Attention Deficit Hyperactivity Disorder: Utilisation Analysis

Drug utilisation sub-committee (DUSC)

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Abstract

Purpose

To review the utilisation of the Pharmaceutical Benefits Scheme (PBS) and Repatriation PBS (R/PBS) listed medicines used in the management of attention deficit hyperactivity disorder (ADHD). This includes a predicted versus actual analysis of guanfacine in the first 24 months of R/PBS listing. Guanfacine was first R/PBS-listed for this indication on 1 September 2018.

Date of listing on the PBS

- Dexamfetamine - 1 December 1973
- Methylphenidate immediate release (IR) - 1 August 2005
- Methylphenidate modified release (MR) (Concerta®) - 1 April 2007
- Methylphenidate modified release (MR) (Ritalin LA®) - 1 April 2008
- Atomoxetine - 1 July 2007 requiring authority approval. On 1 August 2014, the restriction was simplified and changed to streamlined authority
- Lisdexamfetamine - 1 September 2015 requiring authority approval
- Guanfacine – 1 September 2018 requiring streamlined authority approval

Subsidy of lisdexamfetamine, atomoxetine and the two modified-release forms of methylphenidate (Ritalin LA and Concerta) is limited to patients diagnosed between the ages of 6 and 18 years of age inclusive. In addition, for modified-release methylphenidate, patients need to have demonstrated a response to immediate-release methylphenidate with no emergence of adverse events. Lisdexamfetamine and Concerta are for patients requiring coverage over 12 hours. Ritalin LA is for patients requiring coverage over 8 hours.

Atomoxetine and guanfacine are subsidised for patients unable to take dexamfetamine or methylphenidate due specific circumstances set out in the PBS restriction. Patients need to have been diagnosed by a paediatrician or psychiatrist according to the DSM-5 criteria.

Data Source / methodology

The analysis used data from Services Australia supplied prescriptions database.

Table 3. Number of patients initiating R/PBS-listed ADHD medicine therapy by age group and gender per calendar year

	2014	2015	2016	2017	2018	2019	2020
<6 years male	1,603	1,646	1,796	1,990	2,435	2,820	3,131
<6 years female	357	451	471	499	513	691	817
6-12 years male	9,957	11,719	12,608	13,616	16,174	18,477	20,151
6-12 years female	2,930	3,388	3,753	4,310	5,375	6,326	7,461
13-18 years male	2,536	2,712	2,719	3,041	3,539	4,392	5,344
13-18 years female	1,209	1,341	1,434	1,637	2,177	2,840	4,373
19+ years male	5,007	5,510	6,166	6,573	7,878	9,007	11,482
19+ years female	3,034	3,568	3,970	4,564	5,412	6,864	10,100
Unknown	17	8	5	<5	<5	-	6
Total New patients	**26,650**	**30,343**	**32,922**	**36,234**	**43,505**	**51,417**	**62,866**
% growth from previous year		**14%**	**8%**	**10%**	**20%**	**18%**	**22%**

Source: Services Australia prescriptions database, extracted March 2021. Unknown denotes age and sex not available in the data. Table 4. Number of prevalent patients treated with R/PBS-listed ADHD medicines by age group and gender per calendar year.

Table 4. Number of prevalent patients treated with PBS-listed ADHD medicines by age group and gender per calendar year

	2013	2014	2015	2016	2017	2018	2019	2020
<6 years male	2,226	2,277	2,334	2,518	2,807	3,319	3,873	4,395
<6 years female	521	516	620	654	676	682	894	1,055
6-12 years male	38,216	40,869	45,506	50,727	55,878	63,239	71,894	81,209
6-12 years female	9,716	10,472	11,672	13,312	15,197	17,897	21,113	24,857
13-18 years male	20,914	21,385	22,893	24,520	26,893	29,750	34,273	39,984
13-18 years female	6,074	6,364	7,032	7,785	8,740	10,214	12,473	16,450
19+ years male	21,899	23,498	26,144	29,727	32,980	37,518	43,012	51,032
19+ years female	12,962	14,107	15,923	18,051	20,627	23,748	28,295	36,204
Unknown	77	73	80	16	32	44	31	21
Total patients	**112,605**	**119,561**	**132,204**	**147,310**	**163,831**	**186,411**	**215,858**	**255,208**
% growth from previous year	**-**	**6%**	**11%**	**11%**	**11%**	**14%**	**16%**	**18%**

Source: Services Australia prescriptions database, extracted March 2021. Unknown denotes age and sex not available in the data.

Children aged 6-12 years constituted 42% of all patients treated with ADHD medicines from 2013 to 2020. In addition, over the same period, approximately two thirds of patients supplied R/PBS ADHD medicines were less than 18 years of age.

The ratio of males to females receiving an ADHD medicine varied across the age brackets with the least difference in treatment rates occurring in adults (19+).

Figure 6 depicts the age distribution of patients new to R/PBS-subsidised ADHD therapy in 2020 by the first ever ADHD medicine they were supplied. Figure 7 shows the age distribution