

5 Characteristics of imaging encounters and patients

5.1 Type of encounter

The characteristics of the 6,979 imaging encounters are compared with those of the 97,878 non-imaging encounters in Table 5.1. There were four statistically significant differences between imaging encounters and non-imaging encounters.

Table 5.1: Distribution of services for imaging and non-imaging encounters

Encounter type	Imaging encounters (n=6,979)				Non-imaging encounters (n=97,878)			
	n	Rate per 100 encounters	95% LCL	95% UCL	n	Rate per 100 encounters	95% LCL	95% UCL
General practitioners	1,036	..	..	..	1,047	..	..	..
Direct consultations	6,670	99.3	99.1	99.5	90,766	96.5	96.1	96.8
No charge	20	0.3	0.0	5.8	534	0.6	0.3	0.8
Medicare claimable	6,398	95.3	94.5	96.1	87,300	92.8	92.2	93.4
Short surgery	23	0.3	0.0	14.0	1,328	1.4	0.6	2.2
Standard surgery	4,982	74.2	72.4	76.0	73,779	78.4	77.4	79.4
Long surgery	1,067	15.9	13.6	18.2	7,071	7.5	6.9	8.1
Prolonged surgery	61	0.9	0.0	6.9	493	0.5	0.0	1.0
Home visits	52	0.8	0.0	5.6	1,349	1.4	0.9	2.0
Hospital	61	0.9	0.0	15.7	387	0.4	0.0	2.1
Nursing home	29	0.4	0.0	11.4	877	0.9	0.0	1.9
Other items	124	1.8	0.0	5.9	2,016	2.1	1.6	2.7
Workers' compensation	153	2.3	0.0	4.9	1,834	2.0	1.6	2.3
Other paid (hospital, State)	99	1.5	0.0	16.4	1,099	1.2	0.0	2.8
Indirect consults	46	0.7	0.0	5.1	3,321	3.5	3.0	4.1
Script	4	0.1	0.0	11.2	1,806	1.9	1.5	2.3
Referral	26	0.4	0.0	6.7	441	0.5	0.2	0.8
Certificate	0	..	..	..	113	0.1	0.0	0.4
Other	18	0.3	0.0	6.3	1,076	1.1	0.7	1.6
Missing	264	..	..	..	3,791	..	..	..

Note: Shading indicates statistically significant differences between the groups. UCL—upper confidence limit; LCL—lower confidence limit.

- Imaging encounters were more likely to be direct consultations (99.3%) where the patient was seen face-to-face, than were non-imaging encounters (96.5%).
- Imaging encounters were more likely to be claimable on Medicare (95.3%) than were non-imaging encounters (92.8%).
- Imaging encounters were less likely to be charged as standard surgery consultations (74.2%) compared with non-imaging encounters (78.4%) and more likely to be charged as long surgery consultations (15.9% compared with 7.5%).

There were no other significant differences in the characteristics of the encounters where imaging was ordered when compared with those at which it was not. However, it should be noted that sample sizes for the remaining variables were very small and unlikely to produce statistically significant differences.

5.2 Patient characteristics

Table 5.2 provides a comparison of the characteristics of patients attending imaging encounters with the characteristics of those attending non-imaging encounters.

Table 5.2: Characteristics of patients at imaging and non-imaging encounters

Patient variable	Imaging encounters (n=6,979)				Non-imaging encounters (n=97,878)			
	Number	Rate per 100 encounters ^(a)	95% LCL	95% UCL	Number	Rate per 100 encounters ^(a)	95% LCL	95% UCL
Sex Male	2,801	40.6	39.0	42.3	41,508	42.9	42.2	43.6
Female	4,090	59.4	57.7	61.0	55,276	57.1	56.4	57.8
Missing gender	(88)	..	..	..	(1,094)	..	..	..
Age <15 years	550	7.9	6.3	9.5	14,752	15.2	14.5	15.8
15–24 years	682	9.8	8.5	11.2	10,132	10.4	10.0	10.9
25–44 years	1,985	28.6	27.0	30.2	25,341	26.1	25.4	26.8
45–64 years	2,170	31.3	29.8	32.9	23,350	24.0	23.5	24.6
65–74 years	798	11.5	10.0	13.0	11,687	12.0	11.5	12.6
75+ years	747	10.8	9.0	12.5	11,856	12.2	11.5	13.0
Missing age	(45)	..	..	..	(759)	..	..	..
New to practice	651	9.3	5.6	13.0	6,990	7.1	6.5	7.8
Health care card holder	2,569	36.8	34.7	38.9	37,883	38.7	37.1	40.3
Veterans' Affairs gold card	155	2.2	0.0	5.2	2,571	2.6	2.3	3.0
Veterans' Affairs white card	20	0.3	0.0	5.7	283	0.3	0.0	0.6
Non-English-speaking background	581	8.3	0.3	16.3	7,775	7.9	4.8	11.1
Aboriginal	57	0.8	0.0	9.9	638	0.7	0.0	1.5
Torres Strait Islander	3	*	0.0	10.7	54	0.1	0.0	0.7

(a) Missing data removed.

* Less than 0.05 per 100 encounters.

Note: UCL—upper confidence limit; LCL—lower confidence limit. Shading indicates statistically significant differences between patients at imaging and non-imaging encounters.

Patient sex and age group

While the patient was female at marginally more imaging encounters (59.4%) than at non-imaging encounters (57.1%), this difference failed to reach statistical significance.

Patients at imaging encounters were more likely to be aged between 25 and 44 years and between 45 and 64 years than those at non-imaging encounters and far less likely to be aged less than 15 years. There was no significant difference between the groups in the proportion of patients aged over 64 years.

Other patient characteristics

There were no further significant differences between patients attending imaging encounters and those attending non-imaging encounters in terms of their health care card status, Veterans' Affairs card status, Non-English speaking background, Aboriginality and Torres Strait Islander status, or status to the practice (new/seen before).

5.3 The content of the encounters

Table 5.3 provides a comparison of the overall content of imaging encounters and non-imaging encounters. At imaging encounters:

- there were significantly more patient reasons for encounter (157.3 per 100 encounters) than at non-imaging encounters (147.8)
- significantly more problems were managed (157.4 compared with 146.5 per 100 encounters), and
- the problems managed were significantly more likely to be new problems to the patient (40.1%) than those at non-imaging encounters (30.1% new).

Overview of management

A significantly lower proportion of imaging encounters generated at least one medication (prescribed, advised for over-the-counter purchase or supplied by the GP) (52.8%) than non-imaging encounters (69.6%). Problems managed at imaging encounters were also significantly less likely to be managed with medication (41.6% compared with 59.4%).

At least one non-pharmacological management was also less likely at imaging encounters (32.0% compared with 36.5% of non-imaging encounters) and significantly fewer problems were managed with other clinical or procedural techniques (23.4% of total problems) than at non-imaging encounters (28.4%).

At least one referral was provided at 14.3% of imaging encounters, for 9.6% of the problems managed. These were significantly higher referral rates than for non-imaging encounters, 10.1% of which generated a referral for 7.2% of problems managed (Table 5.3).

Table 5.3: Morbidity and management at imaging and non-imaging encounters

Data element	Imaging encounters (n=6,979)							Non-imaging encounters (n=97,878)						
	Number	Rate per 100 encounters	95% LCL	95% UCL	Rate per 100 problems	95% LCL	95% UCL	Number	Rate per 100 encounters	95% LCL	95% UCL	Rate per 100 problems	95% LCL	95% UCL
Reasons for encounter	11,007	157.7	154.9	160.5	..	..	..	144,683	147.8	146.1	149.6	..	..	..
Problems managed	10,985	157.4	154.4	160.4	..	..	..	142,872	146.0	144.1	147.8	..	..	..
New problems	4,399	63.0	60.4	65.7	40.1	38.4	41.7	43,059	44.0	42.3	45.6	30.1	28.9	31.3
Old problems	6,586	94.4	90.9	97.8	60.0	58.3	61.6	99,813	102.0	99.5	104.5	69.9	68.7	71.1
Work-related	261	3.7	1.1	6.4	2.4	0.6	4.1	3,088	3.2	2.8	3.5	2.2	1.9	2.4
Management														
At least one medication	3,685	52.8	50.9	54.7	41.6	39.8	43.3	68,096	69.6	68.7	70.4	59.4	58.5	60.3
At least one other treatment	2,233	32.0	30.0	34.1	23.4	21.7	25.1	35,728	36.5	35.3	37.7	28.4	27.4	29.3
At least one referral	996	14.3	12.5	16.1	9.6	8.4	10.9	9,930	10.1	9.8	10.5	7.2	7.0	7.5
Medications	5,859	84.0	79.4	88.5	53.3	50.6	56.1	109,573	112.0	109.6	114.30	76.7	75.3	78.1
Prescribed	5,065	72.6	68.1	77.1	46.1	43.4	48.9	93,307	95.3	93.0	97.7	65.3	63.8	66.8
Advised over-the-counter	510	7.3	4.4	10.2	4.7	2.8	6.5	9,332	9.5	8.7	10.4	6.5	5.9	7.1
GP supplied	283	4.1	0.0	9.4	2.6	0.0	5.6	6,934	7.1	6.0	8.2	4.9	4.1	5.6
Other treatments	2,967	42.5	39.2	45.8	27.0	24.8	29.2	45,227	46.2	44.4	48.0	31.7	30.5	32.8
Clinical	1,963	28.1	25.7	30.5	17.9	15.8	19.9	33,139	33.9	32.3	35.5	23.2	22.1	24.3
Procedural	1,003	14.4	13.1	15.7	9.1	7.7	10.6	12,088	12.4	11.8	12.9	8.5	8.1	8.8
Referrals	1,109	15.9	13.7	18.1	10.1	8.7	11.5	10,651	10.9	10.5	11.3	7.5	7.2	7.7
Emergency department	5	0.1	0.0	6.5	0.1	0.0	4.1	82	0.1	0.0	0.5	0.1	0.0	0.3
Hospital	97	1.4	0.0	6.7	0.9	0.0	4.3	647	0.7	0.5	0.8	0.5	0.3	0.6
Specialist	667	9.6	7.6	11.5	6.1	4.9	7.3	6,972	7.1	6.8	7.4	4.9	4.7	5.1
Allied health services	340	4.9	3.0	6.7	3.1	1.9	4.3	2,950	3.0	2.8	3.2	2.1	1.9	2.2
Pathology	3,525	50.0	45.8	55.2	32.1	29.2	35.0	24,088	24.6	23.5	25.7	16.9	16.2	17.6
Imaging	7,919	113.5	112.3	114.6	72.1	70.7	73.5	..	..	..	..	..	..	..

Note: Shading indicates statistically significant differences between patients at imaging and non-imaging encounters; UCL—upper confidence limit; LCL—lower confidence limit.

Medications

Significantly fewer medications were prescribed, advised or supplied at imaging encounters (84.0 per 100 encounters and 53.3 per 100 problems managed) than at non-imaging encounters (112.0 per 100 encounters and 76.7 per 100 problems managed). However, this difference in overall rates was not significant for rates of advised over-the-counter medication nor in rates of GP-supplied medication. The difference was very much due to the prescribing rates, which were significantly lower at imaging encounters (72.6 per 100 encounters and 46.1 per 100 problems managed) than at non-imaging encounters (95.3 per 100 encounters and 65.3 per 100 problems managed).

Other non-pharmacological management

While there was no significant difference in the overall rate of other treatments per 100 encounters, imaging encounters included significantly less other treatments per 100 problems managed (27.0) than did non-imaging encounters (31.7).

There was a significantly lower rate of provision of clinical treatments (advice and counselling) at imaging encounters (28.1 per 100 encounters and 17.9 per 100 problems) than at non-imaging encounters (33.9 per 100 encounters and 23.2 per 100 problems managed).

In contrast there was a significantly higher rate of procedures at imaging encounters (14.4 per 100 encounters and 9.1 per 100 problems managed) than at non-imaging encounters (12.4 per 100 encounters and 8.5 per 100 problems managed) (Table 5.3).

Referrals

Counting each referral once, the relative rate of referral remained significantly higher at imaging encounters than at non-imaging encounters both on a rate per 100 encounters and a rate per 100 problems basis. However, this difference was not reflected in hospital admissions or in referral rates to emergency departments and allied health services. The difference in overall referral rates reflected referrals to specialists, which were significantly higher at imaging encounters (9.6 per 100 encounters and 6.1 per 100 problems managed) than at non-imaging encounters (7.1 per 100 encounters and 4.9 per 100 problems managed).

Pathology ordering

Orders for pathology tests were made at almost double the rate at imaging encounters (50.0 test orders per 100 encounters and 32.1 per 100 problems) than at non-imaging encounters (24.6 per 100 encounters and 16.9 per 100 problems managed).