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A collaborating unit of the
Australian Institute of Health and Welfare



BEACH

BETTERING THE EVALUATION AND CARE OF HEALTH

**SUMMARY MEDICATION REPORT for GP DIVISIONS
Serum lipid reducing agents (ATC code C10)**

Data period: April 01 – Mar 02



February 2003

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The details of the methods use in BEACH can be found in any of the AIHW general practice publications. These can be accessed through our web site: [www://fmrc.org.au](http://fmrc.org.au). You can click on the most recent annual report listed in the Publications page and this will link directly to the book. *Britt H, Miller GC, Knox S, Charles J, Lisa V, Henderson J, et al. 2002. General practice activity in Australia 2001-02. AIHW Cat. No. GEP 10. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 10). ISBN 1 74024 217 3. ISSN 1442 3022*

Background

This report is a summary of the data collected from April 2001 to Mar 2002 inclusive. It provides information on the prescribing of PPIs

Total number of GPs participating in BEACH in this period: 983.

The total number of encounters for this period: 98,300

The participating GPs are randomly selected from the HIC list of active GPs (those who provided more than 375 GP services in the previous quarter). The research instrument used for each consultation is a single page recording form containing the following variables:

- date of encounter
- service item number/form of payment/indirect encounters (e.g. telephone consults)
- patient age and sex
- patient status to practice (new or seen before)
- health care card status of patient
- patient post code and ethnic background
- patient's reasons for encounter (up to three)
- diagnoses/problems managed (up to four)
- status of each problem to the patient (new/old)
- whether problems are work related
- medications prescribed (up to 4 per problem)
- over the counter medications recommended
- medications provided by the GP
- brand name, strength and regimen of medication
- number of repeats for medication
- medication status - new or continued
- other treatments (up to 2 per problem)
- tests and investigations ordered
- referrals and hospital admissions.

Summary medications – Serum lipid reducing agents (ATC code: C10) Apr 01-Mar 02

Table 1 provides the overall prescription/supply rate of Serum lipid reducing agents (ATC code: C10). It includes a count of the total number of prescriptions for the selected medication during the time period and a breakdown of the number recorded for each generic within this medication group. The prescribing rates are presented in terms of the rate per 100 BEACH encounters, the rate per 100 problems managed (all types) and the percentage of all medications that is accounted for by this medication and the percentage of all drugs in this class. The column titled “National Estimated encs” gives the estimated number of encounters in a year for Australian general practice, at which this drug is prescribed. It is calculated by multiplying the encounter rate by the number of consultations that are carried out in general practice each year about 105 million.

Results: Serum lipid reducing agents (ATC code: C10) were prescribed at a rate of 2.58 medications per 100 encounters and at a rate of 1.8 per 100 problems managed. They accounted for 2.47% of all medications prescribed for all problems. National estimates suggest a total of 2.7 million scripts/supplied medications in 2001-02 for Serum lipid reducing agents (ATC code: C10).

Statins accounted for by far the majority of the Serum lipid reducing agents, particularly Atorvastatin (42.1% of all SLRAs) followed by Simvastatin (38.1%)

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Table 1: Summary medications - Serum lipid reducing agents (ATC code: C10)

Drug label	n	Total per 100 encs	Total per 100 probs	Total % drugs	% Lipid lowering drugs	% generic	National estimated encs
Total Serum lipid reducing agents	2498.8	2.58	1.8	2.47	100.0		2,700,000
Clofibrate	0.7272	0	0	0	0.03		800
Simvastatin	952.72	0.98	0.68	0.94	38.13		1,030,000
Gemfibrozil	95.763	0.1	0.07	0.09	3.83		103700
Pravastatin	343.97	0.35	0.25	0.34	13.77		372400
Fluvastatin	17.78	0.02	0.01	0.02	0.71		19300
Cholestyramine	11.977	0.01	0.01	0.01	0.48		13000
Atorvastatin	1051.4	1.08	0.76	1.04	42.07		1,140,000
Cerivastatin	24.477	0.03	0.02	0.02	0.98		26500

Summary of database: services and patients – Serum lipid reducing agents (ATC code: C10) Apr 01-Mar 02

Table 2 provides a summary of the encounters and the characteristics of the patients for whom the selected medication was prescribed/provided.

Number of observations (n), rate per 100 encounters, 95 per cent confidence interval (CI) are provided for each data point.

The confidence interval (CI) is calculated as the rate estimate \pm (1.96 x standard error). The CI is interpreted as “we are 95 per cent confident that the true population value lies between the lower and upper value”. NB: CIs may be missing where data were insufficient to calculate a meaningful estimate.

- ◆ **Encounters** define the different types of services provided by the participating GPs during the course of their recording period. Only encounters where the selected medication was prescribed are included.
- ◆ **Indirect services** occur when the patient is not actually seen by the GP (eg. telephone) but a clinical service is provided
- ◆ **Surgery consults** are patient encounters that take place in the GP’s surgery and are covered by Medicare consultation item numbers.
- ◆ **Home visits** are consultations that take place in the patient’s home and are covered by a Medicare home visit item number.
- ◆ **Hospital** encounters take place with a patient in a hospital setting, and payment is from a Medicare hospital item number.
- ◆ **Nursing home** consultations are those services covered by the relevant Medicare nursing home item numbers.

- ◆ **Patients** describes the characteristics of the patients for whom the selected medication was prescribed at encounter
- ◆ **Gender and age** distributions are provided. The age groupings correspond with significant trends in GP service consumption.
- ◆ **HCC Yes:** are encounters with patients who hold a health care card (HCC).
- ◆ **VA gold card** and **VA white card** are encounters with patients who hold a Veteran’s Affairs card (the encounter may not necessarily be claimed through VA in the case of white card holders).
- ◆ **NESB** are encounters with patients whose primary language spoken at home is not English.
- ◆ **Aboriginal** patients are those who identify as being Aboriginal.
- ◆ **Torres Strait Islander** patients are those who identify as being Torres Strait Islander.

Number of observations (n), rate per 100 encounters, rate per 100 problems, 95 per cent confidence intervals (CI) are provided for each data point.

- ◆ **Problems managed** are the problems managed at the encounter, for which the selected drug or drug group was prescribed/provided.
- ◆ **New problems** are those that have never been managed before by any doctor, or are first consultations for a new episode of a recurrent problem.

Medications: Provides the total count of the number of the selected medication prescribed/provided. This number will agree with that in Table 0.

- ◆ **Prescribed**
- ◆ **Provided**
- ◆ **Advised**

provides a count of the proportion of the total selected medication that was prescribed by the GP and the proportion that were provided by the GP (e.g. samples) and (where applicable) the proportion that were advised for purchase over-the counter.

Table 2 shows that 783 (79.7%) of the 983 participating GPs prescribed or supplied at least one SRLA during their 100 recorded encounters.

A SRLA was prescribed on 2,477 occasions.

Results: Ninety four percent of encounters at which a SLRA was prescribed/provided were conducted in the surgery. The patient receiving the SLRA was more likely to be male (51.3%, 95% CI 48.8-53.7) when compared with the usual gender distribution in encounter data in Australia (42.6, 95% CI 41.43.3). 94% of the patients at encounters generating a SLRA script were over 45 years, 43% being aged between 45 and 64 years, though this age group only accounts for 26.3% of total GP encounters (i.e. they are over-represented in the SLRA group). All other older age groups are also over represented but not to the same degree.

Health care cardholders were also over-represented in this SLRA sample, accounting for 62.2% of these encounters (compared with 41.9% of total encounters). Patients receiving a SLRA at the encounter described more reasons for encounter than average. These two results would be related to their age distribution.

Very few of these patients were new patients to the practice. Only 7.3% of the problems managed with a SLRA were new problems to the patients. Ninety five percent of the SLRAs were prescribed and 5% were supplied by the GP direct to the patient (Table 2).

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Table 2: Summary of data base: services and patients - Serum lipid reducing agents (ATC code: C10)

Data	n	Rate per 100 encs	Lower 95% CI	Upper 95% CI
General practitioners	783.13	.	.	.
Encounters	2477.37	.	.	.
- Indirect consults	43.13	1.88	0.0	10.3
- Surgery consults	2159.81	94.10	93.2	95.0
- Home visits	18.16	0.79	0.0	9.1
- Hospital	1.55	0.07	0.0	41.5
- Nursing home	7.46	0.33	0.0	118.5
- Worker's comp	10.43	0.45	0.0	17.8
- Other paid	18.59	0.81	0.0	29.2
- No charge	2.90	0.13	0.0	26.7
- Other Medicare items	33.11	1.44	0.0	14.3
- Missing	182.23	.	.	.
Patients	2477.37	.	.	.
- Males	1257.77	51.25	48.8	53.7
- Females	1196.38	48.75	46.4	51.1
- Missing gender	23.22	.	.	.
- 15-24 years	2.39	0.10	0.0	27.5
- 25-44 years	138.13	5.62	0.8	10.4
- 45-64 years	1045.43	42.52	39.9	45.1
- 65-74 years	799.83	32.53	30.1	35.0
- 75+ years	471.36	19.17	16.0	22.4
- Missing age	18.80	.	.	.
New to practice	50.259	2.15	0	10.3
- HCC Yes	1427.10	62.19	59.4	64.9
- VA card	111.22	4.93	0.3	9.6
- NESB	319.45	12.89	1.7	24.1
- Aboriginal	20.16	0.89	0.0	31.8
- Torres Strait Islander	2.26	0.10	.	.
- Aboriginal & Torres Strait Is	0.76	0.03	.	.
Reasons for encounter	4607.12	185.97	180.7	191.2
Problems managed	2479.17	.	.	.
- New problems	182.01	7.34	3.1	11.5

Medications	2498.78	100.79	100.4	101.2
- Prescribed	2365.58	95.42	94.4	96.5
- GP supplied	133.20	5.37	0.0	16.3
	64.95	35.05	100.00	

Most common problems managed with Serum lipid reducing agents (ATC code: C10) April 2001-March 2002

Up to four problems managed at each encounter can be recorded. The problem label is the classified description of the label given by the GP for the problem being managed with the selected medication.

Table 3 presents the most frequent problems managed with the selected medication, in decreasing order of frequency. Data include: number of observations, per cent of GPs (Percentage base = total number of GPs for this time period) who prescribed/supplied the drug for that particular problem; the per cent of total problems managed with the selected medication, lower and upper confidence intervals for this per cent. The last numeric column gives you the proportion of all problems of this type that received a script/were supplied with the selected medication.

If there are asterisks in this Table they tell you that the problem label includes more than one ICPC-2 code. (For example: *Hypertension** includes both *uncomplicated hypertension* and *hypertension with complications*).

Results: "Lipid disorder" was the most common problem for which SLRAs were prescribed/supplied (75.0%) and the remaining 25% of morbidity managed with statins included a very broad range of problems with low relative frequency rates of specific conditions. IHD accounted for 5.5% of the problems for which SLRAs were prescribed/supplied, hypertension 4.3% and diabetes 1.3%.

The far right hand column shows that 63% of GP contacts with the problem 'lipid disorder' generated a script/supply of a statin whereas only 11.18% of contacts with ischaemic heart disease and 1.14% of contacts with hypertension resulted in a statin script/supply (Table 3).

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Table 3: Problems managed - Serum lipid reducing agents (ATC code: C10)

Problem label	n	% of GPs	% of Lipid lowering drugs problems	Lower 95% CI	Upper 95% CI	% of problem
Lipid disorder	1858.	69.68	74.98	72.6	77.3	65.42
Prescription all*	162.6	12.11	6.56	0	14.1	9.01
Ischaemic Heart Disease*	137.2	10.58	5.54	0	11.8	11.26
Hypertension*	105.4	8.55	4.25	0	10.3	1.21
Blood test endocrine/metabolic	32.50	2.64	1.31	0	17	14.39
Diabetes*	31.15	2.95	1.26	0	13.4	1.04
Test results*	17.25	1.42	0.7	0	25.1	1.69
Cardiac check-up*	10.18	1.32	0.41	0	20.8	0.93
Atrial fibrillation/flutter	10.05	0.81	0.41	0	20.4	1.54
Sub-total reported this Table	2,364.3		95.4			
Total problems managed with SLRAs	2,479		100.0			

Average prescribed daily dose (PDD) for the more common problems managed with Serum lipid reducing agents (ATC code: C10) Apr 01-Mar 02

For each problem managed with the selected medication this table provides the mean PDD, the Median PDD, the minimum PDD and maximum PDD recorded by the GPs. The mean, median etc for all prescribed/supplied SLRAs is provided in the last row of the table. Note that the median is often a more reliable measure of central tendency than the mean, which is influenced by outliers.

Note “Average prescribed daily dose” includes prescribed and supplied medications.

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Table 4: Average prescribed daily dose - Serum lipid reducing agents (ATC code: C10)

Problem label	n	Mean	Median		Minimum	Measure	Maximum	Measure
		PDD	PDD	Measure				
Lipid disorder	1648	68.6	20.0	mg	0.20	mg	2400	mg
Prescription all*	132	42.3	20.0	mg	0.30	mg	1200	mg
Ischaemic Heart Disease*	126	32.3	20.0	mg	0.30	mg	1200	mg
Hypertension*	95	94.3	20.0	mg	5.00	mg	1200	mg
Blood test endocrine/metabolic	31	39.1	20.0	mg	0.40	mg	1200	mg
Diabetes*	26	24.4	20.0	mg	0.05	mg	80	mg

Average number of repeats for statins for the more common problems managed with statins (ATC code: C10AA) Apr 01-Mar 02

For each problem managed with the selected medication this Table provides the mean number of repeats, the median number of repeats, the minimum and maximum number of repeats. Again note that the median is often a more reliable measure of central tendency than the average which is influenced by outliers.

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Table 5: Average number of repeats - Serum lipid reducing agents (ATC code: C10)

Problem label	n	Mean	Median	Minimum	Maximum
		repeats	repeats		
Lipid disorder	1436	4.5	5.0	0	5
Prescription all*	135	4.4	5.0	1	5
Ischaemic Heart Disease*	119	4.4	5.0	0	5
Hypertension*	81	4.5	5.0	0	5
Blood test endocrine/metabolic	31	4.5	5.0	2	5
Diabetes*	25	4.7	5.0	1	5
Cardiac check-up*	13	4.7	5.0	2	5
Test results*	12	3.7	5.0	0	5