases need the specific branded Item.
- Inventory would benefit if we could add a "status code" for the quantity described. A reference is the [Inventory Status Code List](#) used in GS1's [Inventory Report](#). Near-term use would be to reference a code-set that would allow us to allocate a quantity of stock for consumption, wastage, etc which are needed in resupply calculations based on inventory.