

Models of psychological service provision under Australia's Better Outcomes in Mental Health Care program

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Abstract

The Access to Allied Psychological Services component of Australia's Better Outcomes in Mental Health Care program enables eligible general practitioners to refer consumers to allied health professionals for affordable, evidence-based mental health care, via 108 projects conducted by Divisions of General Practice. The current study profiled the models of service delivery across these projects, and examined whether particular models were associated with differential levels of access to services. We found:

- 76% of projects were retaining their allied health professionals under contract, 28% via direct employment, and 7% some other way;
- Allied health professionals were providing services from GPs' rooms in 63% of projects, from their own rooms in 63%, from a third location in 42%; and
- The referral mechanism of choice was direct referral in 51% of projects, a voucher system in 27%, a brokerage system in 24%, and a register system in 25%.

Many of these models were being used in combination. No model was predictive of differential levels of access, suggesting that the approach of adapting models to the local context is proving successful.

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THE BETTER OUTCOMES in Mental Health Care (BOMHC) program was introduced in Australia in July 2001,¹ in recognition of the fact that although the majority of people with depression and anxiety see their general practitioner (and often no other mental health professional),² GPs face structural, professional and financial barriers to providing optimal care.^{3,4} The Australian Gov-

What is known about the topic?

Internationally, general practitioners are at the front line in terms of mental health care delivery, but they have traditionally faced a variety of barriers in providing this care. Australia's Better Outcomes in Mental Health Care (BOMHC) program is providing a ground-breaking, comprehensive solution to this problem, and other countries are watching with interest.

What does this paper add?

This paper provides a systematic examination of the uptake of different models across BOMHC projects, the combinations of models that projects are using, and the relationship between different models and greater or lesser levels of access to services.

What are the implications for practitioners?

GPs and allied health professionals can collaborate to deliver affordable, evidence-based mental health care, given appropriate systemic support. The experience from the Access to Allied Psychological Services (ATAPS) projects suggests success may derive from the balance between an overarching vision that defines the parameters within which services are delivered on the one hand, and a degree of flexibility that allows models of service delivery to be tailored to the local context on the other. ◆

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I Components of the Better Outcomes in Mental Health Care program

Education and training for general practitioners	Through this component, general practitioners can participate in familiarisation training which introduces them to the Better Outcomes in Mental Health Care program (2 hours), then Level 1 Training which equips them to perform the 3 step mental health process (6 hours), described below, and then Level 2 Training which provides them with the skills necessary to undertake focused psychological strategies (20 hours), also described below.
The 3 step mental health process	This component provides a framework for GPs to manage mental health problems, and includes an assessment (Step 1), preparation of a mental health plan (Step 2) and a review (Step 3). GPs who have completed Level 1 Training can access a Service Incentive Payment from Medicare Australia (the body responsible for administering Medicare) for providing the 3 step process.
Focused psychological strategies	This component promotes evidence-based focused psychological strategies, namely psycho-education, cognitive behavioural therapy and interpersonal therapy. These strategies are normally delivered by GPs in planned sessions, each lasting a minimum of 30 minutes. GPs who have completed Level 2 Training can bill Medicare Australia against specific Medicare item numbers which have been created to recompense them for their time in delivering focused psychological strategies.
Access to allied psychological services	Through this component, GPs who have completed Level 1 Training are able to refer consumers to allied health professionals for the same focused psychological strategies described above. The allied health professionals are contracted to or employed by Divisions of General Practice through Access to Allied Psychological Services projects.
Access to psychiatrist support	This component enables psychiatrists to be reimbursed for participating in case conferences with GPs and others, and provides access to patient management advice to GPs from psychiatrists through the GP Psych Support service.

Sources: Adapted from Australian Divisions of General Practice,⁵ Hickie et al⁶ and Pirkis et al.⁷



ernment initially provided \$120.4 million for 4 years from July 2001, and, in July 2005, committed further funds for the continuation (\$102.2 million over 4 years) and expansion (\$42.6 million over 5 years) of the program.

The BOMHC program comprises a number of interlocking components, described in detail elsewhere,^{1,5-7} and summarised in Box 1. One of these is the Access to Allied Psychological Services (ATAPS) component, which enables GPs who have satisfied specified training requirements to refer consumers to allied health professionals for six sessions of free or low-cost, evidence-based mental health care (with a following six sessions available upon GP review). This is occurring through 108 projects being conducted by Divisions of General Practice and funded in four funding rounds: 15 from June 2002 (Round 1 pilot projects); 14 from January 2003 (Round 1 supplementary projects); 41 from July 2003 (Round 2 projects); 32 from July 2004 (Round 3 projects); and six from July 2005 (Round 4 projects).

The vast majority (90%) of allied health professionals involved in the projects are psychologists,⁸ but the term “allied health professional” is used throughout the remainder of this paper in recognition of the fact that some social workers, occupational therapists and psychiatric nurses are also providing services. All providers are required to demonstrate certain competencies, including skills in cognitive behavioural therapy and related treatment approaches.

The overarching approach of the ATAPS projects is the same, in the sense that they all involve coherent, collaborative care between GPs and allied health professionals. They differ, however, in their specific models of service delivery. Specifically, they vary in terms of how they retain allied health professionals, the location of allied health professionals, and the referral mechanism used. Box 2 provides a detailed summary of the dimensions on which the models of service delivery differ.

The advantages and disadvantages of the models within each dimension have been

explored in detail elsewhere, via various qualitative data collection exercises.^{7,9} Often the benefits of one model address barriers to another, and vice versa. For example, projects in which allied health professionals operate from their own rooms may have benefits for GPs in terms of access to a range of providers, but may present problems associated with reduced opportunities to collaborate. Conversely, projects in which allied health professionals are collocated with GPs may have advantages for GPs in terms of communication, collaboration and potential knowledge transfer, but the downside may be a reduced range of providers to whom referrals can be made.

Although a considerable amount is known about the pros and cons of each model, there has been no attempt to quantify the employment of different models across projects. So,

for example, it has not been possible to determine the relative popularity of retaining allied health professionals through direct employment compared with doing so under contract. In addition, the question of whether particular models are associated with differential levels of access for consumers has not been examined.

This paper addresses these knowledge gaps using a survey administered to Divisional representatives responsible for each of the projects. Data from the survey were combined with routinely collected data on the numbers of consumers accessing the projects, in order to answer the following two research questions:

What is the profile of models of service delivery across the ATAPS projects?

Are particular models associated with differential levels of consumer access to services?

2 Dimensions on which models of service delivery differ

Means of retaining allied health professionals	Contractual arrangements	Allied health professionals are retained under some sort of contract or memorandum of understanding. In most cases, contracts are with individual providers, but some Divisions of General Practice have elected to enter into contracts with agencies.
	Direct employment	Allied health professionals are directly employed by the Division.
Location of allied health professionals	General practitioners' rooms	Allied health professionals provide services to the projects in rooms at the GPs' practices.
	Own rooms	Allied health professionals provide services at their own premises.
	Other location	Allied health professionals provide services at a third location.
Referral mechanisms	Voucher system	This involves a system whereby the Division distributes vouchers to participating GPs who, in turn, give them to consumers. Consumers then use the vouchers to visit nominated allied health professionals, and the allied health professional redeems the vouchers for payment from the Division.
	Brokerage system	This involves an agency (either the Division or a contracted third party) acting as a broker. GPs refer to this agency, which then allocates the referral to a specific allied health professional, sometimes using prioritisation or matching criteria.
	Register system	This involves a system whereby a register that profiles eligible allied health professionals is provided to participating GPs, who can then make their own decisions about referral.
	Direct referral	This involves a system whereby the GP refers the consumer directly to the allied health professional. Often this takes place in the context of the allied health professional being collocated with the GP. However, there are exceptions, where the allied health professional is located elsewhere.

Sources: Morley et al⁹ and Pirkis et al.⁷



Methods

Data on models of service delivery

In late April 2005, a brief survey was emailed to the person responsible for each of the 102 Round 1, 2 and 3 ATAPS projects in operation at the time. Respondents were asked to complete the survey and return it by email or fax. Reminder phone calls were made as necessary, and the cut-off for returned surveys was late June 2005.

The survey explored the models of service delivery being utilised by the given project. Specifically, it sought information on the project's method of retaining allied health professionals, the location from which allied health professionals were providing services, and the referral process. Changes in each of these dimensions over time were explored. The majority of survey questions provided multiple choice responses, but some provided an opportunity for respondents to enter free text comments.

Data on access

The level of access to any given project was calculated using data from a purpose-designed minimum dataset into which project staff regularly enter data on the socio-demographic and clinical characteristics of each consumer, on the referral source, and on the treatment provided in terms of number, duration, format and content of sessions. As a repository for these consumer-level and session-level data, the minimum dataset provided data on the number of consumers in receipt of services. Data were extracted on 24 June 2005.

To cater for the fact that projects in different funding rounds had potentially different windows of opportunity within which to provide access to services, the median number of consumers per year of project implementation was estimated. To do this, the total number of consumers was divided by the duration of operation of the given project: 3 years, 2.5 years, 2 years and 1 year in the Round 1 pilot

projects, the Round 1 supplementary projects, the Round 2 projects and the Round 3 projects, respectively.

Data analysis

The overall analysis was conducted in two stages. The first stage involved only the survey data, and primarily employed simple descriptive analyses of the multiple choice responses. These analyses profiled the projects in terms of the models of service delivery being utilised, and the results are presented as simple frequencies and percentages. Supplementary qualitative analyses were conducted of the free text comments, in order to draw out common themes.

The second stage involved combining the survey data with the data on access. A regression analysis was conducted which assessed whether particular models were associated with varying levels of access, after controlling for the population size of the Division(s) responsible for the project.*

Results

Models of service delivery

Survey data on models of service delivery were available from 97 ATAPS projects (95%): 14 Round 1 pilot projects (93%); 14 Round 1 supplementary projects (100%); 39 Round 2 projects (98%); and 30 Round 3 projects (91%).

Means of retaining allied health professionals

Of the 97 projects for which survey data were available, 74 (76%) were retaining their allied health professionals under contract, 27 (28%) were utilising a direct employment model, and seven (7%) were using some other means (most commonly involving arrangements with post-graduate psychology students who were neither contracted to nor directly employed by the Division, but rather provided services in a supervised manner as part of their course requirements).†

The surveys indicated that 11 projects (11%) had changed their means of retaining allied health professionals since they began. Some had moved from the direct employment model to contracting

* Divisional population estimates were taken from the Australian Divisions of General Practice website.

with individual providers (or external agencies); others had done the reverse. Several had shifted from using postgraduate psychology students to employing or contracting with established providers (eg, because of low student intakes). Others had introduced greater flexibility (eg, options for part-time work) or improved working conditions (eg, additional mentoring and support, study leave and opportunities to develop further skills, above-award wages) in an effort to attract more (and/or better qualified) allied health professionals into the program and improve the quality of care.

Location of allied health professionals

The allied health professionals in 61 projects (63%) were providing services from GPs' rooms, under collocation arrangements. In the same number of projects, allied health professionals were providing services from their own rooms. In 41 projects (42%), allied health professionals were delivering sessions from some other location.[†] These other locations were many and varied, according to free-text survey responses. A number were providing services from Divisional rooms (either located at the Division, or located elsewhere and rented by the Division for this specific purpose). Other commonly used locations included: community health centres, hospitals and other general health and mental health facilities; other community agencies; and universities. In some projects, allied health professionals were sometimes seeing consumers in their own homes, although this was generally not the norm.

In 23 projects (24%), the location of service delivery had changed since the project began. According to free-text survey responses, this had generally been in an effort to expand the service to additional areas or to provide after-hours services, and/or because circumstances had changed. A number of projects that originally provided services exclusively from GPs' practices had changed to offering services from allied health professionals' rooms as well, and vice versa. Several had terminated arrangements with external

agencies (eg, because rooms provided at these agencies were required by other services), and a number had entered into new arrangements to improve the capacity of the allied health professionals to provide care (eg, relocating to settings with increased space and better access to resources).

Referral mechanisms

The most common referral mechanism, direct referral, was being used in 49 projects (51%). The voucher system had been taken up in 26 projects (27%), the brokerage system in 23 (24%), and the register system in 24 (25%).[†] Survey respondents were given the opportunity to indicate whether any other referral mechanisms were being used in their respective projects, but no new ones were identified.

In 13 projects (13%), the referral mechanism had changed since the project's inception. In the main, these changes had been fairly minor and simply involved refining the referral form or the steps involved in the referral process, often with a view to simplifying the tasks required by the GP and/or keeping better track of referrals. More major changes had tended to see projects move from voucher or brokerage systems to direct referral or register systems.

Model combinations

Many of the above models were being used in combination, both within dimensions (as indicated by the fact that the above totals for each of the three dimensions exceed 100%) and across dimensions. Box 3 indicates the extent of these combinations, and shows that a plethora of different model combinations were being implemented. Some patterns emerged — for example, where allied health professionals were retained under contract, there was a greater tendency for them to operate from their own rooms than from GPs' premises — but there was considerable variability.

Comments on different models of service delivery

Survey respondents were invited to provide any overarching comments in free text. Typically,

[†] Multiple responses were permitted, so the total exceeds 100%.

respondents who provided comments took the opportunity to describe the advantages (and, to a lesser extent, disadvantages) of elements of their models. Two key observations can be made about these comments.

Firstly, approaches that were seen as advantageous in one project were seen as disadvantageous in another, and vice versa, depending on the local context. An illustration is provided below, in the form of comments from two respondents, the first of whom favoured collocating allied health

professionals in GPs' rooms, and the second of whom favoured allied health professionals providing services from their own rooms.

Evaluations have overwhelmingly supported collocation with GP as a preferred model for patients (decreases stigma in country town; less "scary"), GPs and psychologists (build collegial relationships; better understanding of each other's role and skills; improved collaborative care for patient). All our services now prioritise collocation and collaborative care.

3 Number of projects using given model combinations

Referral mechanisms	Means of retaining allied health professionals	Location of allied health professionals						
		GP	OWN	OTH	GP+OWN	GP+OTH	OWN+OTH	GP+OWN+OTH
VCH	CON		5		4			2
	EMP			1				
	OTH		1					
	CON+EMP	1						
BRK	CON	2	2	2	2	2		1
	EMP	1				2		1
	CON+EMP			1				1
REG	CON		3		3			4
	EMP					1		
	OTH		2					
DIR	CON	2	4	4	3	2	2	1
	EMP	4		3		3		
	OTH	1						
	CON+EMP	1			1	1		
	CON+OTH					1		
	EMP+OTH			1				
VCH+REG	CON		1		1			
VCH+DIR	CON		2		1			
	CON+EMP							2
BRK+REG	CON				1			
	CON+EMP							1
BRK+DIR	CON		1		1			1
REG+DIR	CON				2			
VCH+REG+DIR	CON		1		2			1
VCH+BRK+REG+DIR	CON+EMP							1

Referral mechanisms: VCH = voucher system; BRK = brokerage system; REG = register system; DIR = direct referral.

Means of retaining allied health professionals: CON = contractual arrangements; EMP = direct employment;

OTH = other arrangement.

Location of allied health professionals: GP = GPs' rooms; OWN = own rooms; OTH = other location. ◆

Our service delivery model has been specifically set up to meet the needs of the region as the demands change or premises' location may change. Locating rooms within a GP's practice was decided against as there are too many competing locations in this area and we did not want to encourage doctor hopping.

Secondly, sound rationales were provided for using particular elements of the models in combination (both within and across dimensions), again related to local needs. An example is provided below, in the form of comments from a respondent whose project involved contracting some allied health professionals and employing others.

Flexible model; reduces possible waiting lists by having both a directly employed and contracted list of allied health professionals; very quick pick up of referrals by allied health professionals and contact with patient; large range of allied health professionals to choose from; if GPs don't nominate a specific allied health professional we are able to introduce them to an allied health professional they may not have utilised before to increase the scope of referral options for them.

Association between models of service delivery and access to services by consumers

Service models data and minimum dataset data were available for 78 projects (76%): 11 Round 1 pilot projects (73%); 10 Round 1 supplementary projects (71%); 37 Round 2 projects (93%); and 20 Round 3 projects (61%). The lower proportion of Round 3 projects reflects the fact that because some had only just reached the stage of implementation at the time of the survey, a reduced number had begun to enter data into the minimum dataset.

Access to services by consumers

According to the minimum dataset, as at 24 June 2005, the 78 projects had provided access to allied psychological services for a total of 18 770 consumers. The median number of consumers per project was 166.5 (inter-quartile range [IQR], 74.0–349.8). Adjusting for duration of implementation, the median number of consumers per

year of project implementation was 93.3 (IQR, 44.5–161.2).

Predictors of service access related to models of service delivery

The objective of the regression analysis was to determine which, if any, models of service delivery were independently predictive of higher levels of access per year of project implementation, after adjustment for all other variables. For simplicity, the dependent variable, access, was binarised, with the access level for a given project being denoted as "low access" (ie, lower than the median level) or "high access" (the median level or higher).

All models were included as covariates in the analysis, as was Divisional population size. Although the influence of funding round was catered for to some extent by using access per year rather than overall access as the dependent variable, it was considered important to include funding round as a covariate in case there were other residual effects of this variable. In other words, the analysis considered whether given models of service delivery were independently predictive of levels of access per year of project implementation if population size, funding round (and other models of service delivery) were effectively held constant.

Box 4 shows the results, revealing none of the models to be predictive of high levels of access (as indicated by consistent *P* values of > 0.05).

Discussion

The survey data suggest that there is considerable variability across the ATAPS projects with regard to the models of service delivery being implemented. Some features are particularly popular — for example, three quarters of the projects have entered into contractual arrangements with their allied health professionals, and half of all projects are using direct referral as their referral mechanism of choice. Others are more evenly distributed — for instance, equal numbers of projects have their allied health professionals delivering services from GPs' rooms and their own rooms.

4 Models of service delivery as predictors of service access

Variable	OR	95% CI	P
Population size	1.09	1.00–1.19	0.064
Funding round			
Round 1 pilot projects	1.74	0.25–12.15	0.576
Round 1 supplementary projects	4.32	0.68–27.56	0.122
Round 2 projects	2.99	0.85–10.52	0.088
Method of retaining allied health professionals			
Contractual arrangements	1.48	0.19–11.46	0.706
Direct employment	0.50	0.10–2.53	0.400
Other	1.72	0.09–34.03	0.723
Location of allied health professionals			
GPs' rooms	0.61	0.20–1.86	0.385
Own rooms	0.69	0.17–2.72	0.592
Other	1.29	0.43–3.81	0.648
Referral mechanisms			
Voucher system	0.93	0.24–3.69	0.923
Brokerage system	1.77	0.41–7.53	0.441
Register system	1.29	0.32–5.22	0.720
Direct referral	0.73	0.21–2.52	0.617

Perhaps more striking than the above findings, however, is the fact that many projects have developed “combination” models, adopting several options within a dimension (eg, entering into contractual arrangements with some allied health professionals and directly employing others), and/or “mixing and matching” across dimensions. This, and the fact that many of the projects have modified their models of service delivery over time, suggests that Divisions are responding to local needs by seeking solutions that work within their own context.

When the survey data were combined with access data from the minimum dataset, no models emerged as being associated with high levels of access. In other words, all models appear to be performing equally well in terms of enabling consumers to receive free (or low cost), evidence-based mental health care. Again, this suggests that some models may work best in one context, and others may work best in another, and that Divisions have adopted the most appropriate model

(or combination of models) for their local environment.

Several limitations must be borne in mind in interpreting the above findings. Firstly, the data on the models of service delivery came from a single source, namely Divisional project officers. This was considered justified, on the grounds that these respondents would have the greatest knowledge of the specific models of service delivery being implemented through the projects. It is acknowledged, however, that information from different sources (eg, GPs, allied health professionals and consumers) might have introduced different perspectives. Secondly, although population size was taken into account in the regression analysis, this does not give an indication of the proportion of the population who would potentially benefit from the kind of care provided through the ATAPS projects. Australian work is currently under way to develop indicators that include such information, but the current study pre-

ceded this. Thirdly, the level of access might have been influenced by the total amount of funding available to the project. It would have been desirable to control for funding level in the regression analysis, but funding data were not available to the project team. Finally, while it may be reasonable to interpret the findings regarding the cross-project profiles of the different models as indicating that Divisions are responding to their local contexts, it must be acknowledged that the exact nature of the contextual factors that influence model choices is unknown.

Clearly, there is a need for further work in this area. Improving access is a salient indicator, but the ultimate arbiter of success is whether consumer outcomes are improved. Australian work by Vines et al¹⁰ suggests that when mental health care is provided collaboratively by GPs and psychologists, consumer outcomes may be better than when care is provided by GPs alone, but this has not yet been directly tested in the ATAPS projects. Recent modifications to the minimum dataset have meant that Divisions are now able to enter data on consumer outcomes, derived from a range of outcome measures administered to consumers at assessment and review. Future work will combine the survey data on models of service delivery with the minimum dataset data on consumer outcomes, to determine whether particular models are associated with an increased likelihood of improved outcomes.

To conclude, the ATAPS projects are operating under a range of service delivery models which have been adapted over time to best meet local needs. Consequently, different models appear to be equally successful in different contexts at improving access to mental health care for consumers. Further work is needed to determine whether different models are associated with better or worse consumer outcomes, but in the meantime there is no evidence to suggest that Divisions should be modifying their locally tailored models to adopt a more uniform approach.

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Competing interests

The authors declare that they have no competing interests.

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