

The impact of the Medical Specialist Outreach Assistance Program on improved access to specialist services for regional and remote Australia

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Acknowledgment: The national evaluation reported on in this paper was supported through funding provided by the Australian Government Department of Health and Ageing.

Abstract

People living in rural and remote populations tend to have poorer health care status, and thus have higher health care needs. However, they have less access to health care services, including specialist medical care and optometry. The Medical Specialist Outreach Assistance Program (MSOAP) and the Visiting Optometrists Scheme (VOS) were established to address these issues. This paper reports on the results of a national evaluation of MSOAP and VOS undertaken in 2011, with a specific focus on estimates of the impact of MSOAP on access to specialist care.

The national evaluation had a broader set of aims including to assess effectiveness, efficiency and equity impacts of the programs, identify opportunities for improving coordination and streamlining of administration, and examine the potential impact of health reform for both programs.

Evidence for the evaluation was gathered through:

- reviewing of program documentation and literature
- analysis of program and other data
- interviews with stakeholders across Australia
- reviews of written submissions from stakeholders
- a survey of clinical service providers supported through MSOAP or VOS
- case studies of eight localities across Australia.

The evaluation concluded that MSOAP is having a material impact on access to specialist services for rural and remote Australia. Overall, it is estimated that MSOAP has reduced the gap in access to specialist service between major cities and rural and remote Australia by 0.4-0.7 percentage points for inner regional areas, 1.9-2.9 percentage points for outer regional, 2.0-2.9 percentage points for remote and 9.0-13.8 percentage points for very remote. In addition to improving access, the program has other benefits, such as, maintaining continuity of care and promoting shared care between primary and specialist providers.

Conceptually, alternatives to outreach care include patient assisted travel, telemedicine and 'primary care only' care. In practice these modalities are not direct substitutes, and a mix of approaches for improving access is feasible. It was concluded that, in general, outreach specialist care represented a cost effective alternative to patient assisted travel. The impact of the program on health status could not be assessed.

Introduction

People living in rural and remote regions of Australia tend to have poorer health care status, and thus have higher health care needs. However, these populations also have lower levels of access to health care services, including specialist medical care and optometry. The Medical Specialist Outreach Assistance Program (MSOAP), which was established in 2000-01, and the Visiting Optometrists Scheme (VOS), which was established in 1975, are two national schemes designed to improve access to these service providers in rural and remote Australia. Under the schemes, financial assistance is provided for service

providers to travel to rural and remote localities on a regular basis, to deliver outreach services to the local population.

The Commonwealth Department of Health and Ageing (DoHA) commissioned a consultancy group to undertake a national evaluation of these schemes, which was conducted and completed in 2011.¹ This paper reports on some of the conclusions of the national evaluation related to MSOAP. Issues associated with outreach optometry services are to be addressed in a separate paper.

Factors impacting of supply medical specialists

Across Australia, specialist medical services are provided by private medical practitioners working in private practice and by specialists and registrars employed by public hospitals. The main method through which private practice specialists receive income is through the Medicare Benefits Scheme (MBS), although this is supplemented by out of pocket payments by patients and private health insurance gap payments. Some out of hospital service are provided by specialists and registrars supported by public hospital funding, but data on the level and extent of these is very poor.

Mainstream arrangements for financing and providing specialist medical care create structural imbalances between people’s access to private specialists in metropolitan, rural and remote areas. In smaller localities, the financial viability of private specialist practice is challenging. Hospital services are limited in their capacity to manage more complex patients or initiate procedures normally provided by specialists. Professional and social reasons also impact on decisions by specialists on where to locate their practice.

A consequence is that access to private specialist medical services is significantly lower in rural and remote regions. This access differential can be demonstrated through analysis of MBS expenditure data and data on the medical workforce. Table 1 shows that the relative level of per capita expenditure on selected specialist medical services is different in remote areas compared with major cities. Levels of specialist related MBS expenditures are generally lower in regional centres and are even lower for remote and very remote regions. For specialist services provided out of hospital, per capita services are 82% in inner regional areas of major cities (after adjusting for age), falling to 38% in very remote regions.

Table 1 Relative ratio of per capita MBS services provided by remoteness area of residence of Medicare beneficiary, 2006–07

	Out of hospital specialist services		In and out of hospital specialist services		Optometry services	
	Per capita	Age adjusted	Per capita	Age adjusted	Per capita	Age adjusted
Major cities	1.00	1.00	1.00	1.00	1.00	1.00
Inner regional	0.86	0.82	0.86	0.81	1.04	0.98
Outer regional	0.72	0.70	0.71	0.68	0.97	0.93
Remote	0.47	0.50	0.48	0.51	0.76	0.79
Very remote	0.33	0.38	0.32	0.38	0.59	0.67
Australia	0.93	0.92	0.93	0.92	1.00	0.98

Source: Adapted from Australian Institute of Health and Welfare ² Tables 4.17, 5.2, B31, B38, B17, B29. Rates for specialist services were summed across the categories of Specialist, Obstetrics and Operations.

Notes: For this table, the number of services per capita was calculated for each remoteness area, and then expressed as a ratio of the per capita rate for major cities. Age adjusted ratios reflect the rates per 1,000 people age adjusted calculated by the AIHW using the indirect age standardisation method.

Table 2 presents data on the remoteness area specialist’s main work location. These will not account for inter-regional flows of patients, nor the effect of ‘outreach’ services. In addition the rates are not adjusted for the age profile of the population. Nevertheless they show a similar pattern of declining access with greater remoteness. Compared with major cities, the supply of specialists in inner regional

areas in 2011 is just under 50% of that of major cities, dropping to a 33% in outer regional areas, and a 25% in remote and very remote areas. The relative supply of specialists-in-training is even lower for regional and remote areas. There has been no meaningful improvement between 2007 and 2011.

Table 2 Medical workforce full time equivalent (FTE) per 100,000 people by remoteness area practitioners' main work location, 2007 and 2011

	Specialists				Specialists in training			
	Rate		Ratio to major cities		Rate		Ratio to major cities	
	2007	2011	2007	2011	2007	2011	2007	2011
Major cities	130.8	148.7	1.00	1.00	63.4	85.2	1.00	1.00
Inner regional	61.4	73.0	0.47	0.49	18.7	30.9	0.29	0.36
Outer regional	43.3	49.4	0.33	0.33	13.6	30.1	0.21	0.35
Remote & very remote	32.2	36.9	0.25	0.25	13.1	18.5	0.21	0.22
Australia	114.9	122.5	0.88	0.82	52.2	68.3	0.82	0.80

Source: Adapted from Australian Institute of Health and Welfare ³ Tables 5.1, 5.2, 5.3, 5.4

Notes: FTE is based on a standard full-time working week of 40 hours.

Medical Specialist Outreach Assistance Program

One option for addressing these imbalances is to support the provision of outreach specialist services. Prior to 2000, specialist outreach services in Australia existed under a variety of arrangements, often reliant on individual clinicians taking the initiative to respond to needs. The outreach services were financially supported through the specialists' private practice, public hospitals or non-government organisations. There was limited planning of outreach services and significant gaps. The extent of outreach services undertaken at the time is unknown.

MSOAP was established in 2000 with the aim of increasing access to specialist services for people living in rural and remote regions of Australia. In the last three years (2009-2012), there have been three expansions made to the program for *Indigenous Chronic Disease*, *Maternity Services* and *Ophthalmology*. The expansions provide targeted support in specific areas, and also extend eligibility for people to access to GPs, nurses and allied health practitioners under certain circumstances. MSOAP expenditures have grown from around \$12.4m in 2001-02 (the first full year of operation of the program) to \$27.6m in 2010-11, and \$42.8 million in 2011-12. The major expansion in the program in 2011-12, was in the *Indigenous Chronic Disease* component which was planned to increase to \$19.5m in that year.

MSOAP is largely managed by fundholder organisations that are commissioned to manage the contractual relationships with medical specialists and organisations providing outreach services. For most states there is one 'fundholder' organisation, but in two states there are two fundholders. Amongst other functions, fundholders are required to undertake planning, recruitment and contracting with specialists (or organisations) to provide outreach services, and manage payment and accountability arrangements. All decision on services to be funded are made by DoHA officers, on advice from advisory committees which have been established in each state and the Northern Territory.

Once an outreach service is approved, a specialist or organisation will undertake outreach visits, then obtain reimbursement for specific costs associated with the outreach visit from the fundholder. In most circumstances, the reimbursed costs do not cover costs associated with the specialist consultation itself. These costs are typically met through a claim on Medicare or through salaries paid by a public hospital. The program reimburses eligible costs related to the additional costs associated with the outreach visit, such as travel and accommodation.

Literature

Two systematic reviews have considered the evidence concerning specialist outreach services. Powell⁴ reviewed UK studies of the benefits of holding specialist outreach clinics in primary care settings based.

Gruen, Weeramanthri, et al.⁵ conducted a systematic review of “[r]andomised trials, controlled before and after studies, interrupted time series analyses of visiting specialist outreach clinics in primary care or rural hospital settings”⁵. These authors identified nine studies which met the criteria for inclusion, of which two related to rural settings⁶⁻¹⁰ [_ENREF_5](#) and seven to urban settings.¹¹⁻²³ Several more recent comparative studies have examined regular surgical, ophthalmological, gynaecological, and ear, nose, and throat outreach visits to remote communities in the Northern Territory (which were compared with hospital clinics alone)²⁴; specialist outreach services as one aspect of a complex intervention related to chronic disease management in the Torres Strait and other communities in Cape York;²⁵⁻²⁹ a visiting skin cancer clinic;³⁰ and service integration between ophthalmology and optometry in 10 case studies in rural and remote regions in Australia.^{31, 32}

Key conclusions from this literature are that outreach models can improve access to specialist care, improve health outcomes “to a clinically important degree”,³³ and improve efficiency. Efficiency effects identified principally related to health system costs “reducing duplication and unnecessary referrals and investigations”,³³ although reduced costs faced by patients and families are also mentioned. The literature also highlights the potential benefits of outreach services in improving coordination and communication between primary and specialist care^{4, 33}. Gruen, Weeramanthri, et al. observe that outreach services seem “to facilitate engagement between specialists and primary care practitioners, although such engagement cannot be presumed...”. [_ENREF_33](#) They emphasise that to be effective outreach services rely on adequately functioning primary care services. Outreach required investment of additional resources by service providers and health systems compared with hospital based care, but “these extra costs may be at least partly offset by reduced costs for the patient and greater cost-effectiveness of multifaceted interventions”.³³

Methods

For the national evaluation, the evaluators were required to assess the effectiveness and efficiency of MSOAP and the Visiting Optometrists Scheme (VOS), the impact on equity, and opportunities for improved administrative efficiency and coordination of services between the schemes.¹ Evidence for the evaluation was gathered through a range of sources including:

- reviewing of program documentation and literature
- analysis of program and related data
- interviews with stakeholders across Australia
- reviews of written submissions from stakeholders
- a survey of clinical service providers supported through MSOAP or VOS
- case studies of eight localities across Australia.¹

This paper focuses on the results of the analysis of the program data, but draws on some of the other data sources to supplement the understanding of these data and estimate particular parameters. These other sources of evidence provided a rich understanding of outreach services and communities served, but are not the explicit focus of this paper.

Program data was obtained from DoHA for the MSOAP Core program for the period 2005-06 to 2009-10 and for the prior years from an earlier evaluation of MSOAP.³⁴ These data were de-identified aggregate data reflecting numbers of planned outreach visits to particular locations and the actual total number of patients consulted during these visits. The focus of the analysis was on data for the core program, as the *Indigenous Chronic Diseases* subprogram commenced during the 2009-10 financial year with only a small number of funded services becoming operational immediately. Program data included details of:

- Approved outreach services, the schedule of agreed outreach visits to be conducted by the clinical specialist, the locality to be visited, the budget and the actual level of funds provided to for the

service. Unfortunately the program data did not including information on the actual number of visits undertaken for a particular approved service. For analysis purposes, the specialty of the medical practitioner was grouped by one of 18 categories (Table 4). Localities were grouped to AGSC remoteness areas.

- Actual number of patients consultation undertaken (split by Indigenous status). This was an aggregated total for each approved service (not at the visit level). It was based on returns prepared by visiting specialists and supplied to fundholders after outreach visits had been undertaken. These data reflect the actual rather than the planned number of patients consulted.

An extract of summary Medicare data was obtained from DoHA on services and benefits paid related to specialist medical practitioners by AGSC remoteness area and broad area of MBS expenditure for the period 1999-2000 to 2009-10 (see appendix A for definitions). These data include a flag related to whether the claim was for a patient in hospital or out of hospital. The analysis focused on out of hospital services. Rates of services per 1,000 population were calculated using resident population estimates from the Australian Bureau of Statistics.³⁵

Results

Table 3 presents data on planned (forecast) number of visits and actual numbers of patient consultations undertaken by MSOAP supported services in 2009-10. In that year an estimated 10,392 visits were forecast to occur and consultations with around 164,700 patients were reported of whom 21,600 (13%) were Aboriginal and Torres Strait Islander people. Indigenous patients represent 2% of patients in inner regional, 3% in outer regional, 21% in remote and 55% in very remote localities.

The average level of MSOAP funding per patient consultation in 2009-10 is estimated at \$93. This ranged from \$71 per patient consultation in inner regional locations to \$157 in very remote regions. Including administration costs, the average MSOAP cost per patient consultation was estimated to be \$112, with \$13 per patient consultation associated with fundholder administration and \$5 per patient consultation associated with DoHA administration (Figure 1). This ranged from \$86 per patient consultation in inner regional areas to \$190 per patient consultation in very remote areas.

In that year, the average specialist consultation medical benefit payment per consultation was around \$69 and average patient out of pocket contribution \$30, totalling \$99 per consultation.³⁶ Therefore, on average, MSOAP direct costs are around 112% of the consultation fee, but around 160% of the consultation fee in very remote areas.

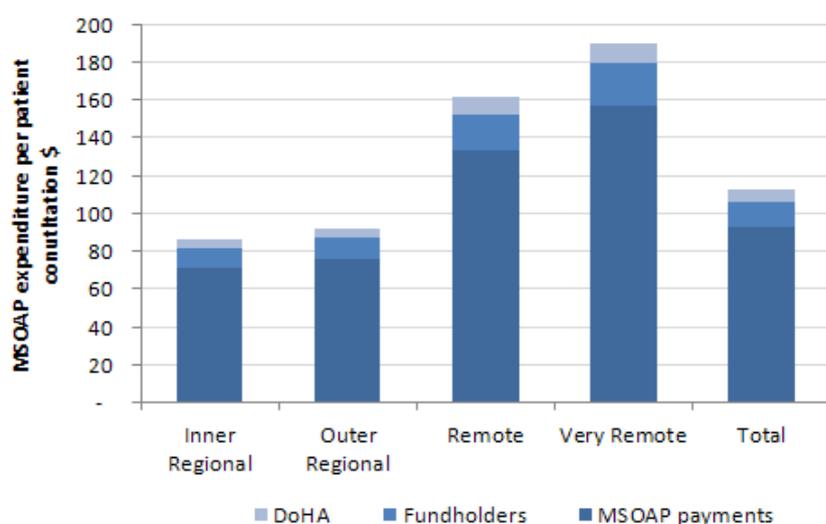
Estimated cost per visit and patient consultation varied significantly across the speciality of medical practitioner supported as shown in Table 4, reflecting the nature and length of consultations undertaken during an outreach visit.

Table 3 Forecast number of visits, number of patient and number of Aboriginal and Torres Strait Islander patients, by ASGC remoteness areas, MSOAP Core, 2009-10

	MSOAP Visits supported (forecast)	Number of patient consultations	Number of Indigenous patient consultations	% Indigenous	MSOAP subsidy per visit	MSOAP subsidy per patient consultation
Inner Regional	2,421	45,786	927	2%	1,395	71
Outer Regional	5,207	78,431	2,506	3%	1,197	76
Remote	834	11,667	2,463	21%	1,917	134
Very Remote	1,930	28,777	15,722	55%	2,417	157
Total	10,392	164,661	21,618	13%	1,528	93

Source: HPA analysis of MSOAP program data

Figure 1 Estimated total expenditure per patient consultation, MSOAP program 2009-10



Source: HPA analysis of MSOAP program data

Table 4 Estimated MSOAP funded cost per visit and cost per patient by speciality of practitioner supported, MSOAP Core, 2009-10

	MSOAP Services	Visits (forecast)	Total patient consultations	% Indig.	Forecast \$ per visit	Actual \$ per patient consult.
	n	n	n	%	\$	\$
01. Physician - General	98	914	10,784	20%	1,196	105
02. Physician - Cardiologist	55	427	9,354	12%	1,686	83
03. Physician - Endocrinology	48	310	5,215	20%	1,989	112
04. Physician - Oncology	10	249	3,654	1%	964	55
05. Physician - Palliative	64	233	1,983	2%	2,251	227
06. Physician - Geriatrics	31	357	1,326	4%	1,391	256
07. Physician - Other	142	1,370	25,270	5%	1,551	83
08. Paediatrician	154	1,199	13,322	29%	1,087	89
09. Dermatologist	60	415	17,141	3%	2,236	56
10. Ophthalmology	98	478	17,509	15%	2,101	53
11. Obstetrics and Gynaecology	120	758	9,882	23%	1,182	92
12. Surgeon - Orthopaedics	34	341	7,414	9%	1,245	60
13. Surgeon - ENT	50	285	7,375	26%	2,686	85
14. Surgeon - Other	102	1,064	18,587	6%	994	60
15. Psychiatry - Child & Adolescent	62	260	1,338	20%	1,830	343
16. Psychiatry - Other	177	1,512	13,416	17%	1,987	218
17. Other	27	67	176	16%	2,978	na
18. Telemedicine	11	na	1,125	23%	na	88
Total	1,343	10,239	164,871	13%	1,561	93

Source: HPA analysis of MSOAP program data

To estimate the impact of MSOAP on access to specialist services, an analysis was undertaken of services supported through medical benefits and the number of patient consultations reported under MSOAP.

Table 5 shows the number of specialist consultations for which an MBS benefit was paid by the AGSC remoteness areas for 1999-2000 to 2009-10. Overall, there were 24.8m out of hospital consultations with specialists for which a Medicare benefits was paid in 2009-10, involving benefit payments of just over \$2b. These reflect a rate of around 1,122 consultations per 1,000 persons per year.

Using the utilisation rate for major cities as a reference, access to specialist services, even with this outreach program initiative, are lower for rural and remote areas. In 2009-10, rates for inner regional areas are around 89% of major cities, outer regional are 75%, remote 49% and very remote 36%.¹ Between 1999-2000 and 2009-10, the gap between major cities and inner regional areas has narrowed (from 80% to 89%) outer regional areas (69% to 75%) and very remote areas (33% to 36%). It has remained almost the same for remote areas (48% to 49%).

Table 5 also shows the reported number of patient consultations supported through MSOAP over the period 2005-06 to 2009-10.

Table 5 Out of hospital specialist services for which an MBS payment was made and services per 1,000 population by remoteness areas, 1999-2000 to 2009-10

Remoteness Area:	Financial year ended 30 June:										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<i>Specialist services for which an MBS payment was made '000</i>											
Major Cities	15,858	15,974	16,154	16,258	16,369	16,771	16,987	17,126	17,333	17,913	18,082
Inner Regional	3,631	3,678	3,709	3,808	3,928	4,076	4,150	4,236	4,346	4,532	4,636
Outer Regional	1,558	1,563	1,578	1,595	1,623	1,667	1,695	1,709	1,757	1,828	1,857
Remote	182	179	176	178	177	179	180	180	181	189	189
Very Remote	67	67	67	67	65	66	66	65	70	74	75
Australia	21,296	21,462	21,685	21,905	22,161	22,760	23,078	23,316	23,686	24,536	24,839
<i>Specialist services per 1000 persons</i>											
Major Cities	1,190	1,199	1,212	1,203	1,196	1,210	1,208	1,198	1,188	1,202	1,189
Inner Regional	948	961	969	982	1,000	1,022	1,024	1,028	1,035	1,058	1,062
Outer Regional	823	826	833	838	848	864	868	863	874	894	895
Remote	577	569	560	564	561	571	573	569	567	585	581
Very Remote	394	394	396	397	387	393	397	389	407	428	429
Australia	1,090	1,099	1,110	1,108	1,107	1,123	1,123	1,116	1,113	1,129	1,122
<i>Specialist services per 1,000 relative to major cities (Major cities = 100)</i>											
Major Cities	100	100	100	100	100	100	100	100	100	100	100
Inner Regional	80	80	80	82	84	85	85	86	87	88	89
Outer Regional	69	69	69	70	71	71	72	72	74	74	75
Remote	48	47	46	47	47	47	47	47	48	49	49
Very Remote	33	33	33	33	32	33	33	32	34	36	36
Australia	92	92	92	92	93	93	93	93	94	94	94
<i>Number of patient consultations supported under MSOAP '000</i>											
Major Cities	-	-	na	na	na	na	-	-	-	-	-
Inner Regional	-	-	na	na	na	na	33	38	42	47	46
Outer Regional	-	-	na	na	na	na	63	87	88	89	78
Remote	-	-	na	na	na	na	10	11	11	10	12
Very Remote	-	-	na	na	na	na	29	27	27	27	29
Australia	-	-	na	na	na	na	134	164	168	172	165

Source: Health Policy Analysis of Medicare Data Extract and MSOAP program data

¹ The data available for the analysis were not age adjusted. However, the potential impact of age adjustment can be obtained from Table 1. Our assessment was that age adjustment would not have a material impact on the assessment of trends, and also in terms of the estimates of the impact of MSOAP. Age adjustment tends to narrow the gap between remote and very remote areas and major cities, and widen the gap for inner and outer regional areas.

An important question is: to what extent has MSOAP contributed to the narrowing of these gaps between major cities and regional and remote Australia, or prevented their widening? In addressing this question, a model was developed to estimate the impact of MSOAP supported services. The model examined the potential impact taking into account the available data and possible values for two key parameters, as described below:

1. The first parameter concerned the level of MSOAP supported consultations which are not billed to Medicare. Two approaches were modelled. Approach A assumed that all MSOAP supported services are represented in the Medicare claim statistics. Approach B assumed different levels of claiming across remoteness areas (see Table 6) ranging from 90% in inner regional areas 90% to 30% in very remote areas. This range was based on discussions with stakeholders and analysis of a survey of MSOAP providers conducted for the evaluation. Option B is considered the better estimate of current practice.

Table 6 Alternative assumptions related to the proportion of MSOAP supported services which attract an MBS payment

Remoteness Area:	Proportion of MSOAP supported services that attract an MBS	
	Approach A	Approach B
Inner Regional	0%	90%
Outer Regional	0%	80%
Remote	0%	50%
Very Remote	0%	30%

The model did not include an estimate of services provided by public hospitals based specialists and registrars which are not billed to Medicare and are not supported through MSOAP are therefore not represented in either the MSOAP or Medicare data. It was considered that there was no reasonable basis for including this estimate and that the impact would not materially affect the conclusions.

2. A second parameter was the extent to which outreach services would continue to be provided in the absence of MSOAP support. The behaviour of the health system in the absence of MSOAP cannot be observed. Therefore alternative assumptions were modelled. As a baseline it was assumed that 30% of MSOAP services would continue to be provided in the absence of support from MSOAP. However, given the differences in cost to service providers across remoteness areas, it was reasoned that that the willingness to continue outreach services would also vary across remoteness areas and a range of values were considered (see Table 7).

Table 7 Alternative assumptions related to the proportion of outreach services that would continue in the absence of MSOAP

Remoteness Area:	Proportion of services that would continue in absence of MSOAP:				
	Approach A	Approach B	B1	B2	B3
Inner Regional	30%	30%	20%	30%	50%
Outer Regional	30%	30%	10%	20%	40%
Remote	30%	30%	5%	10%	35%
Very Remote	30%	30%	0%	5%	35%

Using these parameters the impact of MSOAP on improved access was modelled. Table 8 presents estimates of the impact of MSOAP using two measures of access to specialist services. The first is the extent to which MSOAP contributes to reducing the deficit in access to specialist services, relative to major cities. Using this measure, MSOAP has a relative minor impact on the gap for inner regional areas (less than one percentage point), ranging up to 9 and 14 percentage points for very remote areas. A second measure is the percentage increase in access to specialist services attributable to the program

within each remoteness area. Using this measure, the program increases access by less than 1% for inner regional areas, but by between 24% and 43% for very remote areas.

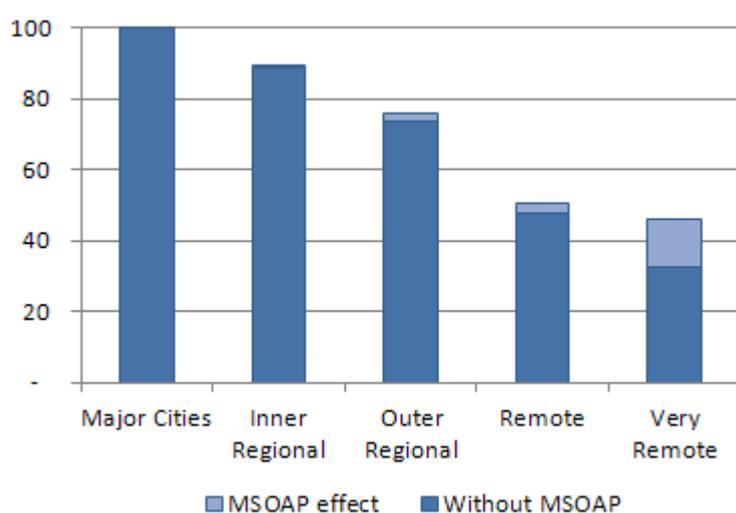
The results published in the MSOAP review were based on the baseline assumption for Approach B. However, based on our understanding of the program, it is considered that that Option B2 provides a better representation to the behaviour of the health system in the absence of the MSOAP program. The estimated impact using Option B2 is shown in Figure 2.

Another way of considering these impacts is to convert services supported under MSOAP into equivalent full time specialist staff. Based on data for 2009, it was estimated there was an average of 1,022 out of hospital consultations per specialist. Applying this ratio to the services supported under MSOAP, this suggests that the program supports the equivalent of 161 full time specialists for rural and remote communities in Australia, 45 for inner regional, 77 for outer regional, 11 for remote and 28 for very remote regions.

Table 8 Estimated impact of MSOAP services on access to specialist services, using alternative assumptions, 2009-10

Remoteness Area:	Approach A	Approach B	Approach B under alternative assumptions		
			B1	B2	B3
Estimated impact of MSOAP on ratio of specialist services relative to Major Cities (reduction in gap)					
Major Cities	-	-	-	-	-
Inner Regional	0.6	0.6	0.7	0.6	0.4
Outer Regional	2.2	2.2	2.9	2.5	1.9
Remote	2.1	2.1	2.9	2.7	2.0
Very Remote	9.7	9.7	13.8	13.1	9.0
Impact of MSOAP relative to rate of services in remoteness area					
Major Cities	0.0%	0.0%	0.0%	0.0%	0.0%
Inner Regional	0.7%	0.7%	0.8%	0.7%	0.5%
Outer Regional	3.0%	3.0%	3.9%	3.5%	2.6%
Remote	4.5%	4.4%	6.0%	5.7%	4.1%
Very Remote	36.6%	26.8%	43.2%	40.2%	24.4%

Figure 2 Estimated impact of MSOAP on access to specialist services—Option B2



Discussion

This paper has presented estimates of the impact of the MSOAP program on access to specialist services for regional and remote populations. The modelling presented suggests that the program is likely to have had a meaningful impact in improving access in remote, in particular very remote localities. The impact for inner regional and outer regional areas is less prominent, although, this is likely to disguise the impact for particular localities within regional Australia. These findings are consistent with the existing literature on outreach services, but add to this knowledge, by providing national level estimates of the impact of a national program.

A limitation of this analysis is that it does not take account of variation in access within each remoteness areas, and hence will understate the impact of the program for particular localities (and overstate it for others). The national evaluation found there were variations across Australia in the relative success and stability of outreach arrangements. The challenges in establishing and sustaining outreach services are most formidable in the more remote regions. Nevertheless there are many good examples in these regions of very successful arrangements which have been operating over many years.

In addition to improving access, the national evaluation identified additional benefits from the program. These were based on interviews with a wide range of stakeholders including community members, primary care services based in rural and remote settings, clinicians providing outreach services and national professional bodies, as well as the findings in the literature. These benefits include:

- Strengthening the capacity of primary care through upskilling, the provision of a consultation and liaison service outside the actual visit and other shared care style arrangements. This can result in a more capable primary care service with the confidence to manage more complex patients on an ongoing basis. This in turn can increase the attractiveness of primary care and therefore have an indirect impact on the primary care workforce. Many primary care service providers interviewed for the evaluation, perceived these as key benefits of the program, which are often unrecognised and undervalued.
- Providing continuity in managing patients with ongoing needs, which was particular relevant in localities with high turnover of primary care staff.
- Reducing costs to patients and their families, the health system and the broader community through avoiding travel to regional or metropolitan centres to access specialist care.

Interestingly, the 'shared care' style arrangements arising out of the MSOAP are largely missing in mainstream arrangements as there are few financial incentives for specialists to engage in these activities in metropolitan settings.

As with specialist services as a whole, the impact of the program on health outcomes is unknown. It is reasonable to assume that MSOAP supported services achieve at least comparable levels of health impact to those provided by specialist services in the general community, although there are a priori reasons to consider that health benefits may be superior when services are delivered to underserved populations.

The national evaluation also considered the issues associated with optometry outreach services. While this is not the specific focus of this paper, the evaluation found that that this scheme also had an important impact on improving access for optometry services for people living in rural and remote Australia. However, issues in coordinating planning and service delivery of eye health care services were evident, particularly for Indigenous people living in remote Australia. Several of the recommendations focused on achieving better synergies in planning of services between MSOAP and VOS.

The cost effectiveness of MSOAP services was also considered, but in very broad terms, rather than through a specific analysis. As discussed above, the average cost for a specialist consultation supported through MSOAP was \$112 in 2009-10 (including the MSOAP payment plus administrative costs), to

which should be added the cost of the consultation itself, estimated at \$99, yielding a total cost estimate of \$211 per consultation. Alternatives to outreach specialist care include:

- patient assisted travel and accommodation, estimated at \$300 (an average subsidy of \$200 per patient assisted trip together with the cost of the consultation at \$99)
- consultations undertaken by telemedicine
- 'primary care only' treatment.

These 'alternatives' are not mutually exclusive and in most situations access to specialist care is achieved through a combination of outreach, patient assisted travel, telecommunications and 'primary care only' care. Given other potential benefits of outreach services (such as strengthening primary care delivery), it was concluded that outreach services generally represent a cost effective alternative to patient assisted travel, although the need for patient assisted travel will continue for many patients. Various configurations of outreach and telemedicine could potentially result in more cost effective solutions, although data was not readily available to assess these options. Stakeholders were generally clear that for many specialties there is an ongoing need for face to face consultations, although the use of telehealth can reduce the frequency with which these are required. Future research could usefully focus on the optimal combinations of these approaches to address service gaps.

The evaluation recommended strategies that could improve the overall cost effectiveness of the program by better planning of services and reducing unit costs. A persistent issue in remote communities, which contributes to higher unit costs for outreach services in those communities, is low levels of attendance at scheduled appointments, often at around 50%. Good regional and local coordination of services appears to have an impact on attendance rates.^{31, 32} Expanding options to support coordination was one of the recommendations of the evaluation. The evaluation also recommended steps to reduce administrative costs for service providers, fundholders and DoHA.

The relatively low supply of medical specialist is clearly only one facet of the health care deficits faced by rural populations. Deficits in the supply of primary care, allied health care and aged care are well known and significant challenges. Ideally these gaps should be addressed in a comprehensive fashion.

Appendix A Definition of specialist services used for extracting MBS data

Services related to medical specialists were identified using the same methods that apply to the reporting of Medicare Statistics by 'broad category of service'³⁶. This is based on the Medicare Schedule item number. Data were grouped to:

Specialist attendances including Items 85, 88, 94, 100, 102-152, 154-159, 177, 189, 300-338, 342-370, 385-388, 410-417, 501-536, 820-866, 887-893, 10801 to 10816 and 17603

Consultant psychiatrist: Group A8, items 855 957 858 861 864 866

Telepsychiatry: Items 353 to 370

Obstetrics : Obstetrics includes Part 2 and Group T4 of the Schedule and Item 9011.

Operations, Assistance at operations and Anaesthetics: Operations comprises Part 10 and Group T8 of the Schedule and Items 9401-9409, 9415-9435, 9440-9449, 9458, 9476-9850; Part 9 and Group T9) and Categories 2, 4 and 7, Groups T1-T3, Group T11, Items 10990, 10991 and 10992; Parts 3 (excluding Items 82, 85, 101, 102), 4 and 5, Groups T5, T6 (excluding Items 17600 and 17603), T7, T10 and Items 9021 to 9060.

These are reported as a 'total' of specialist services in this paper and the national evaluation report. Note that reported related to 'out of hospital' service only.

In addition, data was obtained on **Optometrical services** comprising Items 180 to 186, inclusive, and Group A10 of the Schedule.

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