

Antenatal and postnatal
mental health

Costing report

Implementing NICE guidance in
England

February 2007

This costing report accompanies the clinical guideline: 'Antenatal and postnatal mental health: clinical management and service guidance' (available online at www.nice.org.uk/CG045).

Issue date: February 2007

This guidance is written in the following context

This report represents the view of NICE, which was arrived at after careful consideration of the available data and through consulting health and social care professionals. It should be read in conjunction with the NICE guideline. The report and templates are implementation tools and focus on those areas that were considered to have significant impact on resource utilisation.

The cost and activity assessments in the reports are estimates based on a number of assumptions. They provide an indication of the likely impact of the principal recommendations and are not absolute figures. Assumptions used in the report are based on assessment of the national average. Local practice may be different from this, and the template can be used to estimate local impact.

National Institute for Health and Clinical Excellence

MidCity Place

71 High Holborn

London WC1V 6NA

www.nice.org.uk

© National Institute for Health and Clinical Excellence, February 2007. All rights reserved. This material may be freely reproduced for educational and not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the express written permission of the Institute.

Contents

Executive summary	5
<i>Supporting implementation</i>	5
<i>Significant resource-impact recommendations</i>	5
<i>Total cost impact</i>	6
<i>Benefits of treatment</i>	8
<i>Local costing template</i>	8
1 Introduction.....	9
1.1 <i>Supporting implementation</i>	9
1.2 <i>What is the aim of this report?</i>	9
1.3 <i>Definition and prevalence of antenatal and postnatal mental disorders</i>	10
1.4 <i>Models of care</i>	11
2 Costing methodology.....	12
2.1 <i>Process</i>	12
2.2 <i>Scope of the cost-impact analysis</i>	12
2.3 <i>Basis of unit costs</i>	16
3 Cost of significant resource-impact recommendations.....	18
3.1 <i>Symptoms of depressions and/or anxiety that do not meet the threshold for a formal diagnosis</i>	18
3.2 <i>Managed clinical networks</i>	19
3.3 <i>Specialist inpatient services</i>	21
4 Sensitivity analysis.....	22
4.1 <i>Methodology</i>	22
4.2 <i>Impact of sensitivity analysis on costs</i>	23
5 Impact of guidance for commissioners	24
6 Conclusion	24
6.1 <i>Total national costs for England</i>	24
6.2 <i>Summary</i>	25
Appendix A: Approach to costing guidelines	26
Appendix B Sensitivity analysis	27
Appendix C: References	28

Appendix D: Related NICE guidance..... 30

Executive summary

This costing report looks at the resource impact of implementing the NICE guideline 'Antenatal and postnatal mental health: clinical management and service guidance' in England.

The costing method adopted is outlined in appendix A; it uses the most accurate data available, was produced in conjunction with key clinicians, and was reviewed by clinical and financial experts.

Supporting implementation

The NICE clinical guideline on antenatal and postnatal mental health (APMH) is supported by the following implementation tools available on our website www.nice.org.uk/CG045:

- costing tools
 - a national costing report; this document
 - a local costing template; a simple spreadsheet that can be used to estimate the local cost of implementation in England, Wales or Northern Ireland

Approximately 10 weeks after publication of the guideline

- a slide set; key messages for local discussion
- implementation advice; practical suggestions for action to address potential barriers to implementation
- audit criteria.

A practical guide to implementation, 'Putting NICE guidance into practice: a guide to implementation for organisations', is also available to download from the NICE website. It includes advice on establishing organisational level implementation processes as well as detailed steps for people working to implement different types of guidance on the ground.

Significant resource-impact recommendations

Because of the breadth and complexity of the guideline, this report focuses on recommendations that are considered to have the greatest resource impact

and therefore require the most additional resources to implement or that generate savings. They are:

- psychological therapy for pregnant women who have symptoms of depression and/or anxiety that do not meet diagnostic criteria but significantly interfere with personal and social functioning and who have had a previous episode of depression and/or anxiety (recommendation 1.3.1.1)
- the establishment of managed clinical networks for the delivery of perinatal mental health services. (recommendation 1.5.1.1)
- the provision of facilities designed specifically for mothers and infants (typically with 6–12 beds) by specialist perinatal inpatient services (recommendation 1.5.1.3).

Total cost impact

The NICE guideline on antenatal and postnatal mental health (APMH) has been reviewed to identify the significant resource implications for the NHS in England.

We undertook background research and consultation, and analysed many of the recommendations in the AMPH guideline. We found that many of the issues likely to have a significant resource impact on the NHS had already been included (and in some cases costed) in the guidelines listed in appendix D.

The full annual revenue costs arising from fully implementing the guideline are summarised in the table below. It is recognised that implementing the recommendations may take place over a number of years.

	Annual cost £'000s
Psychological therapy for pregnant women that do not meet diagnostic criteria (full cost)	1,122
Core staff to manage clinical networks for perinatal mental health services (full cost)	1,673
Cost of additional mother and baby unit beds, additional to the cost of care within a general psychiatric setting	6,924

Following discussions with clinical experts, the Guideline Development Group and the Mental Health National Collaborating Centre, we felt that we were unable to identify and quantify the current baseline of the recommendations and therefore the full costs of implementation for psychological therapy and core network staff have been identified; the incremental cost of providing additional specialist inpatient beds for mothers and infants has been identified. Local organisations will need to identify their current baseline against the recommendations in this guideline to calculate local costs, this could be lower if services are already established.

There may be some non-recurrent capital costs in establishing mother and baby units. This will vary considerably based on local circumstances.

Additional costs may be incurred or a redirection of resource be required to provide a specialist perinatal services in each locality served by the network.

Consideration was also given to staff having access to appropriate training and supervision to allow them to follow care pathways, including appropriate knowledge of mental disorders, assessment methods and referral routes.

There are different models of training across the NHS. Perinatal networks will be able to provide advice to maternity hospitals, mental health services and community services on training. The training of staff may be completed during their continuing professional development but, if additional training is required, the costs of any backfill arrangements and of providing courses should be considered.

Benefits of treatment

Mental illness can have a serious impact on a woman's ability to cope with the day-to-day life, including parenting her infant and other children. Such illness may also affect the development of her infant. Early identification of and interventions for women who present with sub-threshold symptoms of depression and/or anxiety may reduce chronicity and improve a woman's ability to cope. This could result in savings in additional interventions, support and pharmacological treatments.

The advantages that perinatal managed networks may bring are an effective concentration of expertise, the identification of dedicated time, and explicit responsibility for the delivery of appropriate care to mentally ill women and their families. This can lead to more favourable outcomes in terms of reduced mortality and morbidity, and increased satisfaction. The networks can ensure that women have accessible care from several services, including primary care, mental health services and maternity services. The timeframe of pregnancy and the importance of the well-being of the child require that services should be available with minimum delay.

Clinical networks can also play a key role in training, education and raising awareness.

Discussions with experts suggested that savings may be generated by perinatal multidisciplinary teams working and supporting women within the community; this may reduce the number of admissions to specialist or tertiary services. Joint working and joint commissioning across primary care trusts (PCTs) should also lead to some savings in the longer term.

Local costing template

The local costing template produced to support this guideline enables organisations in England, Wales and Northern Ireland to estimate the full cost of implementing the recommendations with significant resource implications locally and replace variables with ones that depict the current local position. A sample calculation using this template showed that services providing support to 35,000 live births could be expected to incur costs of around £550,000.

1 Introduction

1.1 *Supporting implementation*

1.1.1 The NICE clinical guideline on antenatal and postnatal mental health is supported by the following implementation tools, available on our website www.nice.org.uk/CG045.

Available immediately:

- a national costing report; this document
- a local costing template; a simple spreadsheet that can be used to estimate the local cost of implementation.

Available approximately 10 weeks after launch of the clinical guideline:

- a slide set to support awareness-raising activities, outlining key messages for local discussion
- implementation advice offering practical suggestions for action to address potential barriers to implementation
- audit criteria – to assist organisations in reviewing and monitoring practice against NICE guidance.

1.1.2 A practical guide to implementation, 'How to put NICE guidance into practice: a guide to implementation for organisations', is also available to download from the NICE website. It includes advice on establishing organisational level implementation processes as well as detailed steps for people working to implement different types of guidance on the ground.

1.2 *What is the aim of this report?*

1.2.1 This report provides estimates of the national cost impact arising from implementing the guidance on antenatal and postnatal mental health in England. These estimates are based on assumptions

about current practice and predictions of how current practice might change following implementation.

1.2.2 This report does not reproduce the NICE guideline on antenatal and postnatal mental health and should be read in conjunction with it (see www.nice.org.uk/CG045).

1.2.3 The costing template that accompanies this report is designed to help those assessing the resource impact at a local level in England, Wales or Northern Ireland. NICE clinical guidelines are developmental standards in the Department of Health's document '[Standards for better health](#)'. The costing template may help inform local action plans demonstrating how implementation of the guideline will be achieved.

1.3 Definition and prevalence of antenatal and postnatal mental disorders

1.3.1 The guideline covers the care of women with mental disorder during the antenatal and postnatal periods, both existing disorders and those arising de novo during this period. It covers common mental disorder such as depression and anxiety disorders, as well as less common disorders such as bipolar disorder and schizophrenia.

1.3.2 Women in the antenatal and postnatal period are vulnerable to having or developing the same range of mental disorders as other adults, and the nature and the course of the large majority of these disorders is common to all adults (Brockington 1996).

1.3.3 There is little evidence that the underlying course of most pre-existing mental disorders is significantly altered during this time. However, for some disorders in particular bipolar disorder, there is an increased rate of relapse in the immediate postnatal period. Similarly, there is little evidence that the prognosis of disorders that develop during pregnancy or postnatal are significantly different to those developing at other times (Brockington 1996).

1.3.4 The Office for National Statistics study 'Birth statistics: births and patterns of family building England and Wales' (2005) indicates there were 649,318 maternities in England and Wales in 2005. This suggests that there were 605,535 maternities in England based on proportion of population (maternities includes live and still births.)

Table 1 Number of singleton maternities and multiple maternities. Birth statistics 2005

	England
Singleton maternities	596,501
Multiple maternities	9,034
Total	605,535

1.3.5 In establishing the prevalence of women who have symptoms of depression and/or anxiety which do not meet diagnostic criteria for major depressive disorder and/or generalised anxiety disorder, panic disorder, PTSD and obsessive-compulsive disorder following discussions with experts we have used the prevalence of chronic sub-syndromal depression symptoms to estimate prevalence figures for sub-threshold disorder.

1.3.6 An American study (Narrow et al 2002) found that the one year prevalence rate of chronic sub-syndromal depression symptoms using clinical significance criteria ranged from 1.6% - 1.8%. This rate needs increasing to take account of those women presenting with anxiety. The prevalence rate for sub-syndromal anxiety and depression problems used in the costing tool is 2.6% based on clinical opinion.

1.4 Models of care

1.4.1 In order to establish the model of care, we contacted healthcare professionals involved in the care of people with antenatal or postnatal mental disorders and discussed the current baseline treatment and how this may change following the implementation of this guideline. The costing template details full cost of

implementation.

2 Costing methodology

2.1 Process

- 2.1.1 We use a structured approach for costing clinical guidelines (see appendix A).
- 2.1.2 Little information has been collected systematically about antenatal and postnatal mental health, and this led to problems in building a comprehensive bottom-up model for costing. Healthcare professionals were asked to estimate the impact that implementation of the new guideline would have in their particular clinical area or organisation. We developed these assumptions and tested them for reasonableness with members of the Guideline Development Group (GDG) and key clinical practitioners in the NHS.

2.2 Scope of the cost-impact analysis

- 2.2.1 The guideline offers best-practice advice on the care of adults who are suspected of having, or are diagnosed with, antenatal or postnatal (up to 1 year after delivery) mental disorders.
- 2.2.2 The guideline does not separately or significantly address the management of physical disorders during this period, or psychiatric conditions outside this period. Women who experience transient low mood (baby blues) in the initial days following the birth of their child are not covered. Therefore, these issues are also outside the scope of the assessment of the implementation costs.
- 2.2.3 Because of the breadth and complexity of the guideline, we worked with the guideline developers and other professionals to identify the recommendations that would have the most significant resource impact (see table 2). Costing work focused on these recommendations.

Table 2 Recommendations with a significant resource impact

High-cost recommendations	Recommendation number	Key priority?
<p>For pregnant women who have symptoms of depression and/or anxiety that do not meet diagnostic criteria but significantly interfere with personal and social functioning, healthcare professionals should consider:</p> <ul style="list-style-type: none"> • for women who have had a previous episode of depression or anxiety, offering individual brief psychological treatment (four to six sessions), such as interpersonal psychotherapy (IPT) or cognitive behavioural therapy (CBT) • for women who have not had a previous episode of depression or anxiety, offering social support during pregnancy and the postnatal period; such support may consist of regular informal individual or group-based support. 	1.3.1.1	
<p>Clinical networks should be established for perinatal mental health services, managed by a coordinating board of healthcare professionals, commissioners, managers, and service users and carers. These networks should provide:</p> <ul style="list-style-type: none"> • specialist multidisciplinary perinatal services that provide direct 	1.5.1.1	✓

<p>services, consultation and advice to maternity services, other mental health services and community services; in areas of high morbidity these services may be provided by separate specialist perinatal teams</p> <ul style="list-style-type: none"> • access to specialist expert advice on the risks and benefits of psychotropic medication during pregnancy and breastfeeding • clear referral and management protocols for services across all levels of the existing stepped care frameworks for mental disorders to ensure effective transfer of information and continuity of care 		
<p>Specialist perinatal inpatient services should:</p> <ul style="list-style-type: none"> • provide facilities designed specifically for mothers and infants (typically with 6–12 beds) • be staffed by specialist perinatal mental health staff • be staffed to provide appropriate care for infants • have effective liaison with general medical and mental health services • have available the full range of therapeutic services • be closely integrated with 	1.5.1.3	

community-based mental health services to ensure continuity of care and minimum length of stay.		
---	--	--

- 2.2.4 Seven of the recommendations in the guideline have been identified as key priorities for implementation, and one of these is among the recommendations considered to have significant resource impact.
- 2.2.5 Three of the key priorities for implementation, on prediction (recommendation 1.2.1.2), detection (recommendation 1.2.1.3) and discussing risks (recommendation 1.4.2.1) have been assessed as not generating any significant additional costs to the NHS.
- 2.2.6 One of the key priorities for implementation relates to pharmacological treatments for pregnant or breastfeeding women (recommendation 1.4.3.2). Following discussions with experts, we felt that the change in prescribing patterns will not have a significant resource impact.
- 2.2.7 The remaining two key priorities for implementation relate to access to psychological treatment, normally within 1 month of assessment and no longer than 3 months after assessment, (recommendation 1.4.1.1) and to the treatment of mild depression in women who are taking an antidepressant.
- 2.2.8 The key priorities for implementation follow previously published guidance for depression, with the removal of the watchful waiting step within the stepped care model and with a recommendation for earlier access to services. There will be an overlap between the population covered by the guideline on APMH and that included in the cost impact assessment for the NICE guideline on depression. There may be some additional costs to bring forward access to services within the time frame recommended in the guideline, particularly when services are also trying to reduce waiting times across all areas. These costs will be non-recurrent, in that once

access times have improved the flow of patients should follow previous patterns.

- 2.2.9 We have limited the consideration of costs and savings to direct costs to the NHS that will arise from implementation. We have not included consequences for the individual, the private sector or the not-for-profit sector.

2.3 Basis of unit costs

- 2.3.1 The way the NHS is funded has undergone reform with the introduction of Payment by Results, based on a national tariff.

- 2.3.2 The guideline recommends the use of individual brief psychological treatment such as interpersonal psychotherapy (IPT) or cognitive behavioural therapy (CBT). These psychological therapies are currently not included in the national tariff. At present, costs arising from implementation of this clinical guideline are outside the scope of Payment by Results.

- 2.3.3 Psychological therapy cost calculations have been based on therapies provided by NHS staff only. For the purpose of this report it is assumed that psychological therapies are currently provided by clinical psychologists, and that this will still be the case following implementation of the guideline.

- 2.3.4 The average grade for a clinical psychologist under Agenda for Change is Band 8a, although it is recognised that local services may be provided by staff on higher or lower grades. The cost of therapy is based on the unit costs shown in table 3.

Table 3 Hourly rate for clinical psychologist

Clinical psychologist	Band 8a (mid-point)
Basic salary including on-costs	£47,428
Working weeks allowing for annual leave	40
Working hours per week	37.5
Percentage of time spent with client	55%
Total number of contact hours	825
Cost per hour of patient time	£57

2.3.5 Table 3 includes staff costs only and not indirect costs; for example, the amount of clinic space required may change with a change in staff numbers and service delivery configurations.

2.3.6 The cost of a session for a clinical lead in the core team of the perinatal network has been calculated using the mid point of the Consultant pay and allowances 2006 for consultants appointed on or after 31st October 2003. The cost of a session has been calculated as detailed in table 4.

Table 4 Cost of a session for clinical lead

Clinical lead	
Consultant pay including on-costs	£98,608
Working weeks allowing for annual leave	40
Weekly gross salary	£2,465
Cost per session	£246.50

2.3.7 Table 4 includes staff costs only and not indirect costs; for example, the costs of travel or administrative equipment.

2.3.8 The cost of an average bed day costs has been established on the assumption that inpatient beds are currently provided but they do not meet the needs of providing for mother and baby. There is therefore an incremental cost of providing specialist services for mothers and babies. The incremental cost used is detailed in Table 5.

Table 5 Average bed day cost

Mental health service mother and baby unit	Average unit cost	£514
Mental health service adult acute care	Average unit cost	£243
Incremental cost		£271

3 Cost of significant resource-impact recommendations

3.1 Symptoms of depressions and/or anxiety that do not meet the threshold for a formal diagnosis

3.1.1 The guideline recommends that for pregnant women who have symptoms of depression and/or anxiety that do not meet diagnostic criteria but significantly interfere with personal and social functioning, healthcare professionals should consider:

- for women who have had a previous episode of depression or anxiety, offering individual brief psychological treatment (four to six sessions), such as interpersonal psychotherapy (IPT) or cognitive behavioural therapy (CBT)
- for women who have not had a previous episode of depression or anxiety, offering social support during pregnancy and the postnatal period; such support may consist of regular informal individual or group-based support.

3.1.2 Following expert opinion, we have looked at information on the prevalence of chronic sub-syndromal depression symptoms because there are no available data on the prevalence of depression or anxiety that do not meet diagnostic criteria but significantly interfere with personal and social functioning.

3.1.3 The study by Narrow et al analysed data from two surveys, both of which included clinical significance questions, such as

- Did you tell a doctor or another professional about your symptoms?
- Did your symptoms interfere with your life or activities a lot?

3.1.4 The prevalence rates of chronic sub-syndromal depression symptoms with clinical significance criteria ranged from 1.6% to 1.8%. The prevalence rate used in the costing tool has been adjusted to include women who are suffering from anxiety and has been adjusted to 2.6%.

3.1.5 Following discussions with experts, we have assumed that the detection rate of symptoms of depression and/or anxiety that do meet diagnostic criteria but significantly interfere with personal and social functioning will be approximately 50%.

3.1.6 The proportion of women who will accept support through a psychological intervention following discussions with professionals is expected to be 50%.

3.1.7 The guideline recommends between four and six sessions of IPT or CBT. We have used five sessions for this example.

3.1.8 When planning the cost of interventions, a number of factors need to be considered, including whether individual or group therapy is used. The costing template models psychological therapy for individuals..

3.1.9 Savings may be made through the early identification and treatment of depression and/or anxiety because the patient may not go on to develop more serious symptoms that which require additional treatment.

3.1.10 The estimated full cost of this recommendation is £1.1million.

3.2 *Managed clinical networks*

3.2.1 The structure of services varies in different parts of the country

depending on local factors, including the organisation of existing mental health services, the demographic profile of the local population and geographical issues. The guideline makes a recommendation about how the components of services may be adapted to meet local needs and deliver integrated care, to ensure the effective provision of high-quality clinical services.

- 3.2.2 The guideline recommends that a perinatal mental health network should have designated specialist inpatient services and typically provide for a population of between 25,000 and 50,000 live births depending on the local psychiatric morbidity rates. This suggests that, based on approximately 600,000 maternities per year there should be between 12 and 24 perinatal networks established in England.
- 3.2.3 The costing template has costed the national figure based on the implementation of 18 perinatal networks.
- 3.2.4 When establishing a managed perinatal network as described in the guideline, NHS organisations – including PCTs and strategic health authorities – will need to establish joint working to commission and deliver the services. This will ensure that provision meets and adapts to the local epidemiological, demographical and geographical needs.
- 3.2.5 The structures within the networks may differ locally, although there will be a core team required to coordinate and manage the network. The costing template has provided cost data for the establishment of a core team that consists of a clinical lead for eight sessions per month, a whole-time-equivalent manager and a whole-time-equivalent coordinator.
- 3.2.6 Local organisations will need to assess the requirements of the network against their own locality's baseline. Setting up networks may require the establishment of a coordinating board and the appointment of appropriate staff. Multidisciplinary teams may need

to be established to support staff training and education, to develop protocols and procedures to support the identification of women with antenatal or postnatal mental disorders, and to give expert advice to support these women in the community.

3.2.7 Networks may already be established formally or informally at the local level. Resources may need to be redirected to formalise or expand them.

3.2.8 Revenue investment will be needed to manage, administer and maintain the network. Examples of areas requiring investment include:

- board recruitment, membership and reimbursement of expenses
- general administration, including marketing of networks, venue hire for board meetings and day-to-day office expenses
- recruitment of the clinical lead, manager and coordinator; generally it is expected that a clinical lead will be required to work approximately 8 sessions per month leading the network.

3.2.9 We have not estimated other administrative costs because this could vary greatly, depending on what systems are already in place, for example meeting rooms might be free of charge if using NHS premises.

3.2.10 The estimated cost of this recommendation is £1.7 million to provide a core network team.

3.3 Specialist inpatient services

3.3.1 One item that was identified that could be managed by the networks, to ensure provision across a wider area, is the commissioning of specialist perinatal inpatient services. These services need to reflect local need and could be governed by service level agreements setting out requirements such as the need for facilities to:

- be designed specifically for mother and infants
- be staffed by specialist perinatal mental health staff
- provide appropriate care for infants
- have effective liaison with general medical and mental health services
- have available the full range of therapeutic services
- be closely integrated with community-based mental health services to ensure continuity of care and minimum necessary length of stay.

3.3.2 Following discussions with experts it is estimated that across England there is currently a shortage of between 60 and 80 inpatient beds suitable for mothers and baby. We have calculated the cost based on 70 additional beds, which are occupied for a full year.

3.3.3 In calculating the cost of these services it is assumed that these patients are currently cared for by inpatient services. Therefore, an incremental cost has been provided in the costing template.

3.3.4 The costing tool details the revenue cost for a specialist inpatient bed. Locally organisations will need to review the availability of services and an assessment as to whether capital investment will be required to meet the requirements of the recommendation and the guideline

3.3.5 The estimated cost of this recommendation is £6.9 million.

4 Sensitivity analysis

4.1 Methodology

4.1.1 There are a number of assumptions in the model for which no empirical evidence exists. Because of the limited data the model has been based mainly on discussions of typical values and predictions of how things might change as a result of implementing the

guidance and is therefore subject to a degree of uncertainty.

- 4.1.2 As part of discussions with practitioners, we considered possible minimum and maximum of variables and calculated their impact on costs across this range.
- 4.1.3 It is not possible to arrive at an overall range for total costs because the minimum or maximum of individual lines would not occur simultaneously. We undertook one-way simple sensitivity analysis, altering each variable independently to identify those that have greatest impact on the calculated total cost.
- 4.1.4 A table detailing all variables modified is contained in appendix B and the two elements that have the greatest impact are discussed in section 4.2.

4.2 *Impact of sensitivity analysis on costs*

Proportion of women to be offered psychological intervention for anxiety/and or depression that does not meet diagnostic criteria.

- 4.2.1 In the cost assessment, the estimated proportion of women who are recognised as having anxiety and/or depression that does not meet diagnostic criteria and are offered a psychological intervention is 50%.
- 4.2.2 When the minimum, 40% and maximum, 60% proportions are added to the costing model, the overall resource impact of the recommendations ranges from £9.494 million to £9.943 million.
- 4.2.3 The cost assessment estimates the proportion of women who will accept the psychological intervention offered as 50%.
- 4.2.4 When the minimum, 40% and maximum, 60% proportions are added to the costing model, the overall resource impact of the recommendations ranges from £9.494 million to £9.943 million.

Managed clinical networks.

4.2.5 We estimated the number of perinatal networks to be established at between 12 and 24. The number used in the cost assessment was 18.

4.2.6 When the minimum, 12 and the maximum, 24 number of networks are added to the costing model, the overall resource impact of the recommendations ranges from £9.161 million to £10.276 million.

Inpatient services

4.2.7 We estimated the number of additional mother-and-baby inpatient beds required nationally at between 60 and 80. The number used in the cost assessment was an additional 70.

4.2.8 When the minimum, 60 and the maximum, 80 are added to the costing model, the overall resource impact of the recommendations ranges from £8.729 million to £10.707 million.

5 Impact of guidance for commissioners

5.1.1 The establishment of perinatal networks will need to be commissioned and resourced jointly across PCTs. The guidance states that networks should provide specialist inpatient services for a population of between 25,000 and 50,000 live births.

5.1.2 The guideline also states that each specialist perinatal service should normally provide 6 to 12 inpatient beds. The services should provide facilities designed specifically for mother and infant.

6 Conclusion

6.1 Total national costs for England

6.1.1 Based on the recommendations that have significant resource impact (table 1) and the assumptions specified within the report we

have calculated the cost of fully implementing this guideline to be £9.72 million, as detailed in table 6.

Table 6 Total budget impact from the implementation of the recommendations with significant resource impact.

	Annual cost £'000s
Psychological therapy for pregnant women that do not meet diagnostic criteria (full cost)	1,122
Core staff to manage clinical networks for perinatal mental health services (full cost)	1,673
Cost of additional mother and baby unit beds, additional to the cost of care within a general psychiatric setting	6,924

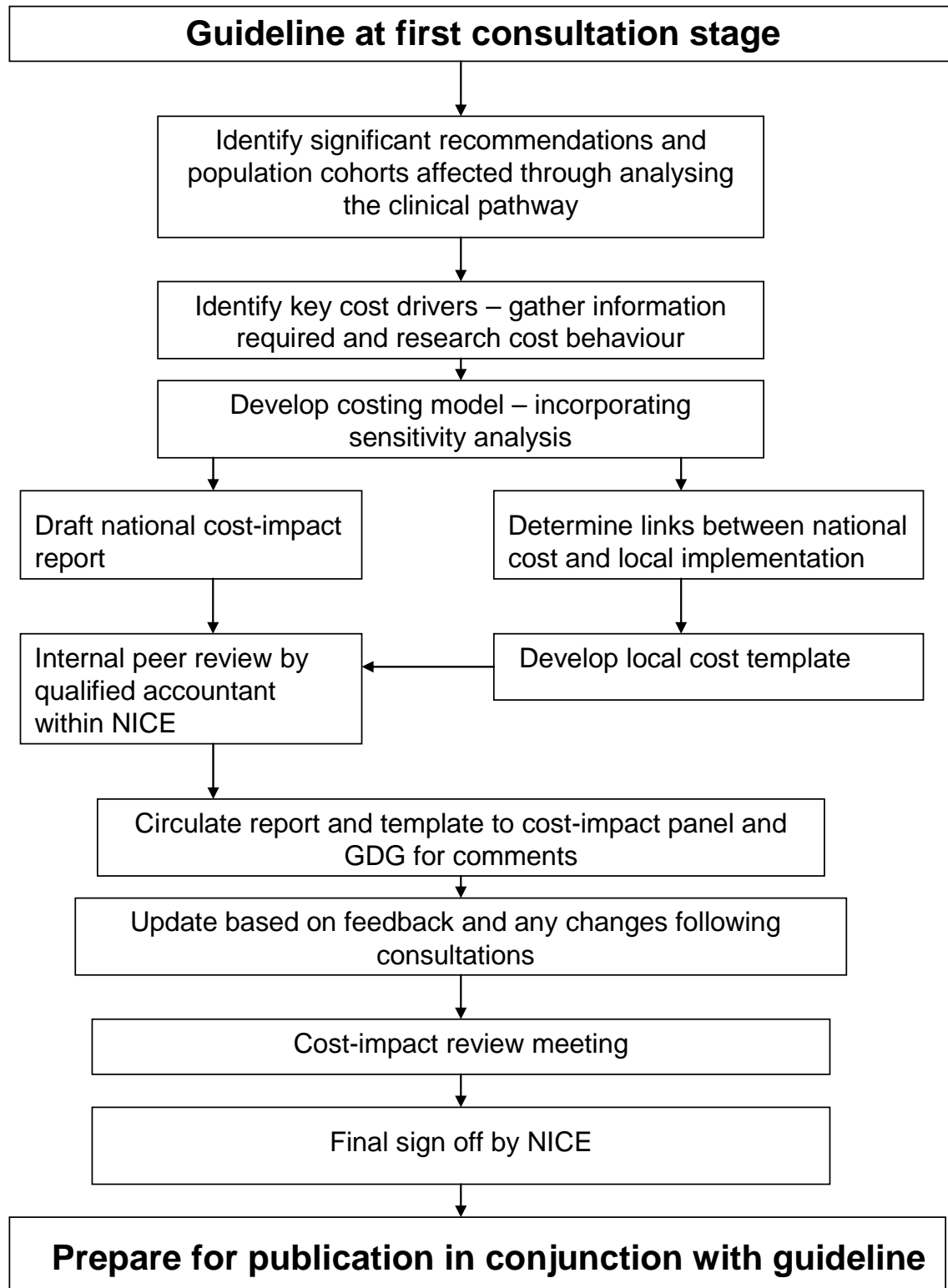
6.1.2 We applied reality tests against data wherever possible, but this was limited by the availability of detailed data. We consider this assessment to be reasonable, given the limited detailed data regarding incidence, prevalence and current treatment plans. However, the costs presented are estimates and should not be taken as the full cost of implementing the guideline.

6.1.3 The accompanying template (available from www.nice.org.uk/CG045) enables you to update assumptions to reflect local practice and costs.

6.2 Summary

6.2.1 We consider this assessment to be reasonable, given the limited detailed data regarding diagnosis and treatment paths and the time available. However, the costs presented are estimates and should not be taken as the absolute cost of implementing the guideline.

Appendix A: Approach to costing guidelines



Appendix B Sensitivity analysis

	Baseline value	Minimum value	Maximum value	Baseline cost £000s	Minimum cost £000s	Maximum cost £000s	Change £000s
Proportion of women who have symptoms of depression or anxiety that do meet diagnostic criteria but significantly interferes with personal and social functioning	2.6%	2.4%	2.7%	£9,718,460	£9,632,248	£9,761,638	£129,390
Proportion of women who will be recognised and offered treatment	50%	40%	60%	£9,718,460	£9,494,165	£9,942,755	£448,590
Proportion of women who would accept psychological therapy	50%	40%	60%	£9,718,460	£9,494,108	£9,942,812	£448,704
Number of perinatal networks to establish	18	12	24	£9,718,460	£9,160,910	£10,276,010	£1,115,100
Number of inpatient beds	70	60	80	£9,718,460	£8,729,310	£10,707,610	£1,978,300

Appendix C: References

Abramowitz JS, Schwartz SA, Moore KM et al (2003) Obsessive-compulsive symptoms in pregnancy and the puerperium: A review of the literature. *Journal of Anxiety Disorders* 17: 461–78.

Brockington IF (1996) *Motherhood and mental health*. Oxford: Oxford University Press.

Crisp AH, Jones MG, Slater P (1978) The Middlesex Hospital Questionnaire: A validity study. *British Journal of Medical Psychology* 51: 269–80.

Gavin NJ, Gaynes BN, Lohr KN et al (2005) Perinatal depression: a systematic review of prevalence and incidence. *Obstetrics and Gynaecology* 106: 1071–83.

Heron J, O'Connor TG, Evans J et al (2004) The course of anxiety and depression through pregnancy and the postpartum in a community sample. *Journal of Affective Disorders* 80: 65–73.

Institute of Psychiatry The Eating Disorders Unit: Prevalence.
<http://www.iop.kcl.ac.uk/loP/Departments/PsychMed/EDU/Prevelance.shtml>

Kendell RE, Chalmers JC, Platz C (1987) Epidemiology of puerperal psychoses. *British Journal of Psychiatry* 150: 662–73.

William E. Narrow; Donald S. Rae; Lee N. Robins; Darrel A. Regier
Arch Gen Psychiatry. 2002;59:115-123 Revised Prevalence Estimates of Mental Disorders in the United States: Using a Clinical Significance Criterion to Reconcile 2 Surveys' Estimates.

National Institute for Health and Clinical Excellence (2004) *Depression: management of depression in primary and secondary care - NICE*
<http://www.nice.org.uk/guidance/CG23>

National Institute for Health and Clinical Excellence (2006) *Bipolar disorder: management of bipolar disorder in adults, children and adolescents, in primary and secondary care* <http://www.nice.org.uk/guidance/cg38>

Office for National Statistics (2005) Birth Statistics: Births and patterns of family building England and Wales (FM1). London: Office For National Statistics.

Olde E, van der Hart O, Kleber R et al (2006) Posttraumatic stress following childbirth: A review. *Clinical Psychology Review* 26: 1–16.

Sholomskas DE, Wickarmaratne PJ, Dogolo L et al (1993) Postnatal onset of panic disorder: A coincidental event? *Journal of Clinical Psychiatry* 54: 476–80.

Appendix D: Related NICE guidance

- Bipolar disorder: the management of bipolar disorder in adults, children and adolescents, in primary and secondary care. NICE clinical guideline 38 (2006). Available from: www.nice.org.uk/CG038
- Postnatal care: routine postnatal care of women and their babies. NICE clinical guideline 37 (2006). Available from: www.nice.org.uk/CG037
- Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder. NICE clinical guideline 31 (2005). Available from: www.nice.org.uk/CG031
- Post-traumatic stress disorder: the management of PTSD in adults and children in primary and secondary care. NICE clinical guideline 26 (2005). Available from: www.nice.org.uk/CG026
- Anxiety: management of anxiety (panic disorder, with or without agoraphobia, and generalised anxiety disorder) in adults in primary, secondary and community care. NICE clinical guideline 22 (2004). Available from: www.nice.org.uk/CG022
- Depression: management of depression in primary and secondary care. NICE clinical guideline 23 (2004). Available from: www.nice.org.uk/CG023
- Eating disorders: core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders. NICE clinical guideline 9 (2004). Available from: www.nice.org.uk/CG009
- Antenatal care: routine care for the healthy pregnant woman. NICE clinical guideline 6 (2003). Available from: www.nice.org.uk/CG006
- Schizophrenia: core interventions in the treatment and management of schizophrenia in primary and secondary care. NICE clinical guideline 1 (2002). Available from: www.nice.org.uk/CG001