

# ACE–PREVENTION PAMPHLETS

## GENERAL POPULATION RESULTS PAMPHLET 1 COST-EFFECTIVENESS OF PREVENTIVE INTERVENTIONS FOR ADULT DEPRESSION

### 1. MAIN MESSAGES

Screening in general practice for early signs of depression followed by brief interventions is cost-effective and could avert up to 20% of the burden of depression.

Prevention of depression is still an emerging field of research and hence the evidence base is not yet fully developed. There is enough evidence to recommend implementing these interventions in pilot studies accompanied by evaluation to examine whether the benefits we have modelled can be realised.

### 2. BACKGROUND

Depression is a common mental disorder. In Australia, over 4% of the adult population can be expected to suffer depression in any one year with up to 20% experiencing at least one episode of depression throughout their life. The World Health Organisation estimates that depression is the third leading cause of disease burden worldwide. Up to 19% of women can expect to experience either major or minor depression after the birth of their children. The costs of treating depression, lost productivity and diminished quality of life place a substantial burden on the Australian economy.

### 3. INTERVENTIONS

We reviewed the literature to identify a range of interventions aiming to prevent major depression, including post-natal depression, in adult populations, which would be suitable for implementation in Australia. It was also important that the interventions had evidence of efficacy/effectiveness in terms of reduction in the onset of Major Depressive Disorder (including post-natal) to support the analyses. From the review process, we selected three interventions for cost-effectiveness analysis:

- 1. Brief Bibliotherapy:** patients are screened opportunistically for symptoms of depression when visiting their general practice; the GP then refers people who screen positive to a psychologist for further screening; the psychologist then determines if the person has sub-syndromal depression (i.e. some symptoms of depression but not enough to warrant a diagnosis of a major depressive disorder); if the person has sub-syndromal depression they then receive the intervention which consists of an extra visit to the psychologist; a self-help manual; and six follow-up telephone calls.
- 2. Group-based psychological therapy:** people are screened similarly to the brief bibliotherapy intervention except that 8 group-based therapy sessions with the psychologist and 1 extra booster session are offered.
- 3. Group-based therapy specifically for post-natal depression:** women are routinely screened as part of their ante-natal care for heightened risk of post-natal depression; those who screen positive are then offered 6 group-based therapy sessions with a psychologist.

NHMRC GRANT NO. 351558

PROJECT LEADERS

PROF THEO VOS (UQ)

PROF ROB CARTER (DEAKIN)

PAMPHLET AUTHOR

CATHY MIHALOPOULOS

FOR FURTHER INFORMATION

[WWW.SPH.UQ.EDU.AU/BODCE-](http://WWW.SPH.UQ.EDU.AU/BODCE-)

ACE-PREVENTION

#### 4. CHOICE OF COMPARATOR

The comparator to the interventions is current practice. The exclusion criteria to all the interventions include currently receiving mental health care, so the interventions are modelled as “add-ons” to the current mix- of health care services (that is, a “do nothing” comparison)

#### 5. INTERVENTION COST-EFFECTIVENESS

The interventions designed to prevent depression predominately fall in the north-east corner (‘health gain at a cost’) of the cost-effectiveness plane (Figure 1). They all have a relatively high probability of being cost-effective when uncertainty simulations are taken into account.

Figure 1: Cost-effectiveness of three psychological interventions designed to prevent depression on a cost-effectiveness plane with \$50,000 per DALY threshold line

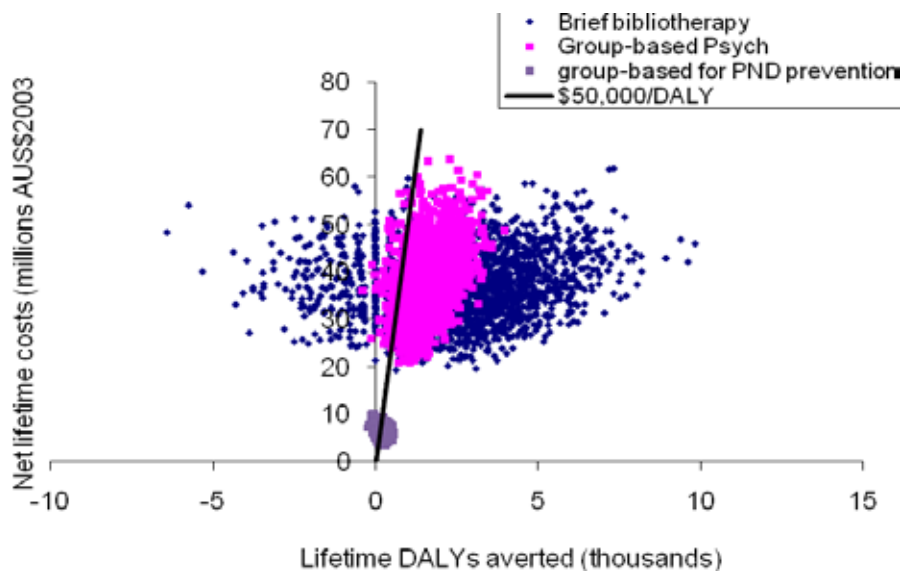


Table 1: Cost-effectiveness ratios and probability of being cost-effective for the three prevention of depression interventions.

Intervention	Cost per DALY (95% uncertainty range)*	Probability of being under \$50,000/DALY
Brief bibliotherapy	\$8,600	82%
Group-based psychological therapy	\$20,000	96%
Group-based therapy for post-natal depression	\$15,000	76-87%**

\*No uncertainty interval is presented as the simulation results include negative ICERS which cannot be meaningfully interpreted within an interval range. The point estimate median values are based on the full 2000 uncertainty iterations

\*\*Note that two methods were used to estimate health improvement for post-natal depression. The second method was more conservative than the first (though the first method is more comparable to the other depression evaluations and is what is reported in the cost/DALY column. The probability of 76% refers to the second, more conservative method of modelling and 87% refers to the first method – please refer to the post-natal depression briefing paper for further information regarding these methods.

Finally, if these interventions were delivered to all people who are eligible to receive them up to 20% of the burden of depression could be averted.

## 6. CONCLUSIONS

Interventions designed to screen people who are at heightened risk of developing depression (including post-natal depression) are recommended for implementation within Australia. The current analyses do not include all potential benefits of such interventions, such as detecting untreated cases of a full-blown depressive disorder, or impact on other mental disorders such as anxiety, so may be considered a conservative estimate of cost-effectiveness.

Strength of evidence is the most important of the second-stage filter criteria in evaluating these interventions. The evidence on bibliotherapy is based on a single small trial which requires replication in an alternative setting. The evidence on the group-based psychological intervention is based on a large published meta-analysis of psychological interventions designed to prevent depression which included interventions in children as well as adults across different settings. The intervention designed to prevent post-natal depression was based on a meta-analysis which only included studies designed to prevent post-natal depression and the results trended towards significance (that is just failed to reach statistical significance). Therefore we recommend further evaluation of such interventions within the Australian context.

There are also substantial work-force issues, since these interventions are ideally delivered by psychologists who are already stretched within the current health care system.

For more information on this topic area, please visit website [www.sph.uq.edu.au/bodce-ace-prevention](http://www.sph.uq.edu.au/bodce-ace-prevention)

# ACE–PREVENTION PAMPHLETS

## 7. ABOUT ACE-PREVENTION

To aid priority setting in prevention, the Assessing Cost-Effectiveness in Prevention Project (ACE-Prevention) applies standardised evaluation methods to assess the cost-effectiveness of 100 to 150 preventive interventions, taking a health sector perspective. This information is intended to help decision makers move resources from less efficient current practices to more efficient preventive action resulting in greater health gain for the same outlay.

### PAMPHLETS IN THIS SERIES

#### Methods:

- A. The ACE-Prevention project
- B. ACE approach to priority setting
- C. Key assumptions underlying the economic analysis
- D. Interpretation of ACE-Prevention cost-effectiveness results
- E. Indigenous Health Service Delivery

#### Overall results

1. League table
2. Combined effects

#### General population results

1. Adult depression
2. Alcohol
3. Blood pressure and cholesterol lowering
4. Cannabis
5. Cervical cancer screening, Sunsmart and PSA screening
6. Childhood mental disorders
7. Fruit and vegetables
8. HIV
9. Obesity
10. Osteoporosis
11. Physical activity
12. Pre diabetes screening
13. Psychosis
14. Renal replacement therapy, screening and early treatment of chronic kidney disease
15. Salt
16. Suicide prevention
17. Tobacco

#### Indigenous population results

1. Cardiovascular disease prevention
2. Diabetes prevention
3. Screening and early treatment of chronic kidney disease