Stroke



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Management of stroke in general practice

The BEACH program is a continuous national study of general practice activity in Australia. This analysis of consultations where stroke was managed provides a backdrop against which articles in this issue of *Australian Family Physician* can be further considered.

Between April 2002 and March 2007, there were 1171 consultations where stroke was managed, occurring at over 2 per 1000 encounters (*Figure 1*). This suggests that general practitioners manage stroke on about 237 000 occasions nationally each year. We included cerebrovascular accident, stroke (old and new), poststroke hemiparesis, cerebral infarction and cerebral haemorrhage.

Gender and age of patient

Males made up 51% of patients managed for stroke, a significantly higher proportion than at total BEACH encounters (44%). Gender specific terms showed that males were managed for stroke at 3 per 1000 and females at 2 per 1000 encounters.

Stroke was managed at 2 per 1000 encounters with those aged 45–64 years and 4 per 1000 encounters with those aged 65–74 years. Over half (55%) of patients at stroke encounters were aged 75 years and over, and stroke was managed for them at almost 1 in 100 encounters (9 per 1000).

Reasons for encounter

Stroke/cerebrovascular accident and request for a prescription were the most common reasons stated by patients for the encounter, at 17.7 and 16.5 per 100 encounters respectively.

Other problems managed

Hypertension was managed at almost 1 in 5 stroke encounters, more than double the average rate for BEACH (9 per 100). Diabetes, lipid disorders, oesophageal disease and dementia were all managed significantly more often for patients at stroke encounters than at total BEACH encounters. Sleep disturbance was managed marginally more often for these patients. The higher rates of management of these problems would be influenced by the fact that the majority of these patients were aged 75 years and over.

Medications

Antithrombotic agents accounted for 60% of medications prescribed for stroke. The most common of these was aspirin, prescribed at a rate of 9.1 per 100 stroke problems managed. Clopidogrel was prescribed for 8.6 per 100 stroke problem contacts, warfarin 7.4, and the dipyridamole/aspirin combination for 7.3 per 100. Other medications prescribed for stroke were lipid modifying agents and angiotensin converting enzyme inhibitors.

Other treatments

The most frequent other treatments provided for stroke management consisted mainly of counselling, advice about the problem and medication (11.8 per 100 stroke problems). Physical medicine/rehabilitation was provided at a rate of 2.1 per 100 stroke problems managed.

Referrals

Referrals were provided at a significantly higher rate for stroke (13.8) than for total BEACH problems managed (8.2 per 100 problems managed). Referrals were most commonly made to neurologists and physiotherapists.

Tests ordered

Pathology tests were ordered at a rate of 28 per 100 stroke problems, close to the average rate for BEACH. Coagulation tests accounted for 28% of these, and were ordered at a rate of 7.9 per 100 stroke problem contacts. Imaging tests were ordered at a rate of 6 per 100 stroke problems managed. The majority were computerised tomography scans of the brain/head (3.8 per 100).

Conflict of interest: none.

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(n=1171)						Medications prescribed		
Gender	Percent	Rate ^(a)				(n=652, 56 per 100 stroke pro Rate per 100 stroke pr		
Male	50.9	0.3				Aspirin	9.1	
Female	49.1	0.3				Clopidogrel	8.6	
Age grou	-	0.2				Warfarin	7.4	
25-44	4.3	0.0				Dipyridamole/aspirin	7.4	
45-64	18.8	0.0	· · · · · · · · · · · · · · · · · · ·			Atorvastatin	2.0	
45 04 65–74	21.7	0.2		Stro	ko	Perindopril	1.6	
75+ 54.9 0.9			(n=1171, 0.24 per 100 patient encounters)				1.0	
						Dipyridamole	1.0	
			¥			Phenytoin	1.1	
Reasons for encounter						Ramipril	0.9	
(n=1920, 16	-	ke encounters)	<i>(</i> 1)					
.	•	0 stroke enco						
	rebrovascula	r accident	17.7			Other treatments		
Prescriptions all*			16.5			(n=279, 24 per 100 stroke problems)		
Encounter initiated by provider			8.5			Rate per 100 stroke	-	
General check up*			8.4			Counselling problem*	5.8	
Cardiac check up*			8.1			Advice/education*	3.7 2.3	
Test results*			5.5			Advice/education medication* Administration document*		
Administrative procedure			4.3					
Follow up cardiovascular			4.0			Physical medicine/rehabilitation*	2.1	
Cerebrovascular disease			4.0		•			
Hypertens	Hypertension 3.6				Refe	rrals		
Other are		a a d		v	(n=16	1, 14 per 100 stroke problems)		
Other problems managed (n=1265, 108 per 100 stroke encounters)					Rate per 100 stroke problems ^(c)			
(n=1265, 10			roke encounters ^(b)		Neurologist		2.1	
		ate per 100 st			Physiotherapist		1.4	
Hypertens				19.6	¥			
Diabetes*				7.3	Pathology			
Lipid disorders*				6.6		er 100 stroke problems)		
Depression*				4.9	(02)/20 pt	Rate per 100 stroke	probleme ^(c)	
Oesophageal disease				2.8	Coagulatio	7.9		
Sleep disturbance				2.5	Full blood	3.8		
lschaemic heart disease*				2.4	Lipids		2.9	
Immunisation all*				2.1	Electrolytes/urea/creatinine			
Atrial fibrillation/flutter				2.1				
Dementia 2.1					Imaging			
					(n=76, 6 per	100 stroke problems)		
			ch sex and age g			Rate per 100 stroke	problems ^(c)	
 Expressed as a rate per 100 encounters 					ain/head	3.8		
) Expressed as a rate per 100 stroke pro			blems managed	ł	X-ray chest		0.8	

* Includes multiple ICPC-2 and ICPC-2 PLUS codes

Figure 1. Content of encounters at which stroke was managed