

*Addressing*  
**Perinatal  
Depression**

**A Framework for BC's Health  
Authorities**

Produced by  
BC Reproductive Mental  
Health Program: BC Women's  
Hospital & Health Centre, an  
Agency of the Provincial  
Health Services Authority.

In partnership with the BC  
Ministry of Health, Mental  
Health and Addictions Branch  
and Healthy Children, Women  
and Seniors Branch.

July, 2006



**Library and Archives Canada  
Cataloguing-in-Publication Data**

Main entry under title:

Addressing perinatal depression [electronic resource]: a framework for BC's health authorities

Produced by BC Reproductive Mental Health Program: BC Women's Hospital & Health Centre, an Agency of the Provincial Health Services Authority. In partnership with the Ministry of Health, Mental Health and Addictions Branch and Healthy Children, Women and Seniors Branch

Includes bibliographical references: p.  
ISBN 0-7726-5599-5

1. Postpartum depression – Government policy - British Columbia.
2. Maternal health services – Government policy - British Columbia. I. British Columbia. Mental Health and Addictions. II. British Columbia. Healthy Children, Women and Seniors Branch. III. BC Reproductive Mental Health Program. IV. Title: Perinatal depression: a framework for BC's health authorities.

RG852.A32 2006

614.5' 992760

C2006-960148-8

*Depression is the leading cause of disability for women in their childbearing years. As many as one in five women in BC will experience significant depression in relation to her pregnancy and childbirth. Unfortunately, few of these women seek help.*

*Without treatment, perinatal depression affects all aspects of a woman's health and that of her baby. It can be a factor leading to low birth weight, compromised mother-infant-interaction, and behavioural/cognitive impairment in early preschool years. The most tragic consequences of perinatal depression are maternal suicide and infanticide.*

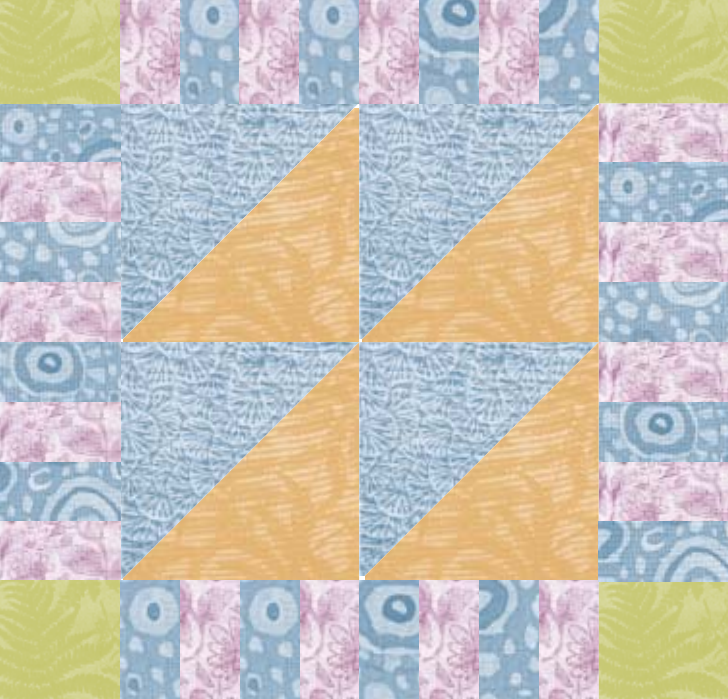
*Although perinatal depression is a serious illness, with the right strategy and a coordinated approach it can be detected early and effectively treated.*

*This document outlines a framework for action to improve recognition, diagnosis, treatment and follow-up care for women affected by perinatal depression in BC.*

**Addressing  
Perinatal  
Depression:**

**A Framework for BC's  
Health Authorities**





# Contents

<b>1</b>	<b>Introduction</b> ..... 1
	<b>Purpose of this Document</b> ..... 1
	<b>The Context</b> ..... 2
<b>2</b>	<b>Scope of the Challenge</b> ..... 3
	<b>Defining Perinatal Depression</b> ..... 3
	<b>Who is Affected?</b> ..... 3
	<b>Perinatal Depression:     Challenges in Access to Services</b> ..... 4
<b>3</b>	<b>Developing a Strategy</b> ..... 7
	<b>Pillars of the Framework</b> ..... 9
	<b>Pillar 1: Education and Prevention</b> ..... 9
	<b>Pillar 2: Screening and Diagnosis</b> ..... 10
	<b>Pillar 3: Treatment and Self-Management</b> ..... 11
	<b>Pillar 4: Coping and Support Networks</b> ..... 13
<b>4</b>	<b>A Perinatal Woman’s Optimal Journey from Conception to Motherhood</b> ..... 15
	<b>Stage 1: First Prenatal Visit to 28 Weeks</b> ..... 15
	<b>Stage 2: 28 to 32 Weeks Prenatal</b> ..... 16
	<b>Stage 3: Birth and the First Weeks Postpartum</b> .... 18
	<b>Stage 4: 6 to 8 Weeks Postnatal</b> ..... 19
<b>5</b>	<b>Implementation and Evaluation: Considerations</b> ..... 21
	<b>Collaborative Roles</b> ..... 21
	<b>Short and Longer Term     Performance Indicators</b> ..... 23
<b>6</b>	<b>Appendices</b> ..... 25
	<b>I The Edinburgh Perinatal Depression     Screening Scale</b> ..... 25
	<b>II Consultation Contacts</b> ..... 27
	<b>III Perinatal Mental Health Services for     Depression and other Mental Disorders     Provided by Physicians in BC (2003/04)</b> ..... 28
	<b>IV References for Evidence-Based     Knowledge and Practice</b> ..... 32
	<b>Endnotes</b> ..... 33

# Introduction

Perinatal depression – which occurs from the time of conception to one year after childbirth – is a significant health issue. The research literature indicates that ten to twenty percent of women are affected by perinatal depression.<sup>1 2 3 4</sup> BC data indicate that twelve percent of women between nine months prenatal and nine months postnatal receive physician services for depression.<sup>i</sup>

The Ministry of Health (MoH) Service Plan for 2005/06 to 2007/08 includes strategic initiatives to strengthen perinatal and maternal health services. One specific initiative focuses on perinatal depression. During the 2006/07 fiscal year, health authorities (HAs) have been asked to prepare regional plans, consistent with this framework document, that will strengthen perinatal depression services.

This document has been produced by BC Reproductive Mental Health Program (RMHP) part of BC Women's Hospital & Health Centre (BC Women's), an agency of the Provincial Health Services Authority (PHSA), in partnership with the MoH, Mental Health and Addictions Branch (MHA), and Healthy Children, Women & Seniors Branch.

This document will help you develop a regional strategy to address perinatal depression. It is based on the expertise of the RMHP, a recent review of relevant literature, and consultation with the parties listed on page 2 and *Appendix II*.

We have tried to make this framework document as “user-friendly” as possible by keeping

it short and to the point. Further information sources are identified in citations throughout this document, and website addresses are included where available.

## Purpose of this Document

This framework document is written primarily for health authority senior managers. Its purpose is to help guide the development of a regionally appropriate strategy for addressing perinatal depression at the local level.

This document incorporates the results of an extensive consultation process with a wide range of stakeholders.<sup>ii</sup> The framework is based upon four pillars of health system activity designed to address the issue of perinatal depression. These activities (education and prevention; screening and diagnosis; treatment and self-management; and coping and support networks) should be engaged at key stages during every woman's “journey” through pregnancy and the postnatal period.

Throughout this framework document you will find text boxes with useful information on existing programs that address perinatal

# 1

## VISION

*Effective collaboration across primary care, mental health and other community supports is resulting in better identification of perinatal depression and improved diagnosis, treatment and follow-up care for women affected by the disorder.*

<sup>i</sup> See Appendix III Table 2

<sup>ii</sup> For the full list of stakeholders consulted, see Appendix II.

## CONSULTATION CONTACTS — WINTER 2006

Provincial Mental Health and Addictions (MH & A) Planning Council  
Provincial Public Health Nursing Managers Council  
Reproductive MH Provincial Outreach Steering Committee  
BC Reproductive Care Program (BCRCP)  
BC Partners for MH & A Information  
Pacific Post Partum Support Society (PPSS)  
MoH – Primary Care, MH & A Services, and Healthy Children, Women and Seniors  
Ministry of Child and Family Development (MCFD) – Child and Youth Mental Health (C & Y MH) Child Protection/Family Supports (CP/FS)  
UBC Department of Psychiatry  
SFU Department of Health Sciences, Centre for Applied Research in Mental Health and Addictions (CARMA)  
BCMA, BC College of Family Practitioners  
Midwives Association of BC  
Doula Association of BC  
Registered Clinical Counselors of BC  
Health Canada – First Nations and Inuit Health, BC/Yukon Region, Maternal and Child/Early Childhood Development Programs  
HA leaders for primary care, maternity care, public health and/or reproductive mental health

depression, stories about women who have experienced perinatal depression, and some examples of evidence-based knowledge and practice concerning the disorder.

This framework has been designed to be adaptable to your regional needs. Our intent is to provide a solid foundation and evidence-based direction for your efforts to develop a regional strategy to address perinatal depression.

### **The Context**

This framework offers a synthesis of current evidence and best practices in the area of perinatal depression. There are also many other useful documents on the subject and

related clinical and service planning topics. There has also been a great deal of work across the province in the area of perinatal depression and related services. Some of these initiatives are highlighted within this document.

A number of service system principles are reflected in the framework, including women- and family-centred, timely, accessible, evidence-based, and based on a collaborative service model. These will be familiar to readers as they are aligned with the strategic values of the MoH, and guiding principles in recent provincial Maternity Care Enhancement Project (December 2004) planning and other service frameworks of the MoH.

The scope of service system activities described in this framework document also reflects the importance of a broad response based on population health principles, health promotion and community capacity-building.

Some helpful resources include:

- Supporting Local Collaborative Models for Sustainable Maternity Care in British Columbia (December 2004)  
[www.health.gov.bc.ca/cdm/practitioners/mcep\\_recommend\\_dec2004.pdf](http://www.health.gov.bc.ca/cdm/practitioners/mcep_recommend_dec2004.pdf)
- A Guide to the Development of Service Frameworks in British Columbia, (December 2005)
- Every Door is the Right Door: A BC Planning Framework to Address Problematic Substance Use and Addiction (May 2004)  
[www.health.gov.bc.ca/mhd/pdf/framework\\_for\\_substance\\_use\\_and\\_addiction.pdf](http://www.health.gov.bc.ca/mhd/pdf/framework_for_substance_use_and_addiction.pdf)
- British Columbia's Provincial Depression Strategy (October 2002)  
[www.health.gov.bc.ca/mhd/pdf/depressionstrategy.pdf](http://www.health.gov.bc.ca/mhd/pdf/depressionstrategy.pdf)

# Scope of the Challenge

Perinatal depression is different from the “baby blues” – a feeling of distress and tearfulness that can affect mothers of newborns and usually disappears within the first few weeks of their baby’s birth. Perinatal depression<sup>iii</sup> covers a spectrum of illness affecting women, from depressive symptoms to a major depressive episode occurring at any time between conception and one year following the birth of their child.

## Defining Perinatal Depression

From a diagnostic standpoint, the criteria for a major depressive episode<sup>5</sup> include:

- A. Five or more of the following symptoms experienced most of the day, nearly every day, for two weeks or more:
  1. Feeling sad, empty, and helpless
  2. Extreme feelings of guilt, worthlessness, and hopelessness
  3. Loss of interest and pleasure in activities enjoyed in the past, including sex
  4. Decreased energy, feeling of fatigue
  5. Changes in sleep or appetite
  6. Restlessness and irritability
  7. Difficulty concentrating or remembering
  8. Thoughts of death or suicide
- B. The symptoms do not include those for a manic or hypomanic episode (*ie* fitting the criteria for both a manic episode and a major depressive episode).
- C. The symptoms cause significant distress or impairment in social and/or occupational functioning.

- D. The symptoms are not due to substance use or a medical condition.
- E. The symptoms are not caused by the loss of a loved one.

Suggestions for management of depressive symptoms are included in this document, in the section entitled *A Perinatal Woman’s Optimal Journey from Conception to Motherhood*.

## Who is Affected?

Provincial data indicate about four in ten perinatal women in BC are seen by a physician for a mental health service. Of these women, about one-third are seen specifically for depression.<sup>iv 6</sup> But the prevalence of perinatal depression may be significantly larger than this figure suggests. In one study it was estimated that only a third of all women with perinatal depression sought help from a health professional and only 15 percent of these women obtained help from a mental health professional.<sup>7</sup> Women with perinatal depression often experience intense feelings of guilt and failure, as well as worries about being perceived as unfit to care for their child.<sup>8</sup> These feelings

<sup>iii</sup> Fifty percent of women with a diagnosis of perinatal depression also experience clinically significant anxiety, which may progress to an anxiety disorder such as panic disorder, generalized anxiety disorder, obsessive compulsive disorder or post-traumatic stress disorder. (Ross et al 2003) Although anxiety disorders in this population are beyond the scope of this document, these frequently co-exist with depression and require urgent recognition and intervention.

<sup>iv</sup> See Appendix III: Perinatal MH Services for Depression and Other Mental Disorders Provided by Physicians in BC (2003/04) – Data Analysis from MoH MH&A Branch, April 2006. Note: BC rates of service are based on Medical Service Plan fee-for-service physician billings, and the depression service is specifically ICD-9 code 311 – major and minor depressions.

## Sandy's Story

*Sandy is a 34-year-old married woman with a history of abuse and substance use. After the birth of her first child, she perceived her baby as fussy and was constantly checking her baby. She showed irritability and anger with her husband and had conflicts with her family and friends. She was diagnosed with depression when her child, who was demonstrating social and cognitive deficits, turned two. She did not tell her doctor that she had started using marijuana and tobacco daily to help cope with her stress.*

and the stigma of having depression can be barriers to seeking help.

About half of all women with a previous history of depression will experience perinatal depression, and 30 percent of women diagnosed with postpartum depression had their initial onset of depression during pregnancy, perhaps indicating that the condition is part of a chronic relapsing illness. Women who are known to have experienced an episode of postpartum depression have a 25 percent risk of experiencing another episode unrelated to childbirth, and have up to a 40 percent risk for experiencing another postpartum depression.<sup>9</sup>

Perinatal depression occurs among women of all ages, ethnicity and levels of education<sup>10</sup> and can also affect women who become mothers through adoption.

The impact of perinatal depression is not borne by mothers alone. The babies of perinatally depressed women are at increased risk for pre-term birth and low birth weight.<sup>11 12 13 14</sup>

A mother's experience of depression affects her ability to bond and interact with her infant. Children from four to 11 years<sup>15 16</sup> whose mothers experienced perinatal depression exhibit deficiencies in cognitive, behavioural and social skills.<sup>17 18 19</sup> Perinatal depression can also affect the partners of perinatally depressed women; up to 25 percent of the partners of women with perinatal depression also experience depression.<sup>20 21 22</sup> While more research is needed to understand the correlation between partner depression and perinatal depression, the ability of the relationship to provide resilience against depression and to meet the challenges of parenting a new child are clearly compromised.<sup>23 24</sup>

In exceptional cases, perinatal depression is associated with maternal acts of suicide and infanticide. Given the low rates of death in this age group, it is an important cause. Recent data from the UK identifies suicide as the leading cause of death among women within a year of childbirth.<sup>25</sup>

### **Perinatal Depression: Challenges in Access to Services**

Our consultations revealed widespread concern among all providers – primary care (*ie* family physicians, nurse practitioners, midwives), public health nursing, maternity care, specialized mental health, private psychiatry and non-governmental organizations – about the ability of current service systems to respond effectively to women experiencing perinatal depression.

Primary care providers agreed they could improve their ability to recognize symptoms of perinatal depression and to educate women about the disorder, but are concerned about their ability to deliver evidence-based treatment and follow up. Specialized mental health service providers are most involved when the disorder is severe and in the acute phases of treatment. They may also be able to support primary care providers with treatment for women experiencing perinatal depressive symptoms through collaborative mental health as part of primary care initiatives emerging in many communities.

Our consultation also revealed that service providers feel either under-informed or under-resourced (and in many cases both) for treating and supporting women with perinatal depression.



Specific concerns include:

- The availability of treatment options, especially evidence-based psychosocial therapy
- Up to date “best practice” information on use of anti-depressant medications in the perinatal period
- A lack of appropriate acute in-patient capacity for mother and infant
- The fragmented social supports and resources for women and families
- Access to services for women whose first language is not English
- Overcoming the stigma and denial frequently associated with depression in the perinatal period

In addition, we are unaware of any studies focused on Aboriginal women and perinatal depression. However, on average, First Nations pregnant women and families with infants and young children have poorer health than the general Canadian population.<sup>26</sup>

Altogether, these concerns represent significant barriers for effective services for women at risk of perinatal depression. However, our consultations also revealed a number of promising avenues for overcoming such barriers and improving our collective ability to address the problem.

For example, best practice literature on mental health among Aboriginal people emphasizes that risk factors in the community also point the way to protective factors. Community-based initiatives which provide a broad range of treatment, prevention and health promotion strategies for improved mental health appear to work best.<sup>27</sup> Health Canada is investing in a Maternal Child Health Program for First Nations families living on reserves toward

## EVIDENCE-BASED PRACTICE AND KNOWLEDGE

### Evidence

Providing women with information about perinatal depression and giving them an opportunity to talk about their feelings has a positive effect on outcomes. (RNAO & Holden et al 1989)<sup>ix</sup>

### Evidence-based practice

Routinely give women and their families reliable and accurate information about perinatal depression.

### Evidence

Women with a personal and/or family history of depression and one other significant risk factor (stressful life event, lack of social support, partner dissatisfaction) are at highest risk of perinatal depression (O’Hara & Swain, 1996; Beck 2001, 2002; Ross et al 2005; Brugha 1998; O’Hara 1991)

### Evidence-based practice

Assess women identified at risk for perinatal depression regularly. Offer support and resources and target preventive strategies to these women, *eg* home visits with at-risk postpartum mothers have a beneficial effect. (Dennis & Creedy, 2004)

achieving improved identification and support for mothers with postpartum depression, as part of a broader set of goals.<sup>28</sup>

The service framework described in the next section reflects best practice opportunities highlighted in the literature and through our consultations for improving perinatal depression services.



<sup>ix</sup> See Appendix IV for a reference list for all citations.



# Developing a Strategy

As mentioned in the introduction, this framework has been built upon four pillars, comprised of evidence-based service system activities that have proven effective in addressing perinatal depression.

These pillars are:

- Education and prevention
- Screening and diagnosis
- Treatment and self-management
- Coping and support networks

A perinatal woman's "journey" through pregnancy and postnatally, should be guided or influenced by activities within each of these four pillars at different stages along the way.

## Getting Started: A Checklist

As a starting point toward a regional strategy to support an "optimal journey" for perinatal women from conception to motherhood, the following steps may be helpful.

### GETTING STARTED: A CHECKLIST

**1** **Identify and engage key stakeholders** in the area of perinatal depression, including individuals, groups and agencies. Beyond your health authority's own primary care, maternity, public health and mental health services and the related physician groups, it will be important to include:

- ✓ Ministry of Children and Family Development (MCFD) child and youth mental health
- ✓ MCFD Child Protection and Family Support Services
- ✓ Federal maternal and child services and mental health services working with First Nations in your region
- ✓ Community and non-governmental organizations serving mothers and families, key immigrant and cultural groups

## 2 **Share information with key stakeholders** on the nature of perinatal depression and the perinatal woman's optimal journey in order to facilitate:

- ✓ Assessing regional issues and opportunities in perinatal depression care, in the context of identified needs, current resources and activities, and best practice service models
- ✓ Prioritizing actions which concentrate on the most significant local pressures and gaps and which focus on service partnerships and collaboration
- ✓ Workforce planning, education and training; and monitoring/evaluation, including linkages to specialized provincial resources for consultation, information and training support

## 3 **Set up a team with clear leadership and accountability:**

- members representing services and programs have sufficient seniority to commit their service area or agency to action<sup>V</sup>
- consumer representatives have clear links to organizations that enable effective consultation and communication.

Activities of the team may include:

- ✓ Developing the regional strategy based on the above-mentioned assessment and prioritization of actions
- ✓ Developing processes for implementing the strategy.
- ✓ Confirming these processes through memorandums of agreement or written protocols (where appropriate)
- ✓ Agreeing on long term goals, early measurable deliverables and on-going monitoring and evaluation mechanisms
- ✓ Defining and addressing local challenges to strategy implementation

<sup>V</sup> Before initiating any service improvements, it is critical to identify the accessible and acceptable range of referral and treatment options in your region for mothers with depressive symptoms. (Interventions for Postpartum Depression: Nursing Best Practice Guideline. April 2005. RNAO. p37.) There is no benefit to identifying women with depressive symptoms unless treatment services are available. Screening is recommended only where there are systems in place to assure accurate diagnosis, effective treatment, and careful follow-up. (Bodnar, Doris; Ogrodniczuk, John. A Survey of Postpartum Depression Screening Practices in BC; December 2003. RMHP / UBC Dep't of Psychiatry).

## Pillars of the Framework

The four pillars of this framework consist of well-defined service system activities that should be considered at key stages of a perinatal woman's optimal journey, from conception to motherhood.

Here we outline some best practices and supporting evidence for each of these areas.

### Pillar 1: Education and Prevention

No definitive primary preventive strategies have been identified for antenatal intervention to prevent postpartum depression.<sup>29</sup> Instead, research findings highlight the importance of secondary preventive strategies such as early identification and intervention, which aim to reduce severity and shorten the course of the illness. Primary prevention strategies such as prenatal information, education and supports through awareness of community resources are likely to facilitate effective early identification and intervention postnatally.

Increasing awareness of perinatal depression among women of childbearing age, their family members and the community at large can focus approaches to strengthen protective factors and minimize risk for the disorder. Broader awareness of the risk of perinatal depression and of the effectiveness of treatment should help to reduce the stigma of depression and encourage self-monitoring and early help seeking.<sup>30</sup>

Targeted prevention activity should focus on vulnerable groups. The following risk factors are most strongly associated with perinatal depression and their presence may help to identify women at risk for perinatal depression.

- Previous history of depression or anxiety prior to or during pregnancy
- Family history of depression

## BEST PRACTICE SERVICE DELIVERY

A resource package about physical and emotional health during pregnancy is given to every pregnant woman in Richmond by her physician/midwife at her first prenatal visit. A weekly postpartum depression support group is offered in partnership with Richmond Health Services and Pacific Postpartum Support Society. Child minding and transportation support are available.

- Stressful life events
- Lack of social support

Women who have one or more of these risk factors have an increased chance of developing postpartum depression compared with women who have none of these factors. Also significant are spousal relationship difficulties.<sup>31</sup> Pregnancy and delivery complications and socio-economic factors should also be considered when other risk factors are present.<sup>32</sup>

The interrelatedness of violence, substance use and the risk of perinatal depression have not been investigated fully; however, these links have been established in other studies on women's mental health.<sup>33 34</sup>

Research indicates that some types of health professional preventive interventions are most effective postnatally. For example, a review of best practices in maternity care effective at preventing perinatal depression identified the positive effects of supportive postnatal home visits by a health professional.<sup>35 36</sup>

Perinatal depression is a multifactorial illness with a variety of causes or triggers. This means a variety of preventive approaches, including education and supportive postnatal home visits, are likely to be of value.

## Carmen's Story

*Carmen felt nausea and fatigue during her first trimester and was surprised when her fatigue continued into her second trimester. During a visit to her midwife, she noticed a poster about perinatal depression and asked for more information. The midwife helped Carmen develop a plan to reduce her stress, increase her supports, and scheduled more visits to monitor Carmen's mood throughout the pregnancy.*

## Xian's Story

Xian and her son emigrated to BC from China to join her husband who worked at two jobs to meet the financial needs of this family. After a year in Canada, Xian gave birth to their second son. A public health nurse became concerned about Xian's exhaustion and lack of interest in the baby. The nurse gave Xian the EPDS screening tool on which she scored over 18. Following this, her GP diagnosed Xian with Major Depression.

### BEST PRACTICE SERVICE DELIVERY

Life After Birth - Postpartum Support is a community-based program funded by MCFD. It offers support to families with babies up to one year of age in the Nelson area. The program services include: hospital visits to new mothers, breastfeeding support, home support, volunteers, postpartum depression/anxiety group and individual guidance; and mothers group. The program works cooperatively with local public health nurses, midwives, physicians, the Pregnancy Outreach Program, the infant development program, and other programs and resources.

#### Pillar 2: Screening and Diagnosis

Screening for depression can improve outcomes when coupled with appropriate treatment and follow-up.<sup>37</sup> **Systematic screening in any community or practice should be implemented only where referral and treatment pathways and protocols have been established among relevant providers.** Screening is merely a tool in the larger context of care. A coordinated approach to diagnosis, treatment and follow up support services is essential for improving outcomes.

Universal screening of women at 28–32 weeks of pregnancy and again at six to eight weeks postnatally using the ten-question, self-administered Edinburgh Perinatal Depression Screening Scale (EPDS) – see *Appendix I* is a recommended strategy for all primary care providers. Good communication regarding why and how screening is being done is likely to engage most women in this important step.

<sup>vi</sup> At 28–32 weeks prenatally, scores of 14 and higher on the EPDS are most predictive of Major Depression. (Murray, Cox 1990)

At 6–8 weeks postnatally, scores of 13 and higher are most predictive. (Gaynes, et al 2006)

### BEST PRACTICE SERVICE DELIVERY

Vancouver Island Health Authority, South Island has been the pioneer in providing universal screening at two and six months postpartum by public health nurses (PHN) at the Child Health Clinics. This practice is now a standard component of the postpartum program. PHNs provide information, active listening and support women, observe mother-infant-interactions, suggest personal coping strategies, and refer to community resources (PPD support group; family physician; counselling, and others resources).

Ninety-one percent of women scoring positively on the EPDS (having a score of 13 or higher, or positive on self-harm item number ten) are eventually diagnosed with Major Depression. The use of this screening tool may also help some women overcome the difficulty of disclosing their problems directly to a health care provider.

Diagnostic follow-up for women scoring 13 or higher on the EPDS<sup>vi</sup> should involve an appropriate physical, mental health and social assessment by a family physician and/or a mental health professional. Diagnostic follow-up should also be timely, and in the case of a positive response to the screening scale item on self-harm, it should be immediate. Where screening scores fall in the 9–12 range, further education and self-care resources should be offered, and regular, ongoing monitoring for mental health status should be initiated. Regardless of EPDS score, if in the clinical judgment of the care provider further assessment is warranted, this should proceed.

## BEST PRACTICE SERVICE DELIVERY

The Nanaimo Adult Short Term Assessment and Treatment Team (ASTAT) accepts referrals of women with high EPDS scores from public health nurses. These women are sent directly to the transitional case manager, circumventing the usual intake procedure. Women are now assessed in their own homes by a mental health professional and referred for additional counselling.

If the health professional conducting the screening will be referring the woman elsewhere for diagnostic assessment, the health professional should also take responsibility for making sure the link to follow-on services is completed and timely.

Given the brevity of the screening tool, it is recommended that all providers in contact with perinatal women offer the screening tool at the intervals recommended in this document in the section entitled, *A Perinatal Woman's Optimal Journey from Conception to Motherhood*.

As the EPDS is an easily administered universal screening tool, its use by all maternal care providers would help maximize identification of depression among perinatal women at little cost. Some coordination of these efforts is required however to avoid unnecessary and costly duplicate referrals for diagnosis and treatment.

## BEST PRACTICE SERVICE DELIVERY

Trained psychiatrists mentored by the Provincial Reproductive Mental Health Program now offer tertiary reproductive mental health services to women across the Lower Mainland, who are able to access specialty services at the following hospitals; Royal Columbian, Richmond, Victoria General, and Lions Gate .

### Pillar 3: Treatment and Self-Management

From a clinical perspective, the type(s) of treatment selected for perinatal depression depends on several factors:

- The woman's response to treatment for a previous depressive illness
- The severity of the present illness
- The woman's and/or her family's ability to mobilize supports for her and her infant
- The woman's preferred treatment choice balanced by consideration for the safety of both mother and infant

Consideration of these factors will help guide the choice of appropriate intervention which include psychosocial therapy, pharmacotherapy or a combination of therapies as the treatment plan for the woman.

Research<sup>38 39</sup> supports the effectiveness of psychosocial interventions for perinatal depression.

Evidence-based therapies for treatment of perinatal depression include cognitive behavioural therapy and interpersonal therapy. There is good evidence for including the mother-infant and family relationships as targets for clinical intervention.<sup>40</sup> Group therapy involving the mother and infant has also been shown to improve the affective state

## Anna's Story

*Anna was reluctant to take medication because she was breastfeeding. She started attending a post-partum therapy group at a community mental health centre where she learned more about perinatal depression. She started setting small goals each week and using other resources to manage her symptoms. At the end of her sessions, Anna maintained contact with the other women from her group and began counselling with her EAP provider. She also visited her GP regularly.*

## Raj's Story

*Raj was depressed after her first child was born and was treated with an antidepressant. She continued medication during her second pregnancy and postpartum and did not experience a relapse. Eventually, in consultation with her GP, she stopped taking the medication. When she became pregnant with her third child she again experienced symptoms of depression and instead of medication, she used the outpatient psychosocial services at her local hospital. Her symptoms worsened and she resumed her medication in conjunction with her psychosocial treatments. She responded well to the joint treatment and had no further symptoms.*

## EVIDENCE-BASED PRACTICE AND KNOWLEDGE

### Evidence

The highest rate of depression during pregnancy occurs in the third trimester. (Evans et al 2001; Josefsson et al 2002)

The highest rate of depression in the postpartum period occurs within the first three months of birth. (Oates, 2000; Gaynes et al 2005; Wisner et al 2002; Beck & Gable 2001, Cox et al 1993)

The Edinburgh Postnatal Depression Scale (EPDS) is a reliable tool for screening women for perinatal depression. (Gaynes et al 2005; Cox & Holden 1994)

### Evidence-based practice

Screen women with the EPDS for Major Depression in the third trimester of pregnancy between 28 and 32 weeks and again at 6 to 8 weeks postpartum. (Note, the EPDS is not a diagnostic tool. Refer for assessment and diagnosis all women at 28 to 32 weeks of pregnancy who score higher than 14 on the EPDS)

## Xian's Story

*Xian was fatigued from night feedings of her baby, in addition to her full-time responsibility of caring for two young children with no family support. A public health nurse contacted MCFD and arranged for doula support and for another Mandarin-speaking mother to take Xian to the local mother-baby drop-in so Xian would not be alone all day. Xian developed a network of support and was able to parent her children successfully within three months.*

vii For more information, see the collaborative model for integrated case management outlined by the MCFD at [www.mcf.gov.bc.ca](http://www.mcf.gov.bc.ca) (Ministry for Children and Families, November, 1999). *Integrated Case Management: A User's Guide*. And see [www.mcf.gov.bc.ca/publications/integ\\_manage.htm](http://www.mcf.gov.bc.ca/publications/integ_manage.htm)

of mothers while enhancing maternal perceptions of the infant and the quality of the mother-infant relationship.

Medication is almost always needed to treat women with severe depressive illness, and especially for those women who suffer from more than one mental health problem (eg anxiety disorders, substance use disorders). Medication is often used in combination with psychosocial therapies to improve women's clinical symptoms. All psychotropic medications will cross the placenta and transfer to the developing baby; they are also secreted into the breast milk. Therefore, the risks and benefits of pharmacotherapy for pregnant and breastfeeding women must be considered by the woman in consultation with her clinicians.

Pregnant women taking antidepressants for pre-existing mental disorders should not stop taking these medications without first discussing the risks with their doctor. Best practice guidelines support minimizing use if possible in the first trimester of pregnancy, and supports using the lowest possible effective

## BEST PRACTICE SERVICE DELIVERY

Reproductive Mental Health, BC Women's Hospital & Health Centre and St Paul's Hospital has the goal of improving mental health services for women in the perinatal period, through:

- Out-patient and in-patient assessment and treatment for pregnant and postpartum women for up to one year after delivery
- "Swing bed" for mother and baby at BC Women's Hospital to ensure bonding is uninterrupted while mother receives treatment
- Treatment offered: Psychotherapies (individual and group CBT, IPT, couple therapy, mother-infant bonding and parenting groups); pharmacotherapy and light therapy
- Concurrent disorders counselling
- Prepregnancy counselling for women on psychotropic medications
- Consultations with service providers across BC
- Education, training and dissemination via hospital rounds, service providers workshops, lectures and publications: 'Self-Care Program' [www.bcwomens.ca](http://www.bcwomens.ca)
- Collaboration and outreach: Case consultations and informal links and networks with service providers across BC through the provincial RMH steering committee
- Research related to improving evidence-based knowledge
- Development of evidence-based RMH best practice guidelines: [www.bcwomens.ca](http://www.bcwomens.ca)



dose to relieve symptoms during the perinatal period. These guidelines can be found at [www.bcwomens.ca/Services/HealthServices](http://www.bcwomens.ca/Services/HealthServices) under the section entitled “Best Practices Guidelines” and on the BCRCP website [www.rcp.gov.bc.ca](http://www.rcp.gov.bc.ca) listed under guidelines.

Self-management approaches to perinatal depression are based on psychosocial concepts and promotion of accessing supportive resources in the community. For women with more severe disorders it may extend to such strategies as shared decision-making, developing a plan for monitoring and managing early warning signs, and accessing further community resources, such as MCFD services.

As a resource for self-management of perinatal depression, RMHP has developed a woman’s guide entitled, *Self-care Program for Women with Perinatal Depression & Anxiety*<sup>41</sup> available at [www.bcwomens.ca/Services/HealthServices/ReproductiveMentalHealth/SelfCareGuide.htm](http://www.bcwomens.ca/Services/HealthServices/ReproductiveMentalHealth/SelfCareGuide.htm) Involving the woman in the choice of treatment increases the likelihood of compliance.<sup>42</sup>

Involving partners and family members in treatment as appropriate is also recommended, with consideration given to the woman’s preferences, the nature of the relationships, and cultural issues. Involving the partner in treatment may have beneficial effects on the partner’s mental health, since research suggests a significant percentage of partners of affected women also experience depression.<sup>43</sup>

In cases where a perinatally-depressed woman is considered at risk of suicide, every effort must be made to protect the mother and her infant. Hospitalization is essential for the perinatal woman with a recognized tendency to suicide. In the case of depressed mothers with infants, it is recommended that the mothers and infants be kept together using whatever facilities or resources are available.

Strategies for relapse prevention (eg self-management education for helping a woman understand her relapse signs and triggers, and pre-crisis planning) are also a component of comprehensive treatment.

For women and families in complex situations (eg involving trauma and abuse, poverty, and/or substance use) experiencing serious mental health disorders and other health or social challenges, protocols to formalize integrated case management across providers and agencies are important tools for ensuring development of an integrated service plan.<sup>vii</sup>

At local and regional levels, standard policies for perinatal depression referral and treatment options need to be established and communicated.<sup>44</sup> These will reflect local resources and expertise, but any clinician in contact with women in the perinatal period should be prepared to deliver or coordinate appropriate care.

#### **Pillar 4: Coping and Support Networks**

An approach based on the broad determinants of maternal and child health encourages community activities that contribute to the good mental health of mothers and families by decreasing social isolation through family and parenting resource centres, child care, community centres and recreation programs and general support for women while caring for young children.

For treating depression, coping strategies need to be combined with appropriate psychological and medical interventions. Cultural groups may have traditional perinatal practices regarded as beneficial, and awareness and appreciation of these should form part of good clinical care.<sup>45</sup>

## BEST PRACTICE SERVICE DELIVERY

Alan Cashmore Centre is a specialized infant mental health team offered through Vancouver Community Mental Health Service. They provide treatment and support services to families with children from birth to five years of age when there are significant concerns around a child's social, emotional and/or behavioral development and/or when multiple environmental risk factors put the child at risk for developing disorders in these areas. These services are provided to Vancouver and Richmond families.

Identification and coordination of the necessary social and self-care supports for affected women, children and families, including the formal family support services of MCFD in a local and regional network of care, is an essential element of a perinatal depression strategy.

A variety of supports are recognized as helpful in addressing perinatal depression, alongside specific therapeutic interventions. These can include the supportive behaviour of a perinatal woman's partner,<sup>46</sup> practical support designed to help a perinatal woman cope with her daily challenges,<sup>47</sup> parenting programs<sup>48</sup> to support couples and enhance their parenting skills, and other forms of support.

## BEST PRACTICE SERVICE DELIVERY

Pacific Postpartum Support Society (PPSS) offers telephone support to women (and their families) experiencing postpartum depression, and to pregnant women experiencing emotional distress. Trained facilitators lead groups for mothers throughout the Lower Mainland. The PPSS offers interactive talks at mother and infant groups, information nights for partners and training in telephone support and group facilitation to interested groups and service providers. <http://postpartum.org>

# 4

## A Perinatal Woman's Optimal Journey from Conception to Motherhood

The overall objective of this framework is to help ensure that every perinatal woman in BC experiences an optimal journey from the onset of her pregnancy to one year following the birth of her child.

A perinatal woman's optimal journey should include regular screening for depression. In a more general way, it should also be supported by four pillars of this framework, including actions at key stages related to education and prevention, screening and diagnosis, treatment and self-management, and coping and support networks.

The optimal journey incorporates best practices and should be treated as a guide for a regional strategy designed to address your specific requirements and capacities.

### Stage 1

#### First Prenatal Visit to 28 Weeks

This first stage of a women's perinatal journey offers some key opportunities for preventing, identifying and treating perinatal depression. Following are some considerations for care at this stage across all four pillars of this framework.

**In the community** at large:

- Raise public awareness about the issue of perinatal depression and its treatment.

- Increase accessibility of prenatal classes/ education programs and include emotional wellness and depression as discussion topics.

**Among primary care and maternity care providers** as well as for pregnant women and their families:

- Educate women at their first prenatal visit about emotional wellness, encouraging them to increase their emotional supports and their social networks.
- Integrate emotional care of pregnant women with their physical care.
- Ensure primary care providers ask women about their emotional health at each prenatal visit and record wellness on the prenatal form.

## BEST PRACTICE SERVICE DELIVERY

Sunshine Coast Perinatal Coalition is a partnership in community caring. Community partners include families/parents, La Leche League midwives/doulas, infant development program, Sechelt Indian Band, prenatal instructors, Parks and Recreation, employment centre, public health nursing, community services, local businesses, and local service clubs. The goals of the coalition are to provide communication and networking opportunities among community agencies, businesses, families and providers; advocate for the community of women with perinatal issues and build partnerships; support the development of new and existing perinatal resources and ongoing education.

- For women who have a personal and/or family history of depression, monitor and treat as appropriate, based on best practices for depression management in pregnancy, and follow up regularly throughout pregnancy for optimal mental health status.
- Women are motivated by concerns about their fetus and will often quit or reduce substance use during their pregnancy. Substance use can often mask or alter a depressive illness. Assess for any changes in substance use and monitor mood. BCRCP Guidelines for Alcohol Use in the Perinatal Period available on [www.rcp.gov](http://www.rcp.gov)

### Stage 2 28 to 32 Weeks Prenatal

This second stage is the highest risk period for prenatal depression. Detecting depression, and providing appropriate treatment and

## A Perinatal Woman's Optimal Journey *Prevention, Screening and Treatment*

This first stage of a women's perinatal journey offers some key opportunities for preventing, identifying and treating perinatal depression.

# 1

### Stage One First prenatal visit to 28 weeks

- Raise public awareness
- Increase accessibility of prenatal classes/education programs
- Educate women at their first prenatal visit
- Integrate emotional care with physical care
- Ensure primary care providers consider emotional health



In the community at large

support for women at this stage is correlated with a reduction of postnatal depression. Screening women for depression at this time also provides an opportunity to link women at risk of depression with appropriate care providers and supports. Best practices for primary and maternity care providers at this stage are to:

**Screen all women** with EPDS.

**Actively manage** the mental health of women at high risk of developing Major Depression or likely to have Major Depression, based on the following best practice guidelines:

- For women experiencing depressive symptoms, (scoring 11–13 on the EPDS), monitor and support. Resolution of their depressive symptoms may be achieved through education, emotional and practical support (telephone, home visiting support, support groups, home care services).

- For women who score 14 or higher on the EPDS at 28–32 weeks, follow up with a comprehensive bio-psychosocial diagnostic assessment for depression, and where confirmed, provide flexible continuous care individualized to the woman's needs. Consult with or refer the woman to specialized mental health services as necessary, based on clinical judgement and experience.

- For women who score 1–3 on item ten on the EPDS, indicating a risk of self-harm, ensure an immediate mental health assessment and intervention as appropriate.

**Continue to educate** all women about emotional wellness in pregnancy, about the risk of depression and the risks of using substances to manage mood.



### Primary care and maternity care support

This second stage is the highest risk period for prenatal depression.

## 2 Stage Two 28 to 32 weeks prenatal

- Screen all women with EPDS
- Actively manage the mental health of women at high risk
- Continue to educate all women about emotional wellness in pregnancy



### Screening and diagnosis

## EVIDENCE-BASED PRACTICE AND KNOWLEDGE

### Evidence

Women who are diagnosed with Major Depression should receive treatment that is flexible to their individual needs. (RNAO, Ross 2005; Dennis & Creedy 2004; Oates, 2000; Steiner et al 2003)

Best practice treatment models for the perinatal depressed woman include psychosocial therapies, weighing the risks and benefits of medication and the development of supportive networks. (O'Hara, 2003; Cooper et al 2003; Murray et al 2003)

### Evidence-based practice

Ensure that health professionals are knowledgeable and skilled in treating perinatal depression as evidenced by their development of a mental health strategy. (Buist et al 2006)

Ensure that there are qualified practitioners in your community who can provide a range of psychosocial therapies and that women have access to these services.

## Stage 3

### Birth and the First Weeks Postpartum

The third stage of a woman's perinatal journey is the opportunity to emphasize the importance of practical and emotional supports and self-care, and to monitor for the presence of, or the risk of developing depression. In many communities, the period shortly following birth is the occasion for contact with community health services through public health nursing follow-up. This is an important relationship, and can provide the basis for successful intervention for perinatal depression. Following are best practices by maternity care, primary care (*ie* family physicians, nurse practitioners, and midwives) and public health nursing, via public health home visits and family physician care:

**Monitor mood and coping skills** (note: EPDS not valid for the first two weeks postpartum) through public health home visits.

## On the Path of the Optimal Journey

The third stage of a woman's perinatal journey is the opportunity to emphasize the importance of practical and emotional supports and self-care, and to monitor for the presence of, or the risk of developing depression.

## 3 Stage Three Birth and the first weeks postpartum

- Monitor mood and coping skills
- Continue to educate about perinatal depression
- Provide individualized care
- Consult with or refer women to services
- Educate mothers on developing attachment



### Community health services and nursing follow-up

**Continue to educate** all women and their families about perinatal depression (incorporate emotional wellness, and perinatal depression information in the discharge information).

**Provide individualized care** in line with best practices for women who are diagnosed with Major Depression or who appear, based on clinical judgement, to be at risk for depression.

**Consult with or refer women** to mental health care services as needed, based on clinical judgement and experience.

**Educate mothers** about the importance of mother-infant interactions and promote opportunities for developing attachment.

## Stage 4 6 to 8 Weeks Postnatal

The fourth stage of a woman's perinatal journey – six to eight weeks after giving birth – presents the highest risk for postpartum depression. A score of 13 or over on the EPDS will capture 91 percent of depressed postnatal women.<sup>49</sup> At this point, both the mother and infant are at risk of negative outcomes if the disorder remains untreated or under-treated.

This postnatal period coincides with physical check-ups of both mother and infant following the birth and/or the infant's immunization visit provided by their physician (obstetrician, pediatrician or family physician) or the public health nurse. These visits offer an important opportunity to check for maternal emotional wellness as well as maternal substance use and physical care.

# 4

## Stage Four 6 to 8 weeks postnatal

The fourth stage of a woman's perinatal journey – six to eight weeks after giving birth – presents the highest risk for postpartum depression.



### Primary care providers and public health nursing

- Screen all postnatal women with EPDS
- Actively manage the mental health of women with Major Depression in a non-judgmental manner, ask women about substance use
- Continue to educate all women
- Educate women about perinatal depression symptoms
- Educate mothers about bio-psychosocial stressors

## BEST PRACTICE SERVICE DELIVERY

Abbotsford/Mission 2004. Postpartum Depression Screening and Non-Directive Counselling Pilot Project. Women who scored 10 or above on the EPDS at well baby immunization clinic visits were offered non-directive counselling home visits by a Public Health Nurse trained in the counselling method. Although a small number of women (14) completed an EPDS before and after counselling intervention, depressive symptoms were reduced in all women with only two women scoring >10 post intervention. Women rated the helpfulness of the visits at 4.3 on a scale of 1 to 5.

Best practices by maternity and primary care providers via public health home or clinic visits include:

**Screen all postnatal women** with EPDS.

**Actively manage** the mental health of women with Major Depression and those at high risk, based on the following best practice guidelines:

- For women experiencing depressive symptoms (scoring 11–13 on the EPDS), monitor and support, as these women may progress to a major depressive episode (re-screen as necessary). Resolution of their depressive symptoms may occur through education, emotional and practical support (telephone, home visiting support, support groups, home care services).

## BEST PRACTICE SERVICE DELIVERY

A community-based peer support program for women experiencing postpartum depression in Prince George has been formed using the Pacific Postpartum Support Society peer support framework.

- For women screening positive (a score of 13 or over on the EPDS), follow up with a comprehensive bio-psychosocial diagnostic assessment for depression, and where confirmed, provide flexible continuous care individualized to the woman's needs. Consult with or refer to mental health care services as needed, based on clinical judgement and experience.
- For women indicating a risk of self-harm (a score of 1–3 on item ten on the EPDS), ensure an immediate mental health assessment and intervention as appropriate.

**In a non-judgmental manner**, ask women about substance use. Women who were motivated by the health of their infant during pregnancy may reuse postpartum. This may indicate the presence of depression.

**Continue to educate** all women about emotional wellness and the risk of depression

**Educate mothers about the importance of mother-infant interactions** and promote increased opportunities for developing attachment.

**Educate mothers about bio-psychosocial stressors** that may trigger a relapse of their depression.



# Implementation and Evaluation: Considerations

## Collaborative Roles

Inter-professional and inter-agency collaboration in the design and delivery of perinatal depression services is recommended and is broadly consistent with the recommendations of leading national and provincial policy experts.<sup>50</sup>

- ‘Shared care’ and ‘collaborative care’<sup>51</sup> initiatives address funding and payment models as well as professional relationships and responsibilities, enabling more effective services.
- A new focus on chronic disease management provides good direction for bridging the gap in primary care settings between current realities of discontinuity in care and the optimal woman’s journey. The BC Chronic Care Model outlines six key functions for delivery of optimal care<sup>52</sup> which are highly relevant to improving perinatal depression. This is helped by new opportunities to reimburse physicians for consultation roles and evidence-based activities that improve outcomes.

Potential roles for the various players in implementing a collaborative service model for perinatal depression are described in the following:

## The Individual, Her Family and Personal Supports

- Provide feedback and suggestions for successful functioning and effective coordination of a collaborative team.
- Self-management: Actively participate as partners in making decisions about mental health care and treatment plans, as well as taking responsibility for following through with agreed-upon recommendations. Having women feel empowered and encouraged to inquire about what is happening with their care plan is a key concept of self-management.

## All Care Providers in Contact with Childbearing Women and Families – Health Care, Other Services

- Enhance the skills, knowledge and attitudes of the general and professional community in acknowledging mental health problems. Be knowledgeable on women’s health and family functioning (and on where to acquire information).
- Advocate for and be aware of an identifiable system of referral and treatment for women with perinatal depression in their service area, including mobilizing social supports.
- Contribute professional knowledge and skills as well as a good understanding of community needs and resources through the participation on “communities of practice” or regional mental health networks.

- Include private practitioners in the integrated case management team.
- Incorporate best practice approaches to screening and diagnosis.

**Health Care System and Other Care Systems**

- The health authorities have a leadership role to play in planning, implementing and monitoring a women-centered, collaborative, locally-based, and effective continuum of services, in active partnership with health and social services funded through other ministries and federal or non-profit agencies. The provincial Maternity Care Enhancement Project, led by BC Women's/PHSA, is identifying a number of opportunities to strengthen care collaboration.
- Health services, including mental health services, which are friendly to the family, are important for effective early intervention and successful treatment measures.
- MCFD C & Y MH regional services have expert resources to assist with community-based assessment and treatment for both young mothers under 19 years of age and infants and children affected by perinatal depression. They are an important partner in regional and local resource identification, service planning and service delivery. As of September 2006, they are launching specialized education and training for C&Y MH staff province-wide in infant mental health, which is expected to link in part to maternal perinatal depression.
- MCFD CP/FS has a mix of resources available including respite services, and in-home support, adapted to regional and local needs.

- The Provincial Reproductive Mental Health Program (RMHP) provides specialized consultation, treatment and knowledge translation through a provincial advisory committee and other consultation and outreach education initiatives. In addition, RMHP is strengthening its partnership with BC Reproductive Care Program to address mental health issues in perinatal care, and related data collection and analysis to support outcomes evaluation and quality improvement activities.

**Policy and Practice Environment – MoH, MCFD, Other Public and Private Sector Organizations**

- The MoH, through the Maternity Care Enhancement Project, is identifying opportunities to improve the practice and business models for family physicians and other providers with the aim of encouraging their participation on collaborative teams, communities of practice and networks.
- The MoH is supporting the Act Now Healthy Choices in Pregnancy initiative to enhance system competence in supporting women to reduce alcohol and tobacco use in pregnancy, resulting in potential partnership opportunities with this mental health initiative.
- There may be opportunities to align MoH initiatives in primary care and chronic disease management, and the reimbursement models associated with those, with best practices and service standard recommendations.
- MoH through MH & A Services, in collaboration with Healthy Children, Women & Seniors, initiated the development of this Perinatal Depression Framework.

- MCFD C&Y MH and CP/ FS were consulted in the development of the Framework. They have confirmed their interest and roles in relation to women and families affected by perinatal depression and the expectation that MCFD regional service leaders will participate with health authorities in service planning and improvements.

**Short and Longer Term Performance Indicators**

To evaluate the effectiveness of a perinatal depression initiative and to ensure that it is meeting the needs of both perinatal women and providers, an evaluation component should be established from the beginning. A range of information sources – some available through routine clinical and administrative records, and some project specific – may be required to effectively evaluate the impact of service changes. A February 2006 “toolkit” provides assistance for designing evaluation processes which capture primary care/mental health care collaboration.<sup>53</sup>

**Performance indicators**

Quality performance measures describe specific features or outcomes of health care practices that may be amenable to improvement.

**Key performance indicators** for demonstrating short-term progress or impact of a perinatal depression strategy could include the following:

- Regional inventory of treatment and support options in place for perinatal depression, including the broader family and community supports for new mothers, and protocols for appropriate engagement of and integrated case management with MCFD Child Protection and Family Support Services.

**EVIDENCE - BASED PRACTICE AND KNOWLEDGE**

**Evidence**

Women who have strong social support from their partner and their family have greater resilience in the onset and recovery from perinatal depression. (Misri et al 2000)

The strength of women's social networks will influence a woman's recovery from her present illness, and her parenting and resilience to future depressive illness. (O'Hara et al 1983; Cohen et al 2002; Mayberry et al. 2005; Grace et al 2003)

**Evidence-based practice**

Offer a range of supports that meet the needs of the perinatal depressed women in your community *eg* individual support (Armstrong 1999), peer support (Dennis, 2003), and telephone support. (Dennis, 2003)

Address the barriers that may prevent women from accessing supports services *eg* child care, transportation.

Provide women and maternity and primary care providers with an inventory of community resources that support building social networks.

- Regional protocols agreed and implemented for the primary care management of perinatal depression (including referral and treatment with evidence-based psychosocial therapies).
- Regional protocols agreed and implemented between primary care and specialist mental health services (child, youth and adult) for the management of perinatal depression, including local and regional service plans and protocols for acute care of mother-infant pairs affected by perinatal depression.

In the medium and longer term, a number of more specific process and outcome performance indicators can be identified based on local, regional and provincial information systems capabilities.

One measure used in BC to monitor continuity of care in mental health services is the percentage of persons hospitalized for a mental health diagnosis who receive community or physician follow-up within 30 days of

discharge.<sup>viii</sup> A high rate of community or physician follow-up reduces the chance of a relapse and readmission to hospital and indicates strong communication between discharge planners, community services and family physicians.

An equivalent and more relevant measure for the effectiveness of perinatal depression treatment could be follow-up monitoring at six and twelve months postpartum of those women who have scored positively on the EPDS at their perinatal screenings. This late stage monitoring follow-up coincides with immunization visits for their infants.

Some provincial and national initiatives that provide good resources to support regions in identifying feasible and appropriate indicators include:

- Collaboration Between Mental Health and Primary Care Services: A Planning and Implementation Toolkit for Health Care Providers and Planners (April 2006, CDM/Q1 Task Force) [www.ccmhi.ca/en/index.html](http://www.ccmhi.ca/en/index.html)
- A Guide to the Development of Service Frameworks in BC (December 2005)
- The Continuous Enhancement of Quality Measurement (CEQM) in Primary Mental Health Care: Closing the Implementation Loop [www.mheccu.ubc.ca/ceqm/index.cfm](http://www.mheccu.ubc.ca/ceqm/index.cfm)

The BC Reproductive Care Program (BCRCP) is also a resource for supporting the design and implementation of evaluation mechanisms for perinatal depression care. The BCRCP has a provincial role in perinatal care by providing perinatal guidelines, and through the collection and analysis of provincial data in the provincial perinatal database that is used to detect trends and indicators of key aspects of perinatal health in the province. It is anticipated that the

BCRCP will collaborate at both the health authority and the provincial level toward identifying maternal mental health and outcome indicators for perinatal reproductive mental health. Refer to BCRCP's website: [www.rcp.gov.bc.ca](http://www.rcp.gov.bc.ca)

<sup>viii</sup> MoH has established a baseline performance on this indicator of 74.3 percent (2003/04), and a long-term target of 80 percent (2007/08) of persons hospitalized for a mental health or addictions diagnosis that receive community or physician follow-up within 30 days of discharge. [www.healthservices.gov.bc.ca/socsec/performance.html](http://www.healthservices.gov.bc.ca/socsec/performance.html)

# Edinburgh Postnatal Depression Scale (EPDS)

JL Cox, JM Holden, R Sagovsky. Department of Psychiatry, University of Edinburgh.

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Number of Months Postpartum: \_\_\_\_\_

As you have recently had a baby, we would like to know how you are feeling. Please mark the answer which comes closest to how you have felt *in the past 7 days* not just how you feel today.

In the example at the right, the 'X' means "I have felt happy most of the time during the past week." Please complete the following questions in the same way.

**In the past 7 days:**

1. I have been able to laugh and see the funny side of things
 

<input type="checkbox"/> As much as I always could	0
<input type="checkbox"/> Not quite so much now	1
<input type="checkbox"/> Definitely not so much now	2
<input type="checkbox"/> Not at all	3
  
2. I have looked forward with enjoyment to things
 

<input type="checkbox"/> As much as I ever did	0
<input type="checkbox"/> Rather less than I used to	1
<input type="checkbox"/> Definitely less than I used to	2
<input type="checkbox"/> Hardly at all	3
  
3. I have blamed myself unnecessarily when things went wrong
 

<input type="checkbox"/> Yes, most of the time	3
<input type="checkbox"/> Yes, some of the time	2
<input type="checkbox"/> Not very often	1
<input type="checkbox"/> No, never	0
  
4. I have been anxious or worried for no good reason
 

<input type="checkbox"/> No, not at all	0
<input type="checkbox"/> Hardly ever	1
<input type="checkbox"/> Yes, sometimes	2
<input type="checkbox"/> Yes, very often	3

...continued

**E X A M P L E**

I have felt happy:

- Yes, all the time
- Yes, most of the time
- No, not very often
- No, not at all

- 5. I have felt scared or panicky for no very good reason
  - Yes, quite a lot 3
  - Yes, sometimes 2
  - No, not much 1
  - No, not at all 0
- 6. Things have been getting on top of me
  - Yes, most of the time I haven't been able to cope 3
  - Yes, sometimes I haven't been coping as well as usual 2
  - No, most of the time I have coped quite well 1
  - No, I have been coping as well as ever 0
- 7. I have been so unhappy that I have had difficulty sleeping
  - Yes, most of the time 3
  - Yes, sometimes 2
  - Not very often 1
  - No, not at all 0
- 8. I have felt sad or miserable
  - Yes, most of the time 3
  - Yes, quite often 2
  - Not very often 1
  - No, not at all 0
- 9. I have been so unhappy that I have been crying
  - Yes, most of the time 3
  - Yes, quite often 2
  - Only occasionally 1
  - No, never 0
- 10. The thought of harming myself has occurred to me
  - Yes, quite often 3
  - Sometimes 2
  - Hardly ever 1
  - Never 0

# Consultation Contacts

## Provincial or National Organizations/Groups

Provincial MH&A Planning Council: all HA MH&A leads and MOH MH&A

Provincial Public Health Nursing Managers Council: all HAs

RMH Provincial Steering Committee: phone conference discussion

BC Reproductive Care Program: *Barb Selwood*, Community Perinatal Nurse Consultant;  
*John Andrushak*, Program Director

BC Partners for Mental Health & Addictions Information: *Peter Coleridge*, PHSA

Pacific Perinatal Support Society: Board representatives, facilitator

MOH – Chronic Disease Management & Primary Care Renewal: *Valerie Tregillus*;

Mental Health & Addictions: *Ann Marr*, *Wayne Fullerton*, *David Scott*

Healthy Children, Women & Seniors: *Joan Geber*

MCFD – C&Y MH: *Tamara Dalrymple*

Child Protection/Family Supports: *Karen Wallace*

UBC Department of Psychiatry: *Dr. Raymond Lam*, depression;

*Dr. Martha Donnelly*, Geriatric Psychiatry network model

SFU Department of Health Sciences: *Dr. Elliot Goldner*, Centre for Advancement of  
Research in MH&A (CARMHA)

BCMA: *Dr. Dan McCarthy*, Lead; *Dr. Shelley Ross*, Consultation

BC College of Family Practitioners: *Dr. Jim Thorsteinson*, Lead; *Dr. James Hii*

Midwives Association of BC: message on listserv

Doula Association of BC: membership e-mail

Registered Clinical Counsellors of BC: membership e-mail

Health Canada – First Nations & Inuit Health, BC/Yukon Region, Maternal & Child/Early  
Childhood Development Programs: *Penny Stewart*, Manager

## Regional Representatives: Primary Care Leads, Other

PHSA: *Dr. Sue Harris*, Family Practice Executive Committee Head

VCHA: *Ted Bruce*, Lead; *Dr. Vivian Paul*, *Sue Saxell*, Consultation

FHA: *Dr. Terry Isomura*, *Dr. Tricia Bowering*, Consultation

VIHA: *Victoria Power-Politt*, Lead/Consultation; *Dr. Ellen Anderson*, Consultation

IHA: *Dr. Robert Trunbull*, Lead; *Fran Hensen*, Consultation

NHA: *Dr. Dan Horvat*, Lead

# III APPENDIX

## Perinatal Mental Health Services for Depression and Other Mental Disorders Provided by Physicians in BC (2003/04)

In fiscal year 2003/04, over 38,000 BC women received obstetrics-delivered hospital services.<sup>x</sup> This cohort provides the basis to identify and measure utilization patterns of mental health services for depression amongst pregnant and postnatal women in BC.

This analysis summarizes the ages of obstetrics-delivered women, their geographic distribution, and their utilization of physician services in the perinatal period. In this analysis, the perinatal period is defined as:

1. Nine months or less prior to the admission dates for deliveries, and
2. Nine months or less following the separation dates for deliveries.

### Geographic and Age Distribution of Obstetrics-Delivered Women

Women with valid BC personal health numbers were assigned to a health authority based on the person's local health area at the end of fiscal year 2003/04. The ages of women are from the Discharge Abstract Database (DAD) – that is, the age recorded in women's separation records for obstetrics-delivered services.

Data pertaining to the numbers of women in health authorities, and some descriptive statistics about the ages of 2003/04 obstetrics-delivered women, are contained in *Table 1*. The data indicate that the youngest women (generally) tend to be located in Northern HA and the oldest women in Vancouver Coastal HA.

The total number of women receiving obstetrics-delivered services provides a minimum baseline for analyses of the potential demand for perinatal mental health services because women who have experienced therapeutic abortions, still births, etc., are excluded from this analysis.

Table 1

HEALTH AUTHORITY	UNIQUE PATIENTS	AGE			
		MEAN	MEDIAN	MINIMUM	MAXIMUM
Interior	5,303	29	28	14	47
Fraser	15,053	30	30	14	48
Vancouver Coastal	9,018	32	32	15	49
Vancouver Island	5,419	29	29	13	48
Northern	3,301	27	27	14	45
Unknown	274	28	28	13	41
BC	38,368	30	30	13	49

<sup>x</sup> Patient Service Code 51 in the hospital Discharge Abstract Database, DAD



## Mental Health Services in the Perinatal Period

Data indicating the percent of the 38,000 obstetrics-delivered women, by the number of physician-provided MH services received,  $\leq 9$  months before admission date and  $\leq 9$  months after separation date, are indicated in *Figure 1*. Approximately 37 percent (14,000 of the 38,000 women) received one or more MH services from physicians, and approximately 12 percent (4,500 of the 38,000 women) received one or more depression services.

The data in *Figure 1* consist of physician-provided services by general practitioners and all specialists – psychiatry, obstetrics, for example, and paid for on a fee-for-service basis. The data exclude services that are paid for by the health authorities – for example, services that take place in health authority-funded clinics, and paid on a basis other than fee for service billing.

The data in *Figure 1* indicate that during the perinatal period:

- Approximately 4 percent (of the total group) received  $\geq 6$  MH services and approximately 1 percent (of the total group) received  $\geq 6$  depression services

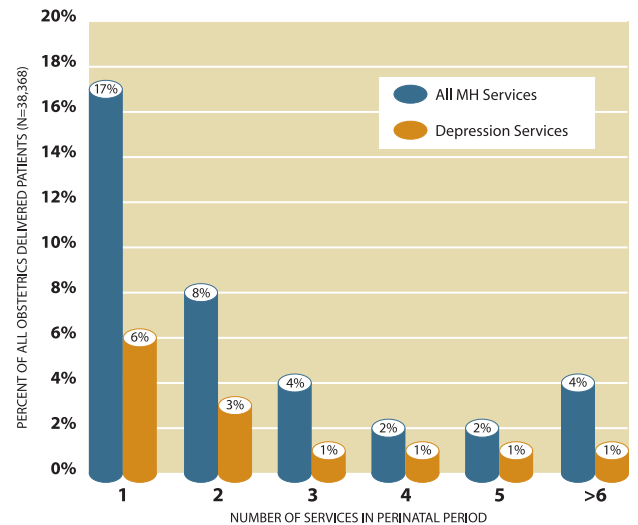
The mean number of MH services for the approximately 14,000 women who received  $\geq 1$  MH service is approximately 3.5 services per woman. Of the 4,574 women who received  $\geq 1$  depression service, their mean number of depression services is approximately 2.5 per woman.

The data in *Figure 2* indicate the mean number of all physician-provided MH services for the 14,000 women who received one or more MH physician-provided MH services, by age.

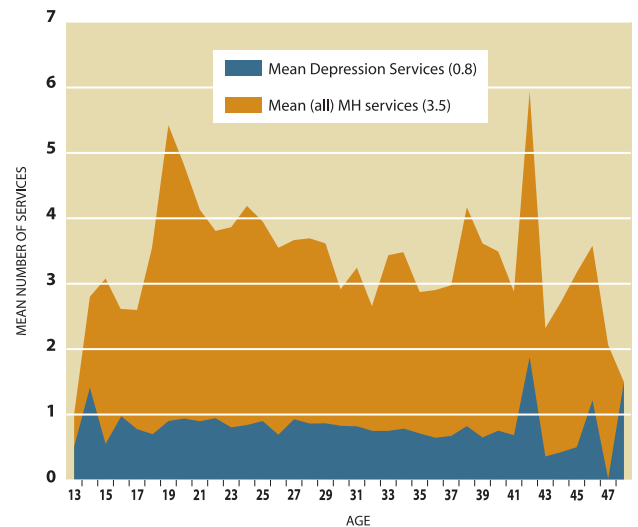
The data in *Figure 2* indicate that women who are in their teens and early forties receive more MH services than women who are the mean age of the cohort, *ie* approximately 30 years.

The mean number of MH services for the total 38,000 obstetrics-delivered women during the perinatal period is approximately 1; the mean number of MH services for the 14,000 women who received  $\geq 1$  MH service is approximately 3.5, and their mean number of depression services is  $< 1$  (*see Figure 2*).

**Figure 1**  
Percent of 2003/04 Obstetrics-Delivered Women who received Physician-provided MH and Depression Services, (n=14,321), by the number of Services Received in the Perinatal Period



**Figure 2**  
Mean Number of Mental Health Services, and Mean Number of Depression Services, Received in Perinatal Period (2003/04), by Age, For Women (n = 14,321) Receiving  $\geq 1$  MH Services in Perinatal Period



The data in *Table 2* indicate the total number of obstetrics-delivered women, by health authority, and the numbers and percents of women who received  $\geq 1$  MH service (for any MH disorder) and  $\geq 1$  depression service, from physicians on a fee for service basis in the perinatal period. Note: ICD-9 311 is used to indicate major and minor depressions<sup>xi</sup> in physicians' billing claims. ICD-9 311 is the code used to identify depression for this analysis. It should be recognized, however, that ICD-9 coding may not be a precise diagnosis, and that using only ICD-9 311 for this analysis provides a minimum baseline estimate of the pattern of depression in this population.

As previously indicated, the total number of women who received one or more services is 14,321 – or 37 percent of 2003/04 obstetrics-delivered women. Of this group, approximately one-third (n=4,574 women) received services for depression, coded by physicians as ICD-9 311.

The data in *Table 2* indicate, in part, that the likelihood of obstetrics-delivered women receiving physician services for depression in the perinatal period, varies by health authority

- The provincial mean of the likelihood of receiving a physician-provided mental health service is around 37 percent; for receiving a depression service in the perinatal period examined is approximately 12 percent.
- The range for depression services is from a low of approximately 8 percent in Vancouver Coastal HA to a high of approximately 16 percent in Vancouver Island HA.

The differences in physician billing rates for depression services coded as ICD-9 311 between health authorities may reflect physicians' coding patterns for depression, women's needs and demands for depression-related services, or the structuring and availability of services (and alternative services) for similar health needs. Local and regional considerations and monitoring of these data may be necessary to adequately explain intra-provincial variations.

Table 2

Number and Percent of Obstetrics-delivered Women (total n = 38,368) Receiving $\geq 1$ Physician-provided MH Service, and $\geq 1$ Physician Provided Depression Service, During Perinatal Period, (2003/04) by Health Authority					
HEALTH AUTHORITY	TOTAL	ANY MENTAL DISORDER		DEPRESSION	
	N	N	% OF TOTAL PATIENTS	N	% OF TOTAL PATIENTS
Interior	5,303	1,981	37%	796	15%
Fraser	15,053	5,798	39%	1,770	12%
Vancouver Coastal	9,018	3,036	34%	752	8%
Vancouver Island	5,419	2,523	47%	875	16%
Northern	3,301	930	28%	366	11%
Unknown	274	53	19%	15	5%
BC	38,368	14,321	37%	4,574	12%

<sup>xi</sup> Other codes used for MSP billing without ICD-9 specificity have been excluded – for example, billing code 50B is “anxiety/depression.” The estimates based on ICD-9 311 alone are conservative.

### Timing of Physician-provided MH Services for Depression:

The data in *Figure 3* show the percent of the 38,000 obstetrics-delivered women who received physician-provided services for depression in each month of the perinatal period.

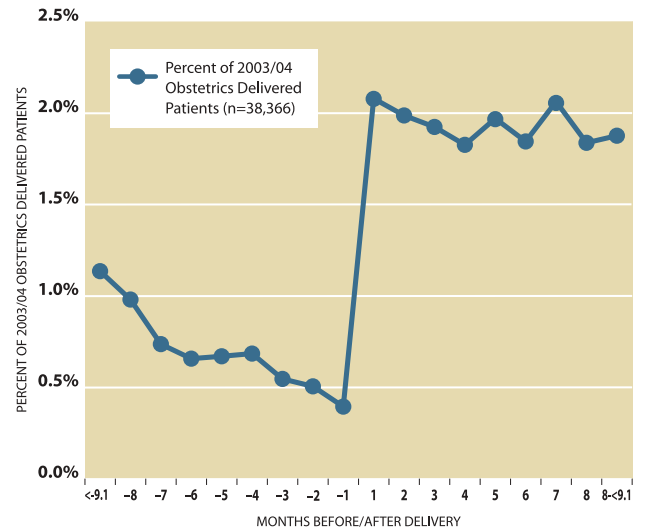
The data in *Figure 3* indicate that depression services are provided more frequently during the post-delivery period (than during the pre-delivery period).

The percent of women who received  $\geq 1$  service for depression in the perinatal period, ie 'before' and/or 'after' delivery, are shown in *Table 3*.

Of the 4,574 women that received depression services during the perinatal period:

- 16 percent were seen both prenatally and postnatally.
- 19 percent were seen only prenatally.
- 65 percent were seen only postnatally.

*Figure 3*  
Timing of Physician-provided Services for Depression  
Percent of Obstetrics-Delivered Women (n = 4574) Receiving Depression Services, by the Number of Months Before and After Obstetrics Delivered Admission and Separation Dates (2003/04).



*Table 3*

Frequency of Preinatal and Postnatal Services for Depression, 2003/04 Fiscal Year (n = 4574)				
DEPRESSION SERVICES IN PERINATAL PERIOD	STATISTIC	NO DEPRESSION SERVICE AFTER	DEPRESSION SERVICE AFTER	TOTAL
NO DEPRESSION SERVICE BEFORE	Patients (n)	0	2,968	2968
	Row %	0%	100%	100%
	Column %	0%	80%	65%
	Total %	0%	65%	65%
DEPRESSION SERVICE BEFORE	Patients (n)	884	722	1606
	Row %	55%	45%	100%
	Column %	100%	20%	35%
	Total %	19%	16%	35%
TOTAL	Patients (n)	884	3,690	4,574
	Row %	19%	81%	100%
	Column %	100%	100%	100%
	Total %	19%	81%	100%



# IV

APPENDIX

## References for Evidence-Based Knowledge and Practice

- Armstrong KL, Fraser JA, Dadds MR, Morris J. "A randomized, controlled trial of nurse home visiting to vulnerable families with newborns." *J Paediatr Child Health* (1999) 35(3): 237-44.
- Beck CT. Predictors of postpartum depression: an update. *Nursing Research* (2001) 50(5): 275-85.
- Beck CT. Postpartum depression: a metasythesis. *Qualitative Health Research* (2002) 12(4): 453-472
- Beck CT, Gable R. Postpartum depression screening scale with two other depression instruments. *Nursing Research* (2001) 50: 242-250.
- Burgha TS, Sharp HM, Cooper SA, Weisender C, Britto D, Shuinkwin R. The Leicester 500 Project. Social support and the development of postnatal depressive symptoms, a prospective cohort survey. *Psychological Medicine* (1998) 28(1): 63-79<sup>54</sup>
- Buist A, Condon J, Brooks J, Speelman C, Milgrom J, Hayes B, Ellwood D, Barnett B, Kowalenko N, Matthey S, Austin MP, Bilszta J. Acceptability of routine screening for perinatal depression. *Journal of Affective Disorders* (2006) In press.
- Cooper PJ, Murray L, Wilson A, Romaniuk H. Controlled trial of the short- and long-term effect of psychological treatment of post-partum depression. 1. Impact on maternal mood *The British Journal of Psychiatry* (2003) 182: 412-419
- Cohen S, Underwood L, Gottlieb B. Social support measurement and intervention: A guide for health and social scientists. New York: Oxford University Press.
- Cox J & Holden J. Perinatal Psychiatry: Use and misuse of the Edinburgh Postnatal Depression Scale. The Royal College of Psychiatrists. Gaskell, London. 1994.
- Cox JL, Murray D, Chapman G. A controlled study of the onset, duration and prevalence of postnatal depression. *The British Journal of Psychopathology* (1993) 163: 27-31.
- Dennis CL & Creedy D. "Psychosocial and psychological interventions for preventing postpartum depression." *Cochrane Database Systematic Review* (2004) (4): CD001134
- Dennis C L. "The effect of peer support on postpartum depression: a pilot randomized controlled trial." *Canadian Journal of Psychiatry* (2003) 48(2): 115-24.
- Evans J, Heron J, Francomb H, Oke S, Golding J. Cohort study of depressed mood during pregnancy and after childbirth. *British Medical Journal* (2001) 323, 257-260.
- Gaynes A, Buist A, Condon J, Brooks J, Speelman C, Milgrom J, Hayes B, Ellwood D, Barnett B, Kowalenko N, Matthey S, Austin MP, Bilszta J. Acceptability of routine screening for perinatal depression. *Journal of Affective Disorders* (2006) In press. On page37
- Gaynes BN, Gavin N, Meltzer-Brody S, Lohr KN, Swinson T, Gartlehner G, Brody S, Miller WC. Perinatal Depression: Prevalence, screening, accuracy and screening outcomes *Evidence Report/Technology Assessment* (February 2005) AHRQ Publication No. 05-E006-2, Number 119, 1-101.
- Grace SL, Evidandar A, Stewart E. The effect of postpartum depression on child cognitive development and behaviour: A review and critical analysis of the literature *Archives of Women's Mental Health* (2003) 6: 263-274.
- Holden JM, Sagovsky R, Cox J L. Counseling in a general practice setting: Controlled study of health visitor intervention in treatment of postnatal depression. *British Medical Journal* (1989) 298(6668): 223-226.
- Josefsson A, Angeliou L, Berg G, Ekstrom CM, Gunnervik C, Nordin C, Sydsjo G. Obstetric, somatic and demographic risk factors for postpartum.

Maybery DJ, Ling L, Szakacs E, Reupert AE. (2005) Children of a parent with a mental illness: perspectives on need. *Australian e-journal of mental health* 4;2: 1-11

Misri S, Kostaras X, Fox D, Kostaras D. "The impact of partner support in the treatment of postpartum depression." *Canadian Journal Psychiatry* (2000) 45(6): 554-8.

Murray D, Cox JL Screening for depression during pregnancy with the Edinburgh Depression Scale, *Journal of Reproductive and Infant Psychology* (1990) 8: 99-107.

Murray L, Cooper PJ, Wilson A, Romaniuk H. Controlled trial of the short- and long-term effect of psychological treatment of post-partum depression: 2. Impact on the mother-child relationship and child outcome. *British Journal of Psychiatry* (2003) 182: 420-427.

Oates M, Perinatal Maternal Mental Health Services, Royal College of Psychiatrists, London UK, 2000.

O'Hara M, Schlecte J, Lewis D, Wright E. Prospective study of postpartum blues: biologic and psychosocial factors. *Archives of General Psychiatry* (1991) 48:801-6

O'Hara MW, Swain AM. Rates and risk of postpartum depression – a meta-analysis. *International Review of Psychiatry* (1996) 8: 37-54. Depressive symptoms. *Obstetrics and Gynecology* (2002) 99(2): 223–228.

O'Hara MW, Rehm LP, Campbell SB. Postpartum depression. A role for social network and life stress variables. *Journal of Nervous & Mental Disease* (1983) 171(6): 336-341

Registered Nurse Association of Ontario (RNAO). Organization and policy recommendations, Interventions for Postpartum Depression: *Nursing Best Practice Guidelines*. RNAO (April 2005) [www.rnao.org](http://www.rnao.org)

Ross LE, Dennis CL, Blackmore ER, Stewart DE. Postpartum Depression: A guide for front-line health and social service providers. Centre for Addiction and Mental Health publications, Toronto, Ontario. 2005

Ross LE, Evans SEG, Sellers, M, Romach MK. Measurement issues in postpartum depression part 1. Anxiety as a feature of postpartum depression. *Archives of Women's Mental Health* (2003) 6(1): 51–57.

Steiner M, Dunn E, Born L. "Hormones and mood: From menarche to menopause and beyond." *Journal of Affective Disorders* (2003) 74: 67-83.

Wisner KL, Parry BL, Piontek CM. "Postpartum Depression." *New England Journal of Medicine* 2202, 347(3): 194-199.

## Endnotes

- 1 Gaynes BN, Gavin N, Meltzer-Brody S, Lohr K N, Swinson T, Gartlehner G, Brody S, Miller W C. Perinatal Depression: Prevalence, screening accuracy and screening outcomes. Evidence Report/Technology Assessment, number 119, AHRQ Publication #05-E006-2, February 2005.
- 2 O'Hara MW, Swain AM. "Rates and risk of perinatal depression: a meta-analysis." *International Review of Psychiatry* (1996) 8: 37-54.
- 3 Evans J, Heron J, Francomb H, Oke S, Golding J. Cohort study of depressed mood during pregnancy and after childbirth. *British Medical Journal* (2001) 323: 257-260;
- 4 Josefsson A, Berg G, Nordin C, Gunilla S. Prevalence of depressive symptoms in late pregnancy and postpartum. *Acta Obstetrics Gynecology Scandinavia* (2001) 80: 251-255.
- 5 Adapted from the American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, 4th e., Text Revision (DSM-IV-TR) (Washington, DC: American Psychiatric Association, 2000).
- 6 MOHS 2003/04 Physician Services analysis – Data from the Provincial Discharge Abstract Database (DAD) indicated that in 2003/04, approximately 38,000 women were admitted to BC hospitals to deliver their babies. During the 9-month period preceding their deliveries, 884 women received at least one physician service for (MSP – ICD-9 code 311) for minor or major depression. In the 9 month period following deliveries, 3690 women, or close to 10 percent, received physician service (MSP – ICD-9 code 311) for minor or major depression. See *Table 3, Appendix III*, this document.
- 7 Small R, Brown S, Lumley J, Astbury J: Missing voices: what women say and do about depression after childbirth. *J Reprod Inf Psychol* (1994) 12: 89-103.
- 8 Scottish Intercollegiate Guidelines Network (2002) "Postnatal depression and puerperal psychosis: A national clinical guideline." [www.sign.ac.uk](http://www.sign.ac.uk)
- 9 Wisner KL, Perel JM, Peindl KS, Hanusa BH. "Timing of depression recurrence in the first year after birth." *Journal of Affective Disorders* (2004) 78(3): 249-52.
- 10 Misri, S. Quoted in "The Dilemma of Depression for Mothers-to-Be," Jane E. Brody. *The New York Times* Feb. 21, 2006.

- 11 Marcus SM, Flynn HA, Blow FC, Barry KL. "Depressive symptoms among pregnant women screened in obstetrics settings." *J Womens Health (Larchmt)* (2003) 12(4): 373-80.
- 12 Field T, Diego M, Hernandez-Reif M, Schanberg S, Kuhn C, Yando R, Bendell D. "Pregnancy anxiety and comorbid depression and anger: effects on the fetus and neonate." *Depress Anxiety* (2003) 17(3): 140-51.
- 13 Teixeira JM, Fisk NM, Glover V. "Association between maternal anxiety in pregnancy and increased uterine artery resistance index: cohort based study." *Bmj* (1999) 318(7177): 153-7.
- 14 Van den Bergh BRH, Mulde EJM, Mennes M, Glover V. Antenatal maternal anxiety and stress and the neurobehavioural development of the fetus and child: links and possible mechanisms. A review. *Neuroscience & Biobehavioral Reviews* (2005) 29(2): 237-58
- 15 Misri S, et al. "Internalizing behaviors in four-year-old children following in utero exposure to psychotropic medications." *Am J Psychiatry* (in press)
- 16 Binaro L, Pinto N, Ahn E, Einarson A, Steiner M, Koren G. Perinatal Risks of Untreated Depression During Pregnancy. *Can J Psychiatry* (2004) 49(11): 726-35.
- 17 Beck CT (1998). The effects of postpartum depression on child development: A meta-analysis. *Archives of psychiatric nursing* 12(1): 12-20.
- 18 Hay DF, Pawlby S, et al. "Intellectual problems shown by 11-year-old children whose mothers had obstetrical depression." *J Child Psychol Psychiatry* (2001) 42(7): 871-89.
- 19 Grace SL, Evindar A, et al. "The effect of postpartum depression on child cognitive development and behavior: a review and critical analysis of the literature." *Arch Women Ment Health* (2003) 6(4): 263-74
- 20 Goodman JH. "Paternal Postpartum Depression, its Relationship to maternal Postpartum Depression, and Implications for Family Health." *Journal of Advanced Nursing* (2004) 45.1, 26-35.
- 21 Matthey S, Barnett B, Howie P, et al. "Diagnosing Postpartum Depression in Mothers and Fathers: Whatever happened to anxiety?" *Journal of Affective Disorders* (2003) 74.2, 139-147.
- 22 Ballard CG, Davis R, Cullen PC, et al. "Prevalence of Postnatal Psychiatric Morbidity in Mothers and Fathers." *British Journal of Psychiatry* (1994) 164.6, 782-788.
- 23 Dudley M, Poy K, Kelk N, et al. "Psychological Correlates of Depression in Fathers and Mothers in the First Postnatal Year." *Journal of Reproductive and Infant Psychology* (2001) 19.3, 187-202.
- 24 Areias ME, Kumar R, Barros H, Figueiredo E. Correlates of postnatal depression in mothers and fathers. *British Journal of Psychiatry* (1996) 169, 36-41.
- 25 Oates M. "Perinatal psychiatric disorders: a leading cause of maternal morbidity and mortality." *Br Med Bull* (2003) 67, 219-29.
- 26 Health Canada Maternal and Child Health Program to First Nations on Reserve – Planning and Implementation Guidelines. 2006. (Consultation with Penny Stewart, Manager, ECD Programs, Health Canada, First Nations and Inuit Health Branch, BC/Yukon Region).
- 27 Aboriginal Mental Health: What Works Best, MHECCU (2001).
- 28 Health Canada Maternal and Child Health Program to First Nations on Reserve – Planning and Implementation Guidelines. 2006. (Consultation with Penny Stewart, Manager, ECD Programs, Health Canada, First Nations and Inuit Health Branch, BC/Yukon Region).
- 29 Dennis, Creedy, 2004 and Lumley, Austin, Mitchell 2004, cited in Interventions for Postpartum Depression: Nursing Best Practice Guideline, RNAO (April 2005) 20.
- 30 Bodar Doris op cit. p. 20; BC's Provincial Depression Strategy, Phase 1 Report, October 2002. MH&A Division, MoHS with Mheccu, UBC. p. 27-31.
- 31 Beck CT. "Predictors of perinatal depression: an update." *Nurs Res* (2001) 50(5): 275-85.
- 32 O'Hara MW, Swain AM. op cit.
- 33 United Nations Office on Drugs and Crime. "Substance abuse treatment and care for women: Case studies and lessons learned." [www.unodc.org/pdf/report\\_2004-08-30](http://www.unodc.org/pdf/report_2004-08-30)
- 34 Chander G, McCaul ME. Co-occurring psychiatric disorders in women with addictions. *Obstet Gynecol Clin N Am* (2003) 30:469-81.
- 35 Dennis & Creedy, 2004 & Lumley, Austin & Mitchell 2004, cited in Interventions for Postpartum Depression: Nursing Best Practice Guideline, RNAO (April 2005) 20.

- 36 Smye V, Mussell B. "Aboriginal Mental Health: What Works Best." Mental Health Evaluation and Community Consultation Unit (2001).
- 37 Pigone et al, *Ann Intern Med.* (2002) 136: 765-776.
- 38 Stuart S, O'Hara MW, Gorman LL. "The prevention and psychotherapeutic treatment of postpartum depression." *Arch Women Ment Health* 6 Suppl (2003) 2: S57-69. Ogrodniczuk JS, Piper WE. "Preventing postnatal depression: a review of research findings." *Harv Rev Psychiatry* (2003) 11(6): 291-307.
- 39 Highet N, Drummond P. "A comparative evaluation of community treatments for post-partum depression: implications for treatment and management practices." *Aust N Z J Psychiatry* (2004) 38(4): 212-8.
- 40 Clark R, Tluczek A, Wenzel A. "Psychotherapy for postpartum depression: a preliminary report." *Am J Orthopsychiatry* (2003) 73(4): 441-54.
- 41 Bodnar D, Ryan D, Smith JE. September 2004 BC Women's/Providence Health Care Reproductive Care Program [www.bcwomens.ca](http://www.bcwomens.ca)
- 42 Boath E, Bradley E, Henshaw C. "Women's views of antidepressants in the treatment of postnatal depression." *J Psychosom Obstet Gynaecol* (2004) 25(3-4): 221-33.
- 43 Pp. 33-34, Organization and policy recommendations, Interventions for Postpartum Depression: Nursing Best Practice Guidelines. *RNAO*, April 2005. [www.rnao.org](http://www.rnao.org)
- 44 P. 37, organization and policy recommendations, Interventions for Postpartum Depression: Nursing Best Practice Guidelines. *RNAO*, April 2005. [www.rnao.org](http://www.rnao.org)
- 45 p. 35, *RNAO* 2005, op cite
- 46 Tammentie T, Paavilainen E, Astedt-Kurki P, Tarkka MT. "Family dynamics of postnatally depressed mothers - discrepancy between expectations and reality." *J Clin Nurs* 1(2004) 3(1): 65-74.
- 47 Brugha TS, Sharp HM, Cooper SA, Weisender C, Britto D, Shinkwin R, Sherrif T, Kirwan PH. "The Leicester 500 Project. Social support and the development of postnatal depressive symptoms, a prospective cohort survey." *Psychol Med* (1998) 28(1): 63-79
- 48 Misri S, Kostaras X, Fox D, Kostaras D. "The impact of partner support in the treatment of perinatal depression." *Can J Psychiatry* (2000) 45(6): 554-8.
- 49 Gaynes BN, et al. op cit.
- 50 Examples:
- Health Council of Canada, 2006 Annual Report, "Clearing the Road to Quality," (February 2006): reports an urgent need for an aggressive focus on interprofessional teams that support new models of primary health care delivery.
  - Maternity Care Enhancement Project, Supporting Local Collaborative Models for Sustainable Maternity Care in British Columbia (December 2004), [www.healthservices.gov.bc.ca/cdm/practitioners/maternitycare.html](http://www.healthservices.gov.bc.ca/cdm/practitioners/maternitycare.html)  
An extensive provincial consultation with maternity care providers supports the creation of a multidisciplinary and multiagency approach to the delivery of maternity care that places the women and their babies at the centre of care.
- 51 See Canadian Collaborative MH Initiative at [www.ccmhi.ca](http://www.ccmhi.ca)
- 52 also known as the Comprehensive Care Model or Care Model; [www.healthservices.gov.bc.ca/cdm/cdminbc/chronic\\_care\\_model.html](http://www.healthservices.gov.bc.ca/cdm/cdminbc/chronic_care_model.html)
- A comprehensive range of available services in a well-coordinated service delivery model
  - A strong emphasis on self-management and a new partnership between an informed and empowered consumer and a well-prepared and supportive provider
  - Evidence-based guidelines incorporated into a treatment setting through treatment algorithms or the presence of a specialist
  - Information systems that allow records to be shared easily between different providers involved with an individual's care and enable individuals at risk of developing a problem to be monitored over time
  - Organizational changes that share the vision and support the goals of the initiatives being developed, including the provision of adequate resources
  - The integration of health services with community resources, looking at health from a population as well as an individual perspective.
- 53 Collaboration Between Mental Health and Primary Care Services: A Planning and Implementation Toolkit for Health Care Providers and Planners (February 2006) [www.ccmhi.ca/en/index.html](http://www.ccmhi.ca/en/index.html)

Reproductive Mental  
Health Program,  
BC Women's Hospital  
Mental Health Building  
4500 Oak Street  
Vancouver, BC  
Canada V6H 3N1  
Tel 604.875.2025  
Fax 604.875.3115

*Women's*

BC WOMEN'S HOSPITAL  
& HEALTH CENTRE  
*An agency of the Provincial  
Health Services Authority*



BRITISH  
COLUMBIA

The Best Place on Earth

