

# 12 Investigations

The GPs participating in the study were asked to record (in free text) any pathology, imaging or other tests ordered or undertaken at the encounter, and to nominate the patient problem(s) associated with each test order placed. This allows the linkage of test orders to a single problem or multiple problems. Up to five orders for pathology and two for imaging and other tests could be recorded at each encounter. A single test may have been ordered for the management of multiple problems, and multiple tests may have been used in the management of a single problem.

A pathology test order may be for a single test (for example, Pap smear, HbA1c) or for a battery of tests (for example, lipids, full blood count). Where a battery of tests was ordered, the battery name was recorded rather than each individual test. GPs also recorded the body site for any imaging ordered (for example, X-ray chest, CT head).

Data on investigations are reported for each year from 1999–00 to 2008–09 in the 10-year summary report *General practice activity in Australia 1999–00 to 2008–09: 10 year data tables*.<sup>1</sup>

## 12.1 Number of investigations

Table 12.1 shows the number of encounters and problems at which a pathology or imaging test was ordered. There were no tests recorded at a large majority (75.8%) of encounters.

At least one pathology test order was recorded at 18.2% of encounters (for 13.6% of problems managed), and at least one imaging test was ordered at 8.5% of encounters (for 5.7% of problems managed).

**Table 12.1: Number of encounters and problems for which pathology or imaging ordered**

Pathology/imaging test ordered	Number of encounters	Per cent of encounters (n = 96,688)			Number of problems	Per cent of problems (n = 149,462)		
		95% LCL	95% UCL	95% LCL		95% UCL		
Pathology and imaging ordered	2,404	2.5	2.3	2.7	1,695	1.1	1.0	1.2
Pathology only ordered	15,180	15.7	15.2	16.2	18,615	12.5	12.1	12.8
Imaging only ordered	5,766	6.0	5.7	6.2	6,768	4.5	4.4	4.7
No pathology or imaging tests ordered	73,337	75.8	75.2	76.5	122,384	81.9	81.4	82.4
At least one pathology ordered	17,584	18.2	17.6	18.8	20,310	13.6	13.2	14.0
At least one imaging ordered	8,171	8.5	8.1	8.8	8,464	5.7	5.4	5.9
At least one other investigation ordered	902	0.9	0.8	1.0	917	0.6	0.6	0.7
At least one other investigation performed in the practice	1,140	1.2	1.1	1.3	1,142	0.8	0.7	0.8
At least one other investigation ordered or performed	1,995	2.1	1.9	2.2	2,018	1.4	1.3	1.4

Note: LCL—lower confidence limit; UCL—upper confidence limit.

## 12.2 Pathology ordering

A comprehensive report on pathology ordering by GPs in Australia in 1998, written by the then General Practice Statistics and Classification Unit (GPSCU) using BEACH data, was published on the Internet by the Diagnostics and Technology Branch of the then Department of Health and Aged Care in 2000.<sup>58</sup> A report on changes in pathology ordering by GPs from 1998 to 2001 was also produced by the GPSCU as an AIHW–University of Sydney book in the GP series in 2003.<sup>59</sup> A review of GP pathology ordering in the National Health Priority Areas and other selected problems between 2000 and 2008 is reported in Chapter 5 of the AGPSCC publication *General practice in Australia, health priorities and policies 1998 to 2008*.<sup>60</sup> Readers may wish to compare those results with the information presented below.

### Nature of pathology orders at encounter

The GPs recorded 44,066 orders for pathology tests/batteries of tests, at a rate of 45.6 per 100 encounters.

The distribution of pathology tests by MBS group, and the most common tests within each group are presented in Table 12.2. Each group and individual test is expressed as a percentage of all pathology tests, as a percentage of the group, and as a rate per 100 encounters with 95% confidence limits.

The pathology tests recorded were grouped according to the categories set out in Appendix 4. The main pathology groups reflect those used in previous analyses of pathology tests by Medicare Australia.<sup>61</sup>

Test orders classed as chemistry accounted for more than half of all pathology test orders, the most common being lipids, for which there were 4.8 orders per 100 encounters, EUC (3.4), liver function (3.3), and glucose/glucose tolerance (2.7 per 100 encounters).

**Table 12.2: Distribution of pathology orders across MBS pathology groups and most frequent individual test orders within group**

Pathology test ordered	Number	Per cent of all pathology	Per cent of group	Rate per 100 encounters (n = 96,688)	95% LCL	95% UCL
<b>Chemistry*</b>	<b>26,073</b>	<b>59.2</b>	<b>100.0</b>	<b>27.0</b>	<b>25.8</b>	<b>28.2</b>
Lipids*	4,604	10.5	17.7	4.8	4.5	5.0
EUC*	3,319	7.5	12.7	3.4	3.2	3.7
Liver function*	3,147	7.1	12.1	3.3	3.0	3.5
Glucose/glucose tolerance*	2,605	5.9	10.0	2.7	2.5	2.9
Thyroid function*	2,404	5.5	9.2	2.5	2.3	2.7
Multibiochemical analysis*	1,891	4.3	7.3	2.0	1.7	2.2
Chemistry; other*	1,294	2.9	5.0	1.3	1.2	1.5
Ferritin*	1,253	2.8	4.8	1.3	1.2	1.4
HbA1c*	1,219	2.8	4.7	1.3	1.1	1.4
Prostate specific antigen*	1,089	2.5	4.2	1.1	1.0	1.2
Hormone assay*	647	1.5	2.5	0.7	0.6	0.8
C reactive protein	637	1.4	2.4	0.7	0.6	0.7

(continued)

**Table 12.2 (continued): Distribution of pathology orders across MBS pathology groups and most frequent individual test orders within group**

Pathology test ordered	Number	Per cent of all pathology	Per cent of group	Rate per 100 encounters (n = 96,688)	95% LCL	95% UCL
<b>Haematology*</b>	<b>7,907</b>	<b>17.9</b>	<b>100.0</b>	<b>8.2</b>	<b>7.8</b>	<b>8.6</b>
Full blood count*	6,007	13.6	76.0	6.2	5.9	6.5
ESR	878	2.0	11.1	0.9	0.8	1.0
Coagulation*	786	1.8	9.9	0.8	0.7	0.9
<b>Microbiology*</b>	<b>5,511</b>	<b>12.5</b>	<b>100.0</b>	<b>5.7</b>	<b>5.3</b>	<b>6.1</b>
Urine M,C&S*	1,777	4.0	32.2	1.8	1.7	2.0
Microbiology; other*	813	1.8	14.7	0.8	0.7	0.9
Hepatitis serology*	452	1.0	8.2	0.5	0.4	0.5
Faeces M,C&S*	332	0.8	6.0	0.3	0.3	0.4
Chlamydia*	294	0.7	5.3	0.3	0.2	0.4
Vaginal swab and C&S*	264	0.6	4.8	0.3	0.2	0.3
Venereal disease*	249	0.6	4.5	0.3	0.2	0.3
HIV*	245	0.6	4.5	0.3	0.2	0.3
<b>Cytology*</b>	<b>1,900</b>	<b>4.3</b>	<b>100.0</b>	<b>2.0</b>	<b>1.7</b>	<b>2.2</b>
Pap smear*	1,863	4.2	98.0	1.9	1.7	2.1
<b>Other NEC*</b>	<b>810</b>	<b>1.8</b>	<b>100.0</b>	<b>0.8</b>	<b>0.7</b>	<b>1.0</b>
Blood test	375	0.9	46.2	0.4	0.3	0.5
Other test NEC	286	0.7	35.2	0.3	0.2	0.4
<b>Tissue pathology*</b>	<b>715</b>	<b>1.6</b>	<b>100.0</b>	<b>0.7</b>	<b>0.6</b>	<b>0.9</b>
Histology; skin	642	1.5	89.8	0.7	0.5	0.8
<b>Immunology*</b>	<b>729</b>	<b>1.7</b>	<b>100.00</b>	<b>0.8</b>	<b>0.7</b>	<b>0.9</b>
Immunology, other*	368	0.8	50.4	0.4	0.3	0.4
Rheumatoid factor	155	0.4	21.3	0.2	0.1	0.2
<b>Simple basic tests*</b>	<b>210</b>	<b>0.5</b>	<b>100.0</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>
<b>Infertility/pregnancy*</b>	<b>212</b>	<b>0.5</b>	<b>100.0</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>
<b>Total pathology tests</b>	<b>44,066</b>	<b>100.0</b>	<b>—</b>	<b>45.6</b>	<b>43.8</b>	<b>47.4</b>

\* Includes multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix 4, <[www.aihw.gov.au/publications/index.cfm/subject/19](http://www.aihw.gov.au/publications/index.cfm/subject/19)>).

Note: LCL—lower confidence limit; UCL—upper confidence limit; NEC—not elsewhere classified; EUC—electrolytes, urea and creatinine; ESR—erythrocyte settlement rate; M,C&S—microscopy, culture and sensitivity.

## Problems for which pathology tests were ordered

Table 12.3 describes the most common problems for which pathology was ordered, in decreasing frequency order of problem–pathology combinations. Diabetes, hypertension, lipid disorders and general check-ups were the most common problems for which pathology tests were ordered. The two right-hand columns show the proportion of each problem that resulted in a pathology order, and the rate of pathology orders per 100 specified problems when at least one test is ordered. For example, 32.3% of contacts with diabetes resulted in pathology orders, and when pathology was ordered for diabetes, 279 tests were ordered per 100 diabetes contacts that resulted in a pathology test order. In contrast, only 12.4% of

contacts with hypertension problems resulted in a pathology test, but the resulting test orders accounted for almost as many tests (7.2%) as did diabetes.

**Table 12.3: The 10 problems for which pathology was most frequently ordered**

Problem managed	Number of problems	Number of problem–path combinations <sup>(a)</sup>	Per cent of problem–path combinations <sup>(a)</sup>	Per cent of problems with test <sup>(b)</sup>	Rate of path orders per 100 problems with pathology <sup>(c)</sup>
Diabetes—all*	3,952	3,570	7.8	32.3	279.4
Hypertension*	9,787	3,306	7.2	12.4	272.9
Lipid disorders*	3,787	2,490	5.5	31.2	210.5
General check-up*	2,375	2,429	5.3	29.5	346.3
Female genital check-up*	1,956	1,718	3.8	76.4	114.9
Weakness/tiredness	655	1,700	3.7	65.4	397.0
Blood test NOS	358	1,097	2.4	85.9	356.4
Urinary tract infection*	1,606	1,040	2.3	55.8	116.1
Pregnancy*	1,232	991	2.2	34.9	230.8
Abnormal test results*	1,011	909	2.0	53.6	167.8
<i>Subtotal</i>	<i>26,719</i>	<i>19,250</i>	<i>42.2</i>	<i>—</i>	<i>—</i>
<b>Total problems</b>	<b>149,462</b>	<b>45,636</b>	<b>100.0</b>	<b>13.6</b>	<b>224.7</b>

(a) A test was counted more than once if it was ordered for the management of more than one problem at an encounter. There were 44,066 pathology test orders and 45,636 problem–pathology combinations.

(b) The percentage of total contacts with the problem that generated at least one order for pathology.

(c) The rate of pathology orders placed per 100 contacts with that problem generating at least one order for pathology.

\* Includes multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix 4, <[www.aihw.gov.au/publications/index.cfm/subject/19](http://www.aihw.gov.au/publications/index.cfm/subject/19)>).

Note: Path—pathology; NOS—not otherwise specified.

## 12.3 Imaging ordering

Readers wanting a more detailed study of imaging orders should consult the comprehensive report on imaging orders by GPs in Australia in 1999–00, written by the GPSCU using BEACH data, and published by the AIHW and the University of Sydney in 2001.<sup>13</sup>

### Nature of imaging orders at encounter

There were 9,469 imaging test orders recorded, at a rate of 9.8 per 100 encounters.

The distribution of imaging tests by MBS group and the most common tests within each group are presented in Table 12.4. Each group and individual test is expressed as a percentage of all imaging tests, as a percentage of the group, and as a rate per 100 encounters with 95% confidence limits. Diagnostic radiology accounted for almost half of all imaging test orders and ultrasound accounted for a further 36.6%.

**Table 12.4: The most frequent imaging tests ordered, by MBS group**

Imaging test ordered	Number	Per cent of all imaging	Per cent of group	Rate per 100 encounters (n = 96,688)	95% LCL	95% UCL
<b>Diagnostic radiology*</b>	<b>4,584</b>	<b>48.4</b>	<b>100.0</b>	<b>4.7</b>	<b>4.5</b>	<b>5.0</b>
X-ray; chest	1,011	10.7	22.0	1.1	1.0	1.1
X-ray; knee	439	4.6	9.6	0.5	0.4	0.5
Mammography; female	384	4.1	8.4	0.4	0.3	0.4
Test; densitometry	292	3.1	6.4	0.3	0.3	0.4
X-ray; shoulder	268	2.8	5.8	0.3	0.2	0.3
X-ray; hip	242	2.6	5.3	0.3	0.2	0.3
X-ray; foot/feet	235	2.5	5.1	0.2	0.2	0.3
X-ray; ankle	152	1.6	3.3	0.2	0.1	0.2
X-ray; spine; lumbosacral	131	1.4	2.9	0.1	0.1	0.2
X-ray; hand	131	1.4	2.9	0.1	0.1	0.2
X-ray; wrist	123	1.3	2.7	0.1	0.1	0.2
X-ray; spine; cervical	105	1.1	2.3	0.1	0.1	0.1
X-ray; spine; thoracic	99	1.1	2.2	0.1	0.1	0.1
X-ray; abdomen	95	1.0	2.1	0.1	0.1	0.1
X-ray; spine; lumbar	95	1.0	2.1	0.1	0.1	0.1
X-ray; finger(s)/thumb	88	0.9	1.9	0.1	0.1	0.1
<b>Ultrasound*</b>	<b>3,465</b>	<b>36.6</b>	<b>100.0</b>	<b>3.6</b>	<b>3.4</b>	<b>3.8</b>
Ultrasound; pelvis	528	5.6	15.2	0.6	0.5	0.6
Ultrasound; shoulder	390	4.1	11.3	0.4	0.4	0.5
Ultrasound; abdomen	344	3.6	9.9	0.4	0.3	0.4
Ultrasound; breast; female	339	3.6	9.8	0.4	0.3	0.4
Ultrasound; obstetric	259	2.7	7.5	0.3	0.2	0.3
Echocardiography	137	1.4	3.9	0.1	0.1	0.2
Test; doppler	126	1.3	3.6	0.1	0.1	0.2
Ultrasound; kidney	100	1.1	2.9	0.1	0.1	0.1
Ultrasound; renal tract	95	1.0	2.7	0.1	0.1	0.1
Ultrasound; leg	92	1.0	2.7	0.1	0.1	0.1
Ultrasound; thyroid	85	0.9	2.4	0.1	0.1	0.1
Ultrasound; neck	71	0.7	2.0	0.1	0.1	0.1
Ultrasound; abdomen upper	68	0.7	2.0	0.1	0.1	0.1
Ultrasound; hip	63	0.7	1.8	0.1	0.0	0.1
<b>Computerised tomography*</b>	<b>1,234</b>	<b>13.0</b>	<b>100.0</b>	<b>1.3</b>	<b>1.2</b>	<b>1.4</b>
CT scan; brain	194	2.1	15.7	0.2	0.2	0.2
CT scan; abdomen	165	1.8	13.4	0.2	0.1	0.2
CT scan; spine; lumbar	146	1.6	11.9	0.2	0.1	0.2
CT scan; head	119	1.3	9.6	0.1	0.1	0.1
CT scan; spine; lumbosacral	100	1.1	8.1	0.1	0.1	0.1

(continued)

**Table 12.4 (continued): The most frequent imaging tests ordered, by MBS group**

Imaging test ordered	Number	Per cent of all imaging	Per cent of group	Rate per 100 encounters (n = 96,688)	95% LCL	95% UCL
CT scan; chest	87	0.9	7.1	0.1	0.1	0.1
CT scan; sinus	77	0.8	6.2	0.1	0.1	0.1
<b>Nuclear medicine imaging*</b>	<b>115</b>	<b>1.2</b>	<b>100.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
Scan; bone(s)	72	0.8	62.8	0.1	0.1	0.1
<b>Magnetic resonance imaging</b>	<b>71</b>	<b>0.8</b>	<b>100.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Total imaging tests</b>	<b>9,469</b>	<b>100.0</b>	<b>—</b>	<b>9.8</b>	<b>9.4</b>	<b>10.2</b>

\* Includes multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix 4, <[www.aihw.gov.au/publications/index.cfm/subject/19](http://www.aihw.gov.au/publications/index.cfm/subject/19)>).

Note: LCL—lower confidence limit; UCL—upper confidence limit; CT—computerised tomography.

## Problems for which imaging tests were ordered

Table 12.5 describes the most common problems for which imaging was ordered, in decreasing frequency order of problem–imaging combinations. The most common problem for which imaging was ordered was osteoarthritis, accounting for 5.0% of orders, followed by back complaint (also 5.0%), and fracture (3.7%). The two right-hand columns show the proportion of each problem that resulted in an imaging test, and the rate of imaging tests per 100 specified problems when at least one test was ordered. For example, 35.3% of contacts with fractures resulted in an imaging test and 108.9 tests were ordered per 100 fracture contacts when at least one test was ordered.

**Table 12.5: The 10 problems for which an imaging test was most frequently ordered**

Problem managed	Number of problems	Number of problem–imaging combinations <sup>(a)</sup>	Per cent of problem–imaging combinations	Per cent of problems with test <sup>(b)</sup>	Rate of imaging orders per 100 problems with imaging <sup>(c)</sup>
Osteoarthritis*	2,666	481	5.0	15.5	116.3
Back complaint*	2,636	472	5.0	15.9	113.0
Fracture*	910	350	3.7	35.3	108.9
Sprain/strain*	1,374	306	3.2	18.9	117.4
Pregnancy*	1,232	301	3.1	23.9	102.0
Injury musculoskeletal NOS	815	284	3.0	28.9	120.3
Abdominal pain*	601	277	2.9	39.7	116.0
Bursitis/tendonitis/synovitis NOS	826	233	2.4	24.3	116.1
Shoulder syndrome	545	215	2.3	31.3	126.2
Breast lump/mass (female)	208	212	2.2	68.3	149.1
<i>Subtotal</i>	<i>11,813</i>	<i>3,129</i>	<i>32.8</i>	<i>—</i>	<i>—</i>
<b>Total problems</b>	<b>149,462</b>	<b>9,542</b>	<b>100.0</b>	<b>5.7</b>	<b>112.7</b>

(a) A test was counted more than once if it was ordered for the management of more than one problem at an encounter. There were 9,469 imaging test orders and 9,542 problem–imaging combinations.

(b) The percentage of total contacts with the problem that generated at least one order for imaging.

(c) The rate of imaging orders placed per 100 contacts with that problem generating at least one order for imaging.

\* Includes multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix 4, <[www.aihw.gov.au/publications/index.cfm/subject/19](http://www.aihw.gov.au/publications/index.cfm/subject/19)>).

Note: NOS—not otherwise specified.

## 12.4 Other investigations

Other investigations include diagnostic procedures ordered by the GP at the encounter or undertaken by the GP or practice staff. There were a total of 954 other investigations ordered by GPs during the study year and 1,177 other investigations undertaken by the GP or practice staff during the study year. This means there were 2,131 total other investigations either ordered or undertaken in the practice (Table 12.6).

### Most frequent other investigations

The first half of Table 12.6 lists the most common other investigations ordered by GPs. The second half lists the most common other investigations undertaken in the practice by GPs or practice staff. The total number of these investigations ordered by the GP or undertaken in the practice is shown in the table. Each investigation is expressed as a percentage of ordered or undertaken other investigations, and as a rate per 100 encounters with 95% confidence limits.

**Table 12.6: Most frequent other investigations ordered by GPs or performed in the practice**

<b>Investigation ordered</b>	<b>Number</b>	<b>Per cent of ordered investigations</b>	<b>Rate per 100 encounters (n = 96,688)</b>	<b>95% LCL</b>	<b>95% UCL</b>
Electrical tracings*	498	52.3	0.52	0.45	0.58
Diagnostic endoscopy*	274	28.7	0.28	0.24	0.33
Physical function test*	152	15.9	0.16	0.13	0.19
Other diagnostic procedures*	30	3.1	0.03	0.02	0.04
<b>Total other investigations ordered</b>	<b>954</b>	<b>100.0</b>	<b>0.99</b>	<b>0.89</b>	<b>1.08</b>
<b>Investigation undertaken in the practice</b>	<b>Number</b>	<b>Per cent of undertaken investigations</b>	<b>Rate per 100 encounters (n = 96,688)</b>	<b>95% LCL</b>	<b>95% UCL</b>
Physical function test*	466	39.6	0.48	0.40	0.56
Electrical tracings*	464	39.4	0.48	0.41	0.55
Other diagnostic procedures*	227	19.3	0.24	0.18	0.29
Diagnostic endoscopy*	20	1.7	0.02	0.01	0.03
<b>Total other investigations undertaken</b>	<b>1,177</b>	<b>100.0</b>	<b>1.22</b>	<b>1.08</b>	<b>1.35</b>
<b>Total other investigations ordered or undertaken in the practice</b>	<b>2,131</b>	<b>—</b>	<b>2.20</b>	<b>2.04</b>	<b>2.36</b>

\* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4, <[www.aihw.gov.au/publications/index.cfm/subject/19](http://www.aihw.gov.au/publications/index.cfm/subject/19)>).

Note: LCL—lower confidence limit; UCL—upper confidence limit.

## 12.5 Full blood counts ordered in 2008–09

Full blood count (FBC) was the most commonly ordered pathology test in general practice, ordered at 6,007 encounters (6.2% of all encounters) for the management of 6,292 problems in 2008–09. This represents approximately 7 million GP–patient encounters at which FBC was ordered in general practice across Australia in that year.

Figure 12.1 shows the patients and problems for which an FBC was ordered and describes other pathology tests ordered for the same problem.

### Patient age and sex

The sex distribution of patients receiving FBC (39.6% male) was similar to that of all patients attending general practice (42.4%, Table 6.1). The age distribution differed, with more patients at FBC encounters aged 25–64 years (58.1%) and fewer aged < 25 years (11.0%) compared with the total sample (50.5% and 19.9%, respectively, Table 6.1).

Patients aged 45–64 years were those most likely to have an FBC ordered (7.3% of encounters in this age group) followed by patients aged 25–44 years (7.0%). FBC was ordered at 5.8% of encounters with male patients and at 6.5% of those with females.

### Reasons for encounter

The reason for encounter most often given by these patients was a request for prescription (11.7 per 100 FBC encounters), followed by requests for a check-up (10.9), weakness/tiredness (9.7) and requests for a blood test (7.6).

### Problems for which FBC was ordered

The majority (56.7%) of FBCs were ordered as part of the ongoing management of a previously diagnosed problem (that is, a previously assessed problem that requires ongoing care, including follow-up for a problem or an initial presentation of a problem previously assessed by another provider).

FBC was most commonly ordered for hypertension (8.1%), as part of a general check-up (6.6%), as part of the investigation of weakness/tiredness (5.7%), as part of the management of diabetes (4.5%), anaemia (2.6%), and for problems labelled as ‘blood tests’ (2.9%).

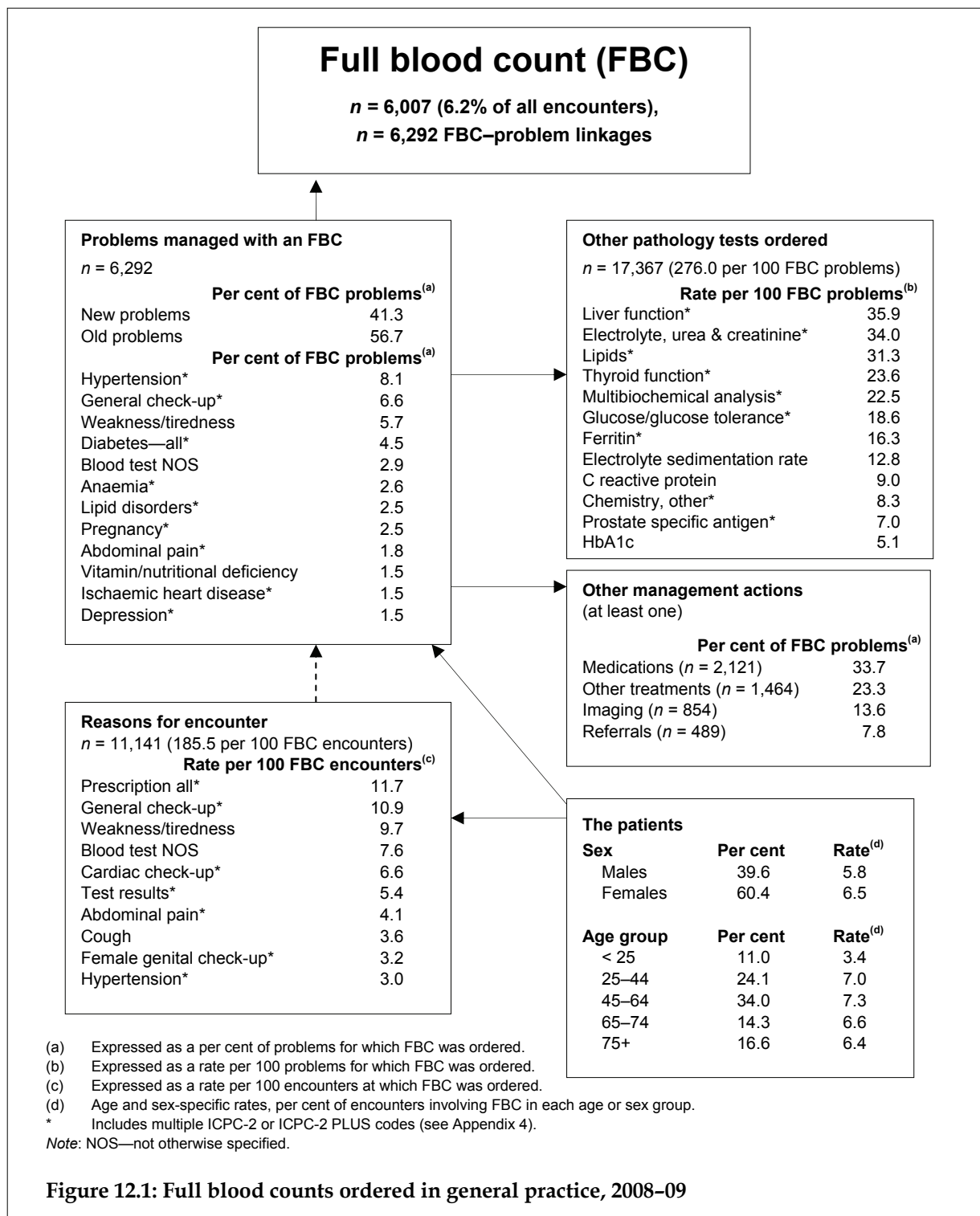
### Other pathology tests ordered for problems where FBC was ordered

There were 17,367 other pathology tests ordered for the same problems that involved FBC orders. On average, 3.8 pathology tests/batteries of tests were ordered for problems involving an FBC order, that is, the FBC order and three (2.8) additional pathology tests/batteries of tests.

The tests most commonly ordered with FBC were liver function tests (35.9 per 100 FBC-tested problems), electrolyte, urea and creatinine (34.0), lipids (31.3), thyroid function tests (23.6) and multibiochemical analysis (22.5).

### Other management actions provided at encounters where FBC was ordered

At least one medication was prescribed, supplied or advised for over-the-counter purchase for approximately one-third of problems for which an FBC was ordered. GPs also commonly provided other treatments (including clinical and procedural treatments) (23.3% of FBC problems), ordered imaging (13.6%), and less commonly referred (7.8%).



## 12.6 Changes in investigations over the decade 1999–00 to 2008–09

Data on investigations are reported for each year from 1999–00 to 2008–09 in Chapter 12 of the web-based companion report *General practice activity in Australia 1999–00 to 2008–09: 10 year data tables*.<sup>1</sup> The major changes are highlighted below.

- The likelihood of ordering at least one pathology test increased from 13.8% of encounters in 1999–00 to 18.2% in 2008–09, which is almost 6.5 million additional encounters at which pathology was ordered in 2008–09 than in 1999–00.
- The number of pathology tests ordered increased from 29.7 tests (or battery of tests) per 100 encounters in 2000–01 to 45.6 in 2008–09, which extrapolates to approximately 21.3 million more test orders in 2008–09.
- The proportion of encounters generating imaging orders increased from 6.7% in 1999–00 to 8.5% in 2008–09, resulting in an estimated 2.7 million more encounters nationally at which imaging was ordered in 2008–09.
- Total imaging orders increased significantly from 7.7 per 100 encounters in 2000–01 to 9.8 in 2008–09, suggesting there were almost 3.3 million more in 2008–09.