ENCOURAGING AUAHI KORE (SMOKEFREE) PREGNANCIES IN NORTHLAND

REPORT OF A FORMATIVE EVALUATION

Public and Population Health Unit and Service Development and Funding, Northland District Health Board

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WHAKATAUKI

Me he manu motu i te māhanga – Freedom: like a bird escaped from the snare

A vision of pregnant women in Northland free from tobacco addiction, and children having the freedom to start life in the best way possible

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 EXECUTIVE SUMMARY

Northland District Health Board's Tupeka Kore (Tobacco Free) Strategic Plan has identified pregnant women who smoke (particularly Māori) as a key priority for smoking cessation support over the period 2008-2011. This formative evaluation is designed to inform the Northland District Health Board's service response in this area.

Key Findings of the Formative Evaluation Are:

- There is a high burden of smoking in pregnancy in Te Tai Tokerau (Northland) - an estimated 40% of pregnancies involve smoking.

- The number of Māori smoking pregnancies is much higher than the number of Non-Māori smoking pregnancies, and this is likely to be a very significant factor in the inequities in birth outcome and child health in Northland.

- There are no pregnancy specific smoking cessation services or initiatives currently operating in Northland.

- Very few pregnant women who smoke in Northland are supported by a smoking cessation programme (approximately 5%).

- Women who continue to smoke in pregnancy, particularly Māori, have high need for cessation support. They are more likely to have complex issues that make quitting very difficult and are often surrounded by smokers in family, work, and social environments.

- The midwifery workforce in Northland is stretched, and there are very few Māori midwives. Many midwives feel unsupported and under-confident in smoking cessation practice.

- Most midwives and General Practitioners do not have a good awareness of the main community cessation provider in Northland - Aukati Kai Paipa.

- Maternity service systems could be better set up to prompt, assist and remind staff about supporting their clients with smoking cessation.

- Smoking cessation interventions during pregnancy are effective at reducing the prevalence of smoking in late pregnancy, and at reducing preterm births and low birthweight. They are also cost-effective.

- Interventions incorporating incentives, biofeedback and enhanced social support appear to be the most effective for smoking cessation in pregnancy.

- There are a number of best practice principles that can be learned from pregnancy smoking cessation initiatives in other parts of New Zealand.

Recommendations:

A. Better Support for Aukati Kai Paipa

Consider ways in which Aukati Kai Paipa services in Northland could be strengthened and supported to incorporate best practice principles into their provision of services to pregnant women. In particular:

- Establishing a good referral network with midwives and other health/family services staff that have contact with pregnant women and new mothers.
- Specific training in pregnancy NRT, and motivational interviewing.
- Use of simple biofeedback (e.g. CO monitor) +/- incentives (e.g. vouchers for baby products).
- Opportunity for mentoring from pregnancy smoking cessation services in other regions.
- Strong systems and protocols, including an IS platform.
- Flexibility in the amount of contact, style, and timing of contact – matched to client, but with an underlying philosophy of long-term support (12 months plus).
- Including partners and whanau as clients, and protocols for referral on to other whanau support services.

B. Support for Maori Role Models and Maori Community Action

- Increase the number of smokefree role models by supporting Māori staff (midwives, community health workers, health care assistants, nurses etc) to quit smoking - providing adequate incentives (e.g. leave from work to attend cessation programme, free medication, rewards, quit and win contests).

- Support programmes which engage with and challenge Māori whanau and community norms around smoking, e.g. Māori SIDS Mokopuna Ora Programme.

- Consider scholarships to attract applicants (particularly Māori) into midwifery training with in-built smoking cessation training.

C. Pregnancy Smoking Cessation Coordinator

Consider creating a regional 'Pregnancy Smoking Cessation Coordinator' position. This position should be trialled as a pilot, with robust evaluation. Roles could include:

- Telephone support of midwives, GPs, practice nurses etc throughout Northland who need advice on NRT prescription for pregnant women, and/or advice on how to support or refer on.
- Strengthening links and referral pathways between health care practitioners (and social and family services) working with pregnant women and Aukati Kai Paipa providers in Northland.
- Link midwife role, and ongoing education and training of midwives in pregnancy ABC throughout Northland.
- Facilitating link between antenatal classes and cessation service providers.
- Fostering midwife smokefree 'champions' in each district.

- Working with secondary care ABC Smoking Cessation Coordinator to establish stronger ABC systems within maternity services, and auditing the effect of these systems.

- Supporting and strengthening AKP practitioners in their service provision to pregnant women.

D. Stronger Smokefree Systems in Maternity and Primary Care

- Embed smoking cessation ABC in maternity services obstetric care planning and discharge planning using appropriate, easy-to-use tools and systems (e.g. triggers to screen and respond, compulsory documentation around ABC as part of discharge, electronic referrals to cessation providers).

- Consider payment to midwives for ABC interventions.

- Consider additional incentive payment to General Practices for ABC intervention for Māori pregnant women, and set a target for pregnant women's ABC (e.g. 90% pregnant women in the practice per year will receive ABC).

- Consider providing ABC training to other professional groups working with young women, e.g. Public Health Nurses, Family Planning and Sexual Health staff, Community Health Workers, Health Care Assistants, Tamariki Ora (Wellchild) providers.

- Promote the use of the Ministry of Health ABC e-learning tool to all health professionals.

- Smoking cessation ABC information and referral contacts easily accessible (and highly visible) on the Northland DHB intranet

- Develop pregnancy specific resources that visually show the benefits of quitting at each stage of pregnancy (this type of resource is being developed in Auckland).

E. Looking Upstream

- Investigate ways in which smoking prevalence in young women of childbearing age can be reduced, e.g. Smokefree Schools Approach applied specifically to young women within kura kaupapa and alternative education providers.

- Investigate a 'vulnerable pregnancies' model for wrapping psychosocial support around women with multiple risk factors for adverse pregnancy/child outcomes (e.g. teen mothers, those on low incomes, substance use, violence, poor housing, single mothers, mental health issues).

2.0 BACKGROUND

2.1 Effects of Smoking in Pregnancy

Tobacco smoking during pregnancy poses risks to the mother, the fetus, and to baby once it is born. Smoking exposes a mother and fetus to carbon monoxide, nicotine, and thousands of other chemicals contained in tobacco smoke. A pregnant woman who smokes is more likely to suffer pregnancy complications; and baby is more likely to be born premature and/or low birthweight. In turn, low birthweight has life-long consequences (e.g. increased risk of heart disease and diabetes in later life). Smoking during pregnancy also raises the risk of Sudden Infant Death Syndrome (SIDS) once a child is born[1-3].

Ongoing exposure to tobacco smoke after birth makes a baby/child more likely to suffer respiratory infections and asthma, glue ear, and learning and behavioural difficulties. These factors impact greatly on a child's development and success in life[1-3]. Furthermore, maternal smoking is a risk factor for adolescent smoking which means that the cycle of tobacco dependence (and smoking in pregnancy) is more likely to be perpetuated into the next generation[4].

2.2 Impact on Māori Health and Inequities*

The high prevalence of maternal smoking in Māori women is reflected in a high burden of smoking related diseases in Northland children, and significant inequities between Māori and Non-Māori. The preterm birth rates are higher for Māori babies in Northland compared to Non-Māori babies; and Northland has consistently higher rates of Sudden Unexpected Death in Infancy (which includes SIDS) than the rest of New Zealand. Māori children in Northland have higher rates of hospitalisation for upper respiratory tract infection, bronchiolitis, and asthma; and higher arranged admissions for otitis media (glue ear)[5-8, 9].

Prior to European contact Māori culture was tobacco free. The burden imposed by this introduced hazard impose both ethical and legal (Te Tiriti O Waitangi) responsibilities on the health sector to reduce harm associated with tobacco use for Māori; and in turn Māori have the right to equitable health outcomes in this area. As such this formative evaluation acknowledges that any service response in the area of Auahi Kore (Smokefree) pregnancies needs to be as effective for Māori pregnant women who smoke as it is for Non-Māori pregnant smokers. For equity to be achieved there needs to be a specific equity focus.

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* Health inequalities can occur by age, gender, ethnicity etc. Not all health inequalities are unfair or avoidable (e.g. older people generally have poorer health status than young people). In comparison health *inequities*, such as those between different ethnic groups, are differences in health which are unnecessary, avoidable and unjust.

2.3 The 'ABC' Approach

The latest evidence based guidelines for smoking cessation in New Zealand are structured around smoking cessation "ABC" with all smokers, as often as possible[11].

A – **Ask** about smoking status, and document

B – Give **Brief advice** to stop smoking to all people who smoke

C – Provide or refer for **Cessation support** those smokers who express a desire to quit

With regards to Nicotene Replacement Therapy (NRT) as a cessation support for pregnant women, the current expert opinion is that NRT can be considered safe to use in pregnancy following an assessment of the risks and benefits. As well as assisting with quitting smoking, a main benefit of using NRT is the removal of all other toxins contained in tobacco smoke, and NRT typically provides less nicotine than tobacco smoke[11].

3.0 AIMS AND OBJECTIVES OF FORMATIVE EVALUATION

Aims

To inform a service response that will:

- Better support pregnant women in Te Tai Tokerau (Northland) to become Auahi Kore (smokefree).

- Reduce the inequities in smoking prevalence between Māori and Non-Māori women who are pregnant in Northland.

Objectives

- To estimate the current number of smoking pregnancies in Northland each year, by ethnicity and district.

- To summarise research evidence on effective interventions for promoting smoking cessation in pregnancy, including for Māori and Indigenous women.

- To summarise research evidence on barriers and enablers to smoking cessation in pregnancy, for Māori and Non-Māori women.

- To assess the current level of smoking cessation support for pregnant women who smoke in Northland.

- To elucidate key challenges/barriers around cessation for stakeholders working with pregnant women in Northland, and ways they could be better supported.

- To elucidate current best practices and innovations for supporting smoking cessation in pregnancy from other services around New Zealand for Māori and Non-Māori women.

- To make recommendations for the service response in this area

4.0 METHODS

Estimation of the annual number of pregnancies involving maternal smoking in Northland (Needs Assessment) was done by combining data on the number of live births in Northland for the year of 2008 (from Statistics New Zealand) with data on the prevalence of smoking in Māori and Non-Māori women of childbearing age (New Zealand Tobacco Use Survey 2006). The prevalence of smoking in Non-Māori women of childbearing age was estimated from the NZ European women's rate as approximately 95% of Non-Māori women in Northland are of NZ European ethnicity[12].

Data on the population attributable fraction for smoking and preterm birth/low birthweight was also used to estimate the number preterm and low birthweight babies each year that might be attributable to smoking in pregnancy in Northland.

Literature review was conducted by searching for English language citations in the MEDLINE database (1966-2006) and the Cochrane Database of Systematic Reviews. Key search terms included smoking, smoking cessation, pregnancy, Māori, indigenous, minority and disadvantaged. Items found in the initial literature review were also searched for further references. Key recent literature reviews on pregnancy smoking cessation were also obtained from the Quit Group and BRC Marketing and Social Research, and key websites were searched including ASH (NZ), and the Quit Group (NZ). Contact was made with the Centre for Excellence in Indigenous Tobacco Control (University of Melbourne).

Consultation with key local stakeholders across Northland occurred through a combination of key informant interviews (face-to-face, and telephone interviews), discussion groups, and written questionnaire.

In order to obtain information on other pregnancy smoking cessation initiatives around New Zealand an email query was sent to the New Zealand Tobacco Action Network (NZTAN), and to key smokefree personnel within other organisations. The operational aspects of the services/initiatives (and key lessons to be learned) were elucidated by examining key documents, reports and evaluations, as well as visiting a selection of services, and talking by phone or teleconference to other services. An overview of smokefree pregnancy services performed by Research New Zealand in 2005 was also consulted.

5.0 RESULTS

5.1 Needs Assessment

The smoking prevalence in women of principal childbearing age (15-39 years) reported in the New Zealand Tobacco Use Survey 2006 was 54.3% for Māori women and 24.3% for NZ European women[13]. This smoking prevalence rate, along with the number of live births in Northland (2008) can be used to estimate the number of pregnancies involving maternal smoking. The estimate does not take into account that some women will quit smoking spontaneously when they learn they are pregnant.

Table 1: Estimated Smoking Pregnancies: Total Northland 2008

Ethnicity (child)	**Live Births 2008**	**Smoking Prevalence women aged 15-39**	**Number of Smoking pregnancies**
Māori	1311	54.3%	712
Non-Māori	992	24.3%	241
TOTAL	2303		**953 smoking pregnancies per year = 41% of all pregnancies**

Source: Statistics New Zealand Resident Live Births by District 2008; NZ Tobacco Use Survey 2006

Table 2: Estimated Smoking Pregnancies: Northland Districts 2008

	Live births 2008		**Number of Smoking pregnancies***		
	Māori	*Non-Māori*	*Māori*	*Non-Māori*	*Total*
Far North District	629	232	342	56	**398**
Whangarei District	588	603	320	147	**467**
Kaipara District	94	152	51	37	**88**
TOTAL	1311	992	712	241	**953**

Source: Statistics New Zealand Resident Live Births by District 2008; NZ Tobacco Use Survey 2006
**Number of smoking pregnancies based on 54.3% & 24.3% smoking prevalence in Maori and Non-Maori women*

It is estimated that smoking during pregnancy accounts for 20% of all preterm births, and 35% of all low birthweight babies[14, 15]. Reports indicate that approximately 5.5% of all births in Northland per year are preterm, and about 2.2% of births are low birthweight[9,16]. Thus the estimated number of preterm births and low birthweight babies that could be attributed to smoking during pregnancy in Northland in 2008 is as follows:

Table 3: Adverse Birth Outcomes Attributable to Smoking in Northland, 2008

Number of preterm births in Northland in 2008: 5.5% x 2303 = 127	Number of preterm births in Northland attributable to smoking: 20% x 127 = **25**
Number of low birthweight babies in Northland in 2008: 2.2% x 2303 = 51	Number of low birthweight babies in Northland attributable to smoking: 35% x 51 = **18**

5.2 Literature Review

5.2.1 Effective interventions for smoking cessation in pregnancy

Recent systematic review of the research evidence (72 trials involving over 25,000 women) has shown that smoking cessation interventions delivered during pregnancy are effective at reducing the prevalence of smoking in late pregnancy. Overall in pooled analysis the interventions were effective at helping approximately 6 in 100 women to stop smoking in pregnancy[17].

The overall analysis included a number of different types of interventions, and some types of intervention appeared to be more successful than others at helping women to stop smoking in pregnancy. The categories of pregnancy smoking cessation interventions were:

- Cognitive behaviour therapy/ educational/ motivational interviewing strategies
- Biofeedback
- Provision of incentives/rewards for smoking cessation
- Provision of pharmacotherapies (e.g. NRT)
- Interventions based on 'stages of change' theory.

The group of interventions in the **cognitive behaviour therapy/ educational/ motivational interviewing category**, when pooled together, helped approximately 5% of women to stop smoking in pregnancy. However there was significant variation in reported success between the studies with some studies suggesting about 30% success, and others reporting no effect at all. The interventions were mostly delivered in the clinic setting with or without telephone support. A few interventions involved quit groups or home visits. Interventions were delivered by a range of people including doctors, medical students, nurses, midwives, counsellors and peer counsellors – but all had had special training to prepare them for assisting pregnant women to stop smoking. In addition to counselling, interventions commonly used self-help work books or videos[17]. Of note, with the general smoking population, face-to-face counselling (both individual and group sessions) appear to be more effective than telephone counselling which in turn appears to be more effective than written self-help materials. Multiple sessions are associated with higher abstinence rate[18].

There were only a small number of trials looking at the effectiveness of **biofeedback** – which involves feedback to the mother of fetal health status, or the measurement of by-products of smoking in the mother (e.g. carbon monoxide). While biofeedback appeared to be quite effective (RR as low as 0.67 in one study) there were only 4 trials with small numbers of participants meaning that statistical significance was not reached in the pooled analysis. Types of biofeedback used included expired air carbon monoxide monitoring, urine cotinine and fetal ultrasound feedback[17].

The most effective category of interventions appeared to be those that provided **rewards or incentives**. Although only 4 studies were in this category, they were consistently effective, with pooled analysis statistically significant, showing that interventions help around 24% of women to quit smoking in pregnancy. The rewards/ incentives used included vouchers with increasing monetary value dependent on biochemical validation of quit status, and entry into prize lottery for those who quit[17].

Pharmacological interventions (e.g. nicotine replacement therapy) in pooled analysis were associated with 5% success for pregnant women who smoke. Lastly, the group of interventions in the **'stages of change'** category, when pooled together, helped approximately 1% of women to stop smoking in pregnancy[17].

Table 4: Effectiveness of Pregnancy Smoking Cessation Interventions

Intervention category	**Effectiveness in pooled analysis**	
	RR and 95% confidence interval	**Absolute difference**
CBT/educational/motivational interviewing	0.95 (0.93-0.97)	5 in 100 women stop smoking
Biofeedback	0.92 (0.84-1.02)	8 in 100 women stop smoking
Incentives/rewards	0.76 (0.71-0.81)	24 in 100 women stop smoking
Pharmacotherapy	0.95 (0.92-0.98)	5 in 100 women stop smoking
Stages of change counselling	0.99 (0.97-1.00)	1 in 100 women stop smoking
ALL INTERVENTIONS	0.94 (0.93-0.96)	6 in 100 women stop smoking

There is a major lack of research for interventions that are effective to promote quitting for Indigenous pregnant women[17, 19, 20]. Even when studies include Indigenous women there is often too few numbers to draw statistically significant conclusions (lack of explanatory power). There has been one initiative, based at Waikato Hospital, that focussed on Maori pregnant women admitted to hospital (and

their whanau). Women or whanau who were identified as smokers received a visit from an Aukati Kai Paipa worker who would start therapy/counselling in hospital, with ongoing follow up in the community. The initiative reported 30% abstinence (self-reported) at one year[21].

There are other studies that have worked with other priority women such as those on low incomes, teens, women with low education attainment, uninsured and ethnic minority women. Of the two controlled trials that showed significant success with priority women, both emphasised enhanced psychosocial support. One study (Donnatelle et al) used peer supporters selected by the pregnant woman (preferably a female non-smoker), and the other study (Belizan et al) involved home visits by a social worker with an emphasis on psychosocial support for the pregnant woman. Belizan's study had a holistic focus on healthy lifestyles (not just smoking), engagement with the health sector, and family participation. Donatelle's study involved the use of incentives (reward vouchers) for both the pregnant woman and her peer supporter for each month of validated quit status. The results showed a 24% reduction in smoking in late pregnancy (RR 0.76, 95% CI 0.66-0.87)[22, 23].

It is important to note that women who stop smoking during pregnancy have a high relapse rate post-partum. Currently there is a lack of evidence around effective interventions for preventing relapse. Eight trials of smoking relapse prevention showed no statistically significant reduction in relapse[17]. However most smokers make several attempts at quitting before achieving abstinence long term, and therefore every quit episode is a step in the right direction.

Smoking cessation interventions during pregnancy are also effective at reducing low birthweight and preterm birth in babies. Interventions are associated with a reduction in low birthweight babies of approximately 17% (RR=0.83; 95% CI 0.73-0.95) and a 53.91g increase in mean birthweight. Smoking cessation interventions during pregnancy were also associated with reduction in preterm birth by approximately 16% (RR 0.86; 95% CI 0.74-0.98)[17]. The reduction in low birth weight babies alone means that smoking cessation interventions in pregnancy are cost effective[8, 17]

5.2.2 Barriers and Enablers to Quitting Smoking During Pregnancy

There is a significant amount of New Zealand research on the barriers and enablers to smoking cessation in pregnancy for all pregnant women, and for Māori wahine:

	All women [24-27,32]	Māori women specifically [25, 28-31,32]
Barriers	Mental health issues Lack of visible/tangible evidence of impacts of smoking on babies Unplanned pregnancy or ambivalence about pregnancy Lack of support/intent to quit from partner Lack of antenatal care Myths/misinformation, including from health professionals (e.g. told quitting during pregnancy "stresses" the baby) Lack of support from health professionals Complex social issues (e.g. alcohol, poverty, violent relationships) Boredom/lack of something to do Fear of weight gain Smoking used as a means of "stress relief" Low confidence Addiction to nicotine Feelings of loss of control/personal space	*In addition* to those barriers listed for all women, the following barriers have been noted for Māori women: Living with other smokers (whanau and partners) Socialising with other smokers Other smokers in work environment Underestimating, or not fully understanding risks to baby Quitting being an 'unseen' achievement, not noticed or celebrated Contradictory messages from older mother figures who say that in their experience the children born to smoking women have been 'fine' Social norms that encourage and reinforce smoking
Enablers	Concerns for baby's health Messages that focus on the health of the baby, and that discuss specific and immediate biological harms to baby Partner and family support for quitting Partner also attempting to quit First pregnancy Morning sickness	*In addition* to those enablers listed for all women, the following enablers have been noted for Māori women: Having a smokefree whanau/whanau support Mass media support to quit – aimed specifically at pregnant women Support groups Comfort/Familiarity with cessation service: A familiar face within the services or a service that other whanau have used Face to face support/home visiting Wanting to be a positive role model for whanau Messages that link smoking in pregnancy to risk of SIDS (cot death)

Table 5: Barriers and Enablers to Quitting Smoking During Pregnancy

5.3 Stocktake of Smoking Cessation Support for Pregnant Women in Northland

There are no pregnancy specific smoking cessation services or initiatives currently operating in Northland. A pregnant woman who smokes in Northland may access ABC-type cessation support from her lead maternity carer (LMC), of whom over 85% are midwives in Northland. However many pregnant women do not meet their

midwife until the second trimester, and some pregnant women (Māori women particularly) get very late access to antenatal care, or no antenatal care at all[25].

Table 6: Registered Lead Maternity Carer (LMC) – Northland 2004

LMC	%
Midwife	87.6
General Practitioner	1.5
Obstetrician	0.6
Other/Unknown	7.0
Not stated	3.2

Source: Ministry of Health Maternity Report 2004

Table 7: The Distribution of Midwives in Northland

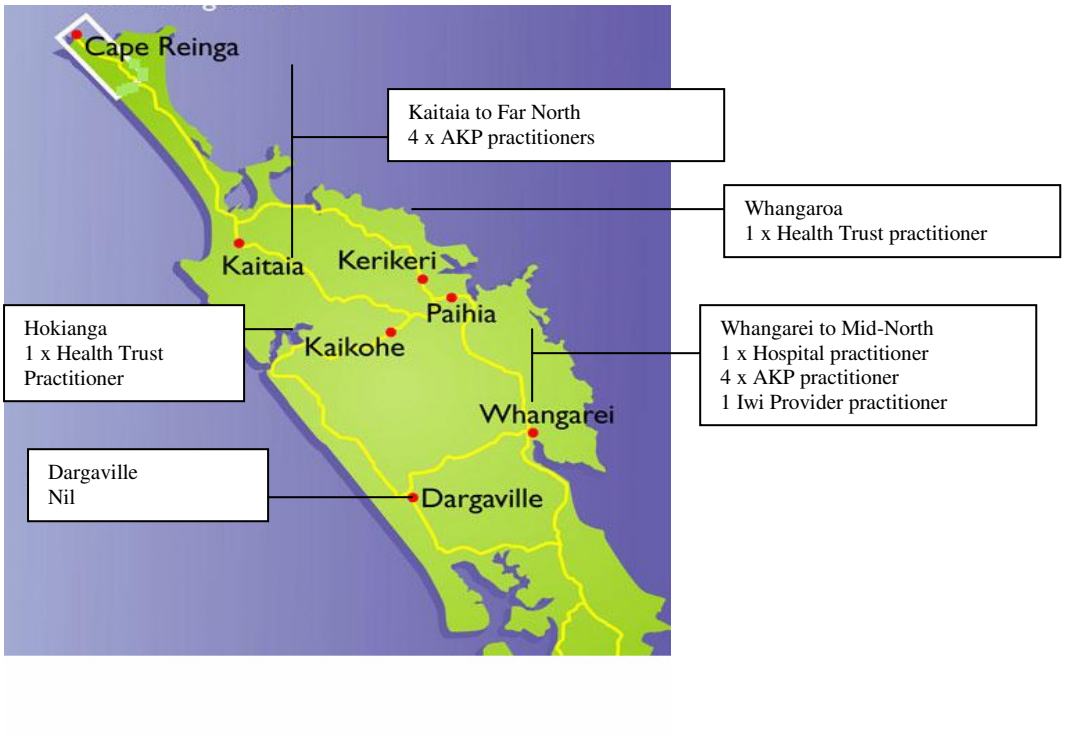
	Independent midwives	DHB midwives	TOTAL midwives	Māori midwives
Whangarei	14	25	39	4
Dargaville	0	2	2	0
Bay of Islands	10	7	17	2
Kaitaia	1	6	7	3
TOTAL	25	40	65	9 (14%)

Source: Northland District Health Board Maternity Services Manager

Other avenues a pregnant woman who smokes may access an ABC-type smoking cessation intervention currently include:

- The national Quitline (telephone cessation support)
- A cessation practitioner/service if she is referred on (or self-refers). The number and type of practitioners in each region are:
    - Whangarei to Mid North –1 Hospital, 4 x AKP and 1 Iwi provider practitioner
    - Dargaville – None
    - Whangaroa – 1 practitioner in health trust
    - Hokianga – 1 practitioner in health trust
    - Kaitaia to Far North – 4 AKP practitioners
- A General practitioner (or a staff member within the practice such as the practice nurse). Many provide only "A" and "B" without cessation support.
- An obstetrician or midwife in antenatal clinic, delivery suite, or maternity ward.

Figure 2: Regional Distribution of Smoking Cessation Practitioners



The number of pregnant women enrolled in the available smoking cessation services in Northland is low. The numbers of pregnant women calling the Quitline in Northland is also low[33, 34]. Thus it is estimated that only 5% of pregnant smokers in Northland are supported by a smoking cessation programme[33].

There are to be two further smoking cessation initiatives in the primary and secondary care environments commencing in the next six months in Northland that may impact on pregnant women.

1. The six Primary Health Organisations (PHOs) will be expected to integrate ABC into General Practices with the requirement of 2000 quit attempts (A,B plus C) per year for the next three years. Practices will be given targets for the number of quit attempts, based on their population, and with higher targets for Māori. There is an expectation that pregnant women will be a priority group, but there is currently no weighting or incentive system to ensure this.

2. Hospital ABCs targets. 80% of smoking inpatients to be offered ABC by 2010, 90% by 2011 and 95% by 2012. These targets will apply to inpatient maternity services.

5.4 Smokefree Systems in DHB Maternity Services

Northland District Health Board's maternity services encompass antenatal clinic, the maternity ward, and the birthing units in Whangarei, Bay of Islands, Kaitaia, and

Dargaville (closed currently due to midwife shortage). These services are staffed by hospital (core) midwives, obstetricians, and health care assistants. There are also case-load (team) midwives who look after women through pregnancy and post-partum. In terms of smoking cessation capacity and systems the following information was obtained:

- There is a shortage of District Health Board midwives (6-8 FTE short). Current midwives feel stressed and overloaded.
- There does not appear to be a smoking cessation "champion" among the practicing midwives or obstetricians.
- There is not a designated person available to provide day-to-day support to midwives around smoking cessation practice.
- Organised cessation education for midwives is minimal and ad hoc. The link midwife position (who facilitates cessation education for midwives) is vacant.
- There is no pregnancy ABC pathway in the clinical notes. There is a tick-box in the obstetric care planning form to indicate whether a smokefree pathway commenced, but no supporting information on what this pathway should look like.
- The maternity database has a field to record smoking status antenatally and postnatally, but this is not linked to the "B" and "C" of smoking cessation.

5.5 Stakeholder Consultation

46 stakeholders who work with pregnant women, maternity services and/or in smoking cessation were consulted:

The following table outlines information obtained on the challenges and barriers faced by these stakeholders who work with pregnant women. It also lists ways in which those practitioners mentioned they could be better supported in the area of pregnancy smoking cessation.

	CHALLENGES AND BARRIERS	ENABLERS & IDEAS
Midwives	Workload and Capacity • Overload with initiatives such as family violence screening, antenatal HIV screening • Lack of time • Feeling that cessation support is a specialised skill outside the expertise of a midwife Systems • Lack of regular education and refreshers/updates for midwives • Lack of robust relationship with, and a referral pathway to cessation services (e.g. AKP) • Lack of feedback from cessation services about a womens' cessation plans and how the midwife could support it. • Smoking status & treatment not prioritised or systematic in clinical notes or integrated into care plan. Need more reminders and prompts. Confidence • Difficulty finding right language to discuss • Uncomfortable when advice/assistance is refused by clients • Worried about damaging rapport with client Resources • Lack of tangible tools to illustrate and demonstrate effects of smoking on fetus	• Feedback & plan from cessation service after referral (with pointers on how the midwife can support) • Regular education and refreshers/updates on ABC for midwives • Integration of smoking status & treatment in notes • A dedicated practitioner that they ask for advice and/or refer on to • Midwives who are having success with ABC sharing their experience, techniques and stories
Māori midwives	Workload and Capacity • Midwife shortage and burnout • Lack of time to talk through all of the effects • Overload with initiatives e.g.family violence screening etc Complex psychosocial issues for pregnant clients e.g. multiple drug use Smokers' Knowledge and Attitudes • Women naïve about wider effects of smoking beyond the fetus (e.g effects on infants and other whanau) • Women not ready to quit Confidence • Remote practice means not able to attend education and training around ABC • Not confident with NRT Community & Whanau Influences • Smoking seen as normal by community and more acceptable than other drugs • Whanau and/or tane not supportive • Lack of ability for midwives to treat whanau who smoke Resources • Lack of resources Lack of Practical Support for Midwives • Smoking issue raised with midwives many times, but support/education/training for midwives not forthcoming	Prohibition of tobacco in NZ More Māori midwives. Support Māori midwives and workers to quit smoking, including use of incentives, free cessation medications Recruit & support Māori women through midwifery training. Dedicated smokefree midwife who can support other midwives and/or receive referrals Stickers/resources to document in notes Training & edu around CBT and techniques for supporting quitting Enable midwives to treat whanau members who smoke too Reward or incentives to women for quitting Pay midwives per ABC (as is the case for General Practices) Taking small steps helps to work toward cessation. E.g. smokefree house, car, smoking reduction.

DHB Maternity Management	Workload and Capacity • Midwives feeling overloaded with screening and regulations • Shortage of DHB midwives Staff attitudes • Core midwives feel it is the responsibility of the LMC to manage smoking • Tacit acceptance of smoking • Feeling that smoking is an individual choice Relationships • Lack of linkages and relationship/trust between midwives and community cessation providers Systems • Lack of pregnancy smokefree screening/recording and referral pathway in clinical record Lack of Sustained Support for Midwives • Lack of support staff, ongoing education and feedback to sustain and support midwife ABC. Health Professionals that Smoke • Gives women mixed messages	Dedicated smokefree midwife or practitioner who can support midwives and/or accept referrals Pregnancy pathway for clinical record – up to date, user-friendly Smoking Cessation information and referral contacts on Intranet
AKP & Māori cessation practitioners	Complex psychosocial issues for pregnant • Transient & mobile clients. Difficult to initiate and maintain contact. • Impact of poverty, stress, family demands on women. Community and whanau influences • Whanau who smoke not willing to support or participate with women Smokers' knowledge and attitudes • Women not ready to quit Lack of links with and referrals from midwives	Incentives (e.g pamper packs) that encourage young women to participate & take pride Social marketing to partners, men & whanau to support wahine Working with alternative education providers Linking with youth & cultural festivals and events Buddy system for quitters works well
Other cessation practitioners	Midwifery Workforce Shortage • Particulary shortage of Māori midwives Complex psychosocial issues for pregnant clients • Social issues • Other addictions • Lack of trust and engagement with health sector • Unplanned pregnancies Effects not tangible or real • Smoking effects on baby and child hard to see. Babies that are a bit small and a bit early not seen as a problem Discordance between family advice and health professional advice • Whanau who perceive that smoking in pregnancy hasn't been a problem for their babies giving conflicting messages	Pay midwives per ABC (as is the case for General Practices) Support midwives who smoke to quit Support Māori role models in health & education to quit smoking ABC training for community health workers in contact with Māori women ABC in Tamariki Ora/Wellchild setting Create a 'Cessation-Midwife' position (to support other midwifes on a day to day basis) Scholarships to attract new midwives, especially Māori Make links with alternative education

Māori health and social service kaimahi	Access • Some Māori wahine not accessing antenatal care or GPs Smokers' Knowledge and Attitudes • Resistance of smokefree advice & support • Not ready to quit • Lack of understanding of effects on baby & mum Complex psychosocial issues for pregnant clients Community & Whanau Influences • Partner, whanau, and peers smoking Confidence broaching subject • They already know it is bad – what else can you tell them? • Difficulties giving advice without imposing guilt	Establishing rapport & whakawhanaunatanga Addressing social issues and wrapping support around whanau Links between Family Start, Tamariki Ora and cessation services Alternative activities/something to do instead of smoking Advice from someone respected – e.g. close family or role model. Non-smoking Māori role models Whanau and Iwi support groups; or Support group with other women who smoke and ex-smokers Social marketing through radio, music Smokefree policy in Māori settings e.g. sports grounds, Marae. Scholarships & support for Māori for midwifery Kaupapa Māori antenatal classes Pay midwives and other practitioners for ABC (as is the case for GPs)
GPs	Lack of Involvement in Pregnancy Care • May not see women at all antenatally if they do not seek care, or if they go straight to a midwife • One funded pregnancy-related appointment only with women. Taken up with many details and ordering of tests. Run out of time or distracted from smokefree counselling/ referral • May only see a woman antenatally if she is in crisis. Not appropriate to raise smoking at this point Lack of knowledge of Māori cessation services (Aukati Kai Paipa) Communication • Need to develop skills in offering advice without 'lecturing' Community & Whanau Influences • Partner, whanau, and peers smoking makes it very difficult for pregnant women to quit Complex psychosocial issues for pregnant clients Smokers' Knowledge and Attitudes • Lack of interest in quitting or not ready • Lack of understanding of effects on baby & mum Lack of social support for Young Mums Health Professionals that Smoke • LMCs, nurses and docs that smoke unlikely to give sincere and meaningful advice about smokefree	Maternity funding to support more than one appointment with GP Pregnancy specific cessation pamphlet More education on the types of cessation services available in the community (esp Māori services) GPs workshop on motivational interviewing techniques GP gift pack with product samples and info from Quitline and AKP Being better able to help clients understand the effects and relevance to their own and their children's health More support for young mums during antenatal period (beyond the LMC) e.g. mentorship from older, experienced Mums Nursing time available so patient can see nurse immediately after doctor's appointment "Expert Patient" type of service where patients can contact other patients who have been in or are in the same situation for counselling & support

Obstetricians	Community & Whanau Influences • Partner, whanau, and peers smoking makes it very difficult for pregnant women to quit, especially Māori Lack of knowledge of community cessation services (especially Aukati Kai Paipa) Obstetricians see women "too late" to effectively intervene, and at a stage when women are in information overload Feeling that advice coming from white middle-class doctors not as effective as from people and role models within own community Difficulty identifying women who are motivated to quit, and those who would benefit from intensive support Not wanting to nag & alienate women – may stop high risk women from engaging with maternity services Pharmacists not dispensing NRT that has been prescribed by obstetricians because of poor understanding of risk/benefit of NRT in pregnancy	Changing community norms around smoking in Māori communities Advice coming from kuia, aunties, and other influential people in Māori communities Support for young women to quit smoking before they become pregnant – e.g. school interventions Better understanding of cessation services in community Education of pharmacists around NRT in pregnancy

Table 9: Barriers and Enablers for Stakeholders

5.5 Other Initiatives Around Aotearoa/New Zealand

The following section outlines some of the approaches that are being taken around New Zealand for pregnant women – Māori and Non-Māori – in terms of smoking cessation.

❖ *Māori SIDS Mokopuna Ora Programme*

Māori SIDS is currently rolling out a train the trainer SIDS prevention programme. Iwi, health and social service organisations (e.g. Nga Manga Puriri, Whangarei) have been approached and offered training in key SIDS prevention messages, including training around the ABC's of smoking cessation, and the importance of smokefree pregnancies. The trained organisation is then supported by Māori SIDS to host a Noho Marae in which a wide range of community members are invited and educated, along with weaving of the 'Wahakura' woven baskets for safe infant sleeping. The programme is supported by academics and experts at the School of Population Health, University of Auckland, and is to be evaluated.

❖ *SmokeChange Programme-Canterbury*

Community based intensive cessation support for pregnant women. Involves motivational, environmental and educational strategies to toward a supported quit attempt. 4-7 visits +/- phone and text support. Maintenance visits for up to 6 months

after birth. Self-referrals and referrals from midwives and health professionals. Has documented a self reported continuous abstinence rate at last visit of 19%.

- *Kaupapa Māori Antenatal Classes with presentation from Aukati Kai Paipa*

Kaupapa Māori antenatal classes are being run by an independent Māori midwife in the Bay of Islands. This includes a presentation from Aukati Kai Paipa. They have also been run in the past in Kaitaia via a 2-day noho marae (incorporating AKP) – however not currently active because of Māori midwife shortage and burnout.

- *SmokeChange Education for Midwives ("Partners in Change")*

Workshops to help midwives become more knowledgeable about smoking in pregnancy, more confident about discussing smoking, and more effective at motivating, referring and supporting quit attempts. Has been delivered in Northland previously, but requires a local midwife to facilitate workshops (link midwife) and this position is not currently filled.

- *Pregnancy specific cessation practitioners within Aukati Kai Paipa*

The Taranaki provider Piki Te Ora Nursing Service acquired a 1 FTE contract to deliver smoking cessation support to pregnant women. This position was filled by a midwife who was trained in smoking cessation. The most appropriate and effective model for working with women was a whanau-inclusive approach – so the practitioner received AKP programme training, and the service was integrated into Piki Te Ora's AKP service.

- *Auckland DHB Smokefree Pregnancy Service*

DHB based specialist pregnancy service. Sees a high proportion of Māori wahine. Phone referrals from midwives, GPs, maternity services – inpatient and outpatient. Initial referral is acknowledged and progress reviews sent back to referrer. Motivational interviewing, NRT, and support for client via home visits, phone, text or at midwife's rooms up to 6 weeks post partum. Uses biofeedback (CO monitor) as a tangible tool to demonstrate health effects and progress – seen as particularly valuable and engaging tool for Māori and Pacific mums. Being located in the DHB maternity service provider seen as a plus in building trust and credibility with referral network.

- *Pregnancy specific cessation practitioners within Runanga or Māori Provider*

Ngati Pikiao Runanga is contracted through a Rotorua PHO to deliver 8 week intensive support (including NRT) to pregnant women and new mothers. Follow up at 3mths, 6mths and post natal. Referral from all providers that work with pregnant women & new mums.

- *Hawkes Bay DHB Smokefree Systems for Maternity, Child & Youth Health Services, and Allied Early Childhood Services*

Has involved a high level management commitment to smokefree policy in maternity, child and youth services. A dedicated Maternity and Child Smokefree Project

Coordinator is employed to bring about education for staff, information systems and referral systems to embed best practice ABC in service delivery. Aims to include both primary and secondary providers, and allied early childhood services. Strategies include

- Training smokefree champions (e.g. midwives) who can go back and support others in service
- Use of Ministry of Health e-learning ABC tool
- Use of incentives (small gift) to encourage participation from staff in education
- Triggers to screen and respond
- Compulsory documentation around ABC that must be filled in before discharge
- 6 monthly audits for evidence of ABC
- Integrating ABC at the point of the 12 week pregnancy scan (working with radiologists)
- Employing a smokefree midwife as a role model and visible champion amongst midwives

❖ *Counties Manukau DHB intervention*

1. Maternity unit database to include a compulsory field for smoking status, and a built in referral form to the Mangere Community Health Trust Smokefree Pregnancy service.
2. Maternity services is about to embark on a project whereby Māori community health workers will provide a 5 contact intervention around smoking in pregnancy. The CMDHB Smokefree Specialist will be training the community health workers and providing quit cards and follow up support if requested.

❖ *Harbour Health PHO pregnancy smoking cessation service for Waitemata*

Language and culture specific coordinators (e.g. Māori, Tongan, Asian workers) trained to support pregnant women and their whanau in smoking cessation and/or smokefree environments (homes and cars). Flexible support – wherever and whenever (including after hrs), and as often as a client needs it for. Face to face, phone, text support as desired. Long term support (12 months, including post-partum) with no limit to number of contacts. Coordinators are chosen for their standing and links within specific communities – and trained in cessation with specialised additional training around needs of pregnant women and NRT in pregnancy. Coordinators also receive additional training in motivational interviewing, addiction, counselling, mental health. Well supported with a specific web based database which records information for each women/family – allows monitoring and evaluation.

❖ *Mangere Community Health Trust (PHO)*

Cessation support +/- NRT for pregnant women and their whanau. 40-45% Māori clients. Home visit initially then flexible weekly follow up support (phone or home visit). Cultural matching of clients to staff (2 Māori, 2 Pacific, 1 European staff). Referrals from midwives, GP, Wellchild providers & self referrals.

5.6 Models and Approaches for Non-Pregnant Young Women

❖ *Mobile phone text messaging cessation support* [35]

A study that involved regular, personalised text messages providing smoking cessation advice, support and distraction to young smokers. There was active recruitment of young Māori (132 young Māori women in intervention group), and

messages were tailored for young Māori participants. Successful at increasing short-term self-reported quit rates for both Māori and Non-Māori youth.

- *Smokefree Schools Pilot -NDHB Public and Population Health Unit* [36]

Training of school staff to become cessation practitioners, quit groups in schools, promotion of local cessation services to parents and school community, participation in smokefree events and advocacy. ASH Year-10 survey data indicated a steeper reduction in prevalence of student smoking in pilot schools than nationally.

- *Te Whare Tangata Auahi Kore - Te Hotu Manawa Māori*

Māori women are defined as "Te Whare Tangata" the bearer of people. This initiative involves Kaupapa Māori education delivered to young women in Kura Kaupapa (Māori Medium Schools). Emphasises the importance of the child-bearing role (and smokefree pregnancy) in terms of protection and guardianship of future generations.

- *Noho Marae Smoking Cessation* [37]

A programme whereby participants attend a five-seven day residential hui on a marae. Participants stop smoking on the first day of the hui. No phamacotherapies used. At four months the programme achieved a 35% point prevalence quit rate

6.0 DISCUSSION

National rates of smoking in pregnancy have been reported as 26-33% of all pregnancies[6, 7, 30]. The needs assessment conducted as part of this formative evaluation has estimated the rate of smoking in pregnancy in Northland to be approximately 40%.

The lack of accurate 'smoking in pregnancy' surveillance data means that smoking prevalence rates in pregnancy have been estimated in New Zealand using a variety of methods – from analysis of Plunket data to cross-sectional survey. More recently the Child and Youth Epidemiology Service has attempted to measure the prevalence of smoking in pregnancy by using the National Minimum Data Set, and the listing of tobacco use in the first 15 diagnostic codes of a woman who gives birth in hospital[38]. Of all the methods used to estimate smoking prevalence in pregnancy this method is most likely to significantly underestimate the number of smoking pregnancies. It relies on both a health professional identifying a woman as a smoker, *and* the clinical coder listing it as a coded diagnosis. The Child and Youth Epidemiology report quotes 18.4% of women giving birth in Northland hospitals as having tobacco use recorded as a diagnosis, which gives a much lower estimate than the 40% quoted in this report[38].

The method used to estimate the number of smoking pregnancies in this formative evaluation also has its limitations. Firstly it does not take into account that some women quit smoking spontaneously when they learn they are pregnant (though many relapse post-partum, and spontaneous quitting is less likely in deprived groups)[17]. Secondly the ethnicity data for the live births is based on the ethnicity of the child that is born rather than the mother. As such the estimates may have slightly over-estimated the number of Māori mothers and therefore slightly overestimated the number of Māori smoking pregnancies. On the other hand, the smoking prevalence in *younger* Māori women (15-24 years) is as high as 60% - higher than the 54% prevalence used to estimate the number of Māori smoking pregnancies in this report[13]. As with any of the other national and local estimates of smoking prevalence in pregnancy, the figure quoted in this report should be taken as indicative rather than absolute.

The Māori population in Northland has a younger age profile than the Non-Māori population, and a higher fertility rate[39]. This results in a high number of Māori births -which when combined with high prevalence of smoking in Māori women of childbearing age - means that by far the greatest number of smoking pregnancies in Northland involve Māori women. It is estimated that there are almost three times as many Māori smoking pregnancies than Non-Māori smoking pregnancies per year in Northland, a striking disparity.

The high number of Māori smoking pregnancies will strongly contribute to the inequities between Māori and Non-Māori in birth outcomes, child health, as well as health in later life in Northland. A life-course approach suggests that adverse exposures (e.g. exposure to smoking) at certain critical periods of life (including in utero, infancy, and childhood) can have disproportionately severe consequences on individual's life and health potential[40].

Despite this very high need in Northland, there are currently no pregnancy specific smoking cessation services or initiatives. There are few pregnant women enrolled with community cessation providers, and few calls to Quitline, which results in a very low proportion of pregnant women being supported by a smoking cessation programme in Northland (estimated only 5%). Research shows that smoking cessation interventions/programmes delivered during pregnancy are effective at reducing smoking in late pregnancy, and at improving birth outcomes (preterm birth and low birth weight). Thus the low enrolment of pregnant women in smoking cessation programmes in Northland currently represents a significant missed opportunity.

It is important to note that the research into smoking cessation interventions during pregnancy does not adequately address effective approaches for Indigenous women. Lusumbami argues that many mainstream interventions (e.g. brief counselling, and provision of self-help materials) may not be as effective for Indigenous populations for whom smoking is less an individual choice, and more influenced by community factors. Such interventions may be most effective for light to moderate pregnant smokers, and not generalisable to heavily addicted women, or those with complex psychosocial issues who are often excluded from studies[20, 24]. The levels of socio-economic deprivation in Northland suggest that pregnant smokers in Northland are more likely to belong to the latter (complex needs) group[41]. Of those interventions that are effective for other priority pregnant women (teens, low income, low education, uninsured, ethnic minority), the common themes appear to be enhanced social support and engagement with the health sector, family participation, holistic approaches (covering a range of risk factors for adverse pregnancy outcomes), and the use of incentives.

The use of incentives appears to be one of the most effective types of intervention overall for reducing the relative risk of smoking in late pregnancy[17, 22, 23]. New Zealand has had some previous positive experience with smoking cessation contests, and it may be worthwhile investigating whether these could be adapted for pregnant women and their partners. Evidence suggests that quit and win contests are cost effective and appeal to communities where there is high smoking prevalence[8, 42].

Midwives in New Zealand have been shown to be an effective resource for smoking cessation as a function of their ongoing relationship with women in primary antenatal care[43]. However in Northland the midwifery workforce is stretched, and midwives feel relatively unsupported and under-confident in their training and practice around ABC. Furthermore midwives in Northland do not have a good awareness of the community cessation providers that they could refer clients on to, and maternity services systems are not well set up to prompt, assist and remind staff about supporting their clients with smoking cessation.

General Practitioners (GPs) in Northland report that they have very little contact with pregnant women – although they may be involved in confirming pregnancy for some women. Like midwives, they do not have a good awareness of the community cessation providers - particularly Aukati Kai Paipa - which has the greatest cessation practitioner capacity in Northland (in terms of full time staff equivalents), and which is known to be an effective for Maori and their whanau[44].

Beyond the GP and the Midwife, there may be several other first points of contact for women when they learn they are pregnant including emergency departments, Accident and Emergency clinics, Family Planning Clinics, Sexual Health Clinics, and School/Youth clinics. These services will also need support (and possibly targets) in order to bring about increased levels of smoking cessation ABC activity by staff[45].

It is also important to note that some pregnant women (Māori and high needs women particularly) get very late access to antenatal care, or no antenatal care at all[25, 46]. Māori women are under-represented in antenatal classes in Northland, which is consistent with national trends[45]. Māori women also have lower access to primary care[47, 48]. Thus relying on pregnancy providers and primary care alone to deliver (or refer on for) smoking cessation will miss some of the most high need pregnant women who smoke. For this reason, involvement of the community in promoting pregnancy smoking cessation (e.g. 'Imagine Muriwhenua' or the Maori SIDS approach) is important for reaching (and supporting) all pregnant women who smoke, as is the involvement of secondary maternity care services.

One practitioner who is supporting a number of pregnant women to quit smoking is the Whangarei hospital cessation practitioner. She is a midwife, Māori, has experience in working with pregnant smokers, and is trusted by other midwives in Northland. However she is currently employed to provide cessation support to all NDHB staff and inpatients and thus has very little spare capacity to work with pregnant women specifically, or to assist midwives. With her combination of skills she is an under-utilised resource in the pregnancy smoking cessation area.

A key theme that emerges from the summary of barriers and enablers to quitting smoking during pregnancy is the difficulties women face (particularly Māori women) when they are surrounded by other smokers in their home, social and work environments. It is also a barrier when many of the health professionals and role models women encounter are themselves smokers (including midwives, nurses, community health workers). Barriers are also present when women feel ambivalent about a pregnancy or have other social issues such as poverty, poor housing, relationship violence, and alcohol. Many women in these situations do not feel ready to quit (or it is a lower priority), and are not receptive to offers of smoking cessation support. Health professionals working with these women also tend to rank smoking cessation as a lower priority compared to issues such as heavy alcohol intake[25]. A 'vulnerable pregancies' model whereby women with multiple risk factors for adverse outcomes in pregnancy are identified and holistically supported (e.g. teen, smoking, alcohol, poverty, mental illness, single women) may be a more appropriate model than one that focuses on smoking cessation alone.

It is also a barrier to quitting when risks (of smoking in pregnancy) are not fully understood by a woman, when they seem disputed (by family and health professionals), and when they seem "unreal", "invisible" or "intangible". For this reason it seems that simple biofeedback tools could be a real advantage when working with pregnant women. Women who smoke (or who have smoked) in pregnancy state that the most powerful messages are those that focus on specific and immediate biological harm to the baby[32]. For Māori women, other pertinent enabling factors (for quitting) are face-to-face support, home-visiting, support groups, whanau support, and wanting to be a positive role model for whanau. This is consistent with the success of the "It's About Whanau" national television social marketing campaign which was received positively by Māori smokers and their whanau[49].

From the examination of existing pregnancy smoking cessation services/initiatives in Aotearoa/New Zealand, it is possible to elucidate a number of best practice principles. These include:

- Recognising intensiveness of service required (sometimes 15-20 attempts are required to make initial contact with a woman).
- Interventions beginning early (e.g. before pregnancy or first trimester).
- Interventions with a relatively long time period (e.g. 12 months) that extend support into the post-partum period.
- A flexible approach covering not only cessation, but also smoking reduction, education, and smokefree environments (homes and cars).

- Flexibility in the amount of contact and style of contact – matched to client – including home visits, text messaging, telephone, email. Also flexibility in timing of contacts – including after hours access.

- Including partners and whanau members as clients.

- Use of nicotine replacement therapy.

- Credibility of service with referral network (particularly midwives).

- Establishing and actively maintaining a good referral network with health and social services staff that have contact with pregnant women.

- Providing feedback and progress reports to referrers about the progress of women that they have referred.

- Strong systems and protocols within service as a foundation for service delivery (including information systems for data collection).

- Specific training around smoking and pregnancy, and use of NRT in pregnancy for practitioners.

- Practitioner access to ongoing training in areas of motivational interviewing, counselling, mental health and addictions.

- Practitioner access to debriefing/discussion with colleagues about difficulties and challenges faced in their day to day work.

For pregnant smokers who are Māori a number of additional best practice principles can be highlighted for successful service delivery:

- Use of Māori models (e.g whare tapa wha) in service delivery
- Use of stories
- Establishing a relationship, whakawhanaunatanga.
- Valuing whakapapa and whanau context
- Consultations at home and/or community based clinics

The 'Whanau Ora' model of He Korowai Oranga (the Māori Health Strategy) is a useful framework for considering how overall smoking cessation support for pregnant women could be enhanced in Northland. Whanau Ora approaches are also the current direction encouraged for health (and other) services working with Māori populations.

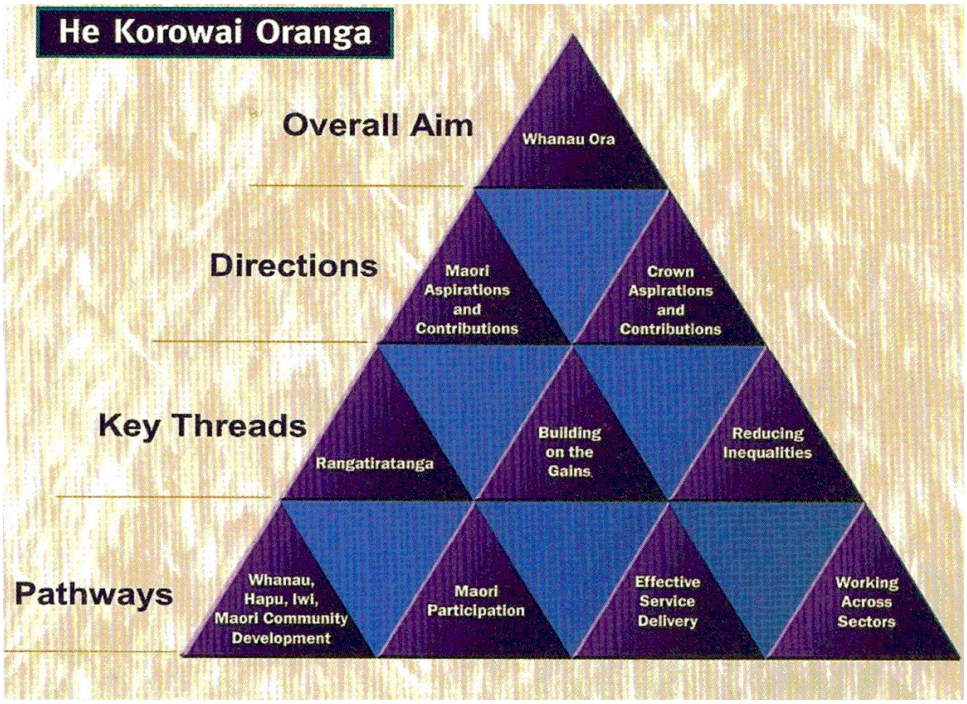


Figure 3: He Korowai Oranga: Maori Health Strategy Model

EXAMPLES OF ACTIONS UNDER THE HE KOROWAI ORANGA PATHWAYS			
Whanau, Hapu, Iwi & Māori Community Development	**Māori Participation**	**Effective Service Delivery**	**Working Across Sectors**
Encouraging & supporting more Māori into midwifery training Involving community in promoting smokefree pregnancy, e.g. Maori SIDS approach Supporting Māori midwives, nurses, community health workers etc to quit using appropriate incentives and rewards Action on the determinants of health (social and economic development)	For Example: Pregnancy smoking cessation service integrated into Aukati Kai Paipa Intervention involves Māori providers, and increases their capacity in the area of smokefree	Intervention that uses biofeedback and incentives/reward – and that incorporates best practice principles Intervention culturally appropriate and accessible for Māori women and their whanau	Linkages across other sectors & services in contact with pregnant and young women: Family Start, CYFS, School for Teen Parents, alternative education centres, youth transition services Service has pathways of referral to community social support agencies that can wrap support around whanau Vulnerable pregnancies support model

Table 10: He Korowai Oranga Pregnancy Smoking Cessation Actions

Limitations of the evaluation

The limitations inherent in estimating the numbers (and prevalence) of smoking in pregnancy in Northland have been discussed earlier. It would have been useful, in addition to those stakeholders consulted, to have consulted with practice nurses in General Practices, and possibly staff in other settings such as emergency departments, family planning and sexual health. It is possible that not all of the initiatives (current and past) in New Zealand for promoting smoking cessation in pregnancy will have been captured in this report.

7.0 CONCLUSION AND RECOMMENDATIONS

There is a very high burden of smoking pregnancies in Northland, particularly for Māori, and currently very little support to help these women to quit smoking. This is likely to strongly contribute to the inequities between Māori and Non-Māori in birth outcomes, child health, as well as health in later life.

Recommendations:

B. Better Support for Aukati Kai Paipa

Consider ways in which Aukati Kai Paipa services in Northland could be strengthened and supported to incorporate best practice principles into their provision of services to pregnant women. In particular:

- Establishing a good referral network with midwives and other health and family services staff that have contact with pregnant women and new mothers.
- Specific training in pregnancy NRT, and motivational interviewing.
- Use of simple biofeedback (e.g. CO monitor) +/- incentives (e.g. vouchers for baby products).
- Opportunity for mentoring from pregnancy smoking cessation services in other regions.
- Strong systems and protocols, including an IS platform.
- Flexibility in the amount of contact, style, and timing of contact – matched to client, but with an underlying philosophy of long-term support (12 months plus).
- Including partners and whanau as clients, and protocols for referral on to other whanau support services.

B. Support for Māori Role Models and Māori Community Action

- Increase the number of smokefree role models by supporting Māori staff (midwives, community health workers, health care assistants, nurses etc) to quit smoking - providing adequate incentives (e.g. leave from work to attend cessation programme, free medication, rewards, quit and win contests).

- Support programmes which engage with and challenge Māori whanau and community norms around smoking, e.g. Māori SIDS Mokopuna Ora Programme.

- Consider scholarships to attract applicants (particularly Māori) into midwifery training with in-built smoking cessation training.

C. Pregnancy Smoking Cessation Coordinator

Consider creating a regional 'Pregnancy Smoking Cessation Coordinator' position. This position should be trialled as a pilot, with robust evaluation. Roles could include:

- Telephone support of midwives, GPs, practice nurses etc throughout Northland who need advice on NRT prescription for pregnant women, and/or advice on how to support or refer on.
- Strengthening links and referral pathways between health care practitioners (and social and family services) working with pregnant women and Aukati Kai Paipa providers in Northland.
- Link midwife role, and ongoing education and training of midwives in pregnancy ABC throughout Northland.
- Facilitating link between antenatal classes and cessation service providers.
- Fostering midwife smokefree 'champions' in each district.
- Working with secondary care ABC Smoking Cessation Coordinator to establish stronger ABC systems within maternity services, and auditing the effect of these systems.
- Supporting and strengthening AKP practitioners in their service provision to pregnant women.

D. Stronger Smokefree Systems in Maternity and Primary Care

- Embed smoking cessation ABC in maternity services obstetric care planning and discharge planning using appropriate, easy-to-use tools and systems (e.g. triggers to screen and respond, compulsory documentation around ABC as part of discharge, electronic referrals to cessation providers).
- Consider payment to midwives for ABC interventions.
- Consider additional incentive payment to General Practices for ABC intervention for Māori pregnant women, and set a target for pregnant women's ABC (e.g. 90% pregnant women in the practice per year will receive ABC).
- Consider providing ABC training to other professional groups e.g. Public Health Nurses, Family Planning and Sexual Health staff, Community Health Workers, Health Care Assistants, Tamariki Ora (Wellchild) providers.
- Promote the use of the Ministry of Health ABC e-learning tool to all health professionals.
- Smoking cessation ABC information and referral contacts easily accessible (and highly visible) on the Northland DHB intranet
- Develop pregnancy specific resources that visually show the benefits of quitting at each stage of pregnancy (this type of resource is being developed in Auckland).

E. Looking Upstream

- Investigate ways in which smoking prevalence in young women of childbearing age can be reduced, e.g. Smokefree Schools Approach applied specifically to young women within kura kaupapa and alternative education providers.

- Investigate a 'vulnerable pregnancies' model for wrapping psychosocial support around women with multiple risk factors for adverse pregnancy/child outcomes (e.g. teen mothers, those on low incomes, substance use, violence, poor housing, single mothers, mental health issues).

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