



Australian Government

Australian Digital Health Agency

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# Snapper:Map – creating maps to SNOMED CT-AU

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# Learning outcomes

- Understand how to access Snapper:Map
- Learn about the features of Snapper:Map
- Tips on how to use Snapper:Map
- Understand how Snapper:Map can help with maintenance



# What is Snapper:Map?

- Snapper is an application that supports the creation and maintenance of FHIR® ConceptMaps between FHIR® ValueSets that include values from any FHIR® CodeSystem supported by the connected terminology server
  - This webinar describes the workflow when mapping simple, local code sets to current versions of SNOMED CT-AU or Australian Medicines Terminology (AMT) that are hosted on the National Terminology Server
- It was developed by the Australian e-Health Research Centre (AeHRC) of the CSIRO
- Under national licensing arrangements, Snapper is available for free use by Australian organisations
- Features
  - Uses a web-based browser (such as Chrome, Firefox)
  - Automap to match the descriptions in a local codeset to descriptions in SNOMED CT
  - Supports maintenance by finding maps to inactive concepts and suggesting replacements
  - Can store resulting maps within an Ontoserver instance, which can then be used for translation operations

# Accessing Snapper:Map

- Access the Snapper:Map tool via the CSIRO Ontoserver website: <http://ontoserver.csiro.au/>
  - Must agree to Snapper Terms of Use
    - Snapper:Author and Snapper:Map is available
  - Also must agree to SNOMED CT Sub-Licence Conditions
- The default terminology server is the National Terminology Server (NTS), which requires your login as a National Clinical Terminology Service (NCTS) user
  - This can be changed to other FHIR® terminology servers via the settings within Snapper



[Import existing FHIR Concept Maps](#)[Classic Maps](#)

## Snapper:Map 2.4.1

Concept mapping that works with HL7's FHIR terminology resources

Classic maps are similar to those authored by the old Snapper desktop application but instead work with a FHIR terminology server to produce [ConceptMap](#) and supporting [CodeSystem](#) FHIR resources where required.

You can import pre-existing data from CSV/TSV files, or add new entries one by one.

By default, maps are from a local code system and to SNOMED CT. This can be altered by changing the map's metadata. The map's metadata also allows you to configure the appropriate set of map relationship types that are appropriate for your context.

View the documentation ([PDF](#)), [ChangeLog](#), or get to know Snapper by taking a tour ...

[FHIR Settings Tour](#)[Mapping Tour](#)[Map Migration Tour](#)

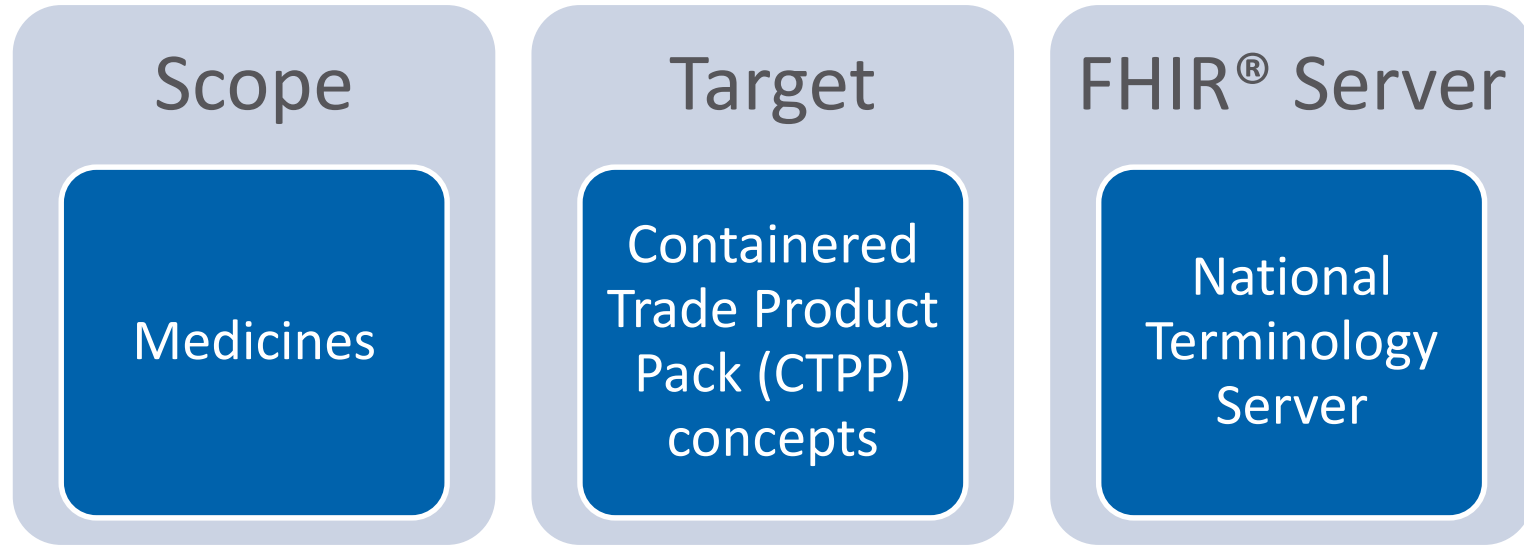
**Information:** This editor stores its state (the maps you are currently editing) in **your web browser's local storage**. This means that if you switch browsers (e.g., from Chrome to Firefox) or computers, then you will no longer see the maps you've been editing.

[Snapper Terms of use](#)

Snapper makes use of [angular-intro.js](#) and [intro.js](#) unmodified and licensed under [AGPL-3.0](#)

- This is the landing page after logging into the NCTS website and accessing the Snapper:Map link
  - You will be asked to “Confirm FHIR Server Authentication” if you didn’t log into the NCTS first

# My Example Map in context

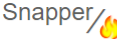



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Creating a new map

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# Creating a new map

 <https://api.healthterminologies.gov.au/integration/R4/fhir> 

Import existing FHIR Concept Maps

Classic Maps 

## Snapper:Map 2.4.1

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[Snapper Terms of use](#)

Snapper makes use of [angular-intro.js](#) and [intro.js](#) unmodified and licensed under [AGPL-3.0](#)

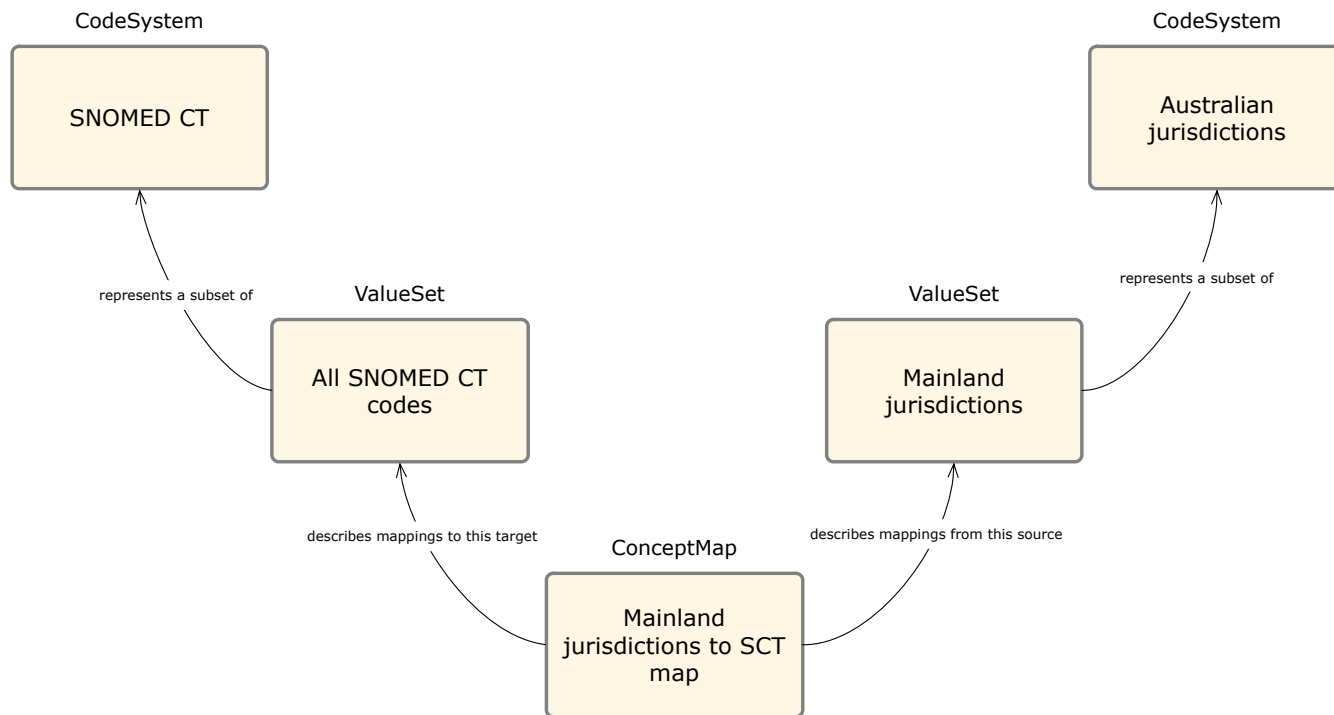


Click on  
the green  
plus icon





# FHIR® fundamentals



# Editing the metadata

Give your map a **name**

Uri is automatic (can specify if desired)

Leave **source** unchanged when importing a local code set

The default **target** is all of SNOMED CT

A **description** helps users understand the map and its purpose

Select a predefined SNOMED CT-AU **ValueSet** (i.e. subset)

Default **relationships** are selected, adjust if desired

Metadata: Untitled Map

Name: Untitled Map

Uri: urn:42aa02c6-09bb-46f9-8688-b508fc03d3ca/cm

Description: Human language description of the concept map

Source: Define the CodeSystem

Code system: urn:42aa02c6-09bb-46f9-8688-b508fc03d3ca/cs

Value set: urn:42aa02c6-09bb-46f9-8688-b508fc03d3ca/vs

Target: Reference an existing CodeSystem

Code system: http://snomed.info/sct

Value set: http://snomed.info/sct?fhir\_vs=isa/138875005

Mapping relationships

- ☐ inexact
- ☒ equivalent
- ☐ subsumes
- ☐ specializes
- ☒ unmatched
- ☐ disjoint
- ☐ equal
- ☒ wider
- ☒ narrower

Cancel Done

Find ValueSet

Selected: http://snomed.info/sct?fhir\_vs=isa/138875005

Predefined:

Name
All codes
Adverse reaction agent reference set
Adverse reaction type reference set
ALTERNATIVE association reference set

Target

# My Example Map is a new blank map

Access all functions from the **Mapping Editor** menu

Metadata can be changed at any time, to adjust the target ValueSet and mapping relationships

The screenshot displays the Snapper Mapping Editor interface. On the left, a sidebar shows 'Classic Maps' with 'My Example Map' selected. The main area features the 'Mapping Editor' menu, which includes options like 'Download...', 'Upload...', 'Delete...', 'Metadata...', 'Import codes...', 'Select all rows', 'Select inactive targets', 'Migrate selected rows...', 'Add row...', 'Duplicate rows', 'Delete rows', 'Automap...', 'Show source codes', 'Show target codes', and 'Toggle Filters'. A callout box points to the 'Metadata...' option, stating that metadata can be changed at any time to adjust the target ValueSet and mapping relationships. Another callout box points to the 'Mapping Editor' menu header, indicating that all functions are accessible from there. The top of the interface shows the Snapper logo and a URL: <https://api.healthterminologies.org.au/integration/R4/fhir>.

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Adding source data

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# Importing source data, or manually adding rows

The screenshot displays the Snapper Mapping Editor interface. On the left, a sidebar titled 'Import existing FHIR Concept Maps' contains two items: 'Classic Maps' and 'My Example Map'. The 'My Example Map' item is selected. The main area is titled 'Mapping Editor' and features a table with columns: Target, Category, Map, Status, and Notes. A dropdown menu is open, showing options: Download..., Upload..., Delete..., Metadata..., Import codes..., Select all rows, Select inactive targets, Migrate selected rows..., Add row..., Duplicate rows, Delete rows, Automap..., Show source codes, Show target codes, and Toggle Filters. Two blue callout boxes with arrows point to the 'Import codes...' and 'Add row...' options. The first callout box contains the text: 'Select **Import codes** to add your source data from a CSV or TSV file'. The second callout box contains the text: 'Select **Add row** to manually add any number of rows to the map'.

Snapper/ <https://api.healthterminologies.gov.au/integration/R4/fhir>

Import existing FHIR Concept Maps

Classic Maps

My Example Map

Mapping Editor

Download... Upload... Delete... Metadata... Import codes... Select all rows Select inactive targets Migrate selected rows... Add row... Duplicate rows Delete rows Automap... Show source codes Show target codes Toggle Filters

Target Category Map Status Notes

Select **Import codes** to add your source data from a CSV or TSV file

Select **Add row** to manually add any number of rows to the map

# Using the Import Wizard

- Before starting the import process
  - The file must be in CSV or TSV format
  - Ensure you have less than 20,000 source terms
  - Ideally your source terms are in one column to make best use of the Automap feature

**Browse** for the file on your computer and then select the **file type**

Choose the number of **header rows** to be excluded from the mapping

A **preview** of your source data will be shown

The number of **total items** reflects how many rows you are mapping

The screenshot shows the 'Import Wizard - import data' window. At the top, there is a 'Browse...' button and a text field containing 'CTPP refset\_Jan 18\_ECL\_partial.csv'. Below this, there are two buttons for 'Select the type of file': 'CSV' (selected) and 'TSV'. Underneath is a text field for 'Select the number of rows for the header' with the value '1'. A tabbed interface shows 'Source Code', 'Source Label', 'Target Code', 'Target Label', 'Target Relationship', and 'Comments'. The 'Source Code' tab is active, displaying a table with two columns: '0: Concept ID' and '1: Preferred Term'. The table contains five rows of data. At the bottom left, it says 'Total Items: 12656'. At the bottom right, there are four buttons: 'Cancel', 'Back', 'Next', and 'Import'.

0: Concept ID	1: Preferred Term
764351000168102	2in1 Blood Glucose Test diagnostic strip, 50, bottle
19838011000036104	3TC 10 mg/mL oral liquid solution, 240 mL, bottle
19457011000036108	3TC 150 mg film-coated tablet, 60, bottle
20636011000036109	3TC 300 mg film-coated tablet, 30, bottle
923161000168100	Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, bliste...

# Using the Import Wizard – assigning your source data

The screenshot shows the 'Import Wizard' interface. At the top, there's a 'Browse...' button and a 'Select the number of columns' field set to '1'. Below this is a 'Select column for:' section with tabs for 'Source Code', 'Source Label', 'Target Code', 'Target Label', 'Target Relationship', and 'Comments'. The 'Source Code' tab is selected and highlighted in green. Below the tabs, there are two columns of data: '0: Concept ID' and '1: Preferred Term'. The 'Source Code' column contains a list of IDs, and the 'Preferred Term' column contains corresponding medical descriptions. At the bottom right, there are buttons for 'Cancel', 'Back', 'Next', and 'Import'.

**1.** Click on **Source Code**

**2.** Click on the body of your Code or ID column



**3.** The **Source Code** button will turn green when data is successfully assigned to a column

**4.** Repeat for **Source Label** (which are your local descriptions)


Optionally assign the other columns if importing mapped data


**5.** Click on **Import**

# Local data has successfully imported

Snapper  <https://api.healthterminologies.gov.au/integration/R4/fhir> 

Import existing FHIR Concept Maps

Classic Maps 

My Example Map 

**Mapping Editor**

Source	Target	Category	Map	Status	Notes
2in1 Blood Glucose Test diagnostic strip, 50, bottle					
3TC 10 mg/mL oral liquid solution, 240 mL, bottle					
3TC 150 mg film-coated tablet, 60, bottle					
3TC 300 mg film-coated tablet, 30, bottle					
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, blister pack					
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, bottle					
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, blister pack					
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, bottle					
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, blister pack					
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, bottle					

Total Items: 12656 | Unmapped: 12656 | Selected: 0

**Search**

Target Value Set

search text - word prefix, any order

Property	Value
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- When your data has successfully imported, your source terms will be displayed in the “Source” column.
- The next step is to perform Automap, or manually assign targets.



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# The Automap feature

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# Using Automap

1. Select the desired row(s) for mapping
  - The **Mapping Editor** has an option to **Select all rows**
  - Individual rows can also be selected manually
  - Selected rows are highlighted in a pale blue colour
2. Select **Automap** from the **Mapping Editor**
3. Set the Automap options
4. Click on **Go**
5. There will be a progress bar at the bottom of the screen
  - The time it takes depends on your connection to the server and the number of rows to be mapped
  - Automap can be run in batches.

Select the **direction** from your local set (source) to SNOMED CT-AU (target)

The **strategy** determines the rules Automap will follow

- Strict = most words match
- Default = few words match
- Experimental = partial word match

Automap options

Strategy **Default**

☒ From Source to Target

☐ From Target to Source

Overwrite existing target codes? ☐

Cancel Go

Leave **unticked** unless you deliberately want to change mapped rows

**Tip:** Run Automap twice when mapping on new source data for the first time.

- First, select “Strict” to find precise matches.
- Second, select the unmapped rows (those with an empty target) and select “Experimental”.



# Local data is now mapped to SNOMED CT

The top match is shown but there may be others, double click on the **target** to see/select them

The **map** type is always inexact when Automap has been run on a row

The **Status** allows you to track the mapping workflow

Mapping Editor						
Source	Target	Category	Map	Status	No	
2in1 Blood Glucose Test diagnostic strip, 50, bottle	2in1 Blood Glucose Test diagnostic strip, 50, bottle	(contained ...	inexact	Automap		
3TC 10 mg/mL oral liquid solution, 240 mL, bottle	Ziagen 20 mg/mL oral liquid, 240 mL, bottle	(contained ...	inexact	Automap		
3TC 150 mg film-coated tablet, 60, bottle	Centrum film-coated tablet, 150, bottle	(contained ...	inexact	Automap		
3TC 300 mg film-coated tablet, 30, bottle	Stocrin 300 mg film-coated tablet, 60, bottle	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, ...	Abacavir/Lamivudine 600/300 (Apo) film-coated ta...	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, ...	Abacavir/Lamivudine 600/300 (Apo) film-coated ta...	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, ...	Abacavir/Lamivudine 600/300 (Apotex) film-coate...	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, ...	Abacavir/Lamivudine 600/300 (Apotex) film-coate...	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, ...	Abacavir/Lamivudine 600/300 (Apotex) film-coate...	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, ...	Abacavir/Lamivudine 600/300 (Apo) film-coated ta...	(contained ...	inexact	Automap		
Total Items: 12656   Unmapped: 11856   Selected: 1						

The **category** relates to the SNOMED CT hierarchy the target concept comes from

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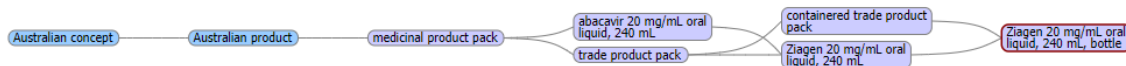
Reviewing mapped rows

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Mapping Editor

[illegible]

Total Items: 12656 | Unmapped: 11856 | Selected: 1



The **hierarchy** is displayed either for the mapped target concept or a search result if selected

Search

Target Value Set

search text - word prefix, any order

Type in a **search term** to look for a SNOMED CT target concept in the specified ValueSet

Property	Value
Code	199330111000036101
System	<a href="http://snomed.info/sct">http://snomed.info/sct</a>
Version	<a href="http://snomed.info/sct/32506021000036107/version/20190430">http://snomed.info/sct/32506021000036107/version/20190430</a>
Display	Ziagen 20 mg/mL oral liquid, 240 mL, bottle
Designation	Ziagen (abacavir 20 mg / 1 mL) oral liquid, 240 mL, bottle (contained trade product pack)
Designation	Ziagen 20 mg/mL oral liquid, 240 mL, bottle
Sufficiently Defined	true
Effective Time	20090630
Module Id	900062000036108

The **properties** give you information about the mapped or selected SNOMED CT target concept

1.

Manually search for an appropriate target

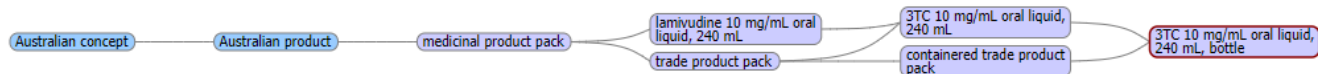
Mapping Editor						
Source	Target	Category	Map	Status	Notes	
2in1 Blood Glucose Test diagnostic strip, 50, bottle	2in1 Blood Glucose Test diagnostic strip, 50, bottle	(contained ...	inexact	Automap		
3TC 10 mg/mL oral liquid solution, 240 mL, bottle	3TC 10 mg/mL oral liquid, 240 mL, bottle	(contained ...	inexact	Draft		
3TC 150 mg film-coated tablet, 60, bottle	Centrum film-coated tablet, 150, bottle	(contained ...	inexact	Automap		
3TC 300 mg film-coated tablet, 30, bottle	S	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, blister pack	A	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, bottle	A	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, blister pack	A	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, bottle	A	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, blister pack	A	(contained ...	inexact	Automap		
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, bottle	Abacavir/Lamivudine 600/300 (Apo) film-coated ta...	(contained ...	inexact	Automap		

Total Items: 12656 | Unmapped: 11856 | Selected: 1

3.  
Drag and drop into the target column either the search result OR the code value from the property box

2.

Evaluate the properties and parent/child relationships



4.

Complete the mapping workflow

- Draft **status** indicates a human has made changes to the row, can be changed manually
- Select the appropriate **map** type (based on options enabled in metadata)
- Add useful **notes** (free text) if desired

Target Value Set	
3T 240	
Showing 20 of 50 matches	
3TC 10 mg/mL oral liquid, 240 mL, bottle	
Anpec SR 240 mg modified release tablet, 30, blister pack	
Cordilox SR 240 mg modified release tablet, 30, blister pack	
Isoptin SR 240 mg modified release tablet, 30, blister pack	
Diltiazem Hydrochloride CD (Terry White Chemists) 240 mg modified release capsule, 30, bottle	
Diltiazem Hydrochloride CD (Terry White Chemists) 240 mg modified release capsule, 30, blister pack	

Property	Value
Code	19838011000036104
System	http://snomed.info/sct
Version	http://snomed.info/sct/32506021000036107/version/20181130
Display	3TC 10 mg/mL oral liquid, 240 mL, bottle
Designation	3TC (lamivudine 10 mg / 1 mL) oral liquid, 240 mL, bottle (contained trade product pack)
Designation	3TC 10 mg/mL oral liquid, 240 mL, bottle
Sufficiently Defined	true
Effective Time	20090630
Module Id	900062011000036108

# A reviewer completes the workflow

Similarly use the Search function, check the hierarchy view and properties to validate each Target value is appropriately mapped to the Source.

Mapping Editor

Source	Target	Category	Map	Status
2in1 Blood Glucose Test diagnostic strip, 50, bottle	2in1 Blood Glucose Test diagnostic strip, 50, bottle	(containere...	equivalent	Final
3TC 10 mg/mL oral liquid solution, 240 mL, bottle	3TC 10 mg/mL oral liquid, 240 mL, bottle	(containere...	equivalent	Final
3TC 150 mg film-coated tablet, 60, bottle	3TC 150 mg film-coated tablet, 60, bottle	(containere...	equivalent	Final
3TC 300 mg film-coated tablet, 30, bottle	3TC 300 mg film-coated tablet, 30, bottle	(containere...	equivalent	Final
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, blister p...	Abacavir/Lamivudine 600/300 (Apo) film-coated tablet,...	(containere...	equivalent	Final
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, bottle	Abacavir/Lamivudine 600/300 (Apo) film-coated tablet,...	(containere...	equivalent	Final
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, bliste...	Abacavir/Lamivudine 600/300 (Apotex) film-coated tab...	(containere...	equivalent	Final
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, bottle	Abacavir/Lamivudine 600/300 (Apotex) film-coated tab...	(containere...	equivalent	Final
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, blister pack	Abacavir/Lamivudine 600/300 (GH) film-coated tablet, ...	(containere...	equivalent	Final
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, bottle	Abacavir/Lamivudine 600/300 (GH) film-coated tablet, ...	(containere...	equivalent	Final

Total Items: 12656 | Unmapped: 11856 | Selected: 0

Draft  
Final

**Tip:** If any rows cannot be agreed by Person 1 and Person 2, an independent conflict resolution process is recommended (i.e. Person 3 or some adjudication process decides the final mapping).

Final status  
indicates mapping  
is complete

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## Tips for working with Snapper:Map

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# Sort columns and perform bulk actions from the column headers

Mapping Editor

All columns can be sorted

Source	Target	Category	Map	Status	Notes
2in1 Blood Glucose Test diagnostic strip, 50, ...	2in1 Blood Glucose Test diagnosti...	Sort Ascending	Sort Ascending	Final	
3TC 10 mg/mL oral liquid solution, 240 mL, b...	3TC 10 mg/mL oral liquid, 240 ...	Sort Descending	Sort Descending	Final	
3TC 150 mg film-coated tablet, 60, bottle	3TC 150 mg film-coated tablet,	Clear all	Clear all	Final	
3TC 300 mg film-coated tablet, 30, bottle	3TC 300 mg film-coated tablet,	Clear selected	Clear selected	Final	
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, blister ...	Abacavir/Lamivudine 600/300 (	Set selected 'equivalent'	Set selected 'equivalent'	Final	
Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, bottle	A	Set selected 'unmatched'	Set selected 'unmatched'	Final	
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, blis...	A	Set selected 'wider'	Set selected 'wider'	Auton	
Abacavir/Lamivudine 600/300 (Apotex) film-coated tablet, 30, bottle	A	Set selected 'narrower'	Set selected 'narrower'	Auton	
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, blister ...	A			Auton	
Abacavir/Lamivudine 600/300 (GH) film-coated tablet, 30, bottle	Abacavir/Lamivudine 600/300 (GH) film-coated tabl...			Auton	

Some columns allow you to assign a particular value to several selected rows at once

Some columns allow you to clear values from several selected rows at once

Tip: Clear all will clear values in that column, whether the row is selected or not!

Total Items: 12656 | Unmapped: 11856 | Selected: 7

# Filter columns to work with subsets of rows

**Mapping Editor**

Download...  
Upload...  
Delete...  
Metadata...  
Import codes...

Select all rows  
Select inactive targets  
Migrate selected rows...  
Add row...  
Duplicate rows  
Delete rows  
Automap...

Show source codes  
Show target codes  
Toggle Filters

Source	Target	Category	Map	Status
atic strip, 50, bottle	2in1 Blood Glucose Test diagnostic strip, 50, bottle	(contained...	equivalent	Final
n, 240 mL, bottle	3TC 10 mg/mL oral liquid, 240 mL, bottle	(contained...	equivalent	Final
0, bottle	60, bottle	(contained...	equivalent	Final

Type in terms and click on the x to remove the filter

**Tip:** Working with a smaller subset of rows can make mapping more manageable

**Mapping Editor**

Source:  ✕

Target:

Category:

Map:

Status:

Source	Target	Category	Map	Status
Bricanyl 500 microgram/mL injection solution, 5 x 1 mL ampoules			unmatch...	Automap
Bricanyl Elixir 300 microgram/mL oral liquid solution, 1 L, bottle			unmatch...	Automap
Bricanyl Elixir 300 microgram/mL oral liquid solution, 100 mL, bottle			unmatch...	Automap
Bricanyl Elixir 300 microgram/mL oral liquid solution, 300 mL, bottle			unmatch...	Automap
Bricanyl Respule 5 mg/2 mL inhalation solution, 30 x 2 mL ampoules	Bricanyl Respule 5 mg/2 mL inhalation solution, 30 x 2 mL ampoules			Automap
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation			Automap
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation			Automap

Multiple columns can be filtered at once

**Toggle filters** to display and hide text boxes in the column headers

**Mapping Editor**

Source:  ✕

Target:  ✕

Category:

Map:

Status:

Source	Target	Category	Map	Status
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation	(contained...	inexact	Automap
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 500 microgram/actuation powder for inhalation	(contained...	inexact	Automap

Total Items: 12656 | Unmapped: 12656

# Show or hide source or target codes

The screenshot shows the 'Mapping Editor' application. A dropdown menu is open, displaying various actions. The 'Show source codes' and 'Show target codes' options are highlighted with a blue arrow pointing to a callout box. The main table displays mapping data with columns for Source, Target, Category, Map, Status, and Notes. The 'Src Code' and 'Tgt Code' columns are currently hidden.

Src Code	Source	Tgt Code	Target	Category	Map	Status
764351000168102	2in1 Blood Glucose Test diagnostic strip, 50,...	764351000168102	2in1 Blood Glucose Test diagnostic ...	(contained...	equivalent	Final
19838011000036104	3TC 10 mg/mL oral liquid solution, 240 mL, ...	19838011000036104	3TC 10 mg/mL oral liquid, 240 mL, ...	(contained...	equivalent	Final
19457011000036108	3TC 150 mg film-coated tablet, 60, bottle	19457011000036108	3TC 150 mg film-coated tablet, 60, ...	(contained...	equivalent	Final
20636011000036109	3TC 300 mg film-coated tablet, 30, bottle	20636011000036109	3TC 300 mg film-coated tablet, 30, ...	(contained...	equivalent	Final
923161000168100	Abacavir/Lamivudine 600/300 (Apo) film-coa...	923161000168100	Abacavir/Lamivudine 600/300 (Apo)...	(contained...	equivalent	Final
923171000168106	Abacavir/Lamivudine 600/300 (Apo) film-coa...	923171000168106	Abacavir/Lamivudine 600/300 (Apo)...	(contained...	equivalent	Final
933541000168106	Abacavir/Lamivudine 600/300 (Apotex) film-...	933541000168106	Abacavir/Lamivudine 600/300 (Apot...)	(contained...	equivalent	Final
933551000168108	Abacavir/Lamivudine 600/300 (Apotex) film-...	933551000168108	Abacavir/Lamivudine 600/300 (Apot...)	(contained...	equivalent	Final
1071061000168106	Abacavir/Lamivudine 600/300 (GH) film-coat...	1071061000168106	Abacavir/Lamivudine 600/300 (GH) ...	(contained...	equivalent	Final
1071071000168100	Abacavir/Lamivudine 600/300 (GH) film-coat...	1071071000168100	Abacavir/Lamivudine 600/300 (GH) ...	(contained...	equivalent	Final

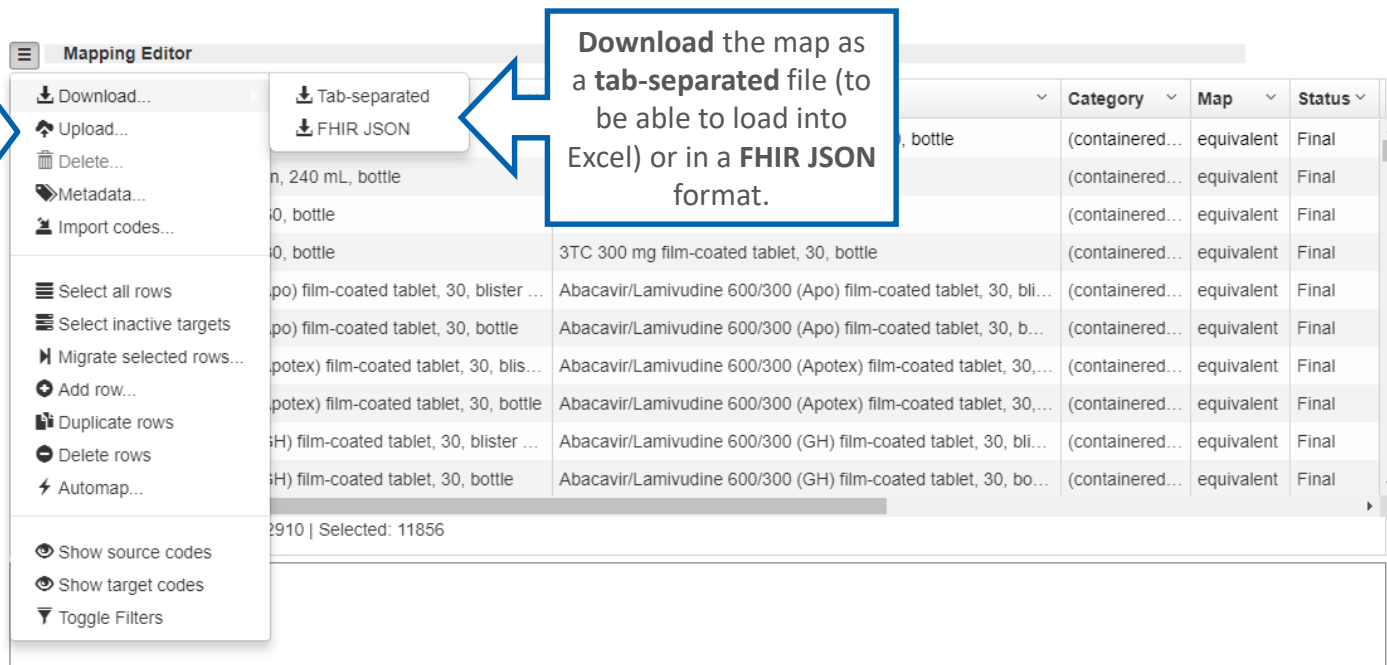
Select **show** or **hide** the **codes** you wish to see

**Tip:** Source codes and target codes are part of the map but hidden by default as they are not as important as the descriptions in the mapping process

# Download the map as a file or publish to a FHIR® server

**Upload** as a ConceptMap resource to a FHIR® terminology server

**Tip:** You cannot upload to the National Terminology Server



The screenshot shows the 'Mapping Editor' interface. A dropdown menu is open, showing options: 'Download...', 'Upload...', 'Delete...', 'Metadata...', and 'Import codes...'. A sub-menu for 'Download...' is also visible, showing 'Tab-separated' and 'FHIR JSON'. A blue arrow points from the 'FHIR JSON' option to a text box on the right. Another blue arrow points from the 'Upload...' option to a text box on the left. The background shows a table with columns: 'Category', 'Map', and 'Status'. The table contains several rows of mapping data, including '3TC 300 mg film-coated tablet, 30, bottle' and 'Abacavir/Lamivudine 600/300 (Apo) film-coated tablet, 30, bli...'. The status for all rows is 'Final'.

**Download** the map as a **tab-separated** file (to be able to load into Excel) or in a **FHIR JSON** format.

**Tip:** Map data is saved in your local web browser folder and it is good practice to download your mapping work often with version control

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# Mapping considerations and performing map maintenance

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# Some mapping considerations

- Follow good mapping principles, refer to SNOMED CT-AU or AMT mapping guidelines
  - Defining use case, scope, purpose
  - Pre-process the source data
  - Document decisions, rules and processes
- There are various ways to perform a mapping exercise (with independent personnel). Some options:
  - Single map, single review
  - Single map, dual review
  - Dual map, single review
- Ensure all map values are equivalent as much as possible
  - It is possible to create maps between concepts that are not equivalent (e.g. when the target SNOMED CT-AU or AMT concept is less specific in meaning than the source concept, therefore the map relationship is set to “wider”), but consider interpretation and reproducibility issues
- Not all concepts are in scope or found in SNOMED CT-AU or AMT
  - If not in scope, no map is expected for that entry
  - If in scope, send a request submission form (available from <https://www.healthterminologies.gov.au/request>) or email [help@digitalhealth.gov.au](mailto:help@digitalhealth.gov.au)
- Snapper is optimised to handle simple maps where the mapping does not require additional business rules
- Snapper imports are generally limited to 20,000 rows
  - Large maps can be slow to work with



# Mapping maintenance & updates

- Mapped rows must be reviewed for potential changes every time the source data or target SNOMED CT-AU changes
  - SNOMED CT-AU (including AMT) is currently updated every month
  - Releases may become more regular than monthly in the future
- Follow the same business rules and mapping process when the map was first created, to ensure consistent mapping
- Snapper:Map can also be used to maintain a map
  - The tool can check if SNOMED CT-AU targets have become inactive and suggest replacements



# Mapping maintenance using the Snapper:Map tool

**Select all rows then select inactive targets**

Any inactive target concepts will remain selected

Source	Target	Category	Map	Status	Notes
Brenzys Auto-Injector 50 mg/mL injection solution, 4 x 1 mL inje...	Brenzys Auto-Injector 50 mg/mL injection, 4 x 1 mL pe...	(contained...	equivalent	Final	
Breo Ellipta 100/25 powder for inhalation, 14 actuations, blister p...	Breo Ellipta 100/25 powder for inhalation, 14 actuation...	(contained...	equivalent	Final	
Breo Ellipta 100/25 powder for inhalation, 30 actuations, blister p...	Breo Ellipta 100/25 powder for inhalation, 30 actuation...	(contained...	equivalent	Final	
Breo Ellipta 200/25 powder for inhalation, 14 actuations, blister p...	Breo Ellipta 200/25 powder for inhalation, 14 actuation...	(contained...	equivalent	Final	
Breo Ellipta 200/25 powder for inhalation, 30 actuations, blister p...	Breo Ellipta 200/25 powder for inhalation, 30 actuation...	(contained...	equivalent	Final	
Bretaris Genuair 322 microgram/actuation powder for inhalation,...	Bretaris Genuair 322 microgram/actuation powder for i...	(contained...	equivalent	Final	
Bretaris Genuair 322 microgram/actuation powder for inhalation,...	Bretaris Genuair 322 microgram/actuation powder for i...	(contained...	equivalent	Final	
Brevibloc 100 mg/10 mL injection solution, 20 x 10 mL vials	Brevibloc 100 mg/10 mL injection, 20 x 10 mL vials	(contained...	equivalent	Final	
Brevibloc 100 mg/10 mL injection solution, 5 x 10 mL vials	Brevibloc 100 mg/10 mL injection, 5 x 10 mL vials	(contained...	equivalent	Final	
Brevibloc 2.5 g/10 mL concentrated injection, 10 mL ampoule	Brevibloc 2.5 g/10 mL injection, 10 mL ampoule	(contained...	equivalent	Final	

Total Items: 12656 | Unmapped: 2900 | Selected: 4

The status bar at the bottom of the screen will indicate how many inactive targets

2018-12-20 03:46 | Selected 4 rows with inactive target codes



**Mapping Editor**

Download... Upload... Delete... Metadata... Import codes...

Select all rows  
Select inactive targets  
Migrate selected rows...

Source	Target	Category	Map
Brenzys Auto-Injector 50 mg/mL injection solution, 4 x 1 mL pen devices	Brenzys Auto-Injector 50 mg/mL injection, 4 x 1 mL pen devices	(container...	equiv...
Breo Ellipta 100/25 powder for inhalation, 14 actuations, blister pack	Breo Ellipta 100/25 powder for inhalation, 14 actuations, blister pack	(container...	equiv...
Breo Ellipta 100/25 powder for inhalation, 30 actuations, blister pack	Breo Ellipta 100/25 powder for inhalation, 30 actuations, blister pack	(container...	equiv...
Breo Ellipta 200/25 powder for inhalation, 14 actuations, blister pack	Breo Ellipta 200/25 powder for inhalation, 14 actuations, blister pack	(container...	equiv...
Breo Ellipta 200/25 powder for inhalation, 30 actuations, blister pack	Breo Ellipta 200/25 powder for inhalation, 30 actuations, blister pack	(container...	equiv...
Bretaris Genuair 322 microgram/actuation powder for inhalation, 3...	Bretaris Genuair 322 microgram/actuation powder for inhalation, 3...	(container...	equiv...
Bretaris Genuair 322 microgram/actuation powder for inhalation, 6...	Bretaris Genuair 322 microgram/actuation powder for inhalation, 6...	(container...	equiv...
Brevibloc 100 mg/10 mL injection solution, 20 x 10 mL vials	Brevibloc 100 mg/10 mL injection, 20 x 10 mL vials	(container...	equiv...
Brevibloc 100 mg/10 mL injection solution, 5 x 10 mL vials	Brevibloc 100 mg/10 mL injection, 5 x 10 mL vials	(container...	equiv...
Brevibloc 2.5 g/10 mL concentrated injection, 10 mL ampoule	Brevibloc 2.5 g/10 mL injection, 10 mL ampoule	(container...	equiv...

0 | Selected: 4

With inactive targets highlighted, migrate selected rows

The workflow will take you through historical association maps to find suitable replacements

**Map target migration - select migration**

Select the SNOMED CT historical association map to apply:

☒ Replaced By  
☐ Same As  
☐ Possibly Equivalent To  
☐ Alternative

Note: migration results may be inactive; you may need to perform the Replaced By migration multiple times.  
Warning: repeated application of other migrations (e.g., Same As) may result in cycles.

Cancel Back Next

## Map target migration - selective application

Total migrations found: 4

Current				Migrated			
Apply?	Code	Display	Equivalence	Code	Display	Equivalence	
<input checked="" type="checkbox"/>	6776110001	Breo Ellipta 100/25 powder for inhalation, 14 actuations, blister pack	equivalent	1222021000	Breo Ellipta 100/25 powder for inhalation, 14 actuations, dry powder inhaler	equivalent	
<input checked="" type="checkbox"/>	6775810001	Breo Ellipta 100/25 powder for inhalation, 30 actuations, blister pack	equivalent	1222031000	Breo Ellipta 100/25 powder for inhalation, 30 actuations, dry powder inhaler	equivalent	
<input checked="" type="checkbox"/>	6775210001	Breo Ellipta 200/25 powder for inhalation, 14 actuations, blister pack	equivalent	1222041000	Breo Ellipta 200/25 powder for inhalation, 14 actuations, dry powder inhaler	equivalent	
<input checked="" type="checkbox"/>	6774910001	Breo Ellipta 200/25 powder for inhalation, 30 actuations, blister pack	equivalent	1222051000	Breo Ellipta 200/25 powder for inhalation, 30 actuations, dry powder inhaler	equivalent	

CancelBackApply

Source	Target	Category	Map	Status
Brenzys Auto-Injector 50 mg/mL injection solution, 4 x 1 mL pen devices	Brenzys Auto-Injector 50 mg/mL injection, 4 x 1 mL pen devices	(container...	equi...	Final
Breo Ellipta 100/25 powder for inhalation, 14 actuations, blister pack	Breo Ellipta 100/25 powder for inhalation, 14 actuations, dry powder...	(container...	equi...	Draft
Breo Ellipta 100/25 powder for inhalation, 30 actuations, blister pack	Breo Ellipta 100/25 powder for inhalation, 30 actuations, dry powder...	(container...	equi...	Draft
Breo Ellipta 200/25 powder for inhalation, 14 actuations, blister pack	Breo Ellipta 200/25 powder for inhalation, 14 actuations, dry powder...	(container...	equi...	Draft
Breo Ellipta 200/25 powder for inhalation, 30 actuations, blister pack	Breo Ellipta 200/25 powder for inhalation, 30 actuations, dry powder...	(container...	equi...	Draft
Bretaris Genuair 322 microgram/actuation powder for inhalation, ...	Bretaris Genuair 322 microgram/actuation powder for inhalation, 30 ...	(container...	equi...	Draft
Bretaris Genuair 322 microgram/actuation powder for inhalation, ...	Bretaris Genuair 322 microgram/actuation powder for inhalation, 60 ...	(container...	equi...	Draft
Brevibloc 100 mg/10 mL injection solution, 20 x 10 mL vials	Brevibloc 100 mg/10 mL injection, 20 x 10 mL vials	(container...	equi...	Draft
Brevibloc 100 mg/10 mL injection solution, 5 x 10 mL vials	Brevibloc 100 mg/10 mL injection, 5 x 10 mL vials	(container...	equi...	Draft
Brevibloc 2.5 g/10 mL concentrated injection, 10 mL ampoule	Brevibloc 2.5 g/10 mL injection, 10 mL ampoule	(container...	equi...	Draft

Total Items: 12656 | Unmapped: 2900 | Selected: 4

**Map target migration - summary**

Migrated 4 target maps resulting in 0 additional map entries.

Cancel Back Done

The target will be updated and the status will change to "Draft"

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Implementation support & document links

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# Useful resources

- Official Snapper:Map [documentation](#)
- National Clinical Terminology Service (NCTS) website [document library](#)
  - SNOMED CT-AU Mapping Guidelines v2.0
  - AMT Mapping Guidelines v1.2
  - NCTS Guidance for People and Processes v1.1
  - NCTS Guidance for Use in Healthcare Software v1.1



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Questions?

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# Contact us

Help Centre	1300 901 001
Email	<a href="mailto:help@digitalhealth.gov.au"><u>help@digitalhealth.gov.au</u></a>
Website	<a href="http://healthterminologies.gov.au"><u>healthterminologies.gov.au</u></a> <a href="http://digitalhealth.gov.au"><u>digitalhealth.gov.au</u></a>
Twitter	<a href="https://twitter.com/AuDigitalHealth"><u>twitter.com/AuDigitalHealth</u></a>

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