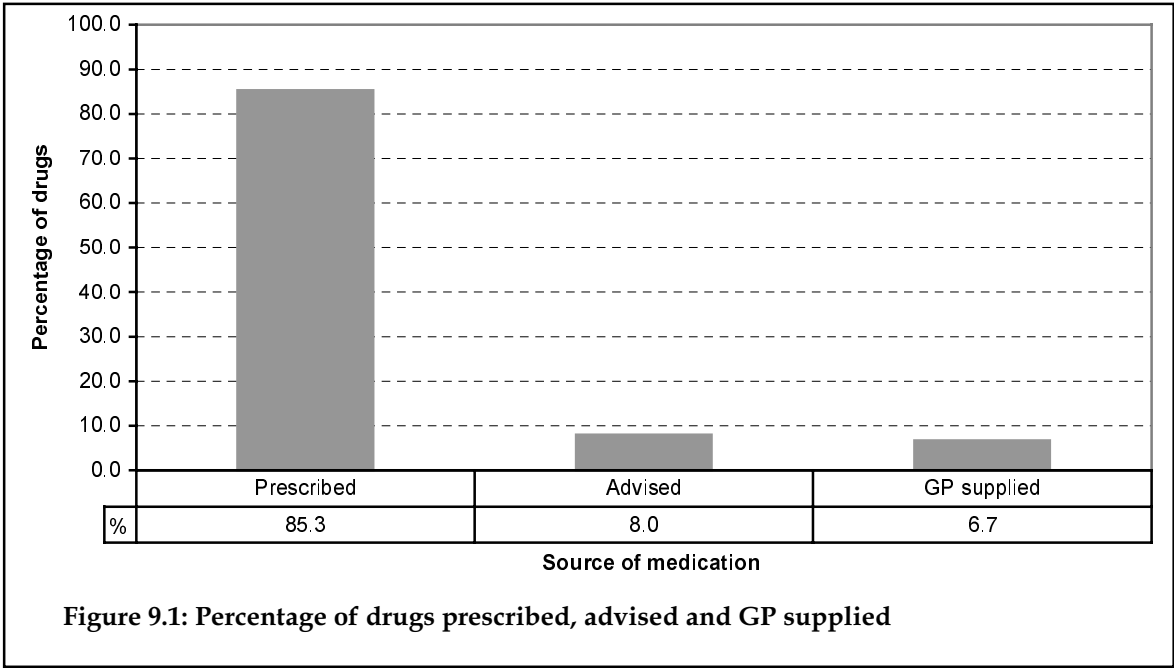


# 9. Medications

## 9.1 Source of medications

For each problem managed the survey form allowed the recording of up to four drugs. Each drug could be recorded as prescribed (the default), recommended for ‘over the counter’ (OTC) purchase or supplied by the GP from surgery stocks or samples. GPs were requested to enter the brand or generic name, the strength, regimen and number of repeats ordered for each drug and to designate if this was a new or continued drug for that patient for this problem. This structure allowed, for the first time, analysis of the drugs advised by GPs for OTC purchase, drugs supplied by the GP and the prescribed daily dose (PDD) of drugs. Generic or brand names could be used and were entered into the database exactly as recorded by the GP. Drugs were classified using the CAPS system developed by the Family Medicine Research Centre from which they were also mapped to the WHO ATC classification (see Methods). While analysis can be conducted at brand name level, the results in this Chapter are reported only at the generic level.



Most medications (85.3%) were prescribed; however, 8.0% of medications were recommended by the GP for OTC purchase. Extrapolated to the whole general practice population, this represents approximately 8 million occasions per annum at which drugs were recommended by GPs to their patients for OTC purchase. On a further 6.7 million occasions at least one drug was supplied by the general practitioner. These areas of drug supply have been largely unexplored in the past (Figure 9.1). Table 9.1 shows the distribution of commonly used medications by method of supply: prescribed, recommended for OTC purchase or supplied by the GP. Simple analgesics and NSAIDs were distributed mainly between prescribed and advised; however, they were also supplied by the GP on a few occasions. Influenza vaccine was two-thirds prescribed and one-third supplied.

**Table 9.1: Distribution of most frequently used medications between the three recorded sources – prescribed, advised and GP supplied**

Generic drug	Prescribed			Advised OTCs			GP supplied			Total	
	Number prescribed	Percentage of scripts (n=90,710)	Prescribed as a percentage of N	Number advised	Percentage of advised (n=8,538)	Advised as a percentage of N	Number supplied	Percentage of supplied (n=7,072)	Supplied as a percentage of N	Total of this drug (N)	Percentage of total meds (n=106,320)
Paracetamol	3,802	4.2	61.4	2317	27.2	37.4	76	1.1	1.2	6,196	5.8
Amoxicillin	3,133	3.5	97.6	0	0.0	0.0	78	1.1	2.4	3,212	3.0
Paracetamol/Codeine	2,565	2.8	88.7	224	2.6	7.7	102	1.5	3.5	2,890	2.7
Influenza virus vaccine	1,663	1.8	67.1	0	0.0	0.0	817	11.6	32.9	2,480	2.3
Salbutamol	2,324	2.6	96.3	14	0.2	0.6	76	1.1	3.2	2,414	2.3
Cefaclor monohydrate	2,104	2.3	97.6	0	0.0	0.0	52	0.7	2.4	2,156	2.0
Cephalexin	2,047	2.3	98.0	0	0.0	0.0	43	0.6	2.1	2,090	2.0
Amoxicillin/potass. clavulanate	1,730	1.9	97.2	0	0.0	0.0	49	0.7	2.8	1,779	1.7
Roxithromycin	1,731	1.9	98.5	0	0.0	0.0	27	0.4	1.5	1,758	1.7
Temazepam	1,397	1.5	97.2	0	0.0	0.0	40	0.6	2.8	1,437	1.4
Diclofenac sodium systemic	1,234	1.4	95.8	7	0.1	0.5	48	0.7	3.7	1,288	1.2
Levonorgestrel/ Ethinyloestradiol	1,205	1.3	94.5	0	0.0	0.0	71	1.0	5.6	1,276	1.2
Doxycycline	1,126	1.2	97.0	0	0.0	0.0	34	0.5	3.0	1,161	1.1
Diazepam	1,082	1.2	96.6	0	0.0	0.0	38	0.5	3.4	1,120	1.1
Erythromycin	1,041	1.2	98.6	1	0.0	0.1	15	0.2	1.4	1,056	1.0
Ranitidine	967	1.1	94.6	0	0.0	0.0	55	0.8	5.4	1,022	1.0
Atenolol	953	1.1	98.2	0	0.0	0.0	17	0.3	1.8	970	0.9
Fruzemide	929	1.0	98.3	0	0.0	0.0	16	0.2	1.7	945	0.9
Betamethasone topical	915	1.0	97.8	2	0.0	0.2	19	0.3	2.0	935	0.9
Simvastatin	894	1.0	96.9	0	0.0	0.0	29	0.4	3.1	923	0.9

(continued)

**Table 9.1 (continued): Distribution of most frequently used medications between the three recorded sources- prescribed, advised and GP supplied**

Generic drug	Prescribed			Advised OTCs			GP supplied			Total	
	Number prescribed	Percentage of scripts (n=90,710)	Prescribed as a percentage of N	Number advised	Percentage of advised (n=8,538)	Advised as a percentage of N	Number supplied	Percentage of supplied (n=7,072)	Supplied as a percentage of N	Total of this drug (N)	Percentage of total meds (n=106,320)
Chloramphenicol eye	878	1.0	95.5	0	0.0	0.0	41	0.6	4.5	919	0.9
Aspirin	712	0.8	79.5	172	2.0	19.2	12	0.2	1.4	896	0.8
Naproxen	842	0.9	97.7	5	0.1	0.6	15	0.2	1.8	862	0.8
Prochlorperazine	720	0.8	88.2	1	0.0	0.1	95	1.4	11.7	816	0.8
Oxazepam	755	0.8	97.6	0	0.0	0.0	19	0.3	2.5	774	0.7
Amlodipine	724	0.8	97.1	0	0.0	0.0	21	0.3	2.9	746	0.7
Enalapril mal	717	0.8	98.1	0	0.0	0.0	14	0.2	1.9	731	0.7
Metoclopramide	595	0.7	81.5	0	0.0	0.0	135	1.9	18.5	730	0.7
Ibuprofen	485	0.5	67.5	209	2.5	29.1	25	0.4	3.4	718	0.7
Piroxicam oral	593	0.7	84.4	4	0.1	0.6	106	1.5	15.1	702	0.7

## 9.2 The inter-relationship of a medication with other variables. Example: Cephalosporins

Prescribing of cephalosporins by general practitioners has increased considerably since 1990–91, now being used at almost the same rate as broad spectrum penicillins. Figure 9.2 demonstrates the relationship between prescription or supply of cephalosporins by a GP and other variables collected in the survey. This example demonstrates the wealth of information which can be inter-related in studying medications used in general practice. On the chart solid arrows indicate a direct relationship and dotted arrows an indirect.

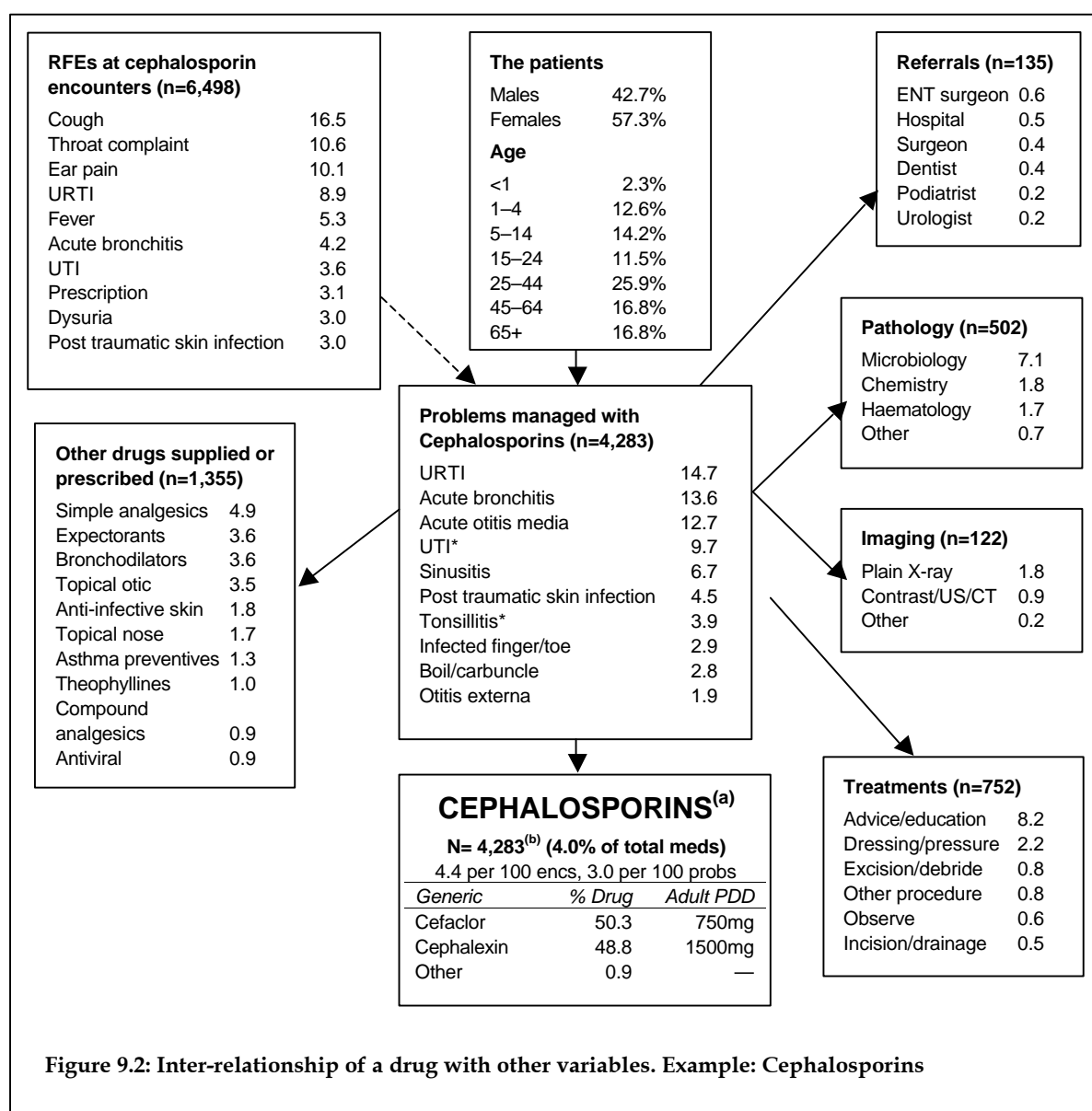


Figure 9.2: Inter-relationship of a drug with other variables. Example: Cephalosporins

\* Indicates multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix III).

(a) Except where otherwise specified results are presented as rates per 100 problems for which a cephalosporin was prescribed or supplied.

(b) Problems for which there was at least one prescription or GP supply of cephalosporins (N=4,283).

Note: Abbreviations: Encs –encounters, Probs – problems, Meds – medications prescribed or supplied by the GP.

### *Rate of supply and source of drug*

Cephalosporins were given at a rate of 4.4 per 100 total GP encounters and at a rate of 3.0 per 100 total problems. Their prescribing rate was second only to broad spectrum penicillins amongst the major antibiotic groups (see Section 9.2.). While almost all the drugs were prescribed, 2.2% were supplied by the GP, presumably from sample starter packs. Cefaclor and cephalexin were given with almost identical frequency and together made up 99.1% of cephalosporins.

### *Prescribed daily dose*

Prescribed daily doses (PDD) are reported as medians reflecting the most common prescribing regimes. Cefaclor had a median PDD of 750mg which accords with the recommended usual adult dose (MIMS Australia, 1999). Cephalexin had a median PDD of 1500mg which is 50% above the usual adult dose of 1000mg suggested in MIMS.

### *Age and sex distribution of patients*

Patients between 1 and 24 years of age were over-represented in the population prescribed or supplied cephalosporins and those over 45 under-represented. This probably reflects the age groups in which the infections treated with cephalosporins by GPs occur. The gender distribution of the patients is similar to that of the general GP patient population.

### *Reasons for encounter*

The patients most commonly described their reasons for encounter in terms of respiratory, ENT, urinary or skin infection or as general symptoms of infection such as fever.

### *Problems managed*

Problem labels given by the GP reflected the same spectrum of disorders as the RFEs with 53.5% of common labels being related to respiratory or ENT infections. Urinary and skin infections were also relatively frequent.

### *Other drugs supplied or prescribed*

Other drugs were supplied or prescribed at the same encounter and for the same problem for which cephalosporins were given on 1,355 occasions at a rate of 31.6 per 100 encounters. Their distribution reflects the spectrum of problems under management described above. Simple analgesics were commonly given as were respiratory drugs, particularly anti-asthmatic drugs, although asthma was not frequently the problem under management.

### *Other treatments*

Other treatments were less frequently utilised for problems managed with cephalosporins (17.6 per 100 problems) than in the total dataset (29.7 per 100 problems). They were divided between advice (principally regarding medication), dressings and minor surgery.

### *Pathology and imaging*

Pathology was ordered at a rate of 11.7 per 100 problems managed with cephalosporins and consisted mainly of microbiology tests as might be expected. Imaging occurred much less frequently at a rate of 2.8 per 100 encounters compared with 3.7 for the total data.

### *Referrals*

The patient was referred to other services for these problems infrequently (3.2 per 100 problems) compared with a rate of 7.7 for all problem contacts.

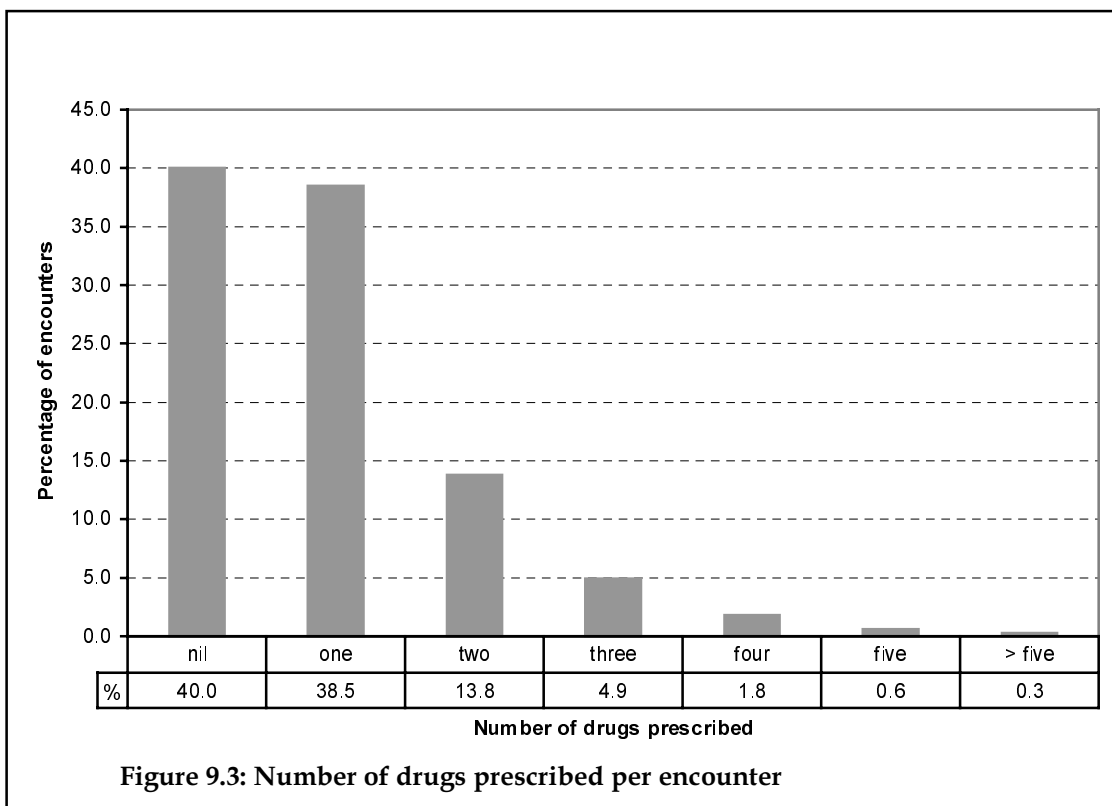
## 9.3 Prescribed drugs

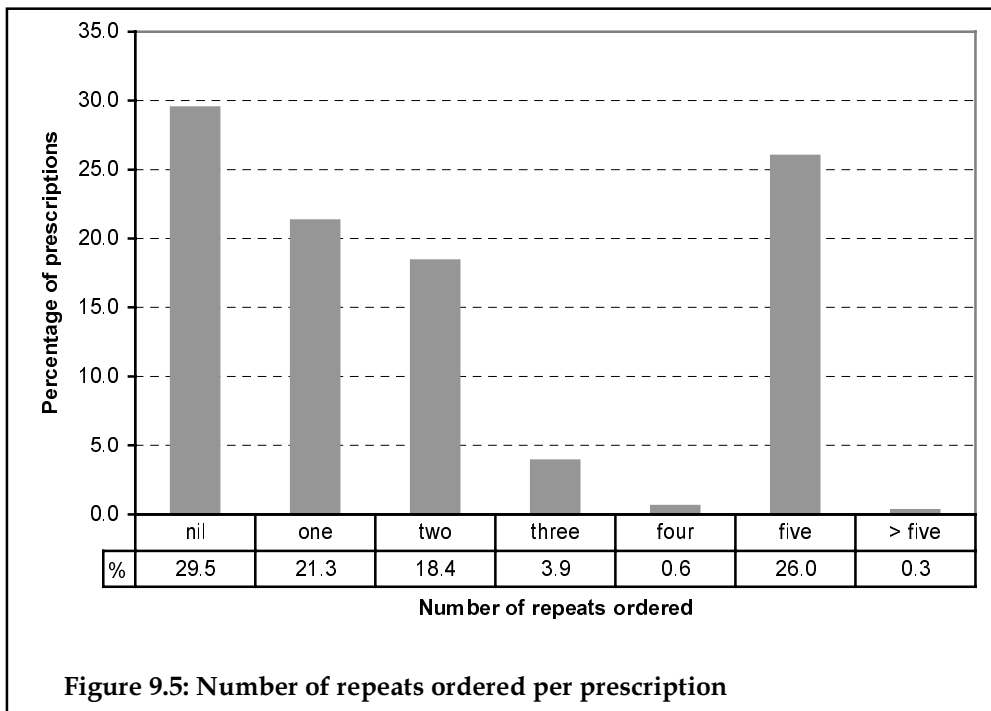
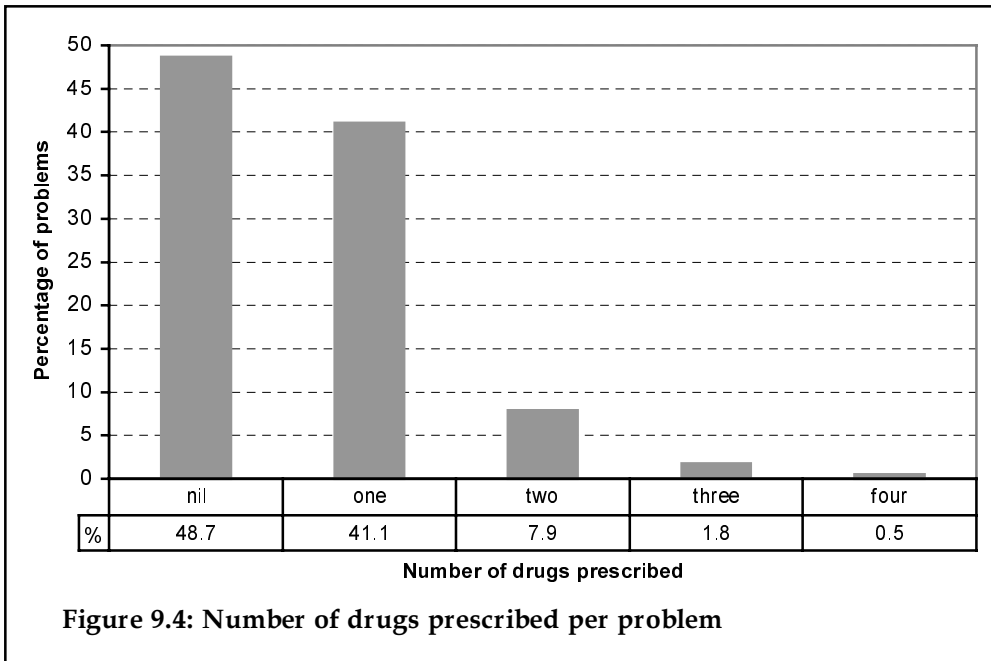
There were 90,710 prescriptions recorded, at a rate of 93.6 per 100 encounters and 64.4 per 100 problems managed. At least one script was recorded at 60% of encounters and for 51.3% of problems.

The survey form allowed GPs to record up to four medications for each of four problems. A maximum of 16 medications could be recorded at each encounter.

However no drugs were prescribed at 40% of encounters, one drug at 38.5% of encounters, two at 13.8% and three at 4.9%. Four or more drugs were prescribed at only 2.7% of encounters (Figure 9.3).

No prescription was given for almost half (48.7%) of all problems managed, one for 41.1%, two for 7.9% and three or more for only 2.3% (Figure 9.4).



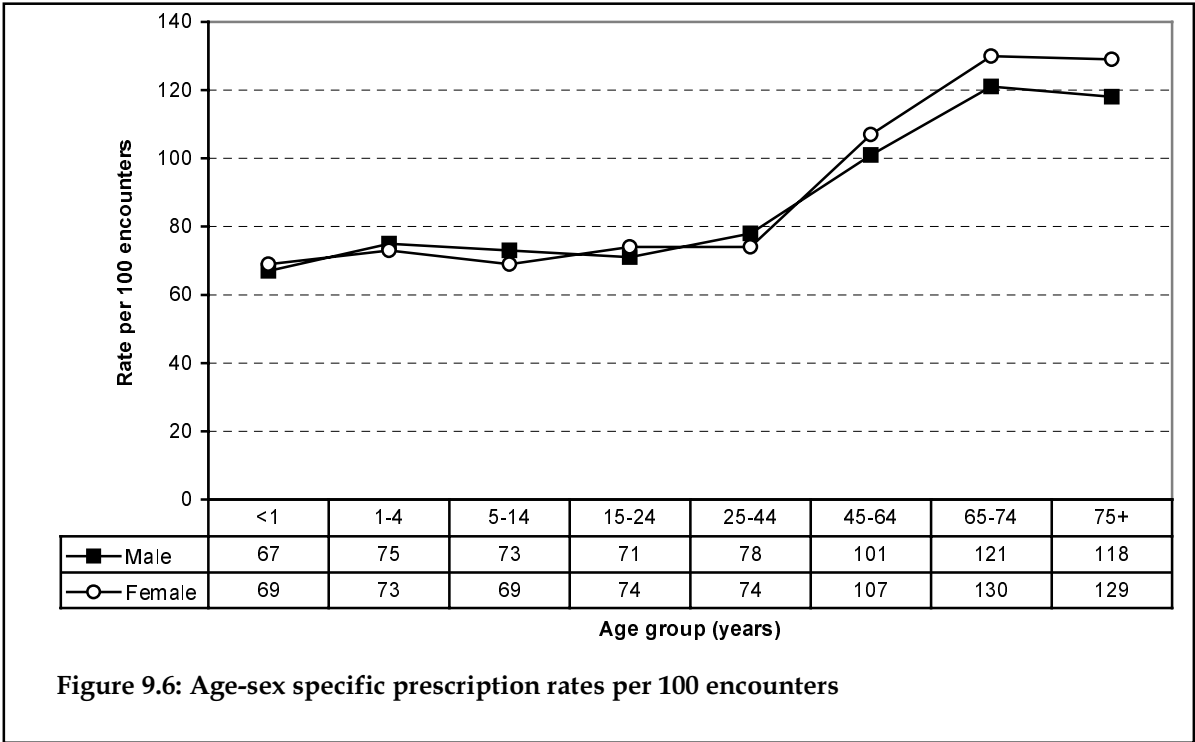


GPs also recorded the number of repeat prescriptions ordered and these are presented in Figure 9.5 in categories from none to 6+ as a percentage of all prescriptions.

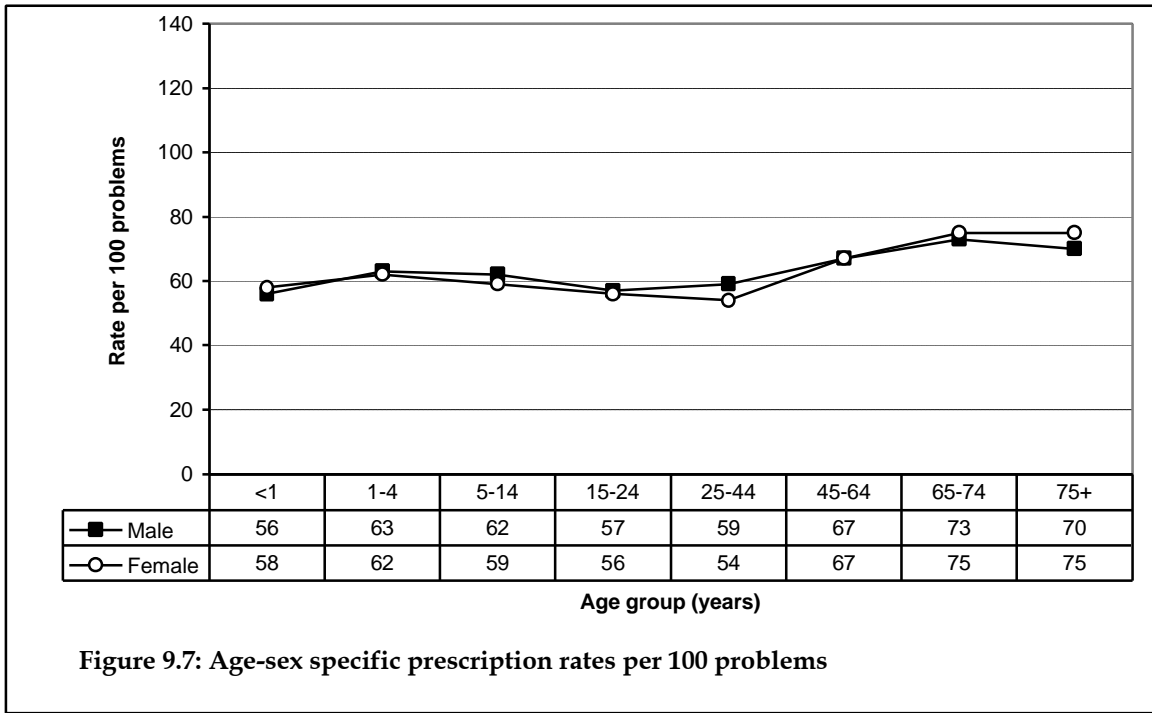
No repeats were ordered in nearly 30% of prescriptions, one or two in a further 40% and five in over a quarter. The total number of original prescriptions plus the repeats ordered amounted to 243,833 for the year. This extrapolates to approximately 244,000,000 orders by recognised GPs for drugs to be dispensed. However, in the 1998 calendar year only 106,532,082 dispensed prescriptions from recognised GPs were recorded in the PBS data (personal communication McManus, DHAC, from HIC data). While it could be expected that some prescriptions are not presented for dispensing, the non-redemption rates for prescriptions in overseas studies have varied between 5.2% in the UK (Beardon et al., 1993) and 13% in a more comparable health system in New Zealand (Gardner et al., 1996). These non-redemption rates are not sufficient to explain the difference. The main cause of this huge discrepancy appears to be the lack of recording in the PBS data of drugs that fall below the subsidy threshold. This suggests that PBS data should not be used alone to monitor significant areas of general practice therapeutic management.

### 9.3.1 Age–sex specific rates of prescribed drugs

Age–sex specific charts show the prescription rate per 100 encounters for all the male or female patients respectively in the age group under consideration. Figure 9.6 shows the well-described tendency for the number of prescriptions written at each encounter to rise with advancing age. Figure 9.7, however, demonstrates that the age based increase almost disappears if the prescription rate is related to problems. This suggests that the increased prescription rate in older patients is largely accounted for by the increased number of health problems to which they are subject.



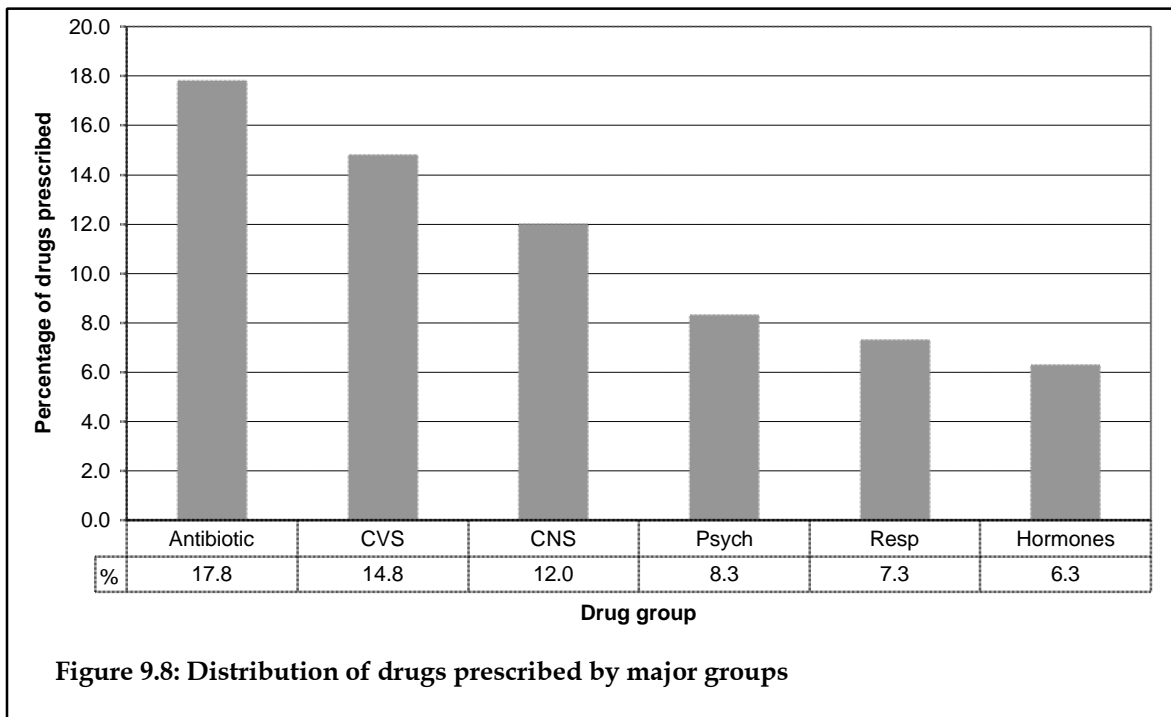




### 9.3.2 Types of drugs prescribed

*Drugs prescribed by major groups*

The distribution of prescribed drugs by major groups is presented graphically in Figure 9.8.



**Antibiotics** were the most commonly prescribed group, representing 17.8% of all prescriptions. These were followed by **cardiovascular** drugs (14.8%), **CNS** (12.0%), **psychological** (8.3%), **respiratory** drugs (7.3%) and **hormones** (6.9%).

Table 9.2 shows the distribution of drugs commonly prescribed by group, sub-group and generic name in order of frequency. In the **antibiotic** sub-group it is notable that cephalosporins are now being prescribed at a rate of 4.3 per 100 encounters, almost the same rate as broad spectrum penicillins (5.0 per 100). Other antibiotics, including the macrolides, were prescribed at a rate of 3.5 per 100 encounters.

Within **cardiovascular** drugs, anti-hypertensives contributed more than half the prescriptions (7.2 per 100 encounters) followed by beta-blockers (1.7 per 100). Other CVS drugs, principally lipid lowering agents, contributed 2.1 prescriptions per 100 encounters.

Prescribed **CNS** drugs were mainly analgesics (9.1 per 100 encounters) and anti-emetics (1.4). Compound analgesics containing codeine continue to be a frequent choice.

**Psychological** drug prescribing was dominated by benzodiazepines and anti-depressants, while bronchodilators (3.7) and asthma preventives (2.2) made up the majority of **respiratory** drugs prescribed.

In other groups, NSAIDs/anti-rheumatoids were prescribed at a rate of 4.5, vaccines at a rate of 3.9, topical steroids at a rate of 2.8 and anti-ulcerants at a rate of 2.2 per 100 encounters

The wide range of drugs prescribed reflects the extensive variety of problems managed in general practice.

#### *Most frequently prescribed generic drugs*

The most frequently prescribed individual generic drugs are listed in Table 9.3. There has been a change in the distribution of the drugs since the AMTS survey in 1990–91 (Bridges-Webb et al. 1992). This is discussed in Chapter 13. Antibiotics were well represented in BEACH, with 6 of the top 10 drugs being from that group. Simple analgesics were very frequently prescribed, probably reflecting their prescription for health care card holders for whom prescription is a cheaper option than over the counter purchase. Influenza vaccine represented 1.8% of all prescriptions, presumably reflecting a patient and GP response to public health campaigns to increase immunisation levels in at-risk groups.

**Table 9.2: Distribution of drugs prescribed by group, sub-group, generic drug**

Group	Sub-group	Generic	Number	Percentage of scripts	Rate per 100 encs	95% LCI	95% UCI
<b>Antibiotics</b>			<b>16,799</b>	<b>17.8</b>	<b>17.3</b>	<b>16.7</b>	<b>18.0</b>
	Penicillins		1,431	1.5	1.5	1.3	1.7
	Broad spectrum penicillins		4,871	5.0	5.0	4.7	5.4
		Amoxicillin	3,133	3.2	3.2	2.9	3.5
		Amoxicillin/ clavulanate	1,730	1.8	1.8	1.5	2.0
	Cephalosporins		4,190	4.3	4.3	4.0	4.7
		Cefaclor monohydrate	2,104	2.1	2.2	1.8	2.6
		Cephalexin	2,047	2.2	2.1	1.9	2.4
	Tetracycline		1,386	1.5	1.4	1.2	1.6
		Doxycycline	1,126	1.3	1.2	1.0	1.3
	Sulphonamides	Cotrimoxazole	554	0.6	0.6	0.3	0.9
	Other antibiotics		3,368	3.7	3.5	3.2	3.7
		Roxithromycin	1,731	1.9	1.8	1.5	2.0
		Erythromycin	1,041	1.1	1.1	0.8	1.3
	Antiviral agents		805	1.0	0.8	0.5	1.2
<b>Cardiovascular</b>			<b>13,253</b>	<b>14.8</b>	<b>13.7</b>	<b>12.9</b>	<b>14.5</b>
	Anti-hypertensives		6,990	7.8	7.2	6.8	7.6
		Amlodipine	724	0.8	0.7	0.6	0.9
		Enalapril mal	717	0.8	0.7	0.6	0.9
		Indapamide	563	0.6	0.6	0.4	0.8
		Perindopril	556	0.6	0.6	0.4	0.7
		Felodipine	529	0.6	0.5	0.4	0.7
		Irbesartan	525	0.5	0.5	0.3	0.8
		Verapamil hydrochloride	502	0.6	0.5	0.4	0.7
		Lisinopril	457	0.5	0.5	0.3	0.7
	Anti-angina		1,421	1.6	1.5	1.3	1.7
		GTN (glyceryl trinitrate)	441	0.5	0.5	0.3	0.6
	Cardiac glycosides		544	0.6	0.6	0.4	0.7
		Digoxin	543	0.6	0.6	0.4	0.7
	Beta-blockers		1,680	1.9	1.7	1.6	1.9
		Atenolol	953	1.1	1.0	0.8	1.1
	Other CVS drugs		2,009	2.2	2.1	1.9	2.3
		Simvastatin	894	1.0	0.9	0.8	1.1
		Atorvastatin	549	0.6	0.6	0.4	0.8

*(continued)*

**Table 9.2 (continued): Distribution of prescribed drugs by group, sub-group, generic drug**

Group	Sub-group	Generic	Number	Percentage of scripts	Rate per 100 encs	95% LCI	95% UCI
<b>CNS</b>			<b>11,011</b>	<b>12.0</b>	<b>11.4</b>	<b>10.8</b>	<b>11.9</b>
	Simple analgesics		4,581	5.0	4.7	4.4	5.1
		Paracetamol	3,802	4.1	3.9	3.6	4.3
		Aspirin	712	0.8	0.7	0.6	0.9
	Narcotic analgesics		1,069	1.2	1.1	0.6	1.6
	Compound analgesics		3,213	3.4	3.3	3.1	3.6
		Paracetamol/Codeine	2,565	2.7	2.6	2.4	2.9
	Anti-convulsants		559	0.6	0.6	0.4	0.8
	Anti-emetic/anti-nausea		1,398	1.5	1.4	1.3	1.6
		Prochlorperazine	720	0.8	0.7	0.6	0.9
		Metoclopramide	595	0.7	0.6	0.4	0.8
<b>Psychological</b>			<b>7,322</b>	<b>8.3</b>	<b>7.6</b>	<b>7.2</b>	<b>7.9</b>
	Sedative hypnotics		1,902	2.2	2	1.8	2.2
		Temazepam	1,397	1.6	1.4	1.3	1.6
	Anti anxiety		2,025	2.3	2.1	1.9	2.3
		Diazepam	1,082	1.3	1.1	0.9	1.3
		Oxazepam	755	0.9	0.8	0.6	0.9
	Phenothiazines		584	0.7	0.6	0.4	0.8
	Anti-depressants		2,806	3.2	2.9	2.7	3.1
		Sertraline	503	0.6	0.5	0.4	0.7
<b>Respiratory</b>			<b>6,726</b>	<b>7.3</b>	<b>6.9</b>	<b>6.5</b>	<b>7.3</b>
	Bronchodilators		3,625	3.9	3.7	3.5	4
		Salbutamol	2,324	2.5	2.4	2.2	2.6
		Terbutaline	657	0.7	0.7	0.5	0.9
		Ipratropium inhaled	630	0.7	0.6	0.5	0.8
	Asthma preventives		2,159	2.4	2.2	2.1	2.4
		Budesonide	680	0.8	0.7	0.6	0.8
		Beclomethasone	680	0.7	0.7	0.5	0.9

*(continued)*

**Table 9.2 (continued): Distribution of prescribed drugs by group, sub-group, generic drug**

Group	Sub-group	Generic	Number	Percentage of scripts	Rate per 100 encs	95% LCI	95% UCI
<b>Hormones</b>			<b>5,650</b>	<b>6.3</b>	<b>5.8</b>	<b>5.5</b>	<b>6.1</b>
	Sex hormones		2,150	2.5	2.2	2	2.4
		Medroxyprogesterone	557	0.6	0.6	0.4	0.7
	Corticosteroids		1,206	1.4	1.2	1.1	1.4
		Prednisolone	511	0.6	0.5	0.3	0.7
	Hypoglycaemics		1,736	1.8	1.8	1.5	2.0
		Metformin	670	0.7	0.7	0.5	0.9
	Other hormones		554	0.6	0.6	0.4	0.7
		Thyroxine	451	0.5	0.5	0.3	0.6
<b>Musculoskeletal</b>			<b>5,485</b>	<b>5.9</b>	<b>5.7</b>	<b>5.4</b>	<b>6.0</b>
	NSAID/anti-rheumatoid		4,349	4.7	4.5	4.2	4.7
		Diclofenac systemic	1,234	1.3	1.3	1.1	1.5
		Naproxen	842	0.9	0.9	0.7	1.1
		Piroxicam oral	593	0.7	0.6	0.4	0.8
		Ibuprofen	485	0.5	0.5	0.2	0.8
	Urosuric agents		483	0.5	0.5	0.3	0.7
<b>Allergy, immune</b>			<b>4,693</b>	<b>5.4</b>	<b>4.8</b>	<b>4.3</b>	<b>5.4</b>
	Anti-histamines		786	0.8	0.8	0.5	1.1
	Vaccines		3,817	4.5	3.9	3.3	4.6
		Influenza virus vaccine	1,663	2.0	1.7	0.4	3.0
<b>Skin</b>			<b>4,329</b>	<b>4.8</b>	<b>4.5</b>	<b>4.2</b>	<b>4.7</b>
	Anti-infection skin		946	1.1	1.0	0.8	1.1
	Topical steroids		2,736	3.0	2.8	2.7	3.0
		Betamethasone topical	915	1.0	0.9	0.8	1.1
		Monetasone	560	0.6	0.6	0.4	0.8
		Hydrocortisone topical	468	0.5	0.5	0.3	0.7
	Other skin		624	0.7	0.6	0.5	0.8
<b>Digestive</b>			<b>4,172</b>	<b>4.7</b>	<b>4.3</b>	<b>4.1</b>	<b>4.5</b>
	Anti-spasmodics		440	0.5	0.5	0.3	0.6
	Anti-ulcerants		2,148	2.4	2.2	2.1	2.4
		Ranitidine	967	1.1	1.0	0.9	1.1
	Anti-diarrhoeals		614	0.7	0.6	0.5	0.8

*(continued)*

**Table 9.2 (continued): Distribution of prescribed drugs by group, sub-group, generic drug**

<b>Group</b>	<b>Sub-group</b>	<b>Generic</b>	<b>Number</b>	<b>Percentage of scripts</b>	<b>Rate per 100 encs</b>	<b>95% LCI</b>	<b>95% UCI</b>
<b>Urogenital</b>			<b>2,133</b>	<b>2.5</b>	<b>2.2</b>	<b>2.0</b>	<b>2.4</b>
	Diuretics		1,639	1.9	1.7	1.5	1.9
		Frusemide (Furosemide)	929	1.1	1.0	0.8	1.1
<b>Ear, nose topical</b>			<b>2,232</b>	<b>2.4</b>	<b>2.3</b>	<b>2.1</b>	<b>2.5</b>
	Topical otic		991	1.0	1.0	0.8	1.2
		Dexamethas /Framycetin	554	0.6	0.6	0.4	0.8
	Topical nose		1,241	1.4	1.3	1.1	1.4
		Budesonide topical nasal	675	0.7	0.7	0.5	0.9
<b>Contraceptives</b>			<b>1,611</b>	<b>1.8</b>	<b>1.7</b>	<b>1.5</b>	<b>1.8</b>
	Oral contraception		1,611	1.8	1.7	1.5	1.8
		Levonorgestrel/ Ethinylloestr	1,205	1.3	1.2	1.1	1.4
<b>Blood</b>			<b>1,530</b>	<b>1.7</b>	<b>1.6</b>	<b>1.4</b>	<b>1.8</b>
	Other blood		716	0.8	0.7	0.6	0.9
		Warfarin sodium	664	0.8	0.7	0.5	0.9
<b>Eye medications</b>			<b>1,625</b>	<b>1.7</b>	<b>1.7</b>	<b>1.5</b>	<b>1.8</b>
	Anti-infectives		1,064	1.1	1.1	1.0	1.2
		Chloramphenicol eye	878	0.9	0.9	0.8	1.1
<b>Nutrition/ metabolic</b>			<b>1,179</b>	<b>1.4</b>	<b>1.2</b>	<b>1.1</b>	<b>1.4</b>
	Mineral tonic		634	0.7	0.7	0.5	0.8
<b>Miscellaneous</b>			<b>448</b>	<b>0.5</b>	<b>0.5</b>	<b>0.0</b>	<b>1.2</b>

*Note:* Abbreviations: Encs – encounters, Scripts – prescriptions, UCI – Upper confidence interval, LCI – Lower confidence interval

**Table 9.3: Most frequently prescribed drugs**

<b>Generic drug</b>	<b>Number</b>	<b>Percentage Rate per 100 of scripts</b>	<b>Rate per 100 encs</b>	<b>95% LCI</b>	<b>95% UCI</b>
Paracetamol	3,802	4.2	3.9	3.6	4.3
Amoxicillin	3,133	3.5	3.2	2.9	3.5
Paracetamol/Codeine	2,565	2.8	2.7	2.4	2.9
Salbutamol	2,324	2.6	2.4	2.2	2.6
Cefaclor monohydrate	2,104	2.3	2.2	1.8	2.6
Cephalexin	2,047	2.3	2.1	1.9	2.4
Roxithromycin	1,731	1.9	1.8	1.5	2.0
Amoxicillin/potass.clavulanate	1,730	1.9	1.8	1.5	2.0
Influenza virus vaccine	1,663	1.8	1.7	0.4	3.0
Temazepam	1,397	1.5	1.4	1.3	1.6
Diclofenac sodium systemic	1,234	1.4	1.3	1.1	1.5
Levonorgestrel/Ethinylloestradiol	1,205	1.3	1.2	1.1	1.4
Doxycycline hcl	1,126	1.2	1.2	1.0	1.3
Diazepam	1,082	1.2	1.1	0.9	1.3
Erythromycin	1,041	1.2	1.1	0.8	1.3
Ranitidine	967	1.1	1.0	0.9	1.1
Atenolol	953	1.1	1.0	0.8	1.1
Fruzemide (Furosemide)	929	1.0	1.0	0.8	1.1
Betamethasone topical	915	1.0	0.9	0.8	1.1
Simvastatin	894	1.0	0.9	0.8	1.1
Chloramphenicol eye	878	1.0	0.9	0.8	1.1
Naproxen	842	0.9	0.9	0.7	1.1
Oxazepam	755	0.8	0.8	0.6	0.9
Amlodipine	724	0.8	0.8	0.6	0.9
Prochlorperazine	720	0.8	0.7	0.6	0.9
Enalapril mal	717	0.8	0.7	0.6	0.9
Aspirin	712	0.8	0.7	0.6	0.9
Budesonide	680	0.8	0.7	0.6	0.8
Beclomethasone	680	0.8	0.7	0.5	0.9
Budesonide topical nasal	675	0.8	0.7	0.5	0.9
<i>Subtotal</i>	<i>40,226</i>	<i>44.4</i>	<i>..</i>	<i>..</i>	<i>..</i>
<b>Total prescribed</b>	<b>90,710</b>	<b>100</b>	<b>93.6</b>	<b>91.2</b>	<b>96.1</b>

Note: Abbreviations: Scripts – prescriptions, encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval

### 9.3.3 Distribution of drugs prescribed by ATC drug group

Table 9.4 shows the distribution of prescribed drugs using the WHO Anatomical, Therapeutic, Chemical classification (ATC) (WHO Collaborating Centre for Drug Statistics Methodology 1998) as an alternative method of grouping. This allows comparison with other data classified in ATC such as that produced by the Health Insurance Commission. With this classification analgesics were the most frequently prescribed group, followed by penicillins and NSAIDs. Other beta-lactam antibacterials, principally cephalosporins, were fourth, followed by ACE inhibitors.

Even when using the same classification, comparison with PBS data is difficult as the PBS records drugs dispensed rather than prescribed and only records those whose price is above the subsidy threshold. For example, the two commonly prescribed cephalosporins discussed earlier fall below the threshold and are not recorded by the PBS for non health care card holders. The threshold for HCC holders is lower and the cephalosporins dispensed for them would be recorded. However the age distribution of the problems for which cephalosporins are used means that the number who are HCC holders is likely to be much less than the general GP patient population. Therefore the number of cephalosporins prescriptions recorded as dispensed in the PBS data is likely to be much lower than actual dispensing. Community pharmacy surveys and sales data may pick up the difference but cannot separate the prescriptions of general practitioners from those of other practitioners.



**Table 9.4: Distribution of drugs prescribed by ATC drug group**

ATC drug group	Number	Percentage of scripts	Rate per 100 encs	95% LCI	95% UCI
Other analgesics & antipyretics	7,417	8.2	7.7	7.2	8.1
Beta-lactam antibacterials penicillins	5,981	6.6	6.2	5.8	6.5
Anti-inflammatory/anti-rheumatic products non-steroids	4,322	4.8	4.5	4.2	4.7
Other beta-lactam antibacterials	4,187	4.6	4.3	4.0	4.7
ACE inhibitors plain	3,309	3.7	3.4	3.2	3.7
Adrenergics inhalants	3,125	3.5	3.2	3.0	3.5
Macrolides & lincosamides	2,851	3.2	2.9	2.7	3.2
Anti-depressants	2,806	3.1	2.9	2.7	3.1
Other anti-asthmatics inhalants	2,683	3.0	2.8	2.6	3.0
Viral vaccines	2,549	2.8	2.6	1.9	3.3
Corticosteroids plain	2,167	2.4	2.2	2.1	2.4
Drugs for treatment of peptic ulcer	2,148	2.4	2.2	2.1	2.4
Anxiolytics	2,030	2.2	2.1	1.9	2.3
Hypnotics & sedatives	1,896	2.1	1.1	1.8	2.2
Cholesterol & triglyceride reducers	1,872	2.1	1.9	1.7	2.1
Beta-blocking agents plain	1,769	2.0	1.8	1.6	2.0
Hormonal contraceptives for systemic use	1,720	1.9	1.8	1.6	1.9
Selective calcium channel blockers with mainly vascular effects	1,707	1.9	1.8	1.6	1.9
Opioids	1,463	1.6	1.5	1.1	1.9
Oral blood glucose lowering drugs	14,278	1.6	1.5	1.2	1.7
Tetracyclines	1,386	1.5	1.4	1.2	1.6
Anti-psychotics	1,305	1.4	1.4	1.2	1.5
Decongestants & other nasal preparations for topical use	1,213	1.3	1.3	1.1	1.4
Anti-infectives	1,205	1.3	1.2	1.1	1.4
Corticosteroids for systemic use plain	1,196	1.3	1.2	1.1	1.4
Oestrogens	1,057	1.2	1.1	1.0	1.2
Anti-histamines for systemic use	986	1.1	1.0	0.8	1.3
High-ceiling diuretics	958	1.1	1.0	0.8	1.2
Selective calcium channel blockers with direct cardiac effects	907	1.0	0.9	0.8	1.1
Sulfonamides & trimethoprim	885	1.0	0.9	0.7	1.1
<i>Subtotal</i>	<i>68,527</i>	<i>75.7</i>	<i>..</i>	<i>..</i>	<i>..</i>
<b>Total prescribed</b>	<b>90,710</b>	<b>100</b>	<b>93.6</b>	<b>91.2</b>	<b>96.1</b>

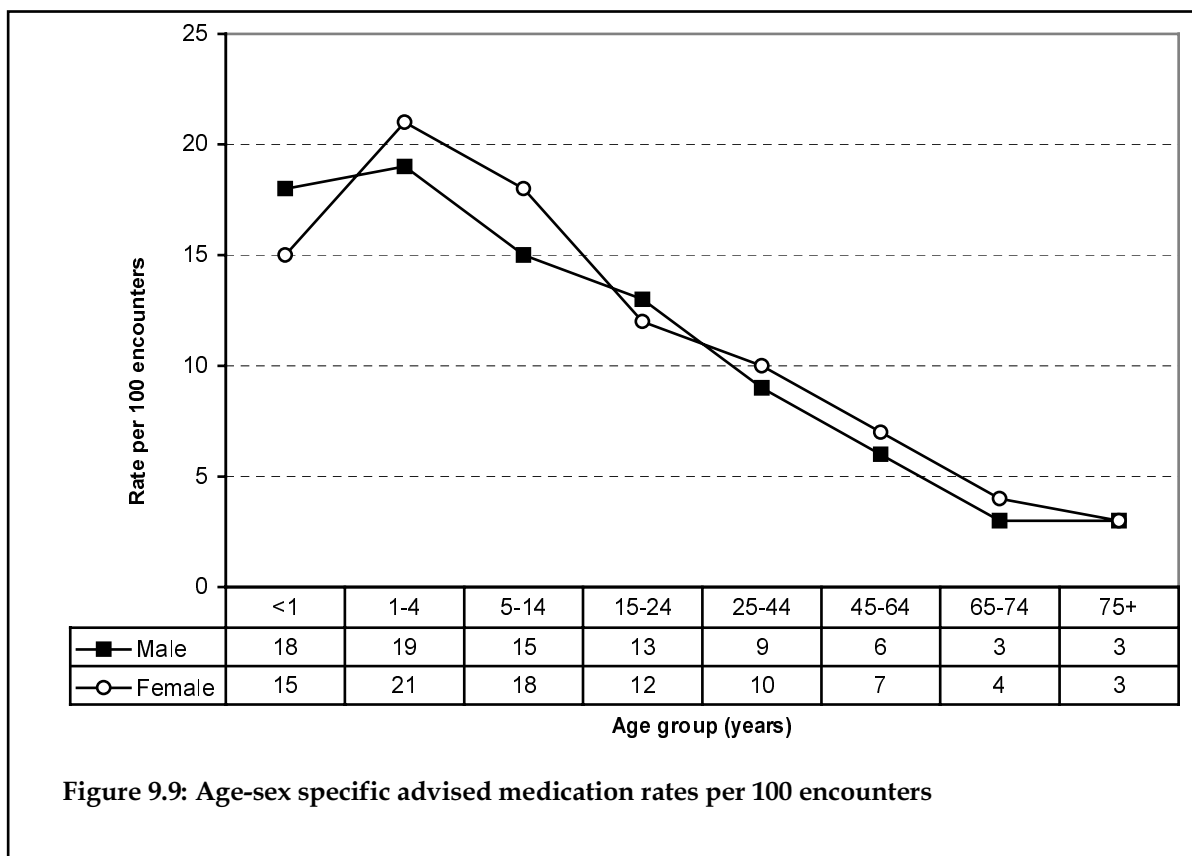
Note: Abbreviations: Encs – encounters, Scripts – prescriptions, UCI – Upper confidence interval, LCI – Lower confidence interval.

## 9.4 Advised drugs for over the counter purchase

The total number of drugs recorded as recommended by the GP for over the counter purchase was 8,538, at a rate of 8.8 per 100 encounters and 6.1 per 100 problems managed. At least one drug was recorded as advised at 7.9% of encounters and for 5.5% of problems.

### 9.4.1 Age–sex specific rates of advised drugs

Age–sex specific charts show the advised drug rate per 100 encounters for all the male or female patients respectively in the age group under consideration.

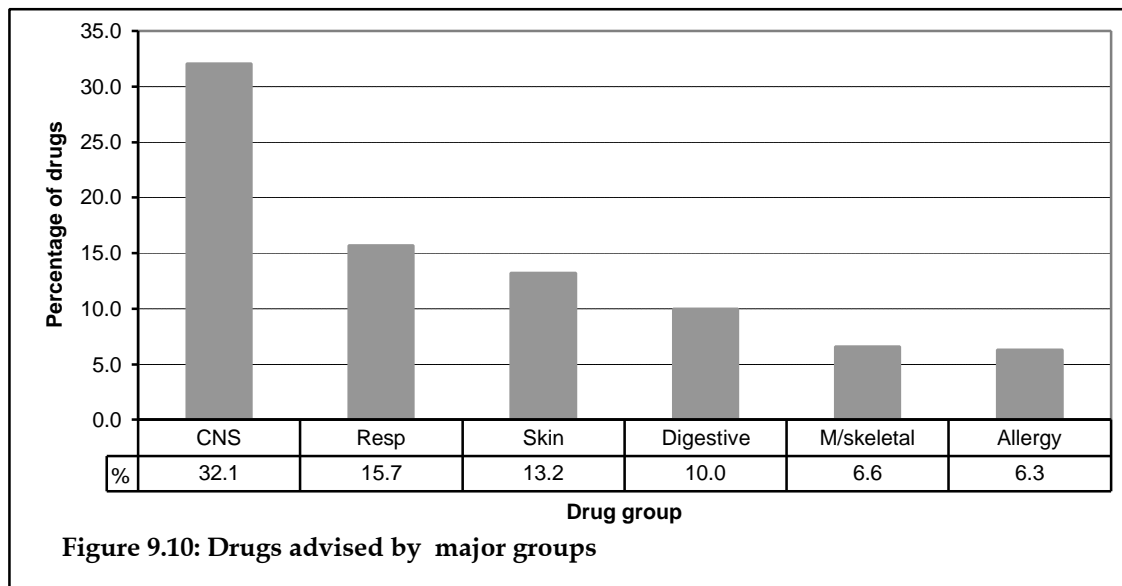


The pattern of age–sex specific rates of advised medications per 100 encounters was almost the reverse of that for prescribed drugs (Figure 9.9). Younger age groups predominate as recipients of advice to purchase OTC drugs. This reflects both the nature of the problems managed and the lower rates of HCC holders in these age groups seen by GPs (see Chapter 6). OTC purchase of drugs by non HCC may be the cheapest option for drugs available without prescription. The age–sex specific rate per 100 problems showed an almost identical distribution (results not presented).

## 9.4.2 Types of drugs advised

### *Drugs advised by major groups*

CNS drugs predominated in those advised to patients, with almost a third of the drugs advised being in this group (Figure 9.10).



The distribution of advised OTCs by group, sub-group and individual drugs demonstrated that **CNS** drugs consisted almost entirely of analgesics, with paracetamol predominating (Table 9.5). These results could be expected from the age-sex specific rates described above. **Respiratory** drugs consisted predominantly of compound decongestants/cough suppressants, and **skin** medications were split between anti-infectives and simple creams and lotions.

The distribution of the most frequently advised drugs by generic name shows that paracetamol dominates, accounting for over 25% of all drugs advised, at a rate of 2.4 per 100 encounters (Table 9.6). Other drugs were advised in relatively small numbers; however, the range of drugs was very wide. As stated in Chapter 9.1, general practitioner advice to purchase OTC drugs represents a significant area of therapeutic support for patients and appears particularly important for younger age groups.

**Table 9.5: Distribution of OTCs advised by group, sub-group and generic drug**

Group	Sub-group	Generic	Number	Percentage of OTCs	Rate per 100 encs	95% LCI	95% UCI
<b>CNS</b>			<b>2,842</b>	<b>32.1</b>	<b>2.9</b>	<b>2.4</b>	<b>3.5</b>
	Simple analgesics		2,512	28.0	2.6	2.1	3.1
		Paracetamol	2,317	25.2	2.4	1.8	2.9
		Aspirin	172	2.5	0.2	0.0	0.4
	Compound analgesics		320	3.9	0.3	0.0	0.6
		Paracetamol/Codeine	224	2.7	0.2	0.0	0.6
		Paracetamol/Codeine/ Doxylamine	66	0.8	0.1	0.0	0.4
<b>Respiratory</b>			<b>1,418</b>	<b>15.7</b>	<b>1.5</b>	<b>1.1</b>	<b>1.8</b>
	Expectorants		1,154	12.5	1.2	0.8	1.6
		Chlorpheniramine/ Phenylephrine	313	3.4	0.3	0.0	0.7
		Brompheniramine/ Pseudoephedrine	197	2.1	0.2	0.0	0.9
		Pseudoephedrine	165	1.7	0.2	0.0	0.5
		Pseudoephedrine/ Paracetamol	147	1.7	0.2	0.0	0.6
		Decongest/Expectorant/ Cold relief	98	1.0	0.1	0.0	0.8
		Cough mix/Expectorant	82	0.8	0.1	0.0	0.9
	Antitussives		198	2.5	0.2	0.0	0.6
		Pholcodine	113	1.4	0.1	0.0	0.6
<b>Skin</b>			<b>1,099</b>	<b>13.2</b>	<b>1.1</b>	<b>1.0</b>	<b>1.3</b>
	Anti-infection skin		558	6.7	0.6	0.4	0.7
		Clotrimazole topical	237	2.9	0.2	0.0	0.4
		Povidone-iodine topical	68	0.8	0.1	0.0	0.4
		Miconazole (cream)	55	0.6	0.1	0.0	0.4
	Other skin		512	6.1	0.5	0.3	0.7
		Sorbolene/Glycerol	96	1.3	0.1	0.0	0.4
		Calamine lotion	67	0.7	0.1	0.0	0.5
		Cream/ointment/lotion	62	0.7	0.1	0.0	0.5

*(continued)*

**Table 9.5 (continued): Distribution of OTCs advised by group, sub-group and generic drug**

<b>Group</b>	<b>Sub-group</b>	<b>Generic</b>	<b>Number</b>	<b>Percentage of OTCs</b>	<b>Rate per 100 encs</b>	<b>95% LCI</b>	<b>95% UCI</b>
<b>Digestive</b>			<b>796</b>	<b>10.0</b>	<b>0.8</b>	<b>0.6</b>	<b>1.0</b>
	Antacids		90	1.2	0.1	0.0	0.4
	Anti-spasmodics		68	0.7	0.1	0.0	0.5
		Hyoscine butylbromide	51	0.5	0.1	0.0	0.6
	Laxatives		206	2.6	0.2	0.0	0.5
		Psyllium mucilloid	72	0.9	0.1	0.0	0.4
	Anti-diarrhoeals		73	0.8	0.1	0.0	0.5
		Loperamide	63	0.7	0.1	0.0	0.6
	Topical rectal		97	1.3	0.1	0.0	0.4
	Mouth, throat topical		246	3.2	0.3	0.0	0.5
		Povidone-iodine gargle	58	0.8	0.1	0.0	0.7
		Benzydamine oropharyngeal	55	0.6	0.1	0.0	0.5
<b>Musculoskeletal</b>			<b>568</b>	<b>6.6</b>	<b>0.6</b>	<b>0.4</b>	<b>0.8</b>
	NSAID/anti-rheumatoid		240	2.8	0.2	0.0	0.5
		Ibuprofen	209	2.4	0.2	0.0	0.5
	Topical preparations		320	3.8	0.3	0.1	0.6
		Diclofenac diethyl topical	174	2.0	0.2	0.0	0.5
		Meth/salicylate + Menthol	73	0.8	0.1	0.0	0.6
<b>Allergy, immune system</b>	Anti-histamine		<b>562</b>	<b>6.3</b>	<b>0.6</b>	<b>0.3</b>	<b>0.9</b>
		Loratadine	191	2.3	0.2	0.0	0.5
		Promethazine hchl	86	0.8	0.1	0.0	0.7
		Fexofenadine	77	0.8	0.1	0.0	0.5
<b>Nutrition, metabolism</b>			<b>354</b>	<b>4.7</b>	<b>0.4</b>	<b>0.0</b>	<b>0.7</b>
	Vitamins		176	2.3	0.2	0.0	0.6
		Vitamin C (ascorbic acid)	46	0.7	0.0	0.0	1.0
	Mineral tonics		173	2.3	0.2	0.0	0.5
		Sodium/Potassium/Citric/Glucose	97	1.2	0.1	0.0	0.5
<b>Ear, nose topical</b>			<b>232</b>	<b>2.8</b>	<b>0.2</b>	<b>0.0</b>	<b>0.5</b>
	Topical otic		96	1.1	0.1	0.0	0.4
	Topical nose		136	1.7	0.1	0.0	0.6
		Oxymetazoline	56	0.7	0.1	0.0	0.8

*(continued)*

**Table 9.5 (continued): Distribution of OTCs advised by group, sub-group and generic drug**

<b>Group</b>	<b>Sub-group</b>	<b>Generic</b>	<b>Number</b>	<b>Percentage of OTCs</b>	<b>Rate per 100 encs</b>	<b>95% LCI</b>	<b>95% UCI</b>
<b>Urogenital</b>			<b>193</b>	<b>2.5</b>	<b>0.2</b>	<b>0.0</b>	<b>0.4</b>
	Urinary antiseptic		72	0.9	0.1	0.0	0.4
		Sodium citrotartrate/ Tartaric acid	70	0.9	0.1	0.0	0.4
	Topical vaginal		120	1.6	0.1	0.0	0.3
		Clotrimazole vaginal	94	1.2	0.1	0.0	0.3
<b>Blood</b>			<b>137</b>	<b>1.8</b>	<b>0.1</b>	<b>0.0</b>	<b>0.5</b>
	Haemopoietics		135	1.7	0.1	0.0	0.5
		Folic acid	59	0.8	0.1	0.0	0.6
<b>Eye medic'ns</b>			<b>79</b>	<b>1.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.4</b>
	Other eye medic'ns		76	1.0	0.1	0.0	0.4
<b>Miscellaneous</b>			<b>190</b>	<b>2.3</b>	<b>0.2</b>	<b>0.0</b>	<b>0.6</b>

*Note:* Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval.

**Table 9.6: Most frequently advised OTC drugs**

Generic drug	Number	Percentage of OTCs	Rate per 100 encs	95% LCI	95% UCI
Paracetamol	2,317	25.2	2.4	1.8	2.9
Chlorpheniramine/Phenylephid	313	3.4	0.3	0.0	0.7
Clotrimazole topical	237	2.9	0.2	0.0	0.4
Paracetamol/Codeine	224	2.7	0.2	0.0	0.6
Ibuprofen	209	2.4	0.2	0.0	0.5
Brompheniramine/Pseudoeph	197	2.1	0.2	0.0	0.9
Loratadine	191	2.3	0.2	0.0	0.5
Diclofenac diethyl topical	174	2.0	0.2	0.0	0.5
Aspirin	172	2.5	0.2	0.0	0.4
Pseudoephedrine	165	1.7	0.2	0.0	0.5
Pseudoephedrine/Paracetamol	147	1.7	0.2	0.0	0.6
Pholcodine	113	1.4	0.1	0.0	0.6
Decongest/Expectorant/Cold relief	98	1.0	0.1	0.0	0.8
Sodium/Potassium/Citric/Glucose	97	1.2	0.1	0.0	0.5
Sorbolene/Glycerol/Cetomac	96	1.3	0.1	0.0	0.4
Clotrimazole vaginal	94	1.2	0.1	0.0	0.3
Promethazine hchl	86	0.8	0.1	0.0	0.7
Cough mix/Expectorant nec	82	0.8	0.1	0.0	0.9
Fexofenadine	77	0.8	0.1	0.0	0.5
Methyl salicylate + Menthol	73	0.8	0.1	0.0	0.6
Psyllium hydrophil mucil (Ispaghula)	72	0.9	0.1	0.0	0.4
Sodium citrotartrate/Tartaric acid	70	0.9	0.1	0.0	0.4
Povidone-iodine topical	68	0.8	0.1	0.0	0.4
Calamine lotion	67	0.7	0.1	0.0	0.5
Paracet/Codeine/Doxylamine	66	0.8	0.1	0.0	0.4
Loperamide	63	0.7	0.1	0.0	0.6
Cream/Ointment/Lotion nec	62	0.7	0.1	0.0	0.5
Folic acid	59	0.8	0.1	0.0	0.6
Nicotine	58	0.6	0.1	0.0	0.6
Povidone-iodine gargle	58	0.8	0.1	0.0	0.7
<i>Subtotal</i>	<i>5,806</i>	<i>65.8</i>	<i>..</i>	<i>..</i>	<i>..</i>
<b>Total</b>	<b>8,534</b>	<b>100.0</b>	<b>8.8</b>	<b>8.0</b>	<b>9.6</b>

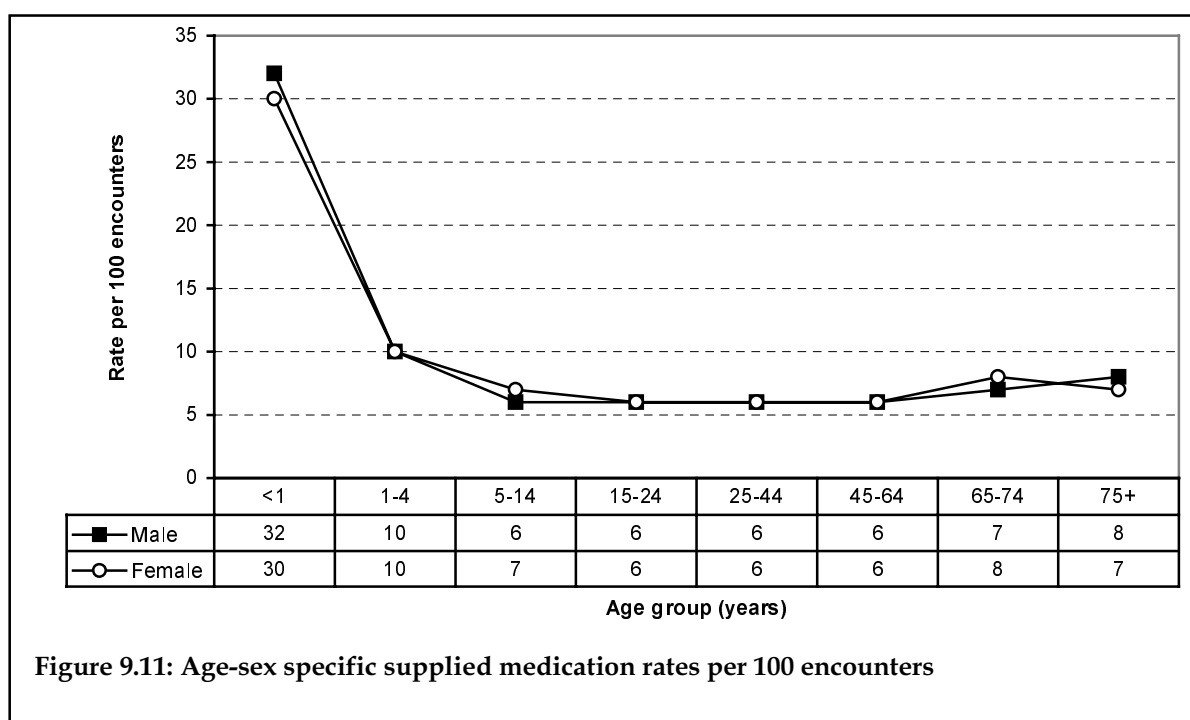
Note: Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval.

## 9.5 General practitioner supplied drugs

General practitioners supplied their patients with a total of 7,072 drugs in this study at a rate of 7.3 drugs per 100 encounters and 5.0 per 100 problems. At least one drug was supplied at 5.6% of encounters and for 4.0% of problems.

### 9.5.1 Age–sex specific rates of GP supplied drugs

The age–sex specific rate is the rate per 100 encounters at which the drugs were supplied to male and female patients respectively in the age group under consideration (Figure 9.11).



There were only minor differences between these rates for male and female patients of all age groups. Infants aged less than one year had by far the highest rate of receipt of GP supplied drugs (32 and 30 per 100 encounters for male and female patients respectively). Patients aged between one and four years received 10 GP supplied drugs per 100 encounters. The rate for all other age groups was steady at between 6 and 8 per 100 encounters. These results probably reflect the use of a direct GP supply mechanism for childhood vaccines in most parts of Australia.

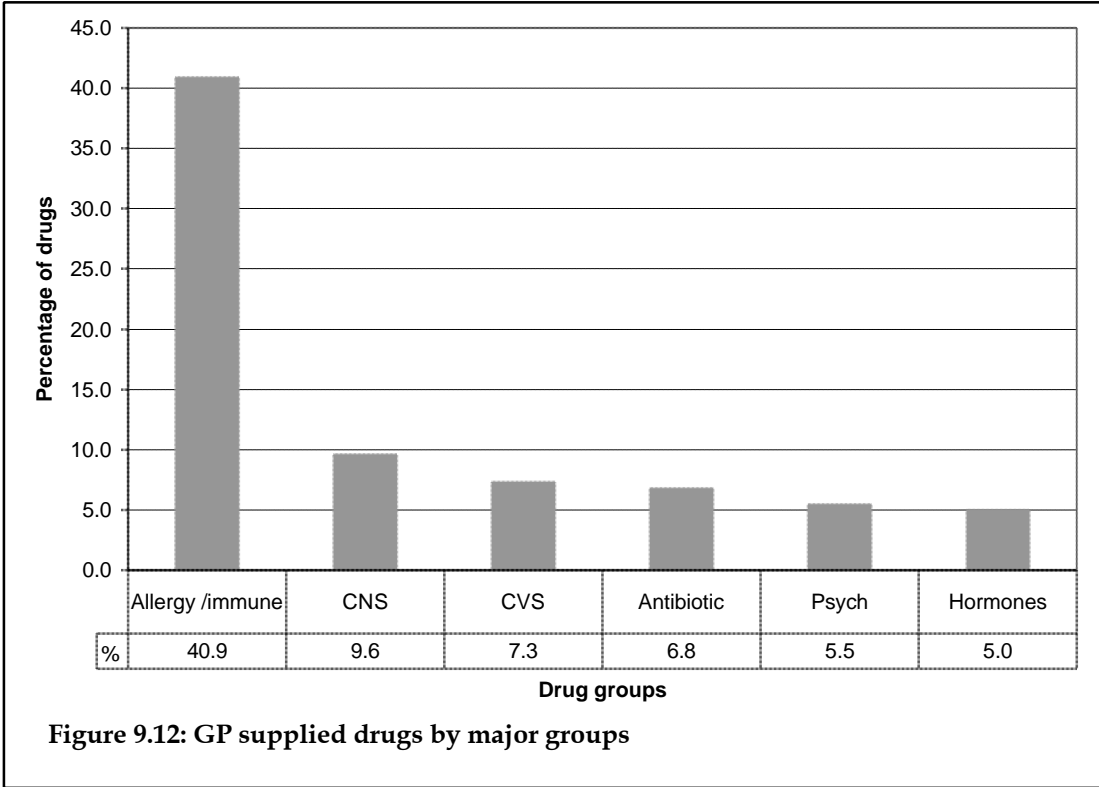
The age–sex specific rates per 100 problems displayed an almost identical pattern to that per 100 encounters (unreported data).



### 9.5.2 Types of drugs supplied by GPs

*Drugs supplied by GPs by major groups*

The distribution of supplied drugs by drug group supported the assumption that direct vaccine supply was responsible for the high supply rate in infants, as allergy/immune drug supply constituted over 40% of drugs supplied. These were followed by CNS and CVS drugs (Figure 9.12).



**Figure 9.12: GP supplied drugs by major groups**

Analysis of the distribution of GP supplied drugs by group, sub-group and commonly supplied individual drug demonstrates that vaccines constitute the major sub-group within the allergy/immune system group (Table 9.7). They were supplied at the rate of 2.9 per 100 encounters and constituted 38.2% of all drugs supplied. Analgesics and anti-emetics, frequently drugs administered by injection, made up almost all of the CNS drugs supplied. There was a wide spread of other drugs supplied, mostly prescription drugs, presumably from manufacturers’ sample packs. They reflect a range of drugs which may be needed acutely in a situation (such as out of pharmacy hours) where prescription drugs cannot be obtained from other sources or where cost is an issue.

The distribution of generic drugs frequently supplied by GPs shows that vaccines occupy the first seven places, followed by anti-emetics and analgesics/NSAIDS (Table 9.8). As might be expected, many of the most frequently supplied drugs are injectables and/or only available directly from the GP.

**Table 9.7: Distribution of supplied drugs by group, sub-group and generic drug**

Group	Sub-group	Generic	Number	Percentage of supplied	Rate per 100 encs	95% LCI	95% UCI
<b>Allergy, immune</b>			<b>2,967</b>	<b>40.9</b>	<b>3.1</b>	<b>2.5</b>	<b>3.7</b>
	Vaccines		2,795	38.2	2.9	2.2	3.5
		Influenza virus vaccine	817	11.2	0.8	0.0	2.2
		Triple antigen	377	5.0	0.4	0.1	0.7
		Polio sabin oral	347	4.7	0.4	0.1	0.6
		Haemophilus B vaccine	288	4.0	0.3	0.0	0.6
		Mumps/Measles/Rubella	214	3.0	0.2	0.0	0.5
		ADT/CDT (Diph/Tet)	211	2.8	0.2	0.0	0.6
		Hepatitis B vaccine	181	2.3	0.2	0.0	0.6
		Pneumococcal vaccine	101	1.3	0.1	0.0	1.2
		Tetanus toxoid vaccine	77	1.1	0.1	0.0	0.4
		Hepatitis A vaccine	67	1.1	0.1	0.0	0.5
	Anti-histamines		106	1.7	0.1	0.0	0.4
		Promethazine	36	0.6	0.0	0.0	0.5
		Loratadine	34	0.6	0.0	0.0	0.4
	Anti-allergy		65	0.9	0.1	0.0	0.5
		Allergen injection	47	0.7	0.0	0.0	0.6
<b>CNS</b>			<b>634</b>	<b>9.6</b>	<b>0.7</b>	<b>0.2</b>	<b>1.1</b>
	Simple analgesics		90	1.3	0.1	0.0	0.7
		Paracetamol	76	1.1	0.1	0.0	0.6
	Narcotic analgesics		153	2.4	0.2	0.0	0.6
		Pethidine injection/tablet	100	1.5	0.1	0.0	0.5
	Compound analgesics		131	2.0	0.1	0.0	0.8
		Paracetamol/Codeine	102	1.6	0.1	0.0	0.7
	Ant-iemetic/anti-nausea		236	3.5	0.2	0.0	0.5
		Metoclopramide	135	2.1	0.1	0.0	0.4
		Prochlorperazine	95	1.3	0.1	0.0	0.4
<b>Cardiovascular</b>			<b>526</b>	<b>7.3</b>	<b>0.5</b>	<b>0.0</b>	<b>1.2</b>
	Anti-hypertensives		290	4.1	0.3	0.0	0.8

(continued)

**Table 9.7 (continued): Distribution of supplied drugs by group, sub-group and generic drug**

<b>Group</b>	<b>Sub-group</b>	<b>Generic</b>	<b>Number</b>	<b>Percentage of supplied</b>	<b>Rate per 100 encs</b>	<b>95% LCI</b>	<b>95% UCI</b>
<b>Antibiotics</b>			<b>453</b>	<b>6.8</b>	<b>0.5</b>	<b>0.0</b>	<b>1.3</b>
	Penicillins		92	1.2	0.1	0.0	0.6
	Broad spectrum penicillins		128	1.9	0.1	0.0	1.1
		Amoxicillin	78	1.1	0.1	0.0	0.9
		Amoxicillin/ clavulanate	49	0.8	0.1	0.0	1.0
	Cephalosporins		96	1.4	0.1	0.0	0.8
		Cefaclor monohydrate	52	0.7	0.1	0.0	0.9
		Cephalexin	43	0.7	0.0	0.0	0.8
	Tetracyclines		38	0.6	0.0	0.0	0.9
		Doxycycline	34	0.5	0.0	0.0	0.8
	Other antibiotics		60	1.1	0.1	0.0	0.6
		Roxithromycin	27	0.6	0.0	0.0	0.6
<b>Psychological</b>			<b>375</b>	<b>5.5</b>	<b>0.4</b>	<b>0.0</b>	<b>0.8</b>
	Sedative hypnotics		67	0.8	0.1	0.0	1.3
	Anti-anxiety		62	1.0	0.1	0.0	0.8
		Diazepam	38	0.6	0.0	0.0	0.7
		Phenothiazine	50	0.8	0.1	0.0	0.4
	Anti-depressants		196	2.9	0.2	0.0	0.5
		Sertraline	67	0.9	0.1	0.0	0.5
		Paroxetine	35	0.6	0.0	0.0	0.5
<b>Hormones</b>			<b>342</b>	<b>5.0</b>	<b>0.4</b>	<b>0.1</b>	<b>0.6</b>
	Sex hormones		142	2.3	0.1	0.0	0.4
		Medroxyprogesterone	52	0.8	0.1	0.0	0.4
	Cortico steroids		153	2.1	0.2	0.0	0.5
		Methylprednisolone	45	0.5	0.0	0.0	0.5
	Hypoglycaemic		39	0.5	0.0	0.0	1.1
<b>Musculoskeletal</b>			<b>319</b>	<b>4.3</b>	<b>0.3</b>	<b>0.0</b>	<b>0.7</b>
	NSAID/anti-rheumatoid		260	3.5	0.3	0.0	0.7
		Piroxicam oral	106	1.4	0.1	0.0	0.5
<b>Digestive</b>			<b>270</b>	<b>4.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.5</b>
	Anti-spasmodics		32	0.5	0	0.0	0.5
	Anti-ulcerants		177	2.5	0.2	0.0	0.4
		Ranitidine	55	0.7	0.1	0.0	0.5

*(continued)*

**Table 9.7 (continued): Distribution of supplied drugs by group, sub-group and generic drug**

<b>Group</b>	<b>Sub-group</b>	<b>Generic</b>	<b>Number</b>	<b>Percentage of supplied</b>	<b>Rate per 100 encs</b>	<b>95% LCI</b>	<b>95% UCI</b>
<b>Respiratory</b>			<b>269</b>	<b>3.8</b>	<b>0.3</b>	<b>0.0</b>	<b>0.6</b>
	Bronchodilators		128	1.7	0.1	0.0	0.6
		Salbutamol	76	1.0	0.1	0.0	0.5
	Asthma preventives		114	1.6	0.1	0.0	0.4
<b>Skin</b>			<b>249</b>	<b>3.6</b>	<b>0.3</b>	<b>0.0</b>	<b>0.6</b>
<b>Blood</b>			<b>131</b>	<b>1.8</b>	<b>0.1</b>	<b>0.0</b>	<b>0.5</b>
<b>Contraceptives</b>			<b>99</b>	<b>1.5</b>	<b>0.1</b>	<b>0.0</b>	<b>0.5</b>
<b>Eye medications</b>			<b>88</b>	<b>1.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.6</b>
<b>Ear/nose topical</b>			<b>77</b>	<b>1.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.7</b>
<b>Nutrition/metab</b>			<b>55</b>	<b>0.9</b>	<b>0.1</b>	<b>0.0</b>	<b>0.5</b>
<b>Urogenital</b>			<b>46</b>	<b>0.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.9</b>
<b>Surgical</b>			<b>55</b>	<b>0.7</b>	<b>0.1</b>	<b>0.0</b>	<b>1.7</b>
<b>Miscellaneous</b>			<b>39</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>	<b>2.6</b>

*Note:* Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval.

**Table 9.8: Most frequently GP supplied drugs**

Generic drug	Number	Percentage of GP supplied	Rate per 100 encs	95% LCI	95% UCI
Influenza virus vaccine	817	11.2	0.8	0.0	2.2
Triple antigen(Diph/Pert/Tet)	377	5.0	0.4	0.1	0.7
Polio sabin oral	347	4.7	0.4	0.1	0.6
Haemophilus B vaccine	288	4.0	0.3	0.0	0.6
Mumps/Measles/Rubella vaccine	214	3.0	0.2	0.0	0.5
ADT/CDT (Diph/Tet) vaccine	211	2.8	0.2	0.0	0.6
Hepatitis B vaccine	181	2.3	0.2	0.0	0.6
Metoclopramide	135	2.1	0.1	0.0	0.4
Piroxicam oral	106	1.4	0.1	0.0	0.5
Paracetamol/Codeine	102	1.6	0.1	0.0	0.7
Pneumococcal vaccine	101	1.3	0.1	0.0	1.2
Pethidine hcl inject/tab	100	1.5	0.1	0.0	0.5
Prochlorperazine	95	1.3	0.1	0.0	0.4
Vitamin B12 (Cyanocobalamin)	85	1.1	0.1	0.0	0.5
Amoxicillin	78	1.1	0.1	0.0	0.9
Tetanus toxoid vaccine	77	1.1	0.1	0.0	0.4
Paracetamol	76	1.1	0.1	0.0	0.6
Salbutamol	76	1.0	0.1	0.0	0.5
Levonorgestrel/Ethinylloestradiol	71	1.0	0.1	0.0	0.6
Hepatitis A vaccine	67	1.1	0.1	0.0	0.5
Sertraline	67	0.9	0.1	0.0	0.5
Ranitidine	55	0.7	0.1	0.0	0.5
Irbesartan	54	0.7	0.1	0.0	0.5
Cefaclor monohydrate	52	0.7	0.1	0.0	0.9
Medroxyprogesterone	52	0.8	0.1	0.0	0.4
Amoxicillin/potass.clavulanate	49	0.8	0.1	0.0	1.0
Monetasone	48	0.7	0.0	0.0	0.5
Diclofenac sodium systemic	48	0.6	0.0	0.0	0.8
Allergen treatment injection	47	0.7	0.0	0.0	0.6
Methylprednisolone	45	0.5	0.0	0.0	0.5
<i>Subtotal</i>	<i>4,123</i>	<i>56.8</i>	<i>..</i>	<i>..</i>	<i>..</i>
<b>Total</b>	<b>7,024</b>	<b>100.0</b>	<b>7.2</b>	<b>6.3</b>	<b>8.2</b>

Note: Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval.