

Mapping to standardised vocabularies: a process for medicine codes in Australia

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INTRO:

- We outline our process of mapping the **Pharmaceutical Benefits Scheme (PBS)** data, a catalogue for all government subsidised medicines in Australia, to OMOP CDM standardized vocabularies

METHODS

- Mapping of the PBS non-standard vocabulary to an OHDSI standard vocabulary required the following steps (**Figure 1**):
 - Mapping PBS item codes to the **Australian Medical Terminology (AMT)** vocabulary
 - Mapping of the AMT vocabulary to the **RxNorm Extension** vocabulary using the OHDSI 'concept_relationship' table
 - Where the above steps did not find a suitable match - manual mapping of PBS item codes to RxNorm Extension 'concept_id's were made using the OHDSI tool **Usagi**

RESULTS

- There are 3692 unique PBS medicine codes available in Australia as of Dec 2019 (**Table 1**):
 - 74% of PBS codes were directly mapped to the RxNorm Extension standard concepts Corresponds to 94% of all medicines dispensed
- Of the remaining 969 PBS codes
 - 430 (11.6%) were mapped manually using Usagi
 - accounting for 5.1% of medicines dispensed
- The remaining codes accounted for less than 0.5% of medicines dispensed.

85% of unique Australian PBS medicine codes have been mapped to an OMOP standard concept code – corresponding to 99.5% of dispensings.

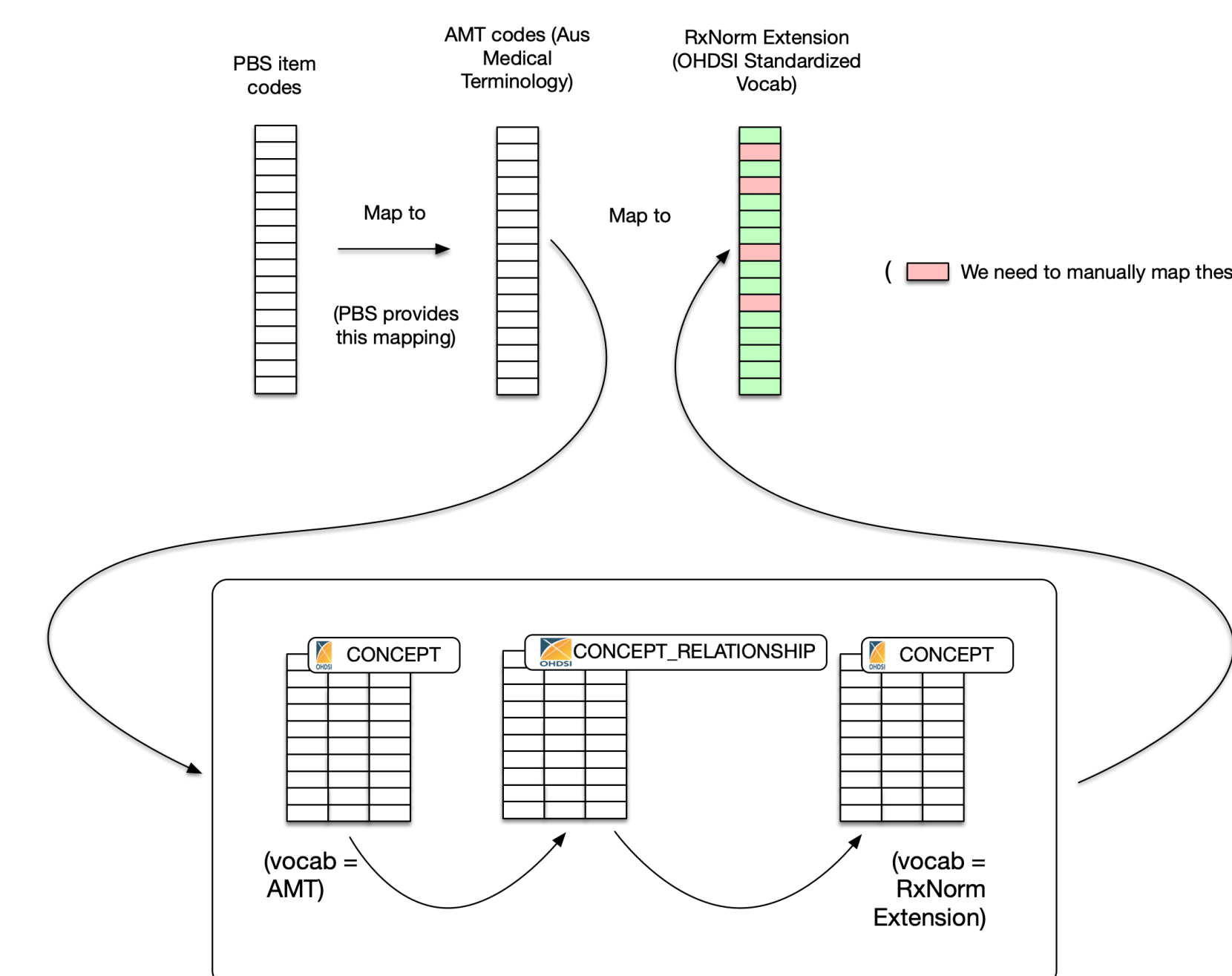


Figure 1. The mapping of PBS (Pharmaceutical Benefits Scheme) data to the OHDSI standardized vocabulary of RxNorm Extension.

Table 1. Patient dispensings and PBS item code capture through the mapping process.

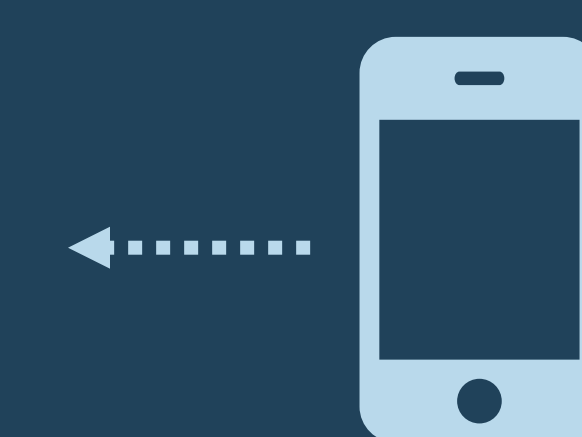
Step	PBS item codes n (%)	Patient dispensings n (%)
OHDSI assisted automatic mapping (Fig 1)	2 723 (73.8%)	39 192 527 (94.4%)
Manual mapping via Usagi	430 (11.6%)	2 098 247 (5.1%)
Total records mapped to standard concept	3 153 (85.4%)	41 290 774 (99.5%)

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PBS item codes
↓
RxNorm Extension concept IDs

Mappings will be made available by OHDSI Australia

- <https://ohdsi-australia.org/>



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