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ABSTRACT

The perinatal period offers a unique opportunity for enhancing the mental health of women and their families. Women come into frequent contact with health professionals during this time and the enhancement of their emotional well being can promote their own, their infant's, and their partner's health. The aim of this book is to assist health practitioners to identify, assess, manage, and prevent mental health problems. These good practice guidelines address a range of conditions including perinatal depression and anxiety disorder, pre-existing mental health problems in mothers, and infants at risk for mental health problems. A multidisciplinary team of professionals along with consumers all had input into this publication. Chapter 1 discusses the guidelines for the development process. Chapter 2 reviews screening and assessment of depression, anxiety, and psychoses during the perinatal period. Chapter 3 presents ideas for prevention and intervention with parents. Chapter 4 reviews clinical management. Chapter 5 looks at the effects of parental mental disorders on infants. Chapter 6 summaries findings and suggestions from previous chapters. (Contains 126 references.) (JDM)

The perinatal period

Early interventions for mental health

Clinical approaches to early intervention in child and adolescent mental health

Volume 4

The Australian Early Intervention Network for Mental Health in Young People

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in child and adolescent mental health

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Series editors:
Robert Kosky, Anne O'Hanlon, Graham Martin and Cathy Davis
The University of Adelaide and Flinders University of South Australia

The perinatal period

Early interventions for mental health

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The opinions expressed in this document are those of the authors and are not necessarily those of the Commonwealth Department of Health and Aged Care.

This document is designed to provide information to assist decision making and is based on the best information at the time of publication.

This document provides a general guide to appropriate practice, to be followed only subject to the individual professional's judgement in each individual case.

A copy of this book can be downloaded from the AusEinet website:
http://auseinet.flinders.edu.au

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Clinical approaches to early intervention in child and adolescent mental health

Series editors:
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Foreword to series

There are now about three thousand people who form the Australian Early Intervention Network for Mental Health in Young People (AusEinet) developed since 1997. They include carers, consumers, mental health professionals, policy makers, teachers and others who are interested in the new developments in early intervention for the mental health of young people. The members of the network are linked by our website (http://auseinet.flinders.edu.au), our journal (AusEinetter), the seminars we held across Australia, the first International Conference held in Adelaide in 1999 and by the set of books and guides we have produced for them. The books have so far included two national stocktakes of prevention and early intervention programs in Australia, a comprehensive account of eight model early intervention projects which were subsidised by AusEinet and a general early intervention literature review. Details of these publications can be obtained from our website.

This current series deals with clinical approaches to early intervention for the mental health of young people. The AusEinet team asked some leading clinical researchers in Australia to review the evidence base for recent clinical approaches to early intervention in their particular fields of interest. Only a few mental health problems could be chosen to start the series. We are aware that there are research groups active in other areas and we hope to access their work at a later date.

We are also aware that few programs in the field have been well evaluated; certainly few reach Level I or II evidence, according to the standards recommended by the National Medical Health and Research Council in Australia (levels of evidence are

discussed in the series volumes). Consequently, we asked groups to consult with clinical experts and consumers to develop a consensus view on the best approach to practice in early intervention in their fields.

The volumes so far created for this series include clinical approaches to attention deficit hyperactivity disorder in preschool aged children, anxiety disorders, conduct problems, the perinatal period, and psychological adjustment to chronic conditions. Details of these volumes are available from the AusEinet website. A guide for delinquency will also become available on our website. The National Health and Medical Research Council (http://www.health.gov.au/nmhrc) has produced guidelines on depression in young people aged 13 to 20 years. AusEinet may look at clinical approaches specifically for early intervention in depression in children as well as young people in the future. Guidelines for early psychosis are available through the Early Psychosis Prevention and Intervention Centre (http://home.vicnet.net.au/~eppic/).

The clinical approaches recommended by the authors of the volumes in the series are the responsibility of the authors and naturally reflect their particular interests and those of their expert advisors. While the approaches outlined in this series do not necessarily reflect our views, we consider that it is important to open up a forum for information on early intervention for mental health and to allow our network access to some of the most recent scientific and clinical knowledge in the field. We hope that this series will help bridge the gap between research and practice.

The Editors

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Chapter 1
Introduction

The perinatal life stage offers unique opportunities for enhancing mental health through prevention and early intervention strategies. Women come into frequent contact with health professionals during this critical period, and the enhancement of their emotional wellbeing can promote their own, their infant's and their partner's health.

The aim of this book is to assist primary health care practitioners to identify, assess, manage and prevent perinatal mental health problems. These good practice guidelines address a range of conditions including perinatal depression and anxiety disorders and pre-existing mental health problems in mothers and infants at risk of mental health problems.

Guideline development process

This document was prepared by a group of health professionals guided by a multi-disciplinary Steering Committee. A wider reference and review group including consumers was also established to provide consultation and expert advice.

Several strategies were used to ensure consumer input. A consumer representative was included on the steering committee and a questionnaire was developed and distributed to gain consumer comment about their contact with health professionals during the perinatal period. The draft guidelines were distributed for comment to consumers and a representative from Postpartum Support International.

During November 1998 and as a continuing process, a computerised literature search was undertaken using keywords and text search (see Appendix 1). The Medline, PsycLIT, CINAHL and Cochrane databases were searched in this process.

The resulting references were reviewed by the project team members. The citations were rated (where possible) using the levels of evidence ratings adapted from the

US Preventive Services Task Force (1989), by the National Health and Medical Research Council (1999). This is as follows:

Level I evidence obtained from a systematic review of all randomised controlled trials

Level II evidence obtained from at least one properly designed randomised controlled trial

Level III-1 evidence obtained from well-designed pseudo-randomised controlled trials (alternate allocation or some other method)

Level III-2 evidence obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case-control studies, or interrupted time series with a control group

Level III-3 evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group

Level IV evidence obtained from case series, either post-test or pre-test and post test.

Members of the Steering Committee also undertook a manual search to identify further references in key areas of the project. These references were also rated. Given the broad scope of this project and the number of conditions under consideration, this process resulted in a large body of literature. It has been necessary to synthesise this into a relatively short document.

Due to constraints in this project, several important issues could not be addressed here. Their significance for perinatal mental health is, however, acknowledged. These issues include: problems for parents from non-English speaking and from indigenous backgrounds, alcohol and other drug problems, developmental disability and the impact of chronic illness.

Perinatal mental health refers to the emotional well-being of a mother, her partner and their infant, from conception until 24 months postpartum. Most people successfully negotiate major transitional life stages and the experiences they gain in

these transitions enhance their coping capacities. Transitional life stages also represent times of increased vulnerability, and a degree of anxiety and a labile mood can be expected at these times. But they are also associated with increased vulnerability to more severe mental health disturbances. During this time women (and their partners) may experience difficulties ranging from mild, transient anxiety or depression to more severe psychiatric illness. Perinatal mental health also emphasises the vulnerability of the developing foetus and of the infant. A glossary of other terms used in these guidelines is shown in Appendix 2.

Chapter 2

Perinatal mental health

Depression, anxiety and psychoses in the perinatal period

The prevalence of symptoms of depression and anxiety has been reported to be as high as 25% among young women in the general community (Andrews, Hall, Teeson & Henderson, 1999). There are conflicting data about whether or not the prevalence of anxiety is higher during pregnancy and the postpartum period than at other times in life (Williams & Koran, 1997). Prevalence rates for major depressive disorder in the postnatal period are reported to be around 13% (O'Hara & Swain, 1996). Similar, or higher, rates have been reported for the antenatal period (Green & Murray, 1994).

During the reproductive stage of life (15-45 years), twice as many women as men receive a diagnosis of depression (Paykel, 1991). Discriminating between anxiety and depressive conditions may be difficult clinically. Symptoms of depression or anxiety occurring in the perinatal period show no significant differences in form to those occurring at other times in life. In some instances the problem will be a continuation or exacerbation of an existing condition while in others, depression or anxiety may arise for the first time in association with pregnancy, delivery or parenthood. Antenatal depression and dysphoria are strong predictors of postnatal depression. Around half of all episodes of postnatal depression begin in the antenatal period (Gotlib et al., 1989).

A past history of depression at an earlier stage of life, or an episode of perinatal depression, makes recurrence more likely with further pregnancies. The risk of recurrence of depression in future pregnancies is especially high in those for whom the first onset of a depressive illness occurred in an earlier postpartum period (Cooper & Murray, 1995).

The so-called ***postnatal blues*** refers to a mild and transient mood disturbance arising within a few days of delivery. It occurs in some 50% to 80% of women in the postnatal period (Buist, 1996; Brockington, 1996; Barnett & Fowler, 1995; Riley, 1995; Boyce, 1994; Cox, 1986). The symptoms of postnatal blues commonly respond to simple forms of emotional and social support. Severe 'blues' may, however, be followed by an episode of clinical depression.

Postnatal depression is a more severe condition than this and while it usually resolves within 6 months, the disorder may persist for longer (Kumar et al., 1984; Watson et al., 1984). Persistent depression can be associated with social withdrawal, breakdown in family and social relationships and loss of the enjoyment of mothering, with a risk of self-harm or of harm to the infant. Approximately half of the women experiencing postnatal depression are experiencing their first episode of a major mood disorder.

Postpartum psychosis is a rare and complex condition requiring specific treatment. It carries a greatly increased risk for maternal self-harm, abuse of the infant and infanticide. An earlier history of psychosis (especially postpartum psychosis) is a strong indicator of risk for postpartum psychosis and an indication that prophylactic treatment may be required.

Postpartum psychosis is reported to occur in about one in five hundred pregnancies (Kendell et al., 1981). Most are affective psychoses (manic, depressive or schizo-affective

illnesses). The risk of developing an affective psychosis in the early postnatal weeks may be increased as much as 16-fold, compared with the risk at other times in a woman's life (Kendell et al., 1987). Risk factors for postpartum psychosis include a family history of affective psychosis, a previous psychiatric history of a psychosis or perinatal infant death (Brockington et al., 1982; Dowlatshahi & Paykel, 1990; Kendell, 1985; Kendell et al., 1987; Platz & Kendell, 1988). There is also the potential, during these periods, for existing mental health problems (for example, eating disorders or schizophrenia) to be exacerbated.

Observation during the antenatal and postpartum periods can alert health professionals to the occurrence of uncharacteristic or bizarre thoughts or behaviours that may precede psychoses and so facilitate early intervention (Kumar, 1992). A clear history of the mental health of the mother in her antenatal period is necessary to identify women who are at greater risk due to a family history of psychotic illness or a previous episode of psychosis. Appleby et al. (1997, in press) noted that, if there had been a previous postpartum psychosis, the risk of recurrence was about 50%. Prophylactic treatment may be appropriate in these cases.

There is growing research interest into postnatal mental disorders that are potentially found in ***fathers***. In assessing the father's mental state, it is worth noting that men may present mental health problems differently from women, often in a more externalised or 'acted-out' form, such as drug or alcohol use (Wilhelm & Parker, 1994). The use of drugs and alcohol may, in themselves, constitute additional family stresses.

Data concerning the prevalence of mental health problems amongst fathers are generally lacking. In a study of 200 postnatal couples, Ballard et al. (1994) found that 9.0% of the fathers exhibited depression at six weeks postpartum and 5.4% had depressive symptoms at six months postpartum. Fathers were significantly more

likely to have depression if their partners did also. Harvey and McGrath (1988) studied a group of fathers whose partners were admitted to a psychiatric unit. They found that there was a 10-fold increase (42%) in the incidence of psychiatric morbidity among them. Lovestone and Kumar (1993) found that 42% of spouses of postpartum mothers admitted to a psychiatric unit met Research Diagnostic Criteria for psychiatric illness.

There are other relevant issues involving the interactions between mothers and their partners. Domestic violence is reported to be more prevalent during pregnancy, with violence often being directed at the mother's abdomen i.e. the foetus (Webster et al., 1994, Condon; 1987).

Risk and protective factors for perinatal mood disorders

Risk factors are characteristics, variables or hazards that, if present in a person's life, make it more likely that this individual, rather than someone else, will develop a disorder. Researchers have identified a number of risk factors associated with mental health problems in the perinatal period. Different risk factors may have different effects, depending on whether they act early or late in the perinatal period (Boyce et al., 1991).

Five key potential risk factors for perinatal mood disorders have been identified in the literature. They are:

- enduring psycho-social adversity;
- a previous history of depression, especially perinatal depression;
- lack of an available confidante;
- the presence of a depressed mood;
- an unwanted pregnancy, especially where termination was considered and rejected.

Numerous other factors, some of which are associated with the above, have been identified in the literature, but the evidence supporting their role as independent risk factors is not strong. These factors include a past history of mental health disorders, such as an eating disorder, anxiety or drug and alcohol abuse or an overly conscientious (perfectionist) personality. The risk factors also include a problematic relationship with a parent or with a partner, a recent experience of migration, a recent significant bereavement or the experience of multiple social stressors (e.g. financial strain, moving house or unemployment). Other factors are caring for sick relatives or a child with a disability, a history of physical, emotional or sexual abuse or a family history of mental illness.

The above factors have been developed from Beck (1996), Boyer (1990), Boyce & Todd (1992), Boyce et al. (1991), Brown, Lumley and Small (1994), Cox et al. (1993), Elliott et al. (1988), Gjerdingen and Challoner (1994), Gotlib et al. (1991), Green (1990), Harris, (1994), Hickey et al. (1997), Kumar & Robson (1984), Murray et al. (1995), O'Hara et al. (1991), Small et al. (1994), Warner et al. (1996).

A full list of the potential risk factors for perinatal mood disorders that have been identified in the literature is provided in Table 1.

Protective factors are individual and family strengths that protect a woman and her family from the development of a disorder. Minimal research has so far occurred in this important area. Potential protective factors for perinatal mood disorders so far identified in the literature are good physical and mental health, adequate self-esteem, an available, supportive interpersonal relationship (especially with partner and with own mother). Others are adequate social and economic circumstances (e.g. housing, transport, access to services, finances and strong community networks), an uncomplicated delivery, a healthy infant and an infant with an easy temperament.

Table 1. Potential risk factors for mood disorders in the perinatal period

During pregnancy

- Maternal age less than 18 or greater than 35 years
- Previous termination, miscarriage, stillbirth, neonatal death, SIDS or a previous child with a disability
- Pregnancy not wanted
- Pregnancy complications, e.g. bleeding; hypertension; gestational diabetes; admission to hospital; multiple pregnancy, especially if one of the foetuses dies or has abnormalities
- Mother does not attend for antenatal care
- Severe premenstrual mood problems
- Low socio-economic status or financial strain
- Lack of partner or partner frequently away from home, e.g. armed services
- Lack of other social support, e.g. geographical isolation; language difficulties; transport problems
- Drug or alcohol problems
- Bereavement or loss or past significant bereavement
- Past psychological problems (anxious, dependent) or illness, especially depression
- Past psychological problems or illness in the family or family history of mental illness
- Problems in relationship with partner, including poor emotional support; abuse or violence
- Poor relationship with mother, e.g. cannot confide in her mother; mother is overly critical
- Adverse childhood circumstances, e.g. poverty; abuse; loss of parent; parent with severe or chronic physical or mental health problems
- Low self-esteem

Table 1. (continued)

At delivery	After the birth
■ No partner	■ No partner or other support person after discharge
■ No support person in attendance	■ Multiple birth
■ Birth complications, especially if perceived as life-threatening, e.g. haemorrhage; misplaced epidural; retained placenta	■ A sick baby
■ Labour and delivery not according to plan, e.g. emergency caesarian section	■ Abnormal appearance of the baby
■ Markedly premature or postmature delivery	■ Not the expected baby -'wrong' gender
■ Negative feelings about the baby	■ Mother continues to feel detached from the baby, e.g. not responsive when the infant cries or is hungry
	■ Mother experiences severe 'blues' or 'highs' ('pinks')
	■ Early discharge from hospital - particularly if not by choice
	■ Breastfeeding problems
	■ Late delivery complications, e.g. incontinence; infection; retained products; tear not healing; episiotomy pain
	■ Other health problems, e.g. thyroid dysfunction; anaemia; continuing hypertension
	■ Managing an infant after a caesarian section without sufficient support
	■ Temperamentally challenging baby or baby with reflux
	■ Lack of parenting skills
	■ Unrealistic expectations regarding parenting
	■ Negative parenting experience with other children

Screening for perinatal mental health problems

The use of universal screening measures, in particular the *Edinburgh Postnatal Depression Scale* (EPDS) (Cox et al., 1987) has recently gained wider acceptance by health professionals. Studies of the EPDS in a variety of clinical settings have demonstrated its acceptability to women who were asked to complete this questionnaire (Holden, 1994; Gerrard et al., 1993; Murray & Carothers, 1990). Boyce and Stubbs (1994) argue that there are benefits to screening because perinatal mental disorders have a defined period of onset, coinciding with a time of considerable contact with health professionals, and they cause serious negative impacts on women, babies and on family functioning.

The EPDS is a simple, reliable, self-report scale consisting of 10 items. It can be completed in a few minutes. It was developed in Scotland (Cox et al., 1987) and has been subsequently validated in other communities, including Sydney (Boyce et al., 1993). The scale is particularly valuable as it can be used for routine screening in the antenatal period and up to 18 months postpartum (Cox, 1994; Green & Murray, 1994). It can be administered in all primary health care settings and is very simple to score.

The best use of the EPDS is for routine postnatal screening, although cost-effectiveness awaits formal evaluation. The EPDS is frequently used when the clinician is concerned about the presence of a depressed mood. Although the EPDS was developed for use with English-speaking women, it has now been validated for use in some other cultural backgrounds. Matthey and Barnett (1996) reported on a study using the EPDS with Vietnamese and Arabic-speaking women. Versions in French, Chinese and Swedish have also been developed. Different cut-off scores are appropriate for different ethnic groups, but a score greater than nine suggests the need for further assessment.

Clinical assessment during the perinatal period

The establishment and maintenance of good rapport between the health professional and the person seeking help should result in a trusting, mutually respectful relationship which is a good foundation for the ongoing care of the pregnant woman and her family. Needless to say, this process takes time. More than one consultation may be required.

Women may perceive a range of barriers when consulting a primary health professional. They may have concerns about confidentiality and perceive negative, judgmental or insensitive attitudes from the health professional. There may be long waiting times, a lack of privacy to feed the infant or a lack of infant changing facilities. The consultation may focus on the infants' health in lieu of a discussion of the mothers' needs and feelings and the partner may be reluctant to support the mother.

Adequate assessment means taking a comprehensive history. This includes information about physical health, personal and family history, risk and protective factors, current mental state and psychological well-being, social circumstances and available social network, relationship issues and plans for adjustment to the new life situation. It can be useful to ensure that every patient completes the EPDS.

The framework outlined in Table 2 is a guide to the ***clinical interview process*** and has been adapted from Barnett & Fowler (1995), NHMRC (1997) and Sumich et al. (1995). Consumers were surveyed about their experiences when consulting health professionals. Some of their comments are shown in Table 3.

Table 2. The clinical interview process

Interview environment
- ensure privacy and confidentiality
- unhurried atmosphere (a longer appointment may need to be made)
- use counselling skills such as open-ended questions, active listening, probing questions
- provide toys to occupy infants and young children

Range of current symptoms and signs
- nature
- time of onset
- duration
- variation
- severity
- speed of onset
- frequency

Current level of functioning in maternal role
- ability to physically care and nurture infant and other children
- sleep deprivation or fatigue
- breastfeeding

Previous history
- depression/anxiety and treatment
- other psychiatric problems and treatment
- medical illnesses
- suicide attempts
- adverse childhood circumstances including losses and abuse of any kind
- medical illness (which may have caused or contributed to the perinatal mental health disorder)
- learning or other developmental disability
- major trauma e.g. refugee

Obstetric history
- infertility
- pregnancy
- previous pregnancies
- childbirth experience
- antenatal preparation
- complications e.g. urinary tract infection
- labour
- early postpartum history including infant feeding

Psychosocial assessment
Recent stressors such as:
- relationship difficulties or breakdown
- bereavement, e.g. own mother, previous children, siblings, partner
- parenting difficulties with previous children
- children unwell, with disability, or behaviour is problematic
- housing difficulties, e.g. transient, or completing renovations

Table 2. (continued)

Medications or alcohol and illegal drugs which may be causing or caused by the perinatal mental health problem

Family situation

- strengths and problems, e.g. living arrangements, conflict with and between parents and other family members, employment status of woman and her partner, financial concerns
- family history of mental health problems
- current physical and mental health status of partner, including drug & alcohol, domestic violence

Social support

- access to regular physical and emotional support from partner, another close family member or friends
- access to regular child care
- access to 24 hour parent help-line
- contact with the general practitioner, early childhood health nurse or community health nurse
- contact with birth associations (if appropriate)

Relevant cultural issues

- e.g. acculturation or inter-generation problems, gender issues

Infant and maternal (parental) relationship and infant safety issues

- see Chapter 5: Infant mental health

Suicidal thoughts and behaviours

- Do they extend beyond simply thinking "it would be nice not to wake up in the morning"?
- Has the patient a plan, e.g. would take tablets, would drive her car off the highway into a tree, or would attach a hose pipe to the car exhaust?
- Has she the means of suicide, e.g. already has the tablets in the house, or has bought a length of hose?
- What does she think would occur in the aftermath of her death, e.g. if she were dead, does she think her partner and the baby would be better off?
- Does she intend to take the baby and/or partner with her?
- Is there a history of previous attempts at self-harm, e.g. overdoses or self-mutilation?

It is useful to understand that:

Asking about and exploring suicidal intention will not cause suicidal behaviours. Often, being open about feelings of hopelessness, experiencing despair and having suicidal thoughts, and asking about them directly can provide significant relief. Discussing suicidal thoughts and developing a crisis plan collaboratively can greatly assist ongoing safety. Talk of suicide should never be ignored. Urgent action and appropriate psychiatric referral may be required.

Table 3. Consumer responses about their experiences during the clinical interview

"Health professionals should not force their point of view."

"Consumers should be included in management decisions."

"I was criticised for not breastfeeding past six months from a few people - the choice to stop breastfeeding is difficult enough without someone telling you that you have done the wrong thing."

"Each individual person is different, when it comes to the emotional side of things, and everyone copes differently with stress, anxiety and depression."

"Provision of on-going counselling on a one-to-one basis allowed me to discuss my feelings, emotions and deal with issues that arose due to pregnancy and parenting."

"My GP was very supportive in suggesting medication and counselling."

"Parents need ongoing support and continued contact after the initial crisis has passed."

"Parents may need help in asking for help."

"Parents need to be told they are doing a great job."

"Simply asking the question "and how are you feeling through all this" and looking for any signs of tearfulness, anxiety. Only one health professional asked how I was and I burst into tears."

"Be compassionate - acknowledge that the first months after giving birth - women need to heal, but also need to care for a newborn (a full time job). To quote my doctor "it's hard work." "

"There was a communication barrier (I did not speak English); not enough time was spent explaining things, especially medical terms."

"Prenatal classes should include more practical advice for after the birth of the baby - childbirth is short - a child's day is long!"

"Everything seems to be extreme or exaggerated when children are first born."

"First time mothers are easily intimidated - they often think they are doing everything wrong. Help them gain confidence through positive reinforcement and genuine listening."

"Encourage women to socialise and join groups - go the extra mile to make women feel wanted and included in activities."

Chapter 3

Prevention and early intervention for parents

Prevention

Prevention strategies have a clear role in perinatal mental health. The evidence for their effectiveness will be reviewed in this section.

There are numerous possible strategies for prevention. Information about mental health and possible problems can be mailed to the mother (and her partner) during pregnancy, the early postnatal period and during the first year after the birth. The general community can also be informed about perinatal mental health. Parenting programs can be implemented with an emphasis on communication and interpersonal skills (e.g. being able to ask for assistance, talking about feelings and needs); strategies to enable self-care (e.g. learning to drive, arranging child care); exploring parenting expectations; creating a social support network (e.g. developing friendships with other parents); and infant development and capacities.

During consultations the mother or the partner can be given the opportunity to explore feelings about the pregnancy, birth, motherhood and fatherhood. Activities can be encouraged that enhance parental-infant interaction (e.g. baby massage, cuddling infant when feeding, and play). Parents can be assisted to deal with family conflict, to develop skills in communication and problem-solving and develop social networks.

Barnett (1995, p. 96) recommends five strategies for preventive perinatal mental health. These are:

1. ensure that individuals have the opportunity to consider whether becoming a parent is a role they can play competently;

2. facilitate a successful transition for parents, e.g. by promotion of self-esteem and by keeping distress, anxiety and depressive symptoms within reasonable limits;

3. identify those at risk for mood disorders and other illness;

4. treat actively those who are psychiatrically ill;

5. identify those at risk of anomalous parenting, whether because of their own vulnerability or because of the infant's, and provide them with assistance.

A number of studies have explored universal intervention strategies as methods of reducing the prevalence of perinatal disorders. Interventions such as developing support networks, providing information, enhancing skills such as communication and problem-solving, and encouraging the exploration of parenting experiences, have been evaluated. Most evaluation studies measure functional or dimensional (degree of severity) outcomes. Table 4 details the evidence base for these studies.

Table 4 reveals that some studies show benefits while others do not. On the basis of the evidence, there is some support for both the effectiveness of brief simple strategies (e.g. the use of tapes and video programs) but also for sustained interventions (although this is not invariable).

In general, these interventions assume that one intervention should be effective for all women, and / or their partners. Individual differences, such as coping or personality styles have not generally been assessed.

Early intervention

Early interventions are strategies which are targeted to individuals, or to a subgroup of the population, whose risk of developing mental disorders is significantly higher than average...' (Mrazek & Haggerty, 1994, p.25). These selective intervention measures include home visiting (Olds et al., 1997, 1990, 1986), support for pre-term babies (Field 1980) and the provision of therapy for postpartum women with high anxiety levels (Barnett & Parker, 1985). The evidence base for these types of intervention strategies in postnatal depression is detailed in Table 5.

Table 4. Universal interventions for perinatal disorders

Evidence Level & Author	Subject & Design	Intervention	Outcome & Measurement Point
II Black-Olien 1993	116 couples E, C RCT	Special 7 sessions antenatal classes focusing on communication skills & relaxation training	9 weeks E = C for women E > C for men on affect measure
II Broussard 1976	318 first time mothers E, C RCT	E = Television programs in hospital (after the birth) on parenthood	4 weeks E > C on mother's perception of her infant
II Coffman et al. 1994	105 women, 99 men (couples) E, PC RCT	E = Extra antenatal class session, focusing on expectation of couple support after childbirth	6 weeks & 6 months E = PC on attitude to baby, martial relationship, affect & perceived support
II Gordon & Gordon 1960	161 couples E, C RCT	E = 2 additional sessions in the antenatal classes focusing on psychosocial issues following birth	6 weeks & 6 months E > C on emotional adjustment
II Rees 1995	60 first time mothers E, PC RCT	E = audiotape of guided imagery & relaxation post birth	4 weeks E > PC on depression, anxiety & self-esteem
II Shields et al. 1997	1,299 women E, C RCT	E = Midwife managed care	7 weeks & 28 weeks E>C (statistically but not clinically) on mood
III Cowan & Cowan 1988	96 (couples) E, C_1,C_2 Semi-random (subjects not blind to condition)	E = weekly meetings for 6 months focussed on couple communication, sense of self and parenting issues	6 months & 18 months E > C on adjustment & marital satisfaction; & involvement satisfaction (men)
III Melelis & Swendsen 1978	58 first time couples E,C, P C Insufficient information for design	E= 8x 2 hour sessions (in pregnancy) & home visits (antenatal & postnatal): expectations, support	6 weeks E > C = PC on anxiety & attitude to infant
III Midmer et al. 1995	70 couples E, C Semi-random (S not blind to condition)	E = extra 2 sessions in antenatal classes focussing on adjustment postpartum	6 weeks & 6 months E > C on anxiety, adjustment & marital relationship
III Wandersman & Wandersman 1980	47 women, 42 men (couples) E, C Non-random	E = Postpartum parenting groups 9 sessions over 6 months, 1 session of parenting issues	8 months E = C on support & adjustment

Table prepared by S. Matthey & N. Kowalenko, 1999.
Design: E = Experimental; C = Control; PC = Placebo Control; RCT = Randomised Controlled Trial
Outcome: E > C means the Experimental Condition had better outcomes than the Control Condition

Table 5. Early intervention in perinatal mental health

Evidence Level & Author	Subject & Design	Intervention	Outcome & Measurement Point
II Buist et al. 1999	44 at risk women E, C RCT	E = Information & support (8 sessions antenatal & 2 sessions postnatal)	6 weeks & 6 months E = C on mood & anxiety
II Barnett et al. 1985	89 first time mothers with anxious symptoms RCT E_1, E_2, C	E_1 = professional intervention E_2 = non-professional intervention 11 post-natal sessions	3, 6 & 12 months E_1 > C E_2 = C
II Elliot et al. 1988	99 high risk women; 89 controls E, C Insufficient information for design	11 home visits (antenatal & postnatal) & special meetings; continuity of care; education, information & support	E = C (mother); E > C (partners) significant for partner (but not mother) on anxiety & depression at 12 weeks
II Field 1980	60 pre-term infants with teenage mothers E, C RCT	Home visits with education, developmental guidance & psycho-social support	E > C Improved parenting skills & attitudes in mothers
II Stamp et al. 1995	139 at risk women E, C RCT	E = Special classes (3 sessions: 2 antenatal & 1 postnatal) providing support & information	6, 12 & 26 weeks E = C on mood
II Wolman et al. 1993	189 first time pregnant women with no planned supports at birth E,C RCT	E = Support person during labour & birth	6 weeks E>C on depression, anxiety & self-esteem
III-2 Barnard et al. 1988	147 at-risk women E_1, E_2 Random assignment	E_1 = Mental health model; E_2 = Information model. Both had home visiting from pregnancy to 1 year postpartum	Up to 3 years postpartum E_1 > E_2 on maternal responsiveness to infant & mood

Table prepared by S. Matthey & N. Kowalenko, 1999.
Design: E = Experimental; C = Control; PC = Placebo Control; RCT = Randomised Controlled Trial
Outcome: E > C means the Experimental Condition had better outcomes than the Control Condition

One of the most common risk factors for postnatal depression is the lack of partner support. The trend in the listed studies was for those that incorporated the partner in the intervention to show a positive outcome. The structure of an intervention will be critical as to whether or not the partner will become involved. Multi-session interventions, spanning the antenatal and postnatal period are less likely to have high attendance by partners than briefer interventions (Elliot et al., 1988; Buist et al., 1999).

We noted some general limitations to the available studies. For instance, most studies tend to treat the participants as belonging to an homogenous group. In fact, this is rarely likely to be the case and it is unlikely that a particular intervention is going to be suitable for all participants. Future research needs to tease out the suitability of different strategies for different sub-groups of parents.

The interventions which are summarised in Table 5 target population subgroups whose risk of developing mental health problems is higher than average.

There are limitations in the reliable prediction of perinatal mental health problems solely through the simple consideration of risk factors. This is due to the significant prevalence of post-natal emotional problems and disorders developing in those mothers who have not displayed any significant antenatal risk. These limitations may have restricted the impact of the interventions in these groups compared to controls.

In summary, those studies with larger samples, involving home visits and including multiple components such as psycho-social support, continuity of care and significant duration, demonstrated efficacy.

Chapter 4

Clinical management

Once a perinatal mental health problem has been recognised, appropriate information and education should be offered to the woman and her family. Her partner may need to be involved. The mental state of the partner may need to be assessed, including clarification of their use of alcohol and other drugs and the potential for violence in the relationship may need to be clarified.

Standard treatments for mental health disorders should be provided to women in the perinatal period when they are indicated on clinical grounds. Potential risks to the foetus need to be considered and the mother must be informed of these should treatment be recommended. Safety of mother and infant is paramount, but untreated psychiatric illness can also have serious consequences.

Referral to and advice from a mental health practitioner should be considered if the mother is at risk of suicide, the depression is severe, there are psychotic symptoms or the problem is not improving or is worsening, despite treatment. Referral should also be considered where significant co-morbidity complicates management, e.g. alcohol and other drug use or when there is a past history of a previous psychosis.

In rural areas, referral may be difficult because of lack of services. In such situations, it is vital that there is a professional support network. For example, this network could allow telephone contact with specialist mental health practitioners, such as psychiatrists, via telehealth links. A crucial role of the primary health professional in this network is the coordination, liaison and ongoing care of women and their families during the perinatal period.

A decision about whether a specialist mental health consultation is necessary may also be required if the mother fails to respond to ordinary degrees of support. If the clinician is concerned about the baby's safety, the appropriate child protection services should be notified.

Barnett (1990) has outlined a range of strategies for managing postnatal depression. These include education about what are the 'normal' feelings to experience in the usual postpartum circumstances, practical support, counselling or psychotherapy (individual, relationship and/or group), medication and hospitalisation.

Education for professionals and parents can help the mother and her partner identify realistic expectations for parenting and gain an understanding of perinatal mental health problems. ***Self-care skills*** can be developed to assist the mother and her partner to focus on their own personal and social needs and their relationship.

Social support encompasses the provision of social and emotional support by the woman's partner, family, friends, voluntary support groups and government services. Supports include childcare, mothers' groups, home help and crisis phone numbers.

Counselling can be useful for advising on and helping decision-making. ***Cognitive behavioural therapy***, a form of therapy to replace negative thinking patterns with adaptive thoughts, and ***group therapy***, including self-help groups and professionally run groups, may be useful.

The evidence base for management strategies for postnatal depression

The evidence base for the clinical management of postnatal depression is summarised in Table 6. Holden (1996) reported a study of non-directive counselling intervention by health visitors providing six, weekly, one-hour visits to depressed women in their own homes. At least half of the visit was spent encouraging mothers to talk about their feelings. Women in the counselled group were significantly more likely to have recovered from their depression, than were controls. This study has been replicated in a Swedish population (Wickberg & Hwang, 1996).

Murray and Cooper (1997) studied brief forms of psychotherapy provided over eight weeks in the patients' homes. They reported significant positive effects from three forms of psychotherapy: non-directive counselling by health visitors, cognitive therapy directed at the infant behaviours and dynamic psychotherapy centred on the mother-infant relationship.

Table 6. Management of postnatal depression

Evidence Level & Author	Subject & Design	Intervention	Outcome & Measurement Point
II Appleby et al. 1997	PND RCT N=87 (screened 3000)	Cognitive Behavioural Therapy (CBT) vs fluoxetine	Significant benefit for each intervention, E > C, no additive effect for the 2 treatments together (3 month follow-up)
II Holden et al. 1989	PND RCT N=50	non-directive counselling (home visiting)	Significantly improved mood E > C Decreased cases of depression (3 & 6 month follow-up)
II Murray & Cooper 1997	N = 194 RCT to 4 conditions CBT (E_1) counselling (E_2) Psycho-dynamic (E_3) control (C)	Weekly visits for 8 weeks by home visitor for treatment intervention (E_1,E_2,E_3)	E_1>E_2>E_3 > C at 3 months; controls catch up at 9 months. No change to infant emotional or cognitive outcomes. Improved infant behavioural outcomes on maternal ratings
II Gregoire et al. 1996	N = 61 RCT	E = Trans-dermal oestrogen	Significantly reduced rates of distress & depressive symptoms (E > C) at 3 months, but not at 9 months
III-2/3 Henderson et al. 1991	PND (referrals) N = 20 Placebo control	Oestradial skin patches	E>PC with increased mood elevation (2 month follow-up)
III-3 Spinelli 1997	Ante-partum Depression (referrals) N = 13 Open Trial (pilot)	Interpersonal psychotherapy 16 sessions (clinic based)	Significant improvements in post-intervention measures of depression
III-3 Wisner et al. 1999	N=35 Naturalistic	TCA vs SSRI for PND in a referred population	Significant improvement in depression ratings in both groups
III-1 Wickberg 1996 (replication)	PND, N= 41 Comparison group intervention	Home visitor counselling	Significant decrease in prevalence of depression

Table prepared by N. Kowalenko & S. Matthey 1999

Design: E = Experimental; C = Control; PC = Placebo Control; RCT = Randomised Controlled Trial

Outcome: E > C means the Experimental Condition had better outcomes than the Control Condition; SSRI=Selective Serotonin Reuptake Inhibitors; TCA=Tricyclic antidepressants.

Appleby et al. (1997) studied the joint effects of treatment with fluoxetine and cognitive behavioural counselling (one or six sessions) on women with depression when they were 6-8 weeks postpartum. They found significant improvement in levels of depression among all treatment groups after 12 weeks. Greater improvement occurred among those who received fluoxetine compared with a placebo, and amongst those who received six counselling sessions compared with one.

Other interventions have a role in the treatment of depression including interpersonal therapy (Spinelli, 1997) and brief psychodynamic therapy (Cooper & Murray, 1997) but only limited evidence is currently available for their benefits. Morgan et al. (1997) report beneficial effects from a group program for postnatal depressed women which offers both psychotherapeutic and cognitive-behavioural strategies. Fathers were specifically invited to attend.

In summary, randomised controlled trials show that simple forms of psychological interventions, non-directive counselling (Holden et al., 1989; Wickberg et al., 1996) and cognitive behavioural therapy (Cooper & Murray, 1997; Appleby et al., 1997) and antidepressant medication are effective treatments for postnatal depression. Both are designed to be delivered by non-specialists in mental health.

Intensive community care and hospitalisation

Intensive mental health care is not often required. However, the issue of ensuring adequate safety for the mother and infant may mean that in cases of puerperal psychosis, hospitalisation followed by intensive community care may be necessary. Oates (1982) outlines a comprehensive approach to care providing services that best develop the least restrictive models for perinatal mental health disorders.

Barnett and Morgan (1996) discussed the advantages and disadvantages of joint admission (of mother and baby) to psychiatric units. However, specialised mother-baby in-patient psychiatric units are rare. A cost-analysis of a mother-infant day patient program at Burton-upon-Trent has been conducted and the initial indications are promising (Boath & Cox, 1999).

Postpartum psychosis is a psychiatric emergency requiring urgent referral for a psychiatric assessment, including an assessment of the safety of mother and infant. Hospitalisation, anti-psychotic medications and intensive community care may all form part of a comprehensive management plan. The decision about the form of management must be based on the level of risk to the safety of the mother and baby, the willingness and capacity of the family to care for the mother and infant and the availability of community services to provide adequate support.

Infants with parents who have psychosis represent a group at-risk for a range of later mental health problems. One potential framework for assessing parenting and the risk to dependent children is provided by Gopfert, Webster and Seeman (1996) and is shown in Table 7.

Maintenance and prophylactic treatment

Studies on long-term treatment to reduce relapse and recurrence of disorders are not available for the perinatal period. The usual guidelines for depressive illness may be appropriate, but the issue of other episodes occuring in further pregnancies must be considered. For chronic and enduring mental disorders, long-term treatment can reduce the probability of relapse and recurrence (level IV evidence).

Prophylactic treatment, including psychological support and medication, are sometimes required during pregnancies. Wisner and Wheeler (1994) explored prophylactic use of antidepressant medication in a small group of women who had already experienced at least one episode of major postpartum depression, based on criteria from the Diagnostic and Statistical Manual of Mental Disorders, revised 3rd edition (DSM-III-R; American Psychiatric Association, 1987). They found a lower level of recurrence of depressive symptoms amongst those who received medication immediately after birth than amongst those who received none (Table 8).

While programs to support parents recovering from psychotic episodes with young children have been described, the quality of their evaluations is insufficient at present to make specific recommendations. Programs that address the needs of infants and young children have been described by Shipp (1997).

Table 7. A framework for assessing parenting and risk to children

Focus on parenting
Capacity to attend to child's physical, intellectual, social and emotional needs
Capacity to provide a stable and nurturing environment (secure base)
Age-appropriate understanding and expectations of child
Capacity to initiate or follow, and enjoy child centred activity (play)
Evidence for physical or sexual abuse or neglect

Focus on mentally ill parent
Level of disturbance, instability and violent tendencies (impulse control)
Behaviour and psychiatric symptoms directly affecting parenting capacity and ability, including alcohol/drug addiction and level of commitment to child
Attitude to social norms/relationship to society
Sense of responsibility for self, child and family/capacity to acknowledge any risk to child
Level of paranoia/capacity to form trusting relationships
Use of help/clinical interventions/potential for motivation for change including relevant history

Focus on 'well'/other parent (if relevant)
Attitude to illness of partner
Relationship to child
Commitment to maintaining the family
Capacity to be available/intervene on child's behalf if and when necessary
Health/emotional resources

Focus on the marriage/partnership (if relevant)
Style and intensity of marital conflict
Ability to communicate
History of violence/spouse abuse
Capacity to work together as parents

Focus on child
Developmental progress
Child's attachment status (including fear of parent)
Capacity for self-protection
Unusual behaviours and characteristics
Relationships outside the nuclear family, including extended family, peers and school

Focus on context and extended family
Degree and patterns of support from extended family, including parents' relationship to own parents
Quality of non-family network
Financial/housing status
Environmental stress/life events/current stressors

(from Gopfert, Webster & Seeman, 1996)

Table 8. Evidence base for prophylactic treatments

Evidence Level & Author	Subject & Design	Intervention	Outcome & Measurement Point
III-3 Wisner & Wheeler 1994	N = 23 previous episode of postpartum depression (DSM-III-R) Antidepressants vs routine monitoring	Prophylactic antidepressants	E>C, with active treatment group having less cases of depression

Table prepared by N. Kowalenko & S. Matthey, 1999.
Design: E = Experimental; C = Control; PC = Placebo Control; RCT = Randomised Controlled Trial
Outcome: E > C means the Experimental Condition had better outcomes than the Control Condition

Australian, community-based, programs that aim for good practice in this area and provide intensive community-based support are the Families Together Program (Edwards & West 1999) and the "Trees" Playgroup. In the latter project, a mental health clinician and an early childhood health nurse facilitate a playgroup program for mothers with dependent children (Bratchell & Park, 1996).

Parenting problems of depressed mothers which have been noted in the literature include decreased awareness or sensitivity to infants' emotional cues, and negative maternal perceptions of infants. Randomised controlled trials demonstrate that counselling and antidepressant drugs are effective for the treatment of maternal mood state, but they may not remedy parenting problems relating to the infant. Persistent problematic mother-infant interaction is likely to need specialist management, but the nature of effective interventions has not yet been established.

Guidelines for prescribing psychotropic drugs

For obvious ethical reasons, randomised controlled drug trials are difficult to conduct in pregnancy and during lactation. Thus the data available do not reach the 'gold standard' of evidence. If possible, the usual rule of avoiding medication during the first trimester and during lactation should be followed. Untreated mental health problems at this time constitute considerable risk, directly and indirectly, to both mother and foetus (Cohen & Rosenbaum, 1998; Lou et al., 1994; Teixera et al., 1999).

During pregnancy

Tricyclic and specific serotonin reuptake inhibitor (SSRI) ***antidepressants*** may be associated with an increase in the incidence of congenital anomalies (club foot, hydrocele, dislocated hip) and a risk of miscarriage, neonatal jaundice, hypotonia, cyanosis and apnoea (Chambers et al., 1996; Kulin et al., 1998; Pastuszak et al., 1993).

Data are lacking as yet on the use of other recently available antidepressants. Withdrawal symptoms (irritability, tachypnoea, jitteriness, convulsions) in neonates have been reported after tricyclic and SSRI usage in pregnancy (Adverse Drug Reactions Advisory Committee:ADRAC, 1997). Reduction in maternal dosage prior to delivery may be a useful precaution, e.g. reduce the dose by half 7 to 10 days prior to delivery. The long half-life of fluoxetine suggests the dose reduction should occur 2-3 weeks before delivery.

Patients taking regular ***antipsychotic medication*** should be maintained on high-potency (e.g. haloperidol) rather than low potency (e.g. chlorpromazine) drugs, especially during the first trimester, but also late in the pregnancy (Altshuler et al., 1996; van Waes & van de Velde, 1969; Auebach et al., 1992). Depot medication should be avoided.

Lithium and anticonvulsant ***mood stabilisers*** should be avoided if possible (Cohen et al., 1994; Jacobsen et al., 1992; Rosa, 1991; Omtzigt et al., 1992), especially during the first trimester. If necessary, symptoms may be controlled with high-potency low-dose antipsychotic medication. If lithium is recommenced during the pregnancy, the dose should be reduced 48 hours prior to delivery to avoid toxicity in both mother and infant (the 'floppy baby syndrome'). If anticonvulsants have been prescribed, dosage should be tapered off in the weeks before delivery to avoid neonatal withdrawal problems. Folic acid supplements are advisable. Medication should be recommenced following delivery as relapse is particularly likely postpartum. Antipsychotics may be used if the woman wishes to breast-feed and prefers to avoid lithium.

Benzodiazepines are best avoided. An increased rate of miscarriage and cleft palate has been reported following use in the first trimester, and low Apgar scores following use late in pregnancy (Altschuler et al., 1996; Pastuszak et al., 1994). Patients taking

regular benzodiazepine medication in pregnancy should be withdrawn slowly over two to three weeks prior to delivery. Especially if these were long-acting benzodiazepines (e.g. diazepam) the infant must be carefully observed for withdrawal symptoms.

For additional information see Australian Drug Evaluation Committee (1996).

Postpartum

Avoiding the use of medication during lactation is desirable since excretion into breast milk should be assumed, but sometimes medication cannot be avoided, e.g. in acute or chronic psychosis or recurrence of such illness. Most antidepressants and antipsychotic drugs have been used in breastfeeding women without major problems arising. Nevertheless, careful observation of both mother and infant is mandatory and the lowest effective dose should be used. Combinations of drugs should not be used. If the infant is premature or unwell (e.g. jaundiced), breastfeeding should be avoided while the mother is taking medication. This area has been recently reviewed by Austin and Mitchell (1998) and Yoshida and Kumar (1996).

Tricyclic antidepressants are the most documented and, apart from doxepin, have not been reported to cause problems for the infant. Dothiepin in standard dosage is commonly prescribed and is useful for anxiety symptoms which are often a salient feature. ***SSRI's*** are widely used in practice and, like the tricyclics, appear to be relatively safe. Nevertheless, some adverse effects on the infant have been reported to the ADRAC (1997). Studies using moclobemide are underway and appear promising. Insufficient data are available on other antidepressants to permit useful comment at this stage.

Antipsychotic drugs may be used in low dosage. Insufficient data are available as yet on newer antipsychotic preparations. Although there are case reports indicating that no problems arose with lithium, the concentration in breast milk is high and it is a very toxic drug. Anticonvulsants are also toxic and inadequate data are available for their use to be recommended while the mother is breastfeeding.

The potential benefits of treatment, when indicated, should outweigh potential or actual harm to parent or infant. The woman and her partner should be given adequate information to collaborate in treatment planning.

Chapter 5

Infant mental health

The interactions between mother (and other early care-givers) and infant are critical to the physical and emotional development of the child. Mental health problems in parents can affect these interactions in a variety of ways.

The basic requirements for healthy child development include physical and emotional nourishment, love, security, protection, an appropriate learning environment and appropriate socialisation. Consistent parenting is likely to be a major influence on the positive provision of these essentials. Children who experience multiple changes in parental figures are at-risk of later psychosocial problems (Mrazek & Haggerty, 1994).

There is a strong association between parental mental health problems and increased risk for poor child health outcomes (Beck, 1998). However, this relationship is highly complex, related to a constellation of risk factors and the role of protective and modifying factors, such as the participation of alternate care-givers.

Risks to the infant increase if both parents experience mental health problems. Outcomes may take various forms. For infants, low birth weight, impairments in cognitive and language functioning, and in physical and psychosocial development may occur (Mrazek & Haggerty, 1994).

Most studies on the impact of parental mental health on child development do not specifically indicate the prevalence of mental health disorders amongst infants in similar communities. Studies generally report in terms of outcomes on dimensions of self-esteem, social competence and functioning and physical development.

Effects of parental mental disorder

Beck (1998) undertook a meta-analysis of the literature to determine the long-term effects of postpartum depression on child development. She concluded that this form of depression had a small but significant adverse effect on the cognitive and emotional development of children older than one year.

Studies have found less interaction between depressed mothers and their infants (less than 12 months of age), resulting in less optimal behaviour expressed by the infants (e.g. Field et al., 1993) although these results may be due to other, uncontrolled factors, such as social disadvantage.

Cooper and Murray (1997) cite several studies indicating association between early maternal depression and adverse outcomes in older children. They include: poorer mental and motor development in later infancy, emotional difficulties in late infancy, including but not limited to mothers' reports of behaviour and evidence of poorer cognitive outcomes among pre-school age children.

The association between maternal depression in the first year postpartum and later ***cognitive deficits*** in the child was reported by Cogill et al. (1986), Hay and Kumar (1995), and Sharp et al. (1995). It was also noted by Sharp et al., that sons of depressed mothers were particularly at risk of adverse cognitive outcomes. Depression in mothers in disadvantaged populations has been reported to produce severe disturbance in mother-infant interactions (Murray et al., 1996). Infants with depressed mothers may have less secure attachment and are generally more likely to have behaviour problems and difficulties in expressive language (Cox et al., 1987).

The link between depressive disorder in parents and ***emotional disturbance*** in their children depends on a complex array of genetic and psychosocial factors. Depressive symptoms in children are heightened by the presence of other mental disorders in a parent, greater chronicity and severity of the parental disorder, divorce and the presence of disturbances in parenting (Mrazek & Haggerty, 1994).

In a specialist in-patient unit for mothers who were acutely psychotic, a significant proportion (about half) of the women were unable to care for their infant (Kumar, 1995). While most mothers who suffer from severe and enduring mental disorders can

effectively raise their children, infants with parents who have these conditions are at higher risk of a range of childhood health problems (Mrazek & Haggerty, 1994; p169).

Beck (1996) points out the need for further investigation of the potential role of fathers in decreasing the adverse effects of maternal mental health problems. The impact of formal child-care should also be further considered because programs which included home visits and child-care result in better infant development than home visits alone.

Clinical aspects of infant mental health

Infants may be presented for professional assessment with specific difficulties such as developmental delay, excessive crying, feeding problems, low birth weight, sleep disturbance, failure to thrive, difficulty weaning, attachment problems and injuries.

Accurate and timely ***assessment*** is an essential component of early intervention practices, in particular, to assess the safety of the infant. This assessment should not be limited to the physical condition of the infant, but include an assessment of physical, psychological and parent-infant interaction. Decisions related to the management of the infant should also include information gathered from maternal and family assessments.

Infant assessment is a complex skill. The results of an infant assessment will assist in making a decision about the need for referral to a child and family health professional. If the infant is identified as being in danger a referral may need to be made to an appropriate government child protection agency.

Intervention strategies targeting infants and their parents include high-quality prenatal and perinatal care, parenting education, promotion of healthy parent-infant interaction, appropriate cognitive and language stimulation, and brief psychotherapeutic approaches to promote infant attachment. They also include regular home visitation, well-baby health care, childhood immunisation, family support and centre-based infant day care (Mrazek & Haggerty, 1994). The evidence base for these interventions is shown in Table 9.

Table 9. Evidence base for intervention with infants

Evidence Level Program & Author	Targeted Population Sample/Group Size when Project Began	Risk Factors Addressed	Outcomes (for total intervention group or subgroup)
II Prenatal/Early Infancy Project Olds et al., 1986, 1988, 1990, 1994, 1997	Selective N=394 RCT	Economic deprivation, maternal prenatal health and damaging behaviours, poor family management practices	Improved maternal diet and reduced smoking during pregnancy, fewer pre-term deliveries, higher-birth-weight babies, less child abuse, less crime, better school performance
II Tactile/ Kinaesthetic Stimulation Field et al., 1986	Selective N=40 RCT	Pre-term delivery low birth-weight	Better physical and mental development of infants
II Early Intervention for Pre-term Infants Field et al., 1980	Selective N=60 RCT	Teenage parenthood, low socioeconomic status, pre-term delivery	Better parenting behaviours and attitudes of mothers, better cognitive competence, better physical development, better temperament of infants
II Infant Health and Development Program 1990; Ramey 1992	Selective N=985 RCT	Low birth-weight, poor family management practices, academic failure, early behaviour problems	Better cognitive competence, fewer behaviour problems
II Murray & Cooper 1997	N = 194 RCT to 4 conditions CBT (E_1) counselling (E_2) Psycho-dynamic (E_3) control (C)	Weekly visits for 8 weeks by home visitor for treatment intervention (E_1,E_2,E_3)	E_1,E_2,E_3 > C at 3 months; Improved infant behavioural outcomes on maternal ratings

Adapted from: Mrazek and Haggerty (1994), p.226

E = Experimental; C = Control; RCT = Randomised controlled trial

The studies described in Table 9 report on both multicomponent and multi-level approaches demonstrating significant gains throughout childhood. The studies by Field (1980, 1986) and Murray & Cooper (1997) also demonstrate enhanced infant functioning for programs with a narrower focus for intervention.

A considerable amount of work is underway to demonstrate the benefits of a wide variety of approaches to promote infant mental health and we can expect significant gains in the evidence base for effective early intervention.

Chapter 6
Conclusion

Perinatal mental health problems experienced by women and their families are a major public health concern. They may result in serious disturbance to healthy parenting and have adverse effects on the family, in particular, the infant. Fortunately, the perinatal period offers a 'window of opportunity' to implement a range of mental health early intervention strategies.

The ***provision of services*** which are friendly to the family is crucial for the effective implementation of early intervention measures. Service issues include developing comprehensive services, easy access to immediate support and crisis services and providing perinatal mental health assessment for all women and their families. It is also important to develop user-friendly mental health services for families with infants (e.g. quiet area for breastfeeding, nappy changing facilities, age-appropriate toys for children).

It is important to enhance the ***skills, knowledge and attitudes*** of the general and professional community in acknowledging mental health problems. This may involve developing clinicians' skills to assess the mental health problems of mothers, infants and families, and providing on-going training and education for health professionals in perinatal mental health. Service delivery may also be improved by developing a comprehensive community and professional referral network and by developing professional support networks to provide supervision, assistance and education in working with families in the perinatal period.

There are presently ***gaps in the research*** literature. The definition of what constitutes postnatal depression remains controversial and few published intervention studies exist which have entirely satisfactory methodology. Areas for further investigation include maternal and infant mental health interventions that demonstrate improved outcomes, not only for the mother, but also for the infant and aspects of the father's mental health status and the relationship of this to the mother's mental health status.

The effects of the use of alcohol and other drugs during the perinatal period and the use of hormonal treatment and its effectiveness in managing resistant depression, warrant further investigation. There is also a lack of studies which investigate the cost-effectiveness of programs and services.

These guidelines have been prepared to enhance preventive activities and early intervention processes for health professionals working with infants, women and families at-risk of developing perinatal mental health problems. On-going amendment to these guidelines will be necessary as new research findings are published.

References

Adverse Drug Reactions Advisory Committee. (1997). *Australian Drug Reactions Bulletin*, 16(4), p1.

Altshuler, L.L., Cohen, L., Szuba, M.P., Burt, V.K, Gitlin, M. & Mintz, J. (1996). Pharmacologic management of psychiatric illness during pregnancy: Dilemmas and guidelines. *American Journal of Psychiatry*, 153, 592-606.

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV). Washington, DC: American Psychiatric Press.

American Psychiatric Association (1987). *Diagnostic and Statistical Manual of Mental Disorders, Revised 3rd edition (DSM-III-R)*. Washington, DC: American Psychiatric Press.

Andrews, G., Hall, W., Teeson, M. & Henderson, S. (1999). *The mental health of Australians*. Canberra: Mental Health Branch, Commonwealth Department of Health and Aged Care.

Appleby, L., Koren, G. & Sharp, D. (in press). Depression in pregnant and postnatal women: An evidence-based approach to treatment in primary care (Editorial). *British Journal of General Practice*.

Appleby, L., Warner, R., Whitton, A. & Faragher, B. (1997). A Controlled study of fluoxetine and cognitive-behavioural counselling in the treatment of postnatal depression. *British Medical Journal*, 314, 932-936.

Auebach, J.G., Hans, S.L., Marcus, J., & Maeir, S. (1992). Maternal psychotropic medication and neonatal behavior. *Neurotoxicology and Teratology*, 14, 399-406.

Austin, M-P. V. & Mitchell, P. (1998). Use of psychotrophic medications in breast-feeding women: acute and prophylatic treatment. *Australian and New Zealand Journal of Psychiatry*, 32, 778-784.

Australian Drug Evaluation Committee. (1996). *Medicines in pregnancy: An Australian categorisation of risk of drug use in pregnancy*, (3rd ed.). Canberra: AGPS.

Ballard, C.G., Davis, R., Cullen, P.C.C., Mohan, R.N. & Dean, C. (1994). Prevalence of postnatal psychiatric morbidity in mothers and fathers. *British Journal of Psychiatry*, 164, 782-788.

Barnard, K.E., Booth, C.L., Mitchell, S.K. & Telzrow, R.W. (1988). Newborn nursing models: A test of intervention to high-risk infants and families. In E. Hibbs (Ed.), Children and families: *Studies in prevention and intervention*. Madison, CT: International Universities Press.

Barnett, B. & Parker, G. (1985). Professional and non-professional intervention for highly anxious primiparous mothers. *British Journal of Psychiatry*, 146, 287-293.

Barnett B (1995). Preventive intervention: pregnancy and early parenting. In B. Raphael & G.D. Burrows (Eds.), *Handbook of studies in preventive psychiatry*. Amsterdam: Elsevier.

Barnett, B. (1990). *Infants with depressed mothers: Clinical issues*. Sydney: Hampden Press.

Barnett, B. & Fowler, C. (1995). *Caring for the family's future*. Sydney: Norman Swan Medical Communications.

Barnett, B. & Morgan M. (1996). Postpartum psychiatric disorder: who should be admitted and to which hospital? *Australian and New Zealand Journal of Psychiatry*, 30, 709-714.

Barnett, B. & Parker, G. (1985). Professional and non-professional intervention for highly anxious primiparous mothers. *British Journal of Psychiatry*, 146, 287-293.

Beck, C.T. (1996). Postpartum depressed mothers' experiences interacting with their children. *Nursing Research*, 45(2), 98-103.

Beck, C.T. (1998). The effects of postpartum depression on child development: a meta-analysis. *Archives Psychiatric Nursing*, 12(1), 12-20.

Black-Olien, P. (1993). The effects of prenatal programs on postpartum emotional well-being. *Social Behaviour and Personality*, 21(3), 169-174.

Boath, E. & Cox, J. (1999). The cost-effectiveness of two alternative strategies for the treatment of postnatal depression. Paper presented at the *Australasian Marcé Society Bi-annual Scientific Meeting*, 17-18 September.

Boyce, P. (1994). Personality dysfunction, marital problems and postnatal depression. In J. Cox & J. Holden (Eds.), *Perinatal Psychiatry: Use and misuse of the Edinburgh Postnatal Depression Scale*. London: Gaskell.

Boyce, P., Hickie, I. & Parker, G. (1991). Parents, partners or personality? Risk factors for postnatal depression. *Journal of Affective Disorders*, 21, 245-255.

Boyce, P.M. & Stubbs, J.M. (1994). The importance of postnatal depression. *Medical Journal of Australia*, 161, 471-472.

Boyce, P. Stubbs, J. & Todd, S. (1993). The Edinburgh Postnatal Depression Scale: Validation for an Australian sample. *Australian and New Zealand Journal of Psychiatry*, 27, 472-476.

Boyce, P.M. & Todd, A.L. (1992). Increased risk of postnatal depression after emergency caesarean section. *Medical Journal of Australia*, 157, 172-174.

Boyer, D. (1990). Prediction of postpartum depression. *Clinical Issues in Perinatal and Women's Health Nursing*, 1(3), 359-368.

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

Brockington, I.F., Winokur, G. & Dean, C. (1982). Puerperal psychosis. In I. F. Brockington & R. Kumar (Eds.), *Motherhood and Mental Illness*. London: Academic Press.

Broussard, E.R. (1976). Evaluation of televised anticipatory guidance to primparae. *Community Mental Health Journal*, 12(2), 203-210.

Brown, S., Lumley, J., Small, R. & Astbury (1994). *Missing voices: The experience of motherhood*. Oxford: Oxford University Press.

Buist, A. (1996). *Psychiatric disorders associated with childbirth: A guide to management*. Sydney: McGraw-Hill.

Buist, A., Westley, D., Hill, C. (1999). Antenatal prevention of postnatal depression. *Archives of Women's Mental Health*, 1 (4), 167-174.

Chambers, C.D., Johnson, K.A., Dick, L.M., et al. (1996). Birth outcomes in pregnant women taking fluoxetine. *New England Journal of Medicine*, 335, 1010-1056.

Coffman, H., Levitt, M.J. & Brown, L. (1994). Effects of clarification of support expectations in prenatal couples. *Nursing Research*, 43(2), 111-116.

Cogill, S., Caplan, H, Alexandra, H., Robson, K. & Kumar, R (1986). Impact of maternal postnatal depression on cognitive development of the young child. *British Medical Journal*, 292, 1165-1167.

Cohen, L.S. & Rosenbaum, J.F. (1998). Psychotropic drug use during pregnancy: weighing the risks. *Journal of Clinical Psychiatry*, 59 (suppl 2), 18-28.

Cohen, L.S., Friedman, J.M., Jefferson, J.W., Johnson, E.M., Weiner, M.I. (1994). A reevaluation of risk of in utero exposure to lithium. *Journal of the American Medical Association*, 271, 146-150.

Condon, J. 1987. "The battered fetus syndrome": Preliminary data on the incidence of the urge to physically abuse the unborn child. *The Journal of Nervous and Mental Disease*, 175(12), 722-725.

Cooper, P.J. & Murray, L. (1997). The impact of postnatal depression on infant development: a treatment trial. in L. Murray & P.J. Cooper (Eds.), *Postpartum depression and child development*, Guildford Press.

Cooper, P.J. & Murray, L. (1995). Course and recurrence of postnatal depression: Evidence for the specificity of the diagnostic concept. *British Journal of Psychiatry*, 166, 191-195.

Cowan, P.A. & Cowan, C.P. (1988). Changes in marriage during the transition to parenthood: must we blame the baby? In G.W. Michaels & W.A.Goldberg (Eds.), *The transition to parenthood: current theory and research*. Cambridge: Cambridge University Press.

Cox, J. (1986). *Postnatal depression*. Edinburgh: Churchill Livingstone.

Cox, J. (1994). Origins and development of the 10-item Edinburgh Postnatal Depression Scale. In J. Cox & J. Holden (Eds.), *Perinatal Psychiatry: Use and misuse of the Edinburgh Postnatal Depression Scale*. London: Gaskell.

Cox, J.L., Holden, J.M. & Sagovsky, R. (1987). Detection of postnatal depression: development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry*, 150, 782-786.

Cox, J.L., Murray, D. & Chapman, G. (1993). A controlled study of the onset, duration and prevalence of postnatal depression. *British Journal of Psychiatry*, 163, 27-31.

Dowlatshahi, D. & Paykel, E.S. (1990). Life events and social stress in puerperal psychoses: absence of effect. *Psychological Medicine*, 20, 655-662.

Edwards, J & West J. (1999). Early intervention with families where a parent has a mental illness. Paper presented at the Tresillian Conference, 11 September, Sydney.

Elliott, S.A., Sanjack, M. & Leverton, T.J. (1988). Parent groups in pregnancy: a preventive intervention for postnatal depression? In B.H. Gottlieb (Ed.), *Marshalling social support*. Sage: Newbury Park.

Field, T, (1980). Supplemental stimulation of preterm neonates. *Early Human Development*, 4, 301-314.

Field, T.M., Schanberg, S.M., Scafadi, F., Bauer, C.R., Vega-Lahr, N., Garcia, R., Nystrom, J. & Kuhn, C.M. (1986). Tactile/kinaesthetic stimulation effects on preterm neonates. *Pediatrics*, 77(5), 654-658.

Field, T., Morrow, C. & Adelestein, D. (1993). Depressed mothers' perceptions of infant behaviour. *Infant Behaviour and Development*, 16, 99-108.

Gerrard, J., Holden, J.M., Elliott, S.A., McKenzie, P. & Cox, J.L. (1993). A trainer's perspective of an innovative training programme to teach health visitors about detection, treatment and prevention of postnatal depression. *Journal of Advanced Nursing*, 18, 1825-1832.

Gjerdingen, D.K & Chaloner, K.M. (1994). The relationship of women's postpartum mental health to employment, childbirth, and social support. *The Journal of Family Practice*, 38, 465-472.

Gopfert, M., Webster, J. & Seeman, M.V. (Eds) (1996). *Parental disorder: Distressed parents and their families*. Cambridge: Cambridge Press.

Gordon R.E. & Gordon, K.K. (1960). Social factors in prevention of postpartum emotional problems. *Obstetrics and Gynecology*, 15, 433-438.

Gotlib, I.H., Whiffen, V.E., Mount, J.H., Milne, K. & Cordy, N.I. (1989). Prevalence rates and demo graphic characteristics associated with depression in pregnancy and the postpartum. *Journal of Counsulting and Clinical Psychology*, 57(2), 269-274.

Gotlib, I.H., Whiffen, V.E., Wallace, P.M. & Mount, J.H. (1991). Prospective investigation of postpartum depression: factors involved in onset and recovery. *Journal of Abnormal Psychology*, 100(2), 122-132.

Green, J. (1998). Postnatal depression or perinatal dysphoria? Findings from a longitudinal community-based study using the Edinburgh Postnatal Depression Scale. *Journal of Reproductive and Infant Psychology*, 16, 143-155.

Green, J. (1990). Who is unhappy after childbirth? *Journal of Reproductive and Infant Psychology*, 8, 175-183.

Green, J. & Murray, D. (1994). The use of the Edinburgh Postnatal Depression Scale in research to explore the relationship between antenatal and postnatal dysphoria. In J. Cox & J. Holden (Eds.), *Perinatal psychiatry: Use and misuse of the Edinburgh Postnatal Depression Scale*. London: Gaskell.

Gregoire, A.J.P., Kumar, R., Everitt, B., Henderson A.F. & Studd J.W.W. (1996). Transdermal oestrogen for treatment of severe postnatal depression. *The Lancet*, 347, 930-933.

Harris, B. (1994). Biological and hormonal aspects of postpartum depressed mood. *British Journal of Psychiatry*, 164, 288-292.

Harvey, I. & McGrath, G. (1988). Psychiatric morbidity in spouses of women admitted to a mother and baby unit. *British Journal of Psychiatry*, 152, 506-510.

Hay, D.F. & Kumar, R. (1995). Interpreting the effects of mothers' postnatal depression on children's intelligence: a critique and re-analysis. *Child Psychiatry & Human Development*, 25, 165-181.

Henderson, A.F., Gregoire, A.J.P., Kumar, R.C. & Studd, J.W. (1991). Treatment of severe postnatal depression with oestradiol skin patches. *The Lancet*, 338, 816-817.

Hickey A.R., Boyce P.M., Ellwood, D. & Morris-Yates, A.D. (1997). Early discharge and risk for post natal depression. *Medical Journal of Australia*, 167, 244-247.

Holden, J. (1996). The role of health visitors in postnatal depression. *International Review of Psychiatry*, 8, 79-86.

Holden, J. (1994). Can non-psychotic depression be prevented? In J. Cox & J. Holden (Eds.), *Perinatal psychiatry: Use and misuse of the Edinburgh Postnatal Depression Scale*. London: Gaskell.

Holden, J.M., Sagovsky, R. & Cox, J.L. (1989). Counselling in a general practice setting: controlled study of health visitor intervention in treatment of postnatal depression. *British Medical Journal*, 298, 223-226.

Infant Health and Development Program (1990). Enhancing the outcomes of low birth-weight premature infants: A multi-site randomised trial. *Journal of the American Medical Association*, 263, 3035-3042.

Jacobson, S.J., Jones, K., Johnson, K., Ceolin, L., Kaur, P., Sahn, D., Donnenfeld, A.E., Rieder, M., Santelli, R., Smythe, J. Pastuszak, A., Einarson, T. & Koren, G. (1992). Prospective multicentre study of pregnancy outcome after lithium exposure during first trimester. *The Lancet*, 339, 530-533.

Kendell, R.E., McGuire, R.J., Connor,Y. & Cox, J.L. (1981). Mood changes in the first three weeks after childbirth. *Journal of Affective Disorders*, 3, 317-326.

Kendell, R. (1985). Emotional and physical factors in the genesis of puerperal mental disorders. *Journal of Psychosomatic Research*, 29, 3-11.

Kendell, R., Chalmers, J. & Platz, C. (1987). Epidemiology of puerpural psychosis. *British Journal of Psychiatry*, 150, 662-673.

Kulin, N.A., Pastuszak, A., Sage, S.R., Schick Boschetto, B., Spivey, G., Feldkamp, M., Ormond, K., Matsui, D., Stein Schechman, A.K., Cook, L., Brouchu, J., Rieder, M. & Koren, G. (1998). Pregnancy outcome following maternal use of the new selective serotonin reuptake inhibitors: a prospective controlled multicenter study. *Journal of the American Medical Association*, 279, 609-610.

Kumar, R., Marks, M., Platz, C. & Yoshida, K. (1995). Clinical survey of a psychiatric mother and baby unit: characteristics of 100 consecutive admissions. *Journal of Affective Disorders*, 33, 11-22.

Kumar, R. (1992). Mentally ill mothers and their babies: what are the benefits of joint hospital admission? In K. Hawton & P. Cowen (Eds.), *Practical problems in Clinical Psychiatry*. Oxford: Oxford University Press.

Kumar, R. (1992). Postpartum mental illness (letter). *Professional Care of Mother and Child*, 38.

Kumar, R. & Robson, K. (1984). A prospective study of emotional disorders in childbearing women. *British Journal of Psychiatry*, 144, 35-47.

Lou, H.C., Hansen, D., Nordenfoft, M., et al. (1994). Prenatal stressors of human life affect foetal brain development. *Developmental Medicine and Child Neurology*, 36, 826-832.

Lovestone, S. & Kumar, R. (1993). Postnatal psychiatric illness: The impact on partners. *British Journal of Psychiatry*, 163, 210-216.

Matthey, S. & Barnett, B. (1996). Postnatal depression and social support in Vietnamese and Arabic women in south west Sydney. In I.H. Minas (Ed.), *Recent Developments in Mental Health: proceedings of a collaborative workshop between Vietnam, Australia and New Zealand, Hanoi, 13-15 November 1996.* Melbourne; Centre for Cultural Studies in Health.

Meleis, A.I. & Swendsen, L.A. (1978). Role supplementation: Empirical test of a nursing intervention. *Nursing Research*, 27(1), 11-18.

Midmer, D., Wilson, L. & Cummings, S. (1995). A randomized, controlled trial of the influences of perinatal education on postpartum anxiety and marital adjustment. *Family Medicine*, 27(3), 200-205.

Morgan, M., Matthey, S., Barnett, B. & Richardson, C. (1997). A group programme for postnatally depressed women and their partners. *Journal of Advanced Nursing*, 26, 913-920.

Mrazek, P.J. & Haggerty, R.J. (1994). *Reducing Risks for Mental Disorders: frontiers for preventive intervention research.* Washington DC: National Academy Press.

Murray, L. & Cooper, B. (1997). Effects of postnatal depression on infant development. *Archives Dis Child*, 77(2), 99-101.

Murray, L., Hipwell, A., Hooper, R., Stein, A. & Cooper, P. (1996). The cognitive development of 5-year-old children of postnatally depressed mothers. *Journal of Child Psychology & Psychiatry & Related Disciplines*, 37(8), 927-935.

Murray, L. & Carothers, A.D. (1990). The validation of the Edinburgh Depression Scale on a community sample. *British Journal of Psychiatry*, 157, 288-290.

Murray, D., Cox, J.L., Chapman, G. & Jones, P. (1995). Childbirth: life event or start of a long-term difficulty? Further data from the Stoke-on-Trent controlled study of postnatal depression. *British Journal of Psychiatry*, 166, 595-600.

National Health and Medical Research Council (1997). *Clinical practice guidelines: Depression in young people.* Canberra: Australian Government Publishing Service.

National Health Medical Research Council (NHMRC) (1999). *A Guide for the development, implementation and evaluation of clinical practice guidelines.* Canberra: Australian Government Publishing Service.

Oates, M. (1982). The development of an integrated community-orientated service for severe postnatal mental illness. In R. Kumar & I.F. Brockington (Eds.), *Motherhood and mental illness 2: Causes and consequences.* London: Wright.

O'Hara, M.W., Schlechte, J.A., Lewis, D.A. & Varner, M.W. (1991). Prospective study of postpartum blues. Biologic and social factors. *Archives of General Psychiatry*, 48, 801-806.

O'Hara, M.W. & Swain, A.M. (1996). Rates and risks of postpartum depression - a meta-analysis. *International Journal of Psychiatry*, 8, 37-54.

Olds, D.L., Henderson, C.R.Jr., Chamberlin, R. & Tatelbaum, R. (1988). Improving the life-course development of socially disadvantaged mothers: A randomized trial of nurse home visitation. American Journal of Public Health, 78(11), 1436-1444.

Olds, D.L., Henderson, C.R.Jr., Chamberlin, R. & Tatelbaum, R. (1986). Preventing child abuse and neglect: A randomized trial of nurse home visitation. *Journal of Pediatrics*, 78, 65-78.

Olds, D.L. & Kitzman H. (1990). Can home visitation improve the health of women and children at environmental risk? *Pediatrics*, 86(1), 108-116.

Olds, D.L., Eckenrode, J., Henderson, C.R., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L.J. & Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. *Journal of the American Medical Association*, 278, 637-643.

Omtzigt, J.G.C., Los, F.J., Grobbee, D.E., et al. (1992). The risk of spina bifida aperta after first trimester exposure to valproate in a prenatal cohort. *Neurology*, 42 (suppl 5), 119-125.

Pastuszak, A., Schick-Boschetto, B., Zuber, C., Feldkamp, M., Pinelli, M., Sihn, S., Donnenfeld, A., McCormack, M., Leen-Mitchell, M. & Woodland, C. (1993). Pregnancy outcome following first-trimester exposure to fluoxetine. *Journal of the American Medical Association*,. 269, 2246-2248.

Paykel, E.S. (1991). Depression in women. *British Journal of Psychiatry*, 158, (suppl. 10) 22-29.

Platz, C. & Kendell, R.E. (1988). A matched-control follow-up and family study of 'puerperal psychoses'. *British Journal of Psychiatry*, 153, 90-94.

Ramey, C.T., Bryant, D.M., Wasik, B.H., Sparling, J.J., Fendt, K.H. & La Vange, L.M. (1990). Infant health and development program for low birth weight, premature infants: Program elements, family participation and child intelligence. *Pediatrics*, 89, 454-465.

Rees, B.L. (1995). Effect of relaxation with guided imagery on anxiety, depression, and self-esteem in primiparas. *Journal of Holistic Nursing*, 13(9), 255-267.

Riley, D. (1995). *Perinatal mental health: a source book for health professionals.* Oxford: Radcliffe Medical Press.

Rosa, F. (1991). Spina bifida in infants of women treated with carbamazepine during pregnancy. *New England Journal of Medicine*, 324, 674-677.

Sharp, D., Hay, D. F., Pawlby, S., Schmucker, G., Allen, H. & Kumar, R. (1995). The impact of postnatal depression on boys' intellectual development. *Journal of Child Psychology and Psychiatry*, 36, 1315-1336.

Shields, N., Reid, M., Cheyne, H., Holmes, A., McGinley, M., Turnbull, D. & Smith, L.N. (1997). Impact of midwife-managed care in the postnatal period: an exploration of psychosocial outcomes. *Journal of Reproductive and Infant Psychology*, 15, 91-108.

Shipp, Y. (1997). *Options for mothers affected by a mental health disorder, with dependent children.* Report of a Churchill Fellowship Study Tour.

Small, R., Astbury, K., Brown, S. & Lumley, J. (1994). Depression after childbirth: does social context matter? *Medical Journal of Australia*, 161(8), 473-7.

Spinelli, M.G. (1997). Interpersonal Psychotherapy for depressed antepartum women: A pilot study. *American Journal of Psychiatry*, 154(7), 1028-1030.

Stamp, G.E., Williams, A.S. & Crowther, C.A. (1995). Predicting postnatal depression among pregnant women. *Birth: Issues in Perinatal Care & Education*, 23(4), 218-223.

Sumich, H., Andrews, G. & Hunt, C.J. (1995). *The management of mental disorders: Volume 1 Handbook of management skill.* Sydney: WHO, Training & Reference Centre for CIDI.

Teixera, J.M.A., Fisk, N.M. & Glover, V. (1999). Association between maternal anxiety in pregnancy and increased uterine artery resistance index: cohort based study. *British Medical Journal*, 318, 153-157.

Van Waes, A. & van de Velde, E. (1969). Safety evaluation of haloperidol in the treatment of hyperemesis gravidarum. *Journal of Clinical Pharmacology*, 9, 224-237.

Wadersman, L., Wandersman, A. & Kahns, S. (1980). Social support in the transition to parenthood. *Journal of Community Psychology*, 8, 332-342.

Watson, J. Elliott, S., Rugg, A. & Brough, D. (1984). Psychiatric disorder in pregnancy and the first postnatal year. *British Journal of Psychiatry*, 144, 453-462.

Warner, R., Appleby, L., Whitton, A. & Faragher, B. (1996). Demographic and obstetric risk factors for postnatal psychiatric morbidity. *British Journal of Psychiatry*, 168, 607-611.

Webster, M., Thompson, J., Mitchell, E. & Werry, J. (1994). Postnatal depression in a community cohort. *Australian and New Zealand Journal of Psychiatry*, 28, 42-49.

Wickberg, B. & Hwang, C.P. (1996). The Edinburgh Postnatal Depression Scale: validation on a Swedish community sample. *Acta Psychiatrica Scandinavia*, 94, 181-184.

Wilhelm, K. & Parker, G. (1994). Sex differences in lifetime depression rates: fact or artefact? *Psychological Medicine*, 24, 97-111.

Williams, K.E. & Koran, L.M. (1997). Obsessive-compulsive disorder in pregnancy, the puerperium, and the premenstruum. *Journal of Clinical Psychiatry*, 58(7). 330-334.

Wisner, K.L., Peindl, K.S. & Gigliotti, T. (1999). Tricyclics vs SSRIs for postpartum depression. *Archives of Women's Mental Health*, 1, 189-191.

Wisner, K.L., Peindl, K.S., Gigliotti, T. & Hanusa, B.H. (1999). Obsessions and compulsions in women with postpartum depression. *Journal of Clinical Psychiatry*, 60, 176-180.

Wisner, K.L. & Wheeler, S.B. (1994). Prevention of recurrent postpartum major depression. *Hospital and Community Psychiatry*, 45(12), 1191-1196.

Wolman, W., Chalmers, B., Hofmeyr, G. & Nikodem, V. (1993). Postpartum depression and companionship in the clinical birth environment: A randomized, control study. *American Journal of Obstetrics and Gynecology*, May, 1388-1393.

Yoshida, K. & Kumar, R. (1996). Breast feeding and psychotropic drugs. *International Review of Psychiatry*, 8, 117-124.

Appendix 1

Keywords used in literature search

Postnatal depression
Postpartum depression
Antenatal depression
Postpartum anxiety
Postnatal anxiety
Maternal depression
Perinatal depression
Perinatal anxiety
Mental health in pregnancy
Mother-infant attachment
Mother-infant relationship
Maternal bonding
Depressed mothers
Depressed infants
Postnatal mental illness
Edinburgh postnatal depression scale
Mother
Father
Pregnancy
Perinatal mental health
Perinatal psychiatry
Obstetric mental health
Mental health in pregnancy
Childbearing
Postpartum mood disorders
Postpartum psychosis
Postnatal psychosis
Puerperal

Connect with women, maternal, childbearing, pregnancy, mother
Affective disorder
Depression
Distress
Treatment
Screening
Identification
Mental
Schizophrenia
Postnatal illness
Adjustment disorder
Post-traumatic stress disorder
Personality disorder
Child abuse
Abuse
Sexual abuse
Physical abuse
Emotional abuse
Neglect

Appendix 2

Glossary

Adjustment Disorder: the development of clinically significant emotional or behavioural symptoms within three months of an identifiable stressor.

Affective Disorder: disorders of mood including depression, mania and mixed disorders.

Anxiety Disorders: include panic attacks, agoraphobia, simple phobias, obsessive compulsive disorder, post-traumatic stress disorder and acute stress disorder.

Baby blues or postnatal blues: a mild transient mood disturbance arising within a few days of delivery. Characterised by mood swings from sadness to elation, exhaustion, sensitivity and aches and pains. This condition peaks at three to five days after delivery and can last from a few hours to 10 days.

Cognitive Behavioural Therapy: A form of therapy that involves multiple treatment components in which the patient is taught to replace maladaptive thinking patterns with adaptive thoughts, to increase levels of self-reinforcement and to explicitly schedule pleasurable activities.

Depressive Disorder: a clinical diagnosis referring to a constellation of disturbances in emotional, behavioural, somatic and cognitive functioning. Includes Major Depressive Disorder, which exists at different levels of severity up to the inclusion of psychotic features.

Depressed Mood: a sad or unhappy mood; feeling blue; low mood; irritability.

Mania: an illness characterised by hyper-excitability, euphoria and hyperactivity. Rapid thinking and speaking, agitation, decreased need for sleep, and high energy levels are usually present.

Perinatal: for the purposes of this document, perinatal is defined as the period from conception to 24 months.

Perinatal Dysphoria (Distress): a significant proportion of mothers commonly experience coping difficulties and transient depressive and anxiety symptoms as a reaction to the constant demands of a baby, until a significant readjustment can take place. Antenatal dysphoria is a good predictor of postnatal mood disturbance (Green 1998).

Postnatal (Postpartum) Mood Disorders: include 'the blues', postnatal depression and postpartum psychosis. The high-risk period for the onset of mood disorders is consistently reported to be the first three months following childbirth (Cox et al., 1993; Kendell et al., 1987; Kumar & Robson, 1984).

Postnatal Depression (PND): is defined as an episode of Major Depression occurring in the first 12 months following childbirth.

Postpartum (or Puerperal) Psychosis: is a rare but serious mental illness (psychosis) occurring within four weeks of delivery. It may begin with an often-undetected prodromal mood disorder during pregnancy.

Psychosis: severe mental illness characterised by a loss of touch with reality; includes affective, schizophrenic, schizo-affective or organic types.

Psychotherapy: refers to a wide variety of psychological interventions including counselling, psychoanalytic, cognitive, behavioural and interpersonal therapy on an individual, couple, family or group basis. The therapy is based on a relationship with a helping professional who offers support, guidance and other techniques.

Schizophrenia: a complex chronic or episodic psychotic disorder characterised by the presence of delusions, hallucinations and disorganisation of speech, thinking and behaviour.

Schizo-Affective Disorder: a psychotic disorder which includes features of both schizophrenia and affective disorder.



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