

8 Overview of management

The BEACH survey form allowed GPs to record several aspects of patient management for each problem managed at each encounter. Pharmaceutical management was recorded in detail and linked to a patient problem. Other modes of treatment including clinical treatments (e.g. counselling) and procedures were recorded briefly in the GP's own words and were also related to a single problem. Provision was made on the form for referrals and hospital admissions, and for pathology and imaging orders to be related to multiple problems.

GPs undertook a total of 200,433 management activities at a rate of 206 per 100 encounters and 144 per 100 problems. The most common management activity was medication prescribed, advised or supplied, at a rate of 104.5 per 100 encounters or 72.9 per 100 problems. Other treatments took place at the rate of 51.9 per 100 encounters, referrals at a rate of 10.5, pathology orders at a rate of 31.0 and imaging at a rate of 7.9 per 100 encounters (Table 8.1).

Table 8.1: Summary of management

Management type	Number	Rate per 100 encounters (n=96,973)	95% LCL	95% UCL	Rate per 100 problems (n=139,092)	95% LCL	95% UCL
Medications	101,350	104.5	102.2	106.9	72.9	71.4	74.3
Prescribed	85,332	88.0	85.6	90.4	61.4	59.8	62.9
Advised OTC	8,606	8.9	8.1	9.6	6.2	5.7	6.7
GP supplied	7,412	7.6	6.3	9.0	5.3	4.4	6.3
Other treatments	50,308	51.9	49.6	54.2	36.2	34.7	37.7
Clinical	36,909	38.1	36.1	40.1	26.5	25.2	27.9
Procedural	13,399	13.8	13.1	14.5	9.6	9.1	10.1
Referrals	10,167	10.5	10.1	10.9	7.3	7.0	7.6
Specialist	7,096	7.3	7.0	7.6	5.1	4.9	5.3
Allied health	2,206	2.3	2.1	2.5	1.6	1.5	1.7
Hospital	423	0.4	0.3	0.6	0.3	0.2	0.4
Emergency dept	123	0.1	0.0	0.4	0.1	0.0	0.3
Other referral	320	0.3	0.0	0.6	0.2	0.0	0.4
Pathology	30,086	31.0	29.7	32.4	21.6	20.8	22.5
Imaging	7,642	7.9	7.6	8.2	5.5	5.3	5.7
Other investigations	880	0.9	0.8	1.0	0.6	0.5	0.7
Total management activities	200,433	206.7	144.1

Note: LCL—lower confidence limit, UCL—upper confidence limit, OTC—over-the-counter, NOS—not otherwise specified.

Another perspective emerges in analysis of the number of encounters or problems for which at least one form of management was recorded by the GP. At least one management action was recorded at 91.8% of encounters and for 87.3% of problems managed. At least one medication was given at two-thirds (66.6%) of encounters and for 58.1% of problems. At least one non-pharmacological treatment was given at 39.6% of encounters and for 31.4% of

problems, a clinical treatment being more likely than a procedure. A referral was made at 9,681 encounters (10.1%) and for 7.3% of problems. At least one test or investigation was ordered at 19.7% of encounters and for 15.3% of problems. These were most commonly pathology orders, which were reported at 14.0% of encounters (for 10.8% of problems). Imaging orders were placed less frequently at 6.9% of encounters and for 5.0% of problems (Table 8.2).

Table 8.2: Encounters and problems for which management was recorded

Management type	Number of encounters	Per cent of total encounters ^(a) (n=96,973)	Number of problems	Per cent of total problems ^(a) (n=139,092)
At least one management type	89,032	91.8	121,443	87.3
At least one medication or non-pharmacological treatment	80,727	83.3	106,400	76.5
At least one medication	64,572	66.6	80,737	58.1
At least one prescription	55,710	57.5	69,268	49.8
At least one OTC advised	7,720	8.0	7,883	5.7
At least one GP supplied	5,619	5.8	6,021	4.3
At least one non-pharmacological treatment	38,351	39.6	43,699	31.4
At least one clinical treatment	28,835	29.7	32,540	23.4
At least one therapeutic procedure	12,268	12.7	12,665	9.1
At least one referral	9,681	10.1	10,162	7.3
At least one referral to a specialist	6,859	7.1	7,148	5.1
At least one referral to allied health	2,161	2.2	2,217	1.6
At least one referral to hospital	423	0.4	441	0.3
At least one referral to emergency dep't	123	0.1	133	0.1
At least one referral NOS	320	0.3	336	0.2
At least one investigation	19,081	19.7	21,239	15.3
At least one pathology order	13,561	14.0	15,073	10.8
At least one imaging order ^(b)	6,695	6.9	6,885	5.0
At least one other investigation ^(b)	852	0.9	867	0.6

(a) Figures will not total 100 as multiple events may occur in one encounter or in the management of one problem at encounter.

(b) In *General Practice Activity in Australia 1998–99, 1999–00, and 2000–01*, 'Imaging orders' included 'Other investigations'.

Note: LCL—lower confidence limit, UCL—upper confidence limit, OTC—over-the-counter, NOS—not otherwise specified.

The combinations of management types related to each problem were then investigated. There were 17,648 problems (12.7%) for which no specific management was recorded by the GP. Check-ups (either partial or full) (10.3%), hypertension (8.7%) and upper respiratory tract infections (4.9%) together accounted for almost one-quarter of these (results not shown). The majority of treatments occurred either as a single component or in combination with one other component. Single component management was provided for 63.7% of problems, and double component for 18.1%. More than two components were provided in the management of less than 5% of problems.

Table 8.3 provides a list of the most common problem management combinations. The most common management choice was medication alone (for 39.8% of problems), followed by clinical treatment alone (10.1%), but the combination of medication and clinical treatment was also relatively frequently recorded (8.7%).

Table 8.3: Most common management combinations for problems

Management type	Number of problems	Per cent of total problems ^(a) (n=143,528)
No recorded management	17,648	12.7
Management recorded	121,444	87.3
Medication only	55,407	39.8
Clinical treatment only	13,996	10.1
Medication + clinical treatment	12,060	8.7
Therapeutic procedure only	5,871	4.2
Pathology order only	5,596	4.0
Referral only	5,192	3.7
Medication + pathology	3,447	2.5
Medication + procedure	2,866	2.1
Imaging order only	2,653	1.9
Medication + referral	1,716	1.2
Clinical + pathology	1,542	1.1
Medication + imaging	1,379	1.0
Procedure + pathology	1,151	0.8
Clinical treatment + referral	1,028	0.7

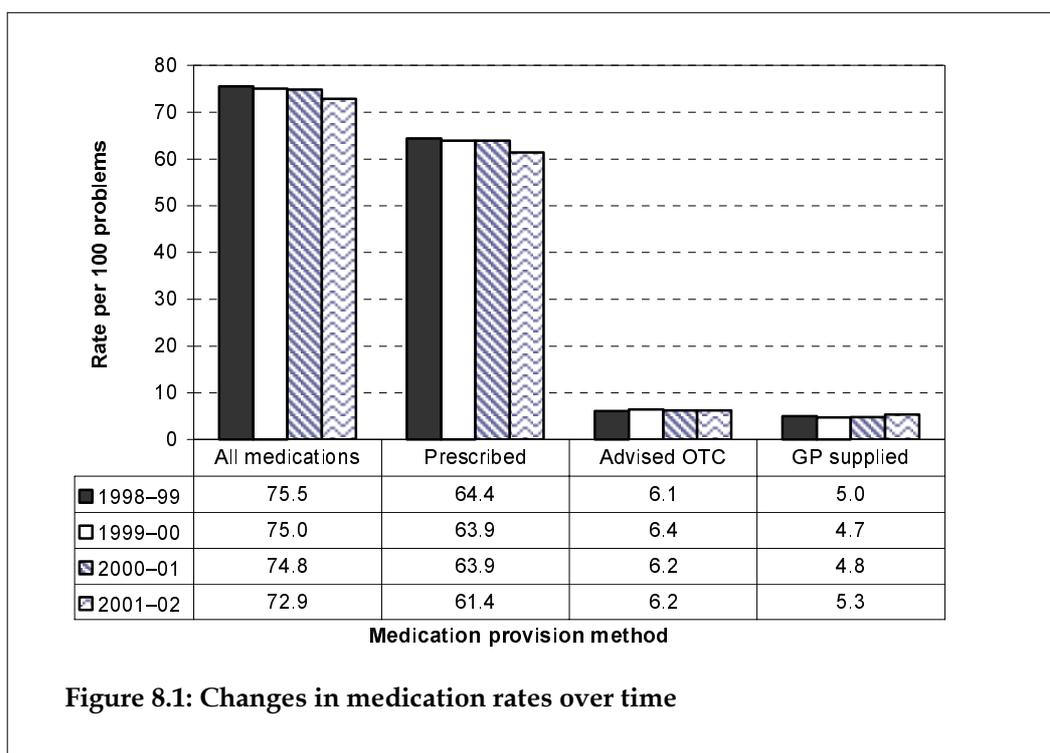
(a) Within the top 15 management combinations there were none containing more than 2 management components.

8.1 Significant changes from 1998–99 to 2001–02

There has been a significant decrease in overall medication rates, from 109.7 per 100 encounters (95% CI: 107.4–112.0) in 1998–99 to 104.5 (95% CI: 102.2–106.9) in 2001–02.

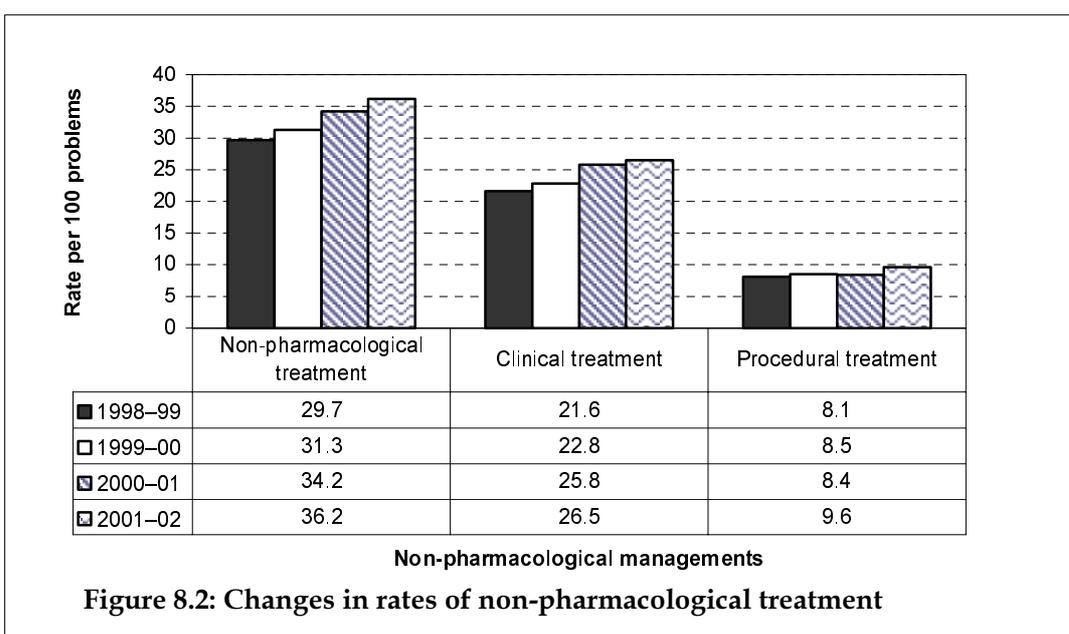
Medications

The decrease in total medications was reflected particularly in the rates of prescribed medications which fell steadily from 93.6 (95% CI: 91.2–96.1) per 100 encounters in 1998–99 to 88.0 (95% CI: 85.6–90.4) in 2001–02. The rate of advised over-the-counter medications and those supplied by the GP showed no significant changes or trends over the last 4 years (Appendix 4, Table A4.2). Figure 8.1 provides a graphic view of the changes in medication rates per 100 problems managed over time. The graph presents prescribing rates per 100 problems managed and demonstrates that decreased prescribing rates are not due to any decrease in problem management rates.



Non-pharmacological treatments

In contrast there has been a significant increase in the relative rates of provision of other treatments, from 42.3 (95% CI: 41.3-45.0) per 100 encounters to 51.9 (95% CI: 49.6-54.2), and this was reflected in the rate of clinical treatments (such as advice and counselling) which increased from 31.4 per 100 encounters (95% CI: 29.7-33.0) to 38.1 per 100 (95% CI: 36.1-140.1) and of therapeutic procedures (11.8 per 100, 95% CI: 11.2-12.5, to 13.8 per 100, 95% CI: 13.1-14.5) (Appendix 4, Table A4.2). The rates of provision of other treatments are compared on the basis of rates per 100 problems managed in Figure 8.2.



Referrals

There has been no significant change in the relative rate of all referrals or in those made specifically to medical specialists, allied health services or emergency departments. A consistent trend over the 4 years, of a decrease in referral rates to hospitals failed to reach statistical significance but will be worthy of further testing at the end of the next BEACH year (Appendix 4, Table A4.2).

Pathology orders

There was a significant increase in the number of pathology tests ordered per 100 encounters, from 24.6 per 100 encounters (95% CI: 23.5–25.7) in 1998–99 to 31.0 per 100 (95% CI: 29.7–32.4), representing an increase of approximately 25% over the 4 years of the BEACH program (Appendix 4, Table A4.2). This change is being investigated in detail in a specific study of pathology ordering patterns currently being undertaken for the Commonwealth Department of Health and Ageing and the results will be reported in a separate publication.

Imaging orders

While it would appear from the annual BEACH summary results that there has been a significant increase in the relative rate of orders for imaging, this is probably due to a change in the coding of imaging orders between years 2 and year 3 of the program, when more specific coding of the exact type of test ordered was introduced. In years 1 and 2 of BEACH only broad test types were coded. Next year it will be possible to investigate any apparent changes in ordering rates from 2000–01 to 2002–03 as three measurement points, using the same detailed coding system, will then be available.