

## International research

# Impact of Australia's 'Better Outcomes in Mental Health Care' initiative in Melbourne

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### ABSTRACT

**Aims** To examine the possible impact of the Better Outcomes in Mental Health Care (BOiMHC) initiative on general practitioner (GP) attitudes, training needs, service improvement strategies, and patient management approaches.

**Method** A mail survey sent to 2500 GPs working in the Melbourne metropolitan area of whom 598 (23.9%) returned completed questionnaires. We compared GPs who were registered with BOiMHC and those who were not registered on: attitudes towards mental healthcare, needs for training, level of confidence in assessing and treating mental disorders, strategies for improving mental healthcare, and frequency of treatment solely by GPs or referral to specialist services.

**Results** GPs who were registered in the BOiMHC, when compared with those who were not registered, were more likely to indicate interest in mental health work, and to endorse a need for improved funding arrangements and specialist

advice and supervision to improve their capacity to conduct mental healthcare. They were less likely to express a need for further training in assessment and diagnosis. There was no overall difference between groups in relation to expressed training needs in most aspects of mental health work, treating mental disorders and in management approaches (sole management versus hand-over versus collaboration with specialist care).

**Conclusions** Possible initial impacts of the BOiMHC on GP attitudes, needs and practice appear to be modest and require further exploration. There remain substantial needs for training in mental healthcare and for specialist advice and supervision. Insufficient co-ordination with mental health specialists remains a significant issue.

**Keywords:** general practice, mental healthcare, outcomes

## Introduction

General practice, in many countries, is well positioned to make a significant contribution to the detection and management of mental disorders,

due to its extensive community reach, typically large workforce, and public acceptance of its critical role in community health. Nevertheless, there are

many problems in relation to mental healthcare provision in general practice, including low detection rates of mental disorder, diagnostic inaccuracy, low management rates despite detection and diagnosis and lack of clarity about its effectiveness in patient outcomes.<sup>1-9</sup> Substantial efforts are being made internationally to enhance mental health service provision in general practice.<sup>9</sup>

Under the National Mental Health Strategy implemented since 1992, Australia's public specialist mental health system has changed dramatically from a hospital-centred to a community-based system, while the focus of the system remains on the management of the 'severe', low-prevalence mental disorders (e.g. the psychoses).<sup>10,11</sup> There is a continuing gap in addressing the high-prevalence disorders, such as depression and anxiety disorders.<sup>12</sup> At the same time there is greater awareness of the substantial contribution of depression and other common mental disorders to Australia's burden of disease, and increased emphasis in the National Mental Health Strategy of the importance of prevention and early intervention.<sup>12,13</sup> Moreover, allied health practitioners (counsellors and psychologists) remain an under-utilised resource due to insufficient health insurance rebates through Medicare (Australia's universal health insurance scheme).<sup>11</sup> These, among other considerations, including the fact that general practice is the most common service in Australia sought by those with mental health problems, have contributed to an ongoing examination of role of general practice in the provision of mental healthcare.<sup>14</sup> Attention has focused on ways in which this role may be enhanced, and obstacles to provision of mental healthcare in general practice may be diminished. An example of such obstacles is the fee-for-service arrangement under Medicare that has favoured short consultations, effectively discouraging diagnosis and treatment of mental health problems.<sup>15</sup>

In this context the Better Outcomes in Mental Health Care initiative (BOiMHC), described comprehensively elsewhere, was introduced by the Federal Government in 2001 in order to improve mental healthcare in general practice by providing mental healthcare training to general practitioners (GPs), supporting linkages to allied mental health practitioners and psychiatrists and providing incentive payment for mental health work.<sup>16-19</sup> Seventeen (17.4%) percent of Australian GPs were registered in the programme by November 2004.<sup>20</sup> Participation in the programme, and eligibility to receive incentive payment is contingent on undertaking training in conducting mental health assessment, negotiation of a treatment plan with the patient and review of progress. Thirteen percent of Australian GPs registered in the programme, by April 2004, had

completed more extensive training modules that focus on delivery of evidence-based psychological treatments.<sup>21</sup> The programme is progressively including funded access to allied mental health practitioners for focused psychological therapies, consultancy assistance for psychiatric emergencies, and access to case conferencing with psychiatrists.<sup>19</sup>

One aim of the Melbourne Mental Health in General Practice Survey (conducted in July–October 2004) was to examine whether there are significant differences between GPs who are registered with BOiMHC and those who are not, in attitudes towards mental healthcare, training needs in mental healthcare, level of confidence in managing various mental disorders, and the extent to which patients are managed alone by the GP or referred for specialist care. In view of the objectives of the BOiMHC and the training provided as part of the programme, and the fact that GPs with an interest in mental health may be more likely to enter the programme, our expectations were that GPs who were registered with the BOiMHC, when compared with those who were not registered, would express more positive attitudes towards mental health work, fewer training needs, greater confidence in providing mental healthcare, and greater rates of collaborative care arrangements with specialist services and mental health professionals.

A further aim of the study was to examine mental healthcare in ethnic minority communities by bilingual and monolingual GPs. This issue will be examined in a separate paper.

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## Methods

### The survey instrument

A survey questionnaire was designed to elicit information on GP demographics, interest in mental health work, whether the GP was registered in the BOiMHC programme, views concerning the current policy emphasis on mental healthcare in general practice, mental health training needs, confidence in treating different mental disorders, referral sources, nature of mental health problems presenting, patient management approaches, opinions regarding strategies for improving capacity to do mental health work, and interest in mental health research. In line with the second aim of the study, concerning monolingual and bilingual practice, we collected data on self-reported ability to conduct mental health work in a language other than English, and issues relevant to interpreted consultations. Analysis of these data is the focus of another paper.

## Sampling and procedure

The sample of GPs was drawn from 23 of Melbourne's 32 local government areas (LGAs). Melbourne Metropolitan LGAs were examined for their distributions of ethnic minority communities using the 2001 population Census data. Survey areas were identified on the basis of high numbers in the population of people born in a country where English is not the primary language. Despite this focus, the 23 LGAs that were selected represent 84.1% of Melbourne's population (and 56.8% of the population of the state of Victoria). Postcodes were identified for each LGA and an approximate population proportional sample of GPs was allocated to each postcode with some under-sampling and over-sampling in respective higher and lower population density areas. The list of the number of GPs per LGA was sent to the Health Insurance Commission (HIC, that administers Medicare) who developed, on this basis, a list of GPs to be surveyed. A total of 2500 questionnaires were mailed by the HIC on behalf of the researchers, including an explanation of the study, the nature and conditions of research participation (voluntary and anonymous), a standard covering letter from the HIC, and a return postage-paid envelope. No incentives were provided to GPs for completing and returning the survey.

## Ethics approval

The project was approved by the Human Research Ethics Committee of the University of Melbourne and by the research and ethics group at the HIC.

## Analysis

Analyses were conducted after double-checking for the accuracy of data entry and mainly by use of the Statistical Package for the Social Sciences (SPSS) Version 11. The main comparison is between GPs registered and those not registered in the BOiMHC. Registered GPs are those who have undergone mental health training under the BOiMHC initiative and thereby qualify for service incentive payments under Medicare. Chi-square statistics were calculated for frequency data and *t* tests for scale data. Appropriate *t* test comparisons were conducted under equal or unequal variance assumptions based on the Levene test. Additional comparisons were made with McNemar chi-square statistics and paired *t* tests, where we compare repeated measures conditions. Because of the multiple comparisons involved in the comparative analysis between groups (39 primary comparisons) we re-examined outcomes by

calculating *P* values adjusted for false-discovery rate and *q* values, implemented via the QVALUE software.<sup>22–24</sup> This method of adjusting for multiple comparisons is not as conservative, as are the more common approaches such as the Bonferroni method for controlling type I error rates,<sup>25,26</sup> but is less subject to type II error. For our estimations we accepted a 5% false-positive rate across all comparisons. Results using different methods suggested that statistical outcomes where the unadjusted *P* values fell between 0.05 and 0.01 should be eliminated. We nevertheless report unadjusted levels of significance in our results section for comprehensiveness, and because calculating type I error rate does not mean that results in question are in fact type I errors.

## Results

### The sample

Of the 2500 questionnaires that were mailed to GPs, 598 (23.9%) were returned completed. Based on estimations of the number of GPs in Victoria, the sample represents 11% of Victorian and 15.1% of Melbourne Metropolitan GPs.<sup>27</sup> Responses were received from GPs working in all the 23 LGAs targeted. Response rates across LGAs ranged between 10.3% and 35.9%, with 70% of LGAs having a 20% or higher response rate, and 30% of LGAs having response rates of 25% or higher.

With reference to Table 1, our sample may over-represent female GPs in Victoria based on statistics provided by the Australian Institute of Health and Welfare (AIHW).<sup>28</sup> The AIHW indicated that 32.5% of Victorian GPs were female, a proportion similar to the Australia-wide (33.2%) figure. However in other respects the sample resembles the population of GPs in Australia, particularly with respect to their age distribution (65.8% of Australian GPs were aged between 45 and 54 years), the fact that the majority graduated in Australia (77.2% Australia-wide) and that they work as sole practitioners (14.5% Australia-wide). Regardless of similarities, however, it should be clear that the sample is not representative of GPs working in non-metropolitan settings.

Of the 598 GPs, 170 (28.4%) indicated that they were registered in the BOiMHC, a higher proportion than the national rate (15% to 17%).<sup>19,20</sup> Table 1 summarises comparisons between those registered and not registered in the BOiMHC, and the general trends in the overall sample with respect to demographic features of the doctors and the practices. The only difference between groups was a higher proportion of females in those registered than those not

**Table 1** Demographic features of those registered and not registered in the BOiMHC

	Not in BOiMHC ( <i>n</i> = 428) <i>n</i> (%) <sup>a</sup>	In BOiMHC ( <i>n</i> = 170) <i>n</i> (%) <sup>a</sup>	Statistical outcome <sup>b</sup>	Total sample ( <i>n</i> = 598) <i>n</i> (%) <sup>a</sup>
<b>Sex</b>				
Male	232 (54.2)	74 (43.5)	5.55*	306 (51.2)
Female	196 (45.8)	96 (56.5)		292 (48.8)
<b>Age</b>				
30–39 years	64 (15.0)	21 (12.4)	7.38 ns	85 (14.2)
40–49 years	165 (38.6)	67 (39.4)		232 (38.8)
50–59 years	135 (31.5)	68 (40.0)		203 (33.9)
60 plus years	64 (15.0)	14 (8.2)		78 (13.0)
<b>Place of birth</b>				
Australia	271 (64.7)	102 (60.4)	3.84 ns	373 (63.4)
Other English-speaking country	31 (7.4)	20 (11.8)		51 (8.7)
Asia/Pacific	66 (15.8)	23 (13.6)		89 (15.1)
Europe and elsewhere	51 (12.2)	24 (14.2)		75 (12.8)
<b>Place of first medical qualifications</b>				
Australia	351 (83.6)	137 (81.1)	2.15 ns	488 (82.9)
Other English-speaking country	24 (5.7)	15 (8.9)		39 (6.6)
Asia/Pacific	21 (5.0)	9 (5.3)		30 (5.1)
Europe and elsewhere	24 (5.7)	8 (4.7)		32 (5.4)
<b>Speaks a language other than English</b>				
Yes	162 (37.9)	63 (37.1)	<1 ns	225 (37.7)
No	265 (62.1)	107 (62.9)		372 (62.3)
Years practising as a GP <sup>c</sup>	20.87(10.41)	20.13 (8.51)	<i>t</i> < 1 ns	20.91 (9.91)
<b>In sole or group practice</b>				
Sole	74 (17.4)	26 (15.4)	<1 ns	100 (16.8)
Group	352 (82.6)	143 (84.6)		495 (83.2)
<b>Practice locality's population size</b>				
<100 000	136 (32.5)	53 (31.2)	<1 ns	189 (32.1)
>99 999	283 (67.5)	117 (68.8)		400 (67.9)
<b>Practice locality's size of non-English speaking background<sup>d</sup> population</b>				
<20 000	161 (38.4)	63 (37.1)	<1 ns	224 (38.0)
20 000–<30 000	141 (33.7)	57 (33.5)		198 (33.6)
30 000+	117 (27.9)	50 (29.4)		167 (28.4)

<sup>a</sup> Number (percentage) unless otherwise specified

<sup>b</sup> Chi-square value unless otherwise specified

<sup>c</sup> Mean (standard deviation)

<sup>d</sup> non-English-speaking background is based on being born in a non-English speaking country \**P* < 0.05  
ns: not significant

registered. Otherwise, the majority of the overall sample was aged between 40 and 59 years, on average they had worked 21 years in general practice, most were working in group (rather than 'solo')

practices, and two-thirds worked in LGAs with populations of 100 thousand or more.

Within the registered GP group, 66% had seen patients with a mental disorder under the BOiMHC

initiative in the three months leading up to the survey. Forty percent had seen between 1 and 10 patients, 18.6% had seen between 11 and 20 patients and 5% more than 20 patients. Preliminary analysis revealed little variation in survey opinions according to level of mental health service provision in the previous three months.

## Comparative findings

While reporting the general trends in the data for the whole sample, the present analysis focuses on comparisons between GPs registered in the BOiMHC and those not registered. Table 2 summarises findings related to attitudes towards mental health work, training needs, confidence in managing mental disorders and endorsement of strategies for improving the GPs' capacity to do mental health work. Table 3 extends the comparisons to patient management approaches. As noted we assess differences between groups on the basis of the 0.05 level two-tailed significance, but it should be recalled that after controlling for possible type I error due to multiple comparisons, group differences at or below the 0.01 level of significance should be regarded as robust – the rest exploratory. In addition we report composite measures to provide a complementary description of the general trends in the data. The smaller number of these comparisons on composite measures also means a lower probability of type I error.

## Attitudes

GPs who were registered in the BOiMHC had a more positive attitude to mental health work than those who were not registered. Among registered GPs, 30.2% responded that they were 'somewhat interested' in mental health work and 60.4% were 'very interested', while the corresponding figures for those not registered were 41.5% and 25.1%. Overall 91.4% and 80.8% of registered and non-registered GPs respectively agreed with the current policy emphasis on mental health work in general practice. For the non-registered group, 53.7% endorsed 'tend to agree' while 27.7% endorsed 'strongly agree'. The corresponding figures for those in the BOiMHC were 43.7% and 49.7%.

## Needs for training

Comparisons of expressed needs for training in relation to various aspects of mental health work show few differences between BOiMHC-registered

and non-registered GPs. In particular there were no differences between groups in expressed needs for training in use of psychotropics and in conducting psychological therapies. Although a significantly smaller proportion of BOiMHC-registered GPs expressed a need for training in assessment and diagnosis than those who were not registered, 35% of registered GPs reported a need for further training in these basic skills. An additional analysis was conducted comparing endorsement of training needs for the whole sample (last column of Table 2) using pairwise comparisons with the McNemar chi-square statistic. All frequencies (and percentages shown in Table 2) differed significantly. Significantly higher proportions of GPs in the sample endorsed a need for training in providing psychological treatments (66.9%) compared with psychotropic administration (48.1%) and assessment and diagnosis (44%).

There was little difference between registered and non-registered GPs in expressed training needs in relation to working with patients with different types of disorders (Table 2). Examination of the total sample proportions, using pairwise contrasts as above, indicated significant differences in all contrasts except between psychoses and neuropsychiatric conditions. Inspection of Table 2 (last column) shows that least training needs were expressed in relation to depression (28.5%) and anxiety disorders (36.6%), with increasing needs in relation to situational/adjustment disorders (45.0%), psychoses (60.3%) and neuropsychiatric conditions (63.4%), and the highest needs for training in relation to dealing with personality disorders (70.6%).

## Confidence

In comparing BOiMHC-registered and non-registered GPs on ratings of confidence in working with major categories of disorders, a different picture emerged. Significantly higher confidence ratings were evident among the registered than among the non-registered GPs in relation to situational/adjustment disorder, depression, anxiety disorder and psychoses. In relation to personality disorders registered and non-registered GPs were equally lacking in confidence, and there was no difference between the groups in relation to neuropsychiatric disorders. For the total sample confidence scores (last column in Table 2) statistical analysis (carried out as before but using paired *t* tests) revealed significant differences in all paired comparisons except for psychoses and neuropsychiatric conditions. It can be seen (Table 2) that confidence declined from relatively high levels for depression and anxiety disorders, to a medium level for situational disorders, to low levels for

**Table 2** Comparisons between BOiMHC-registered and non-registered GPs

	Non-registered ( <i>n</i> = 428)	BOiMHC-registered ( <i>n</i> = 170)	Statistical outcome <sup>a</sup>	Total sample ( <i>n</i> = 598)
<b>Attitudes towards mental health in general practice</b>				
Mean interest rating in conducting mental health work in general practice <sup>b</sup>	2.81	3.49	9.35***	3.00
Mean agreement rating with current policy emphasis on mental health care in general practice <sup>c</sup>	3.05	3.40	5.20***	3.15
Mean total positive attitude	5.76	6.85	9.08***	6.07
<b>Percentage expressing training needs<sup>d</sup> in:</b>				
mental health assessment and diagnosis	47.5	35.3	7.35**	44.0
administering psychotropic medicines	48.0	48.2	<1 ns	48.1
providing psychological therapies and treatments	65.0	71.8	<1 ns	66.9
mean total training endorsement	1.61	1.55	<1 ns	1.59
<b>Percentage expressing training needs<sup>d</sup> in assessment and treatment of:</b>				
situational/adjustment disorder	44.7	45.6	<1 ns	45.0
anxiety disorder	36.8	36.1	<1 ns	36.6
depressive disorder	30.3	24.3	2.14 ns	28.5
personality disorder	68.0	76.9	4.58*	70.6
psychosis	60.1	60.9	<1 ns	60.3
neuropsychiatric conditions	61.3	68.6	2.79 ns	63.4
mean total training needs	3.01	3.12	<1 ns	3.04
<b>Mean confidence rating<sup>e</sup> in working with patients with:</b>				
situational/adjustment disorder	2.86	3.05	3.34**	2.91
anxiety disorder	3.03	3.21	3.30**	3.08
depressive disorder	3.19	3.36	3.01**	3.24
personality disorder	2.16	2.22	1.09 ns	2.18
psychosis	2.31	2.45	2.05*	2.35
neuropsychiatric conditions	2.44	2.56	1.69 ns	2.48
mean sum of confidence ratings	15.92	16.80	3.25**	16.17
<b>Percentage endorsing strategies<sup>d</sup> for improvement of capacity for mental health practice</b>				
Improved funding arrangements	36.2	48.8	8.07**	39.8
Improved referral processes	45.8	43.5	<1 ns	45.2
Regular training/advice/supervision	43.5	65.3	23.21***	49.7
Better co-ordination between GP and mental health specialists/services	66.6	63.5	<1 ns	65.7
Mean total endorsement	1.92	2.21	2.56*	2.00

<sup>a</sup> Where percentage is indicated this is a chi-square value, where mean is indicated this is a *t* value

<sup>b</sup> Rated on a scale of: not at all interested (1), a little interested (2), somewhat interested (3), very interested (4)

<sup>c</sup> Rated on a scale of: strongly disagree (1), tend to disagree (2), tend to agree (3), strongly agree (4)

<sup>d</sup> Rated as: yes or no

<sup>e</sup> Rated on a scale of: not at all confident (1), a little confident (2), quite confident (3), very confident (4)

ns: not significant, \**P* < 0.05; \*\**P* < 0.01; \*\*\**P* < 0.001

neuropsychiatric conditions, psychoses and personality disorders.

## Strategies to improve mental healthcare capacity

Table 2 indicates the percentage GPs endorsing each of the strategies for improving their capacity to conduct mental health work in their practices. BOiMHC-registered GPs were significantly more likely to endorse 'improved funding arrangements' and availability of 'regular training/advice/supervision' as strategies that would improve capacity. Pairwise comparisons of total group frequencies, as above, indicated significant differences in endorsement of all four strategies, except between improved referral and ongoing training/advice/supervision. The most endorsed strategy among all GPs was 'better co-ordination between general practice and mental health specialists/services' (65.7%). Indeed several respondents provided additional unsolicited comments on the survey questionnaire relating predominantly to the inaccessibility of specialist mental health services or providers. Although it was the least frequently endorsed strategy 'improved funding arrangements' was, nevertheless, endorsed by 39.8% of respondents.

## Approach to mental health management

Table 3 shows the estimated proportions of patients with different mental disorders who were treated solely by the GP, were handed over for treatment to a specialist mental health service or professional, or were managed jointly by the GP and specialist mental health services. There was no difference between BOiMHC-registered and non-registered GPs in their management approaches. Pairwise analyses revealed several significant differences across disorders with sole management by the GP being most likely for situational/adjustment, anxiety, and depressive disorders and least likely for psychoses and neuropsychiatric conditions. Personality disorders were also less likely to be under sole management than were anxiety and depressive disorders, but no different from situational/adjustment disorders. Personality, psychotic and neuropsychiatric conditions were more likely to be handed over for treatment to specialist mental health services than were situational/adjustment, anxiety, and depressive disorders. Joint management by GP and specialist service was most likely to occur for psychoses and neuropsychiatric conditions, particularly psychoses, although surprisingly high proportions of patients

with these disorders (29.2% and 44.2% respectively) were managed solely by the GP. Analysis of overall estimates, regardless of type of disorder, indicated that sole treatment predominated over handover and collaborative care.

## Influence of demographic and practice features

Several demographic and practice features were explored in relation to the observed differences (e.g. in attitudes, training needs, confidence ratings, opinions for improved mental health practice capacity) between registered and non-registered practitioners including age, sex, ability to communicate in a language other than English, years in practice, whether or not the practice was a solo practice, and size of the immigrant population where the practice resides. None of these accounted for observed differences between the BOiMHC-registered and non-registered groups.

## Discussion

Better Outcomes in Mental Health Care is a significant initiative that aims to improve the capacity of the Australian health system to meet the mental health needs of the community, particularly important in the context summarised in the introduction. BOiMHC is gaining acceptance among general practitioners and is improving access to allied mental healthcare.<sup>19</sup> The present study, conducted towards the conclusion of the first four-year period of funding to the programme, demonstrates some possible gains, but also raises questions about programme outcomes.

First, there is a high level of interest among GPs in mental health work, and substantial agreement with the current policy emphasis on mental health work in general practice. Whether this may be attributed to a sampling bias, where GPs with more positive attitudes towards mental healthcare were more likely to complete and return the questionnaires, is not known. A wider and more representative survey would be required to answer this question. The significantly greater levels of interest and agreement among BOiMHC-registered GPs may have preceded their engagement in the initiative, or may be a product of their additional training and experience in carrying out mental health work. The cross-sectional design of our survey does not allow any conclusion concerning the cause of any observed difference.

**Table 3** Comparisons of management approaches between BOiMHC-registered and non-registered GPs

	Non-registered	BOiMHC-registered	Statistical outcome <sup>a</sup>	Total sample
<b>Mean estimated percentage that assessed and treated alone</b>				
Situational/adjustment disorder (42, 24)	65.76	56.58	1.31 ns	62.42
Anxiety disorder (49, 31)	68.31	64.13	<1 ns	66.69
Depressive disorder (71, 39)	69.43	67.26	<1 ns	68.99
Personality disorder (34, 21)	46.53	46.05	<1 ns	46.35
Psychosis (41, 21)	29.10	26.43	<1 ns	29.19
Neuropsychiatric (32, 17)	47.38	37.88	<1 ns	44.08
Total mental disorders mean (112, 55)	59.48	54.50	1.28 ns	57.84
<b>Mean estimated percentage that handed patient over to mental health service or professional</b>				
Situational/adjustment disorder (42, 24)	13.71	17.63	<1 ns	15.14
Anxiety disorder (49, 31)	11.61	13.03	<1 ns	12.16
Depressive disorder (71, 39)	12.59	11.59	<1	12.28
Personality disorder (34, 21)	23.47	28.71	<1 ns	25.27
Psychosis (41, 21)	32.59	38.46	<1 ns	34.52
Neuropsychiatric (32, 17)	20.97	36.06	1.85 ns	26.20
Total mental disorders mean (112, 55)	18.33	20.48	<1 ns	19.04
<b>Mean estimated percentage that worked together with mental health service or professional</b>				
Situational/adjustment disorder (42, 24)	18.67	23.38	<1 ns	20.38
Anxiety disorder (49, 31)	19.12	19.61	<1 ns	19.31
Depressive disorder (71, 39)	17.61	21.64	1.30 ns	19.28
Personality disorder (34, 21)	27.21	22.43	<1 ns	25.38
Psychosis (41, 21)	37.46	34.90	<1 ns	36.60
Neuropsychiatric (32, 17)	26.16	26.06	<1 ns	26.12
Total mental disorders (112, 55)	20.43	24.77	1.48 ns	21.86

<sup>a</sup> *t* values

Numbers in brackets in column 1 refer to GP sample sizes in statistical comparisons. Sample sizes vary according to whether or not patients with particular mental disorders were seen in the last three months and reported on by the GP

Total mental disorders mean is based on any presenting condition in the three-month period  
ns: not significant

However, where there is no significant difference between the two groups, or differences are small in magnitude, it is possible to say that the maximum possible impact of BOiMHC is modest.

Second, with the exception of need for training in the basic skills of assessment and diagnosis, very few differences could be found between registered and non-registered GPs in relation to expressed training needs in mental health. Levels of expressed needs for training should not be read to imply levels of competence. GPs who have received training through

BOiMHC may have higher awareness of the need for further general training in conducting mental health work or specific training to deal effectively with particular disorders. Indeed, 65% of the BOiMHC group expressed the view that their capacity to conduct mental health work would benefit from regular training, and specialist advice and supervision. More direct evaluation of capability than has been possible through a survey method is required.

Between 44% and 66.9% of all GPs expressed the need for additional training in one or another area



of their mental health work. Greatest training needs were in providing psychological treatments, although even in relation to treatment with psychotropics almost half (48.1%) expressed need for further training. Within the BOiMHC programme GPs have the opportunity to undertake more extensive training in mental health, together with further incentive payments for providing evidence-based treatment, yet only 13% (to November 2004) of BOiMHC-registered practitioners have undertaken this further training.<sup>21</sup>

With respect to assessment and treatment of different disorders, findings suggest a need to focus more than has been the case on the less common conditions, such as personality disorders, psychoses and neuropsychiatric conditions. GPs expressed the lowest levels of confidence in dealing with these conditions while, at the same time, such patients accounted for significant proportions of their mental health work under sole management.

The main differences observed between BOiMHC-registered and non-registered GPs were in ratings of confidence in working with patients with mental disorders. Differences were found where they might be expected (given the nature of the training provided within the BOiMHC) in the management of common mental disorders – adjustment, anxiety, and depressive disorders. Whether increased confidence equates with increased capabilities, such as improved detection, diagnostic accuracy, and capacity to apply appropriate treatments in an effective manner, and translates to improved patient outcomes, is a matter for further investigation.

The BOiMHC-registered group more frequently endorsed continuing training and specialist advice and supervision, and improved funding arrangements, as strategies that would improve their capacity to conduct mental health work. Further work is required to understand the adequacy of current funding arrangements given that just under half of BOiMHC-registered GPs (48.8%) identified this as an issue.

An important continuing problem is availability of mental health specialists and specialist services to GPs. Nearly two-thirds of GPs (65.7%) expressed a need for better co-ordination between general practice and specialist services, and a number of GPs responding to the survey provided unsolicited comments highlighting the inaccessibility of specialist supports. A key feature of BOiMHC is the improvement of linkages between GPs and allied mental health practitioners and specialist psychiatry services. It was surprising, therefore, to find that there were no systematic differences between registered and non-registered GPs in the frequency with which they managed patients on their own, referred them to specialists for management or undertook joint management.

Where referral options are more available, namely for patients with psychotic and neuropsychiatric conditions, GPs are more likely to refer patients for management or enter into joint care arrangements. What is not clear, however, is whether the high proportions of patients managed solely by GPs is the result of GPs' (or patients') preference for sole management, or is due to insufficient availability of viable referral and collaborative care options. That the latter is the probable explanation is suggested by respondents' strong expression of unsatisfactory levels of mental health specialist accessibility and of insufficient co-ordination between general practice and specialist care.

There are several limitations in this study. Given that one of the aims of the study was to examine bilingual and monolingual general practice mental healthcare available to members of ethnic minority groups, we may have over-sampled bilingual GPs by focusing the survey on localities with large populations of people born in non-English-speaking countries. However, the 23 LGAs from which GPs were sampled cover 84% of Melbourne's population and 57% of the Victorian population. Ability of the GP to communicate in a language other than English and whether the general practice was located in an LGA with a large immigrant population did not account for any of the observed differences. Furthermore, except for sex distribution, the surveyed GPs resembled Victorian or Australian GPs in general. These observations suggest that the survey may provide a reasonably representative profile on the issues under study, although the findings cannot be generalised to non-metropolitan GPs. Second, the response rate was relatively low – 24% – and we do not know whether GPs with a greater interest in mental health were more likely to complete and return the survey instrument. Third, it was not possible to gather information on the number of BOiMHC-registered and non-registered GPs in Melbourne (or in the surveyed localities) in order to ascertain what proportions of these groups were included in our sample and whether there is a bias in these proportions. A survey with a more representative sample of GPs and higher response rate is required to be confident that our findings will generalise to the population of GPs. A further limitation of the study is that it is based on self-reported judgements and opinions of GPs. There is a need for direct investigation of factors such as mental health competencies and actual use of various treatment approaches to mental disorders, and the impact of training on improving competencies and modifying practice approaches. Further investigation of the impact of BOiMHC would benefit from a longitudinal study design.

## Conclusions

Impact of the BOiMHC, as suggested by the survey, on GP attitudes towards mental health work, meeting needs for training, and mental health management appears to be modest (especially given that observed group differences may be subject to some type I error) and requires further exploration. There remain substantial needs for training in mental healthcare and for specialist advice and supervision. Insufficient co-ordination with mental health specialists remains a significant issue. BOiMHC is a major initiative that is likely to become an integral part of mental healthcare in Australia. Our results suggest the need for a more detailed and comprehensive evaluation of the programme.

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#### CONFLICTS OF INTEREST

None.

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