

Variation in levels of uptake of Enhanced Primary Care item numbers between rural and urban settings, November 1999 to October 2001

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Abstract

We aimed to report on variation in levels of uptake of enhanced primary care item numbers between rural and urban Divisions of General Practice between November 1999 and October 2001. Most providers of EPC services and most services (close to 70%) are located in capital cities and other metropolitan centres. The average number of health assessments done per provider was slightly lower (8-14) in remote than urban and rural (20-30) areas. A similar pattern was observed for care plans, but rates of case conferences were similar in rural and urban areas. However, adjusted for population aged 75 years and over, in all jurisdictions except South Australia, between 30% and 144% more health assessments were done per full time equivalent general practitioner (FTE GP) in rural divisions. For rural and urban Divisions of General Practice, there is a wide range in the rate of services provided, between and within Divisions. However, overall, more services are provided per FTE GP in rural Divisions.

The Enhanced Primary Care package

The Enhanced Primary Care (EPC) package was launched by the Federal Government in the 1999 budget. The aim of the EPC package is to improve the health and the quality of life of older Australians, of people with chronic conditions, and of those with multidisciplinary care needs (Commonwealth Department of Health and Aged Care, 1999). The EPC package comprises a range of initiatives including additional coordinated care trials, chronic disease self-management demonstration projects, establishment of Carelink, and the introduction of new EPC items on the Medicare Benefits Schedule (MBS).

The EPC MBS items allow general practitioners (GPs) to undertake or participate in activities that support the broad aims of the EPC package. Specifically these activities comprise health assessments for older people, care planning for patients with chronic, complex and on-going care needs, and also multi-disciplinary case conferencing (Commonwealth Department of Health and Aged Care, 1999).

We have previously reported, in the first five papers in this series, on trends in uptake of items for health assessments (HAs), care plans (CPs) and case conferences (CCs); on variation in uptake between Divisions of General Practice; on characteristics of patients who have had EPC services and general practitioners who have provided these services; and on the variation in levels of uptake of EPC services between medical practices across Divisions of General Practice, and jurisdictions (Wilkinson 2002 a-e). Here we report on rural-urban differences in rates of EPC service provision.

Methods

Data source and EPC services, patient and practitioner details

The main methods are as reported in the first paper in this series (Wilkinson 2002a). Additional methods relevant to this paper are included below.

Analyses

Data on the number of providers and services are stratified by RRMA (rural, remote and metropolitan areas) zone (Department of Primary Industries and Energy, 1994), the most commonly used measure of rurality and remoteness. We also used the newer ARIA (accessibility and remoteness index of Australia) to examine whether patterns differ accordingly to classification system (<http://www.gisca.adelaide.edu.au/>).

Poisson regression was used to determine the ratio of HA per FTE GP in rural divisions to urban divisions, for each state. Only HAs done in Practice Incentive Program (PIP) registered practices (211,982) were included as we only had data on the number of full time equivalent (FTE) general practitioners (GP) for these practices. The analysis was also adjusted for the population aged 75 or older in each jurisdiction. We excluded the Australian Capital Territory (no rural Divisions) and the Northern Territory and Tasmanian (no urban Divisions).

We also report on the uptake of HAs and CPs for each medical practice across urban and rural divisions (ranked highest to lowest) standardised per FTE GP, as the median value and the interquartile range.

Results

As shown in Table 1, most providers of EPC services, and hence most EPC services (close to 70%) are located in capital cities and other metropolitan centres. This is true for HAs, CPs, CCs and all EPC services combined. It is notable that for CCs the proportion in these urban areas is about 10% lower than the other services.

The average number of HAs provided per GP was between 20 and 30 in each RRMA zone, except for "remote central" and "other remote" where it was lower (8-14). A similar pattern was observed for CPs but not for CCs where the average number of services per provider was similar across all zones. A similar pattern of provision was observed when remoteness was measured by ARIA (data not shown).

In all jurisdictions, except South Australia and Victoria, the average number of HAs done per FTE GP was higher among rural Division of General Practice than among urban Divisions (Table 2; unadjusted rate ratio), by between 10-30%. However, once adjusted for the number of people aged over 75 years, this difference was greater still, and only in South Australia was there no significant difference in the rates. In the other jurisdictions, the rural rate was between 31% (Queensland) and 144% (Western Australia) higher (Table 2; adjusted relative risk).

Figure 1 and Figure 2 show for HAs and CPs respectively the distribution of the median number (and interquartile range) of services provided per FTE GP in rural and urban Divisions. Patterns for each service in rural and urban areas are similar in that a small number of Divisions have much higher rates than do the rest. Also, within each Division there is substantial variation in the number of services provided per FTE GP (indicated by a wide interquartile range). For both HAs and CPs, overall the median number of services is higher in rural than urban Divisions.

Discussion

These analyses show that, as expected, most GPs providing EPC services, and hence most EPC services, are located in the metropolitan areas of Australia. The average number of health assessment and care plan services rendered by each provider tends to be higher in urban areas than remote areas, but the absolute differences are modest.

Expressed as the number of services provided per FTE GP there is notable variation across states. This difference favours rural Divisions of General Practice within each state (except for South Australia where there is no rural-urban difference). The rural-urban difference is 31% in Queensland and reaches 144% in Western Australia. For Australia as a whole, rural uptake of health assessments is 36% higher than urban uptake (per FTE GP). These observations are confirmed when scatter plots of rates of uptake of HAs and CPs in rural and urban sites are compared (Figures). In both rural and urban Divisions there is a marked gradient in rates of uptake across Divisions of General Practice, and there is marked variation within each Division. However, the overall level of uptake is seen to be higher in rural Divisions.

Rural health inequalities have been well documented in Australia (Australian Institute of Health and Welfare, 1998) and are characterised by higher morbidity and mortality rates, and lower access to services (Bamford et al, 1999). Why then do rural communities seem to be better served in terms of EPC services?

There are several possible reasons and we will be seeking to explore these in our fieldwork. Firstly, it may be that rural Divisions of General Practice have been more effective at promoting the EPC program to their members. However, the wide variation in rates of uptake within rural Divisions (very similar to variation within urban Divisions) suggests this may not be the case. Rather, the explanation may be at the practice or GP level. It is possible that rural GPs are better connected with local community health and related services than are many urban GPs. These stronger networks would make it easier for GPs to engage or employ nurses and allied health workers to help deliver EPC services. Small rural communities, almost by definition, allow closer and easier channels of communication to be established across different parts of the health service. Commonwealth funded programs such as support for rural practices to employ nurses in the general practice setting would also enable more EPC services to be provided. Some rural GPs may be more entrepreneurial or more ready to take up new service opportunities. It is also quite possible that rural people are more accepted of and used to primary care teams.

It is encouraging that rural parts of Australia have not been disadvantaged in terms of EPC uptake in the first two years of the program.

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Table 1. RRMA zone of doctor at time of rendering Enhanced Primary Care service

Health Assessments											
RRMA	Number of providers	% Providers	Number of services	% Services	Average	SD	Min	Max	Median	Q1	Q3
Capital	5,975	60.8	140,460	62.3	23.5	37.3	1	361	9	3	27
Other Metro	867	8.8	24,577	10.9	28.3	39.8	1	343	13	4	37
Large Rural	726	7.4	16,742	7.4	23.1	35.2	1	268	9	3	29
Small Rural	769	7.8	16,799	7.5	21.8	33.8	1	284	9	3	25
Other Rural	1,322	13.5	24,927	11.1	18.9	29.3	1	245	8	3	21
Remote Central	64	0.7	531	0.2	8.3	13.4	1	72	3	1	8
Other Remote/ Offshore	97	1.0	1,317	0.6	13.6	18.8	1	102	6	1	16
Total	9,629*	100.0	225,353	100.0	23.4	36.3	1	361	9	3	28

Care Plans											
RRMA	Number of providers	% Providers	Number of services	% Services	Average	SD	Min	Max	Median	Q1	Q3
Capital	3,495	60.3	84,582	62.8	24.2	62.9	1	1,712	6	2	21
Other Metro	500	8.6	13,170	9.8	26.3	65.0	1	558	8	2	24
Large Rural	426	7.4	8,699	6.5	20.4	54.0	1	466	5	1	16
Small Rural	484	8.4	12,305	9.1	25.4	71.5	1	956	6	2	21
Other Rural	765	13.2	14,091	10.5	18.4	40.0	1	595	5	2	18
Remote Central	44	0.8	606	0.4	13.8	24.0	1	132	3	2	16
Other Remote/ Offshore	78	1.3	1,235	0.9	15.8	31.2	1	218	6	2	14
Total	5,728*	100.0	134,688	100.0	23.5	60.6	1	1,712	6	2	20

Case Conferences											
RRMA	Number of providers	% Providers	Number of services	% Services	Average	SD	Min	Max	Median	Q1	Q3
Capital	1,669	55.1	6,075	53.4	3.6	9.8	1	223	1	1	3
Other Metro	167	5.5	640	5.6	3.8	6.7	1	49	2	1	4
Large Rural	236	7.8	667	5.9	2.8	3.9	1	41	1	1	3
Small Rural	276	9.1	1,051	9.2	3.8	7.4	1	70	2	1	3
Other Rural	576	19.0	2,334	20.5	4.1	7.7	1	75	2	1	4
Remote Central	35	1.2	114	1.0	3.3	4.8	1	27	1	1	3
Other Remote/ Offshore	71	2.3	485	4.3	6.8	11.8	1	89	4	1	8
Total	3,015*	100.0	11,366	100.0	3.8	8.8	1	223	1	1	3

Total EPC											
RRMA	Number of providers	% Providers	Number of services	% Services	Average	SD	Min	Max	Median	Q1	Q3
Capital	7,102	60.9	231,117	62.2	32.5	66.3	1	1,756	10	3	33
Other Metro	948	8.1	38,387	10.3	40.5	74.1	1	712	15	3	47
Large Rural	844	7.2	26,108	7.0	30.9	63.1	1	692	10	3	34
Small Rural	919	7.9	30,155	8.1	32.8	71.8	1	1,063	10	3	35
Other Rural	1,600	13.7	41,352	11.1	25.8	49.9	1	682	9	3	26
Remote Central	99	0.8	1,251	0.3	12.6	27.2	1	231	3	1	12
Other Remote/ Offshore	150	1.3	3,037	0.8	20.2	37.2	1	290	7	2	23
Total	11,388*	100.0	371,407	100.0	32.6	65.5	1	1,756	10	3	34

RRMA - rural, remote and metropolitan areas classification

* The total number of providers is less than the sum of the providers in each RRMA zone, as some GPs practiced in more than one zone during the 2 years.

Table 2. Differences in the rate of uptake of health assessments per full-time equivalent general practitioner in urban and rural Divisions

State	HA per FTE GP			Unadjusted			Adjusted for population aged 75+			
	Rural	Urban	RR (Rural v Urban)	Lower 95% CI	Upper 95% CI	p-value	RR	Lower 95% CI	Upper 95% CI	p-value
ACT	NA	6.85	NA				NA			
NSW	22.85	19.64	1.163	1.143	1.183	<.0001	1.723	1.687	1.759	<.0001
NT	6.72	NA	NA				NA			
Qld	20.34	16.34	1.245	1.219	1.272	<.0001	1.308	1.280	1.337	<.0001
SA	19.41	27.36	0.709	0.687	0.733	<.0001	1.006	0.961	1.054	0.7893
Tas	19.42	NA	NA				NA			
Vic	20.27	20.71	0.979	0.960	0.997	0.0244	1.311	1.279	1.345	<.0001
WA	22.44	13.41	1.673	1.615	1.733	<.0001	2.444	2.312	2.584	<.0001
Australia (adjusted for jurisdiction)	20.82	19.21	1.093	1.083	1.104	<.0001	1.359	1.343	1.374	<.0001

NA - not applicable. RR - rate ratio.

Figure 1. Comparison of uptake of health assessments for urban and rural Divisions (median number of services and interquartile range, per full time equivalent general practitioner across medical practices)

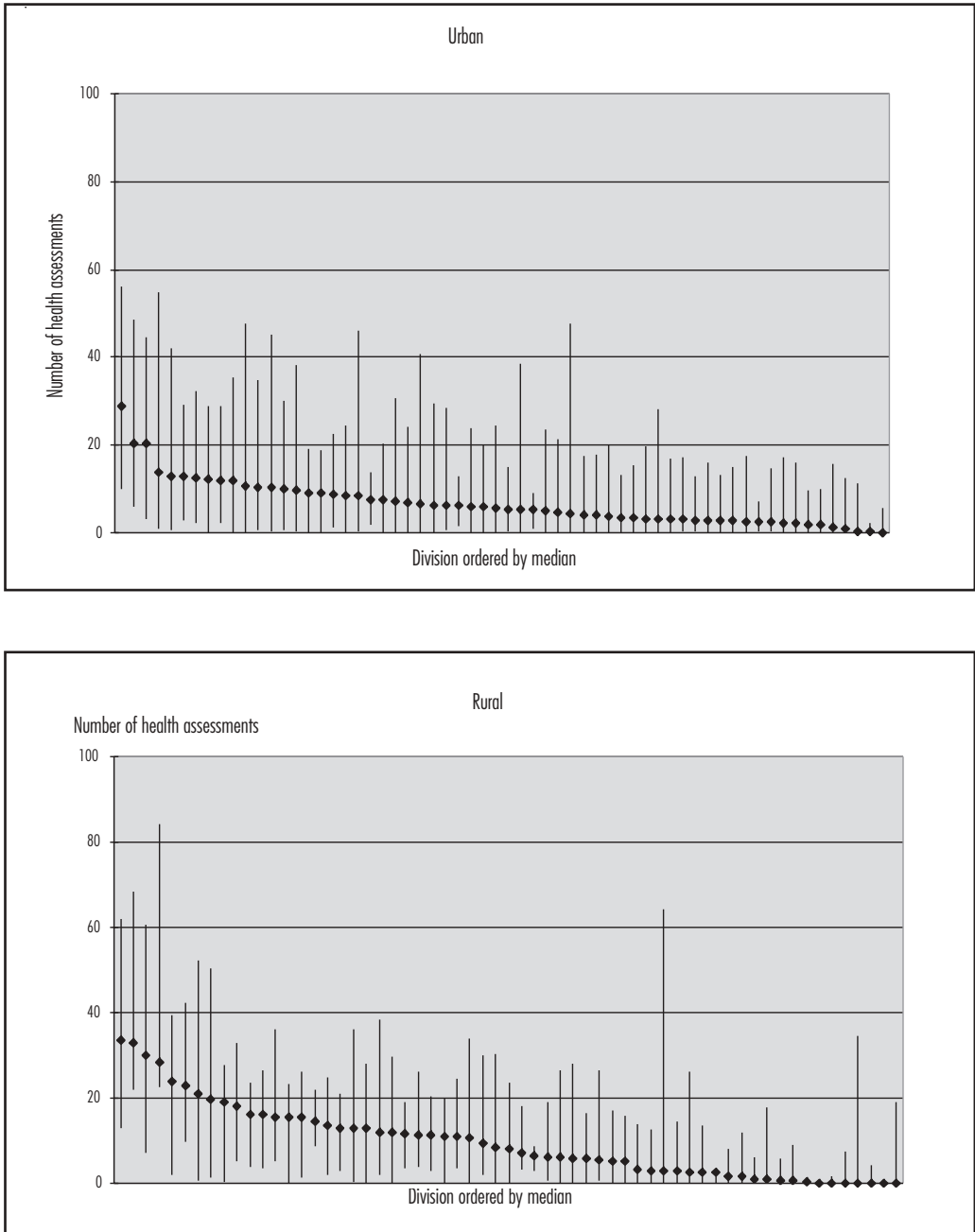


Figure 2. Comparison of uptake of care plans for urban and rural Divisions (median number of services and interquartile range, per full time equivalent general practitioner across medical practices)

