

8 Overview of management

This chapter includes an overview of management in general practice from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and – indicates that there was no change.

Since 1999–00, some trends emerged in management of actions at patient encounters (Table 8.1). Most noticeably, over these 10 years:

- the rate of prescribed medications significantly decreased, from 93.8 per 100 encounters in 1999–00 to 86.4 per 100 encounters in 2008–09
- the rate of GP supplied medications significantly increased, from 6.9 per 100 encounters in 1999–00 to 11.0 per 100 encounters in 2008–09
- the rate of clinical treatments increased significantly from 33.5 per 100 encounters in 1999–00 to 39.2 in 2004–05, decreased to 29.2 in 2005–06 with the introduction of the practice nurse provider numbers, but then increased again to 34.0 per 100 in 2008–09
- there was an increase in the rate of procedural treatments undertaken in general practice, from 12.5 per 100 encounters in 1999–00 to 16.7 per 100 encounters in 2008–09
- the rate of referrals to other health providers significantly increased, from 11.1 to 13.7 per 100 encounters between 1999–00 and 2008–09
- since 2000–01, the rate of pathology tests ordered significantly increased by 53%, from 29.7 orders per 100 encounters to 45.6 per 100 encounters in 2008–09
- there was a significant increase in the rate of imaging tests ordered, from 7.7 per 100 encounters in 2000–01 to 9.8 per 100 in 2008–09, and in the rate of other investigations, from 0.6 per 100 in 2000–01 to 1.0 per 100 encounters in 2008–09.

Similar changes can be observed for each of these areas, in the percentage of encounters where at least one management type was provided (Table 8.2). This reflects a change in the likelihood of each action eventuating at an encounter.

- There was a significant reduction in the likelihood of patients being provided with at least one medication (from 68.5% in 1999–00 to 65.1% in 2008–09), particularly prescribed medications, decreasing from 60.1% to 54.6% over this time. The latter reflects the reduction in the rate of prescribed medications reported above and shown in Table 8.1.
- There was an increase in the likelihood of patients receiving at least one GP-supplied medication, from 5.1% in 1999–00 to 8.5% of encounters in 2008–09.
- The likelihood of patients receiving at least one other (non-pharmacological) treatment increased from 36.2% of encounters in 1999–00 to 39.6% in 2008–09.
- The likelihood of patients receiving at least one procedural treatment at the encounter continually and significantly increased from 11.4% in 1999–00 to 15.0% in 2008–09.
- The likelihood of patients being referred increased significantly (from 10.4% of encounters in 1999–00 to 12.8% in 2008–09), particularly to specialists (from 6.9% in 1999–00 to 8.6% in 2008–09), to allied health practitioners (from 3.0% in 1999–00 to 3.7% in 2008–09), and to emergency departments (from 0.1% in 1999–00 to 0.2% in 2008–09).

- Contributing to the increase in the rates of pathology and imaging tests ordered per 100 encounters shown in Table 8.1, there was an increase in the likelihood of the GP ordering at least one investigation at the encounter, from 18.9% in 1999–00 to 24.6% in 2008–09. In 1999–00 the likelihood of at least one pathology test being ordered was 13.8%, and that of at least one imaging test being ordered was 6.7%. By 2008–09 these proportions had significantly increased to 18.2% and 8.5% of encounters, respectively (Table 8.2).

Table 8.1: Summary of management, BEACH, 1999-00 to 2008-09

Management type	Rate per 100 encounters (95% CI)										^(e) ↕
	1999-00 (n = 104,856)	2000-01 (n = 99,307)	2001-02 (n = 96,973)	2002-03 (n = 100,987)	2003-04 (n = 98,877)	2004-05 (n = 94,386)	2005-06 (n = 101,993)	2006-07 (n = 91,805)	2007-08 (n = 95,898)	2008-09 (n = 96,688)	
Medications	110.1 (107.8-112.4)	108.2 (105.7-110.6)	104.5 (102.2-106.9)	103.8 (101.4-106.2)	104.4 (102.1-106.7)	101.5 (99.3-103.8)	104.4 (101.8-107.0)	101.5 (99.2-103.9)	102.7 (100.3-105.0)	106.3 (104.0-108.5)	—
Prescribed	93.8 (91.5-96.2)	92.3 (89.9-94.7)	88.0 (85.6-90.4)	84.3 (81.8-86.9)	86.0 (83.6-88.5)	83.4 (81.2-85.5)	85.8 (83.3-88.4)	83.3 (81.0-85.5)	82.4 (80.3-84.6)	86.4 (84.1-88.6)	↘
GP-supplied	6.9 (5.8-7.9)	6.9 (5.7-8.1)	7.6 (6.3-9.0)	9.3 (7.6-11.0)	8.6 (7.4-9.8)	8.1 (7.3-8.9)	8.8 (8.2-9.5)	8.9 (8.2-9.6)	10.1 (9.5-10.7)	11.0 (10.2-11.8)	↗
Advised OTC	9.4 (8.6-10.2)	9.0 (8.1-9.8)	8.9 (8.1-9.6)	10.2 (9.2-11.1)	9.8 (9.0-10.6)	10.1 (9.1-11.0)	9.8 (9.0-10.5)	9.4 (8.7-10.1)	10.0 (9.3-10.9)	8.9 (8.3-9.4)	—
Other treatments	46.0 (44.1-47.8)	49.4 (47.1-51.7)	51.9 (49.6-54.2)	51.8 (49.3-54.3)	51.4 (48.9-53.8)	54.7 (52.1-57.3)	43.6 (41.5-45.8)	44.7 (42.3-47.0)	51.2 (48.9-53.6)	50.7 (48.5-52.9)	↗
Clinical	33.5 (31.8-35.2)	37.2 (35.1-39.3)	38.1 (36.1-40.1)	37.2 (35.0-39.4)	36.6 (34.5-38.8)	39.2 (37.1-41.4)	29.2 (27.3-31.1)	29.5 (27.6-31.4)	34.5 (32.5-36.5)	34.0 (32.1-35.9)	—
Procedural	12.5 (11.9-13.0)	12.2 (11.6-12.8)	13.8 (13.1-14.5)	14.6 (13.9-15.3)	14.7 (14.0-15.5)	15.5 (14.6-16.4)	14.4 (13.7-15.1)	15.2 (14.4-16.0)	16.7 (15.9-17.5)	16.7 (16.0-17.5)	↗
Referrals	11.1 (10.7-11.6)	10.4 (10.0-10.8)	10.5 (10.1-10.9)	11.1 (10.7-11.6)	11.6 (11.1-12.1)	11.5 (11.1-12.0)	12.0 (11.5-12.5)	12.2 (11.7-12.7)	12.5 (12.0-13.0)	13.7 (13.2-14.2)	↗
Specialist	7.2 (6.9-7.5)	7.4 (7.0-7.7)	7.3 (7.0-7.6)	7.7 (7.3-8.0)	7.9 (7.5-8.2)	7.7 (7.4-8.0)	8.2 (7.8-8.5)	8.0 (7.7-8.4)	8.0 (7.6-8.3)	9.0 (8.7-9.3)	↗
Allied health service	3.1 (2.9-3.3)	2.3 (2.2-2.5)	2.3 (2.1-2.4)	2.5 (2.3-2.7)	2.6 (2.4-2.8)	2.7 (2.5-2.9)	2.9 (2.7-3.1)	3.1 (2.9-3.3)	3.5 (3.2-3.7)	3.9 (3.6-4.1)	↗
Hospital	0.7 (0.6-0.8)	0.5 (0.4-0.6)	0.4 (0.4-0.5)	0.6 (0.5-0.6)	0.6 (0.5-0.6)	0.5 (0.4-0.5)	0.4 (0.3-0.4)	0.4 (0.3-0.5)	0.4 (0.3-0.5)	0.3 (0.4-0.4)	↘
Emergency department	0.1 (0.1-0.1)	0.1 (0.1-0.1)	0.1 (0.1-0.2)	0.1 (0.1-0.2)	0.2 (0.1-0.2)	0.2 (0.1-0.2)	0.2 (0.2-0.2)	0.2 (0.1-0.2)	0.2 (0.2-0.3)	0.2 (0.2-0.2)	↗
Other referrals/other medical services ^(b)	0.0 [†] (0.0-0.0)	0.2 (0.1-0.2)	0.4 (0.3-0.4)	0.3 (0.2-0.3)	0.4 (0.4-0.5)	0.4 (0.4-0.5)	0.4 (0.3-0.4)	0.5 (0.5-0.6)	0.5 (0.4-0.6)	0.3 (0.2-0.3)	↗

(continued)

Table 8.1 (continued): Summary of management, BEACH, 1999–00 to 2008–09 (rate per 100 encounters)

Management type	Rate per 100 encounters (95% CI)											(e)
	1999–00 (n = 104,856)	2000–01 (n = 99,307)	2001–02 (n = 96,973)	2002–03 (n = 100,987)	2003–04 (n = 98,877)	2004–05 (n = 94,386)	2005–06 (n = 101,993)	2006–07 (n = 91,805)	2007–08 (n = 95,898)	2008–09 (n = 96,688)		
Pathology ^(c)	NAV	29.7 (28.4–30.9)	31.0 (29.7–32.4)	32.9 (31.5–34.4)	35.2 (33.7–36.7)	36.7 (35.2–38.2)	38.6 (36.9–40.3)	42.4 (40.7–44.2)	43.2 (41.3–45.0)	45.6 (43.8–47.4)	↑	
Imaging ^(c)	NAV	7.7 (7.3–8.0)	7.9 (7.6–8.2)	8.6 (8.2–9.0)	8.2 (7.8–8.6)	8.3 (8.0–8.6)	8.8 (8.4–9.2)	9.0 (8.6–9.3)	9.5 (9.2–9.9)	9.8 (9.4–10.2)	↑	
Other investigations ^(c)	NAV	0.6 (0.5–0.7)	0.9 (0.8–1.0)	1.0 (0.8–1.2)	1.0 (0.9–1.2)	1.1 (0.9–1.3)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	↑	

(a) The direction and type of change is indicated for each result: **↑**/**↓** indicates a statistically significant change, and — indicates there was no change.

(b) Other referrals and other medical services have been grouped for comparability. In 1999–00 'other medical services' and 'other referrals' were grouped and reported together.

(c) In the 2000–01 BEACH year, the data collection and data coding system for pathology, imaging and other investigations changed. Data from 1999–00 are not comparable to those from 2000–01 onward.

‡ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval; OTC—over-the-counter; NAV—not available.

Table 8.2: Encounters for which at least one management was recorded, BEACH, 1999–00 to 2008–09

At least one...	Per cent of encounters ^(a) (95% CI)											^(b) ↕
	1999–00 (n = 104,856)	2000–01 (n = 99,307)	2001–02 (n = 96,973)	2002–03 (n = 100,987)	2003–04 (n = 98,877)	2004–05 (n = 94,386)	2005–06 (n = 101,993)	2006–07 (n = 91,805)	2007–08 (n = 95,898)	2008–09 (n = 96,688)		
Management type	92.2 (91.7–92.7)	91.6 (91.0–92.2)	91.8 (91.3–92.3)	91.3 (90.6–92.0)	91.5 (90.9–92.0)	91.9 (91.3–92.5)	91.2 (90.6–91.8)	90.4 (89.8–91.0)	91.9 (91.3–92.4)	92.2 (91.7–92.7)	–	
Medication or other treatment	83.8 (83.1–84.5)	83.5 (82.7–84.2)	83.2 (82.5–84.0)	82.5 (81.6–83.3)	82.3 (81.5–83.1)	82.4 (81.6–83.2)	81.4 (80.6–82.1)	79.9 (79.1–80.8)	82.2 (81.4–82.9)	82.4 (81.7–83.1)	↘	
Medication	68.5 (67.6–69.3)	68.0 (67.1–68.9)	66.6 (65.7–67.5)	65.8 (64.9–66.8)	65.6 (64.7–66.5)	64.3 (63.4–65.2)	65.2 (64.3–66.2)	63.9 (63.0–64.9)	64.4 (63.4–65.3)	65.1 (64.3–65.9)	↘	
Prescription	60.1 (59.1–61.1)	59.8 (58.7–60.8)	57.4 (56.4–58.5)	54.9 (53.7–56.1)	55.7 (54.6–56.9)	54.8 (53.8–55.8)	55.6 (54.5–56.6)	54.1 (53.2–55.1)	53.6 (52.6–54.5)	54.6 (53.7–55.5)	↘	
GP-supplied	5.1 (4.5–5.6)	5.1 (4.5–5.7)	5.8 (5.1–6.5)	6.8 (6.0–7.7)	6.5 (5.8–7.3)	6.2 (5.7–6.7)	6.4 (6.0–6.9)	6.8 (6.3–7.3)	7.9 (7.4–8.4)	8.5 (7.9–9.1)	↗	
Advised OTC	8.3 (7.7–8.9)	8.0 (7.3–8.6)	8.0 (7.4–8.6)	9.0 (8.3–9.8)	8.7 (8.0–9.3)	8.7 (8.1–9.4)	8.6 (8.0–9.2)	8.4 (7.8–8.9)	8.9 (8.3–9.6)	8.0 (7.5–8.5)	–	
Other treatment	36.2 (35.0–37.4)	37.6 (36.2–39.1)	39.5 (38.1–41.0)	39.4 (37.8–40.9)	39.3 (37.8–40.8)	41.2 (39.7–42.8)	35.1 (33.7–36.6)	35.3 (33.8–36.9)	39.9 (38.3–41.4)	39.6 (38.3–41.0)	↗	
Clinical treatment	27.0 (25.8–28.2)	29.0 (27.6–30.3)	29.7 (28.4–31.1)	29.2 (27.7–30.6)	28.9 (27.4–30.3)	30.5 (29.1–32.0)	24.0 (22.7–25.4)	23.8 (22.5–25.2)	27.5 (26.1–28.9)	27.3 (26.3–28.6)	–	
Procedural treatment	11.4 (11.0–11.9)	11.1 (10.6–11.7)	12.7 (12.0–13.3)	13.2 (12.6–13.8)	13.3 (12.7–13.9)	13.8 (13.1–14.6)	13.2 (12.6–13.8)	13.8 (13.2–14.5)	15.0 (14.3–15.7)	15.0 (14.4–15.6)	↗	
Referral	10.4 (10.0–10.8)	9.9 (9.6–10.3)	10.0 (9.6–10.4)	10.6 (10.2–11.0)	11.0 (10.5–11.5)	10.9 (10.5–11.3)	11.3 (10.9–11.8)	11.5 (11.0–11.9)	11.8 (11.3–12.2)	12.8 (12.3–13.2)	↗	
Specialist	6.9 (6.6–7.2)	7.1 (6.8–7.4)	7.0 (6.7–7.3)	7.4 (7.0–7.7)	7.6 (7.3–8.0)	7.5 (7.2–7.8)	7.9 (7.5–8.2)	7.7 (7.4–8.0)	7.7 (7.4–8.0)	8.6 (8.3–8.9)	↗	
Allied health	3.0 (2.8–3.2)	2.3 (2.1–2.4)	2.2 (2.1–2.4)	2.4 (2.2–2.6)	2.5 (2.3–2.7)	2.6 (2.5–2.8)	2.8 (2.6–3.0)	3.0 (2.8–3.1)	3.3 (3.1–3.5)	3.7 (3.5–3.9)	↗	
Hospital	0.7 (0.6–0.8)	0.5 (0.4–0.6)	0.4 (0.4–0.5)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	↘	

(continued)

Table 8.2 (continued): Encounters for which at least one management was recorded, BEACH, 1999–00 to 2008–09

At least one...	Per cent of encounters ^(a) (95% CI)										^(b) ↑ ↓
	1999–00 (n = 104,856)	2000–01 (n = 99,307)	2001–02 (n = 96,973)	2002–03 (n = 100,987)	2003–04 (n = 98,877)	2004–05 (n = 94,386)	2005–06 (n = 101,993)	2006–07 (n = 91,805)	2007–08 (n = 95,898)	2008–09 (n = 96,688)	
Emergency department	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↑
Other referral/other medical service ^(c)	0.0 [†] (0.0–0.0)	0.2 (0.1–0.2)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.3 (0.2–0.3)	↑
Investigation	18.9 (18.3–19.5)	19.3 (18.7–19.9)	19.7 (19.1–20.3)	20.8 (20.2–21.5)	21.3 (20.7–22.0)	21.8 (21.1–22.4)	22.6 (21.9–23.3)	23.5 (22.8–24.2)	23.8 (23.1–24.5)	24.6 (23.9–25.9)	↑
Pathology order ^(d)	13.8 (13.3–14.3)	13.8 (13.3–14.3)	14.0 (13.5–14.5)	14.7 (14.2–15.3)	15.5 (14.9–16.1)	15.7 (15.2–16.3)	16.4 (15.8–16.9)	17.4 (16.8–18.0)	17.4 (16.7–18.0)	18.2 (17.6–18.8)	↑
Imaging order ^(d)	6.7 (6.4–7.0)	7.2 (6.9–7.5)	6.9 (6.6–7.2)	7.5 (7.1–7.8)	7.2 (6.9–7.5)	7.3 (7.0–7.6)	7.8 (7.4–8.1)	7.9 (7.6–8.2)	8.3 (8.0–8.6)	8.5 (8.1–8.8)	↑
Other investigation ^(d)	NAV	0.6 (0.5–0.7)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	↑

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

(b) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

(c) Other referrals and other medical services have been grouped for comparability. In 1999–00 'other medical services' and 'other referrals' were grouped and reported together.

(d) While the coding system for pathology and imaging changed in the 2000–01 BEACH year, the presence or absence of a test at the encounter was still recorded. These figures are therefore comparable with data from subsequent years.

† Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval; OTC—over-the-counter; NAV—not available.