

**Christopher A Barton**

PhD, MMedSci, BSc, is Research Fellow, Department of General Practice, University of Adelaide, South Australia. chris.barton@adelaide.edu.au

Melissa Opolski

BA(Hons), is a project officer, Department of General Practice, University of Adelaide, South Australia.

Elizabeth Cleland

RN, RPN, BApp.Sci(Nurs), GradDipHSM, is Manager – Allied Health Services, Adelaide Hills Division of General Practice, Mt Barker, South Australia.

Amy Cotton

BA(Hons), is a project officer, Adelaide Hills Division of General Practice, Mt Barker, South Australia.

Allied mental health referral

Trends in the Adelaide Hills Division of General Practice

Background

Referrals to allied health professionals as part of Access To Allied Psychological Services (ATAPS) and More Allied Health Services (MAHS) at the Adelaide Hills Division of General Practice were examined to gain insight into the characteristics of referred patients and the characteristics of referring general practitioners.

Methods

Data held by the division for the two allied mental health programs was extracted for the period July 2001 to December 2005. The analysis identified characteristics of patients and GPs that were associated with referrals to each program.

Results

One hundred and sixteen GPs made 2451 referrals. Female patients accounted for 72% of referrals. Men were more likely to be referred to MAHS than women, and were more likely to be referred by a male GP. Mean Kessler Psychological Distress Scale scores were 31.3 for ATAPS and 27.7 for MAHS referred patients.

Discussion

This study identified significant trends in the use of these programs. Further research is needed to understand factors driving these trends.

■ **The Australian Government has responded to concerns about the provision of primary mental health care by providing funding for referral based allied health programs. Two of these programs, Access To Allied Psychological Services (ATAPS) and More Allied Health Services (MAHS) (funded through the Better Outcomes in Mental Health Care initiative) have been implemented at the Adelaide Hills Division of General Practice (AHDGP) in South Australia.**

More Allied Health Services provides referred patients with brief intervention counselling by psychologists and mental health nurses (up to three visits initially). This program is restricted to residents of rural suburbs within the AHDGP experiencing depression, anxiety, grief and loss, anger management, or relationship difficulties.¹

Access To Allied Psychological Services provides focused psychological strategies to low income earners, who may have up to six 1 hour sessions, with the option of six more sessions following a review by the patient's general practitioner.

Methods

Information routinely collected by the AHDGP for MAHS and ATAPS program management was extracted and de-identified. The extracted information included descriptive and demographic details of patients referred, referring GPs, and reasons for referral. Patients' Kessler Psychological Distress Scale (K10) scores,² collected at the first therapeutic session, were available for most ATAPS referrals. The majority of MAHS referred patients did not have a K10 score recorded.

Data relating to patients referred to the ATAPS program was available from 2004. The MAHS program data was available from mid 2001. Data to December 2005 was utilised in the analysis for both programs.

Results

The AHDGP services approximately 100 GPs working in 30 practices in a mix of rural and urban areas. Approximately 65 000 residents

Nancy Briggs

PhD, MA, BSc, is a statistician, Department of General Practice, University of Adelaide, South Australia.

Michael Taylor

MBBS, DCCH, FRACGP, is Medical Director, Adelaide Hills Division of General Practice, Mt Barker, South Australia.

Cate Howell

MBBS, BAppSc(OT), FRACGP, DipHSM, is Director, Primary Care Mental Health Unit, Department of General Practice, University of Adelaide, South Australia.

live within the AHDGP boundaries. The area has a higher overall socioeconomic status than both country South Australia and Australia in general.³

Number of referrals

In total, 1977 people were referred by 116 GPs to the two programs between July 2001 and December 2005. Of those, 71.8% of referrals were made for female patients and 61.2% of referrals were made by male GPs (*Table 1*).

Referring GPs made an average of 21.1 referrals each, and each patient was referred an average of 1.24 times (*Table 1*). The average level of psychological distress reported by patients referred to MAHS was 27.7 and for ATAPS it was 31.3.

Male GPs made 62.7% of referrals to MAHS. Male patients made up a higher proportion of the referrals to MAHS (28.9%) than to ATAPS (22.4%). Female GPs made 52.1% of the referrals to ATAPS.

Referral reasons

Depression was the most common reason for referral to both MAHS (64%) and ATAPS (74.1%) (*Table 2*). Comorbidity was common among patients referred to both programs. Other reasons for MAHS referrals included relationship difficulties (25.1%), family dynamics issues (22.4%), and grief and/or loss issues (13.5%). A small proportion of ATAPS referrals noted a reason other than depression and anxiety (alcohol and/or drug issues [9.6%] and psychotic disorders [1.2%]).

Characteristics of patients referred to MAHS and ATAPS

Male patients were 1.42 times more likely to be referred to MAHS than female patients and 80% of the males referred to MAHS were referred by a male GP (*Table 3*). In contrast, female patients were 1.37 times more likely to be referred to ATAPS than male patients and 59% of females were referred to ATAPS by a female GP.

The average K10 score for patients referred to MAHS was 28, indicating medium risk of psychological distress. This was lower than the mean K10 scores for patients referred to ATAPS (31) indicating high risk of psychological distress.² Although this difference was statistically significant ($p < 0.001$), such a small mean difference is unlikely to be clinically significant.

Discussion

More women than men were referred to the division's allied mental health programs overall, however men were more likely to be

Table 1. Referrals to AHDGP allied mental health programs from July 2001 to December 2005

Total number of referrals	241
Referred patients	
Number of patients referred	1977
Average number of referrals for each patient	1.24
Female patient referrals*	1758 (71.76%)
Male patient referrals*	692 (28.24%)
Referring GPs	
Number of referring GPs	116
Average number of referrals from each referring GP	21.1
Referrals from women GPs	951 (38.85%)
Referrals from male GPs	1497 (61.15%)
* N=1 missing	

referred to the MAHS program than the ATAPS program.

The findings are generally consistent with literature on gender differences in primary care presentations for mental health issues. However, extending this, we found that male GPs were more likely than female GPs to refer male patients and vice versa for female GPs and female patients. The data from our study complements findings from the Australian SPHERE project research⁴ that found patient factors related to accessing treatment included being female, unemployed and single. Practitioner related factors included the GP being female, of older age, having an interest in mental health and having had previous mental health training.⁴ These patterns require further investigation to determine the impact, if any, on the type and quality of care received for mental health issues in primary care, and models of primary mental health care that provide best health outcomes for patients.

The underlying reasons for the differences observed in referral to MAHS and ATAPS are not clear from this data, but may reflect the different focus of the two programs. More Allied Health Services provides brief intervention counselling by psychologists and mental health nurses of up to three visits initially for patients experiencing depression, anxiety, grief and loss, anger management, and relationship difficulties. Access To Allied Psychological Services

Table 2. Reasons for referral to the MAHS and ATAPS programs

	MAHS	ATAPS
Common referral reasons		
Depression	1405 (64.1%)	192 (74.13%)
Anxiety	998 (45.53%)	143 (55.21%)
Depression and anxiety	637 (29.06%)	121 (46.72%)
MAHS only referral reasons		
Relationship difficulty	549 (25.05%)	–
Family dynamics	491 (22.40%)	–
Grief and/or loss	296 (13.50%)	–
Anger management	168 (7.66%)	–
Other	560 (25.55%)	–
ATAPS only referral reasons		
Alcohol and/or drugs	–	25 (9.65%)
Psychotic disorders	–	3 (1.16%)
Unexplained somatic disorders	–	0 (0.00%)
Other	–	9 (3.47%)

is available to support GPs in the provision of up to 12 sessions for low income earners who would otherwise be unable to afford psychological services. It can be theorised that GPs perceive male mental health care needs are better served by the MAHS brief intervention model, while female patients are perceived as being more likely to respond to the ATAPS model.

Further research is needed to elucidate the reasons for these differences in the profile of patients referred, and any implications for the models of allied mental health care provided to male and female patients.

Limitations of this study

This analysis was limited to data collected as part of the delivery of a clinical service, and the authors were unable to determine a denominator for the number of GPs or consultations in the division. However, there was access to a substantial pool of systematically and consistently collected data on referrals within the division.

Conclusion

This data is consistent with evidence that allied mental health initiatives have enjoyed strong support from GPs, particularly in rural areas.^{5,6} It also strengthens evidence that GPs are referring patients to mental health services for a range of reasons, most often anxiety and depression, but also for issues related to drug and alcohol use, grief and loss, and relationship issues –

highlighting the diversity of mental health problems GPs see in their practices.

Implications for general practice

- Consistent with current literature, more women than men were referred to allied mental health programs. However, male GPs were more likely than female GPs to refer male patients, and vice versa for female GPs and female patients.
- The data demonstrate that GPs are utilising the division's allied mental health programs, which is consistent with evidence that

Table 3. Comparison of referrals to MAHS and ATAPS

	MAHS	ATAPS	p value
Referrals			
Number of referrals	2192*	259**	–
Average number of referrals per year	487	130	–
Referring GP gender			
Male	1373 (62.7%)	124 (47.9%)	p<0.001
Female	816 (37.3%)	135 (52.1%)	
Patient characteristics			
Male	634 (28.94%)	58 (22.39%)	p=0.02
Female	1557 (71.06%)	201 (77.61%)	
Age in years	38.5 (SD=15.1)	39.5 (SD=13.4)	NS
K10 score	27.7 (SD=7.5)	31.3 (SD=6.5)	p<0.001

* June 2001 to December 2005; ** January 2004 to December 2005

NS = not statistically significant at 0.05

the Better Outcomes initiative has enjoyed strong support from GPs, particularly those in rural areas.

Conflict of interest: none declared.

Acknowledgments

This study was funded by a University of Adelaide PHCRED seeding grant. Dr Barton was supported by a research Fellowship from Lubims Pty Ltd when this study was conducted. The authors would like to extend their thanks to Kelly Northey for her invaluable advice and assistance with the extraction of data from the AHDGP databases and the new database development.

References

1. Australian Government Department of Health and Ageing. Guidelines for the More Allied Health Services program. Canberra: DoHA, 2002.
2. Kessler R, Mroczek D. Final version of our non-specific psychological distress scale. [Memorandum dated 10 March 1994]. Ann Arbor (US): University of Michigan Survey Research Centre of the Institute for Social Research, 1994.
3. Public Health Information Development Unit. Population health profile of the Adelaide Hills Division of General Practice. Report No.: 99. Adelaide: PHIDU, 2006.
4. Hickie I, Davenport T, Naismith S, Scott E. SPHERE: a national depression project. *Med J Aust* 2001;175:S4–5.
5. Thomas J, Jasper A, Rawlin M. Better outcomes in mental health care – a general practice perspective. *Aust Health Rev* 2006;30:148–57.
6. Hickie I, Pirkis J, Blashki G, Groom G, Davenport T. General practitioners' response to depression and anxiety in the Australian community: a preliminary analysis. *Med J Aust* 2004;181:S15–20.