

Technical Note: Linked MBS and PBS data

Version: October 2020

Overview

The 45 and Up Study receives Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) data from Services Australia (formerly known as Department of Human Services (DHS), and before that Medicare. MBS and PBS records are provided to the Sax Institute every year, with the current datasets covering the period 2001 to 2019.

The data are extracted for active 45 and Up Study participants by use of an identification number that was assigned by DHS at recruitment. Each extract contains data linked to “active” participants at the time of application for the extract. “Active” participants include all consenting participants who have not withdrawn from the study. Therefore “active” participants for linkage purposes also include those who have died.

Department of Veteran’s Affairs (DVA) data is now also included covering the period 2013 to 2019. DVA Medical Services data are included in the MBS data, and Repatriation Pharmaceutical Benefits Scheme (rPBS) data are included in the PBS data.

The number of active participants for which MBS and PBS data is held has increased with each extract. To date, we now have MBS data for 99.9% of active participants, and PBS data for 99.1%. This includes around 6900 participants for whom we have DVA Medical Services and rPBS data.

Data management by the 45 and Up Study Co-ordinating Centre

Each extract from Services Australia is based on date of processing. While most records returned will be for services and supplies within that timeframe, there are also many from the latter months in the previous period, and some spread across previous years. The 45 and Up Study Co-ordinating Centre conducts some limited processing of the extracts to remove records duplicated across overlapping time periods. Potentially duplicated records are records across extracts with the same Services Australia identifier with the same date of service (MBS) or date of supply (PBS) and the same item number. When duplicates are found in different extracts, the records from the most recent extract are selected.

Review of the latest MBS and PBS update (2018 and 2019)

- 16,945,845 MBS records with a date of processing of between 1 January 2018 and 31 December 2019 were added. 99% of these records had a date of service within the same period.
- 14,711,756 PBS records with a date of processing of between 1 January 2018 and 31 December 2019 were added. 97% of these records had a date of supply within the same period.
- On review of duplicate records, 0.006% of MBS records and 0.001% of PBS records in the previous datasets were replaced.

Data notes

- Extraction of Medicare data was first done in 2008 for a subset of the final cohort while recruitment was still underway. Coverage of the full cohort should be complete from September 2005.
- In April 2012, under co-payment prescription data collection began. These records can be identified as those with a Gross Price less than the co-payment threshold for that year, and Net Benefit of \$0. For more information, see <http://www.pbs.gov.au/info/statistics/under-co-payment/under-co-payment-data>.
- rPBS records are now included in the PBS extracts for the years 2013 onwards. rPBS records can be identified by **Patient Category**=7 (RPBS – Ordinary) or **Patient Category** =8 (RPSB - Safety Net), or the RPBS flag = 1.
- DVA Medical Services records are now included in the MBS extracts for the years 2013 onwards. DVA Medical Services records can be identified by selecting DVA_data = 1.
- Codes and descriptions for **MBS Bill Type** changed in the DHS system in 2013, therefore an additional variable was introduced for bill types from 2013 onwards.
- The **MBS Provider Specialty** codes from the 2013 extract have different descriptions to those from other extracts. The Provider Specialty Codes provided in the DVA Medical Services data are also different. See the MBS data dictionary for more detail.
- There have been some issues with **PBS Scrambled Provider Number** over the years. In 2015, DHS resupplied as much data as possible from previous years. Where it was not possible to resupply the data, the scrambled provider number has been set to missing.

Further information can be found in the [MBS Data Dictionary](#) and [PBS Data Dictionary](#), or by contacting the 45 and Up Study Data Team by email on 45andUp.data@saxinstitute.org.au.