Adolescence



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# Adolescent attendances in general practice

The BEACH program, a continuous national study of general practice activity in Australia, gives us an overview of general practice consultations with adolescent patients. This provides a backdrop against which articles in this issue of *Australian Family Physician* can be further considered.

Adolescents account for 4.0% of all encounters in BEACH yet make up 9.6% of the Australian population.<sup>1</sup> Males and females aged 12–14 years each account for 2% of the population<sup>1</sup> but only 1% of all A1 Medicare claims.<sup>2</sup> Males aged 15–18 years account for 2.8% of the population<sup>1</sup> but only 1.3% of A1 Medicare claims, whereas females account for 2.6% of the population<sup>1</sup> and 1.9% of A1 Medicare claims.<sup>2</sup> *Figure 1* summarises 7228 general practice encounters with adolescents aged 12–18 years between April 2004 and March 2006.

Almost half the males were aged 12–14 years and 51% were aged 15–18 years. One in 3 were health care cardholders, 7% were from a non-English speaking background (NESB) and 16% were new to the practice.

Thirty-nine percent of the females were aged 12–14 years and 61% were aged 15–18 years. More than a third (35%) were health care cardholders, 6% were from a NESB and 15% were new to the practice.

# **Reasons for encounter**

Many reasons for encounter were common to adolescents of both genders, with high rates of cough, throat symptoms, earache, acne, rash and immunisations. Young women also attended for contraception and menstrual problems; young men with musculoskeletal injuries.

# **Problems managed**

Female adolescent patients had significantly more problems managed (124.8 per 100 encounters) than males (119.5 per 100). Adolescent males were more likely to have asthma, warts and problems related to physical trauma managed (including fracture, laceration, sprain and strain).

Depression, urinary tract infection and weakness/tiredness were more often managed at encounters with female adolescents than males.

### Medications

General practitioners prescribed 67.5 medications per 100 problems managed, significantly less than average (71.4 per 100). The most common medication prescribed was amoxycillin.

# Referrals

Referrals did not differ for male (8.8 per 100 problems) and female (7.8 per 100) patients. However, male adolescents were more likely to be referred to a physiotherapist (1.2 per 100 problems) than females (0.6).

# Tests ordered

Pathology tests were ordered significantly more often for females (26.0 per 100 problems) than males (15.4), particularly full blood counts, urine microscopy, culture and sensitivity, thyroid function, ferritin and chlamydia tests.

Imaging tests were ordered significantly more often for males (9.4 per 100 problems) than females (5.7).

# **Other treatments**

Female adolescents were more likely to have clinical treatments provided (30.4 per 100 problems compared with 24.9), in particular counselling.

Procedural treatments were more frequent among male (17.7 per 100 problems) than female adolescents (11.4), particularly excision/removal/biopsy, dressings and repair/suture.

Conflict of interest: none declared.

### References

- Australian Bureau of Statistics. 2006. Population projections, Australia, 2004-210. Available at www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/ 3222.02004%20to%202101?OpenDocument [Accessed 5 June 2007].
- 2. Data provided by the Primary Care Division of the Australian Government Department of Health and Ageing.

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Reasons for encounter		Male		Female	Re	asons for encounter		
(n=4328, 1.35 per encounter) (		(n=3187 encounte	ers, 3.7%	(n=4041 encounters, 3.7%		(n=4328, 1.35 per encounter)		
Rate per 100 encou	nters <sup>(a)</sup>	of all male encou		of all female encounters		Rate per 100 encoun	nters <sup>(a)</sup>	
Cough <sup>†</sup>	8.8	n=3809 problems	managed)	n=5042 problems managed)	Th	roat symptom	10.3	
Throat symptom	8.5	Age group		Age group	Co	ught	6.8	
Prescription all*	3.9 🔫	12–14 years	48.9%	12–14 years 38.5%	-> Or	al contraception	4.1	
njury musculoskeletal NOS	S <sup>†*</sup> 3.2	15–18 years	51.1%	15–18 years 61.5%	Tes	st results <sup>†*</sup>	4.0	
Test results**	2.5				Me	enstrual problems*	3.5	
Abdominal pain <sup>†</sup> *	2.1					dominal pain <sup>†</sup> *	3.5	
Weakness/tiredness <sup>†</sup>	1.4					akness/tiredness <sup>†</sup>	2.7	
						arts <sup>†</sup>	2.0	
					Ini	ury musculoskeletal NOS <sup>+</sup>		
		¥		<b></b>	,			
	Proble	ems managed		Problems managed				
	(n=380	9, 1.20 per encounters	s)	(n=5042, 1.25 per encounters)				
		Rate per 100 enc	ounters <sup>(a)</sup>	Rate per 100 enco	unters <sup>(a)</sup>			
	URTI		10.1	URTI	9.4			
	Asthm	ia†	5.2	Oral contraception	5.3			
	Acne		4.9	Acne	4.9			
	Warts <sup>+</sup>		3.8	Menstrual problems*	3.8			
	Fractu	re <sup>†</sup> *	3.8	Asthma <sup>+</sup>	3.4			
	Sprain	n/strain†*	3.3	Depression <sup>†</sup> *	3.0			
<b>-</b>	Lacera	ation/cut <sup>+</sup>	2.3	Warts <sup>†</sup>	2.5			
			2.1	Urinary tract infection <sup>†*</sup>	2.2	Prescribed medication	IS	
(n=1797, 47.2 per 100 problems) Injury musculoskeletal NOS <sup>+</sup>			OS⁺* 1.8	Sprain/strain <sup>†</sup> *	1.9	(n=2500, 49.6 per 100 pro	blem	
Rate per 100 problems <sup>(b)</sup> Depression <sup>†</sup> *			1.3	Weakness/tiredness <sup>†</sup>	1.6	Rate per 100 proble	ems <sup>(t</sup>	
Amoxycillin 5.	VVEaki	ness/tiredness†	0.4	Fracture <sup>†</sup> *	1.2	Amoxycillin	4.	
Cephalexin 2.	Unnar	y tract infection <sup>†</sup>	0.3	Injury skin, other <sup>†</sup>	0.9	Levonorgesterel/	4.:	
Salbutamol 2.	4			Injury musculoskeletal NO	S⁺* 0.9	ethinyloestradiol		
				Laceration/cut <sup>†</sup>	0.7	Cephalexin	2.8	
Referrals								
(n=1901, 8.8 per 100 problems)						Referrals		
Rate per 100 problems		Management		Management	Ĺ	(n=392, 7.8 per 100 proble		
Specialist 5.		Management	•	Inanagonione	Į	Rate per 100 probl		
Allied health services 2.		/				Specialist	5.	
Physiotherapy <sup>†</sup> 1.	2					Allied health services	2.	
				· · · · · · · · · · · · · · · · · · ·		Physiotherapy <sup>†</sup>	0.	
Tests ordered	Other	treatments		Other treatments		Tests ordered		
(n=959)	(n=162	3, 42.6 per 100 proble		(n=2107, 41.8 per 100 problem		(n=1619)		
Rate per 100 problems <sup>(b)</sup>		Rate per 100 problems <sup>(b)</sup>		Rate per 100 problems <sup>(b)</sup>		Rate per 100 probl	lems <sup>(</sup>	
Pathology <sup>†</sup> 15.	4 Clinica	al†	24.9	Clinical <sup>†</sup>	30.4	Pathology <sup>↑</sup>	26.	
Full blood count <sup>+</sup> 3.	3 Advice	e/education	6.3	Advice/education	7.2	Full blood count <sup>†</sup>	5.	
Liver function 1.	1 Advice	e treatment	5.4	Advice treatment	5.1	Test urine MC&S <sup>†</sup>	2.4	
Test urine MC&S <sup>+</sup> 0.	8 Couns	elling problem <sup>+</sup>	2.7	Counselling problem <sup>†</sup>	4.1	Thyroid function <sup>†</sup>	1.9	
Thyroid function <sup>†</sup> 0.	7 Psycho	ological counselling	g† 1.3	Psychological counselling <sup>†</sup>	2.3	Ferritin <sup>†</sup>	1.	
Ferritin <sup>†</sup> 0.	7 Proced	Jural⁺	17.7	Procedural <sup>†</sup>	11.4	Chlamydia <sup>†</sup>	0.0	
Chlamydia <sup>†</sup> 0.	1 Excisio	on/removal/biopsy <sup>†</sup>	3.7	Injection	2.4	Imaging <sup>+</sup>	5.	
omaniyana o			2.7	Evaluation/romoval/bionov/t	2.2			
	4 Injecti	on	3.7	Excision/removal/biopsy <sup>†</sup>	2.2	X-ray chest		
Imaging <sup>†</sup> 9.	4 Injecti 0 Dressi		3.7	Dressing <sup>†</sup>	1.9	X-ray chest <sup>†</sup> X-ray wrist <sup>†</sup>	0.! 0.:	

(a) Expressed as a rate per 100 encounters with adolescent patients

(b) Expressed as a rate per 100 problems managed for adolescent patients

 Indicates a statistically significant difference at the 95% confidence level (p<0.05) between adolescent male and female patients</li> \* Includes multiple ICPC-2 and ICPC-2 PLUS codes

Note: NOS = not otherwise specified, MC&S = microscopy, sensitivity and culture, URTI = upper respiratory tract infection

Figure 1. Content of encounters with male and female adolescent patients