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

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):

a) Mapping PBS item codes to the Australian Medical Terminology (AMT) vocabulary
b) Mapping of the AMT vocabulary to the RxNorm Extension vocabulary using the OHDSI ‘concept_relationship’ table
c) 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.

<table>
<thead>
<tr>
<th>Step</th>
<th>PBS Item codes n (%)</th>
<th>Patient dispensings n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OHDSI assisted automatic mapping (Fig 1)</td>
<td>2 723 (73.8%)</td>
<td>39 192 527 (94.4%)</td>
</tr>
<tr>
<td>Manual mapping via Usagi</td>
<td>430 (11.6%)</td>
<td>2 098 247 (5.1%)</td>
</tr>
<tr>
<td>Total records mapped to standard concept</td>
<td>3 153 (85.4%)</td>
<td>41 290 774 (99.5%)</td>
</tr>
</tbody>
</table>

WATCH THIS SPACE

Mappings will be made available by OHDSI Australia
- https://ohdsi-australia.org/