

Pharmaceutical Benefits Scheme Data



PBS Data Flow

- Prescriptions are written by approved prescribers
- Drugs are supplied to patients by approved suppliers
 - S90 pharmacies and Friendly societies (95%)
 - S94 hospital pharmacies
 - S92 dispensing doctors
- Pharmacies have online claiming – real time interaction with the DHS (98%)
 - Collect co-pay from patients
 - Submit claim to DHS for balance
- Pharmacies are required to provide specified data to DHS as part of claim
 - also required to submit under co-pay data (from April 2012)
 - note private scripts are not captured

PBS Data Flow

- DHS process claims and make payments to pharmacy
- After validation DHS provide prescription data to Health
 - can be a lag of up to 3 months
- Around 300 million prescriptions annually at a cost to Government of around \$9 billion.
- PBS database maintained by Health contains comprehensive information about each script dispensed:
 - Pharmacy
 - Patient
 - Prescriber
 - Drug



PBS Data – What the Department of Health holds

Information about the patient:

- patient date of birth (to determine patient age at time of dispensing)
- patient gender
- patient postcode
- patient state



PBS Data – What the Department of Health holds

Information about the prescription:

- drug manufacturer (to determine brand)
- quantity dispensed
- date of prescribing
- date of supply
- whether general or concessional, ‘safety-net’ or ‘non safety-net’
- form/strength
- government benefit
- patient co-payment



PBS Data – What the Department of Health holds

Other available information:

- dispensing setting (ie. community pharmacy or hospital pharmacy)
- pharmacy postcode
- pharmacy state
- major specialty of prescriber
- Information collected by the Department of Human Services on the approval of authority prescriptions

Monitoring Utilisation with PBS data – Example simple analyses

Report 1: Number of prescriptions and patients by brand by month

Month	Brand 1		Brand 2	
	Prescriptions	Patients	Prescriptions	Patients
December 2015				
January 2016				
February 2016				
...				
Total to date				

Report 2: Number of patients switching brands, all indications, by State/Territory. December 2015 to xxxxxxx

State	Number of switches					
	1	2	3	4	5	...
NSW						
VIC						
...						
AUST						

Report 3: Number of patients switching brands, by indication. December 2015 to xxxxxxx

Indication	Number of switches					
	1	2	3	4	5	...
Indication 1						
Indication 2						
...						
Indication Unknown						
All Indications						



Monitoring Utilisation with PBS data – further analysis

- Established process for monitoring use of medicines listed on the PBS
- Analyses are undertaken for the Drug Utilisation Subcommittee (DUSC) and the PBAC
 - usually 24 months after listing on the PBS; or
 - at other times requested by the DUSC or PBAC
- The impact of listing biosimilars could be monitored through several approaches used in reporting for the PBAC and its DUSC.
- Utilisation reviews are published on the PBS website
<http://www.pbs.gov.au/info/industry/listing/participants/public-release-docs/dusc-utilisation-public-release-docs>



Prescription Volume

- Assessing market share and growth
 - *For example changes in the a drug's market for a particular condition over time**
- Data can also be presented by brand to assess market share of reference medicine and biosimilars



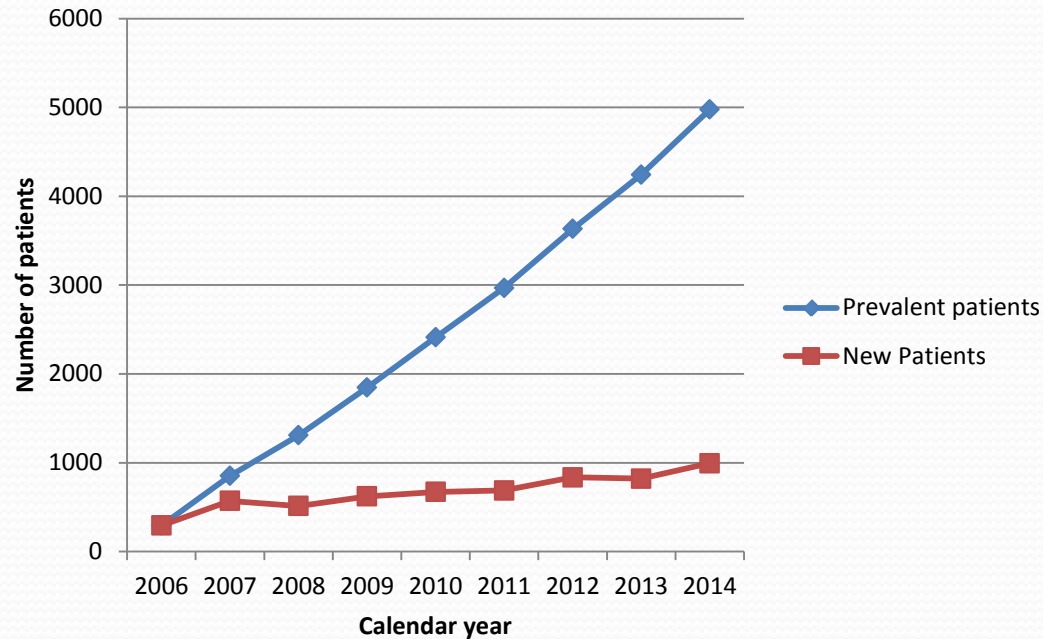
Indication

- Indication is known when there is a separate PBS item or authority code
 - *For example the item codes for a drug that can be used for different conditions will have different codes for each of the conditions*
 - *For some drugs there is also a different item code for initial and continuing treatment*
 - *For others, there is also a different item code for public and private hospital supply*
- Can monitor whether utilisation patterns for reference and biosimilar differ across indications



Patient numbers

- Quantifying the number of patients: incident (new) and prevalent (all)
 - *For example new and all patients treated with a group of drugs for a specific condition over time*



Patient numbers by drug

- Distribution of patients by drug prescribed
 - *For example new patients treated with a drug for a particular condition*

- Data can also be presented by whether the reference or biosimilar was first supplied product.



Transitions between drugs

- Patient level analyses can be undertaken, using various methods, to examine switching, adding or ceasing medicines.
- Transitions (single or multiple) between reference and biosimilars could also be incorporated into these types of analyses.



Treatment duration and discontinuation rates

- Time on treatment & discontinuation rate analyses can be undertaken
- Most common approach is Kaplan-Meier (K-M) analysis.
- A simplified approach assesses continuation rates based on repeat approvals
- Assumptions are needed to identify likely discontinuations from treatment breaks.
- Different cohorts such as reference only, biosimilar only, single and multiple switchers could be compared.



Other possible analyses

- Prescriber type to assess whether patterns of use vary between specialities, or between specialists and GPs
- Co-prescription analyses



Linking PBS and MBS data

- Linking strictly controlled by law
 - Privacy Guidelines enacted under Section 135AA of the *Nation Health Act 1953*
- Enables analysis of GP/specialist usage for patients who switch and don't switch
 - Is there a difference in MBS item levels of usage?
 - Do the MBS items accessed differ between groups?

