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**GPSoC Allergy Archetype Implementation Guidance**

**Improving allergy interoperability**

Document management

Revision History

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| 0.1 | 14/03/2018 | Initial draft |
| 0.2 | 22/06/2018 | Second draft following initial reviews with team |
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Glossary of Terms

| Term / Abbreviation | What it stands for |
| --- | --- |
| AMP | Actual Medicinal Product |
| Archetype | A formal re-usable model of a domain concept. |
| dm+d | Dictionary of medications and devices is a UK terminology system published by TRUD. |
| FHIR | Fast Healthcare Interoperable Resources is a healthcare interoperability standard supported by HL7. |
| GP2GP | Electronic transfer of a patient’s electronic health record between two general practices. |
| GPSoC | General Practice Systems of Choice framework |
| SNOMED-CT | **S**ystematized **No**menclature Of **Med**icine **C**linical **T**erms is a systematically organised computer processable collection of [medical terms](http://en.wikipedia.org/wiki/Medical_terms) providing codes, terms, synonyms and definitions used in clinical documentation and reporting. |
| TRUD | Technology Reference data Update Distribution is a service provided by the UK terminology centre at NHS Digital to provide updates to terminology. |
| VMP | Virtual Medicinal Product |
| VTM | Virtual Therapeutic Moiety |

References

| Document No. | Document title | Author |
| --- | --- | --- |
| AA2 | Implementing the Allergy Archetype in the GP2GP Message | Pete Salisbury |
| AA3 | Implementing the Allergy Archetype FHIR | Pete Salisbury |
| AA4 | GPSoC Allergy Archetype - GP Connect Allergy Guidance | Pete Salisbury |

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# Introduction

This document is for GP systems suppliers and manufacturers of clinical decision support systems. It provides guidance in the implementation of the allergy archetype that was defined as part of the GPSoC requirements (see Appendix A).

## Purpose of document

### Background context

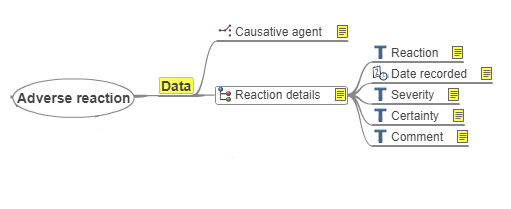
The clinical leads of GP2GP and GPSoC have identified a clinical benefit to standardising the capture of primary care drug allergy information, the transfer of this information between primary care organisations and the clinical safety benefits to prescribing new medications to patients. There are likely to be further benefits to other care settings when patients are referred for more specialised treatment.

This document contains the following sections:

* Logical model – the constructs, attributes and inter-relationships making up the archetype
* Tabular requirements – the system requirements for using the archetype
* Appendices – these contain other relevant documentation

# Logical model

The mind map of the logical model developed for the allergy archetype is detailed below and describes the relevant data items and their relationships.



For GP2GP V2 use, it is currently anticipated that there will be 4 permissible ways to express a causative agent:

* Drug Group (SNOMED-CT)
* dm+d VMP/AMP (dm+d)
* Ingredient (SNOMED-CT)
* TradeFamily/TradeFamilyGroup (SNOMED-CT).

It is MANDATORY that one and only one of these must always be selected. Optionally, in addition a SNOMED AllergyCode may be sent as a mapping but can never be sent on its own.

For legacy use, other codes are permissible such as FDB Agent codes, EMIS Drug codes and READ codes, but these should be carried as simple free text and the coded information carried in mappings/translation attributes. This kind of coding is not regarded as being safe to trigger decision support with the native GP system. See document AA2: ‘Implementing the Allergy Archetype in the GP2GP Message’ for more detail on implementation in the GP2GP message.

The detailed description of each of the data items is in the following table:

| **Data item** | **Description** | **Rules/Constraints** |
| --- | --- | --- |
| **Causative agent** http://ckm.apperta.org/ckm/pics/rm/small/choice.png Choice [http://ckm.apperta.org/ckm/pics/menu/more_info.png](http://ckm.apperta.org/ckm/) Mandatory | Details of the agent or medicinal substance believed to be the cause of the adverse reaction or allergy. | *Choice of:*   * http://ckm.apperta.org/ckm/pics/rm/small/text.png Coded Text Constraint:  Causative Agent A causative agent term from one of the approved terminology subsets - dm+d Ingredient/ VTM/AMP/VMP; SNOMED-CT Allergy codes/Trade family/Trade Family Group codes.  Constraint binding:   [SNOMED-CT]  subset=CausativeAgents  For detail of SNOMED subset definition in Appendix B  http://ckm.apperta.org/ckm/pics/rm/small/text.png Text |
| http://ckm.apperta.org/ckm/pics/other/arrow_expanded.png  **Reaction details** http://ckm.apperta.org/ckm/pics/rm/small/cluster.png Cluster Optional | Details of a single reaction thought to be due to the causative agent. |  |
| **Reaction** http://ckm.apperta.org/ckm/pics/rm/small/text.png Coded Text [http://ckm.apperta.org/ckm/pics/menu/more_info.png](http://ckm.apperta.org/ckm/) Optional [**SNOMED-CT**::282100009 | Adverse reaction to substance (disorder)] | An optional pre-coordinated unqualified SNOMED-CT code for the nature of the reaction produced by the drug allergy. | Constraint:  Clinical Finding Any SNOMED-CT term in the Clinical Finding hierarchy.  Constraint binding:  [SNOMED-CT]  subset=ClinicalFinding |
| **Date recorded** http://ckm.apperta.org/ckm/pics/rm/small/datetime.png Date/Time [http://ckm.apperta.org/ckm/pics/menu/more_info.png](http://ckm.apperta.org/ckm/) Optional | The date that the reaction was clinically recorded/asserted. This will often equate to the date of onset of the reaction, but this may not be wholly clear from source data. |  |
| **Severity** http://ckm.apperta.org/ckm/pics/rm/small/text.png Coded Text [http://ckm.apperta.org/ckm/pics/menu/more_info.png](http://ckm.apperta.org/ckm/) Optional [**SNOMED-CT**::272141005 | Severities (qualifier value)] | The severity of the reaction. | * Mild [**SNOMED-CT**::255604002] (Mild (qualifier value)) * Moderate [**SNOMED-CT**::6736007] (Moderate (severity modifier) (qualifier value)) * Severe [**SNOMED-CT**::24484000] (Severe (severity modifier) (qualifier value)) * Life-threatening [**SNOMED-CT**::442452003] (Life threatening severity (qualifier value))   Fatal [**SNOMED-CT**::399166001] (Fatal severity (qualifier value)) |
| **Certainty** http://ckm.apperta.org/ckm/pics/rm/small/text.png Coded Text [http://ckm.apperta.org/ckm/pics/menu/more_info.png](http://ckm.apperta.org/ckm/) Optional [**SNOMED-CT**::255544004 | Certainties (qualifier value)] | The certainty with which the reaction is deemed to be due to allergy to the causative agent. | * Unlikely [**SNOMED-CT**::1491118016]( Improbable diagnosis (qualifier value)) * Likely [**SNOMED-CT**::5961011]( Improbable diagnosis (qualifier value)) * Certain [The agent is thought to be certain to have caused the reaction but this has not been confirmed by challenge testing.] [**SNOMED-CT**::255545003] (Definite (qualifier value)) * Confirmed by challenge testing [The reaction to the agent has been confirmed by challenge testing or other concrete evidence.] [**SNOMED-CT**::410605003] (Confirmed present (qualifier value)) |
| **Comment** http://ckm.apperta.org/ckm/pics/rm/small/text.png Text [http://ckm.apperta.org/ckm/pics/menu/more_info.png](http://ckm.apperta.org/ckm/) Optional | Any additional comment or clarification about the adverse reaction. |  |

# Requirements

There are 3 areas that the requirements for implementing the allergy archetype will impact within the clinical system and each is discussed in the following sections. In addition to these requirements there is also guidance on how to implement the allergy archetype in both document AA2: ‘Implementing the Allergy Archetype in the GP2GP Message’ and AA3: ‘Implementing the Allergy Archetype in FHIR’. It should be noted that these documents contain further requirements on how to populate each of the messages.

## Causative agent subset mapping

A SNOMED reference set has been developed that contains a list of the possible causative agents for drug allergies and intolerances. To implement the allergy archetype, a clinical system must be able to understand this list. To do this the clinical system must be able to use the reference set directly or map it to the local list of drugs or drug dictionary that is used within the clinical system.

|  |  |
| --- | --- |
| DAA01 | The clinical system **MUST** support a mapping table to the bounded list of the causative agent subset including all inactive concepts and descriptions that it contains. |

## Decision support

One of the primary drivers for the development of the allergy archetype is to enable decision support in receiving systems to be triggered by transferred allergies. Decision support systems can be developed as part of a clinical system or be a module supplied by a third party that then integrates into the clinical system. When implementing the allergy archetype, it is essential that the decision support system can interpret any code from the allergy archetype reference set that is received and that in doing so it triggers the correct decision support processes.

|  |  |
| --- | --- |
| DAA02 | If a decision support system is presented with an item that is from the causative agent bounded list or a translation of that list by the clinical system, then it **MUST** recognise it as an element of the subset and trigger the appropriate decision support.  For clarity, the entire causative agent list **MUST** be supported including all inactive concepts and descriptions that it contains. |

## Maintenance

The reference set will be maintained by the terminology team at NHS Digital and revisions to it will be published via TRUD in as part of the dm+d release.

|  |  |
| --- | --- |
| DAA03 | All clinical system suppliers and manufacturers of decision support systems **MUST** support all changes to the SNOMED reference set for causative agents within 1 month of the release of a new version in line with the normal process of data dictionary updates via TRUD. |

Appendix A – GPSoC drug allergy archetype paper



Appendix B – Allergy archetype causative agent SNOMED reference set

The definition of the SNOMED reference set for the causative agent is:

(^999000801000001108 |Allergy Archetypes Drug Groups simple reference set|

OR ^999000631000001100 |National Health Service dictionary of medicines and

devices trade family simple reference set|

OR ^999000641000001107 |National Health Service dictionary of medicines and devices trade family group simple reference set|

OR ^999000771000001105 |National Health Service dictionary of medicines and devices combination drug virtual therapeutic moiety simple reference set|

OR ^999000561000001109 |National Health Service dictionary of medicines and devices virtual medicinal product simple reference set|

OR ^999000541000001108 |National Health Service dictionary of medicines and devices actual medicinal product simple reference set|

OR ^999000791000001109 |NHS dm+d (dictionary of medicines and devices) ingredient simple reference set|

OR <<716186003 |No known allergy|

OR 196461000000101 |Transfer-degraded drug allergy|

OR 196471000000108 |Transfer-degraded non-drug allergy|)

This will be maintained by TRUD as part of their regular release schedule so may be updated, but is correct at the time of writing.