



Australian Government
Australian Digital Health Agency

Snapper:Map – creating maps to SNOMED CT-AU

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](#)

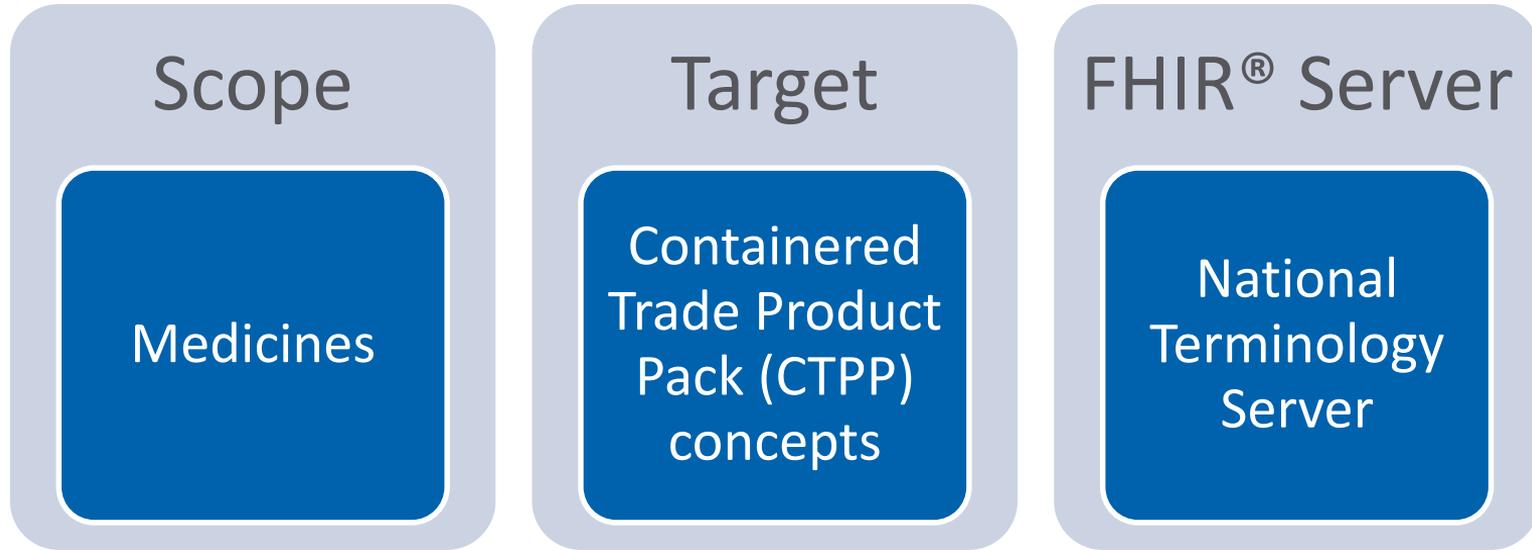
Information: This editor stores its state (the maps you are currently editing) in **your web browser's local storage**. This means that if you switch browsers (e.g., from Chrome to Firefox) or computers, then you will no longer see the maps you've been editing.

[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



Creating a new map

Creating a new map

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

Import existing FHIR Concept Maps

Classic Maps 

Click on the green plus icon

Snapper:Map 2.4.1

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

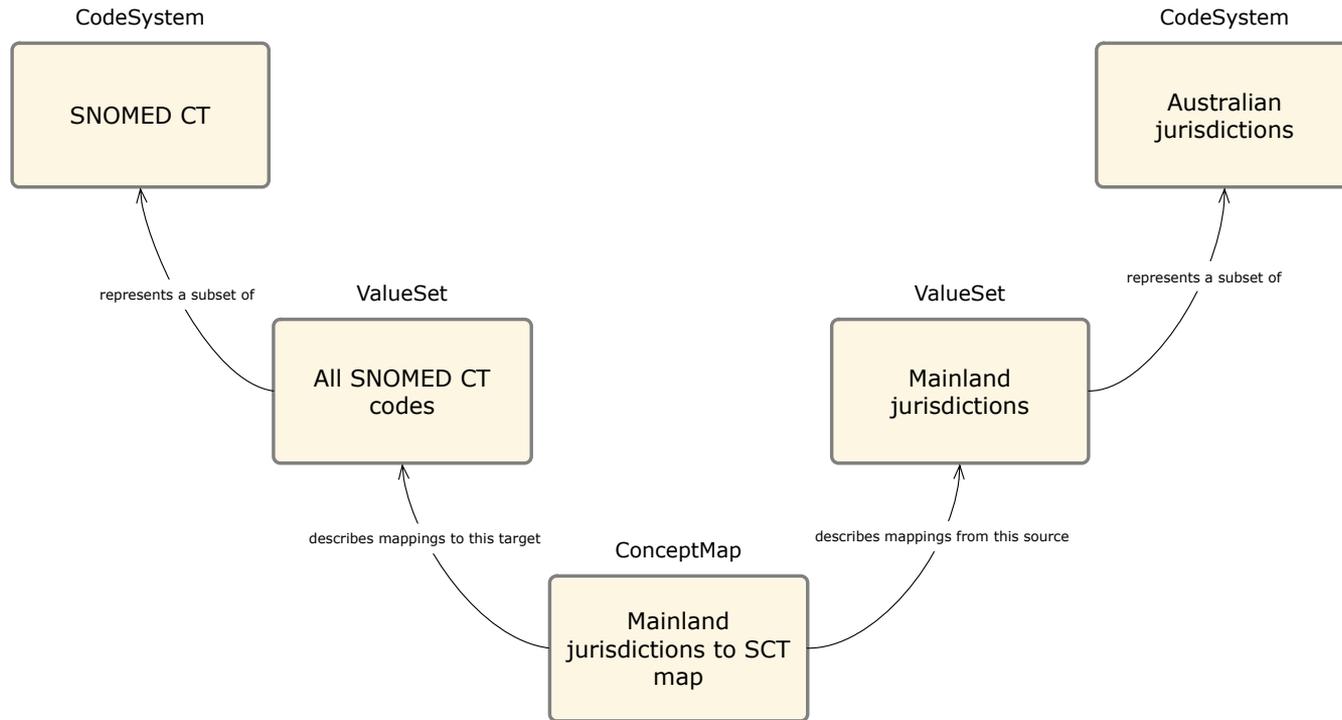
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FHIR® fundamentals



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?hir_vs=isa/138875005

Mapping relationships:

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

Buttons: Cancel, Done

Find ValueSet

Selected: http://snomed.info/sct?hir_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

The screenshot shows the Snapper web application interface. On the left, there is a sidebar with a section titled 'Classic Maps' containing a list of maps, with 'My Example Map' selected. The main area is titled 'Mapping Editor' and contains a table with columns for 'Map', 'Status', and 'Notes'. A context menu is open over the table, listing various actions such as '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'. The 'Metadata...' option is highlighted, and a callout box points to it with the text: '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 with the text: 'Access all functions from the Mapping Editor menu'. The browser address bar shows the URL: <https://api.healthterminologies.gov.au/integration/R4/fhir>.

Adding source data

Importing source data, or manually adding rows

The screenshot displays the Snapper Mapping Editor interface. On the left, there is a sidebar with the title 'Import existing FHIR Concept Maps'. It contains two items: 'Classic Maps' with a green plus icon and 'My Example Map' with a red minus icon. The main area is titled 'Mapping Editor' and features a table with columns: Target, Category, Map, Status, and Notes. A dropdown menu is open on the left side of the main area, listing various actions: 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'. The table below the menu shows a header row and a single row with the text 'ected: 0'.



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

The screenshot shows the 'Import Wizard - import data' window. A callout box points to the 'Browse...' button and the file name 'CTPP refset_Jan 18_ECL_partial.csv', stating: 'Browse for the file on your computer and then select the file type'. Another callout points to the 'Select the number of rows for the header' input field, which is set to '1', stating: 'Choose the number of header rows to be excluded from the mapping'. A third callout points to the table preview, stating: 'A preview of your source data will be shown'. A fourth callout points to the 'Total Items: 12656' text at the bottom of the table, stating: 'The number of total items reflects how many rows you are mapping'. The table has columns for 'Source Code', 'Source Label', 'Target Code', 'Target Label', 'Target Relationship', and 'Comments'. The table content is as follows:

0: Concept I D	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...

At the bottom of the table, it says 'Total Items: 12656'. Navigation buttons 'Cancel', 'Back', 'Next', and 'Import' are visible at the bottom right.

Using the Import Wizard – assigning your source data

The screenshot shows the 'Import Wizard' interface. At the top, there is a 'Browse...' button and a 'Select the number of columns' field set to '1'. Below this is a table with columns: 'Source Code', 'Source Label', 'Target Code', 'Target Label', 'Target Relationship', and 'Comments'. The 'Source Code' column is highlighted in green. The table contains two columns of data: '0: Concept ID' and '1: Preferred Term'. The 'Source Code' column has values like '764351000168102', '19838011000036104', etc. The 'Preferred Term' column has values like '2in1 Blood Glucose Test diagnostic strip, 50, bottle', '3TC 10 mg/mL oral liquid solution, 240 mL, bottle', etc. At the bottom, there are buttons for 'Cancel', 'Back', 'Next', and 'Import'. Five callouts provide instructions: 1. Click on Source Code (points to the 'Source Code' column header). 2. Click on the body of your Code or ID column (points to the first row of the 'Source Code' column). 3. The Source Code button will turn green when data is successfully assigned to a column (points to the green 'Source Code' header). 4. Repeat for Source Label (which are your local descriptions) (points to the 'Source Label' column header). 5. Click on Import (points to the 'Import' button).

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)

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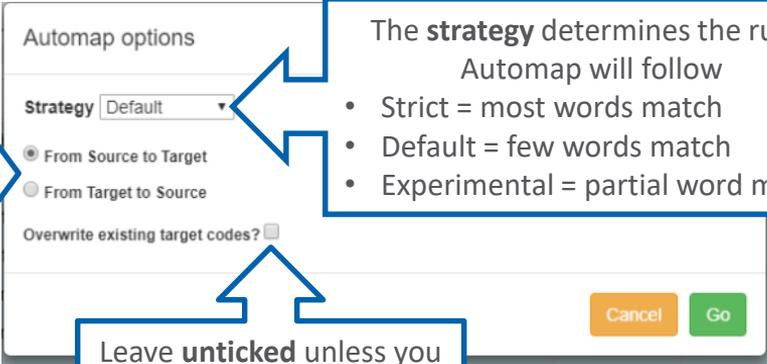
- When your data has successfully imported, your source terms will be displayed in the “Source” column.
- The next step is to perform Automap, or manually assign targets.



The Automap feature

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.



The **Automap options** dialog box is shown with the following settings:

- Strategy:** Default
- Direction:** From Source to Target (selected)
- Overwrite existing target codes?:**

Callout boxes provide additional information:

- Direction:** Select the **direction** from your local set (source) to SNOMED CT-AU (target)
- Strategy:** The **strategy** determines the rules Automap will follow
 - Strict = most words match
 - Default = few words match
 - Experimental = partial word match
- Overwrite existing target codes?:** 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

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

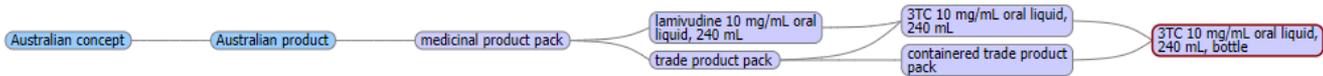
Reviewing mapped rows

1. Manually search for an appropriate target

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 (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 (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	

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

Final status indicates mapping is complete

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).

Tips for working with Snapper:Map

Sort columns and perform bulk actions from the column headers

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 clear values from several selected rows at once

Some columns allow you to assign a particular value to 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

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

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

Multiple columns can be filtered at once

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

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

Source	Target	Category	Map	Status
bricanyl				
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, 100, bottle	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle			Automap
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle			Automap

Source	Target	Category	Map	Status
bricanyl	tur			
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle	(contained...	inexact	Automap
Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle	Bricanyl Turbuhaler 500 microgram/actuation powder for inhalation, 100, bottle	(contained...	inexact	Automap

Show or hide source or target codes

The screenshot displays the Mapping Editor interface. A dropdown menu is open, showing options to show or hide source and target codes. The main table shows a list of mappings with columns for Source, Target, Category, Map, Status, and Notes. The source and target codes 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 (Apo) film-...	933541000168106	Abacavir/Lamivudine 600/300 (Apo)...	(contained...	equivalent	Final
933551000168108	Abacavir/Lamivudine 600/300 (Apo) film-...	933551000168108	Abacavir/Lamivudine 600/300 (Apo)...	(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

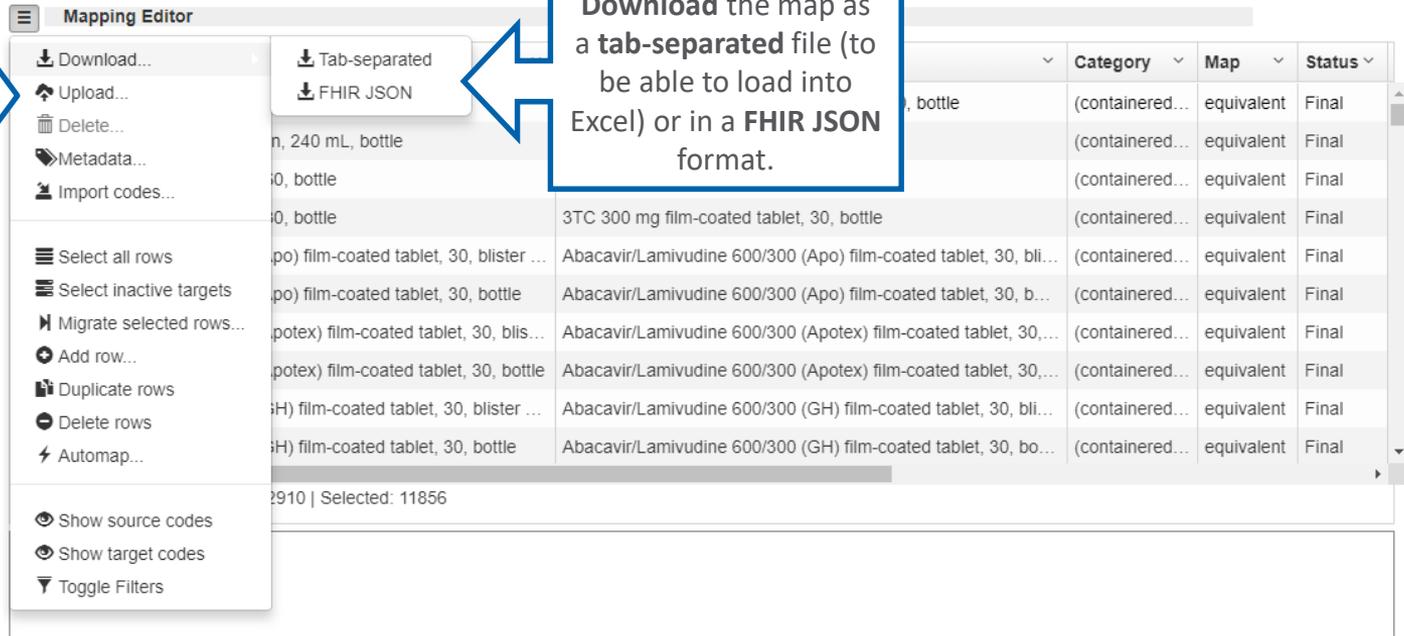
Select **show** or **hide** the **codes** you wish to see

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 under the 'Download...' button, showing two options: 'Tab-separated' and 'FHIR JSON'. A blue arrow points from the 'Download the map as a tab-separated file...' text box to the 'Tab-separated' option. Another blue arrow points from the 'Download the map as a FHIR JSON format.' text box to the 'FHIR JSON' option. The background shows a table with columns for '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, blister...'. The status for all rows is 'Final'. At the bottom of the table, it says '2910 | Selected: 11856'. Below the table, there are options to 'Show source codes', 'Show target codes', and 'Toggle Filters'.

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

Mapping considerations and performing map maintenance

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
- 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

The screenshot shows the Snapper:Map tool interface. On the left, a menu is open with the following 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. A blue box highlights the 'Select all rows then select inactive targets' path. The main table has columns: Source, Target, Category, Map, Status, and Notes. The status bar at the bottom indicates 'Total Items: 12656 | Unmapped: 2900 | Selected: 4'. A blue box highlights the status bar with the text '2018-12-20 03:46 | Selected 4 rows with inactive target codes'. Another blue box highlights the 'Status' column with the text '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...	(containered...	equivalent	Final	
Breo Ellipta 100/25 powder for inhalation, 14 actuations, blister p...	Breo Ellipta 100/25 powder for inhalation, 14 actuation...	(containered...	equivalent	Final	
Breo Ellipta 100/25 powder for inhalation, 30 actuations, blister p...	Breo Ellipta 100/25 powder for inhalation, 30 actuation...	(containered...	equivalent	Final	
Breo Ellipta 200/25 powder for inhalation, 14 actuations, blister p...	Breo Ellipta 200/25 powder for inhalation, 14 actuation...	(containered...	equivalent	Final	
Breo Ellipta 200/25 powder for inhalation, 30 actuations, blister p...	Breo Ellipta 200/25 powder for inhalation, 30 actuation...	(containered...	equivalent	Final	
Bretaris Genuair 322 microgram/actuation powder for inhalation,...	Bretaris Genuair 322 microgram/actuation powder for i...	(containered...	equivalent	Final	
Bretaris Genuair 322 microgram/actuation powder for inhalation,...	Bretaris Genuair 322 microgram/actuation powder for i...	(containered...	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	(containered...	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	(containered...	equivalent	Final	
Brevibloc 2.5 g/10 mL concentrated injection, 10 mL ampoule	Brevibloc 2.5 g/10 mL injection, 10 mL ampoule	(containered...	equivalent	Final	

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...
- Add...
- Delete...

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, 30 actuations, blister pack	Bretaris Genuair 322 microgram/actuation powder for inhalation, 30 actuations, blister pack	(container...	equiv...
Bretaris Genuair 322 microgram/actuation powder for inhalation, 60 actuations, blister pack	Bretaris Genuair 322 microgram/actuation powder for inhalation, 60 actuations, blister pack	(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.

Final

Cancel Back Next

Map target migration - selective application

Total migrations found: 4

Apply	Code	Display	Current	Equivalence	Code	Display	Migrated	Equivalence
<input checked="" type="checkbox"/>	677610001	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		

Cancel Back Apply

Map target migration - summary

Migrated 4 target maps resulting in 0 additional map entries.

Cancel Back Done

Source	Target	Category	Map	Status
Brenzys Auto-Injector 50 mg/mL injection solution, 4 x 1 mL injecti...	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

12656 | Unmapped: 2900 | Selected: 4

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

Implementation support & document links

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



Questions?

Contact us

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