Healthy Beginnings

Developing perinatal and infant mental health services in New Zealand

Contents

Appendices

References   64

Glossary of Terms and Abbreviations   69

List of Tables

List of Figures

Executive Summary

Healthy Beginnings provides guidance to district health boards (DHBs), and other health planners, funders and providers of perinatal[1] and infant mental health and alcohol and other drug (AOD) services, on ways to address the mental health and AOD needs of mothers[2] and infants. The document is not a clinical guideline but it is informed by current literature and experience in clinical best practice.

During the perinatal period women have been shown to be at a higher risk for the onset or recurrence of mental illnesses than at other times (Burt and Quezada 2009). It is estimated that maternal psychiatric disorders occur during the perinatal period in at least 15 percent of pregnancies. Maternal mental illness in this period has a detrimental effect on the emerging mother-infant relationship and can result in delayed social and emotional development and/or significant behavioural problems for the infant, potentially leading to a range of negative outcomes that may persist into adulthood.

Research has demonstrated the importance of effective intervention for mothers and infants with mental disorders and/or AOD problems. The developing mother–infant relationship is often an essential part of clinical intervention. This means clinicians in these services must be multi-skilled and able to assess and treat the mental disorders of both the mother and the infant as well as the relationship between the mother and her infant.

In New Zealand mental health services for mothers and infants do not exist in some places and where they do exist development has been somewhat piecemeal. No DHB currently provides the full range of perinatal and infant mental health and AOD services that are required. Comprehensive perinatal and infant mental health services include:

- health promotion
- screening and assessment
- interventions including case management, transition planning and referrals
- access to respite care and specialist inpatient care for mothers and babies
- consultation and liaison services within the health system and with other agencies.

Developing perinatal and infant mental health services, including specialist inpatient facilities for mothers and babies in the North Island, will take time and requires regional and national funding and planning.

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[1] The term **perinatal** means relating to the period immediately before and after birth. The internationally accepted timeframe is from pregnancy to one year postpartum.

[2] Throughout *Healthy Beginnings* the term **mother** is used for the simplicity as mothers are most commonly in the role of primary caregiver for their infants. However, fathers, grandparents, adoptive parents, foster parents and others may also undertake this role and may access services if eligible.

This document recognises that:

- perinatal and infant mental health and AOD services cannot be effective unless they are delivered in collaboration with other maternity, child and family health and social services

- services for Māori will be based on whānau ora – *Māori families supported to achieve their maximum health and wellbeing* – as the overall vision for Māori health

- it is not desirable or necessary to create a new health 'silo' to improve perinatal and infant mental health and AOD services

- the current constrained fiscal environment demands that joining up service provision and sharing resources effectively rather than new funding are required to develop existing services

- services for infants are less well developed than maternal services and each region will start from a different point.

Specialist mental health and AOD service provision requires a skilled workforce, and perinatal and infant mental health is a relatively new and developing field. In New Zealand the clinical workforce with these skills is small and its capacity and capability needs to grow to address the needs identified in *Healthy Beginnings*.

This document is designed to:

- encourage and disseminate good practice

- assist, over time, with the achievement of greater consistency in the quality of services and the way they are delivered across the country

- provide guidance on cost-effective models of care to assist DHBs to make best use of existing funding.

Release of this document does not signify that there will be any additional funding for implementation.

This document is aligned with the new Nationwide Service Framework, which includes service specifications and reporting requirements. It is intended that it will be used to inform future purchasing of services.

1   Introduction

Purpose of the guideline

Healthy Beginnings provides guidance to district health boards (DHBs), and other health planners, funders and providers of perinatal and infant mental health and alcohol and other drug (AOD) services, on ways to build on existing service provision to address the mental health and AOD needs of mothers and infants. The document is not a clinical guideline but it is informed by current literature and experience in clinical best practice.

Mental health services for mothers and infants, where they exist, have developed in an uncoordinated and ad hoc way. Any such services have usually developed in child and adolescent mental health services (CAMHS) or maternal mental health services, in isolation from other perinatal and child health services, and in response to the clinical interests and advocacy of concerned clinicians. Most CAMHS have given less attention to infant mental health and development in the face of high demand for services for older children and youth. Service provision is therefore variable. Canterbury DHB operates a five-bed specialist inpatient service for mothers and babies for the Southern region but there is no similar service in the North Island. No DHB currently provides the full range of perinatal and infant mental health and AOD services that are required.

Recent research has demonstrated the importance of effective intervention for mothers and infants (in the context of whānau) with emotional or regulatory problems, relationship problems, mental health disorders and/or AOD problems. Evidence has shown that the developing mother–infant relationship is often an essential part of clinical intervention. This means clinicians in these services must be multi-skilled and able to assess and treat the mental disorders of both the mother and the infant as well as the relationship between the mother and her infant.

The document recognises that:

- perinatal and infant mental health and AOD services cannot be effective unless they are delivered in collaboration with other maternal, family and child health and social services

- services for Māori will be based on whānau ora – *Māori families supported to achieve their maximum health and wellbeing* – as the overall vision for Māori health

- it is not desirable or necessary to create a new health 'silo' to improve perinatal and infant mental health and AOD services

- the current constrained fiscal environment demands that joining up service provision and sharing resources effectively rather than new funding are required to develop existing services

- services for infants are less well developed than maternal services and each region will start from a different point.

Healthy Beginnings describes the continuum of care required for perinatal and infant mental health and AOD services. The document describes the required linkages between specialist perinatal and infant mental health services and other health and social service providers – these include but are not limited to: primary care including iwi providers; public health services; Lead Maternity Carers (LMCs); maternal health services; paediatric services including neonatal intensive care units; Well Child / Tamariki Ora providers; maternal mental health services, adult mental health services (AMHS) and AOD services; CAMHS; and Child, Youth and Family (CYF).

Background to the guideline

In 2008 concerns about child and adolescent mental health and AOD services were identified in *Te Raukura – Mental health and alcohol and other drugs: Improving outcomes for children and youth* (Ministry of Health 2007) and its companion document *Whakarato Whānau Ora: Whānau wellbeing is central to Māori wellbeing* (Ihimaera 2007).[3] These documents identified gaps in specialist service provision and confusion about who is responsible for service provision. They also identified the need for guidance to DHBs about the appropriate future direction for maternal and infant mental health and AOD services provided through adult mental health services and child and adolescent mental health services.

Whānau ora – *Māori families supported to achieve their maximum health and wellbeing* – is the overall vision for Māori health. The health and wellbeing of whānau as a collective are pivotal to the future development of Māori potential and ultimately achieving whānau ora. The Government and the Ministry of Health are committed to achieving whānau ora, as a key outcome in the Ministry's *Statement of Intent 2010– 2013*.

Whānau ora is also the broader vision for *Te Puāwaiwhero – The Second Māori Mental Health and Addiction National Strategic Framework 2008–2015* (Ministry of Health 2008). *Te Puāwaiwhero* confirms the shift towards a more responsive, integrated and seamless service provision across the mental health and addiction continuum of health and social services (including prevention, primary and secondary services). Concurrently it supports the aspirations for development among whānau, hapū, iwi and Māori communities.

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[3]   These documents build on the child and adolescent mental health policy first articulated in 1998 in *New Futures: A strategic framework for specialist mental health services for children and young people in New Zealand* (Ministry of Health 1998)*.

Why invest in perinatal and infant mental health services?

The rationale for developing comprehensive, integrated perinatal and infant mental health services comes from an extensive body of research. Its findings include the following.

- The onset of mental illness for women has been shown to be higher around the time of childbirth. During this period women are particularly at risk for the onset or recurrence of mood disorders.

- Maternal mental illness during pregnancy and the postpartum period has been shown to have a detrimental effect on the emerging mother–infant relationship and other family and whānau relationships.

- The disruption of this relationship in the absence of other nurturing primary caregiving relationships can result in delayed social and emotional development and/or significant behavioural problems for the infant.

- Poor early social, emotional and behavioural development predicts early school failure which in turn predicts later school failure.

- Social, emotional and/or behavioural problems that emerge during early childhood have been associated with mental illness, chronic health problems, unemployment and offending that may persist into adulthood.

- Early adverse environments often have a cluster of risk factors that co-occur with maternal mental illness and/or AOD problems, such as prematurity, poverty and domestic violence. These risk factors threaten the mother's psychological wellbeing and, in turn, the emerging mother–infant relationship.

- Early intervention builds strength and resilience, which can reduce the need for later high-cost interventions for both mother and infant.

What this guideline provides

Section 2 of this document describes maternal and infant mental health disorders and their prevalence. Section 3 presents an overview of perinatal and infant mental health services. Section 4 sets out underpinning principles and a proposed framework for a continuum of service provision. Section 5 describes workforce requirements. Section 6 proposes the development of a national perinatal and infant mental health forum and Section 7 describes research requirements.

This document provides more detailed information on the needs of infants than on those of mothers because services that meet infants' needs are less developed than the body of practice providing maternal mental health services. It does not give detailed guidance on the clinical aspects of perinatal and infant mental health service provision. Rather it is concerned with integrating perinatal and emerging infant mental health practice in a way that serves both mothers and infants and that focuses on the mother–infant relationship in the context of whānau and their wider circle of support.

This document has been informed by evidence-based literature and consultation with key stakeholders in the delivery of maternal and infant mental health services.

Implications of guideline

District health boards need to consider the services they fund and provide for mothers, infants and their families and whānau, locally or across regions, in light of the continuum of care described in *Healthy Beginnings,* and explore using a more joined up approach. Services will need to be re-oriented to operate this way, including through the re-allocation of resources.

The establishment of new specialist inpatient facilities for mothers and babies in the North Island will take time and require regional or national funding and planning. DHBs will need to develop regional plans for perinatal and infant mental health that are strongly linked with their plans for primary care, maternal health, child health and mental health.

DHBs will also need to seek support from Health Workforce New Zealand and the mental health workforce development centres to increase the capacity and capability of the perinatal health, child health and mental health workforces.

This document is aligned with the new Nationwide Service Framework, which includes service specifications and reporting requirements. It is intended that it will be used to inform future purchasing of services.

Release of this document does not signify that there will be any additional funding for implementation. However, it is anticipated that, where the guidance is implemented, enhanced models of care will enable services to respond to people's needs in cost-effective ways, potentially leading to efficiency gains and, in some cases, the capacity to provide increased volumes of services within existing funding streams.

A note on terminology

This document seeks to reflect a client-centred and recovery-focused philosophy that promotes a partnership between families and clinicians in the development and implementation of intervention plans. Counties Manukau DHB consulted widely on proposals to develop an infant mental health project and found strong resistance to the phrase 'infant mental health'. Most of those consulted, from consumers and parents to health professionals, managers and board members, were concerned about the risk of 'pathologising' infants and the potential for stigma associated with the terminology to undermine families' willingness to access services. There was a strong preference for terminology such as 'infant social and emotional development'. This document will use the phrase **perinatal and infant mental health** (PIMH) because it is the internationally accepted terminology on which the literature is based but services will need to identify and adopt more acceptable terminology for service identification and branding.

2 Prevalence of Perinatal and Infant Mental Disorders

What is infant mental health?

Fraiberg and her colleagues coined the term **infant mental health** in the late 1960s, and were the first to define this discipline as the 'social, emotional and cognitive wellbeing of a baby within the context of a caregiving relationship' (Fraiberg et al 1987). Since then, 'infant mental health' has become accepted internationally as the term commonly used to describe the interdisciplinary field of research, clinical practice and public policy making concerned with maximising the emotional, cognitive, social and physical development of the young child from 0 to 3 years of age (up to the fourth birthday).

The definition of infant mental health for this document has been drawn from two prevalent perspectives in the current literature. The predominant perspective that has been proposed by the Zero to Three Infant Mental Health Taskforce[4] focuses on the individual child's social-emotional development within the context of their early environment. This developmental or clinical definition describes early childhood mental health as the:

- developing capacity of the child to experience, regulate and express emotion
- ability to form close, secure relationships
- capacity to explore the surrounding environment and learn
- ongoing social-emotional and behavioural wellbeing of the infant and young child and their family and whānau.

The second definition, proposed by Knitzer (2000), takes a systems or service delivery perspective. Its focus is on a set of strategies that promote and support early childhood mental health to:

- promote the emotional and behavioural wellbeing of all young children

- help strengthen the emotional and behavioural wellbeing of children whose development has been threatened by environmental or biological risk(s) in order to minimise the impact of further environmental risks and enhance the likelihood that they will enter school with appropriate skills

- help families of young children overcome whatever barriers they face to ensure their children's emotional development is not compromised

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[4] ZERO TO THREE is a national non-profit organisation in the United States that informs, trains and supports professionals, policy makers and parents in their efforts to improve the lives of infants and toddlers. More information can be found at: www.zerotothree.org

- expand the competencies of non-familial caregivers, health professionals and allied social services to promote the wellbeing of young children and families, particularly those at risk due to biological insult[5] or exposure to a less than optimal environment
- ensure that young children experiencing clearly atypical emotional and behavioural development and their families have access to needed services and supports.

Both definitions of infant mental health emphasise the need to adopt an **ecological** approach to building infant mental health systems. According to ecological systems theory, a child's development should be viewed within the context of the system of relationships that form their environment (Bronfenbrenner 1979). The theory defines complex 'layers' of environment, each having an effect on a child's healthy development. Infant mental health systems should therefore provide services that **address the adverse influences** on the early relationship between the primary caregiver and child, and the relationships between the child and other members of the family and whānau. Adverse influences on these relationships may include one or more of the factors set out in Table 1 below.

Table 1:   Potential adverse influences on a child's relationships with family members

Family factors	Child factors
- Poverty - Parental level of education - Family trauma and/or loss - Parental mental illness - Parental AOD problems or addiction - Maternal substance use during pregnancy - Domestic violence - Chronic illness of parent or other family members - Parental intellectual disability - Cultural connectedness - Number of siblings	- Pervasive developmental disorders - Chromosomal disorders - Prematurity - Intra-uterine growth restriction - Fetal alcohol spectrum disorder - Drug withdrawal - Sensory or regulatory problems - Chronic or congenital health problems

In turn, the wellbeing of the family and caregivers may be influenced by their culture and the characteristics of the communities in which they reside, including such factors as the quality of the schools, safety of the neighbourhood, and the availability of adequate health and social services. These community-level resources are affected by the broader policy and fiscal climate.

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[5]   An event that causes damage to tissue or an organ including, in this context, damage to the developing central nervous system in the pre- and postnatal period.

Prevalence of infant mental health disorders

Infant mental health is a relatively new discipline and as such there are few studies that have explored the incidence and prevalence of infant mental health problems.[6]

Skovgaard et al (2005) used the diagnostic criteria of the International Classification of Diseases (ICD-10)[7] and the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC:0-3R: see Appendix 1) to identify infant mental health disorders in 211 infants (1.5 years of age) randomly selected from a birth cohort of 6090 children. They found the prevalence of early mental health problems in this Copenhagen sample to be between 16 and 18 percent.

The discussion below covers the prevalence of relatively common mental health disorders for which there is strong evidence in the literature.

Feeding problems

Feeding-related concerns are among the most common problems in infants and young children who parents bring to primary health care professionals. The incidence of feeding problems is estimated to be 25 to 45 percent of typically developing children and up to 80 percent of children with developmental disabilities. While many feeding problems are due to developmental problems, many others emerge due to social and emotional factors related to the child's early environment and are maintained by them. Recent clinical studies have noted maternal eating disorders (active or during childhood or adolescence) as a risk factor for feeding disorders (von Hofacker et al 2008).

Excessive crying

Excessive crying is a common and often serious problem for parents. Prevalence estimates are variable, ranging from 1.5 to 17.8 percent. Excessive crying in the first three months in community-based samples (St James-Roberts and Halil 1991) ranged from 16 to 29 percent. These disparities are related to differences in definitions, methods of assessment and age. Of those infants with excessive crying (fussing and crying for more than three hours a day), a large number continue to be distressed beyond three months.

Of particular concern is how parents respond to excessive crying. For instance, parents may have negative feelings towards the child, regarding the infant as difficult rather than different/vulnerable and this may distort parent–child relations in the future. At the extreme, excessive crying may cause parents to engage in all kinds of actions to stop the crying. Some of these actions may be detrimental to the infant's physical health and wellbeing, such as slapping or shaking the baby.

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[6] The classic Christchurch and Dunedin longitudinal studies collected data on physical development from birth and only began collecting data on mental development from childhood onwards.

[7] The ICD-10 was endorsed by the Forty-third World Health Assembly in May 1990 and came into use in WHO Member States from 1994.

Infantile subdural haemorrhage (SDH), often called shaken baby syndrome, can result from violent shaking. Infants that are diagnosed with infantile SDH usually have irreversible neurological damage and may die as a result of the damage. The epidemiology of infantile SDH in New Zealand is similar to that described elsewhere.

Non-accidental head injury is another significant health issue in New Zealand, and the incidence is particularly high among Māori (Kelly and Farrant 2007). Associated risks include poverty, social isolation, young parenthood, family and whānau violence and AOD abuse.

Relationship problems and attachment

Development of an infant's capacity for reciprocal relationships needs to be understood in a broader context than just the developing primary attachment relationship with their mother. However, the attachment relationship is the most well-researched aspect and problematic patterns of attachment have been shown to have significant long-term consequences. Appendix 2 describes attachment in more detail, including the stages of development and the prevalence of different patterns of attachment.

Behavioural problems

Externalising behaviours are among the problems that make up a large proportion of referrals to primary care and early childhood mental health services. The prevalence of preschool behaviour problems internationally ranges from around 12 to 24 percent, depending on the sample, the methodology and the severity of the disorder.

The prevalence of behaviour problems in a New Zealand sample of Pacific Island families, as reported by the mother, was found to be higher than other international populations that used similar measures. Almost 16 percent of two-year-olds in the Pacific Islands Families study, a longitudinal study of 1398 infants born to Pacific families in South Auckland, were in the clinical range for behaviour problems (Paterson et al 2007). In contrast, research has shown 8.8 percent of Turkish children (Erol et al 2005), 9.8 percent of Finnish children (Ujas et al 1999) and 12.5 percent of Dutch children (Koot and Verhulst 1991) were in the clinical range.

Developmental disabilities and problem behaviour

Behaviour problems are common in children with disability. The prevalence of any psychiatric disorder in children with disabilities ranges from 40 to 64 percent. Parents of 64 percent of preschoolers with severe intellectual disability have reported challenging behaviours (Roberts et al 2003).

Lifelong effects of early experience

There is compelling evidence that early adverse environments can have lifelong effects on the emergence of conduct disorder, substance abuse, and physical and mental health problems.

The neural circuits in the developing brain that deal with stress are particularly malleable (or 'plastic') during the fetal and early childhood periods. Experiences during these periods shape how readily these brain circuits are activated and how well they can be contained and turned off. However, the stress that can come from adverse environments during infancy and early childhood can affect these developing brain circuits and related hormonal systems in a way that leads to poorly controlled stress-response systems which will be overly reactive or slow to shut down when faced with threats throughout the lifespan (see National Scientific Council on the Developing Child 2007a).

Frequent or sustained activation of brain systems that respond to stress can heighten vulnerability to a range of behavioural and physiological disorders over a lifetime. Undesirable outcomes can include a number of stress-related disorders affecting both mental health (eg, depression, anxiety disorders, AOD disorders) and physical health (eg, cardiovascular disease, diabetes, stroke) (National Scientific Council on the Developing Child 2007b).

Children who live with and are affected by maltreatment, neglect, substance abuse or domestic violence in the absence of a buffering secure relationship with their primary attachment figure are extremely vulnerable to serious and chronic mental health problems. They frequently display serious behaviour problems, and may manifest conditions that can seriously impede their lifelong learning and later success (Knitzer 2000; Hardin 2004).

The Dunedin Multidisciplinary Health and Development Study and two other large epidemiological studies (Felitti et al 1998; Danese et al 2009) have found that experience of poverty, mental and physical abuse, parental mental illness, family and whānau conflict and abandonment was associated with risky health behaviours and chronic illnesses such as asthma, diabetes, cancer and high blood pressure.

Prevalence of maternal mental disorders

Women have been shown to be at a higher risk for the onset or recurrence of mental illnesses, particularly mood disorders, during periods of hormonal fluctuation such as the beginning of puberty, postpartum and in some cases during pregnancy and during menopause (Burt and Quezada 2009). Of particular concern for maternal mental health services is the high rate of mental illness during the perinatal period – psychosis, bipolar affective disorder or severe depression – in one or both parents. It is estimated that maternal psychiatric disorders occur during the perinatal period in at least 15 percent of pregnancies. The characteristics of most mental disorders are similar in the perinatal period to those experienced at other times but psychotic disorders may develop more rapidly, be more severe and childbirth can trigger a bipolar episode (New Zealand Guidelines Group 2008). These severe illnesses mean women may require immediate access to specialist treatment.

Pregnancy represents a significant biopsychosocial transition period with a powerful impact on many aspects of the life of a woman, her partner and her family and whānau, which can increase vulnerability to mental illness. Financial stresses increase that vulnerability. Also, the new relationship with her infant may raise 'ghosts in the nursery' – unresolved trauma and losses that can further increase such vulnerability in the postpartum period.

Previous mental illness

Women who have a history of mental illness are significantly more likely to have a recurrence during the first few weeks after birth. For women with a previous history of bipolar illness or puerperal psychosis, the risk of recurrence following delivery is estimated to be as high as one in two (Weick et al 1991; Robertson et al 2005).

A population-based study showed that, among women without previous psychiatric hospitalisations, the incidence of a psychotic or bipolar episode within the first three postpartum months was 0.04 and 0.01 percent of first births, respectively. In women with psychiatric hospitalisation, the incidence increased to 9.24 percent for postpartum psychotic episodes and 4.48 percent for bipolar episodes. Factors that increased the incidence of postpartum psychotic or bipolar episodes included the length of most recent hospitalisation, the recency of pre-pregnancy hospitalisations, and the number of previous hospitalisations. Women were most vulnerable to re-hospitalisation during the first 10 to 19 days postpartum (Munk-Olsen et al 2006, 2009).

Stopping medication

Women who are concerned about the risk to the fetus from prescribed medications for mental illness may stop taking their medication, leading to a recurrence of a mood disorder or other mental illness. A clinical guideline (New Zealand Guidelines Group 2008) provides advice to primary care practitioners supporting women to make a decision on this issue.

One study found that 70 percent of women elected to stop using mood stabilising treatment early in pregnancy, regardless of illness severity. Those women who chose to stop their medication during the perinatal period more than doubled their likelihood of suffering a recurrence of at least one episode of the illness (85.5 versus 37.0 percent) and spent over 40 percent of the time during pregnancy suffering bipolar symptoms compared with only 8.8 percent of the time for those who continued on medication (Viguera et al 2007). Cohen et al (2006) found that of women with prior depression who were doing well on an antidepressant at conception, 68 percent of the 44 women who discontinued their medication had a relapse compared with 26 percent of the 82 women who maintained their antidepressant medication through pregnancy.

Depression

Postnatal depression is the most common postpartum mental disorder. Between 7 and 26 percent of women meet criteria for major or minor depression during pregnancy (O'Hara and Swain 1996). Women are at greatest risk of new-onset depression during their first postpartum year, with approximately 45 to 65 percent of ever-depressed women having their first episode at this time (Goodman 2007; O'Hara 2009).

Anxiety

Perinatal anxiety, panic disorder, obsessive compulsive disorder (OCD), posttraumatic stress disorder (PTSD) and generalised anxiety disorder (GAD) are under-reported in the literature; however it is known that anxiety and stress during pregnancy can have adverse fetal and developmental consequences. Prevalence rates for panic disorder range from 1.3 percent to 2 percent, for OCD from 0.2 percent to 1.2 percent in pregnancy and from 2.7 percent to 3.9 percent postpartum, for PTSD from 2.3 percent to 7.7 percent, and for GAD from 8.5 percent in pregnancy (third trimester) and from 4.4 percent to 8.2 percent postpartum (Ross and McLean 2006).

Putting these figures into perspective, the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV-TR) reports a lifetime prevalence rate for GAD as 5 percent, which suggests that GAD is more common in postpartum women. Women with a previous history of an anxiety disorder appear to be at greater risk for a postnatal mood disorder (ie, depression or anxiety) than those with a history of a depressive disorder (Matthey et al 2003).

Schizophrenia

Women with a diagnosis of schizophrenia are more at risk for psychotic episodes in the postpartum period. For every 1000 live births, one or two women will develop a puerperal psychosis (Kendell et al 1987). Overall, women with schizophrenia have been shown to have more obstetric complications. One high-risk symptom of schizophrenia during pregnancy may be denial of pregnancy, which could result in women not seeking antenatal care. Psychotic symptoms can include delusions that the baby is dead or defective, delusions that the birth did not occur and auditory delusions to hurt the baby (Miller 1990; Stanton et al 2000; Morgan and Jablensky 2006; Solari et al 2009).

Studies have generally found that parenting by women with schizophrenia tends to be less reciprocal, responsive and involved. They also touch and play less with their infants and provide less sensory and motor stimulation (Riordan et al 1999; Snellen et al 1999).

Borderline personality disorder

Mental illnesses such as schizophrenia and personality disorders can have a significant impact on the mother and the developing child. People with borderline personality disorder (BPD) find parenting especially difficult. BPD is characterised by instability in interpersonal relationships, self-image and emotions.

In general, mothers with BPD do not provide the nurturing, stimulation, consistency and warm structure that infants and young children require. Research has shown they are often inconsistent, unpredictable and emotionally dysregulated which can cause the child great anxiety and uncertainty about whether they will experience an affectionate response or a negative reprisal. Love and hate are frequently mixed and cause the child intense confusion. Threats of abandonment and/or actual abandonment may be common. The mother with BPD expects to be taken care of but frequently criticises any attempts at helping that the child offers (Lawson 2002). Without intending to, the mother may become frightening to the infant or young child.

Suicide

In a report on 26 maternal deaths associated with psychiatric causes in Australia between 1994 and 2002, Austin et al (2007) showed that 17 deaths (65 percent) occurred antenatally, with 13 occurring at less than 20 weeks' gestation. Six of the nine postnatal deaths occurred within 42 days after birth. Seventeen of the women died violently, suggesting a profound wish to die. The other nine women died from an overdose of prescription or illicit drugs.

The findings from the UK Confidential Enquiries into Maternal Deaths (CEMD), covering 1997 to 1999, revealed that suicide was the leading cause of maternal death followed by maternal drug overdose (Oates 2003). Psychiatric illness was associated with a substantial proportion of these deaths.

In 46 percent of the suicides reported to the CEMD, the woman had been admitted to a psychiatric hospital during a previous episode of illness and all of those who died from substance misuse had previous contact with AOD services. However, there were few cases where either the psychiatry or maternity services had been aware of the past history or risk of recurrence following delivery and even fewer where management plans had been put in place.

It is estimated that 50 percent of the women who died from suicide might not have died if their past history had been accurately identified and plans for proactive management put in place (Oates 2003).

Alcohol and other drugs

Reliable data on the incidence of and harm caused by in-utero exposure to alcohol and other drugs are limited. Elliot et al (2008), in their systematic review, report estimates based on overseas incidence rates for fetal alcohol spectrum disorder (FASD) of 3 per 1000 live births, which would equate to at least 173 babies born with FASD every year in New Zealand. They also report that other studies estimate that up to 360 babies are born with FASD each year in New Zealand.

The impact of such exposure can be significant. Miscarriage and stillbirth are among the consequences of alcohol exposure in pregnancy. In the child, alcohol exposure in pregnancy can result in prematurity, brain damage, birth defects, growth restriction, developmental delay, and cognitive, social, emotional and behavioural deficits (Ministry of Health 2010a). In older children, intellectual and behavioural characteristics in individuals exposed to alcohol in pregnancy include low IQ, inattention, impulsivity, aggression and problems with social interaction.

There is evidence of harms caused by exposure to other drugs, including nicotine, during pregnancy but there are even fewer data than for alcohol on the incidence in New Zealand of such exposure.

Prevalence of Māori maternal mental disorders

By 2021 Māori will make up a larger proportion of the population than they currently do and 30 percent of New Zealand children will have Māori ancestry. Currently, about half the Māori population are younger than 25 years old, and the median childbearing age is much younger for Māori than for the non-Māori, non-Pacific population – 26 compared with 30 years old (Robson and Harris 2007).

Māori as a population experience higher prevalence, earlier age of onset, and greater severity of mental disorders, along with a higher lifetime risk of developing a mental disorder, compared with the non-Māori, non-Pacific population[8] (Ministry of Health 2008). There is a significant unmet need for services – half of Māori with a serious disorder are not receiving mental health care for their mental health needs, and general practitioners (GPs) are the leading point of contact for those who are.

Mental illness such as anxiety disorders and antenatal and postpartum depression comprises a group of disabling conditions that are often not identified in Māori women in the community and are often not detected by primary health professionals.

Women with a history of mental illness are significantly more likely to have a recurrence during the first few weeks after birth. Māori women experience greater severity of serious disorders (such as schizophrenia or bipolar disorder) and common mental disorders (depression, anxiety, AOD problems), often from a younger age than others (Oakley Browne et al 2006).

Māori first-time mothers tend to be younger than non-Māori. Rates of pregnancy among Māori adolescents are high compared with non-Māori. There is a high number of young Māori women who are sole parents, many of whom live without the support of whānau. Such young Māori women are likely to be more at risk of depression (Baxter 1998).

Evidence suggests that serious mental illness such as schizophrenia can have a major impact on both mother and infant. Given the high rates of hospital admission and estimated prevalence of Māori women experiencing schizophrenia (Baxter 2008; Kake et al 2008), services must place a greater emphasis on working with both mother and whānau to ensure the safety of all.

Māori women are also significantly more likely to experience AOD problems and are less likely to receive care for these problems than any other type of disorder. The impact of AOD problems on whānau and infants is well known.

Postnatal depression has a higher incidence in women who are less supported, single and under 20 years of age. Māori women may experience multiple maternal risk factors: young school-leaving age; young motherhood; living in poverty and disadvantage; poor access to health services; and bearing compromised babies (low birthweight, prematurity, higher rates of admission to neonatal care) (Tipene-Leach, nd).

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[8] In the Christchurch Health and Development Study over half of Māori youth aged 18 years had at least one mental disorder from the age of 16. One in three Māori aged 16 to 24 years and one in three Māori women experienced at least one mental health disorder in a year.

Postnatal depression impacts on the health and wellbeing of infants in multiple ways. It may also link to sudden unexpected death in infancy, the rate of which is higher in Māori whānau.

The health and wellbeing of Māori infants

Māori infants and whānau disproportionately experience environments and risk factors associated with the development of severe emotional and behavioural problems, for example, low birthweight, low levels of maternal education, parental AOD abuse and pre-existing mental illness (Tipene-Leach, nd). The outcomes for and impact of unmet need in Māori maternal health and infant mental health are evident in the high numbers of Māori children in Child, Youth and Family care, in justice settings, with conduct disorder, and experiencing earlier onset of anxiety and AOD problems.

3 Overview of Perinatal and Infant Mental Health Services

Comprehensive perinatal and infant mental health services include:

- health promotion
- screening and assessment
- interventions including case management, transition planning and referrals
- access to respite care and specialist inpatient care for mothers and babies
- consultation and liaison services within the health system and with other agencies.

PIMH services are delivered in universal, primary and secondary settings as shown in Figure 1 below. They cover the pregnancy and the first postnatal year.

The focus of this document is on secondary and tertiary maternal and infant mental health services, but these services are part of the continuum of care to provide a comprehensive approach to maternal and infant mental health. Referrals to secondary and tertiary services are likely to come from universal and primary health services and will require ongoing consultation during assessment and intervention, and post treatment.

At present a number of health care providers and allied services deliver maternal mental health and AOD services. However, most of these are not able to provide fully integrated PIMH services.

Figure 1:   Continuum of perinatal and infant mental health services across universal, primary and secondary health services

Universal preventive services	**80–100%**
• Health and developmental surveillance • Case management • Parenting education • Promotion • Provision of care/referral	
PIMH primary care services	**10–15%**
• Risk-specific assessment • Intervention • Education • Promotion • Referral	
Secondary and tertiary services	**5–10%**
• Diagnostic assessment • Treatment for parent/caregivers, child and family	
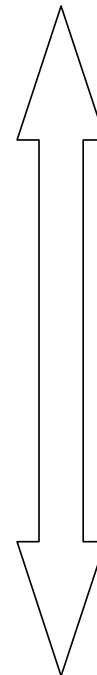
Universal preventive services

Universal preventive services are aimed at improving child development, parenting knowledge and behaviour, and infant mental health for all families within their service range. They serve the general public or a specific population group that has been identified on the basis of criteria other than increased risk, such as all children younger than four years. These services can be provided in any setting, but are primarily found in health care, child care, early childhood education, and family support settings (see Table 2).

Well Child / Tamariki Ora: a universal preventive service

The primary objective for Well Child / Tamariki Ora service providers is to support families/whānau to maximise their child's developmental potential and health status from birth to five years, establishing a strong foundation for ongoing healthy development. Well Child / Tamariki Ora has been established to:

- build on the strengths of each family and whānau

- inform and support parents to gain the knowledge and skills required to understand and manage the various stages of their child's development

- reassure parents through health surveillance and clinical assessment that their child is developing normally, and ensure any health or developmental concerns are referred and addressed in a timely way

- promote positive parenting skills and the development of the caregiving bond and secure infant attachment (see Appendix 2 for more information on attachment)

- work with families/whānau to identify their needs for support, and either provide that support or facilitate access to support from other health or community services, especially for those children of families/whānau at risk of adverse outcomes

- promote family and whānau understanding of Well Child / Tamariki Ora service entitlements, and assist them to access the provider's own or alternative services if this is the client's wish

- provide culturally appropriate services to all children and their families/whānau

- provide services in a way that recognises the needs of identified priority groups including Māori and Pacific peoples, children from families with multiple social and economic disadvantage and children with high health and disability support needs (Ministry of Health 1996).

Well Child / Tamariki Ora services may identify families at elevated risk and provide additional visits or other interventions such as the Post Natal Adjust Programme offered by Plunket in Canterbury and South Canterbury. The 2007 Well Child Review recommended a nationally consistent needs assessment process and additional support for families at risk of poor outcomes.

Table 2: Summary of universal preventive services

Population served	Services provided	Providers	Access/referral
Women during pregnancy and postnatally	Antenatal care, screening for maternal mental illness and AOD use, education about importance of early mother–infant interactions	Lead Maternity Carers, GPs, Well Child / Tamariki Ora, public health nurses, obstetricians, Family Planning, iwi health services	Direct access
Infants, young children and their parents	**Screening and developmental assessment** Well Child / Tamariki Ora visits, monitoring of child development, maternal mental health, AOD problems, and family violence. Screening for behavioural and mental health problems at 4 years **Educational services** Guidance about early social emotional development and child behaviour, the parent–infant relationship, parenting and common developmental issues **Assessment and intervention** Emphasising the role of early relationships in common concerns such as sleeping, eating and infant distress **Care management** Making referrals for potential or active PIMH problems	GPs, non-governmental organisations (NGOs), Well Child / Tamariki Ora, public health nurses, paediatricians, paediatric primary care services, iwi health services Daycare and Early Childhood Education Atawhaingia Te Pa Harakeke, services developed by Māori for Māori	Direct access – referral to specialist paediatric clinics, or to paediatricians
Families of children 0 to 3 years of age	**Educational** Parenting skills, importance of mother– child relationship	Parents as First Teachers Ahuru Mowai, Strategies with Kids – Information for Parents programme,* NGOs eg, Anglican Trust, Barnados	Home visits, eligibility requirements

Note: * For more information on SKIP, see www.familyservices.govt.nz/skip

Primary care services

Primary care services are the first level of contact for the majority of health concerns and are generalist in nature. The largest component of primary care is obtained from general practices and the general practitioner has a health care coordination role. Primary health care is universally accessible to people in their local communities. Specific guidance has been provided to the primary care sector on screening, assessment and intervention for women with mental health disorders in the perinatal period (New Zealand Guidelines Group 2008).

A number of primary care programmes and services within New Zealand care for at-risk families with young children, although they would not necessarily identify themselves as providing an infant mental health service (see Table 3). Some serve families where there is an established risk for infants or young children developing physical, cognitive, social and emotional problems. Caregivers and/or young children are referred to such services because they manifest specific risk factors, but they may or may not show specific symptoms or problems. These services typically include problem-specific screening and assessment, and risk-specific interventions, including information and education, monitoring and outcome assessment. In addition, all primary health organisations (PHOs) in New Zealand deliver primary mental health programmes, some with a focus on brief intervention for postnatal depression.

Primary health services need to develop strong linkages with services that address families' overlapping health, social, mental health and relational issues. Especially relevant may be services funded by the Ministry of Social Development to support families aided by practice changes as part of its Vulnerable Infants initiative. In addition, primary health services need to link with more intensive secondary and tertiary services.

Better, Sooner, More Convenient primary health care is a current Government priority with significant changes under way in relation to current primary health care structures. One of the aims of the Government's *Better, Sooner, More Convenient* initiative is to smooth the transition of people from one level of care to another, including through the establishment of Integrated Family Health Centres. These centres will improve the efficiency and effectiveness of services by enabling:

- better integration of primary and specialist mental health and addiction services
- co-location and better integration of the services provided by PHOs, non-governmental organisations (NGOs) and agencies outside the health sector
- better coordination of care for people with complex and/or long-term physical and mental health problems
- better coordination of care for high-needs families.

Early Start

The Early Start Programme is an example of a primary care programme. Early Start is available in Christchurch for high-needs or at-risk families (Fergusson et al 2005). The overall goals of the Early Start Programme are to support, empower and assist families to address a wide range of issues relating to child rearing, parenting and family and whānau functioning. A major feature of this programme is that services are tailored to each family's needs and circumstances rather than following a predetermined protocol.

The essential features of service provision include:

- child health – ensuring children have adequate access to and use of child health services, which include immunisations

- maternal wellbeing – ensuring that the physical, social and emotional health of the child's mother is supported and protected

- parenting skills – helping mothers acquire and maintain adequate parenting skills

- family and whānau economic functioning – which is likely to entail helping families to reduce financial stress through encouraging them to seek budgeting advice and helping them to find adequate housing and supplement income through part-time employment

- crisis management – supporting families during crises, which is likely to mean acting as a source of support, advocacy and mentorship when crises emerge from family violence, AOD problems or difficulties with the law.

Atawhaingia Te Pa Harakeke

Atawhaingia Te Pa Harakeke is an example of a primary health programme developed in South Auckland specifically for Māori.[9] Atawhaingia is based on the philosophy that all parents desire the best for their children, are affected by their own experiences of parenting, and may require support in understanding and applying strategies that will contribute to positive outcomes for their families.

The following are essential features of Atawhaingia.

- It has been developed by Māori for high-risk Māori families/whānau.

- Training for this programme has been delivered nationally (on various marae) by Te Komako in four-week intensive blocks.

- In an independent evaluation of the training, it was found that participants valued the use of Māori tikanga, worldviews and interactive teaching styles.

- After training there are specialist support people (waewae taha) who provide mentoring, monitoring and support in the delivery of the programme.

- Those who provide the intervention have good resources such as parenting education pamphlets, CDs and videos that are for Māori specifically.

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[9] This programme was an amalgamation of two programmes: a parenting programme called Hakuitanga, Hakorotanga and a children's programme called He Taonga Te Mokopuna.

Table 3:   Summary of maternal and infant mental health services in primary care

Population served	Services provided	Providers	Access/referral
Women during pregnancy and postnatally	**Assessment** Screening for maternal mental illness, family history of mental illness, AOD, family violence **Education** Covering the importance of early mother–infant interactions **Brief interventions**	LMCs, GPs including primary mental health, Well Child / Tamariki Ora, public health nurses, obstetricians, Family Planning, iwi health services	Direct access, referral from LMCs, GPs
Infants and young children at risk because of biological or developmental disorders (prematurity, chronic illness, FASD) and/or family circumstances	**Child health** Ensuring children have adequate access to and use of child health services. **Developmental assessment** Assessing social and emotional, cognitive and motor skills **Brief interventions**	Special Education developmental specialists, psychologists, speech language therapists, child psychotherapists, family therapists, occupational and physiotherapists, behavioural paediatricians, Family and Community Services	GPs, LMCs, Well Child / Tamariki Ora, public health nurses, NGOs, PHOs, or self referral
Infants and young children with mothers, fathers and extended family members who may be at risk for parenting failure through mental illness, AOD problems, domestic violence, teen parenting	**Maternal wellbeing** Ensuring that the physical, social and emotional health of the child's mother is supported and protected **Parenting skills** **Family budgeting advice** **Crisis management**	Home visiting programmes, NGOs, psychologists, psychiatrists trained in PIMH and early child development, experience with high-risk families; nurses, social workers and allied health professionals with similar training	CYF, community alcohol and drug service, LMCs, Family Court, or self referral

Secondary and tertiary services

Secondary and tertiary services are intensive services for infants and mothers or caregivers most severely affected by mental health and/or AOD disorders. Generally this means the difficulty, for the infant and/or the mother, is of a magnitude that would be diagnosed as a disorder, or there are significant parent–infant interaction difficulties that are likely to impede healthy social and emotional development of the infant. Both primary health and secondary services require mental health professionals with a broad expertise in working with a mix of disorders and treatments. Perinatal and infant mental health services at the secondary/tertiary level will develop linkages to public and/or private health providers engaged in the provision of universal and primary health services. Criteria for access to secondary services are described in Section 4.

Although a number of agencies are beginning to develop infant mental health programmes, few have developed a comprehensive programme to date. Three examples outlined below are the Zero to Five service located within CAMHS at Hutt Valley DHB, the Pregnancy and Parental Service located within the community alcohol and drug service at Waitemata DHB and the Granger Grove programme in Auckland. Table 4 then gives a more general summary of the infant mental health programmes that are currently in operation.

Zero to Five

The Zero to Five service sees infants and young children at high risk and their families. The majority of presenting problems involve toddlers with externalising behaviours. There is a high rate of parental mental illness in the families served and often they have current or previous contact with Child, Youth and Family.

• The service is proactive in taking referrals so that the family and whānau does not wait too long for an assessment.

• Assessment is in-depth, takes place over three to five sessions and aims to be therapeutic.

• A time limit of six to eight weeks to complete assessment is a priority.

• All interventions are systematic, with regular times and space in order to provide the family and whānau with consistency and support.

• A variety of models is used, including: Guided Interaction; Watch, Wait and Wonder; Seeing is Believing; and Floortime.[10]

The referral process and the criteria for referral are described in Section 4. The diagnostic criteria are defined in more detail in Appendix 1. As these families are likely to be facing a number of challenges, it is likely that, in some instances, clinical input will be required from a multidisciplinary team of health, mental health and allied professionals.

The Pregnancy and Parental Service

The Pregnancy and Parental Service (PPS) is a multidisciplinary team that provides assessment, intervention, case management and service coordination for socially marginalised, substance-using parents (with a child under the age of three years) and/or pregnant women. The goal of PPS is to improve health outcomes and reduce risk to eligible substance-using parents and their children. The client group typically may be poorly engaged with services for a number of reasons including poverty, lack of transport, stigma and fear of the involvement of child protection services.

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[10] Further information is available on:
 • Guided Interaction at http://playtherapy seminars.com
 • Watch, Wait and Wonder at www.watchwaitandwonder.com
 • Seeing is Believing video self-modelling at www.spectronicsinoz.com
 • DIR/Floortime at www.icdl.com

The PPS provides a range of evidence-based psychosocial and pharmacological interventions (including nicotine replacement therapy, withdrawal and relapse prevention for alcohol dependency and substitution and/or withdrawal management for benzodiazepine dependency) and consultation and liaison support for other practitioners. Services are provided across settings such as home visiting, outpatient antenatal clinics, AOD and hospital services.

The Granger Grove Family Learning Centre Programme

The Granger Grove programme is provided by the Anglican Trust for Women and Children, a non-governmental organisation. This residential parenting programme provides training in positive parenting practices as well as other life skills. The majority of its referrals come from Child, Youth and Family. In addition to providing parenting skills training for high-risk parents, it operates a daycare service for the children.

Table 4: Summary of secondary and tertiary maternal and infant mental health services

Population served	Services provided	Providers	Access/referral
Women during pregnancy and postnatally who have a history of mental illness and/or substance abuse who require more than education or a brief intervention	**Assessment** Assessing maternal mental illness and/or AOD use, history of abuse, current domestic violence **Treatment** Developing individualised treatment incorporating child and family Providing linkages to other related services	**Multidisciplinary team made up of** maternal mental health and AOD specialists and infant mental health specialists, CAMHS	Parents (or primary caregivers) seeking mental health treatment, GPs, LMCs, Well Child / Tamariki Ora, public health nurses, NGOs, PHOs CYF, AMHS, AOD services, Family Court, iwi health services
Infants and young children with delay in social and emotional development and problem behaviours as set out in the DC:0-3R (Appendix 1) and their parents (primary caregivers	**Child health** Assessing child health and medical history **Comprehensive developmental assessment** Covering all domains of development, and developmental psychopathology, particularly social and emotional and parent–child relationship **Treatment** Developing individualised treatment plan incorporating child and family Providing linkages to related services	**Multidisciplinary team made up of** perinatal and infant mental health specialists, clinical psychologists, psychiatrists, family therapists, child psychotherapists, with access to other professionals such as speech language therapists, occupational and physiotherapists, behavioural paediatricians, CAMHS	Parents (or primary caregivers) seeking mental health treatment or when they have concerns for their infant or young child, GPs, LMCs, Well Child / Tamariki Ora, public health nurses, NGOs, PHOs, CYF, Family Court, other mental health and AOD services, disability support services, Needs Assessment and Service Coordination providers, iwi health services

Population served	Services provided	Providers	Access/referral
Infants and young children with mothers, fathers and extended family members severely affected by mental illness, alcohol and other drug use, domestic violence	**Child health** Assessing child health and medical history **Comprehensive developmental assessment** Covering all domains of development, and developmental psychopathology, particularly social and emotional and parent–child relationship **Assessment** Assessing health including history of chronic illness, mental health, AOD use, history of abuse, domestic violence, parenting skills **Treatment** Developing individualised treatment plan incorporating child and family Providing linkages to related services	**Multidisciplinary team made up of** psychologists, psychiatrists trained in PIMH and early child development, experience with high-risk families, nurses, social workers, family therapists and allied health professionals with similar training	CYF, Family and Community Services, AMHS, AOD services, LMCs, Well Child / Tamariki Ora, Family Court, iwi health services, Early Childhood Education

4 Guideline for the Development of Perinatal and Infant Mental Health Services

Guiding principles

Eight principles of care provide a framework to guide the development of perinatal and infant mental health services. They are based on those set out by *Te Raukura – Mental health and alcohol and other drugs: Improving outcomes for children and youth* (Ministry of Health 2007) as well as the principles of systems of care for children set out by Knitzer (2000) and Stroul and Friedman (1986).

1. Services need to be centred on the mother and child and consider the triadic relationship of the mother, father and child, and other relationships within the family and whānau.

2. Mothers, infants and families require access to a comprehensive and integrated range of services. Services should address the mother's mental health needs and her ability to promote her child's development. These services should also address each child's unique physical, emotional, social and educational needs in accordance with their potential.

3. A developmental approach to assessment and treatment is required.

4. Perinatal and infant service provision should be guided by a tailored intervention plan and be provided within the least restrictive, most normative environment that is clinically appropriate. Use of the Choice and Partnership Approach (CAPA)[11] is recommended.

5. Early identification and intervention with mothers and their infants should be promoted by the system of care in order to build resilience and enhance the likelihood of positive outcomes.

6. Families, including non-kin caregiving families, of children with behavioural, developmental and emotional disorders should be full participants in all aspects of the planning and delivery of services, supported with case management to ensure that multiple services (including those provided by non-health and non-government agencies) are delivered in a coordinated and therapeutic manner so they move through the system of services in accordance with their 'changing' needs.

7. Services need to be culturally appropriate and provided in a way that strengthens whānau, improves Māori health outcomes and reduces disparity for Māori.

8. Services need to be evidence based, goal focused and accountable, acceptable to those using them, and accessible.

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[11] The Choice and Partnership Approach is a clinical system developed by consultant psychiatrists Dr Ann York and Dr Steve Kingsbury. It is informed by capacity and demand theory and the development of a collaborative partnership between clinician and client that provides choices. Information, training and implementation support for the CAPA model are available from the Werry Centre at www.werrycentre.org.nz

Who should be served by perinatal and infant mental health services?

The target population for perinatal and infant mental health services is families when a child and/or their mother has, or is suspected of having, a mental health and/or substance use disorder, or a psychological disorder including severe behavioural or emotional disturbance in the child.

Criteria for referral to secondary PIMH services

The criteria for referral to secondary PIMH services are set out in the Nationwide Service Framework.[12] Caregiver, infant/child and family and whānau factors are relevant to PIMH services and may include one or more of the following.

Caregiver factors include:

- women during pregnancy and postnatally who have a history or current symptoms of mental illness and/or AOD problems
- mothers and/or fathers who have:
  - a severe mental illness (including personality disorder)
  - AOD problems (including, but not solely, tobacco)
  - developmental or cognitive limitations, impulsivity
  - experience of severe loss or trauma during pregnancy or early in the infant's or young child's life
  - childhood experience of abuse and/or neglect or of extended or multiple placements in foster care
- parents who maintain a persistent negative view of the infant/young child or are unable to feel close to them
- mothers who have a 'teen' pregnancy in which they are distressed (anxious, depressed), have little support, and are at high risk of parenting failure.

Child factors include:[13]

- infants or young children who:
  - have developmental difficulties or delay
  - are born very preterm
  - exhibit sensory, regulatory or attention deficit disturbances
  - have delayed social and emotional development
  - exhibit problem behaviours
- infants or young children affected by maltreatment or neglect.

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[12] The Nationwide Service Framework is available at www.nsfl.health.govt.nz

[13] For more on child factors, see DC:0-3R (Appendix 1), DSM-IV-TR or ICD-10.

Family and whānau factors include:

- conflictual family and whānau relationships with few strategies for solving problems

- domestic violence (physical, verbal or sexual) including a history of siblings taken into care

- limited social support, and parents being very young and inexperienced, especially in combination with some of the difficulties identified above.

Coverage for secondary PIMH services

The Nationwide Service Framework defines coverage for PIMH services (including specialist inpatient units for mothers and babies) as the perinatal period – pregnancy to one year postpartum. It also defines the age range for infant mental health services as 0 to 3 years (to fourth birthday). PIMH services will cover the perinatal period as a minimum with flexibility to determine when the transition to an adult mental health service or a CAMHS is most appropriate according to the assessed needs of the individual or family and whānau. Flexibility to delay transition to generic adult mental health services (beyond one year postpartum) is important when the focus of intervention is on both mother and infant or family and whānau.

Who should make referrals to secondary services?

Referrals to secondary services may come from:

- individuals with symptoms, who may refer themselves and/or their infant or young child if they are concerned about their social, emotional, cognitive or physical development or behavioural problems

- health care providers who have identified people with mental health problems, problematic substance use or domestic violence during pregnancy or postnatally; such providers include:
  - general practitioners
  - midwives
  - iwi health services
  - paediatricians
  - public health nurses

- Well Child / Tamariki Ora and B4School health check providers

- paediatricians

- early childhood programmes such as:
  - Parents as First Teachers
  - daycare, kōhanga reo and preschools
  - Special Education Services

- adult mental health services where the patient is a parent of an infant or young child

- AOD services where the client is a parent of an infant or young child

- CYF and Family and Community Services (FACS) workers

- Early Start and Family Start workers
- Family Court and Department of Corrections staff (for mothers with infants in prison).

Secondary PIMH services will develop relationships with referrers. This is particularly important regarding iwi health or whānau ora providers and kōhanga reo where lower levels of trust of specialist services may limit referrals.

System of care

The system of care for mothers, their infants and family and whānau links the four critical processes of:

- engagement – accessible and responsive services that address barriers to engagement
- assessment – including formulation, diagnosis and treatment planning/partnering
- treatment – including a partnership approach to contracting and implementing treatment, and supervision
- evaluation – including treatment effectiveness and supervision.

Although these processes are described in sequence below, it is likely that the clinical process will be flexible and provide multiple opportunities for continued engagement in treatment, re-assessment, further treatment and evaluation. (See Figure 2 for an overview.)

Engagement

Engaging mothers and families in mental health and AOD services may involve a number of challenges. These may be pragmatic and include one or more of the following:

- difficulty contacting (or maintaining communication with) the family and whānau because of the lack of a phone
- lack of access to transport to get to the mental health or AOD service
- difficulty for the family and whānau of juggling work and time to attend meetings
- lack of child care for older siblings
- stigma associated with accessing mental health or AOD services
- fear of disclosure of medical status, chaotic family and whānau functioning or other family business and fear of consequent involvement with child protection services
- unsafe conditions for home visits due to risk of violence
- service resource difficulties for home visits due to the time required, vehicle access problems and travelling distances.

Services are responsible for addressing barriers to access. To overcome these barriers a priority for continued engagement is developing a relationship with the parent/caregiver based on trust, caring and a sense of partnership. Some or all of the following may be appropriate to initial and ongoing engagement:

- be responsive to the different cultural needs of families

- work with interpreters where language is a barrier

- develop tailored 'packages' that meet communication, transport and child care needs

- engage in conversations rather than a set of questions when initiating the relationship, for example by using CAPA

- be open to what parents and family and whānau want to discuss and achieve

- offer alternatives to times, language, type of information you can provide, and environment (home or clinic)

- work collaboratively with other agencies that are engaged.

Assessment

Assessment refers to the process of establishing a baseline understanding of the parent/caregiver–infant relationship, the infant's strengths and difficulties across developmental domains and the adult's strengths and difficulties within their cultural and environmental context. The results of this assessment should generate the necessary information to select, in partnership with the family and whānau, appropriate and relevant intervention goals and objectives. The CAPA model provides a framework during the engagement and assessment process for negotiating these intervention goals and developing a purposeful partnership between family and whānau and clinician to achieve them.

The following are basic elements of early childhood assessment.

- Focus of assessment: The focus is on the child and primary caregiver as well as immediate and extended family members, and other significant people who are likely to interact frequently with the child.

- Context of assessment: Assessment should take place in multiple contexts. Assessing a child and family and whānau system in a clinical environment is likely to provide only one view of the child's behaviour, developmental strengths and limitations. The home environment may provide a completely different picture of a child and their abilities or problematic behaviour, and a daycare environment a further picture. The cultural context is equally important, which can be taken into account by assessing children and families in settings reflective of their cultural norms.

- Methods of assessment: As young children have a limited ability to express their own developmental concerns, observational methods are an integral part of assessment. A range of evidence-based tools, measures and techniques is usually needed to provide a complete picture of a child's development, behaviour, potential and safety. PIMH services also use a range of instruments for assessing the parents' mental health and AOD intervention needs and for understanding the family system.

- Assessment personnel: Traditional models of assessment are dyadic and usually include the subject who is assessed and the clinician. Current models of assessment used with young children and their families require a multi-skilled and multidisciplinary approach. Integral to the team are the child's parents and/or primary caregiver who can provide the 24-hour perspective that professionals do not gain first-hand.

- Fusion of assessment and intervention: The fusion of assessment and intervention has its roots in early childhood interventions. The most important principle of assessment is to recognise that it has limited value in the absence of intervention. The meaning of an assessment is closely tied to how the results will be communicated with the family and whānau, and will be used in planning and implementing interventions in partnership with the parents, in evaluating the intervention and ultimately in the child's continuing progress.

A comprehensive assessment can take up to eight sessions. During the process of ongoing assessment, the clinician will be building a relationship with the mother and child as well as the family and whānau, and the process of intervention will have begun. Therefore, the optimal type of service delivery is a seamless system in which the clinician who conducts the assessment also provides the intervention. However, the assessments required for PIMH are likely to require individual evaluations by three or more disciplines: speech and language, psychiatry, psychology, nursing, nutrition, occupational therapy and family therapy may each use their own protocols and complete separate reports. A team approach is required to give clear and consistent feedback to the family and whānau and it may also provide a mechanism for preventing delays caused by serial referrals or discipline-specific waitlists. To establish a baseline for effective intervention planning, all components of initial multidisciplinary assessment should be completed within a maximum of eight weeks.

Appendix 3 provides a set of principles of assessment in infancy and early childhood.

Treatment/intervention

Treatment/intervention refers to the therapeutic processes (case management, interagency collaboration, specific treatment programmes) implemented to address the family's agreed treatment goals. Diagnostic formulation and treatment may depend on the results of observations of the child and the family and whānau in a number of contexts, and the reports of a variety of health care professionals, who could include paediatricians, speech language therapists, and nurses, as well as allied professionals such as those in early child care, CYF, AMHS and AOD services.

A review of best practice for treatment is beyond the scope of this document. However, a review of treatments for infant mental health is available on the Werry Centre website (www.werrycentre.org.nz).

Appendix 4 describes principles of treatment in the area of perinatal and infant mental health.

Evaluation

Evaluation refers to an ongoing process with the family and whānau in which the progress of the infant, the parents and the infant–parent relationship is compared with the agreed goals. Evaluation includes consideration of the child's developmental progress against milestones and any remedial action that may be required.

Figure 2: A system of care for perinatal and infant mental health services
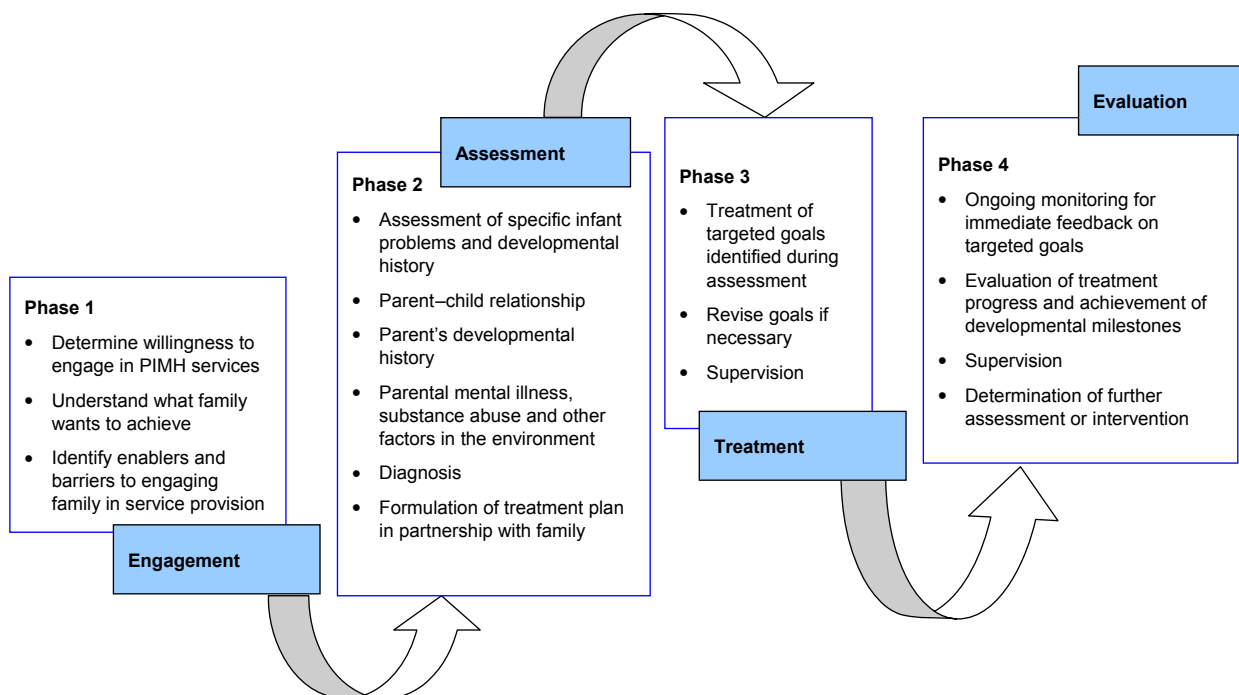
Services for Māori

Gluckman identified that although the activity of addressing issues and needs applies across all of New Zealand's population, interventions must be developed and delivered in culturally appropriate ways (Office of the Prime Minister's Science Advisory Committee 2011). *Te Puāwaiwhero* (Ministry of Health 2008) provides a framework for the development of perinatal and infant mental health services for Māori.

It is evident that Māori women experience higher rates of severe mental illness and AOD problems than others and that Māori generally experience poorer outcomes from infancy and across the lifespan. The principles articulated in *Te Puāwaiwhero*, therefore, need to be applied to support the mental health and wellbeing of Māori mothers during pregnancy and the postnatal period.

A recent Perinatal and Maternal Mortality Review Committee report (PMMRC 2009) emphasised that fragmented care, unclear communication and poor risk management can have a serious impact on the health of mother and baby. The mental health needs of Māori women during pregnancy need to be identified at the first point of contact with services.

It is necessary to invest in **what works** to achieve whānau ora in an environment of limited health spending.

The establishment of PHOs generally and Māori-led PHOs in particular has provided the opportunity for primary health care practitioners (midwives, Well Child / Tamariki Ora nurses, iwi providers and community health care workers) to have an increasingly important role in addressing Māori mental health and AOD needs. These practitioners also provide an important point of referral to secondary mental health services (Tupara and Ihimaera 2004).

An online training programme, on Whānau Ora Maternal Māori Mental Health and Addiction Need, has been developed to develop cultural and clinical competency among professionals and upskill them in this area.[14]

A whānau ora approach includes Māori-responsive and seamless service provision across social, cultural, maternal, primary care, and mental health and AOD specialist services. Primary health care services provided by Māori are an important point of referral to secondary mental health services.

A whānau ora approach ensures that services are responsive to the needs of the individual, their whānau and/or carers. Whānau are supported to care for whānau – as carers in their own right and as part of care and treatment services by Māori for Māori. Ante and postnatal programmes that are responsive to Māori and based on Māori world realities, focus on whakawhanaungatanga, or whānau or kin shared responsibility and collaboration. Achieving this focus includes meeting other whānau, sharing experiences, learning from other women – in particular older women – and hearing stories of traditional practices.

If Māori women are getting their education through the whānau, the information needs to be accurate, up to date and consistent (Tipene-Leach, nd).

Antenatal programmes should also consider the realities that face many young Māori mothers: dealing with AOD problems; nicotine addiction; mothers of a young age living in a flatting environment with little or no adult support; mothers living with several others or with siblings; or mothers living outside of their tribal rohe.

Midwives are the health professionals likely to have the most contact with Māori and play a pivotal role in maintaining continuity of care. The role of maternity services can also be critical in ensuring that a Māori mother's experience of mental illness and/or AOD problems is acknowledged and a plan developed in partnership with the mother, her whānau and her mental health/AOD provider to ensure her ongoing care.

Although Māori- and whānau-led solutions are a vital component in addressing Māori mental health needs, Māori mental health is everybody's responsibility. DHBs need to provide a range of options for Māori-responsive perinatal and infant mental health care, from which individuals can choose.

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[14]   For further information see www.healthpro.ac.nz

Greater collaboration among Māori-responsive antenatal care, primary, maternity (particularly midwives), mental health and AOD, health and social services will provide a real opportunity to improve integrated care and health outcomes for Māori. Stronger links with specialist mental health services are needed to strengthen effective care that is responsive to Māori mothers with mental health and AOD needs (Tupara and Ihimaera 2004).

Location and entry points for perinatal and infant mental health services

Perinatal and infant mental health services should be accessible from a number of entry points and services delivered in a range of locations.

Capacity to provide home visits will be an integral part of these services. Assessment of the child and family and whānau in the home is likely to provide important information about the risks and protective factors in the child's environment and assist more effective intervention planning, tailored to each family's needs.

Antenatal

Entry points should occur across the continuum of universal, primary and secondary services. For instance, screening for factors that impact on social and emotional development during infancy needs to begin during pregnancy and be offered through Lead Maternity Carers during antenatal clinics. It should ascertain whether:

- the pregnancy is wanted and what the expectations for and perceptions of the baby are
- there is current or a past history of maternal mental illness
- there is current or a past history of family violence or child abuse
- there is current or a past history of AOD use by the mother and/or father
- the family and whānau circumstances pose risks and, if there are other children, there is any history of health or developmental difficulties.

Those who may need mental health or AOD treatment at an antenatal entry point should be distinguished from those for whom PIMH consultation/liaison support from their regular health professional would suffice. Specific factors to consider in making this distinction are:

- perceived and actual level of practical support available postnatally
- perceived and actual availability of emotional support postnatally
- recent major stressors, changes or losses
- personal rating of self-esteem and self-confidence in parenting
- self-report of anxiety, obsessionality, feeling worried or depressed, including:
  - history of these feelings related to earlier pregnancies
  - past or current treatment for these feelings
  - past or current family and whānau members treated for these feelings

- emotional, physical or sexual abuse during childhood
- alcohol and/or other drug use, including tobacco use
- presence of domestic violence
- past or current involvement with CYF
- total score on Edinburgh Depression Scale and response to question 10 (on harm to self).

Birth and postnatal period

Parents (primary caregivers) of infants born prematurely or parents of infants who for various reasons may need to spend extended periods in the neonatal intensive care unit or Special Care Baby Unit may require maternal and/or infant mental health services. Infant and family therapists working in collaboration with neonatal specialists in either of these units can provide support for the mother, infant and family and whānau to address one or more of the following:

- maternal or paternal depression and/or anxiety about their infant's health or survival
- support for mothers, fathers and siblings in their early interactions with a baby they perceive as fragile and vulnerable
- encouragement and support if the mother is reluctant or concerned about her ability to take on the role as the primary caregiver to a baby she perceives as fragile.

PIMH services that are delivered in hospital are time limited and may prevent the emergence of relationship problems between the mother and child.

For families with ongoing mental illness and/or AOD problems, the infant, mother and family and whānau may require ongoing outpatient support from perinatal and/or infant mental health services. There may also be a need for the involvement of other services and agencies, including AMHS, AOD services, CAMHS, CYF, community support services and the Family Court.

General practitioners and Well Child / Tamariki Ora clinics

Parents or primary caregivers may present at their GP or Well Child / Tamariki Ora clinic with one or more of the following:

- problems sleeping or eating or symptoms that suggest depression or other psychiatric problems (disorganised behaviour, delusions, agitation etc)
- an infant who is not thriving, has persistent crying/colic and/or sleeping problems
- an infant who is aggressive, having tantrums, non-compliant, and/or perceived as very controlling
- a parent/caregiver who is fearful of abusing the infant or does not feel bonded to them.

Paediatric clinics, and child development and paediatric inpatient services

Paediatric clinics, child development services or paediatric inpatient services may identify infants and young children at high risk of developing social and emotional problems. They may base this assessment on one or more of the following:

- chronic illnesses or disabilities, especially those resulting in multiple hospitalisations
- exposure to painful medical procedures, such as treatment for burns (which can be associated with the development of posttraumatic stress disorder)
- parents adjusting to parenting a child with chronic illness or disability or children that result from a multiple birth
- concerns regarding neglect, emotional, physical or sexual abuse
- exposure to alcohol and other drugs during pregnancy
- language or cognitive delay suspected to be due to disturbed parent–child relationship
- problem behaviours.

Interventions for infants and children in inpatient settings may be delivered through liaison psychiatry services.

Early child care and early childhood education, including Special Education Services

In general, referrals from the early childhood education sector note externalising problems ahead of internalising problems and infants whose social, emotional, behavioural and communication development is delayed or disturbed. Problems may include one or more of the following:

- disruptive and aggressive behaviours towards other children and/or staff, inappropriate for the developmental stage of the child
- persistent sad or negative affect
- persistent withdrawn behaviour
- speech and language delays with social and/or emotional problems
- identified concerns with parent–child interaction and problematic development
- loss and/or trauma issues affecting the infant and family and whānau
- parent raising concerns with an early childhood education service regarding development, behaviour, interaction difficulties, or a fear that they themselves may abuse their child.

Alcohol and other drug treatment services

Parental substance misuse can be a risk factor in the development, safety and stability of children, including unborn children. The Ministry of Health (2010a) has published a guide for health professionals on alcohol and pregnancy to help primary care practitioners to identify pregnant women who consume alcohol, to provide information and advice and to refer those who need it to an addiction treatment service. Addiction treatment services need to consider and address the potential impact of parental substance misuse on the pregnancy, on parenting capacity and the consequent impact on children's development and wellbeing. However, pregnancy and parenting are also 'windows of opportunity' where women with AOD problems are identified and can be assisted to stabilise their lifestyle.

As there are high rates of coexisting mental disorders in women with AOD problems, both PIMH and AOD services need to implement best practice approaches to coexisting intervention (Ministry of Health 2010b). Protocols and robust working arrangements between PIMH and AOD services are required to ensure seamless access to services for parents with AOD problems during the perinatal period.

Opioid substitution treatment improves pregnancy outcomes for opioid dependent women as a result of a combination of factors, including stabilisation of drug use and facilitation of access to services. There is no evidence that methadone treatment is teratogenic.

Vulnerable families where there are multiple risk factors

Vulnerable families that lack parenting skills and in which there are multiple risks to an infant's social, emotional, physical and cognitive development are likely to include one or more of the following:

- teenage parents
- a mother, father or extended family member who has been diagnosed with depression or other mental illness
- parents who have a history of or who are being treated for AOD problems
- a family and whānau with a history of domestic violence, neglect and abuse of the infant or other children and/or that is involved with CYF or the Family Court.

These families may be offered services through PIMH services, including home visits, in collaboration with the relevant adult mental health or AOD services and support services.

Table 5 provides a brief summary of the potential entry points, target populations and where potential referrals may come from. It is not meant to be prescriptive and may not include all potential linkages with other health, mental health and allied services.

Table 5:   Summary of entry points for treatment services for PIMH

Entry point	Patient/client	Referral source	Potential location of service
Antenatal	Mother	Self referral, LMC, GP, iwi health service	PIMH outpatient, home visits, primary mental health, maternal mental health
Birth	Mother and infant	Self referral, LMC, maternity services, neonatal specialists	PIMH liaison service in hospital, home visits
Serious illness requiring invasive procedures, suspected mental health problem or abuse/neglect	Infant, mother, father or extended family member	Paediatric services	PIMH liaison service in hospital, PIMH outpatient clinic, home visits
Well Child / Tamariki Ora checks	Mother and infant	GP, iwi health service, Well Child / Tamariki Ora providers, public health nurses	PIMH outpatient, home visits
Early child care	Infant, young child	Daycare, kōhanga reo	PIMH outpatient, daycare, home visits
Early childhood education	Infant, young child	Kōhanga reo, early childhood education settings	PIMH outpatient, early childhood education, home visits
Suspected and/or diagnosis of mental illness	Infant, mother, father or extended family member	GP, AMHS	PIMH Outpatient, in collaboration with AMHS, home visits
Suspected and/or Diagnosis of AOD disorders	Infant, mother, father or extended family member	GP, Community Alcohol and Other Drug Service	PIMH outpatient, in collaboration with AOD service, home visits, inpatient AOD rehabilitation
Suspected or identified domestic violence	Infant, mother, father or extended family member	GP, DHB acute services including emergency services, paediatric services, CYF	PIMH outpatient, in collaboration with paediatric services, CYF, home visits
Suspected or identified child abuse and neglect	Infant, mother, father or extended family member	GP, DHB acute services including emergency services, paediatric services, multi-agency centres, CYF, Family Court	PIMH outpatient, in collaboration with Family Court, CYF, home visits

Configuration options for perinatal and infant mental health services

Four configuration options have been selected for PIMH services. Table 6 outlines each of these options, along with its associated opportunities and challenges.

Table 6: Configuration options for perinatal and infant mental health services

Configuration	Opportunities	Challenges
OPTION ONE: Develop specialist maternal and infant mental health and AOD expertise within existing CAMHS or maternal mental health services	• Potential for faster and less expensive implementation • Builds on existing networks	• Difficult to develop a specialist service with orientation to both mothers and infants within the dominant clinical culture of an existing service • Lack of existing linkages and collaboration with key providers in the continuum of care eg, CAMHS with LMCs or maternal mental health with paediatric services • Maternal mental health services are not set up for older infants and preschoolers up to their fourth birthday
OPTION TWO: 'Virtual team' comprised of specialist staff members from both CAMHS (infant mental health) and maternal mental health (or adult community mental health and AOD) services co-working in dedicated clinics	• Flexible configuration that allows dedicated time and development of specialist expertise in clinicians with some other responsibilities • Suits smaller DHBs that cannot support a full-time service • Flexibility of coverage from pregnancy to infant's fourth birthday	• Logistics of organising clinics when other clinical priorities intrude • Difficult to establish permanent clinical staff for virtual teams • Risk that vacancies or lack of commitment from one team impacts on the other • More difficult for part-time teams to communicate and collaborate with referrers and other agencies
OPTION THREE: Stand-alone specialist infant and maternal mental health service that combines infant, maternal and family mental health (including AOD)	• Provides opportunity to develop expertise and own 'new' and 'joined up' clinical culture and networks • Ideal configuration for larger DHBs with support responsibilities for smaller DHBs • Flexibility of coverage – pregnancy to infant's fourth birthday	• Proliferation of specialist services increases interfaces and potentially exacerbates boundary issues • Risk of de-skilling of generic secondary MH/AOD services that always defer to specialist service • Self-contained specialist MH/AOD service becomes less engaged with the rest of Health

Configuration	Opportunities	Challenges
OPTION FOUR: The service configuration in option two or three working within perinatal or Well Child / Tamariki Ora services	• Potentially strengthens collaboration with critical non-mental health/AOD services • Reduces stigma for service users • Simplifies service user clinical pathway by facilitating access through existing service providers with which they have already engaged	• Risk of professional isolation for mental health and AOD clinicians working in a predominantly physical health environment • Over time, collaboration with mental health and AOD services may diminish • Perinatal services are not set up for older infants and preschoolers up to their fourth birthday

The chosen service configuration should support the models of care outlined in this document. It is therefore more important to achieve national consistency in service user access to the required range of services than to achieve consistency of service configuration itself. However, it is simpler for service users to navigate the system, and for services to maintain the required networks and interfaces, if services are configured in a similar way across regions, albeit allowing for local variations according to the size of DHB and the identified need in each area.

It is possible that a 'mixed' approach could be taken, in which larger DHBs choose option three or four while smaller DHBs choose option one or two. Questions to consider include how such an approach would work regionally and how access to PIMH services would be ensured for people living in rural areas.

It may be useful for DHB Planning and Funding departments to form a regional perinatal and infant leadership group comprising portfolio managers with responsibility for public health, primary care, maternity, child health, Māori health and mental health to drive this process.

Regional and local service provision

All DHBs need to be able to provide service users within their catchments with access to the range of perinatal and infant mental health services described in this document. Achieving this access requires a regional approach to service planning and provision.

Larger DHBs may provide separate specialist perinatal and infant mental health services within their provider arm services. In a regional approach, these services would have responsibility for provision of clinical supervision, training and consultation and liaison services to clinicians in smaller DHBs in a 'hub and spoke' model.[15] Currently six

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[15] The 'hub and spoke' model was originally developed in the freight movements and logistics industry. It has been adapted to health service provision to help specialist clinicians in larger regional centres (hubs) provide clinical support to clinicians in generic secondary services in smaller provincial centres (spokes). The model involves the establishment of formal and informal relationships between each hub and its associated spokes, with regular structured supervision and training combined with ad hoc consultation and liaison support as required. The hub and spoke model is most effective when an individual in the spoke service has a dedicated coordination role, often in conjunction with a local 'virtual team' (including in some cases primary care clinicians or professionals from other agencies). Team members often have a clinical interest and experience in the specialty. Successful New Zealand applications include oncology, eating disorders and forensic mental health services.

DHBs (Waitemata, Auckland, Counties Manukau, Waikato, Capital & Coast and Canterbury DHBs) have specialist maternal mental health services. A further eight DHBs fund some dedicated maternal mental health full-time equivalent staff (FTEs). In addition to the Hutt Valley DHB Zero to Five service, infant mental services have been established in Counties Manukau and Auckland DHBs. Others are planned.

To develop their own local services, those DHBs that currently have no specialist maternal and infant mental health services will need to establish a PIMH service coordination position and identify clinicians with assigned responsibility for PIMH services from CAMHS and community adult mental health and AOD services. Robust interfaces with perinatal health, child health and primary care will also need to be developed, building on existing arrangements.

Respite care

Currently three DHBs fund maternal mental health respite care although other DHBs may provide such care through general mental health respite care funding streams, which do not separately identify this group. Each DHB will need to consider how to meet the respite care needs of this client group with a safe degree of physical separation from other mental health consumers – refer to the respite care Tier Three service description in the Nationwide Service Framework.

Inpatient beds for mothers and babies by region

Canterbury DHB currently provides New Zealand's only tertiary mothers and babies unit, with five beds (5.2 funded beds) for the Southern region. Limited international data are available on requirements for specialist inpatient beds for mothers and babies. In the United Kingdom, however, the East Midlands Perinatal Mental Health Managed Care Network in association with the Perinatal Mortality Review Committee recommend 0.25 to 0.5 beds per 1000 deliveries (Oates and Rothera 2008). Earlier, the Royal College of Psychiatrists recommended a range of 0.5 to 0.75 beds per 1000 deliveries (Royal College of Psychiatrists 2000). The availability of specialist community nursing and suitable respite services for mothers and their infants were identified as factors that moderate demand for inpatient beds for mothers and babies. In the absence of such services, demand for beds will be at the high end of the recommended range. The balance of community services (including primary services provided by LMCs and Well Child / Tamariki Ora providers) to beds will therefore be an important consideration, particularly in rural and remote areas with less access to inpatient beds in the hub DHBs.

Table 7 sets out potential requirements for inpatient beds for mothers and babies in New Zealand, based on the 2008 recommendations from the United Kingdom. These data should be used as a guide only, recognising that there are differences between health service provision in the United Kingdom and New Zealand. Also, the table should not be taken to mean that inpatient units should be established in all four regions. Other factors need to be taken into account; for example, an inpatient unit with fewer than six beds is unlikely to be clinically or financially viable (Oates and Rothera 2008). Access to mother and baby tertiary inpatient treatment will ultimately need to be provided regionally in two or possibly three main centre DHBs.

Table 7:   Potential requirements for inpatient beds for mothers and babies

Region	2008/09 population	2008 NZ live births by region	Beds required based on 2008 UK recommendations
Northern	1,605,745	25,952	6.5–13
Midland	822,653	15,512	3.9–7.8
Central	850,875	10,320	2.6–5.2
Southern	1,017,005	13,255	3.3–6.6
Undefined		294	–
Total	**4,296,278**	**65,333**	**16.3–32.6**

The regional provision of specialist inpatient beds for mothers and babies will require these specialist units to develop a hub and spoke approach to working with clinical teams in the DHB of domicile. Such units will also need to make provision for mothers to maintain contact with family and whānau. This may include provision of on-site whānau facilities and the use of video-conference or Skype technology for communication beyond the district.

5   Workforce Development

Coordination and collaboration

Coordinated care for vulnerable infants and their families requires input from a multi-skilled and multidisciplinary team of practitioners. The term **practitioner** encompasses a broad range of people including: midwives, neonatal specialists, paediatricians, psychiatrists, developmental and clinical psychologists, child psychotherapists, occupational therapists, nurses, social workers and family therapists.

Treatment services need to work collaboratively with universal and primary health services to develop more effective and efficient identification and referral pathways for children and families who need more specialised help. Workforce development strategies should:

- provide opportunities for universal service providers to obtain training and support in effective prevention strategies, such as screening for maternal mental illness and substance abuse

- provide training and support for universal service providers to strengthen their capacity to cater for the needs of a broad range of children and families

- provide opportunities for training for health professionals working in prevention, primary, secondary and tertiary services to improve their knowledge and skills to work with mothers, fathers, infants and their families

- provide training for secondary and tertiary mental health and AOD professionals in ways of working in integrated universal settings, as well as sharing specialist expertise with service providers across the spectrum of care

- provide training for secondary and tertiary professionals in best practice coexisting disorders (mental health and AOD) approaches to support integrated service delivery

- provide opportunities for Māori, Pacific peoples and people of other cultures to join the PIMH workforce

- train staff to appropriately engage with marginalised groups and improve services so that those services are available and accessible to these groups

- provide opportunities for staff to attend national and international conferences and training in order to support their continuing professional development

- link with other relevant training provided by other agencies or disciplines such as partner abuse and child abuse and neglect intervention training through DHB Violence Intervention Programmes.

Competency frameworks for the PIMH workforce

The *Let's get real*[16] framework describes the knowledge, skills and attitudes required by all people working in the mental health and addictions sector. It is intended that the DHB and NGO staff who work with people with concerns related to mental health and addictions will adopt this framework by 2011. The *Let's get real* framework describes three levels of competency: Essential, Practitioner and Leader. People in non-practice roles – that is, in support or administrative management roles – will be required to meet the Essential or Leader levels while practitioners will be required to meet the Essential and Practitioner levels.

For staff working in an environment with infants and families with mental health concerns, there are some areas that are uniquely different from working with adults only. *Real Skills Plus* CAMHS[17] is the adjunct competency framework to *Let's get real* for the **infant, child and youth** mental health and AOD workforce. It is presented as a progressive specialty-focused practitioner competency framework with two levels, practitioner-core and practitioner-specialist.

People working in support or management roles who need to meet the *Let's get real* Essential and/or Leader levels will, because they are working in an environment with **infants**, also need to understand the underpinning skills and principles of *Real Skills Plus* CAMHS.

A practitioner will need to meet the Essential and Practitioner levels of *Let's get real* as well as the practitioner-core or practitioner-specialist level of *Real Skills Plus* CAMHS.

Real Skills Plus CAMHS is organised into the four stages of Engagement, Assessment, Intervention and Outcome/Evaluation. It identifies the core and specialist skills required for working with infants, families and whānau, Māori, Pacific peoples and community.

Core skills and knowledge required for PIMH specialisation

All PIMH specialists will have knowledge specific to their discipline of maternal mental health and AOD and of infancy (0 to 3 years) including specialised knowledge of typical and atypical development and experience of working therapeutically with families. They will also be competent at working collaboratively with a range of health providers and allied disciplines. Appendix 5 provides further detail.

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[16] *Let's Get Real* was developed by Te Pou National Centre of Mental Health Research and launched by the Ministry of Health in 2008. More information can be obtained from www.tepou.co.nz.

[17] *Real Skills Plus* CAMHS was developed by the Werry Centre for Child and Adolescent Mental Health for workforce development and launched by the Ministry of Health in 2009. More information can be obtained from www.werrycentre.org.nz/?t=377

Clinical supervision

All PIMH specialists and PIMH teams will need to arrange regular access to clinical supervision from advanced infant mental health practitioners in this newly developing field. A key focus of this supervision will be systemic and relationship-based intervention that is informed by assessment and evidence and that incorporates best practice.

Responsibility for workforce development

Responsibility for workforce development does not rest solely with services. The Ministry of Health and Health Workforce New Zealand have a role in leading workforce development for the PIMH workforce.

Role of PIMH treatment services in workforce development

PIMH services will provide PIMH specialist support and supervision to the universal and primary health care workforce, including iwi health services. This role may include:

- providing opportunities for professional development through consultation and liaison activities with those working in universal and primary health services – particularly important for the development of regional services using the hub and spoke model

- coordinating and contributing to the development of PIMH through participation in forums that include health care and allied professionals as well as other stakeholders and families

- participating in the development of guidelines for screening and referral for PIMH services, ensuring their alignment with other relevant guidelines such as the Family Violence Intervention Guidelines.

Other resources for workforce development

The Infant Mental Health Association of Aotearoa New Zealand (IMHAANZ) is the New Zealand affiliate of the World Association of Infant Mental Health (WAIMH). IMHAANZ has links with 52 other affiliates of WAIMH,[18] provides access to seminars, disseminates resources on infant mental health and has a range of other functions of relevance to PIMH workforce development.[19]

The Michigan Association for Infant Mental Health[20] has developed a number of resources and training programmes, including best practice guidelines on reflective supervision and consultation.

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[18] See www.waimh.org

[19] For further information see http://imhaanz.org.nz

[20] See www.mi-aimh.org

6 Perinatal and Infant Mental Health Forum

During the development of this guidance document, many stakeholders suggested that a national PIMH forum should be formed.

Purpose of a PIMH forum

A PIMH forum would encourage stakeholders within the sectors of primary care, mental health (CAMHS, maternal mental health, adult mental health and AOD services), perinatal health (LMCs, obstetrics) and child health (neonatal intensive care unit, paediatrics, Well Child / Tamariki Ora) to work together and share their knowledge and experiences, and to foster collaboration.

The forum would encourage national discussion of aspects of prevention, early intervention, education and treatment of (and outcomes achieved for) infants, mothers and families. Enhanced communication would ensure closer connections among the people and organisations with expertise available across the different levels of PIMH services.

The forum would promote the development and consistent use of evidence-based guidelines and best practice principles within services at all levels. It could also provide a vehicle for the planning and coordination across regions of training and workforce development activities.

Effective communication across all levels of care, and across all relevant specialties and professional groups, could be facilitated by the use of information technology (including video-conferencing), especially when participants are separated by considerable geographical distances.

The forum could also provide a vehicle for an interface at a national level with other agencies with a role in supporting infants, children and families, especially CYF, the early childhood education sector and the Department of Corrections (regarding mothers and infants in prison).

The forum would need an agreed structure (terms of reference) and a regular review process to ensure its goals were being met from the perspectives of all stakeholders. The differing goals and objectives of service development in relation to clinical development would need to be reflected in the terms of reference and forum membership.

7   Research on Perinatal and Infant Mental Health

During the development of this document the following areas of maternal and infant mental health have been identified for further research.

Māori, Pacific and other ethnic groups

There is a need to:

- identify Māori and Pacific Islands models of supporting mother–infant and family and whānau relationships

- identify other indigenous models of supporting mother–infant and family and whānau relationships

- explore models of engaging, assessing and intervening with Māori, Pacific and Asian families and other families that are recent immigrants or where English is not the first language

- develop and evaluate interventions based on these models

- ensure the effectiveness and prevalence studies outlined below specifically examine these issues for Māori, Pacific and other ethnic groups.

Develop specific interventions that target vulnerable mothers, infants, families

Two groups of mothers and infants who are under-served in New Zealand are: mothers who have AOD disorders and may have a coexisting mental illness; and women who are in prison. Women in prison are also likely to have coexisting mental health and AOD problems. Interventions to address their multiple problems should include development of:

- procedures in developmental monitoring, screening and assessment for mental health and AOD problems during the perinatal period

- methods to engage these high-risk mothers and their infants in treatment

- interventions that target:
  - their AOD problems or disorders and/or mental illness
  - their family and whānau history which often includes domestic violence or a childhood history of sexual or physical abuse
  - the mother–infant relationship with an infant who may be withdrawing from drugs or vulnerable due to the effects of drug exposure, poor nutrition, inadequate antenatal care or other lifestyle factors
  - the infant's physical, social and emotional development and behavioural problems.

Interventions should be piloted and their effectiveness evaluated.

Other effectiveness studies

The effectiveness of other interventions currently being used in New Zealand needs to be determined, such as:

- Mellow Parenting (currently being trialled)
- Circle of Security
- Incredible Years INFANT
- interventions based on the Developmental, Individual Difference, Relationship (DIR) model (eg, Floortime)
- wraparound systems of care and residential care models such as those offered by the Anglican Trust for Women and Children in Auckland.

A systematic protocol needs to be developed for assessing the effectiveness of treating maternal and infant mental health. It would include:

- standardised measures of outcome
- measures of outcome that are relevant and acceptable to Māori
- maternal and/or family and whānau satisfaction with assessment, intervention planning and treatment and timeliness of the whole process
- length of time from referral to assessment through intervention planning to treatment.

Prevalence studies

Studies are required to determine the:

- prevalence of serious maternal mental illness during the perinatal period
- level of coexisting maternal mental illness and AOD problems or disorders during the perinatal period
- prevalence of primary caregivers (mothers, fathers, foster parents) presenting to primary care with children aged 0 to 3 years who have serious behavioural or developmental disorders
- prevalence of serious behavioural problems that are identified at daycare or preschools up to age 4 years.

Effective use of technology to support training and supervision

There is a need to develop ways to use current and/or new technology to:

- provide specialist supervision in rural areas
- develop the workforce engaged in treating maternal and infant mental health in rural or hard-to-reach areas of New Zealand
- provide specialist training in perinatal and infant mental health in rural or hard-to-reach areas of New Zealand
- disseminate best practice.

Educational research of allied health professionals, CYF and Family Court[21]

There is a need to develop and assess the usefulness of providing educational programmes about the importance of the mother–infant relationship and early child development to groups such as CYF, FACS and Family Court that work with high-risk mothers, infants and their families. Some examples of existing programmes include:

- the Tulane innovative care model which involves providing supervision focused on maternal or infant mental health to the senior staff supervising groups of nurse home visitors[22]

- the treatment programme developed specifically for mothers and infants in the Florida Family Courts

- the MH101 Mental Health Literacy Programme for Police and CYF workers funded by the Ministry of Health.[23]

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[21] The Family Court here includes Family Court judges, registrars, counselling coordinators, counsels for the child, and specialist family lawyers.

[22] See www.tulane.edu

[23] See www.mh101.co.nz

Appendix 1: Diagnostic Classification – DC:0-3R

Overview of Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood: revised edition (DC:0-3R)

The DC:0-3R uses a multi-axial classification system for clinical formulation. This approach focuses the clinician's attention on the factors that may be contributing to the difficulties of the infant or young child, adaptive strengths, and additional areas of functioning in which intervention may be needed.

AXIS I

1. Post-traumatic stress disorder

Post-traumatic stress disorder (PTSD) is described as a pattern of symptoms that may occur when a child has experienced a single traumatic event (eg, an earthquake, automobile accident, or mauling by an animal), a series of connected traumatic events (eg, repeated air raids or terrorist attacks), or an enduring situation (eg, domestic violence, chronic physical or sexual abuse).

2. Disorders of affect

Disorders of affect reflect an infant or young child's inability to regulate affect or mood. These disorders are usually associated with depressed mood, anxiety/fear and anger. For instance, the loss of a primary caregiver, particularly a parent, is almost always a serious stressor for a young child, and most young children do not have the emotional and/or cognitive ability to deal with such a major loss.

3. Adjustment disorder

Adjustment disorder is usually considered when any transient developmental disturbances: (1) do not meet the criteria for PTSD; (2) are not merely an exacerbation of another pre-existing disorder; or (3) do not represent developmentally appropriate reactions to changes in the environment.

4. Regulation disorders of sensory processing

Regulation disorders of sensory processing are constitutionally based responses to sensory stimuli. A diagnosis usually refers to a child's difficulties in regulating emotions and behaviours as well as motor abilities in response to sensory stimulation that lead to impairment in development and functioning. Sensory stimuli include touch, sight, sound, taste, smell, and sensation of movement in space.

5. Sleep behaviour disorder

The classification of sleep behaviour disorder is reserved for two types of conditions that occur after 12 months of age, when stable sleep patterns typically emerge: (1) sleep-onset protodyssomnia – disorders of initiating sleep; and (2) night-waking protodyssomnia – disorders of maintaining sleep (eg, waking up during the night, with difficulty returning to sleep).

6. Feeding behaviour disorder

Symptoms of a feeding behaviour disorder may become evident at different stages of infancy and early childhood. A diagnosis for this disorder should be considered when an infant or young child has difficulty establishing regular feeding patterns.

7. Disorders of relating and communicating

Disorders of relating and communicating are referred to as pervasive developmental disorders. They include autistic disorder, childhood disintegrative disorder, Asperger's disorder, Rhett's disorder, and pervasive developmental disorder not otherwise specified. A growing body of clinical evidence suggests children who are currently being diagnosed with pervasive developmental disorder present a range of relationship patterns, differences in affect regulation, and a variety of processing and cognitive difficulties.

8. Other disorders (DSM-IV-TR or ICD-10)

This classification is for other disorders related to mental health that are not covered by the DC:0-3R.

AXIS II

Relationship classification

Assessment of the relationship between parent/caregiver and infant is always required given the central role the primary relationship has in supporting the child's healthy development. Disturbance and disorder, when they exist, are specific to the relationship. The relationship classifications of Axis II identify the types of difficulties that clinicians are likely to see (ZERO TO THREE 2005, p41). In assessing the parent–infant relationship, the clinician should consider multiple aspects of the relationship dynamic, including:

1. overall functional level of both the child and the parent
2. level of distress in both the child and the parent.
3. adaptive flexibility of both the child and the parent
4. level of conflict and resolution between the child and the parent
5. effect of the quality of the relationship on the child's developmental progress.

There is a variety of established methods for assessing the relationships of infants and young children, the most well researched of which is concerned with attachment patterns (Ainsworth et al 1978; Main and Solomon 1990; Cassidy and Marvin with the McArthur Attachment Working Group 1992). All assessments use observation of interaction often via film to assess the quality of the relationship. Axis II in 0-3R offers two tools that together are of value in making decisions about relationship classification:

- the Parent–Infant Relationship Global Assessment Scale (PIR-GAS)
- the Relationship Problems Checklist (RPCL).

AXIS III

Medical and developmental disorders and conditions

Axis III should be used to note any physical (including medical and neurological) and/or developmental diagnoses made using other diagnostic and classification systems such as the DSM-IV-TR or ICD-10. Many psychiatric symptoms can be caused by medical illnesses. For instance, symptoms of irritability, frustration and behavioural dysregulation may be a consequence of other conditions that require a hearing test and speech/language evaluation.

AXIS IV

Psychosocial stressors

Axis IV provides a framework for identifying and evaluating psychosocial and environmental stressors that may influence the presentation, course, treatment and prevention of mental health symptoms and disorders in young children. The ultimate impact of a stressful event or enduring stress depends on three factors:

1. the severity of the stressor (its intensity and duration, the suddenness of the initial stress, and the frequency and unpredictability of its recurrence)

2. the developmental level of the infant or young child (chronological age, social and emotional history, biological vulnerability to stress, and ego strength)

3. the availability and capacity of adults in the caregiving environment to serve as a protective buffer and to help the child understand and cope with the stressor.

AXIS V

Emotional and social functioning

Axis V reflects the infant or young child's emotional and social functioning in the context of interaction with important caregivers and in relation to expected patterns of development. The following capacities are considered in a young child's emotional and social functioning:

1.   attention and regulation
2.   forming relationships or mutual engagement
3.   intentional two-way communication
4.   complex gestures and problem solving
5.   use of symbols to express thoughts and feelings
6.   connecting symbols logically and abstract thinking.

Appendix 2: Attachment

An attachment is a tie between an individual (the infant or child) and an attachment figure (generally a parent). It is a tie based on the need for safety, security and protection, all of which are critical for infants and children.

Most often the child's birth mother is the **primary attachment figure**; the parent's tie to the child is termed the **caregiving bond**.

It is incorrect to use the term **attachment** with respect to the adult's relationship with the child or as a synonym for the parent–child relationship as attachment is not a complete description of this relationship.

The day-to-day interactional quality in the first seven to eight months becomes the basis of the attachment pattern an infant develops with their parents/caregivers. The infant's attachment pattern cannot be assessed in these first months and importantly an attachment pattern can change as a consequence of environmental changes that lead to a consistent shift in caregiving behaviour.

We see the attachment tie in action from about seven months when we observe the child seek proximity to the attachment figure when their **attachment behavioural system** is activated by fear/threat, or anxiety/distress. How close the child needs to be to feel safe, secure and protected depends on the intensity of activation of their attachment system. A toddler may need to be back in the arms of their parent when hurt after a fall or they may be sufficiently settled by making eye contact with their mother after a stumble. When the attachment figure soothes a child emotionally, protects or ensures safety, they are providing a 'secure haven' for the child (Ainsworth et al 1978). Soothing in this context regulates the child's emotional state and the repeated experience of having their emotional states accurately understood and settled, most of the time, provides the support for the child to gradually develop self-regulation.

The attachment system is reciprocally balanced with the child's **exploratory system**. It is a balancing system responsive to internal and external cues. It is very difficult for a child to confidently play and learn (explore) if they are anxious or fearful; however, when the attachment figure is present and responsive to the child's distress, the soothed child can then confidently move away to explore. Then the attachment figure encourages and supports the child's discoveries and is providing a 'secure base' from which the child can explore (Bowlby 1969).

The development of attachment (adapted from Prior and Glaser 2006)

Phase 1: Birth to two–three months (pre-attachment – Ainsworth)

The infant has a variety of signals and behaviours that are relational, including direct gaze, smiling, gesturing, crying, and babbling. All of them may be directed to any adult although from birth some discrimination is evident. For example, having heard their parents' voices while in the womb, babies will turn towards their parents' voices preferentially from soon after birth.

Phase 2: Two to six months (attachment-in-the-making – Ainsworth]

Developmental gains support the infant's increasing discrimination between parents/caregivers and others. The infant has improving capacity for signalling and maintaining interaction (closeness) to parents.

Phase 3: Beginning between six–seven months and a year and continuing into the third year (clear-cut attachment – Ainsworth)

Signals and mobility become organised in a strategy utilised when distressed or fearful, so the infant is able to plan their behaviour. That behaviour is organised around the attachment figure and there is a general increase in discrimination between adults; for example, strangers become a source of alarm.

Phase 4: From the second–third year (the development of a goal corrected partnership – Bowlby and Ainsworth)

Due to their cognitive development the child begins to understand their attachment figure has their own goals so the relationship becomes more complex, and more thinking is involved. The child is also understood to be developing an internal working model of the relationship on the basis of attachment – caregiving experiences over time. For example, the child who has experienced their parent as protective and soothing when they are anxious or distressed can take that repeated interaction and hold it in their mind so that if the parent is not there when they fall at preschool they can allow themselves to be looked after by another adult, expecting that adult will be helpful. The child who has not experienced their parent as soothing when they have been injured, perhaps always being encouraged to be strong or not 'a softie', may not tell anyone about the fall and only later is it discovered that they fractured their arm.

Patterns of attachment

Infants develop different attachment patterns to specific attachment figures on the basis of repeated experiences when alarmed, fearful or distressed. These anxieties may be set off by tiredness, hunger, sickness or pain; or too great a distance or separation from the attachment figure; or an external threat like alarming noises or sibling rejection. Attachments emerge from interactions with maltreating figures as readily as from those with sensitive, responsive carers.

Patterns identified in infants from 12 to 18 months include secure (B), and insecure organised (which may be either A = avoidant or C = ambivalent or resistant) in that the infant has a behavioural strategy for managing distress and threat although at a physiological level they remain anxious.

For a parent to support their infant in developing a secure attachment to themselves they must avoid having prevailing interactions that:

- frighten the child
- show hostility to the child or consistent criticism/rejection of the child
- indicate they are uninvolved, passively rejecting and unresponsive to the child

- interfere with the child's self-soothing – for example, some parents may want their infant when awake to continually look at them so the infant cannot use looking away as a strategy for managing being overwhelmed by sensory input or when they feel tired; or a parent may intrusively touch and poke their child when the child is trying to disengage from interaction

- interfere with the child's exploration to the extent of alarming the child and therefore precipitating the need for attachment – for example, as an infant becomes more mobile crawling around, the parent may express fear verbally or nonverbally as soon as the infant gets a metre away, thereby keeping the child close at all times.

A fourth pattern, disorganised (D), is identified in 15 percent of low-risk populations but in 77 percent of the population of maltreated children. For these children, signals and behaviours will be seen in interaction with the attachment figure alongside patterns A, B and C when the attachment system is activated. They may indicate direct fear of the attachment figure or behave in ways that appear incongruous – for example, crying but being unable to go to their attachment figure. They are extremely distressed, frightened children whose attachment figure is the source of the fear and distress. As development proceeds these children become controlling in their interactions with the attachment figure, using behaviour that may be punitive and aggressive or overbright and caregiving towards the parent.

Infants with a disorganised pattern are very vulnerable children with high levels of anger, aggression, oppositional and controlling behaviours and low self-esteem and poor social skills. The strongest single predictor from the first six years of life for global pathology at 17½ years is having a disorganised pattern of attachment with the primary caregiver (Sroufe 2005)

The parental behaviour associated with the development of disorganisation includes:

- frightening behaviour – screaming, hitting, shaking, physical and sexual abuse

- being frightened of the infant – for example, the infant's distress or anger elicits a response from the parent whereby they become frightened of interacting, as they perceive the infant's cry as an angry assault 'just like the physically abusive partner' and become fearful and probably withdraw

- dissociated behaviour – an apparent trance-like state may be observed which is highly distressing for an infant

- disrupted affective communication – for example, the infant's crying is met by the parent's laughter, a marked mismatch that is very difficult for an infant to fit to and very stressful

- extreme parental misinterpretation of an infant's communication – for example, an infant at two weeks will use brief looking away to self soothe after intense moments of direct gaze with the parent, and the parent who interprets that behaviour as rejection or evidence that 'she doesn't love me' is misinterpreting the child's behaviour in a very concerning way

- caregiving strategies that elicit and reject infant attachment – here a parent may get considerable comfort themselves by feeding for a long time (closeness around that task) but be rejecting and hostile when the baby cries for rather too long in attempts to get their own close care.

In all these situations the infant becomes highly stressed and dysregulated.

The development of a disorganised pattern of attachment in the infant is correlated significantly with:

- parents who are unresolved with respect to loss and/or abuse they have experienced
- parents with mental health disorders, AOD problems and personality disorders
- teenage parents.

In a very general way, when we look at attachment in infants and young children we look at the relationship between the infant and parent/caregiver, observing:

- the signals and behaviour of the child when they are, for example, hurt, distressed or frightened and the capacity of the parent to provide a safe haven
- the child's comfort with exploring and the capacity of the parent to provide a secure base.

When an attachment figure struggles to provide security, protection and soothing we see differing patterns of attachment as children manage their stress. A child may over-use signals and behaviour indicating distress and anxiety with a parent who inconsistently provides comfort and the child struggles to feel settled enough to explore widely (C pattern= insecure ambivalent). Another child resorts to being busy, that is, over-using exploration as a strategy because in this relationship the parent does not react to distress in a way that settles distress; the parent is likely to encourage action, supporting the child to be independent and coping (A pattern= insecure avoidant).

In the D pattern of insecure disorganised, the attachment figure is a direct source of fear and stress and is unable to function as either a safe haven or a secure base.

It is important to be aware that in low-risk population samples, the incidence of avoidant (26 to 28 percent) and ambivalent attachment (8 to 13 percent) patterns is not uncommon. Therefore in themselves these patterns are not seen as pathological; they are variants across this balanced attachment–exploration system. However, there is substantial evidence that having at least one secure attachment relationship is valuable to a child's development.

A secure infant–parent/caregiver attachment (between 58 and 65 percent in low-risk populations) fosters a child's social and emotional development and promotes adaptive coping in stressful or high-risk environments. Secure attachment in early childhood is associated with good functioning across a number of areas.

- Across home and school settings these children are more positive and less negative emotionally (saying no, crying, whining) and are more compliant.

- They are less emotionally dependent on teachers, demonstrating greater self-reliance and are more positive in their interactions with peers and adults.

- Extending into adolescence they show greater interpersonal competence.

- Secure children rate higher on their capacity for empathy and as adolescents use more positive defences when dealing with difficult experiences.

- Environmental stress has negative effects on brain development in infancy and childhood but a secure attachment helps in regulating the production of stress hormones.

There are no studies of attachment in New Zealand populations but there are now many in different cultures across the world and all have found attachment theory to be applicable. There are cultural differences in how a parent:

- expresses their sensitivity (for example, the amount of touch that may be used)
- supports the child's exploration (for example, verbal encouragement versus non-verbal smiles).

However, all infants are identified as developing attachment relationships when they have available attachment figures.

Appendix 3: Principles of Assessment

The following principles of assessment in infancy and early childhood were established through a Zero to Three Working Group on Developmental Assessment, which comprised a multidisciplinary group of professionals and parents (Greenspan and Meisels 1996).

1. Assessment must be based on an integrated developmental model.

    A child's ability to function and develop in their environment is dependent on the interdependence of all domains of development (cognitive, motor, sensory, social and emotional) and should be included in a comprehensive assessment.

2. Assessment involves multiple sources of information and multiple components.

    For a complete picture of a child's strengths and weaknesses, assessments may need to include observations of the child in different contexts, and from different perspectives. For instance, a child may need to be observed at home and at preschool as there may be specific factors in one or both environments that are triggering and/or maintaining problem behaviour.

3. An assessment should follow a certain sequence.

    Establishing a good working relationship with the parent or caregiver is the first step in assessment. Mutual trust and respect are necessary before the assessment can move to focus on the practical outcomes.

4. The child's relationship and interactions with their most trusted caregiver should form the cornerstone of an assessment.

    Parents are usually better at reading their young child's cues or bids for attention than any professional. However, when the relationship between parent and child has been strained or has become maladaptive and there is no substitute relationship, consequences for the child's development can become strongly negative.

5. An understanding of sequences and timetables in typical development is essential as a framework for the interpretation of developmental differences among infants and young children.

    Early intervention requires an 'in-depth' understanding of child growth and development in all domains. Children grow and develop rapidly during infancy and there is wide variation in the age at which each child develops different skills.

6. Assessment should emphasise attention to the child's level and pattern of organising experience and to functional capacities, which represent an integration of emotional and cognitive abilities.

    Skills or behaviours without any functional application that are tested out of context have no place in developmental assessment and may impede progress. The underlying goal of assessment is to eventually help children make sense of their individual world.

7. The assessment process should identify the child's current competencies and strengths, as well as the competencies that will constitute developmental progression in a continuous growth model of development.

    Identifying only the problems in a child or in a parent–child relationship is overlooking the skills or strengths a child or parent might have that can be helpful in overcoming or meeting developmental or relationship challenges.

8. Assessment is a collaborative process.

    Assessment should be done in collaboration with the parent and the child and take into consideration other professionals' view of the child. The professional's job is not to put forward their singular view of the child, but to join the parent and other professionals in providing a multidimensional view of the child's strengths and current limitations.

9. The process of assessment should always be viewed as the first step in a potential intervention process.

    A complete assessment includes information about how to facilitate a child's development and the supports needed to achieve optimal outcomes. Continued assessment is needed to determine if the prescribed intervention is achieving the proposed clinical goals.

10. Re-assessment of a child's developmental status should occur in the context of day-to-day family and whānau or early intervention activities or both.

    Children behave differently in different environments. Problematic behaviours that occur in a daycare or a hospital setting may be completely different or even absent in the home environment or vice versa. In addition, as a child's growth and development normally occur at a very rapid pace, assessments should be conducted with enough frequency to determine whether further interventions are needed to support emerging development in all domains (social, emotional, cognitive, motor, language).

Appendix 4: Principles of Treatment

Principles for PIMH treatment should include the following.

- The earlier the intervention or treatment, the more positive outcomes are likely to be, partially because secondary complications are then less likely.

- For families with multiple risks and few protective factors, no single intervention is likely to be effective and multiple components of treatment that come from multiple health care and allied providers will be required.

- Case management and a model of service delivery that includes integration with universal and preventive services will be important to ensure a seamless system of care.

- It is likely that infants and young children who meet criteria for referral will require longer and more intensive services, and some may require intervention throughout their lifespan.

- Treatment for mothers and infants in this vulnerable group will require access to specialists with training and knowledge specific to infancy and early childhood.

- There should be a focus on the parent–child interaction and exploration of parental attributions of the child for optimal social and emotional developmental outcomes.

- The therapeutic mother–intervener relationship is key, especially when there is a history of trauma, loss or abuse.

- A family-centred approach that makes the parents and whānau partners in assessment, treatment and evaluation avoids feelings of parental helplessness and anger and improves chances for positive outcomes.

- Individual services need to be available both for parent and child as well as appropriate community support resources such as respite care, child care, housing, and basic necessities.

- Interventions need to be sensitive to differences in family structure and patterns of relating, including cultural, ethnic and socioeconomic differences.

Appendix 5: Common Core Skills and Knowledge Required for PIMH Specialisation

Infant related

- Ability to learn from observation
- Understanding of typical and atypical development
- Knowledge of medical complications in infancy
- Understanding of biopsychosocial model of development and effects of prematurity, illness, hospitalisation and special needs on infants and families
- Risk and protective factors for the child and family and whānau functioning

Mother–infant or primary caregiver–infant related

- Skills in supporting the mother–infant relationship
- Skills in identifying patterns in vulnerable early mother or primary caregiver relationships
- Knowledge of effects of maternal mental illness and/or AOD problems on the mother–infant relationship
- Knowledge of impact of past experience of being parented on current parents' expectations of their infant and their relationship with their child
- Knowledge of physical, psychological and social adaptations of pregnancy and the transition to parenthood

Family and whānau related

- Skills in supporting the couple relationship, the parenting subsystem and the father–infant relationship
- Awareness of family and whānau systems
- Awareness and knowledge of cultural variations in parenting style
- Knowledge of sources of risk and resilience in high-risk families
- Knowledge and skills in intervention with coexisting mental health and AOD problems

Team related

- Ability to integrate information from a number of disciplines
- Ability to communicate discipline-specific information to other disciplines
- Skills in facilitating and participating in multidisciplinary teams
- Skills in conflict resolution and joint planning
- Openness to different theoretical and disciplinary perspectives

Interagency and interdisciplinary related

- Skills in coordination of assessment, treatment and evaluation across health providers and allied disciplines

- Knowledge of parental rights and relevant legislation

- Knowledge of child and child protection legislation

Personal attributes

- Capacity to establish and maintain professional relationships

- Capacity for empathy

- Awareness of the effects of one's own personal and cultural background on work with high-risk families

- Flexibility and resilience

Appendix 6: People Consulted during the Development of this Document

The following key stakeholders provided external advice to inform and guide the development of this document and were asked to contribute to or comment on various draft versions.

Trecia Wouldes PhD	Senior Lecturer, Department of Psychological Medicine, University of Auckland
Dr Denise Guy	Child Psychiatrist, Infant Mental Health Specialist & Clinical Supervisor, Incredible Families Charitable Trust
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Lorrie Bennett	Team Manager, Maternal Mental Health, Waitemata DHB
Dr Louise Webster	Clinical Director, Starship Children's Hospital, Auckland DHB
Margaret Mitchell-Lowe	Service Clinical Director, CAMHS, Waitemata DHB
Dr Kimberley Powell	Lecturer in Early Years Teacher Education, Massey University
Dr Sally Merry	Associate Professor, Director of Research Werry Centre for Child and Adolescent Mental Health, University of Auckland
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Denise Murphy	Clinical Coordinator, CAMHS, Bay of Plenty DHB
Jacqui Coates-Harris	Clinical Nurse Manager, Perinatal Mental Health Service, Waikato DHB
Yvonne Alderson	Community Mental Health Maternal Nurse, Southern DHB
Marijke Cederman	Clinical Team Leader, Pregnancy and Parental Service, Community Alcohol and Drug Services, Waitemata DHB
Dr Debbie Wilson	Consultant Psychiatrist, Mothers and Babies Services, Canterbury DHB
Maree Foley	IMHAANZ President; WAIMH Board Member

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References

Ainsworth MDS, Blehar MC, Waters E, et al. 1978. *Patterns of Attachment: A psychological study of the strange situation.* Hillsdale NJ: Lawrence Erlbaum.

Austin M, Kildea S, Sullivan E. 2007. Maternal mortality and psychiatric morbidity in the perinatal period: challenges and opportunities for prevention in the Australian setting. *Medical Journal of Australia* 186(7): 364–67.

Baxter J. 1998. Culture and women's mental health: International perspectives for Aotearoa / New Zealand. In: Sarah Romans (ed), *Folding Back the Shadows: A perspective on women's mental health*. Dunedin: Otago University Press.

Baxter J. 2008. *Maori Mental Health Needs Profile: a review of the evidence*. Palmerston North: Te Rau Matatini.

Bowlby J. 1969. *Attachment and Loss. Vol. 1. Attachment.* New York: Basic Books.

Bronfenbrenner U. 1979. *The Ecology of Human Development.* Cambridge MA: Harvard University Press.

Burt V, Quezada V. 2009. Mood disorders in women: focus on reproductive psychiatry in the 21st century. *Canadian Journal of Clinical Pharmacology* 16(1): e6–e14.

Cassidy J, Marvin RS with the McArthur Attachment Working Group. 1992. *Attachment Organisation in Preschool Children: Coding guidelines.* Unpublished manuscript, University of Virginia.

Cohen L, Altshuler L, Harlow B. 2006. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *Journal of the American Medical Association* 295: 499–507.

Danese A, Moffitt EE, Harrington H, et al. 2009. Adverse childhood experiences and adult risk factors for age-related disease. *Archives of Pediatric and Adolescent Medicine* 163(12): 1135–43.

Elliot L, Coleman K, Suebwingpat A, et al. 2008. Fetal Alcohol Spectrum Disorders (FASD): systematic reviews of prevention, diagnosis and management. *HASC Report* 7(9).

Erol N, Sinsek Z, Oner O, et al. 2005. Behavioral and emotional problems among Turkish children at ages 2 to 3 years. *Journal of the American Academy of Child and Adolescent Psychiatry* 41: 81–87.

Felitti VJ, Anda RF, Nordenberf D, et al. 1998. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine* 14(4): 245–58.

Fergusson DM, Grant H, Horwood LJ, et al. 2005. Randomized trial of the early start program of home visitation. *Pediatrics* 116(6): 803–809.

Fraiberg S, Adelson E, Shapiro V. 1987. Ghosts in the nursery: a psychoanalytic approach to the problems of impaired infant-mother relationships. In: S Fraiberg (ed), *Selected Writings of Selma Fraiberg.* Cincinnati, OH: Ohio State University Press.

Goodman SH. 2007. Depression in women. *Annual Review of Clinical Psychology* 3: 107–35.

Greenspan SI, Meisels SJ. 1996. Toward a new vision for the developmental assessment of infants and young children. In: *New Visions for the Developmental Assessment of Infants and Young Children*. Washington DC: ZERO TO THREE.

Hardin BJ. 2004. *Safety and stability for foster children: A developmental perspective. The Future of Children* 14: 31–47.

Ihimaera LV. 2007. *Whakarato Whānau Ora – Whānau wellbeing is central to Maori wellbeing. (A companion paper to Te Raukura: Mental health and alcohol and other drugs: Improving outcomes for children and youth*, *Ministry of Health).* Palmerston North: Te Rau Matatini.

Kake TR, Arnold R, Ellis P. 2008. *Estimating the Prevalence of Schizophrenia amongst New Zealand Maori: A capture-recapture approach*. Dunedin: Otago University Press.

Kelly P, Farrant B. 2007. Shaken baby syndrome in New Zealand, 2000–2002. *Journal of Paediatrics and Child Health* 44: 99–107.

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

Knitzer J. 2000. Early childhood mental health services: a policy and systems perspective. In: JP Shonkoff and SJ Meisels (eds), *Handbook of Early Childhood Intervention*. Cambridge, England: Cambridge University Press.

Koot HM., Verhulst FC. 1991. Prevalence of problem behavior in Dutch children aged 2–3. *Acta Psychiatric Scandinavia* 83: 1–37.

Lawson CA. 2002. *Understanding the Borderline Mother: Helping her children transcend the intense, unpredictable, and volatile relationship*. Northvale NJ: Jason Aronson.

Main M, Solomon J. 1990. Procedures for identifying infants as disorganised/disoriented during the Ainsworth Strange Situation. In: MT Greenburg, D Cicchetti and EM Cummings (eds), *Attachment in the Preschool Years*. Chicago: University of Chicago Press.

Matthey S, Barnett B, Howie P, et al. 2003. Diagnosing postpartum depression in mothers and fathers: whatever happened to anxiety? *Journal of Affective Disorders* 74(2): 139–47.

Miller LJ. 1990. Psychotic denial of pregnancy: phenomenology and clinical management. *Hospital and Community Psychiatry* 41(11): 1233-7.

Minister of Health and Associate Minister of Health. 2002. *He Korowai Oranga: Māori health strategy.* Wellington: Ministry of Health.

Ministry of Health. 1996. *Well Child Tamariki Ora National Schedule Handbook.* Wellington: Ministry of Health.

Ministry of Health .1998. *New Futures: A strategic framework for specialist mental health services for children and young people in New Zealand*. Wellington: Ministry of Health.

Ministry of Health. 2002. *Family Violence Intervention Guidelines: Child and Partner Abuse.* Wellington: Ministry of Health.

Ministry of Health. 2007. *Te Raukura – Mental health and alcohol and other drugs: Improving outcomes for children and youth*. Wellington: Ministry of Health.

Ministry of Health. 2008. *Te Puāwaiwhero – The Second Māori Mental Health and Addiction National Strategic Framework 2008–2015.* Wellington: Ministry of Health.

Ministry of Health. 2010a. *Alcohol and Pregnancy: A practical guide for health professionals.* Wellington: Ministry of Health.

Ministry of Health. 2010b. *Service Delivery for People with Co-existing Mental Health and Addiction Problems: Integrated solutions.* Wellington: Ministry of Health.

Morgan VA, Jablensky AV. 2006. Exploring the role of reproductive pathology in the etiology of schizophrenia: what happens when mothers with schizophrenia give birth? *Directions in Psychiatry* 26: 1–14.

Munk-Olsen T, Lauresen TM, Pedersen CB, et al. 2006. New parents and mental disorders: a population-based register study. *Journal of the American Medical Association* 296(21): 2582–9.

Munk-Olsen T, Laurensen TM, Pedersen CB, et al. 2009. Risks and predictors of readmission for a mental disorder during the postpartum period. *Archives of General Psychiatry* 66(2): 189–95.

National Scientific Council on the Developing Child. 2007a. *Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper #3*. URL: www.developingchild.net (accessed 4 September 2011).

National Scientific Council on the Developing Child. 2007b. *The Timing and Quality of Early Experiences Combine to Shape Brain Architecture: Working Paper #5*. URL: www.developing child.net (accessed 4 September 2011).

New Zealand Guidelines Group. 2008. *Identification of Common Mental Disorders and Management of Depression in Primary Care. An evidence-based best practice guideline*. Wellington: New Zealand Guidelines Group.

Oakley Browne M, Wells J, Scott K (eds). 2006. *Te Rau Hinengaro: The New Zealand Mental Health Survey.* Wellington: Ministry of Health.

Oates M. 2003. Perinatal psychiatric disorders: a leading cause of maternal morbidity and mortality. *British Medical Bulletin* 67: 219–29.

Oates M, Rothera I. 2008. *Specialised Perinatal Psychiatric Services; Service Model, Organisation and Challenges*. PowerPoint presentation by Margaret Oates, 29 October 2008, at a Perinatal and Infant Mental Health Seminar, Auckland. URL: www.pmmrc.health.govt.nz/moh.nsf/pagescm/7489/$File/perinatal-psychiatric-services.pdf (accessed 14 January 2010).

Office of the Prime Minister's Science Advisory Committee. 2011. *Improving the Transition: Reducing social and psychological morbidity during adolescence. A Report from the Prime Minister's Chief Science Advisor.* Auckland: Office of the Prime Minister's Science Advisory Committee.

O'Hara MW. 2009. Postpartum depression: what we know. *Journal of Clinical Psychology* 65(12): 1258–69.

O'Hara MW, Swain AM. 1996. Rates and risk of postpartum depression -- a meta-analysis. *International Review of Psychiatry* 8: 37–54.

Paterson J, Carter S, Gao W, et al. 2007. Pacific Islands Families Study: behavioral problems among two-year-old Pacific children living in New Zealand. *Journal of Child Psychology and Psychiatry* 48(5): 514–22.

PMMRC. 2009. *Perinatal and Maternal Mortality in New Zealand 2007: Third report to the Minister of Health July 2008 to June 2009.* Wellington: Ministry of Health.

Prior V, Glaser D. 2006 *Understanding Attachment and Attachment Disorders: Theory, evidence and practice*. Child and Adolescent Mental Health Series. London: Jessica Kingsley Publishers.

Riordan D, Appleby L, Faragher B. 1999. Mother–infant interaction in post-partum women with schizophrenia and affective disorders. *Psychological Medicine* 29: 991–5.

Roberts C, Mazzucchelli T, Taylor K, et al. 2003. Early intervention for behaviour problems in young children with developmental disabilities. *International Journal of Disability, Development and Education* 50(3): 275–92.

Robertson E, Jones I, Haque S, et al. 2005. Risk of puerperal and non-puerperal recurrence of illness following bipolar affective puerperal (postpartum) psychosis. *British Journal of Psychiatry* 186: 258–9.

Robson B, Harris R (eds). 2007. *Hauora: Māori Standards of Health IV. A study of the years 2000–2005.* Wellington: Te Rōpū Rangahau a Eru Pōmare.

Ross L, McLean L. 2006. Anxiety disorders during pregnancy and the postpartum period: a systematic review. *Journal of Clinical Psychiatry* 67(8): 1285–98.

Royal College of Psychiatrists. 2000. *Perinatal Maternal Mental Health Services.* Council Report CR88. London: Royal College of Psychiatrists.

Skovgaard A, Olsen E, Houmann T, et al. 2005. The Copenhagen County Child Cohort: Design of a longitudinal study of child mental health. *Scandinavia Journal of Public Health* 33(3): 197–202.

Snellen M, Mack K, Trauer T. 1999. *Schizophrenia, mental state, and mother–infant interaction: examining the relationship. *Australian and New Zealand Journal of Psychiatry* 33: 902–11.

Solari H, Dickson KE, Miller L. 2009. Understanding and treating women with schizophrenia during pregnancy and postpartum. *Canadian Journal of Clinical Pharmacology* 16(1): 323–32.

Sroufe LA. 2005. Attachment and development: a prospective, longitudinal study from birth to adulthood. *Attachment and Development* 7(4): 349–67.

St James-Roberts I, Halil T. 1991. Infant crying patterns in the first year: normal community and clinical findings. *Journal of Child Psychology and Psychiatry* 32(6): 951–68.

Stanton J, Simpson S, Wouldes T. 2000. A qualitative study of filicide by mentally ill mothers. *Child Abuse & Neglect* 24(11): 1451–60.

Stroul B, Friedman R. 1986. *A System of Care for Children and Youth with Severe Emotional Disturbances*. Washington DC: Georgetown University Child Development Center, National Technical Assistance Center for Children's Mental Health.

Tipene-Leach D. nd. *A Decade of Maori SIDS Deaths (1989–1999) – Undercounting in action.* Auckland: University of Auckland.

Tupara H, Ihimaera L. 2004. *In the Context of Midwifery Practice: Recognition and management of mental health.* Wellington: Te Rau Matatini.

Ujas H, Rautava P, Helenius H, et al. 1999. Behavior of Finnish 3-year old children: effects of sociodemographic factors, mother's health and pregnancy outcomes. *Developmental Medicine and Child Neurology* 41: 412–19.

Viguera AC, Whitfield T, Baldessarini RJ, et al. 2007. Risk of recurrence in women with bipolar disorder during pregnancy: prospective study of mood stabilizer discontinuation. *American Journal of Psychiatry* 164(10): 1817–24.

von Hofacker N, Papousek M, Wurmser H. 2008. Feeding disorders and failure to thrive in infants and toddlers. In: M Papousek, M Schieche and H Wurmser (eds), *Disorders of Behavioural and Emotional Regulation in the First Years of Life.* Washington DC: ZERO TO THREE.

Weick A, Kumar R, Hirst AD, et al. 1991. Increased sensitivity of dopamine receptors and recurrence of affective psychosis after childbirth. *British Medical Journal* 303: 613–16.

ZERO TO THREE. 2005. *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood: Revised edition (DC:0-3R).* Washington DC: ZERO TO THREE Press.

Glossary of Terms and Abbreviations

AMHS	adult mental health services
AOD	alcohol and other drug
BPD	borderline personality disorder
CAMHS	child and adolescent mental health services
CAPA	The Choice and Partnership Approach is a clinical system developed by consultant psychiatrists Dr Ann York and Dr Steve Kingsbury. It is informed by capacity and demand theory and the development of a collaborative partnership between clinician and client that provides choices
CYF	Child, Youth and Family
DHB	district health board
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised – lists different categories of mental disorders and the criteria for diagnosing them
FACS	Family and Community Services – a division of the Ministry of Social Development that supports families
FASD	fetal alcohol spectrum disorder
GP	general practitioner
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th Revision – provides codes to classify diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease
IMHAANZ	Infant Mental Health Association of Aotearoa New Zealand
Iwi	Māori tribal group
Kōhanga reo	Māori language early childhood education centre
LMC	Lead Maternity Carer
NGO	non-governmental organisation
perinatal	relating to the period immediately before and after birth; the internationally accepted timeframe is from pregnancy to one year postpartum
PHO	primary health organisation
PIMH	perinatal and infant mental health
PPS	Pregnancy and Parental Service
Puerperal	relating to, connected with or occurring during childbirth or the period immediately following childbirth.
SDH	subdural haemorrhage (referred to as shaken baby syndrome)
Teratogenic	of, relating to, or causing malformations of an embryo or fetus
WAIMH	World Association of Infant Mental Health
Whānau	extended family