

# Screening for depression in general practice and related medical settings

Ian B Hickie, Tracey A Davenport and Cristina S Ricci

*There is insufficient evidence for routine screening for depression in asymptomatic patients.<sup>1</sup>*

IN AUSTRALIA, more than 800 000 adults<sup>2</sup> and 95 000 children and adolescents<sup>3</sup> experience depressive disorders each year, and depression is a leading cause of both ongoing disability and premature mortality.<sup>4</sup> Furthermore, depression is seen to make substantial contributions to major medical and behavioural disorders, such as heart disease and alcohol or other substance misuse. Much effort is currently directed towards increasing community awareness of depression<sup>5</sup> and improving the quality of medical interventions provided.<sup>6</sup> Importantly, in the absence of broad population and enhanced health service approaches, the contribution of depression to overall disability and premature mortality is projected to increase and be second only to cardiovascular disease by 2020.<sup>7</sup>

Data from Australian general practice<sup>8,9</sup> show that most patients with depression or anxiety presenting to medical care do not receive a psychological diagnosis or appropriate interventions. Consequently, some mental health advocates promote the use of simple case-detection systems on both clinical and epidemiological grounds.<sup>10-12</sup> The more conservative position has been to reject such calls, arguing conceptual, practical and ethical limitations.<sup>1</sup>

As the number of relevant studies has increased, it is timely to review this evidence. We sought to answer the following questions:

- Can screening tools efficiently and accurately identify patients with depression?
- Do clinicians use the information obtained from screening tools to assist with diagnosis and treatment planning?
- Is the outcome of patients with depression improved within practice settings that use screening tools (alone or in combination with other techniques)? and
- Is there evidence that the benefit is limited to specific subpopulations of patients?

## **beyondblue: the national depression initiative, Melbourne, VIC.**

Ian B Hickie, MD, FRANZCP, CEO, and Professor of Community Psychiatry, School of Psychiatry, University of New South Wales, Sydney, NSW.

**School of Psychiatry, University of New South Wales, Sydney, NSW.**

Tracey A Davenport, BA(Hons), Research Officer;

Cristina S Ricci, BSc(Hons), Research Officer.

Correspondence: Professor I B Hickie, *beyondblue: the national depression initiative*, PO Box 6100, Hawthorn West, VIC 3122. [ian.hickie@beyondblue.org.au](mailto:ian.hickie@beyondblue.org.au)

## ABSTRACT

**Objective:** To determine if screening in general practice and related medical settings improves management and clinical outcomes in people with depression.

**Data sources:** The Medline (1966–2002), EMBASE (1980–2002) and PsycINFO (1966–2002) databases were searched. These were supplemented by searching the Cochrane databases (to 2002); performing additional specific searches on Medline, EMBASE and PsycINFO; scrutinising reference lists of selected articles; and querying experts.

**Study selection:** Inclusion criteria were: review of prospective studies with a primary focus of depression screening in general practice settings; review of studies of healthy populations or people with known depression; publication in a peer-reviewed journal; and written in English. Eleven reviews that satisfied these criteria were assessed for quality using the Oxman and Guyatt Index. Four reviews met the criterion of a score of five or more.

**Data extraction:** One author tabulated relevant material (including number and type of studies, outcomes/endpoints, measures of association/statistical results, and findings) from the four key reviews. A second author independently checked the accuracy of this extracted material.

**Data synthesis:** Brief self-report instruments have acceptable psychometric properties and are practical for use in general practice settings. Screening increases the recognition and diagnosis of depression and, when integrated with a commitment to provide coordinated and prompt follow-up of diagnosis and treatment, clinical outcomes are improved.

**Conclusions:** Although controversial, the evidence is now in favour of the appropriate use of screening tools in primary care.

MJA 2002; 177: S111–S116

## Methods

Methods have been developed to conduct systematic evaluations of reviews.<sup>13,14</sup> These methods are efficient and reliable, and avoid the need to consult the original articles (unless considerable disagreement exists between the conclusions of well-conducted reviews). We used these methods, focusing our attention on systematic reviews of “case-finding” and “screening/intervention” procedures for common forms of depression encountered in primary care, general practice or other related general medical settings.

Articles were identified by searching the Medline (1966–2002), EMBASE (1980–2002) and PsycINFO (1966–

### 1: Recommended guide to appraising systematic reviews<sup>14</sup> (modification of Oxman and Guyatt Index)<sup>13</sup>

|   |   |
|---|---|
| 1. Were the methods used to find primary research studies reported?                             | No/Partially/Yes                                      |
| 2. Was the search comprehensive?  | No/Can't tell/Yes                                     |
| 3. Were the criteria used for deciding which studies to include in the review reported?         | No/Partially/Yes                                      |
| 4. Was bias in the selection of studies avoided?  | No/Can't tell/Yes                                     |
| 5. Were the criteria used for assessing validity of the studies reported?                       | No/Partially/Yes                                      |
| 6. Was the validity of all studies assessed using appropriate criteria?                         | No/Can't tell/Yes                                     |
| 7. Were the methods used to combine the findings of the studies to reach a conclusion reported? | No/Partially/Yes                                      |
| 8. Were the methods appropriate?  | No/Can't tell/Yes                                     |
| 9. Were the conclusions supported by the data and/or analysis?                                  | No/Partially/Yes                                      |
| 10. What was the overall scientific quality of the overview?                                    | Extensive flaws/Major flaws/Minor flaws/Minimal flaws |

Reprinted from *Australian Family Physician* (Peach H. Reading systematic reviews (Table 1). *Aust Fam Physician* 2002; 31: 737). Copyright *Australian Family Physician*. Permission to reproduce must be sought from the publisher (the Royal Australian College of General Practitioners). For the scoring system to evaluate reviews, see the original article.

2002) databases using the keywords *depression* or *depressive disorders*, plus *screening* or *mass screening* or *psychiatric status rating scales* or *case finding*, plus *primary health care* or *family practice* or *clinical practice* or *general practice* or *general medical setting(s)*. We supplemented these sources by searching the Cochrane databases (to 2002); performing additional specific Medline, EMBASE and PsycINFO searches; scrutinising reference lists of selected articles; and querying experts. We did not seek articles concerning depression screening in association with specific medical conditions such as cancer, stroke or heart disease or their related service systems. In total, 1386 articles were identified.

Eligibility criteria for inclusion of reviews were:

- review of prospective studies with a primary focus of depression screening in general medical settings;
- review of studies of healthy populations or those with known depression;
- publication in a peer-reviewed journal; and
- written in English.

Two authors (T D, C R) independently reviewed the titles and abstracts of the 1386 articles. Those for which both reviewers agreed that eligibility criteria had not been met were excluded. When the reviewers disagreed, the full articles were reviewed by all authors and a decision on inclusion was made by consensus. Eleven reviews satisfied the inclusion criteria, incorporating studies published between 1976 and 2001.

The quality of each review was assessed independently by two authors (T D, C R) using the Oxman and Guyatt

Index<sup>13</sup> and scoring system as modified by Peach (see Box 1).<sup>14</sup> Four reviews<sup>15-18</sup> met the criteria of a score of five or more by Peach's system.<sup>14</sup> One author (C R) abstracted and tabulated relevant data from the included reviews (Box 2). A second author (T D) checked the accuracy of the tables against the original reviews. All authors then examined the evidence presented in each review to respond to our four questions (Box 3).

## Results

Of the four key reviews identified, two<sup>15,18</sup> dealt largely with the practical and predictive capacities of screening tools. Both reviews concluded that there were many instruments that were acceptable from both a psychometric and practical implementation perspective. The other two reviews<sup>16,17</sup> focused on the effects of screening on outcomes, with split recommendations. The larger and more recent review<sup>17</sup> argued for the value of screening procedures in adults when used in conjunction with other practitioner feedback and relevant service enhancement techniques. The other review argued against the value of screening,<sup>16</sup> and its conclusions have been the subject of considerable debate.<sup>19</sup> It included fewer studies and had a more restrictive view of the questions being addressed.

It is important to note that the United States task force that now recommends screening did so only for adults,<sup>20</sup> arguing that there was insufficient evidence of benefit from current treatments to recommend screening of children or adolescents.

## Discussion

With certain caveats, current evidence appears to favour the routine use of case-detection tools for depression in general practice settings. Brief self-report instruments have acceptable psychometric properties and are practical. When these instruments are used appropriately, recognition of depression by the clinician improves, and when accompanied by a commitment to implement system changes that ensure prompt and coordinated follow-up of diagnosis and treatment better outcomes are achieved. Key caveats are that positive results on screening tools need to be followed up by formal diagnostic assessment, and introduction of these tools should be limited to health services that are committed to using the information to provide enhanced care. The principle of using brief self-report methods to increase detection is already widely accepted for common risk behaviours (eg, smoking) and other behavioural disorders (eg, alcohol or other substance misuse) that, like depression, predict adverse health outcomes.

Our interpretation of the value of screening rests largely on the more recent and more inclusive review of Pignone et al.<sup>17</sup> As argued by these authors, their review used a larger and more appropriate dataset in its meta-analyses (derived from 14 studies). The review by Gilbody et al<sup>16</sup> pooled data from only four studies, and commented on negative findings from two other studies. The clear danger was that too few

| <b>2: Review of reviews: summary of the four key reviews</b>   |  |   |  |
|--|--|---|--|
| <b>Mulrow et al (1995)<sup>15</sup></b>  | <b>Gilbody et al (2001)<sup>16</sup></b>   | <b>Pignone et al (2002)<sup>17</sup></b>  | <b>Williams et al (2002)<sup>18</sup></b>  |
| <b>Years covered by studies in review</b>  |  |   |  |
| 1977–1994  | 1976–1996  | 1976–2001   | 1977–1999  |
| <b>Study factors</b>   |  |   |  |
| Depression; case-finding instruments; recognition rates; primary care.   | Screening and outcome questionnaires; depression and anxiety; recognition rates; management; clinical outcomes; non-psychiatric settings.  | Screening; depression; recognition rates; treatment rates; clinical outcomes; primary care.   | Case-finding questionnaires for depression; recognition rates; primary care.   |
| <b>Number and type of studies</b>  |  |   |  |
| Eighteen prospective studies in primary care.  | Nine randomised trials in primary care and general medical settings (screening and feedback to clinician vs screening with no feedback to clinician).  | Fourteen randomised trials in primary care (routine screening vs usual care).   | Twenty-eight prospective studies in primary care.  |
| <b>Outcomes/endpoints</b>  |  |   |  |
| Characteristics of case-finding questionnaires for depression: length; administration time; sensitivity and specificity for detecting depression.  | Rates of detection.<br>Number of patients treated or referred for treatment.<br>Outcome of psychiatric disorders.  | Differences in clinicians' rate of detection.<br>Proportion of patients with depression who were treated or referred for treatment.<br>Clinical outcomes of depression.   | Characteristics of case-finding questionnaires for depression: administration time; likelihood ratios (positive and negative) for depression.            |
| <b>Measures of association/statistical results</b>   |  |   |  |
| Nine case-finding instruments were assessed. No significant differences were found between instruments: overall sensitivity, 84%; overall specificity, 72%.  | Four (of nine) studies were combined in a meta-analysis: suggests routine screening and feedback to clinicians did not increase overall detection rate.<br>Two (of nine) studies showed routine administration and selective feedback for high scores increased recognition rate. This did not lead to increased rate of intervention. | Seven (of 14) studies were combined in a meta-analysis: suggests screening and feedback provides a 13% reduction in relative risk for depression.   | 11 case-finding questionnaires were assessed. No significant differences between questionnaires were found.  |
| <b>Findings</b>  |  |   |  |
| Several questionnaires are available with reasonable operating characteristics to assist clinicians with the identification of patients with depression.<br>Screening may improve recognition of depression in primary care. | Studies of routine administration of psychiatric measures with feedback to clinicians have no effect on patient outcome and do not influence clinicians' behaviour.  | Screening for depression can improve patient outcome in primary care, particularly when screening is integrated with the aim of improving treatment provision and clinic systems (coordinated and timely follow-up of diagnosis and treatment).<br>Screening with feedback to clinicians generally increases recognition of depression by a factor of two to three. | Several questionnaires with reasonable performance characteristics are available to assist clinicians to identify and diagnose patients with depression. |

studies were included to reveal a positive effect. It seems clear to us that sufficient data are now available to be more confident about the value of screening.

Critics of screening for depression highlight technical, practical and ethical issues. The most important technical issue has been the limited positive predictive value (35%–50%) of the instruments when used in primary care environments. Although some authors have argued that this is insufficient to recommend routine use,<sup>21</sup> others have concluded that the performance of these instruments is adequate, provided that screening is followed by a formal diagnostic interview.<sup>19</sup> A wide variety of self-report screening instruments have been developed to increase detection, follow the course of disorders, and more effectively engage

patients in their own treatment.<sup>12</sup> Such instruments are not “diagnostic” screening tests, but are more akin to other forms of medical examination or pathology testing (eg, recording body temperature, blood pressure or haemoglobin levels), where abnormal results indicate the need for further enquiry (rather than making a specific diagnosis). It is common to combine the use of screening instruments with more formal education in relevant diagnostic systems, improved communication skills and recognition of other patient and doctor factors that promote treatment adherence.<sup>22</sup> The introduction of screening tools without attention to such issues would be unlikely to result in the improved outcomes described in the reviews. In the Australian setting, we are now seeing systematic attempts to

**3: Review of reviews: answers to key questions about screening tools**

| Mulrow et al (1995) <sup>15</sup>   | Gilbody et al (2001) <sup>16</sup>   | Pignone et al (2002) <sup>17</sup>  | Williams et al (2002) <sup>18</sup>  |
|---|--|---|--|
| <b>Can screening tools efficiently and accurately identify patients with depression?</b>  |  |   |  |
| Yes<br>There are many questionnaires that are relatively short (2–28 items; administration times < 2 min to 6 min) and easily self-administered by patients. Likelihood ratio positive* = 2.86. | Insufficient data to answer  | Insufficient data to answer   | Yes<br>Many questionnaires (1–30 items; administration times < 1 min to 5 min) are available to help clinicians identify and diagnose patients with depression. Median likelihood ratio positive* = 3.3 (range, 2.3–12.2). |
| <b>Do clinicians use the information obtained from screening tools to assist with diagnosis and treatment planning?</b>   |  |   |  |
| Insufficient data to answer   | No<br><i>Recognition:</i> Increases were not observed with routine administration of screening questionnaires in unselected patients. Increases were only observed when the instrument was scored by someone other than the clinician and only results of those with high scores were fed back to the clinician.<br><i>Treatment:</i> In studies where rates of increased recognition were observed, this did not translate into an increased rate of intervention or improved management of depression. | Yes<br><i>Recognition:</i> Increased by a factor of two to three.<br><i>Detection and diagnosis:</i> Increased by 10%–47%.<br><i>Effect on treatment rates:</i> Varied results. Three of seven studies showed large increases; four showed no significant effect.   | Insufficient data to answer  |
| <b>Is the outcome of patients with depression improved within practice settings that utilise screening tools (alone or in combination with other techniques)?</b>                               |  |   |  |
| Insufficient data to answer   | No<br>Routine administration of validated outcome measures with feedback to clinicians has not been shown to influence clinicians' behaviour, improve detection or improve patient outcome.  | Yes<br>Screening can improve recognition and outcomes, particularly when screening is integrated with the aim of improving treatment provision and clinic systems (coordinated and timely follow-up of diagnosis and treatment).<br>Screening is estimated to reduce relative risk by 13% and is associated with a nine-percentage-point absolute reduction in the proportion of patients with persistent depression. | Insufficient data to answer  |
| <b>Is there evidence that the benefit is limited to specific subpopulations of patients?</b>  |  |   |  |
| Insufficient data to answer   | Yes<br>Patients with high scores on screening questionnaires may benefit.  | No<br>Findings do suggest that screening is probably effective in primary care patients who are not frequent attenders.   | Insufficient data to answer  |

\*Likelihood ratio positive = likelihood of a positive screen result in a person with depression in comparison to a person without depression. It is calculated as sensitivity/(1-specificity).<sup>16</sup>

use screening and outcome tools within this appropriate context.<sup>23</sup>

A common difficulty for screening systems in mental health is deciding which “disorder” or “diagnosis” is being predicted. The narrow view is that only specific diagnoses (eg, major depression) that are associated with clear treatment guidelines should be identified.<sup>6</sup> The broader view is that screening tools should be used to identify a wider range of typically comorbid disorders (eg, depression, anxiety, somatoform disorders, and alcohol or other substance misuse).<sup>11</sup> This avoids the need to

use multiple screening tools for closely related disorders. Therefore, if the real “diagnosis” of interest is actually a series of common mental disorders, then the prevalence in general practice is high (up to 60% for some forms of depression, anxiety, somatoform disorders, and alcohol or other substance misuse),<sup>9</sup> and the positive predictive value of related instruments increases proportionally. The data provided within the reviews presented here deal only with the specific topic of depression. A new wave of such studies in primary care is likely to begin to address this broader issue.<sup>9</sup>

An important ethical consideration is whether screening tools should be introduced within a health system that lacks commitment to enhanced service provision. Until very recently, the Australian healthcare system has relied almost exclusively on general practitioners to provide care for people with common mental disorders.<sup>24</sup> However, GPs have not been supported by adequate professional training, remuneration, logistic, professional and specialist support, or access to specialist treatment systems.<sup>25</sup> The weight of evidence is that screening instruments are only likely to be of benefit where they are tied clearly to practice procedures that use the information to promote evidence-based treatments.<sup>17</sup> Therefore, screening for depression (or comorbid disorders) can only be recommended in those healthcare systems that also incorporate new practice and practitioner-training systems designed to maximise evidence-based treatments.<sup>23</sup>

An important difference between screening for depression and other forms of medical screening should also be noted. Mental health screening is not "screening" in the typical sense. Self-report instruments require the person to disclose the symptoms of mental disorder voluntarily. If a person does not wish to reveal that he or she has psychological or related somatic symptoms, he or she can simply not complete the questionnaire or can return negative responses. Importantly, such instruments are predictive of a person's recognition of need for appropriate psychological assessment.<sup>10</sup> In essence, such methods are less about screening and more about efficient methods for prompting voluntary disclosure of key psychological symptoms. Other doctor and patient factors clearly influence disclosure of psychological symptoms, so acceptance of screening tools will be affected by those same factors (eg, doctor's communication skills, patient's understanding of the nature of their symptoms, time that the doctor is likely to spend with the patient, doctor's confidence in providing psychological treatments, doctor's training in mental health).<sup>9,10,22,26</sup> Medical practitioners are often reported by patients to hold surprisingly negative views about people with mental health problems,<sup>27</sup> and such views will also affect disclosure.

Although the case for effective pharmacological and non-pharmacological treatments of common forms of depression, anxiety, and alcohol or other substance misuse in the general practice setting is well established,<sup>6</sup> the notion of effective treatments is not well known to people in the community.<sup>5</sup> Additionally, many people often perceive medical treatments for depression to be harmful (eg, causing addiction, personality change or severe medical side effects) or leading to other adverse outcomes (eg, through increased stigma or resultant discrimination in employment or access to insurance). This raises another important ethical concern. If providing treatment results in direct medical benefits but also contributes to other social losses, then the practitioner has an additional obligation to ensure that the patient (and in some instances their family) has been provided with adequate information with regard to treatment alternatives (including the consequences of not being treated at all). To date, we have little evidence that systematic information about the risks and benefits of treatments is

provided to patients or their families by either primary care or specialist services.<sup>28</sup> Ethically, screening in medical settings is not analogous to screening in non-medical environments (eg, telephone screening) or within other health systems (eg, antenatal or postnatal clinics), where the information from the screening tool is not linked directly to the provision of relevant information or treatments.

Given the potential impact of screening on existing workloads, it is likely that GPs will dismiss screening systems as "over-sensitive".<sup>29</sup> Although the instruments are not over-sensitive relative to existing standards (such as degree of resultant disability, clinician judgement, patient's perception of need for treatment, or formal psychiatric [DSM-IV<sup>30</sup>] diagnoses), a case can be made for not treating everyone identified by the systems. Treatment decisions, as in all other clinical situations, require formal diagnoses, clinical judgements, comparison with existing guidelines,<sup>6</sup> and negotiation with the person affected. The decision by a clinician not to screen or treat, however, may be skewed by other considerations, such as their own lack of confidence<sup>11</sup> or skills in delivering psychological treatments, their inability to access appropriate professional and specialist support services, their misperception of the seriousness of the condition, and a tendency (shared with the rest of the community<sup>5</sup>) not to see common mental disorders as major health problems.

In our view, the most pertinent ethical and professional dilemma surrounding the introduction of screening in general practice is whether appropriate services will be provided to those who are eventually diagnosed as having depression (or other related disorders). First, the number of people identified by any of the self-report and related diagnostic systems currently available (7%–15%) would be far in excess of the number of patients currently receiving any formal intervention (about 4%).<sup>31</sup> Clearly, it would be unethical to introduce screening if practitioners ignored the results, or if health systems did not change rapidly to accommodate the increased need for relevant treatments. However, it may become unethical in the future to ignore high prevalence mental disorders that have serious health consequences. Currently, practitioners (or health systems) that ignore people with hypertension, diabetes or asthma, or ignore child immunisation or cervical cancer screening, or discourage detection of harmful patterns of alcohol or tobacco use, could be described as acting in an unethical manner. Current evidence suggests that it is time for professional leaders in general practice in Australia to reconsider their stance on screening for common mental disorders such as depression.

## References

1. National Preventive and Community Medicine Committee of the Royal Australian College of General Practitioners. Guidelines for preventive activities in general practice. 5th ed. *Aust Fam Physician* 2001; 30 (Special Issue): S11-S161.
2. Henderson S, Andrews G, Hall W. Australia's mental health: an overview of the general population survey. *Aust N Z J Psychiatry* 2000; 34: 197-205.
3. Sawyer MG, Arney F, Baghurst P, et al. The mental health of young people in Australia. Canberra: Mental Health and Special Programs Branch, Commonwealth Department of Health and Aged Care, 2000. Available at <<http://www.health.gov.au/hsdd/mentalhe/resources/young/pdf/young.pdf>>.

4. Mathers C, Vos T, Stevenson C. The burden of disease and injury in Australia. Canberra: Australian Institute of Health and Welfare, 1999. (AIHW Catalogue No. PHE-17.)
5. Highet NJ, Hickie IB, Davenport TA. Monitoring awareness of and attitudes to depression in Australia. *Med J Aust* 2002; 176 Suppl May 20: S63-S68.
6. Ellis PM, Smith DAR. Treating depression: the *beyondblue* guidelines for treating depression in primary care. *Med J Aust* 2002; 176 Suppl May 20: S77-S83.
7. Murray CJL, Lopez AD, editors. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Cambridge, MA: Harvard University Press, 1996.
8. Harris MF, Silove D, Kehag E, et al. Anxiety and depression in general practice patients: prevalence and management. *Med J Aust* 1996; 164: 526-529.
9. Hickie IB, Davenport TA, Scott EM, et al. Unmet need for recognition of common mental disorders in Australian general practice. *Med J Aust* 2001; 175 Suppl July 16: S18-S24.
10. Hickie IB, Davenport TA, Hadzi-Pavlovic D, et al. Development of a simple screening tool for common mental disorders in general practice. *Med J Aust* 2001; 175 Suppl Jul 16: S10-S17.
11. Hickie IB, Davenport TA, Naismith SL, et al. Conclusions about the assessment and management of common mental disorders in Australian general practice. *Med J Aust* 2001; 175 Suppl Jul 16: S52-S55.
12. Hickie IB, Andrews G, Davenport TA. Measuring outcomes in patients with depression or anxiety: an essential part of clinical practice. *Med J Aust* 2002; 177: 205-207.
13. Oxman AD, Guyatt GH. Validation of an index of the quality of review articles. *J Clin Epidemiol* 1991; 44: 1271-1278.
14. Peach H. Reading systematic reviews. *Aust Fam Physician* 2002; 31: 736-740.
15. Mulrow CD, Williams JW, Gerety MB, et al. Case-finding instruments for depression in primary care settings. *Ann Intern Med* 1995; 122: 913-921.
16. Gilbody SM, House AP, Sheldon TA. Routinely administered questionnaires for depression and anxiety: systematic review. *BMJ* 2001; 322: 406-409.
17. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for depression in adults: a summary of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2002; 136: 765-776.
18. Williams J, Noel PH, Cordes J, et al. Is this patient clinically depressed? *JAMA* 2002; 287: 1160-1170.
19. Pignone M, Gaynes BN, Lohr KN, et al. Questionnaires for depression and anxiety: systematic review is incomplete. *BMJ* 2001; 323: 167-168.
20. US Preventive Services Task Force. Screening for depression: recommendations and rationale. *Ann Intern Med* 2002; 136: 760-764.
21. Arroll B. Questionnaires for depression and anxiety: two screening questions may be helpful. *BMJ* 2001; 323: 168-169.
22. Naismith SL, Hickie IB, Scott EM, Davenport TA. Effects of mental health training and clinical audit on general practitioners' management of common mental disorders. *Med J Aust* 2001; 175 Suppl Jul 16: S42-S47.
23. Better Outcomes in Mental Health Care initiative. <<http://www.mental-health.gov.au>>. Accessed July 2002.
24. Andrews G, Henderson S, Hall W. Prevalence, comorbidity, disability and service utilisation. Overview of the Australian National Mental Health Survey. *Br J Psychiatry* 2001; 178: 145-153.
25. Hickie IB. Primary care psychiatry is not specialist psychiatry in general practice. *Med J Aust* 1999; 170: 171-173.
26. Hickie IB, Davenport TA, Naismith SL, et al. Treatment of common mental disorders in Australian general practice. *Med J Aust* 2001; 175 Suppl Jul 16: S25-S30.
27. McNair BG, Highet NJ, Hickie IB, Davenport TA. Exploring the perspectives of people whose lives have been affected by depression. *Med J Aust* 2002; 176 Suppl May 20: S69-S76.
28. Goldney RD, Fisher LJ, Wilson DH. Mental health literacy: an impediment to the optimum treatment of major depression in the community. *J Affect Disord* 2001; 64: 277-284.
29. Harris MF, Penrose-Wall J. Mental distress or disorder? *Med J Aust* 2001; 175 Suppl Jul 16: S6-S7.
30. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th ed. (DSM-IV). Washington, DC: APA, 1994.
31. Britt HC, Miller GC. The BEACH study of general practice. *Med J Aust* 2000; 173: 63-64. □