



*General/family practice
SNOMED CT RefSet
and ICPC-2 mapping project:
current status and next steps*

Nick Booth¹, Graeme Miller^{1,2}, Julie O'Halloran^{1,2}

¹IHTSDO IFP/GP RefSet and ICPC Mapping Project Group

¹Wonca International Classification Committee

²Family Medicine Research Centre, The University of Sydney

Project schedule

- ❁ The GP/FP RefSet and ICPC mapping project was divided into three distinct phases:
 1. Development of project framework (9 months)
 2. Construction of the GP/FP RefSet and map from the GP/FP RefSet to ICPC-2 (6 months)
 3. Testing and validation of the GP/FP RefSet and map from the GP/FP RefSet to ICPC-2 (6 months)



What has happened to date

- ✿ Phase 1 – Development of project framework
- ✿ Phase 2 – RefSet and Map development
 - ✿ RefSet – in beta version
 - ✿ Map to ICPC-2 – in beta version
- ✿ Phase 3 – Field test and validation of RefSet and Map
 - ✿ Development of field test web software completed





Mapping process

- ✚ Mapping tool
- ✚ Mapping personnel
- ✚ Mapping process
- ✚ NOTE: IHTSDO, Mapping SIG, IHTSDO/WHO PG have also mapped the RefSet to ICD 10 using similar process





Mapping tool

- ✚ Mapping tool modified from purpose built software designed to map SNOMED CT to ICD 10
- ✚ Connected online to programs and databases at NLM in Bethesda USA



Mapping personnel

✦ FP/GP PG

- ✦ Nick Booth
- ✦ Ray Simkus
- ✦ Graeme Miller
- ✦ Julie O'Halloran
- ✦ Jason Mitchell
- ✦ Richard Medicot
- ✦ Kees van Boven
- ✦ Diago Schrans
- ✦ Preben Larsen

✦ IHTSDO team

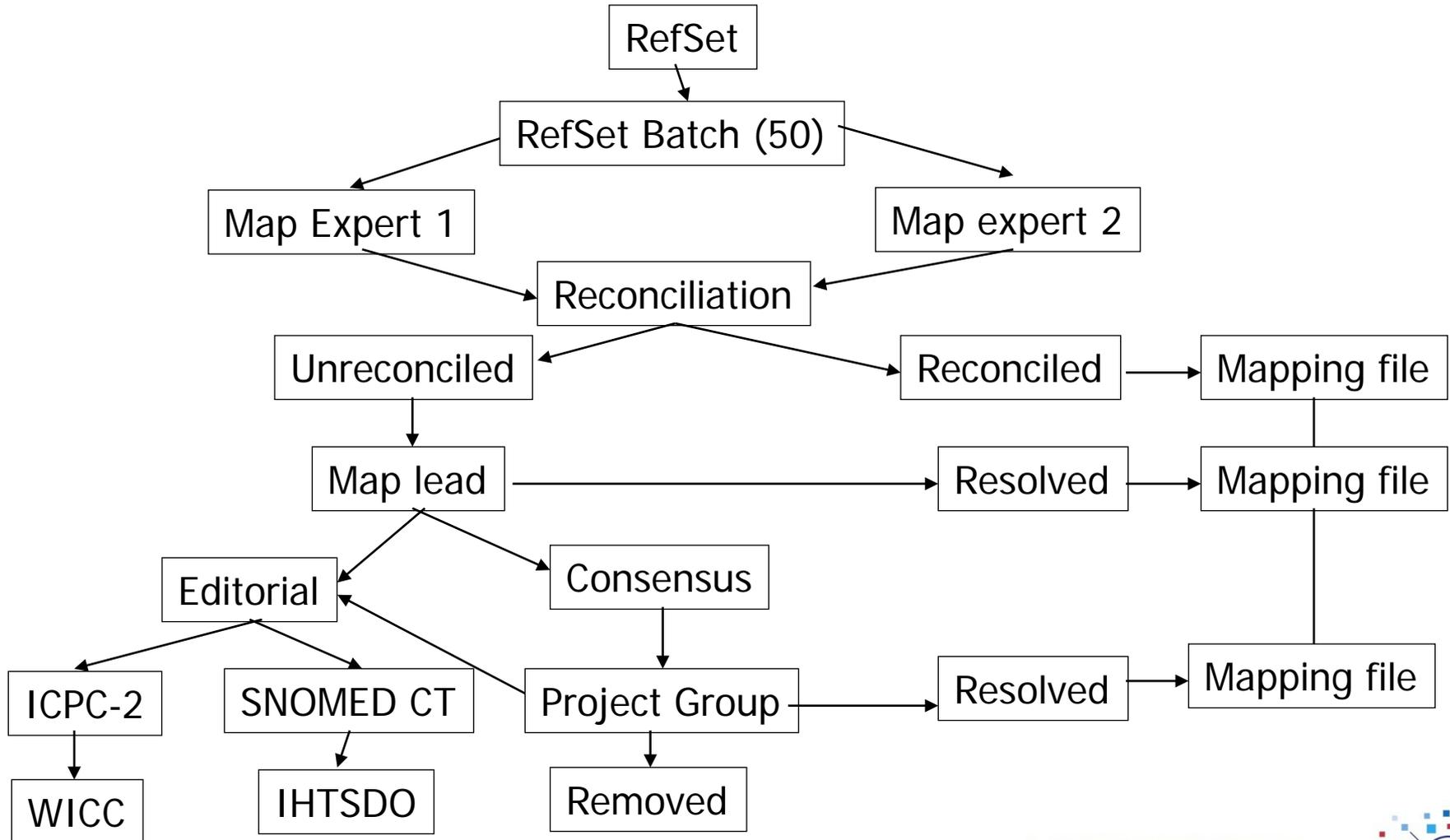
- ✦ Jane Miller
- ✦ Ian Green
- ✦ Kathy Giannangelo
- ✦ Brian Carlson
- ✦ Monica Harry
- ✦ Rory Davidson
- ✦ David Markwell

✦ Project team

- ✦ Graeme Miller
- ✦ Julie O'Halloran
- ✦ Carmen Zahang



Mapping process





What happens next

- ✪ Phase 3 – Field test of RefSet and Map
 - ❑ Recruitment of GP participants in the field test
 - ❑ Testing of GP/FP RefSet +/- map to ICPC-2
 - ❑ Incorporation of revisions resulting from testing
 - ❑ Technical release of RefSet and map - February 2014
 - ❑ Full release of RefSet and map – July





Aims of the field test

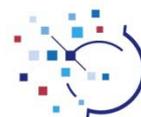
- ❖ To assess the completeness of the GP/FP RefSet
- ❖ To identify important missing content in the GP/FP RefSet
- ❖ To assess the accuracy of the map from the GP/FP RefSet to ICPC-2.





Features of the field test

- ✿ GPs/FPs who are actively working in general/family practice are asked to participate in the field test.
- ✿ The field test will be conducted using a simple web-based tool developed specifically for the field test.
- ✿ No prior knowledge of SNOMED CT or ICPC-2 is required for participation.
- ✿ People who do not use ICPC-2 in their practice can opt to test the RefSet alone





Features of the field test

- ✿ Each participant will be asked to assess the GP/FP RefSet and map to ICPC-2 relating to 100 encounters, consecutive if possible. The data may be entered during encounters, or completed later
- ✿ Participants are asked to use the RefSet to enter all reasons for encounter and health issues at each encounter.
- ✿ If willing, participants are also asked to assess the map from the SNOMED CT concepts in the GP/FP RefSet to ICPC-2.





Features of the field test

- ✿ Only data about reasons for encounter and health issues will be collected. No identifying information about patients will be collected.
- ✿ Basic demographic details about participants will be requested, and participants will receive a report about the field test on its completion.
- ✿ The field test will be conducted between September and November 2013.





Field test home page



GP/FP SNOMED CT RefSet and ICPC-2 mapping project - Field Test

GP/FP SNOMED CT RefSet and ICPC-2 mapping project - Field Test

Welcome to the Field Test of the GP/FP SNOMED CT RefSet and map to ICPC

Clinical input is needed to ensure that both the GP/FP RefSet and map to ICPC-2 are of the highest quality possible. The involvement of many GPs/FPs from multiple countries will ensure that both products are acceptable for future implementation at a local level in electronic health records.

Thank you for your participation.

Instructions for completing the Field Test are available [here](#)

New users

[Click here to register](#)

Returning users

Email

Password

[Forgotten your password?](#)



Participant agreement

Field Test Participant Agreement for the use of ICPC-2 and SNOMED CT for Field Testing

The field test participant accepts:

1. That the use of ICPC-2 and SNOMED CT shall be purely and strictly for the purposes of the field test of the International Family Medicine/General Practice SNOMED CT RefSet and map to ICPC-2.
2. That permission to use ICPC-2 and SNOMED CT for the purposes stated in clause 1, shall be granted free of charge.
3. That the use of ICPC-2 and SNOMED CT for the field testing will be valid until the end of December 2013.
4. That the copyright of ICPC-2 belongs to, and remains with, WONCA. That the copyright of SNOMED CT belongs to, and remains with, IHTSDO.
5. That no attempt is made to copy or reproduce ICPC-2 or SNOMED CT by any means or in any form without the prior written consent of the copyright holders as identified in clause 4.
6. That any work published as a result of the field testing and trials shall formally acknowledge WONCA and IHTSDO. These acknowledgements will be display the following statements:
 - "ICPC-2 is Copyright © WONCA 2000"
 - "This material includes SNOMED Clinical Terms® (SNOMED CT®) which is used by permission of the International Health Terminology Standards Development Organisation (IHTSDO). All rights reserved. SNOMED CT® was originally created by The College of American Pathologists. "SNOMED" and "SNOMED CT" are registered trademarks of the IHTSDO."

5th September, 2013

FT registration

Participant registration

* Required

* Title

* First name

* Last name

* Email address

* Password Minimum 6 characters

* Confirm password

* Country

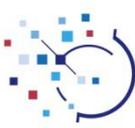
* Main role/occupation

* Gender

* Field Test Option

* By creating an account, I agree to the terms of the license described below.

Register



GP/FP SNOMED CT RefSet and ICPC-2 mapping project - Field Test Test User

Home

Welcome, Test User.

You are participating in this field test by the GP/FP SNOMED CT RefSet only option.
You have completed 0 of 100 encounters.

[Start Field Test](#)



SNOMED CT to ICPC-2

Add Reason For Encounter

A Reason For Encounter is "an agreed statement of the reason(s) why a person enters the health care system, representing the demand for care by that person. The terms written down and later classified by the provider clarify the reason for encounter and consequently the patient's demand for care without interpreting it in the form of a diagnosis. The reason for encounter should be recognised by the patient as an acceptable description of the demand for care" — (Wonca Dictionary of General/Family Practice, 2003).

[Return Home](#)

1. Search for (and select) a **SNOMED CT** concept that represents the RFE you wish to record.

stomach

Select SNOMED concept

- Acute dilatation of stomach
- Angiodysplasia of stomach
- Carcinoma of stomach
- Gastric polyp
- Gastric ulcer
- Malignant tumor of stomach
- Stomach ache

Selected SNOMED Concept: 271681002 - Stomach ache

Synonyms: Belly ache
Sore tummy
Stomach ache
Stomach ache (finding)
Stomach discomfort
Stomach upset
Tummy ache

2. How well does this SNOMED CT concept adequately represent the RFE you wish to record?

1 2 3 4 5
 Very well Poorly

3. If the SNOMED CT concept was not an accurate representation, or no appropriate SNOMED CT concept was found, please write in free text the clinical term you wished to record.



Add Health Issue

A Health Issue is an "issue related to the health of a subject of care, as identified or stated by a specific health care party". This is further defined in the notes as "according to this definition, a health issue can correspond to a health problem, a disease, an illness"

— (Health informatics – System of concepts to support continuity of care – Part 1: basic concepts (CEN 13940-1))

[Return Home](#)

Reason For Encounter successfully recorded. Please do not press back, or refresh the page, as this will re-submit the Reason For Encounter

1. Search for (and select) a **SNOMED CT** concept that represents the Health Issue you wish to record.

stomach Search

- Angiodysplasia of stomach
- Carcinoma of stomach
- Gastric polyp
- Gastric ulcer
- Malignant tumor of stomach
- Stomach ache**
- Stomach cramps
- Upset stomach

Selected SNOMED Concept: 271681002 - Stomach ache

Synonyms: Belly ache
Sore tummy
Stomach ache
Stomach ache (finding)
Stomach discomfort
Stomach upset
Tummy ache



D02 - Abdominal pain epigastric

4. Select the appropriate ICPC-2 code:

Selected ICPC-2 code: D02 - Abdominal pain epigastric

5. In your opinion, is this ICPC-2 code an appropriate match for the Health Issue you recorded?

- | | | | | |
|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Very well | | | | Not at all |

6. If the ICPC-2 code is not an appropriate match, please record your preferred ICPC-2 code or do a text search:

Save & add another Health Issue

Health Issues complete - review encounter

Cancel



ICPC-2 to SNOMED CT

1. Search and (select) the **ICPC-2** code that represents the RFE you wish to record, or do a text search:

- Select ICPC-2 code
- D02 - Abdominal pain epigastric**
- D06 - Abdominal pain localized oth
- D01 - Abdominal pain/cramps gene
- L86 - Back syndrome with radiating
- L84 - Back syndrome without radia
- X18 - Breast pain female
- K03 - Cardiovascular pain NOS

Selected ICPC-2 code: D02 - Abdominal pain epigastric

2. Select an associated SNOMED CT concept

- Select SNOMED concept
- Epigastric discomfort
- Epigastric fullness
- Epigastric pain
- Stomach ache**

Selected SNOMED Concept: Stomach ache

Synonyms: Belly ache
Sore tummy
Stomach ache
Stomach ache (finding)
Stomach discomfort
Stomach upset
Tummy ache



Reviewing encounters

GP/FP SNOMED CT RefSet and ICPC-2 mapping project - Field Test

Test User ▾

Patient Encounters

[Encounter #1 - created on Friday, 6th September 2013](#)

Reason For Encoun... • Stomach ache

Health Issues • Stomach ache

Review/Edit this encounter

[Encounter #2 - created on Friday, 6th September 2013](#)

[Encounter #3 - created on Friday, 6th September 2013](#)

[Encounter #4 - created on Friday, 6th September 2013](#)

[Encounter #5 - created on Friday, 6th September 2013](#)

GP/FP SNOMED CT RefSet and ICPC-2 mapping project - Field Test

Test User ▾

Complete encounter

Patient encounter successfully completed. Please do not press back, or refresh the page, as this will re-submit the encounter.

You have completed 100 of 100 encounters.

Submit Field Test

View patient encounters

Home



Summary

- ❖ We aim to recruit 40 GPs in each of 8 countries plus extra interested GPs in other countries
- ❖ 100 consecutive encounters is ideal however we can accept less and non consecutive.
- ❖ Participants must enter at least one RFE and one health issue in each encounter





Implementation trials

- ✦ Development of local extensions of GP/FP RefSet
- ✦ Mapping of extensions to ICPC-2 and ICD 10
- ✦ Modification of maps to local version of ICD
- ✦ Develop index and search mechanism
- ✦ (maps from local terminologies/thesauri)
- ✦ Implementation instructions for vendors





What then?

- ✦ Ongoing 6 month revision of RefSet and map – GP/FP SIG and IHTSDO (and WICC)
- ✦ Continuing review of SNOMED CT content for GP relevance – GP/FP SIG and IHTSDO
- ✦ Extending the SNOMED CT to ICPC-2 Map to all relevant SNOMED CT content – WICC. GP/FP SIG and IHTSDO
- ✦ Harmonise SNOMED CT to ICPC-2, SNOMED CT to ICD 10, and ICD 10 to ICPC-2 maps - WICC





Request to WICC

- ✚ Endorse map for field test
- ✚ Endorse workplan for field test of map
- ✚ Endorse draft forward work plan





*General/family practice
SNOMED CT RefSet
and ICPC-2 mapping project:
current status and next steps*

Nick Booth¹, Graeme Miller^{1,2}, Julie O'Halloran^{1,2}

¹IHTSDO IFP/GP RefSet and ICPC Mapping Project Group

¹Wonca International Classification Committee

²Family Medicine Research Centre, The University of Sydney