



Pregnancy Issues and Outcomes in
the Whanganui Region:
A literature review to inform the
Hapū Māmā Village project

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Background

It is well established that health inequities exist within Aotearoa New Zealand health services, with Māori experiencing higher rates of morbidity and mortality than their New Zealand European counterparts (Ministry of Health, 2015, 2020). For pregnant Māori women (hapū māmā) these inequities impact not only on wāhine (women), but on health outcomes for their pēpi (baby) (Lawton et al., 2013; Mantell, Craig, Stewart, Ekeroma, & Mitchell, 2004). The following review will summarise a number of previously identified inequities, risks, and barriers for hapū māmā, with a focus on māmā living in the Whanganui rohe. Once these have been identified, however, the review will move past a focus on deficits and will instead report how assets (or strengths) within services, communities, whānau, and pregnant women have supported quality outcomes for hapū māmā and pēpi. The purpose of adopting an asset-based framework is to identify what is working well for hapū māmā and how this could be transferred to improve health outcomes for all pregnant Māori and other women across New Zealand.

In Aotearoa, maternity care is, for the most part, free and is largely provided by midwives who are the largest group of lead maternity carers (LMCs). (Stevenson, Filoche, Cram, & Lawton, 2016). Lead maternity carers are independent providers who may be community-based or attached to a district health board (DHB) (Pullon, Gray, Steinmetz, & Molineux, 2014; Stevenson et al., 2016). Funding is not based on the registered-population, as is the case for other primary care services; enrolment of pregnant women with LMCs is based on availability and current caseload. This model is unique to New Zealand in that it allows women to choose their own LMC (Barnes et al., 2013). Providing continuity of care, it was believed that this model would lead to better outcomes for pregnant Māori women; however, this has not been demonstrated (Adcock et al., 2019).

Early pregnancy care is important, as it increases the likelihood of congenital screening, health promotion, and risk assessment (Dixon et al., 2014). First pregnancy contact is usually with a general practitioner (GP; e.g., 64% in 2014) (Ministry of Health, 2015); however, the large majority of women opt for an LMC for their follow-up care (Dixon et al., 2014; Lawton et al., 2013; Makowharemahihi et al., 2014; Priday, Payne, & Hunter, 2021). When there are issues in the transition between the GP and LMC, pregnancy care may be delayed (Makowharemahihi et al., 2014).

Aotearoa New Zealand has a young Māori population, with 33.7% of Māori under the age of 15 years (Ministry of Health, 2018). Moreover, Māori women are more likely to have pregnancies at a younger age (Ratima & Crengle, 2012); for example, in 2010, 16.6% of pregnant Māori women, compared to 4.8% of non-Māori women, were under the age of 20 years (Ministry of Health, 2010b). In addition, in 2017, the median age of pregnancy for women was found to be 26 years for wāhine Māori, 28 years for Pasifika women, and 32, 31, and 30 years for European, other ethnicities, and Indian women respectively (Ministry of

Health, 2019). Young pregnant Māori women are at increased disadvantage, in that they may be stigmatised both for being young and being Māori (Lawton et al., 2013).

Inequities, Risks, & Barriers through a Deficit Lens

The impact of inequity on hapū māmā and their pēpi

Inequities for hapū māmā begin before conception, with younger Māori women having lower use of contraception services and higher rates of health risks known to affect pregnancy (e.g., smoking, alcohol use, & mental health problems) (Copland et al., 2011; Lawton, Makowharemahihi, Cram, Robson, & Ngata, 2016). In addition, young wāhine Māori are more likely to experience an unplanned pregnancy than non-Māori women (Copland et al., 2011; Lawton, Makowharemahihi, Cram, Robson, & Ngata, 2016). For example, a study on self-reported pregnancy in high school found that, while 11.6% of sexually experienced high school students reported that they had been pregnant, the rates were higher for Māori and Pasifika, at 15.3% and 14.1% respectively (Copland et al., 2011). Pregnancies in younger women have been linked to poorer outcomes for both the mother and child, with increased risks of infant mortality and premature birth in mothers under 20 years (Chen, Wen, Fleming, Yang, & Walker, 2008; Coren, Barlow, & Stewart-Brown, 2003; PMMRC, 2011).

Nationally, more than half of New Zealand pregnancies are unplanned (53%), with 25% of babies being born to an unplanned pregnancy (Hohmann-Marriott, 2018). This is even higher for those with chronic health conditions (including depression, anxiety, asthma, & diabetes). Within this sub-group, two-thirds of Māori and Pasifika pregnancies are unplanned. This is markedly increased to 80% for those who are young, with lower income, do not have a partner living with them, and are less educated (Hohmann-Marriott, 2019). Unplanned pregnancies are associated with increased risk of medical complications due to unmanaged maternal health conditions (e.g., pre-diabetes, diabetes, & hypertension).

Once pregnant, Māori women experience a number of barriers to accessing best practice pregnancy care (Makowharemahihi et al., 2014). Many of these are the result of socioeconomic disadvantages and inequality (Tupara & Tahere, 2020). For example, Māori women report difficulty accessing information around early pregnancy care (Ratima & Crengle, 2012). This is likely to contribute to the tendency for Māori to engage with an LMC at later stages of their pregnancy than non-Māori women. Early engagement with maternity care in Aotearoa is less common in women under 20 years (47.7%), those who are Māori (55.2%) or Pasifika (35.5%), or living in areas of high deprivation (51.9% of Quintile 5 women) (Ministry of Health, 2019). While the National Institute for Health and Care Excellence (NICE) guidelines advise women to initiate maternity care within the first 10 weeks of pregnancy (NICE, 2010), 29.2% of wāhine Māori and 62.0% of Pasifika women in a multi-ethnic South Auckland sample did not engage with antenatal care before 18-weeks gestation (Corbett, Okesene-Gafa, & Chelimo, 2014). It has been established that Māori women of all ages experience difficulties transitioning between their primary health care provider (who has generally confirmed the pregnancy) to an LMC (Makowharemahihi et al., 2014; Priday et al., 2021). This has been noted to be the first barrier in accessing pregnancy care, leading to delays. Access barriers occur for a number of reasons, including lack of information, inability to get hold of a midwife, reduced access to a telephone, and a fear of discussing maternity needs with a stranger. Many of those who attempt to contact LMCs themselves report difficulties reaching them and setting up successful antenatal care (Makowharemahihi et al., 2014). Those supported by their primary care service provider report a more cohesive

maternity care pathway than those who are not. Thus, positive experiences include recommendations from the GP, who they trust, and co-location of midwifery services within the general practice (Priday et al., 2021; Pullon et al., 2014).

Young wāhine Māori report concerns about privacy to be a barrier to accessing early pregnancy care (Copland et al., 2011). Within this cohort, a third of women report prior experiences of having their confidentiality broken by a health practitioner within the past year.

The 2016 World Health Organisation (WHO) recommendations advise that women should have a minimum of eight antenatal contacts throughout their pregnancy; one in the first trimester, two in the second trimester, and five in the third trimester (World Health Organisation, 2018). Māori have been found to engage in fewer antenatal visits with their LMC than non-Māori (Ratima & Crengle, 2012).

Lack of access to Māori primary health care providers has been reported to exacerbate these issues, as many Māori feel reluctant to clarify information from non-Māori practitioners, due to a lack of empathy (Ministry of Health, 2010a; Ratima & Crengle, 2012). It has been noted that pregnant women prefer to engage with midwives that come from the same ethnic background as themselves, with increased communication issues between midwives and mothers when this is not the case (Pullon et al., 2014).

Not only does poor access to information affect enrolment with an LMC, it has also been reported to impact on attendance of antenatal classes (Ratima & Crengle, 2012).

Despite the provision of free maternity care within New Zealand, between 2013-2017, there were significantly more foetal and infant deaths among Māori and Pacific Island babies than other ethnicities (Ministry of Health, 2018). In addition, Māori babies were more likely than non-Māori babies to be hospitalised for avoidable health issues (Ministry of Health, 2017).

Risk factors for hapū māmā and their pēpi

Smoking

Smoking during pregnancy has been linked to significant harms for babies, including pre-term birth, low birth weight, birthing complications, and sudden unexpected death in infancy (SUDI) (Walker, Graham, Palmer, Jagroop, & Tipene-Leach, 2019). It has also been linked to ongoing health issues during childhood, including asthma and other respiratory issues (McLeod, Pullon, & Cookson, 2003). It is well recognised that indigenous women have higher rates of smoking during pregnancy (Gould, Patten, Glover, Kira, & Jayasinghe, 2017; Walker et al., 2019). In Aotearoa, Māori are disproportionately represented in terms of smoking during pregnancy with between 35-37% identified as smokers, compared to 9% of non-Māori (M. Glover & A. Kira, 2011; SmokeFree Aotearoa New Zealand, 2021). Smoking is, however, a modifiable risk factor (Eddy, Prileszky, Nicoll, Barker, & Anisy, 2015) and there is a large emphasis on advising pregnant women to quit (Hoek, Maubach, Gifford, & Newcombe, 2015). Women at increased risk of smoking include those from areas of high deprivation, with lower levels of education. Many of these women have observed others within the community smoking throughout pregnancy, may not have seen evidence of negative outcomes in babies born around them, and may see quitting as something that will separate them from their

immediate support system, who are also likely to smoke (Marewa Glover & Anette Kira, 2011; Hoek et al., 2015). In a qualitative study by Hoek and colleagues (2015), pregnant women that identified as smokers saw smoking as 'normal' within their social networks and felt that smoking was a choice over which they had control. Despite this, the majority of women regretted smoking during pregnancy and had unsuccessfully attempted to quit at some point. In phase 2 of the study, women reviewed three different types of advertisements; 1) seriously unwell babies that had been affected by maternal smoking; 2) parents expressing their desire for their children to grow up healthy and without losing their parents to smoking-related death; and 3) the benefits of raising children in a smoke-free environment. It was found that women were more motivated by the emotionally-laden advertisements that showed direct harm to the infants and those that did not overtly advise them to quit. Didactic messages were demonstrated to impact on women's sense of autonomy over their smoking behaviour, promoting counter-productive responses.

This was supported in a study by Walker et al. (2019), who identified that quitting smoking was a high priority for indigenous women; however, there was a desire for self-agency. Many women believed that reducing the number of cigarettes smoked per day, or having periods of no smoking throughout the pregnancy, would reduce the harm to their baby. Women reported a need for culturally appropriate programmes, believing that the current mainstream smoking cessation programmes were 'inaccessible and impersonal and failed to deliver care'. It was noted that support around building non-smoking social connections would have been of benefit. In addition, there was a need for clear, accurate information about the risks to the child. This included information around the safety of nicotine replacement therapy as an option during pregnancy. Support from other women and family to quit smoking was identified as an important factor in the quitting process.

Schilling and colleagues used information from the Growing Up in New Zealand Longitudinal Study to identify smoking rates across three different phases of pregnancy; pre-pregnancy, during pregnancy, and post-pregnancy (Schilling, Hedges, Carr, & Morton, 2018). A total of 20.3% of women were found to smoke prior to becoming pregnant, with increased risk for Māori women and those living in areas of high deprivation. Of these women, 48.5% quit smoking during their pregnancy; however, 36% relapsed after birth. It was found that those who were less likely to quit during pregnancy smoked more heavily, were more likely to live with other smokers, and were less likely to have a high school qualification. Māori were less likely than non-Māori to quit; however, there was no difference in rate of relapse. The importance of focusing on reducing smoking in households of heavy smokers was identified.

Alcohol Use

The impact of alcohol differs between Māori and non-Māori women (Tupara & Tahere, 2020). For example, 'Māori are more likely to live in communities saturated with alcohol outlets' (p. 60), which has been found to be correlated with increased hazardous drinking (ActionPoint, 2020). Wāhine Māori are more than twice as likely to meet the criteria for hazardous drinking than non-Māori women. In addition, wāhine Māori are exposed to more negative outcomes as a result of someone else's alcohol consumption.

Drinking alcohol during pregnancy has been linked with increased risks to the foetus, such as Foetal Alcohol Spectrum Disorders (FASD) (Mallard, Connor, & Houghton, 2013). FASDs occur in approximately 1-5% of live births (Rossen, 2018). A 2013 New Zealand study found that 34% of women had consumed alcohol during their pregnancy, with 24% of women drinking

alcohol after confirmation of pregnancy (Mallard et al., 2013). Heavy alcohol exposure early in gestation was identified in 12% of pregnancies, with Māori and Pacific women demonstrating significantly more risk (5 times and 3.4 times the risk respectively). In a more recent study, it was found that 22.6% of women reported that they had consumed alcohol during the first trimester, with a further 13.4% who had consumed alcohol after the first three months (Rossen, 2018). 'Heavier drinking in the first trimester was highest among younger women, and significantly higher in Māori women, women who were the most deprived, without a secondary school education, in their first pregnancy and with an unplanned pregnancy' (p. 31). These studies highlight the increased risk of alcohol use in wāhine Māori and Pacific women while they are pregnant.

Exposure to Violence

Wāhine Māori are much more likely than non-Māori women to be assaulted or hospitalised due to an assault or attempted homicide (Ministry of Health, 2019b). It has been noted that Māori women are nearly three times more likely than the national average to experience intimate partner violence (IPV), with the large majority (77%) of the most violent incidents occurring within childbearing age (15-29 years) (Ministry of Justice, 2018). The largest group of women referred to women's refuge during the 2018/19 period were women between the ages of 21-30 years (31%) (National Collective of Independent Women's Refuge Inc., 2018/19). Over this time, 57,036 referrals were made to the service, with Māori disproportionately represented. Māori comprised 38.6% of referrals, compared to Pākehā (37%), Pasifika (5%), Asian (1.7%), and Other (11%). In a recent New Zealand study, looking at IPV in pregnancy, it was identified that IPV incidents were more common for wāhine Māori who were living with their partner than those who were living with non-related others (Bird et al., 2021). In addition, incidents of IPV increased in conjunction with perceived levels of stress. For Pasifika women, increased time living in New Zealand was associated with increase IPV risk, while high levels of family cohesion served to decrease the risk. One third of Pacific women described at least one incident of partner-related physical conflict over the course of their pregnancy. This was compared to one in five Māori or Asian women and one in 20 European women.

Maternal Mental Health

'Between 2006 and 2019 there were 116 maternal deaths [deaths during pregnancy or within 42 days of miscarriage, termination, or birth] in Aotearoa and, of these, 45 (38.8%) were Māori women' (Tupara & Tahere, 2020, p. 62). Mental health contributed significantly to this number, with suicide the primary cause of these deaths (PMMRC, 2017; Tupara & Tahere, 2020). Of the 30 deaths by suicide over this time, Māori women comprised 60% (18 deaths), making the number of Māori deaths by suicide 3.41 times higher than those of European women (Tupara & Tahere, 2020). In addition, it was noted that, in 2019, wāhine Māori within the general population presented with higher rates of psychological distress than non-Māori (17.5% vs. 10.4% respectively) and nearly a quarter (24.4%) of Māori women were diagnosed with depression (Ministry of Health, 2019, cited by Tupara & Tapere, 2020, p.61). A previous history of depression is associated with increased risk of postnatal depression, with Māori at higher risk than non-Māori (Oakley Browne, Well, & Scott, 2006). This, in conjunction with high maternal suicide rates, highlights the significant burden of mental health on wāhine Māori.

Maternal mental health issues have also been demonstrated to impact on the outcomes for the child (V. Glover & Barlow, 2014). For example, children of mothers who were stressed, anxious, or depressed while pregnant have been shown to demonstrate more psychosocial and cognitive issues than those whose mothers did not experience these issues (V. Glover, 2011). Internationally, it has been identified that there are gaps in the system around screening for mental health issues in pregnant women, with minimal mental health screening in this cohort in New Zealand (PMMRC, 2017). A recent New Zealand study identified a lack of any formal screening tool, noting that both pregnant women and LMCs found mental health screening to be ad hoc (Holden, Hatters-Friedman, Corter, & Soosay, 2020). Clinical impression was noted to be the primary method of identification. Pregnant women and LMCs differed in their beliefs around women's receptiveness to discussions about mental health. LMCs believed that the women would not be receptive to such screening. Pregnant mothers, on the other hand, stated that they would welcome the opportunity to discuss their mental health issues; however, they currently feel unsupported to raise these concerns. It was also acknowledged that, even if mental health issues were identified, there is currently a lack of clinical pathways, supports, and systems to manage them (Holden et al., 2020).

Discrimination is another area for concern, as it is associated with decreased engagement with early pregnancy care and adverse birth outcomes (Stevenson et al., 2016; Thayer, Laia, & Polly Atatoa, 2019). Discrimination in health can occur via one of two routes; interpersonal or institutional (Jones, 2000). At an institutional level, discrimination impacts on health via its influence on social determinants; for example, employment, income, and housing (Thayer et al., 2019). Interpersonally, it has the ability to impact on service provision and quality of care, via the relationship between the person and their health care provider or others in their environment. Interpersonal discrimination has been linked to poor health outcomes, such as, increased blood pressure, stress, and mental health issues (Krieger, 2014; Paradies et al., 2015). In a study by Thayer et al. (2019), it was found that there is a relationship between the experience of discrimination and adverse birth outcomes; however, this was only the case for Māori women. For example, Māori women who experienced discrimination in their workplace, or accessing housing, while pregnant were more likely to have lower birth weight babies than Māori women who did not experience discrimination in these areas. Moreover, Māori women who experienced an ethnicity-based physical attack, discrimination at work, or discrimination within the criminal or banking systems, had significantly short gestation periods. This is a significant finding in that babies who are born pre-term or are lower weight at birth are more likely to experience negative health issues over their lifetime (Thayer et al., 2019).

Gestational Diabetes

Worldwide, the incidence of gestational diabetes (GD) is increasing, with significant differences according to ethnicity (Daly, Raiman, & Goodson, 2017). For example, while the prevalence of GD is 2 – 6% in Europe, it is up to 20% in high risk populations, which includes New Zealand (Auckland District Health Board, 2015; Daly et al., 2017). There is a strong association between body mass index (BMI) and GD. In a recent New Zealand Health Survey, it was reported that 47.8% of wāhine Māori met the criteria for being obese (Ministry of Health, 2019a). In addition, as Māori and Pasifika women have higher rates of fertility (2.7 & 2.5 births respectively, compared to 1.9 and 1.7 for Pākehā and Asian women), this increases the risk of GD within the population (Daly et al., 2017). Because of this high risk within the New Zealand population, the importance of screening for GD during pregnancy has been raised. In a study by Daly et al., however, it was found that 'screening rates for Māori and

Pacific were unacceptably low and significantly lower than those for New Zealand European, European, and Asian women' (p. 28). In addition, those between the ages of 25-29 were less likely to be screened than women 35-40 years of age. This highlights an inequity in screening, particularly for younger women. In addition, a recent study by Immanuel, Eagleton, Baker, and Simmons (2021) found that, as a result of hyperglycaemia during pregnancy, Māori and Pacific women were significantly more likely to experience pre-eclampsia and eclampsia and give birth to babies of large birth weight (above the 90th centile) than other ethnicities (Immanuel, Eagleton, Baker, & Simmons, 2021). This highlights the importance of ensuring GD screening in Māori and Pacific women.

Illicit Drug Use

While women tend to engage in illicit drug use less than men, those that use substances develop substance use disorders more rapidly (Louw, 2018). Moreover, substance use disorders are most frequently developed during adolescence and young adulthood, during high reproductive years, with high polysubstance use noted during pregnancy (Delano, Gareri, & Koren, 2013; Reitan, 2017; Terplan, Smith, & Glavin, 2010). A previous history with alcohol, nicotine, or illicit drug use are associated with increased risk of substance misuse during pregnancy (Powers, McDermott, Loxton, & Chojenta, 2013). In addition, lower levels of education, younger age, increased levels of stress or intimate partner violence, unemployment, and previous trauma have been found to be risk factors (Bailey, Hill, Hawkins, Catalano, & Abbott, 2008; Powers et al., 2013; Trussell, 2007; Wendell, 2013).

In 2020/2021, Māori women were twice as likely as non-Māori women to use cannabis and more than 2.5 times more likely to use amphetamines (Ministry of Health, 2021a, 2021b).

Antenatal Inequities

Prenatal Screening

Prenatal screening for conditions such as trisomy 21 is an established part of maternity care within New Zealand (Payne, Wise, Stone, & Pillai, 2017). Women engage with prenatal screening differently, depending on when their pregnancy is identified, cultural and religious practices, and views about screening within the whānau. In addition, health literacy has a big impact, with low screening rates associated with lower levels of understanding about the test. The concern, therefore, is whether women are declining the screening for personal reasons or whether they may choose to have the screening but do not follow through due to lack of understanding or inability to complete it. A study by Payne et al. (2017) found inequity in prenatal screening, with Māori and Pasifika being 60% and 80% less likely to complete prenatal screening than New Zealand European women. In addition, women under the age of 30 years or living in areas of high deprivation were also less likely to participate in screening. Finally regional differences were noted, with those living in the Whanganui region less likely to complete screening than those living in the Auckland area.

Maternal Periodontal Disease

In 2020/2021, Māori women were less likely than non-Māori women to visit a dental health care worker within the past year (Ministry of Health, 2021e). In addition, they were more likely than non-Māori women to have had at least one tooth extracted over that time period,

due to abscess, decay, infection, or gum disease (Ministry of Health, 2021d). Pacific women were also less likely to have visited a dental health care worker and nearly three times more likely than non-Pacific women to have had at least one tooth extracted within that year (Ministry of Health, 2021d, 2021e). Māori and Pacific women were less likely than other ethnicities to rate their oral health as excellent, very good, or good (Ministry of Health, 2021c).

Poor maternal oral health is associated with systemic disease (i.e., diabetes or cardiovascular disease), pre-eclampsia, and women who have periodontal disease are more likely to have premature babies or babies born at lower birth weights than those with healthy gums (Kumar et al., 2018; Moura da Silva, Coutinho, Piscocoy, Ximenes, & Jamelli, 2012).

Pregnancy through a Māori Lens

Traditional Māori birthing practices

Prior to the arrival of Europeans, Māori had their own understanding and approach to pregnancy and childbirth (Hawaikirangi, 2021). Stories depicting the roles and value of women were passed down through generations, highlighting the importance of women within Te Ao Māori (the Māori worldview) (Mikaere, 1999). These included the role of Papatūānuku, from whom human whakapapa (genealogy) began and links to *whenua* (land) are made, Hineahuone, the first woman to be created by Tane, a son of Papatūānuku, who later became Hine-nui-i-te-pō (guardian of the underworld), and the roles of other important women within the stories of Māui, who contributed to his achievements (e.g., his grandmothers, Mahuika & Muriranga-whenua) (Hawaikirangi, 2021; Palmer, 2002). Reflected within these stories were the important roles of, and equality between, both males and females within society.

Pregnancy was a highly valued and celebrated role within Māoridom, as women were seen as *te whare tangata* (the house of people), who carried and birthed the next generation (Best, 1975; Hawaikirangi, 2021). Pregnancy signified the continuation of whakapapa (Hawaikirangi, 2021). It was normalised and young women were involved in the pregnancies and birthing practices of women around them (Palmer, 2002). Pregnancy was seen as one of the 'rites of passage to womanhood and the source of mana wāhine' (Palmer, 2002, p. 23). The wellbeing of pregnant women was prioritised, with great efforts taken to provide them with the foods they desired, for the enrichment of the baby. Hapū māmā (pregnant mothers) continued to participate in their societal roles until a few days before the birth, with some restrictions because they were considered *tapu* (sacred) during this time (e.g., they were not allowed to enter an *urupā* [cemetery] or to take part in certain food gathering rituals) (August, 2004; Palmer, 2002). These restrictions served to preserve the physical and spiritual wellbeing of mother and child.

Pre-European Māori knowledge around pregnancy was extensive and included a comprehensive care plan for hapū māmā and their *pēpi* (baby) (Hawaikirangi, 2021; Palmer, 2002). This included confirmation of birth, estimation of delivery, monitoring during each stage, *mirimiri* (a traditional form of massage), which was used for milk promotion and to determine the baby's position within the womb, and *rongoā* (traditional medicine) (Palmer, 2002). In addition, pre-birth preparations were made by the mother and her female relatives throughout the pregnancy, which included collecting raurēkau, patete, or mangeao leaves to

wrap the baby in, making a *whāriki* (mat) or garments to keep the baby warm, and gathering *angiangi* moss for nappies and sanitary pads.

A few days prior to the birth, the hapū *māmā* moved into a *whare kōhanga* (nest house), where she stayed until approximately 10 days after birth, supported by female relatives (Best, 1975; Palmer, 2002). Post-birth, this allowed her time to bond with her *pēpi*, away from usual duties, and recover from the birth. It also minimised risk of infection (Durie, 1994). *Tītoki* oil-soaked natural plant fibres were used to tie the *iho* (umbilical cord), which was then cut with a sharp stone (Best, 1975). Pregnancy-related complications were rare within this Māori model of pregnancy care. Where complications occurred, *tohunga* (priests/healers) were called to provide *karakia* (prayer) for the mother and baby. If the complications were related to the afterbirth, the mother was taken to a stream, where an attendant would stand on her stomach, shifting where the weight was placed, until the *whenua* (placenta) was delivered.

The arrival of Pākehā and the associated colonisation of Māori impacted on traditional Māori birthing practices (Hawaikirangi, 2021; Mikaere, 1999). According to Jenkins and Pihama, “the silencing of Māori women’s voices has meant the silencing of our theories and world views” (Jenkins & Pihama, 2001) (p.294). It has been argued that traditional Māori stories, translated through a colonial patriarchal lens, depicted Māori women as ‘shy, complacent, passive and inferior’ (Hawaikirangi, 2021, p. 11); thereby disrupting the traditional roles of equality between sexes and minimising the importance of their role within society (Mikaere, 1999). Moreover, Pākehā beliefs around sexuality, pregnancy, and birth were considerably more conservative and women tended to hide themselves away while they were pregnant (Clarke, 2012). Unlike Māori women, who participated in everyday activities during and soon after their pregnancy, Pākehā women spent much of their pregnancy lying down and a longer period of time in bed after the birth (Hawaikirangi, 2021). In addition, while Māori generally gave birth in an upright position, Pākehā gave birth lying down. Māori birthing customs were viewed as ‘uncivilised’ (Donley, 1986) and Pākehā birthing practices became the dominant expectation through the process of colonisation and associated prejudice (Clarke, 2012; Stevenson et al., 2016). In addition, the introduction of Christianity to Māori and enforced legislation, such as the Midwives Act 1904 and the Tohunga Suppression Act 1907, impacted on hapū *māmā*’s ability to legally give birth using traditional methods (Clarke, 2012).

Unlike the majority of Pākehā, who by 1938 had moved to giving birth in hospitals, deemed cleaner and safer than giving birth at home, only 17% of Māori opted for hospital births (Clarke, 2012). By 1962, however, 95% of all New Zealand born babies were born in hospital. In part, this was attributed to the aforementioned legislation; however, in addition to this, incentives and rewards were also used to encourage participation. By this time, ‘Māori were three times more likely than non-Māori to die during childbirth’ (Hawaikirangi, 2021, p. 13) and infant mortality was high, with a quarter of Māori babies dying within their first year of life (Palmer, 2002). The maternity system was inherently racist, with many Pākehā women travelling long distances to ensure they were in a Pākehā facility and not sharing a facility with *wāhine* Māori. Special wards were set up to separate Māori women from Pākehā women, under the guise that it ‘would allow the “natives” to access skilled birth attendants and provide the opportunity for them to learn more civilized methods of childbirth’ (Palmer, 2002, p. 33). *Whānau* support was discouraged within the hospital system and *wāhine* Māori were often separated from their other children, due to long distances between the hospitals and their homes. These factors, in conjunction with numerous others, led many Māori women to be distrustful of the maternity health services and to avoid them, where possible.

Antenatal Care

The growth and development of a foetus in the womb impacts on the health of that child as a newborn and through into adulthood (Ebcog Scientific Committee, 2015); thus, good antenatal care is essential for the child's future health and wellbeing. Access to appropriate antenatal care has been demonstrated to reduce many of the risks associated with prematurity, congenital abnormalities, issues with foetal growth, and asphyxia. This occurs through identification and modification of different lifestyle risks, such as smoking, drinking alcohol, drug taking, poor nutrition, obesity, and inadequate intake of folic acid, and appropriate education around these issues (Ebcog Scientific Committee, 2015; Hawaikirangi, 2021). While attending to the medical aspects of pregnancy are undoubtedly important, it has also been acknowledged that there is a need to address the psychosocial aspects of a woman's life (V. Glover & Barlow, 2014). For example, it has been identified that maternal stress can have long-term effects on an unborn child and mental health issues during pregnancy (e.g., depression & anxiety) lead to increased risk of cognitive, emotional, behavioural, and neurodevelopmental issues in children.

Prior to European colonisation, wāhine Māori learned about pregnancy and birth through female relatives and others close to them (Hawaikirangi, 2021). The introduction of the medical model of pregnancy shifted the focus away from whānau and onto medical professionals, with a move towards education via formal antenatal classes. It has been argued that the mainstream standards of midwifery, which focus on the partnership between midwife and mother, exacerbate this separation from whānau as central to the birthing process (Kenney, 2011).

Māori, like many other indigenous and minority groups, are less likely to access antenatal care than non-Māori, with studies suggesting that, while wāhine Māori represent 24% of women giving birth in New Zealand, only 10% of those attending antenatal classes are Māori (Dwyer, 2009). A 2015 report, which surveyed 3801 women (471 of whom were Māori), found wāhine Māori were significantly less likely to engage in antenatal classes (25%), when compared to other ethnicities (43%) (Buchanan & Magill, 2015). The study found that, even for first babies, Māori were less likely to attend because they 'did not want to' (14%) than other ethnicities (9%) or because they could not afford to (7% compared to 3% of other ethnicities). For this reason, it is recognised that there is a need for Kaupapa Māori antenatal initiatives (Boulton, Tamehana, & Brannelly, 2013; Dwyer, 2009; Hawaikirangi, 2021). According to Durie (2001), Kaupapa Māori approaches to healthcare should include:

- Services led by Māori ("by Māori, for Māori" where possible)
- A tikanga Māori approach (i.e., based on Māori values)
- Whānau, hapū (sub-tribes) and iwi (tribes) involvement in all areas of service delivery
- Traditional Māori healing practices
- An ability to provide cultural assessment and practices
- *Whakawhanaungatanga* (or a connectedness between people)

Māori midwives

It has been acknowledged that there are a lack of Māori midwives in Aotearoa, New Zealand (Kenney, 2011; Tupara & Tahere, 2020). In addition, Māori midwives are bound by the cultural competencies required of mainstream midwives, where Māori knowledge and tikanga (e.g.,

rongoā) are not valued and are controlled by mainstream policies. The national professional organisation that represents Māori midwives and the interests of hapū māmā and their families is Ngā Māia Trust, formed in 1993. Through Ngā Māia, a set of 10 principles were established, in 2006, as cultural guidelines to inform midwifery practice. These are referred to as Tūranga Kaupapa and comprise (Tupara & Tahere, 2020, p. 32):

1. Whakapapa
2. Karakia
3. Whanaungatanga
4. Te Reo Māori
5. Mana
6. Hau Ora
7. Tikanga Whenua
8. Te Whare Tangata
9. Mokopuna
10. Manaakitanga

These 10 kaupapa were incorporated into the Midwifery Standards for Practice and the Competencies for Entry to the Register of Midwives in 2007, in an attempt to uphold Te Tiriti obligations (Tupara & Tahere, 2020). New Zealand is the first country in the world to integrate indigenous concepts into their midwifery regulations. While this is a positive first step, however, it has been noted that these kaupapa were not co-designed at a national level and are not integrated within the philosophies surrounding the midwife-woman partnership model and are, therefore, cultural tokenism (Kenney, 2011). In addition, it is argued that the way in which these have been incorporated present Māori tikanga as ‘other’, prioritising the Eurocentric position as the norm, thus implicitly reinforcing the colonising discourse.

A further concern is that that only around 9% of New Zealand midwives who hold a practising certificate (APC) are Māori (Midwifery Council of New Zealand Te Tatau o te Whare Kahu, 2019; Tupara & Tahere, 2020). It is well established that clinical outcomes can be enhanced when the ethnicity, world view, and cultural identity of the service provider matches that of the patient (Durie, 2001; Marie, Fergusson, & Boden, 2008); thus, there are currently an insufficient number of Māori midwives to meet the needs of the Māori population. ‘Māori midwives are geographically dispersed throughout Aotearoa with main areas of concentration being Auckland, Christchurch, Far North, Gisborne, Hamilton, Hastings, Manukau, Rotorua, Tauranga and Waikato’ (Tupara & Tahere, 2020, p. 38). According to the Midwifery Council of New Zealand Te Tatau o te Whare Kahu (2019), there are only two Māori midwives in the Whanganui region. Of interest, Māori midwives tend to be younger than non-Māori midwives (with an average age of 43 years, compared to 47 years) and remain in practice for an average of 12 years, as opposed to 15 years for non-Māori midwives (Calvert, 2020, cited by Tupara & Tahere, 2020, p. 42). It has been suggested that the inability to retain Māori midwives is due to marginalisation of Māori and their tikanga within midwifery (Kenney, 2011).

Literature from an Asset-Based Lens

An Alternate Stance

The current literature review highlights inequity and areas of concern for pregnant wāhine Māori and their pēpi. These inequities are well documented in the literature and have been

presented here as a way of summarising areas where hapū māmā and their pēpi are at risk of, and susceptible to, adverse outcomes. Moreover, it is acknowledged that, historically, Māori maternity tikanga and care led to high quality outcomes for māmā and pēpi; however, colonialism has separated hapū māmā from traditional birthing practices. It has been demonstrated that this Eurocentric approach to maternity care does not meet the needs of many hapū māmā.

While it is necessary to be aware of health inequity, a continual deficit focus has been reported to perpetuate inequity, as it places control in the hands of service providers (Morgan & Ziglio, 2007). Increased reliance on health services impacts on an individual's ability to flourish by decreasing self-determination and the ability to take responsibility for one's own health and wellbeing. Morgan and Ziglio assert, therefore, that it is better to view health and wellbeing through the lens of the Asset Model (AM), which focuses on what people need in order to flourish and be well. This approach fits within the traditional Māori approach of *whānau ora*, which asserts that health and wellbeing depend on a balance of all areas of life (i.e., physical, spiritual, cultural, emotional, etc) and encompasses the health and wellbeing of the collective (i.e., whānau, hapū, and iwi) (Boulton & Gifford, 2014). The AM identifies areas of strength within individual's, whānau, and the community, and ways in which these resources may be used to promote positive health outcomes.

Smoking

A number of positive interventions have been carried out nationally to support pregnant mothers around smoking cessation (Eddy et al., 2015; M. Glover, Kira, & Smith, 2016). For example, Eddy et al. (2015) conducted a prospective observation study with six LMCs utilising the Ministry of Health ABC guidelines (Ask about smoking, Brief advice, Cessation) (Ministry of Health, 2014). Collectively, the LMCs provided care for 203 women, with high numbers of young mothers (60% under 25 years) and Māori (50%). Approximately 50% of the women in the service were identified as smoking at least one cigarette per day; 45.6% of women smoking were Māori. Of those for whom data was recorded, 79% of women lived in a home with at least one other smoker. Sixty-five women lived with their partner and 77% of their partners were reported to smoke. A further 18 women were involved in stable, committed relationships; 83% of their partners were smokers. The large majority of houses (85.3%) were described as smokefree homes, with all smoking occurring outside of the house. Over a 15-month period, smoking-focused discussions, using the ABC approach, were carried out with pregnant women and their partners and other household members, with all care provided in the woman's home. Pregnant women received a larger number of ABC interventions than others in the whānau, due to the fact that other family members were not always present at the time of the visits. A smokefree status was assigned to anyone who made the conscious decision to quit smoking and had not smoked a cigarette in the past 48 hours. If, anytime after that 48 hours, the woman started smoking again, this was recorded as a relapse. Thirty-two women were recorded as smokefree over the period of intervention, with 50% relapsing either during or after the pregnancy. Fifteen percent of partners quit smoking along with 2.7% of other adults. By the end of the intervention, 90% of all homes were considered smokefree. Māori, Pasifika, and women under 25 had the highest rates of success with this intervention. These results suggest that midwives have the ability to influence smoking cessation in women of these demographics, using a focused ABC intervention with women and their whānau.

Glover et al. (2016) identified the late registration of Māori to pregnancy care as being a potential issue with providing the ABC intervention approach to wāhine Māori via midwives.

These authors developed a pregnancy-related smoking intervention focused on the use of 'Aunties' (Māori community health workers) as a way to identify and support hapū māmā to quit smoking (M. Glover et al., 2016). "Aunties" are linked to the communities in which they work and have an intimate knowledge of the backgrounds and experiences of women within their community. 'They act as a bridge between their communities and health care professionals, providing an interface between modern medicine and traditional knowledge, and... usually provide support to high need communities' (p. 1111). Glover et al. argued that using 'Aunties' to identify hapū māmā who are currently smoking is proactive, rather than reactive, improving the ability to reach priority women who are often more difficult to engage. The study found 'Aunties' to be an appropriate way to identify and reach these women; however, the level of ongoing support varied. Nearly a quarter (24%) of women quit smoking through this intervention, suggesting that this may be a culturally appropriate way of engaging pregnant wāhine Māori.

Whanganui Stop Smoking Service - Hapū Māmā Interventions

The Whanganui Stop Smoking Service (WSSS) provides funded support to the Whanganui community to quit smoking (personal communication, 17 February 2022). The target demographic is wāhine Māori aged 18-30. For this group, much of the reach occurs through social media. For example, the WSSS have rolled out a recent Health Promotion Agency online initiative called Kuini. Kuini is a Māori avatar/chat bot that women can use to support them through the quitting process, via Facebook. The WSSS have used the concept of Kuini to reach out to wāhine Māori and encourage them to quit smoking. In addition, 'Quit TikTok' competitions were held during December 2021. A young Māori summer student released six TikToks on social media. Two of these were narrative (involving Māori women talking about smoking in a relaxed environment) and four were 'trending' dances or videos. Over the course of December, the number of WSSS Instagram followers increased from 103 to 132, as a result of this initiative. In addition, the number of WSSS TikTok followers increased from 3 to 65, with a total of 329 'Likes'. This suggests that social media is successfully reaching the target population within the Whanganui community.

As part of the target demographic, the WSSS is committed to supporting hapū māmā to quit smoking during pregnancy (personal communication, 17 February 2022). One of the ways this is achieved is also through social media. The WSSS connect with hapū māmā via an online Facebook group 'Hapū Whānau Connecting'. In addition, hapū māmā are invited to attend monthly in-person gatherings to connect and socialise, while engaging in activities, many run by wāhine Māori, with a tikanga focus. A quit coach attends these groups to provide education and support for māmā in a relaxed manner.

Other Whanganui Asset-based Interventions

In Whanganui, it has been recognised that management of early pregnancy is haphazard and requires a more structured approach (Cvitanovic, Gifford, & Parata, 2015; Gifford, Parata, & Cvitanovic, 2015). As a region, Whanganui is a high deprivation area, with 63% of its population living in the two most deprived socioeconomic areas (Quintiles 4 & 5), compared to the national average of 40% of the population (personal communication). In addition, while Māori represent 16% of the population nationally, 27% of the adult population and around 40% of the paediatric population of Whanganui are Māori. In 2020, 320 of the 685 of the women who gave birth in the region were Māori (46.7%, compared to the national average of 25% of women who gave birth), 39 Pasifika (5.7%), 44 Asian (6.4%), and 282 other

ethnicities (41.2%) (Whanganui District Health Board, 2019/2020). The large majority (77.3%) came from Quintile 4 and 5 areas (personal communication; Ministry of Health, 2019). While deprivation among Whanganui pregnant women was noted across all ethnicities, Māori and Pasifika were more likely to come from high deprivation areas than women from other ethnicities (89.8% for Māori & 84.2% for Pasifika women, compared to 64.3% for Asian women & 69.7% for women from other ethnicities).

In 2012, the Whanganui and MidCentral DHBs carried out a project that mapped women's maternity journey (MidCentral & Whanganui District Health Boards, 2013). The purpose was to identify areas where collaboration between DHB maternity services and other maternal agencies could be strengthened. In addition to this, a Primary Maternity Services Interface Group was developed to 'create the best possible maternity service in which all mothers and babies are the focus of care, feel safe and have improved outcomes (p.2) (Whanganui & MidCentral DHBs, 2012).

In Whanganui, equity and providing population based care has been a focus of the Whanganui Regional Health Network (WRHN) since its inception (Spence, personal communication, 21 February 2022). The WRHN is a Primary Health Organisation (PHO) encompassing 15 general practices within the Whanganui District (Gifford, Parata, & Cvitanovic, 2015). Within maternal care, this has led to a focus on Māori, Pasifika, and women from areas of high deprivation (Spence, personal communication, 21 February 2022). The model focuses on cultural beliefs around pregnancy and using whānau to provide support in early pregnancy. In addition, it emphasises the provision of antenatal education in a forum that meets the needs of hapū māmā. Equity is enhanced through a number of initiatives being run through the WRHN. This includes 'Rā Hapū Wahine' (antenatal days) and Pēpi Pods (safe sleeping spaces used to decrease sudden infant death in infancy [SUDI]) (Whanganui District Health Board, 2019). Rā Hapū Wahine are a 'one stop shop' concept, where hapū māmā are offered immunisations, transport, kai, labour and birthing information, pēpi pods, and other information depending on identified need (Spence, personal communication, 21 February 2022).

In 2014, the WRHN developed a MedTech-integrated electronic Early Pregnancy Assessment Tool (EPAT), for use in general practice, in an attempt to improve health outcomes for high-risk pregnant women and their babies (Cvitanovic et al., 2015; Gifford et al., 2015). The purpose of the tool was to identify vulnerable women who might not be accessing appropriate early pregnancy support and to 'promote a consistent best-practice approach to first trimester antenatal screening assessment and management' (p. 11) (Gifford et al., 2015). In 2015, this was expanded to an Early Pregnancy Assessment Approach (EPAA), as it was identified that a stand-alone tool would not address identified gaps (e.g., the management of alcohol, tobacco, and other drug issues). It became apparent that there needed to be increased levels of cohesion across services to deal with the issues raised. The purpose of the EPAA was to improve:

- Quality primary care assessment of women in their first trimester;
- Health outcomes for pregnant women and their babies;
- Levels of enrolment with a LMC;
- Levels of tobacco, alcohol, and other drug use; and,
- Safe, non-violent living situations during pregnancy
- Cohesion between LMCs and general practice

A maternal navigator role was developed to support women who were identified to be 'at risk' (Gifford et al., 2015). The purpose of the role was to provide immediate support to these expectant mothers and facilitate connections with any services required. In addition, an Active Pregnancies extension was incorporated, where women were offered subsidised access to antenatal aquarobics classes, via the Green Prescription initiative. Other Whanganui-based initiatives included in the EPPA included the Pēpi-Pod Programme and additional pregnancy and parenting courses. The Pēpi-Pod Programme is a national programme that provides a safe capsule for babies who may be at more risk of accidental suffocation, in addition to support and education for mothers and caregivers. In Whanganui, the contract is held by the WRHN. The WRHN also run one of the pregnancy and parenting courses, which has been modified to fit with the EPAA's focus around early pregnancy, by separating the sessions into information about early, and then later, pregnancy. Providers of early pregnancy care (e.g., general practitioners and LMCs) are encouraged to refer women early in their pregnancy, as a way of addressing lifestyle factors that may impact on the health of the expectant mother or her baby.

Other Regional Asset-based Interventions

He Korowai Manaaki

He Korowai Manaaki is a Kaupapa Māori (by Māori, with Māori, for Māori) augmented maternal care project currently being implemented in Te Wairoa, on the East Coast of New Zealand (Lawton et al., 2021). Te Wairoa is a rural area, with a high Māori population (Adcock et al., 2019). The purpose of the programme is to improve outcomes for Māori hapū māmā and their pēpi, through strong iwi partnership and involvement and improved access to social and health-related services (Adcock et al., 2019; Lawton et al., 2021). While hapū māmā are still supported through the usual LMC pathway, they receive additional appointments with their general practice, including an initial 'First Touch' extended appointment, which includes screening around issues such as mental health, family violence, and sexually transmitted infections and risk identification (Lawton et al., 2021). A checklist is carried out, which identifies areas where wāhine may require additional support (e.g., transport to appointments, oral health, and safe housing). Within this appointment, pregnancy-related medications and screening for congenital abnormalities are offered (e.g., iodine & folic acid), medical conditions are identified, and support is provided to access an LMC. This is followed up at a second appointment, to ensure that hapū māmā are enrolled with a maternity provider. The programme extends to supporting wāhine to obtain appropriate contraception following the birth of their pēpi.

He Korowai Manaaki is based on an asset model approach to health and wellbeing (Adcock et al., 2019). In contrast to the traditional model of identifying the deficits impacting on health, this model focuses on strengths and assets of individuals and the community, as a way of promoting positive health outcomes (Rippon & South, 2017). It is used to determine the factors that support people to flourish in terms of health and wellbeing (Morgan & Ziglio, 2007). As part of this approach, assets, strengths, and resources of individuals and the community are identified, through the process of 'asset mapping' (Morgan & Ziglio, 2007; Rippon & South, 2017). Assets include anything viewed to be a strength within the region and may include individual people, services, resources, and community organisations (Adcock et al., 2019). This process identifies intergroup connections, allowing for the implementation of strategies that will engage, involve, and empower people within the community to take responsibility for their own health and wellbeing (Morgan & Ziglio, 2007). 'It aligns with

Kaupapa Māori Research and ‘Whānau Ora’ (Māori family wellness) – an approach that places whānau, hapū, and Iwi in the centre of decision-making and promotes self-determination’ (p. 510) (Adcock et al., 2019). Through this process, improved collaboration between providers of maternity care has been established.

Hapū Wānanga

Another positive initiative occurring within the antenatal sector is *Hapū Wānanga*; a free Kaupapa Māori-based education programme that provides information to hapū māmā about labour, birth, and parenting (Hawaikirangi, 2021). In addition, mothers receive a bed and bedding, some clothing, and toys for their pēpi (Hapū Hauora, 2016). The programme was introduced in New Zealand in 2016, based on a similar programme used in Finland. ‘It was created and developed by experienced Māori midwives in the Midlands region after consultation with health kaimahi (workers), project managers, koroua/kuia, and design and consumer representatives’ (Hawaikirangi, 2021, p. 20).

Hapū Wānanga is provided in many places across New Zealand, with each programme adapted to meet the needs of hapū māmā and to utilise the resources available (Hawaikirangi, 2021). The programme is based on a combination of traditional Māori practices and Western medical knowledge and provides a pathway to other services, where needed. Teaching methods vary and incorporate traditional Māori approaches to learning, such as *wānanga* (educational seminars), *pūrākau* (ancient legends & stories), and the tuakana/teina model, where knowledge is shared between all those participating. There is a strong focus on whānau participation, with whānau or support people encouraged to attend the two day wānanga. Within Te Ao Māori, *whakawhanaungatanga* (the process through which meaningful relationships are created and maintained) is crucial (Jones, Crengle, & McCreanor, 2006); thus, involving whānau at all levels of pregnancy reinforces and facilitates intergenerational connectedness (Hawaikirangi, 2021). Wānanga take place in community or marae-based settings and include kai (food). Support with transport is provided where required.

While Māori are less likely to attend mainstream antenatal programmes, reporting negative experiences within these approaches, they enjoy participating in Hapū Wānanga programmes (Hawaikirangi, 2021). An evaluation of hapū wānanga by Hawaikirangi (2021) found learning about traditional Māori maternity practices was of value to everyone who attended; that is, both hapū māmā and their whānau. Women reported using aspects of these practices in their birthing experience, describing this as empowering and allowing for the assertion of *tinorangatanga* (self-determination). In addition, use of traditional Māori practices (e.g., mirimiri), learned through the hapū wānanga experience, was noted to ‘foster connection in whānau relationships’ (Hawaikirangi, 2021, p. 59).

In addition to antenatal benefits, other positive outcomes have been noted, including the ability for women to leave abusive relationships and attempts to reduce addictive substance use (Hawaikirangi, 2021). It was suggested that these changes occur through empowerment, as women feel confident to engage with other services and make personal life changes.

Other Strengths-Based Findings

Makowharemahihi and colleagues conducted a study with young Māori hapū māmā, under the age of 20 years, using a Kaupapa Māori framework (Makowharemahihi et al., 2014). The purpose of the research was to understand the lived realities of these women. As part of the

research, areas where things that had worked well for young Māori women were identified. Of note, when health professionals provided additional support, beyond that of the initial pregnancy test, women experienced better continuity of care within the maternal pathway. In addition, having the support of whānau, or recently pregnant friends, helped hapū māmā navigate decisions around accessing midwife care.

Conclusion

There are significant health- and social-related inequities within pregnancy, particularly for Māori and Pacific women. In addition, these populations experience higher pregnancy-related risks, on average than other New Zealand populations. For many of these women, the social determinants of health have a large impact on their outcomes. Factors that impact on pregnancy outcomes for hapū māmā and their pēpi include smoking, alcohol and other drug use, exposure to violence, maternal mental health, gestational diabetes, reduced engagement with antenatal screening, and maternal periodontal disease.

The current literature review identifies a large number of areas of concern for Māori and Pasifika. It is important to acknowledge that these issues exist; however, it is equally important to shift the focus from a deficit model of health to one that promotes positive outcomes and equity (Morgan & Ziglio, 2007). For this reason, it is suggested that those working in the pregnancy-related sector adopt an assets-based approach to supporting pregnant women. Several examples of asset-based approaches have been highlighted in this review, demonstrating the value of such a methodology and the way in which positive outcomes can be achieved for high risk groups of women. It is suggested that, where there are identified areas of deficit within a region, there is a need to identify the assets of those involved (i.e., hapū māmā, whānau, service providers, iwi, supporting services) and how the strengths within each of these groups could be used to promote positive health and wellbeing for hapū māmā and their pēpi. This could be achieved through the process of community asset mapping. By implementing an asset-based approach to pregnancy, there is potential to implement strengths-based strategies that will serve to support hapū māmā in ways that are not currently meeting their needs.

When viewed from an asset lens, it is possible to identify ways in which strengths of the community, whānau, and hapū māmā themselves can be used to create a framework that provides culturally appropriate antenatal care.

Firstly, good support networks were identified as contributing to positive outcomes for hapū māmā (Kenney, 2011; Makowharemahihi et al., 2014; Stevenson, Filoche, Cram, & Lawton, 2016); thus, whānau and friends are significant assets. It is important, therefore, to identify people who women feel close to and to provide opportunities for whānau engagement within the antenatal process. Hapū Wānanga are a considerable asset in this respect, as there is a strong focus on whakawhanaungatanga and intergenerational connectedness throughout the antenatal period (Hawaikirangi, 2021). In line with this, given the preference for pregnant women to engage with people of the same ethnicity and world view (Durie, 2001; Marie, Fergusson, & Boden, 2008), Māori health professionals, particularly Māori midwives, are also assets. Access to Māori health professionals would be a strength within an antenatal pathway. It was noted, however, that there is a shortage of Māori midwives and many experience a lack of professional support; thus, there is a need for improving support for this group of women and an increased focus on recruitment and retention of Māori health professionals.

Where it is not possible to access Māori health professionals, there are still many assets available within primary care to support hapū māmā. One of the biggest assets is engagement; when health professionals actively engage with hapū māmā, continuity of care is enhanced (Makowharemahihi et al. 2014; Stevenson et al., 2016). It was noted that many women have difficulty accessing pregnancy care information (e.g., Tupara & Tahere, 2020) and transitioning between their primary health care provider and the LMC (Wharemakomahihi et al., 2014; Priday et al. 2021). Good engagement with one consistent primary health care provider ensures women are able to ask questions, become informed about their pregnancy, and are supported to find an LMC that they feel comfortable with. Of note, LMC recommendations from a general practitioner and co-location of midwifery services within general practices were also identified as assets. Moreover, it was identified that there is a need for women, particularly young hapū māmā, to feel assured that their privacy and confidentiality will be maintained (Copland, 2011).

An early focus on screening is also an advantage; that is, screening for tobacco, alcohol, and other drug use, mental health screening, screening for gestational diabetes, and prenatal screening. Identifying services within the community, alongside appropriate support people, to facilitate access and engagement for hapū māmā in these areas is essential; for example, the proactive use of 'Aunties' to identify and support hapū māmā within the local community to quit smoking (Glover, Kira, & Smith, 2016). In addition, identifying the individual assets of each pregnant woman and working with these to improve confidence, leads to empowerment, self-agency, and the ability to make personal life changes (Hawaikirangi, 2021).

It is also valuable to identify areas within the service or community that could support hapū māmā to attend appointments (Stevenson et al., 2016). Stevenson et al. identified transport and childcare, in particular, to be of concern.

Finally, when young pregnant Māori women feel appropriately supported, the majority choose to connect with aspects of traditional Māori antenatal care (Stevenson et al., 2016). Māori culture, tikanga, and Te Ao Māori are significant assets on which practitioners, whānau, and hapū māmā can draw. Engagement with traditional birthing practices may be beneficial to wāhine Māori and the provision of such services will serve to legitimise and normalise this as an approach, thereby allowing Māori women to reclaim tino rangatiratanga over the birthing process.

In summary, there are indisputable inequities in pregnancy outcomes for Māori women and their pēpi. These inequities begin before conception, are maintained during pregnancy, and are continued into the lives of Māori children. The introduction of colonial birthing practices led to Māori antenatal practices becoming subsumed by European practices. This, in turn, created a system where hapū māmā and their pēpi were disadvantaged. Identifying that these inequities exist is important; however, it is time to change the focus and look at what we have available within whānau, services, and the community to support pregnant women and their pēpi to experience positive pregnancy outcomes.

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