Mental health consultations in the perinatal period: a cost-analysis of Medicare services provided to women during a period of intense mental health reform in Australia

Georgina M. Chambers1,9 PhD, MBA, BAppSci(MLS), Grad Dip (Comp), Associate Professor and Director
Sean Randall2 Bsc, PhD, Research Fellow
Cathrine Mihalopoulos3 PhD, Associate Professor of Mental Health Economics
Nicole Reilly4 BPsyc(Hons), PhD, Senior Research Associate and Conjoint Senior Lecturer
Elizabeth A. Sullivan5 MD, MPH, MBBS, FAFPHM, Professor and Director
Nicole Highet6 DPsych, Executive Director
Vera A. Morgan7 MSocSc, PhD, Winthrop Professor and Head
Mary Lou Chatterton3 PharmD, Research Fellow
Mary-Paule Austin4,8 MD, FRANZCP, MBBS, Chair and Director, Professorial Fellow

1National Perinatal Epidemiology and Statistics Unit, Centre for Big Data Research in Health and School of Women’s and Children’s Health, UNSW Sydney, Level 1, AGSM Building, Kensington, NSW 2052, Australia.
2Centre for Population Health Research, Curtin University, Kent Street, Bentley, WA 6160, Australia. Email: sean.randall@curtin.edu.au
3Deakin Health Economics, School of Health and Social Development, Deakin University, Locked Bag 20001, Geelong, Vic. 3220, Australia. Email: cathy.mihalopoulos@deakin.edu.au; m.chatterton@deakin.edu.au
4Perinatal and Women’s Mental Health Unit, St John of God Burwood Hospital and School of Psychiatry, UNSW Sydney, 13 Grantham Street, Burwood, NSW 2134, Australia. Email: n.reilly@unsw.edu.au; m.austin@unsw.edu.au
5Australian Centre for Public and Population Health Research, Faculty of Health, University of Technology Sydney, PO Box 123, Broadway, NSW 2007, Australia. Email: elizabeth.sullivan@uts.edu.au
6Centre of Perinatal Excellence, PO Box 122, Flemington, Vic. 3031, Australia. Email: nicole.highet@cope.org.au
7Neuropsychiatric Epidemiology Research Unit, School of Psychiatry and Clinical Neurosciences, The University of Western Australia, Level 3, Medical Research Foundation Building, Rear 50 Murray Street, Perth, WA 6000, Australia. Email: vera.morgan@uwa.edu.au; maxine.croft@uwa.edu.au
8The Black Dog Institute, Hospital Rd, Randwick, NSW 2031, Australia.
9Corresponding author. Email: g.chambers@unsw.edu.au

Abstract

Objective. To quantify total provider fees, benefits paid by the Australian Government and out-of-pocket patients’ costs of mental health Medicare Benefits Schedule (MBS) consultations provided to women in the perinatal period (pregnancy to end of the first postnatal year).

Method. A retrospective study of MBS utilisation and costs (in 2011–12 A$) for women giving birth between 2006 and 2010 by state, provider-type, and geographic remoteness was undertaken.

Results. The cost of mental health consultations during the perinatal period was A$17.5 million for women giving birth in 2007, rising to A$29 million in 2010. Almost 9% of women giving birth in 2007 had a mental health consultation compared with more than 14% in 2010. An increase in women accessing consultations, along with an increase in the average number of consultations received, were the main drivers of the increased cost, with costs per service remaining stable. There was a shift to non-specialist care and bulk billing rates increased from 44% to 52% over the study period. In 2010, the average total cost (provider fees) per woman accessing mental health consultations during the perinatal period was A$689,
Cost analysis of perinatal mental health consultations

Australian Health Review 515

Introduction

Postnatal depression and anxiety disorders within the perinatal period (pregnancy to end of the first postnatal year) are recognised as an international public health problem, affecting around 15% of Australian women. Not only does perinatal mental illness adversely affect a woman’s health and experience of motherhood, it is increasingly being shown to have adverse long-term effects on both mothers and their children. Furthermore, the economic cost of perinatal depression is sizable, with the condition estimated to have cost the Australian economy A$433 million in 2012. In addition, the total economic cost in 1 year of not treating perinatal mental health conditions has been estimated at over A$518.5 million.

The delivery and funding of mental health services in Australia is complex, including, but not limited to a mix of inpatient, ambulatory and primary care services funded by the federal Australian Government, state and territory governments, non-government organisations, private health insurers and direct out-of-pocket payments by patients. In 2011–12, national recurrent expenditure on mental health-related services was estimated to be A$7.2 billion, with major funders being the state and territory governments (A$4.8 billion) and the Australian Government (A$2.4 billion). This represents almost 8% of total government health spending. Furthermore, spending on mental health is growing faster than overall expenditure in health, at around 6% per year.

In 2011–12, A$851 million of the A$2.4 billion dollars spent by the Australian Government on mental health, was spent on Medicare Benefit Schedule (MBS) mental health services. The MBS is the cornerstone of Medicare, Australia’s universal health insurance scheme. Medicare provides access to primary care services, public hospitals and subsidised pharmaceuticals to all Australians through a levy on taxpayers. Medicare pays benefits (rebates) for professional health services listed on the MBS, including mental health services provided by psychiatrists and, in more recent years, by general practitioners (GP) and allied health professionals (eligible registered psychologists, social workers and occupational therapists). During 2011–12, the A$851 million spent on MBS items provided 7.9 million mental health service items to over 1.6 million people in Australia.

The mental healthcare landscape in Australia has changed significantly over the last decade, with the introduction of numerous policies aimed at prevention, screening and improving access to treatment. The Council of Australian Governments’ National Action Plan for Mental Health committed A$4.1 billion to mental health over 2006–11, funding 145 separate initiatives. This included the Better Access to Psychiatrists, Psychologists and General Practitioners (‘Better Access’), in November 2006, which introduced several new MBS items for selected mental health services, including the first mental health MBS items for GPs, psychologists and other allied health professionals. There is strong evidence the Better Access initiative has led to improved access to mental healthcare, with a large increase in mental health service uptake, from an average of 34 individuals per thousand accessing the newly introduced MBS items in 2007, to an average of 53 individuals per thousand receiving access in 2009. Individuals from ‘at-risk’ populations, such as the young, those from lower socioeconomic backgrounds, and those in remote areas, have experienced lower rates of uptake, but have also experienced the greatest percentage increases in uptake over time.

Another important initiative specifically aimed at women giving birth was the National Perinatal Depression Initiative...
(NPDI) introduced in 2008. This initiative aimed to improve prevention and early detection of antenatal and postnatal depression by providing universal screening for women during their antenatal and postnatal periods, along with appropriate follow-up support. To evaluate the impact of the NPDI on access to mental health MBS consultations, we undertook an econometric policy analysis that has been previously published. The study found that in the 2 years following its introduction, the NPDI did not result in an overall increase in access to mental health MBS consultations, but did result in a significant increase in access in particular groups of women, namely those aged under 25 and over 34 years living in major cities. The study also provided some evidence of a shift to accessing mental healthcare earlier in the perinatal period, particularly during pregnancy, compared with later in the postnatal period.

The econometric policy analysis of the NPDI reflected a period of intense primary healthcare reform of mental health services (2006–2011) in which numerous policies, including Better Access, the NPDI and related mental health policies were introduced across Australia. We found that the proportion of women giving birth who accessed at least one mental health MBS item during the perinatal period increased from 88 to 141 per 1000 women giving birth.

The aim of the current study is to extend our econometric policy analysis by examining the costs of mental health MBS consultations in primary and specialist care settings for women in their perinatal period during 2006–2011. We quantify the total and average provider fees, Australian Government rebates, and patient out-of-pocket expenses for MBS-subsidised consultations for women during the perinatal period by state of residence, provider type and level of geographic remoteness. This cost analysis not only provides additional insight into the policy analysis of the NPDI undertaken previously, but provides important data for informing much needed economic evaluations of perinatal mental health initiatives.

Methods

Data sources

A detailed description of the data sources, including the list of MBS mental health items used, has been previously published. The MBS items are not diagnostic-specific, but were services rendered during the perinatal period (pregnancy to end of the first postnatal year). Briefly, the Australian Government Department of Human Services Medicare Information Service Branch provided an extract of monthly aggregate claims data for mental health MBS consultations undertaken during the perinatal period for women giving birth (as identified by the Medicare data) between August 2006 and December 2010. To capture the perinatal period for all women in the cohort the extract included claims for consultations between 1st November 2005 and 31st December 2011.

To identify women who had given birth, the oldest woman of reproductive age (18–44 years) on a Medicare card for which a baby had been added, was identified as the mother of the child. The mental health MBS items claimed by that woman in the 9 months leading up to the birth and the 12 months following the birth were extracted by state (NSW, Vic., WA and all other states and territories combined), level of remoteness (major city, regional or remote) and provider type (psychiatrists, GPs, allied health professionals). Several of the smaller states were combined because less information was available on the rollout of the NPDI in these states. Level of remoteness was defined according to the Australian Bureau of Statistics Accessibility/Remoteness Index of Australia categories. The cost data obtained for each of the MBS consultations claimed included the total provider fee, Medicare rebate, and whether the service was provided at the rebate level (bulk-billed), meaning no out-of-pocket costs to the patient.

Statistical and cost analysis

Costs were inflated to 2011–12 Australian dollars using the Australian Institute of Health and Welfare Medicare medical services fees index. If the perinatal period crossed two financial years, costs were inflated according to the predominant year. Descriptive statistics included measures of utilisation and costs for women who accessed at least one mental health MBS item during her perinatal period. The utilisation measures included the annual number and proportion of women accessing mental health MBS items and the number of consultations claimed per woman, by state, remoteness, provider type, and year of giving birth. The economic outcomes included the annual total and average provider fee, Medicare rebate and out-of-pocket cost per woman who accessed at least one mental health MBS item during her perinatal period (calculated by subtracting the Medicare rebate from the provider fee).

Tests for linear trends were carried out using ordinary least-squares regression, with a t-test performed on the slope of the regression line.

Results

Table 1 summarises the average use for women giving birth 2007–2010 who accessed at least one MBS mental health consultations during their 21-month perinatal period, by provider type (psychiatrist, GP and allied health professional), remoteness and Australian state or territory. Table 2 summarises provider fees, MBS benefits paid, out-of-pocket expenses, and bulk billing rates for MBS mental health consultations for women during their perinatal period. A more detailed analysis by provider type, state, and geographic remoteness is provided as supplementary material to this paper (Table S1, per woman giving birth, and Table S2, per mental health MBS item). Fig. 1 extends the annual results reported in these tables, showing the monthly trends for women who gave birth from August 2006 to December 2010.

Utilisation of MBS-subsidised mental health consultations in the perinatal period

The number of women who gave birth and accessed at least one mental health MBS item in their perinatal period increased more than 1.5-fold between 2007 and 2010, from 88 to 141 women per 1000 women giving birth. That is, 8.8% of women giving birth in 2007 accessed at least one mental health MBS item in the perinatal period compared with 14.1% in 2010.

The number of consultations claimed during the 21-month perinatal period per woman giving birth and who accessed at least one mental health MBS item increased from 4.9
consultations in 2007 to 5.2 consultations in 2010. Victoria had the highest proportion of women accessing treatment and a higher number of consultations claimed per woman. A higher proportion of women giving birth in major cities and regional areas had at least one consultation than those living in remote areas. The average number of consultations also decreased with the level of remoteness (Table 1).

There was also a shift in the type of providers providing consultations, with a decrease in psychiatric services and an increase in allied health professional and GP services. For example, the average number of psychiatric consultations per woman decreased from 1.5 consultations in 2007 to 1.1 consultations in 2010, whereas the average number of GP consultations increased from 1.9 consultations per woman in 2007 to 2.4 consultations in 2010 (Table 1).

Table 1. Utilisation of mental health Medicare Benefit Schedule (MBS) items by women during their perinatal period

<table>
<thead>
<tr>
<th>Variable</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>P^A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women who gave birth and accessed at least one MBS mental health item in the perinatal period (per 1000 women giving birth)</td>
<td>88</td>
<td>114</td>
<td>129</td>
<td>141</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>By remoteness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major cities</td>
<td>98</td>
<td>123</td>
<td>137</td>
<td>148</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Regional</td>
<td>87</td>
<td>118</td>
<td>136</td>
<td>148</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Remote</td>
<td>40</td>
<td>50</td>
<td>57</td>
<td>71</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>By state</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>93</td>
<td>117</td>
<td>131</td>
<td>145</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Vic.</td>
<td>104</td>
<td>133</td>
<td>146</td>
<td>156</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>WA</td>
<td>91</td>
<td>114</td>
<td>128</td>
<td>130</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>All other states</td>
<td>74</td>
<td>99</td>
<td>118</td>
<td>130</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Average number of mental health items per woman giving birth who accessed at least one mental health item during the perinatal period</td>
<td>4.9</td>
<td>5.1</td>
<td>5.1</td>
<td>5.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>By remoteness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major cities</td>
<td>5.4</td>
<td>5.5</td>
<td>5.5</td>
<td>5.6</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Regional</td>
<td>3.8</td>
<td>3.9</td>
<td>4.0</td>
<td>4.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Remote</td>
<td>2.7</td>
<td>3.3</td>
<td>2.6</td>
<td>3.2</td>
<td>n.s.</td>
</tr>
<tr>
<td>By state</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>4.5</td>
<td>4.7</td>
<td>5.0</td>
<td>5.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Vic.</td>
<td>6.0</td>
<td>5.9</td>
<td>5.9</td>
<td>6.0</td>
<td>n.s.</td>
</tr>
<tr>
<td>WA</td>
<td>4.6</td>
<td>4.7</td>
<td>4.5</td>
<td>4.8</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>All other states</td>
<td>4.6</td>
<td>4.8</td>
<td>4.7</td>
<td>4.7</td>
<td>n.s.</td>
</tr>
<tr>
<td>By provider type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPs</td>
<td>1.9</td>
<td>2.3</td>
<td>2.4</td>
<td>2.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Allied health professionals</td>
<td>1.5</td>
<td>1.5</td>
<td>1.6</td>
<td>1.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychiatrists</td>
<td>1.5</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

^ATests for linear trends were carried out on all 53 birth-months using ordinary least-squares regression, with a t-test performed on the slope of the regression line.

Total cost of MBS-subsidised mental health consultations in the perinatal period

The Medicare benefits paid by the Australian Government for mental health MBS items during the perinatal period for all women who gave birth in 2007 was A$15.0 million, rising to A$25.1 million for women who gave birth in 2010. Total out-of-pocket costs increased from A$2.5 million to A$3.9 million in the same period (Table 2). In terms of monthly results, the total MBS benefits paid by the Australian Government more than doubled from A$776,000 for women giving birth in August 2006 to A$2.1 million for women giving birth in December 2010 and out-of-pocket expenses paid by women increased from A$148,000 to A$338,000 over the same period.

Cost per woman of MBS-subsidised mental health consultations in the perinatal period

For women who gave birth in 2007, the average total cost (provider fees) of Medicare-subsidised mental health consultations during the perinatal period was A$685, of which A$589 was paid by the Australian Government in Medicare benefits and A$97 was paid as out-of-pocket expenses. These per-service costs were comparable to those paid in 2010, with average provider fees per treated woman of A$689, Medicare benefits of A$596 and out-of-pocket expense of A$93 (Table 2).

Although the total cost per patient for Medicare consultations remained relatively constant over the study period, the nature of these consultations changed. In 2007, psychiatric consultations represented the largest expense, both in terms of Medicare benefits and out-of-pocket expenses. However, by 2010, allied health represented the greatest mental health MBS cost per woman, both to the government (in Medicare benefits) and individually (in out-of-pocket expenses). The average Medicare benefit for psychiatric consultations decreased from an average of A$221 per woman in 2007 to A$164 per woman in 2010 (P<0.001), whereas benefits for allied health increased from A$192 in 2007 to A$249 in 2010 (P<0.001). The average out-of-pocket costs remained relatively stable for all provider groups over the study period. There were large differences in bulk billing rates between provider types, with GPs bulk billing 90% of the time, allied health professionals bulk billing 34% of the time and psychiatrists bulk billing 20% of the time over the study period (Table S2).

In line with utilisation rates, provider fees, Medicare benefits and out-of-pocket expenses were significantly higher for consultations provided in major cities than those in regional and remote areas (Fig. 1; Table S1). Compared with women receiving consultations in regional and remote areas combined, the average Medicare benefits paid for women receiving services in major cities was 150% higher and out-of-pocket payments were 230% higher (Table S1). Women from regional and remote areas had a higher rate of bulk billing (an annual average of 63% and 66% of consultations) compared with those from major cities (an average of 45% of consultations, P<0.001). The rate of bulk billing increased over the study period in both major cities and regional areas, but remained stable in remote areas (P<0.001; Fig. 1; Table S2).

Cost per service of MBS-subsidised mental health consultations in the perinatal period

There were no substantial changes in average provider fees, Medicare benefits or out-of-pocket costs per service during the
study period. For example, after accounting for inflation, the average provider fee per service was A$138 in 2007 compared with A$133 in 2010 (Table S2). However, the average provider fees, Medicare benefits and out-of-pocket costs per service were higher in major cities than regional and remote areas (Table S2). This is likely explained by the fact that a higher proportion of high-cost psychiatric services were provided in major cities than in regional or remote areas.

Table 2. Costs of mental health Medicare Benefit Schedule (MBS) consultations for women in their perinatal period (AS 2011–12)
The perinatal period is pregnancy to end of the first postnatal year, therefore access to mental health consultations were captured from March 2006 to December 2011. Numbers may not tally due to rounding. n.s., not significant

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>P²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cost of mental health MBS consultations for women treated in their perinatal period (national, all ages)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider fees (millions)</td>
<td>$17.4</td>
<td>$23.1</td>
<td>$25.8</td>
<td>$29.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Medicare benefits (millions)</td>
<td>$15.0</td>
<td>$19.9</td>
<td>$22.3</td>
<td>$25.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Out-of-pocket expenses (millions)</td>
<td>$2.5</td>
<td>$3.2</td>
<td>$3.5</td>
<td>$3.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Average cost of mental health MBS consultations (per woman) treated in their perinatal period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider fees</td>
<td>$685</td>
<td>$679</td>
<td>$672</td>
<td>$689</td>
<td>n.s.</td>
</tr>
<tr>
<td>s.d.</td>
<td>$42</td>
<td>$21</td>
<td>$25</td>
<td>$17</td>
<td></td>
</tr>
<tr>
<td>Medicare benefits</td>
<td>$589</td>
<td>$586</td>
<td>$581</td>
<td>$596</td>
<td>n.s.</td>
</tr>
<tr>
<td>s.d.</td>
<td>$36</td>
<td>$18</td>
<td>$23</td>
<td>$14</td>
<td></td>
</tr>
<tr>
<td>Out-of-pocket expenses</td>
<td>$97</td>
<td>$93</td>
<td>$90</td>
<td>$93</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>s.d.</td>
<td>$7</td>
<td>$4</td>
<td>$4</td>
<td>$6</td>
<td></td>
</tr>
<tr>
<td>Average cost of a mental health MBS consultation (per service) for women treated in their perinatal period (national, all ages)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider fees</td>
<td>$138</td>
<td>$134</td>
<td>$133</td>
<td>$133</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>s.d.</td>
<td>$3</td>
<td>$2</td>
<td>$2</td>
<td>$3</td>
<td></td>
</tr>
<tr>
<td>Medicare benefits</td>
<td>$119</td>
<td>$115</td>
<td>$115</td>
<td>$115</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>s.d.</td>
<td>$3</td>
<td>$2</td>
<td>$2</td>
<td>$2</td>
<td></td>
</tr>
<tr>
<td>Out-of-pocket expenses</td>
<td>$20</td>
<td>$18</td>
<td>$18</td>
<td>$18</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>s.d.</td>
<td>$1</td>
<td>$0</td>
<td>$1</td>
<td>$1</td>
<td></td>
</tr>
<tr>
<td>Percentage of consultations bulk-billed</td>
<td>44%</td>
<td>47%</td>
<td>51%</td>
<td>52%</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

²Tests for linear trends were carried out on all 53 birth-months using ordinary least-squares regression, with a t-test performed on the slope of the regression line.

Fig. 1. Medical Benefits Schedule (MBS) benefits paid for mental health consultations during the perinatal period for women giving birth in Australia, by provider type and geographic area (AS 2011–12), and overall percentage of services bulk billed.
Bulk billing rates for MBS-subsidised mental health consultations in the perinatal period

Bulk billing rates for mental health MBS items for women giving birth increased over the study period. For women giving birth in August 2006, 37% of their mental health MBS consultations in their perinatal period were bulk-billed. For women giving birth in December 2010 this had significantly increased to 53% of mental health MBS consultations (Table 2, Table S2).

Discussion

This is the first study to quantify total costs (provider fees), Medicare benefits (rebates) and out-of-pocket expenses for Medicare-funded mental health consultations for women during the perinatal period. This information is important for quantifying the burden of mental health morbidities, including perinatal depression and anxiety, that are typically treated in an out-of-hospital setting. These findings support and extend our previous policy analysis of the NPDI,18 and provide a detailed cost analysis of Medicare-funded out-of-hospital perinatal mental healthcare during a period of intense mental health reform in Australia. This study is important for advising policy-makers on the absolute and relative distribution of MBS costs for women during this vulnerable period, and for providing much needed data for informing economic evaluations of perinatal mental health initiatives.

We estimated that total government spending on mental health MBS items during the perinatal period for women giving birth in 2010 was A$25 million. An additional A$3.9 million was spent by these women as out-of-pocket costs. These figures cannot be directly compared with annual published MBS expenditure data because the perinatal period represents a 21-month period. However, for comparison, women aged 15–45 years cost the government A$303 million in mental health MBS consultations in 2011.20 Our data also shows comparable proportions of MBS-subsidised spending on mental health services by service provider to those reported by the Australian Institute of Health and Welfare, with 27% of MBS costs attributed to general practice, 30% to psychiatry and 43% to allied health in 2010.21 An economic study commissioned by Perinatal Anxiety and Depression Australia (PANDA) estimated that the cost of providing primary care, allied health and psychiatry services to women with postnatal depression was A$13.1 million in 2012, with an additional A$3.5 million expended in mental health Medicare Pharmaceutical Benefits Scheme medications, and a $40.4 million in mental health hospital admissions.2 However, given important methodological differences between the current study and the PANDA report (which included inpatient, medication costs and indirect costs) more specific comparisons cannot be made.

Women residing in regional and remote areas spent, on average, less than those in major cities, due to a lower total number of consultations as well as accessing a lower proportion of high-cost psychiatric consultations than women residing in major cities. The proportion of women living in remote areas accessing at least one mental health item was half that of those living in major cities and regional areas. Women in regional and remote areas also received, on average, fewer consultations during the perinatal period. This strongly suggests inequities in access to mental health care for women living outside major cities. Moreover, further investigation is needed to understand whether such differences in patterns of access impact the mental health outcomes for women giving birth.

Our findings resemble those investigating mental health service use in the Australian general population,12,22 with an increase in mental health service uptake and an associated increase in costs over the last decade. These increases are most likely related to the introduction of several general mental health policies including Better Access, which, for the first time, allowed allied health professionals to provide mental health consultations under the MBS as well as expanded the role of GPs in mental health treatment. Other important initiatives include specific funding for a perinatal stream of Access to Allied Psychological Services, a Better Outcomes initiative, as a core component of the NPDI, to build the capacity for GPs to better support women with perinatal depression.

Previous studies have also shown increased bulk billing rates in regional areas, and higher mental health costs to individuals in major cities, findings which we also confirmed in our results.15,16 The bulk billing rates found in our study are similar to those for Better Access items, but higher for GP and allied health professional rates.16 Consideration of the bulk billing rates are important because they are widely seen as a proxy indicator of the accessibility of Medicare-funded healthcare.

A recent report by the Australian Bureau of Statistics on patterns of mental health MBS use found that 7.2% of the Australian population accessed at least one MBS mental-health-related item in 2011, with an average number of consultations of 5.2. In comparison, we found that 14.1% of women giving birth in 2010 accessed at least one mental-health-related MBS item in the perinatal period, with an average number of 5.2 consultations over the 21-month perinatal period.23

We also found higher rates of access and a higher average number of consultations in Victoria compared with other states, which is in line with national mental health service data.12 This could be due to greater awareness of the Better Access initiative through its promotion by beyondblue and the PANDA helpline in that state.24

Although this cost analysis and our previous policy analysis quantified utilisation and costs of MBS consultations for women during the perinatal period, it is not possible to comment on whether there remains an unmet need for mental health consultations in women giving birth, nor whether health outcomes for these women have improved over the last decade. Furthermore, data on the type of care women are receiving (i.e. whether it is evidence-based) as well as the cost-effectiveness of screening and treatment for perinatal mental illness in the Australian setting are needed to determine whether universal, routine depression screening and increased access represent good value for money. Despite the wide recognition of the impact of perinatal depression, screening for perinatal depression remains controversial, and debate persists over whether postnatal depression screening is cost-effective.25,26 More real-life studies that account for integrated screening and care in the Australian setting...
are needed, including evaluations of state-based programs such as SafeStart in NSW. Furthermore, since June 2015, federal funding for the NPDI has ceased, with funding having to be absorbed by individual states. Such a move will make it increasingly difficult to monitor the implementation, provision and evaluation of mental health services to women at risk of perinatal mental illness.

Conclusion
In summary, increased access to mental health consultations have coincided with recent mental health initiatives, however disparities exist based on geographic location. This is the first study to quantify the costs of Medicare-funded mental health consultations for women giving birth over a period of intense policy development in mental health generally, and in perinatal mental health policy particularly. This study is important for the evaluation of mental health initiatives, such as the NPDI, for informing future health policy, and for providing cost data for health economic evaluations. Although Medicare-funded consultations are an important source of care for women giving birth, assessments of the real burden of perinatal mental illness must also consider broader economic and non-economic costs, including those associated with inpatient care, private (non-Medicare funded) psychologist and psychiatrist attendances, the costs of comorbidities, and lost productivity and quality of life for women and their families.

Competing interests
The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Acknowledgements
The current study was funded by a National Health and Medical Research Council (NHMRC) Partnership grant (APP1028554: The Australian Perinatal Mental Health Reforms: Using Population Data to Evaluate their Implementation, Provison and Cost-effectiveness); beyondblue is a funding partner on this grant. Associate Professor Georgina Chambers, Professor Elizabeth Sullivan, Dr Nicole Hightet, Associate Professor Maxine Croft, Associate Professor Cathrine Mihalopoulos, Professor Vera Morgan and Professor Marie-Paule Austin are Chief Investigators on the above grant. Associate Professor Cathrine Mihalopoulos is funded by an NHMRC Early Career Research Grant 1035887. Dr Nicole Hightet was the former deputy CEO and National Perinatal Advisor of beyondblue between 2001 and 2013. Professor Marie-Paule Austin and Nicole Reilly are funded by St John of God Health Care, Sydney, Australia. We gratefully acknowledge substantial infrastructure and in-kind support of St John of God Health Care, and also thank Catherine Knox (Gidget Foundation) for her valuable contributions to this project.

References


