newzealand.govt.nz

Enrolling Babies at Birth

2014

A resource for general practice

Acknowledgements

The Ministry of Health acknowledges the support and advice from a wide range of people who contributed to the development of this resource, including staff from general practices, primary health organisations, district health boards and the Ministry of Social Development.

Citation: Ministry of Health. 2014. *Enrolling babies at birth: a resource for general practice*. Wellington: Ministry of Health.

Published in April 2014
by the Ministry of Health
PO Box 5013, Wellington 6145, New Zealand

ISBN 978-0-478-42701-1 (online)
HP 5804

This document is available at www.health.govt.nz

This work is licensed under the Creative Commons Attribution 4.0 International licence. In essence, you are free to: share ie, copy and redistribute the material in any medium or format; adapt ie, remix, transform and build upon the material. You must give appropriate credit, provide a link to the licence and indicate if changes were made.

Contents

Introduction 1
- What has been done so far? 1

Key messages 2

Practice procedures 3
- Adopt and follow a proactive policy 3
- Take the opportunity to enrol the newborn in other programmes 3

Pre-enrolling through NIR notifications 4
- Respond promptly to each NIR notification 4
- Also notify promptly if you decline an enrolment 4

Practice Pregnancy Register 5
- Maintain a Practice Pregnancy Register 5
- Explore ways to share relevant clinical information 5

Patients experiencing financial hardship 6

The role of PHOs and primary health care networks 7

Appendices 8
- Appendix 1: Examples from general practices, DHBs, PHOs and primary health care networks 8
- Appendix 2: Journal article 19
- Appendix 3: Ensuring all babies have a great start 32
- Appendix 4: Flow charts 35

List of Tables

Table 1: The principles and practice of health visiting 22

Table 2: Ethnicity and family types of Manurewa residents compared with the Auckland region 23

Table 3: Annual income, unemployment rate and post-school qualification for people aged 15 years and over in Manurewa compared to the Auckland region 23

List of Figures

Figure 1: Ethnicity of 66 infants aged 6weeks – 6 months enrolled at SAGP October 2009–September 2010 compared to national statistics recorded at 2006 census 26

Figure 2: The number of pregnant women enrolled with the SAGP who had an identified LMC recorded in their notes during 2010 27

Figure 3: Monthly percentage rates of completion and timeliness of immunisations in 6 week–6 month old infants, January–December 2010 (n= 73) 27

Introduction

When newborns are enrolled with a general practice at birth, health professionals gain more opportunities to give childhood immunisations on time and maximise the child's health as they grow. To achieve these benefits, all newborns need to be enrolled with a general practice as close to birth as possible and **no later than two weeks after their birth**. This resource provides general practices with practical suggestions to help this process.

Most general practices already have excellent procedures in place to deliver high-quality and effective care for their pregnant women and newborns. However, sometimes it is difficult to enrol a newborn quickly, which is beyond the control of the general practice. The suggestions in this resource have been developed to be useful and relevant for general practices.

What has been done so far?

From 1 October 2009 to 30 September 2010, almost no newborns were enrolled with a general practice at 6 weeks of age and fewer than half were enrolled at 12 weeks. On 1 October 2012, the preliminary newborn enrolment policy (the B code) was implemented to improve the timeliness of enrolment. It enabled general practices to pre-enrol newborns following an NIR notification that they have been chosen as the newborn's general practice. From 19 August 2013, 70 percent of newborns were enrolled by three months of age.[1]

The Ministry of Health (the Ministry) established a working group, comprising a range of stakeholders, to look at improving the timeliness of enrolling newborns in general practice and inform the development of this resource. The group focused on the process of transferring birth information from hospital systems to the National Immunisation Register (NIR) and the components that are general practice based. District health boards (DHBs) are also working to improve their systems and processes. This resource complements the 2012 policy changes.

Other relevant work includes:

- electronic enrolment with general practice
- developing a Shared Maternity Record of Care , which will give a multidisciplinary team of clinicians and the pregnant woman access to a shared record of care
- the exchange of health information between health professionals.

[1] The Ministry is looking at developing a set of measures against which general practices will report regularly to help the Ministry monitor progress on timely newborn enrolments with general practice.

Key messages

- Best practice is for the general practice, the Lead Maternity Carer (LMC) and the pregnant woman to reach an understanding about the enrolment of the newborn before the birth. Processing the NIR notification will be completed more smoothly if everyone understands the enrolment process.
- Check your provider inbox for NIR notifications daily and act on them promptly. These notifications are the main trigger for pre-approving enrolment of newborns and activating pre-calls for immunisations and other health care services.
- Identify one person in your practice team to be responsible for the health needs of pregnant women and newborns.
- Work and Income advisors can work with clinical staff to identify support available for beneficiaries who experience financial hardship.
- Your primary health organisation (PHO) or primary health care network may have resources and staff who can help with child health needs and enrolment.

Practice procedures

Adopt and follow a proactive policy

With a proactive policy, mothers and babies are more likely to get better care faster. Adopting a policy that outlines standard practices and processes helps to ensure that:

- the woman registers with a LMC – usually a local midwife. Please refer to **www.findyourmidwife.co.nz** for a list of midwives in your area and to check their availability for the month when the woman is due to have her baby
- your practice shares relevant health information such as medical history, diagnostic results including ultrasound and screening, and medications with the LMC once the woman is registered. Your practice can also explore with the LMC what information to share and how it will be shared throughout the woman's pregnancy
- newborn enrolment is completed promptly from the NIR notification and LMC referral letter (see Appendix 1 for an example of one practice's policy)
- the National Immunisation Schedule timeframes are met.

An effective approach is for every practice to develop its own policy that takes account of the roles and responsibilities of the whole practice team. One aspect may be to nominate one person to take a lead role in the care of pregnant women and newborns. Adopting this policy:

- supports the health needs of women
- opens up opportunities to discuss the benefits of early enrolment, childhood immunisation and postnatal care.

For further information, see the appendices.

- Appendices 2 and 3 provide relevant articles from the *International Journal of Patient Centred Medicine and New Zealand Doctor*.
- Appendix 4 sets out two example flowcharts that identify key steps in the process of maternity care, including enrolment – the first is designed for general practices and the second for women once their pregnancy has been confirmed.

Take the opportunity to enrol the newborn in other programmes

Some general practices, PHOs and primary health care networks have used the enrolment form to enrol the newborn in other programmes as well. Relevant programmes include Well Child / Tamariki Ora, newborn hearing screening and community oral health services.

For examples of practice policies, forms, brochures, posters and cards, see Appendix 1.

Pre-enrolling through NIR notifications

Respond promptly to each NIR notification

When your general practice receives an NIR notification through its provider inbox, action the notification promptly. Ideally the response will be immediate, but it should be no later than three days after receiving the notification. The NIR notification is now the main trigger for accepting a newborn pre-enrolment request and activating pre-call for the six-week immunisations.

You can accept a pre-enrolment before a newborn has presented to your practice. Once you have pre-enrolled a newborn, your practice will receive a First Level Health subsidy for the newborn for one quarter. To maintain ongoing funding, the parent or caregiver must sign an enrolment form.

Also notify promptly if you decline an enrolment

If your practice declines an enrolment, notify the NIR or other referrer (eg, the hospital discharge notification following birth) promptly so that a new request can be sent to another general practice as soon as possible. In these instances, the NIR coordinator or referrer should be informed by phone. Currently the main reason for declining an NIR request is that the practice does not know the family concerned.

For further information, see:

- Appendix 1 for an example of a process that one general practice developed to manage NIR notifications
- www.health.govt.nz/publication/newborn-pre-enrolment-toolkit for the Ministry of Health's newborn pre-enrolment toolkit.

Practice Pregnancy Register

Maintain a Practice Pregnancy Register

To keep a reliable record of your pregnant population, your practice could maintain a Practice Pregnancy Register. With comprehensive information in one location, it is easier to:

- enrol newborns
- achieve continuity of care between the general practice team and the family.

The following is an example of the kind of information the Practice Pregnancy Register could contain:

Woman

- Name
- Age
- Address
- Phone number
- Estimated date of delivery
- Name and phone number of the LMC
- Smoking status
- Pertussis vaccine given[2]
- Influenza vaccine given.

Baby

- Date of birth
- Whether the baby is exposed to smokers in the house
- Breastfeeding status (exclusive, fully, partial, artificial).

Explore ways to share relevant clinical information

You may wish to consider ways in which your practice can share clinical information with the woman's LMC or other maternity providers such as DHB Maternity Services.

[2] The pertussis vaccine is funded during epidemics.

Patients experiencing financial hardship

Financial hardship can be a barrier to appropriate care for some families and their newborn. Pregnant women in this situation may have incurred debts with their general practice and may 'shop around' for a general practitioner.

Where financial hardship is a concern and the patient is a beneficiary, find out about Work and Income's range of assistance from:

- www.workandincome.govt.nz/individuals/how-we-can-help-you
- Work and Income's Regional Health Advisors and Regional Disability Advisors, who practice staff may phone directly for further guidance and who can be contacted on 0800 559 009 from Monday to Friday 8.30 am–5 pm, except for Wednesday 9.30 am–5 pm.

The role of PHOs and primary health care networks

Check with your PHO for any resources that it may have to support your practice in enrolling newborns.

PHOs and primary health care networks take a whole-of-population health approach in working with their general practices to improve health outcomes. The PHO Services Agreement requires district health boards and PHOs to work in partnership to deliver whole-of-system solutions. These partnerships, or alliances, are clinically led and identify local priorities where clinical professionals from different organisations could work together to improve clinical pathways for patients. Such work may strengthen the focus on child health issues, including newborn enrolment with general practice.

Appendices

Appendix 1: Examples from general practices, DHBs, PHOs and primary health care networks

Example of practice policy

1. After a GP or practice nurse confirms pregnancy and the GP provides all first trimester care as set out in the Primary Maternity Service Notice, reception will enter the woman's details on the Practice Pregnancy Register. Ensure that the woman is supported to engage with an LMC of her choice and inform the practice manager.
2. The practice manager claims for the first trimester funding within the patient management system (PMS) after the first trimester.
3. The practice manager calls the woman when she reaches 36 weeks to offer support from the nurses or GP if needed and to explain the enrolment process for her new baby. Check first that the woman is still pregnant before making contact.
4. The practice nurse sets as a task for the baby's estimated date of delivery, that the practice manager will send the woman a congratulations letter and enrolment form with a self-addressed envelope. The letter will only be sent when the practice is notified of the baby's birth and after the practice nurse has talked with the woman.
5. The practice nurse calls the mother approximately a week after birth to tell the woman about the immunisation register for the baby, and asks her to make an appointment when the baby is six weeks old for the baby's first immunisations. The practice nurse also asks for the baby's first name if it is not stated on the delivery summary. A task is then set for the practice nurse to check the recall list and make sure the appointment has been made for the six-week immunisations; if it has not, the mother is called to book an appointment.
6. The practice manager checks the GP inbox regularly and sends any NIR notifications it contains to the practice nurse for completion.
7. After receiving the NIR notification, reception sets up the newborn in the PMS and makes up a chart. Enrolment is entered into the PMS as 'B' until the enrolment form is returned, at which stage the immunisations will be entered automatically.
8. If the practice nurse is unclear about a notification, they will discuss with the practice manager and GP before actioning the notification. If still unclear, then the practice nurse and practice manager will contact the midwife, hospital or mother where possible to gain more information.
9. No NIR notification is declined until the NIR coordinator has been notified and informed as to why a decline will be sent.
10. Ensure GPs are aware they need to forward NIR notifications to the practice nurse.

Example of role description for a child health champion

1. Implement the Practice Pregnancy Register.
2. Maintain timely immunisation statistics with the general practice.
3. Implement routine mood assessment of women at six weeks and five months postnatal. Liaise with the Well Child / Tamariki Ora provider if a woman has postnatal depression.
4. Work with the practice and the Well Child / Tamariki Ora providers to identify vulnerable children registered with the practice (where vulnerable means those at risk of harm and children with special needs). Then establish a system with the general practice or PHO/DHB child health champion for regular review of these children.
5. Liaise with Child, Youth and Family regarding vulnerable children.
6. Liaise with emergency department, general practice and the Well Child / Tamariki Ora providers regarding attendance of and admissions to hospital (monitoring vulnerable children in particular).
7. Work with the practice to develop a case management approach to caring for children with asthma, eczema and other conditions (therefore reducing ambulatory-sensitive hospitalisations).
8. Provide second opinions, teaching and support on infant-and child-related issues for midwives, GPs, Well Child / Tamariki Ora providers, practice nurses and school nurses.

Example of process for managing NIR notifications

1. The general practice team discusses and agrees a process for managing NIR notifications in a timely way. Inboxes are checked daily.
2. The practice has a nurse who manages all NIR messages. The nurse checks the GP inbox daily, and uses the filters for all providers and then checks the NIR folder. This picks up all NIR messages no matter who is the named provider.
3. The practice manages this with the practice manager checking the GP inbox and diverting all notifications to the practice administration inbox. The practice manager consults the GP about accepting or declining the notification. Then the practice manager takes the required action and, if enrolment is accepted, forwards the notification to the practice nurse. The practice nurse phones to make an appointment for the six-week immunisations.
4. The GP forwards the NIR notifications to the practice administration inbox or the practice manager diverts messages from the GP's inbox into the practice administration inbox.
    a. Once the enrolment details have been worked through, the GP is approached to accept the enrolment of the newborn.
    b. After the GP accepts the enrolment and the system is set up, the notification is then forwarded to the nurses so that the new mother can be contacted to:
        i. welcome her to the general practice
        ii. enquire how things are going
        iii. provide information on immunisation and when the first immunisations are due
        iv. make the first appointment for the six-week immunisations.

5. Some GPs prefer to manage their own inbox (and make the decisions about their patients), rather than allowing the practice nurse or manager to have access to their email. Alternatively the practice nurse manages all NIR notifications by checking on a daily basis. The notifications can be filtered for all providers in the NIR folder so that all messages can be picked up.
6. Update enrolment information from LMC referral letter and Well Child / Tamariki Ora parents' book.

Example of referral to Well Child / Tamariki Ora provider and notification to GP

POSTNATAL

Please ensure that the completed form is sent to the GP (below) and the Well Child provider by four weeks postpartum, and that a copy is given to the woman.

Date ______________ Planned date of discharge from LMC ______________

Dear Dr ______________

I am writing to update you on my client and her baby who have been in my care.

Name ______________ DOB ______________ NHI ______________

Address ______________ Home telephone ______________

______________ Mobile number ______________

______________ Alternative contact number ______________

Partner/family/social support ______________

Pregnancy summary ______________

Birth summary (including mode of birth) and postnatal period ______________

Parity ______________ Contraception ______________

Baby's name ______________ DOB ______________ NHI ______________

Sex ______________ Gestation ______________ Apgar score ______________

Birth weight ______________ Last recorded weight ______________ Date ______________

Newborn baby summary ______________

Newborn metabolic screening ❑ Yes ❑ No

Newborn hearing screening ❑ Yes ❑ No

Red eye reflex done ❑ Yes ❑ No

Vitamin K ❑ IM Oral ❑ 1st ❑ 2nd ❑ 3rd ❑ Declined

Baby's feeding ❑ Exclusive breastfeeding ❑ Fully breastfeeding ❑ Partially breastfeeding ❑ Artificial feeding

Well Child provider notified ❑ Yes ❑ No

Summary of ongoing maternal and baby needs and referrals made ______________

❑ I will follow up this summary with a phone call.

If you have any further questions please feel free to contact me.

Lead maternity carer ______________

Contact details ______________

Example of I Need You poster

Make sure you provide the name of your GP or medical centre when you...

- register with a midwife
- complete forms asking for this information

If you do not have a GP or medical centre to enrol your baby with...

- call the National Immunisation Register (NIR) on 0800 100 273, select option 1 to be given the names of GPs and medical centres in your area
- ask your midwife for names and contact numbers of local medical centres

If you provide the name of your baby's GP or medical centre...

- the NIR notifies your GP or medical centre you wish to enrol your baby
- you will know where to take your baby if baby is ill
- GP visits will be free for baby
- baby's records will be in one place
- you will be reminded when your baby's vaccinations are due

TM11/12 ???CODE???

Te Hanga Whaioranga Mō Te Iwi
Building Healthy Communities

Waikato District Health Board

Example of enrolment form

Nelson Marlborough

Newborn Enrolment Form

Congratulations on the arrival of your new baby.

Your baby is entitled to **free** health services. You can fill out one form that provides information to enrol your child with the **five services** below.

General Practice

The information on this form will enrol your baby with your medical practice. It will also be held by Kimi Hauora Wairau-Marlborough Primary Health Organisation, where it is used to obtain funding on your behalf and for planning, monitoring and reporting. Details of your health status or the services you receive remain confidential, except where relevant health information is shared with other professionals directly involved in your care.

Well Child Tamariki Ora Provider

This is a free service that will support you to ensure your child grows and develops to their full potential. This is offered to all New Zealand children from birth to 4 years.

The enrolment information you have provided advises the Well Child provider that your baby has arrived.

The LMC and Well Child provider will work together to transfer your child's care at 4-6 weeks of age.

National Immunisation Register (NIR)

NIR is a computerised information system that records immunisations of New Zealand children.

NIR allows health professionals to quickly find out what vaccines your child has been given and ensure the right vaccine is given at the right time. You will receive a letter from NIR asking you to confirm your child's details and that you are happy for their information to be held there.

Community Oral Health Service

Your baby's first teeth will begin to appear at 5-6 months of age. Dental education, preventative and basic treatment services are provided free of charge to preschool and primary school age children by the Community Oral Health Service. You can enrol your child directly or referrals can be made by Well Child providers or general practitioners. You will be contacted by the service with an invitation to enrol your child when they are between 9-12 months old.

Universal Newborn Hearing Screening Early Intervention Programme

Every year in New Zealand up to 170 babies are born with significant hearing loss. Without early detection, these babies may have speech and language delays and be unable to develop adequate communication skills.

You will be offered a free hearing screening to check whether your baby can hear well. The screening test is safe and simple and will not hurt or harm your baby. You can be with your baby during screening and you will be told the results straight away. If you are not seen in the Maternity unit you will be sent an appointment for an outpatients clinic. The information you provide is confidential to the DHB and to the National Screening Unit which monitors the programme.

THANK YOU

You will be contacted by each of these services and provided with further information. If you do not want your baby to receive these services, you can decline at this time.

NMDHB DISTRICT NEWBORN ENROLMENT – MARLBOROUGH: NATIONAL IMMUNISATION REGISTER (NIR), GENERAL PRACTICE, TAMARIKI ORA/WELL CHILD PROVIDER, NEWBORN HEARING SCREENING AND COMMUNITY ORAL HEALTH SERVICE

BABY'S DETAILS:

FIRST NAME(S): | **FAMILY NAME:**

GENDER: Male ☐ Female ☐ | **DATE OF BIRTH :** | **NHI NUMBER:**

PLACE OF BIRTH: Wairau Hospital ☐ Home ☐ Other ☐ Please specify: ____________________

BABY'S PHYSICAL ADDRESS AND PHONE CONTACTS: ***Where the baby will physically live, (cannot be a Post Box or Private Bag)***

UNIT / HOUSE NUMBER: | STREET:

SUBURB: | CITY / TOWN: | POSTCODE:

☎ HOME: | ☎ MOBILE:

BABY'S POSTAL ADDRESS: ***Where you would like your mail delivered, leave blank if same as above***

UNIT / HOUSE NUMBER: | STREET:

SUBURB: | CITY / TOWN: | POSTCODE:

Do you consent to receive communication from the registered providers via text messaging? *(Please tick one)* ☐ Yes ☐ No

BABY'S ETHNIC GROUP: *(Please tick all that apply)*

New Zealand European	
Māori	
Samoan	
Cook Island Māori	
Tongan	
Niuean	
Chinese	
Indian	
Other such as Dutch, Japanese, Tokelauan. Please state: __________	

BABY'S ENROLMENT WITH A GENERAL PRACTICE:

My baby is eligible and entitled to enrol with a General Practice: *(refer to reverse of cover page for eligibility criteria)* ☐ Yes ☐ No

My baby's preferred General Practice or clinic is:

My baby's preferred General Practitioner (GP) / Primary Care Provider is:

PARENT / GUARDIAN'S DETAILS:

MOTHER'S FIRST NAME(S): | **FAMILY NAME:**

DATE OF BIRTH : | **NHI NUMBER:**

COUNTRY OF BIRTH: | **MOTHER'S GP:**

FATHER'S FIRST NAME(S): | **FAMILY NAME:**

COUNTRY OF BIRTH: | **FATHER'S GP:**

WHICH IS YOUR PREFERRED WELL CHILD PROVIDER: *(please tick one)*

☐ Plunket ☐ Maataa Waka ☐ Public Health (Rural)

Are there any other children in the family? ☐ Yes ☐ No

LEAD MATERNITY CARER:

Lead Maternity Carer (LMC) name: | LMC Phone number:

INTERPRETER SERVICES:

Do you require the services of an interpreter? ☐ Yes ☐ No If yes, please specify language: ____________________

PARENT SIGNATURE:

I understand I have the right to access my health information and request correction of information under Rules 6 and 7 of the Health Information Privacy Code 1994

I consent to the transfer of this information to Kimi Hauora Wairau Marlborough PHO, Nelson Marlborough District Health Board and my chosen Well Child provider

SIGNED: **DATE:**

(Parent /Guardian Signature)

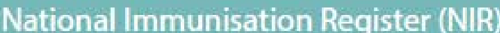
Address for posting or further information: KHW Marlborough PHO, PO Box 1091, Blenheim 7240

GP: White NIR: Pink Oral Health Service/ Newborn Hearing: Green Well Child Provider: Yellow Parent: Blue

Newborn services

Congratulations on the arrival of your new baby

Your baby is entitled to free health services. Please keep this sheet for your information. You can fill out and return the single form attached, which provides information to connect your child with the five services below:



National Immunisation Register (NIR)

NIR is a computerised information system that records immunisations of New Zealand children.

NIR allows health professionals to quickly find out what vaccines your child has been given and ensure the right vaccine is given at the right time. You will receive a letter from NIR asking you to confirm your child's details and that you are happy for their information to be held there. If immunisations become overdue you will be contacted by the Outreach Immunisation team.

General Practice

General Practices will hold two types of information about your baby:

Non-clinical information

Details such as baby's name and address. This enables the practice to contact you about your baby.

Clinical information

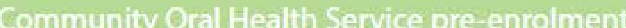
Information you discuss with the doctor or nurse. This is not shared with any other agency without your consent. The primary health organisation will keep a copy of the form as a contact point for these services.

Well Child/Tamariki Ora Provider

This is a free service that will support you to ensure you child grows and develops to their full potential.

This service is offered to all New Zealand children from birth to five years. The enrolment information you have provided advises the Well Child provider that your baby has arrived.

Your LMC and Well Child provider will work together to transfer your child's care at four to six weeks of age.



Community Oral Health Service pre-enrolment

Your baby's first teeth will begin to appear at five to six months of age. Dental education, preventative and basic treatment services are provided free of charge to preschool, primary school age and adolescent children by the Community Oral Health Service.

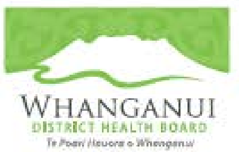
You can enrol your child directly or referrals can be made by Well Child providers or general practitioners. You will be contacted by the service with an invitation to enrol your child when they are about five months old.

Universal Newborn Hearing Screening Early Intervention Programme

Every year in New Zealand up to 170 babies are born with significant hearing loss. Without early detection and treatment, these babies may have speech and language delays and be unable to develop adequate communication skills.

You will be offered a free hearing screening to check whether your baby can hear well. The screening is safe and simple and will not harm your baby. You can be with your baby during screening and will be told the results straight away. If you are not seen in the maternity unit you will be sent an appointment for an outpatient clinic. Any information you provide is confidental to the WDHB and to the National Screening Unit which monitors the programme.

Each of the above services will contact you directly to provide you with further information. You may decline to receive these services at this time.



Newborn Services

National Immunisation Register (NIR), General Practice, Well Child/Tamariki Ora Provider, Newborn Hearing Screening and Community Oral Health Service

Baby's details:

(insert ID label here)

Place of birth: *(please circle one)* Wanganui Hospital Waimarino Health Centre Taihape Health Centre
Home Other: *(please specify)* ....

Baby's contact details:

Phone: *(Home)* .... Mobile: ....

Baby's ethnic group: *(please circle all that apply)*

NZ European Māori Samoan Indian Fijian Chinese
Cook Island Māori Other Pacific Islander Other: *(please state other, e.g. Dutch)* ....

Do you consent to receive communication from the registered providers via text messaging? *(please circle one)*
Yes No

Baby's general practice:

Who is the mother's doctor (GP)? ....

Which doctor (GP) do you intend to register your baby with: ....

Mother's details

(insert ID label here)

Whāngai If yes, please complete

Name: ....
Address: ....
....
Phone: .... Mobile: ....

Alternative contact: *(who lives at another address)*

Family name: .... First name: ....
Relationship: .... Phone: *(Home)* ....
Phone: *(Work)* .... Mobile: ....

Which is your preferred provider? *(please tick one)*

Tamariki Ora providers

- Ngāti Rangi Community Health Centre *(Waimarino)* ☐
- Te Kotuku Hauora (Rangitikei) ☐
- Te Oranganui Iwi Health Authority *(Whanganui)* ☐

Well Child provider

- Plunket ☐

Are there any other children in the family? *(please circle one)* Yes No

Parent signature:

Signed: ....
Date: ....

Lead Maternity Carer:

Name: ....

LMC use:

Example of baby card

IMMUNISE
on time, every time

Dear

We would like to welcome your new baby into the world and look forward to seeing you both.

We support the National Immunisation Guidelines and recommend that your precious baby is immunised. The first immunisation is given at 6 weeks of age.

Enclosed is an appointment time for you to bring your baby in to meet us and to have their 6 week immunisation.

The next immunisations are given at 3 months, 5 months, 15 months and 4 years. We will give you an appointment after each immunisation, starting with the 6 week immunisation.

It is a good idea to bring your 'Well Child Book' with you, so that we can record the immunisation.

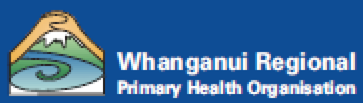
If you have any questions or wish to alter this appointment time please phone us.

Practice Nurse

Looking for a GP

Looking for a GP?

Enrolling with a GP will connect you to one of the two Primary Health Organisations in Whanganui. Benefits of this include cheaper consultation fees and access to a range of subsidised health services.



100 Heads Rd, P O Box 4260, Whanganui
Phone: (06) 348 0109 Fax: (06) 348 8205
Email: pho@wrpho.org.nz
Web: www.wrpho.org.nz

There are 15 general practices under WRPHO. To find out which ones are enrolling new patients please contact the Communications Coordinator on (06) 348 0109, extn 708.

57 Campbell St, P O Box 611, Whanganui
Phone: (06) 349 0007 Fax: (06) 345 6168
Email: info@teoranganui.co.nz
Web: www.teoranganui.co.nz

There are 3 general practices under TOIHA. To find out which ones are enrolling new patients please contact the general practice Team Leader on (06) 349 0037, extn 8017.

Appendix 2: Journal article

Source: *The International Journal of Person Centred Medicine* 1(3): 618–26.

Person-centred maternity services in New Zealand: a practice development initiative to improve the health of pregnant women and infants

Karen J Hoare NP RN FCNA RGN RSCN RHV MSc,[1] Tana Fishman MS FRNZCGP(Dist),[2] Karen Francis RN BHlthScNsg MHlthScPHC MEd PhD[3] and Jane Mills RN BN MEd MN PhD[4]

Abstract

Rationale, aims and objectives: Primary health care and maternity services in New Zealand are delivered via independent self-employed practitioners and separate organisations with no requirement to co-ordinate care. There are disparate immunisation timeliness and rates between ethnic groups. The aim of this practice development initiative is to improve the health of pregnant women and infants. The objectives are to link the general practice enrolled pregnant women with a midwife on confirmation of their pregnancy, record the date of delivery in the general practice notes, enrol the infant with the general practice shortly after birth and so increase the timeliness and rates of immunisations.

Methods: Following an initial audit, information is now recorded on the engagement of pregnant women with a midwife in early pregnancy. Contact is made with the midwife and recorded in the general practice notes around the expected delivery date. An invitation to enrol the infant with the general practice is sent to the family four weeks post natal. Immunisation timeliness and rates of infants are audited monthly.

Results: Details of the midwife were recorded in the notes of 59 out of a total of 63 pregnant women during 2010, illustrating that the new model of care had been adhered to for the majority of pregnant women. Monthly immunisation timeliness and rates of 94–100% were achieved January 2010 –December 2010 in infants six weeks - six months old.

Conclusion: Primary care can be re-shaped in South Auckland by following international models to facilitate engagement of pregnant women with a midwife and increase immunisation timeliness and rates of infants.

Keywords

Clinical audit, general practice, health visitor, immunisations, New Zealand, nurse practitioner, person-centred maternity services, practice development.

The International Journal of Person Centred Medicine
Volume 1 Issue 3 pp 618-626

[1] Lecturer and Nurse Practitioner, Department of General Practice and Primary Health Care and School of Nursing, University of Auckland, Auckland, New Zealand

[2] Senior Lecturer and General Practitioner, Department of General Practice and Primary Health Care, University of Auckland, Auckland, New Zealand

[3] Head of School of Nursing, Midwifery and Indigenous Health, Charles Stuart University, Wagga Wagga, New South Wales, Australia

[4] Senior Lecturer and Deputy Head of School Cairns Campus, School of Nursing, Midwifery and Nutrition, James Cook University, Cairns, Queensland, Australia

Correspondence address
Ms Karen Hoare, Department of General Practice and Primary Health Care and School of Nursing, University of Auckland, Private Bag 92 019, Auckland 1142, New Zealand.
Email: k.hoare@auckland.ac.nz

Accepted for publication: 21 September 2011.

Introduction

This paper discusses the policy context of primary healthcare in New Zealand for pregnant women and infants. An audit of one general practice in South Auckland (SAGP) illustrated that the immunisation and timeliness rates of infants was sub-optimal. A practice development initiative introduced into the SAGP following the audit, coordinated care of pregnant women between general practice staff and midwives. This practice emulated that of the United Kingdom's health visiting profession (Table 1). Additionally a stepped approach to inviting parents/carers to the general practice for their infant's immunisation, based on a model developed in the USA resulted in an enduring marked increase in immunisation timeliness and rates.[1]

Policy contexts

Policy context of primary health care for pregnant women and infants in New Zealand

Healthcare systems are social constructions, formulated by the dominant ethnic group in society. These constructions therefore may not address the needs of ethnic minority groups, thus leading to an inequality in access to healthcare. Primary health care services in New Zealand are delivered by numerous organisations and independent practitioners with no requirement by the public health funding authority to co-ordinate care of patients. This arrangement potentially disadvantages some groups in society. Pregnant girls and women are expected to arrange maternity care themselves, which is free, from a midwife or obstetrician once their pregnancy is confirmed.

Poverty in New Zealand is associated with ethnicity, which results in disparity of access to health care, evidenced by the poor health statistics of Māori and Pacific peoples.[2] Ethnic minority groups, may have no access to a functioning telephone, poor health literacy and with English as a second language, may find it difficult to engage with the various professional groups to navigate the complex maternity care arrangements. Once registered with a lead maternity carer (LMC) (midwife or obstetrician), these professionals are not obliged to communicate with the woman's general practice (if she has one) during her pregnancy.

The LMC remains responsible for the care of the woman and infant for the first six post natal weeks, after which time an expectation is that the infant will be registered by the mother or main carer, with a general practice and 'well child' (for example the Plunket organisation) provider. Although the LMC informs the general practice of the birth of an infant, this information may not reach the practice until the infant is older than six weeks, resulting in late administration of their first immunisation. Additionally 'well child providers' who provide free development checks for the infant from four – six weeks old and health information for families, but generally

The International Journal of Person Centred Medicine
Volume 1 Issue 3 pp 618-626

not immunisations, are not connected to the general practice. A mother with a new infant does not have to engage with a 'well child' provider. This uncoordinated arrangement often results in late registration of the infant with a general practice and subsequent poor timeliness of immunisation.

Timeliness of immunisation is one of the strongest predictors of incomplete immunisation.[3,4] Timeliness is defined by the New Zealand Ministry of Health's immunisation register[5] as delayed if not received within four weeks of the first due date for the six week immunisations and within six weeks for the three month and five month immunisations. Studies have illustrated that the consequence to the infant of delayed and incomplete immunisation in New Zealand is a four – six fold increased risk of hospitalisation with pertussis, a vaccine preventable illness.[6-8]

General practice in New Zealand

Features of general practice in New Zealand are that of a small business model with the ability to charge patients' fees for a consultation. The fee supplements income provided by the District Health Board (DHB) via a primary health organisation (PHO). Since 2003, general practitioners have been encouraged to join a PHO. PHOs bring together doctors, nurses and other health professionals (such as Māori health workers, health promotion workers, dietitians, pharmacists, physiotherapists, psychologists and midwives).[9] The intention of the PHOs is to improve access to primary health care and so improve health and reduce inequalities in health between ethnic groups.

Funding of general practice is a very complex mixture of annual capitation payments for patients who are enrolled with the PHO, via the general practice and 'fee for service' for a range of care episodes, for example, the general practitioner is paid $18.80 for administering an infant's immunisation.[10] Because of the wide disparities in health between ethnic groups in New Zealand, Māori and Pacific peoples and people living in the most deprived areas, attract more funding for the general practice if enrolled with a PHO. Furthermore children under six years old are entitled to free general practice visits as the Ministry of Health subsidises this age group.

Manurewa, South Auckland

Manurewa, a suburb of South Auckland and the location of SAGP is an area of high socio-economic deprivation as measured by the NZDep06 instrument.[11] This instrument is based on eight factors of deprivation and measures meshblocks, the smallest geographical unit defined by Statistics New Zealand.[12] These meshblocks are separated into deciles and ranked from one – ten, with deciles nine and ten being the most deprived areas. Manurewa has one of the highest NZDep06 scores with 69% of residents living in deciles nine and ten [13] Māori and Pacific Island peoples are over represented in Manurewa compared to Auckland (Table 2). Children aged 0–14 years comprise 31% of the population.[14] the highest proportion of children in any area of New Zealand. In Manurewa, children are likely to live in families headed by a solo parent (Table 1) with the attendant poverty that solo parenthood implies.[15] Household income, post school qualification levels and employment rates are low (Table 3) and all of these factors point to Manurewa being an area of high needs with associated health problems.

Table 1: The principles and practice of health visiting [4,28]

Principles of health visiting	Practice of health visiting
Principle 1. The search for health needs	Collect and structure data and information on the health and wellbeing and related needs of a defined population. Analyse, interpret and communicate data and information on the health and wellbeing and related needs of a defined population. Develop and sustain relationships with groups and individuals with the aim of improving health and social wellbeing. Identify individuals, families and groups who are at risk and in need of further support. Undertake screening of individuals and respond appropriately to findings.
Principle 2. The stimulation of an awareness of health needs	Raise awareness about health and social wellbeing and related factors, services and resources. Develop, sustain and evaluate collaborative work Communicate with individuals, groups and communities about promoting their health and wellbeing. Raise awareness about the actions that groups and individuals can take to improve their health and social wellbeing. Develop capacity and confidence of individuals and groups, including families and communities, to influence and use available services, information and skills, acting as advocate where appropriate. Work with others to protect the public's health and wellbeing from specific risks.
Principle 3. The influence on policies affecting health	Work with others to plan, implement and evaluate programmes and projects to improve health and wellbeing. Identify and evaluate service provision and support networks for individuals, families and groups in the local area or setting. Appraise policies and recommend changes to improve health and wellbeing. Interpret and apply health and safety legislation and approved codes of practice with regard for the environment, wellbeing and protection of those who work and the wider community. Contribute to policy development. Influence policies affecting health. Develop, implement, evaluate and improve practice on the basis of research, evidence and evaluation.
Principle 4. The facilitation of health enhancing activities	Work in partnership with others to prevent the occurrence of needs and risks related to health and wellbeing. Work in partnership with others to protect the public's health and wellbeing from specific risks. Prevent, identify and minimise risk of interpersonal abuse or violence, safeguarding children and other vulnerable people, initiating the management of cases involving actual or potential abuse or violence where needed. Apply leadership skills and manage projects to improve health and wellbeing. Plan, deliver and evaluate programmes to improve the health and wellbeing of individuals and groups. Manage teams, individuals and resources effectively.

Table 2: Ethnicity and family types of Manurewa residents compared with the Auckland Region (Statistics New Zealand, 2009).

Ethnic group	Manurewa East %	Manurewa Central %	Auckland region %
European	38.3	43.8	56.5
Māori	30.6	24.6	11.1
Pacific peoples	23.9	20.7	14.4
Asian	16.4	17.6	18.9
Middle Eastern/Latin American/African	4.2	4.3	1.5
Other	4.5	5.4	8.1
Family type			
Couple without child(ren)	26.8	26.7	34.8
Couple with child(ren)	40.5	43.2	46.3
One parent with child(ren)	32.1	29.7	18.9

Table 3: Annual income, unemployment rate and post-school qualification for people aged 15 years and over in Manurewa compared to the Auckland region[12]

Annual income	Manurewa East %	Manurewa Central %	Auckland region %
<$20,000	51.6	50.1	40.9
>$50,000	7.2	8.5	21.6
Median income	$19,100	$19,900	$26,800
Unemployment rate	9.7	8	5.6
Post-school qualification	26.5	27.8	42.5

Children who are not immunised on time are likely to be from socio-economically disadvantaged, urban areas.[16] In March 2010, nationally only 67% of six month old infants had completed their primary course of immunisations. Of these, only 53% of Māori and 64% of Pacific Infants compared to 72% of European infants had completed their age appropriate immunisations.[6] In April 2009, an audit illustrated that the SAGP's timeliness and coverage of vaccines for the primary course was in keeping with national statistics, at 52%. Figure 1 illustrates the ethnicity of the SAGP's enrolled infant population over a one year period, which shows that Māori and Pacific Island infants are over represented at this practice and therefore less likely to receive their immunisations on time, compared to the rest of New Zealand.

The role of the health visitor in public health

The practice development initiative introduced into SAGP is based on the principles and practice of the United Kingdom's (UK) health visiting profession (Table 1). Every infant born in the UK has a specialist community public health nurse [SCPHN] (commonly known as a health visitor) to provide care and advice for its parents. SCPHNs are usually attached to a general practice. Attachment infers that the SCPHN works autonomously alongside the general practitioner sharing notes and case managing the pregnant and 0–5 year old patients and their families registered with the practice. The GP does not employ the SCPHN, the local primary care trust or commissioning body is their employer. SPCHNs in the UK are widely recognised as the

key public health practitioners providing community public health for young children and families.

The definition of public health coined by Acheson and adopted by the WHO is: 'The science and art of promoting health, preventing disease and prolonging life through the organised efforts of society'.[17] Successful public health practice involves working with individuals as well as the population. [18] Central to public health are specific diseases and their prevention, of which pertussis is an example. New Zealand continues to experience an infant hospitalisation rate for pertussis which is three – six times higher than rates for England or Australia and the USA.[8] The aim of community public health is to operate at a micro-level with families and communities to try and change the context of persistent public health issues.[4]

One such issue in New Zealand is the poor uptake of timely immunisation in indigenous (Maori) and Pacific children. New Zealand like the UK provides childhood vaccines free of charge. Parents in the UK are usually advised about the immunisation schedule at the first visit by the SCPHN to the family when their infant is 10–14 days old.[4] The SCPHN will then liaise with the practice nurse at the infant's general practice regarding the delivery of the immunisation schedule. Having one person in the general practice responsible for immunisation issues, patient reminders and recall systems is important in ensuring high coverage rates.[19]

Implementing the practice development initiative in SAGP

The SAGP has a no charge policy for any child under eighteen years old and for those in full time study. In common with most general practices throughout New Zealand, general practitioners at SAGP employ practice nurses and administration staff. The general practice was in agreement that improved immunisation compliance was desirable and supported the lead author's endeavours to achieve this goal.

Following the audit, implementation of the new model was led by the lead author, a UK educated nurse and health visitor who transitioned to a nurse practitioner (NP) role in the SAGP. To operate as a health visitor/SCPHN in New Zealand and be able to prescribe medications, registration as a NP with the Nursing Council of New Zealand (NCNZ) is required.[20] NPs are 'expert' nurses possessing leadership, teaching and advanced clinical practice skills.

Methods

The new initiative comprised:

- Recording the details of pregnant women in the 'birth book' (see below) at time of confirmation of the pregnancy.
- Liaising with the woman to ensure she had a midwife soon after confirmation of pregnancy.
- Including an independent midwife in the SAGP.
- Contacting the pregnant woman at 36 weeks pregnant to renew the relationship with the general practice.
- **Sending** a congratulations letter and reminder when the infant is four weeks old inviting the infant for its six week check and first immunisation.

The International Journal of Person Centred Medicine
Volume 1 Issue 3 pp 618-626

- Contacting the woman when the infant is five weeks old to book them for a six week check appointment if they have not already arranged one.
- Establishing weekly clinics at the three local high schools to work with the school nurses to identify the pregnant teenage girls and offer co-ordinated primary healthcare services.

A 'birth book' was established in May 2008. This book contained demographic details of the pregnant woman, including her age, telephone number and address along with the name of the midwife who was caring for her and her expected date of delivery. The birth book is universally a common tool for health visitors in the UK. At SAGP general practitioners and practice nurses on confirming a pregnancy were requested to send a task via the computerised practice system to both the practice manager and the NP to record the woman's name in the birth book. Her name was recorded beside the month of her estimated delivery date (EDD). The NP contacted the woman early in pregnancy to ensure she had accessed a midwife or obstetrician and when requested by the woman, the NP facilitated access to care for her.

One month prior to the EDD, the NP contacted the woman's midwife to enquire how the pregnancy was progressing and if all was well, she then contacted the woman to remind her of the services available at the general practice following delivery. One month after the delivery date, contact was made with the family to offer; congratulations, an appointment for a six week check and first immunisations for the infant. This action was in line with principle one of health visiting; the search for health needs (Table 1). Actions associated with this principle are to collect and structure data and information on the health and wellbeing and related needs of a defined population and develop and sustain relationships with groups and individuals with the aim of improving health and social wellbeing (Table 1). The intention of the above actions was to improve antenatal care and immunisation rates and so reduce the numbers of infants hospitalised with vaccine avoidable infections such as pertussis. In April 2009 an independent midwife (who maintained her self-employed status) joined the practice.

Baseline audit

The baseline audit for this practice development initiative was conducted by a GP registrar over a one month period, April 2009, who identified all babies enrolled with the practice aged between 0 years and six months, their immunisation status and if they had been immunised on time. To gain accurate information, because data was not recorded correctly in the practice management system, hand searching of the infants' notes was necessary. Definition of timeliness was that the first immunisation was given to the baby by the age of ten weeks, the second by four months old and the third by six months old. These data were then anonymised and sent to the National Immunisation Register.

Subsequent monthly audits

Monthly audits have been conducted since December 2009 to collect the dates of each infant's immunisation using the search engine within the practice management system to ensure that they have been immunised on time. If a delay is noted the family are contacted by telephone and an appointment arranged for them or if they cannot be contacted by telephone, they are visited at home and offered an appointment. These actions constitute evidence-based best practice.[1]

The NP and practice nurse co-ordinate information from the midwife regarding the date of the infant's delivery and integrate it with information recorded in the birth book so that the actual date of birth is recorded next to the EDD.

Ethical approval

This model of care was implemented using the evidence of 'what works' to increase immunisation rates from international models.[1,4] The new model forms part of the audit cycle and therefore ethical approval was unnecessary. Ethical approval was not required for the data collected on immunisation timeliness and rates as these anonymised statistics are freely available and published by the Ministry of Health.[5,21] Parents and carers are requested to consent to the recording of their infant's immunisation status at their first immunisation visit. Consent and subsequent data are sent to the National Immunisation Register (NIR).[5] The general practice's name has been changed and is not identifiable nor are the midwives or obstetricians or the enrolled pregnant population.

Figure 1: Ethnicity of 66 infants aged 6 weeks - 6 months enrolled at SAGP October 2009–September 2010 compared to national statistics recorded at 2006 census (Statistics New Zealand 2006).

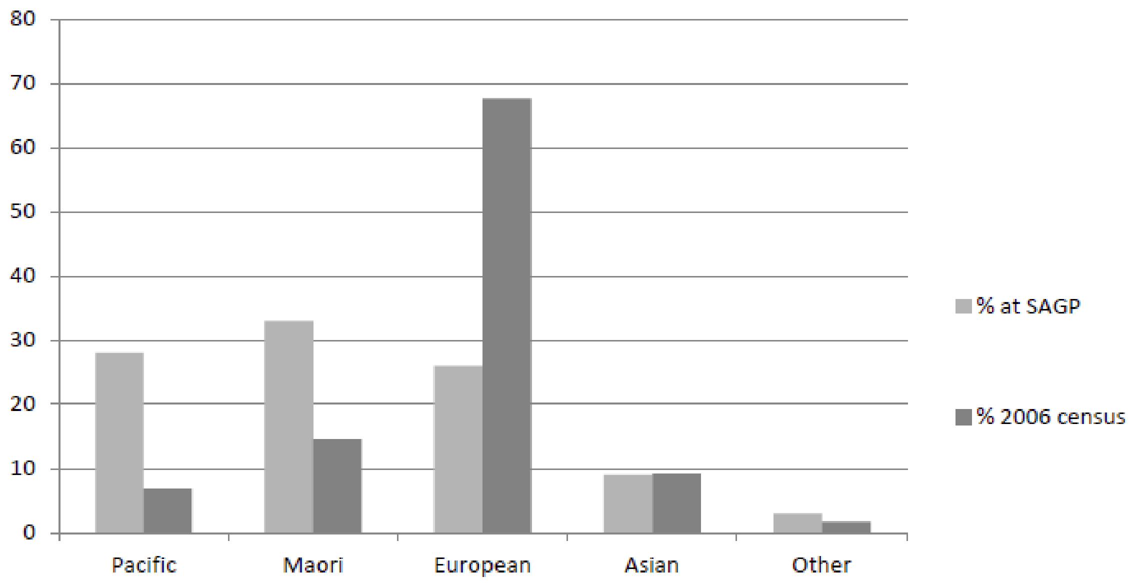


Figure 2: The number of pregnant women enrolled with the SAGP who had an identified LMC recorded in their notes during 2010

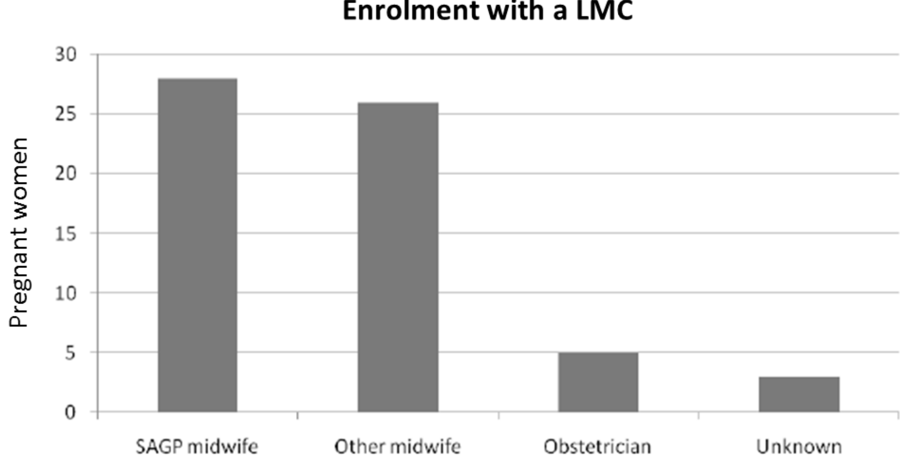
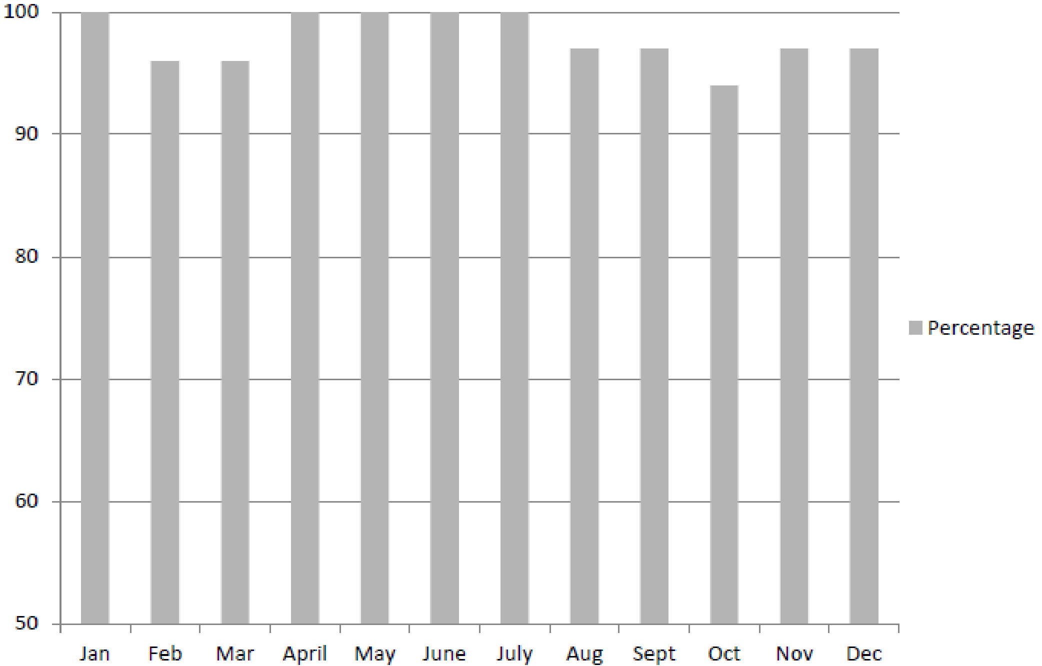


Figure 3: Monthly percentage rates of completion and timeliness of immunisations in 6 week–6 month old infants, January–December 2010 (n= 73)



Results

The 'birth book' has become a shared document between the midwife, NP, practice nurses, GPs and administration staff. Over a one year period (2009–2010), SAGP's enrolled infant population majority, 22 (33%), were indigenous (Māori). The next main group, 19 (28%) were Pacific Island infants and the third main group were New Zealand European (Figure 1). Of the 62 women whose infants were aged six weeks – six months during 2010 and who were registered with SAGP during their pregnancy, 59 (95%) had a documented LMC in their notes (Figure 2).

Eleven infants moved to SAGP after their birth and so no record of their mother's ante-natal care was available. The audit conducted in April 2009 illustrated that only 52% of infants received their immunisations on time at SAGP. Following the introduction of the new model of care, Figure 3 illustrates that in January, April, May, June, and July 2010, 100% of eligible infants had received their immunisations on time. During the remaining months in 2010, the percentage of infants receiving their immunisations on time was never lower than 94% (Figure 3).

Discussion

Summary of main findings

Standard practice prior to the new model of care was, once pregnancy was confirmed, the woman was given a list of midwives to choose one to make contact with. Having searched for health needs of the Manurewa population, in line with principle one of health visiting (Table 1), it was apparent that the impoverished population of Manurewa may not have the financial means to make numerous telephone calls from cell phones to arrange ante-natal care. Consequently, anecdotally, many pregnant women did not arrange ante-natal care for their first and second trimesters. Personnel operating from the general practice were not privy to

information about the pregnancy and subsequent birth and although a system operates whereby the LMC informs the general practice of the birth outcome, receipt of information is often delayed resulting in late appointments offered for the infant's six week immunisation. Women were expected to make contact with the general practice to arrange their infant's six week check and immunisations.

Since implementation of the new model of care, 59 (95%) of pregnant women enrolled with the practice have a LMC documented in the notes and the majority 28 (43%) enrolled with the SAGP midwife (Figure 2). Additionally immunisation timeliness and rates have increased to 94–100% consistently every month since December 2009 (eight months after the new model was implemented). These results indicate that SAGP has reduced inequality of access to immunisations between ethnic groups for at least five months during 2010, as all infants were immunised (Figure 3). Factors associated with the SAGP's success at increasing immunisation rates have been; an ethos of bringing pregnant women into the general practice 'family', by creating a primary care medical home,[22] engaging one midwife to be part of the general practice team, one 'child champion' in the team who case manages the pregnant women and infant population and a whole team approach to childhood immunisations.

Strengths and limitations

The strength of this audit is the completeness of data from one general practice over a one year period. The limitations of this study are the small numbers of infants enrolled at SAGP and the transferability of this model of care to larger populations. There has as yet been no evaluation from the pregnant woman or new mother's perspective on this new model of care. Plans are in place to gain this consumer perspective.

Comparison with existing literature

The new model of care was underpinned by social construction theory[23,24] which suggests that how we perceive the world depends on our relationships within it. Health care systems are

historically time bound and culturally specific, for example in the UK people expect to visit their general practitioner and not pay for this service. This UK tradition was built on Aneurin Bevan's premise at the inception of the National Health Service (NHS) in 1948,[25] that health care should be free at the point of delivery. New Zealand's health care system differs in that only certain groups within society may access services from a general practitioner if they have the means to pay. However all maternity care and hospital services are provided at no cost. These social creations are difficult to deconstruct and explain. Some groups in New Zealand society may not understand the intricacies of primary health and maternity care and so feel intimidated at having to initiate a relationship by contacting a midwife when they discover a pregnancy. They may also be concerned that the service costs money.

The idea of the 'medical home' was first mooted by the American Academy of Pediatrics in 1967.[26] The success of the medical home depends on its ability to focus on the needs of the patient on a case by case basis.[27] Responsibility for care and co-ordination in the medical home resides with the person's primary care provider, working with a health and social care team, which forms and re-forms depending on the patient's needs.[22] The new model of care at SAGP emulates the concept of the medical home, as pregnant women are contacted to ensure they have accessed ante-natal care and all infants receive surveillance to ensure timely immunisation. These actions constitute case management of a specific population of enrolled patients within the practice.

Hambidge et al's (2009) randomised controlled trial of 811 infants conducted in the USA, illustrated that a stepped approach to reminders for immunisation, starting with a letter and escalating to a home visit if the family did not respond to the initial invitations, resulted in infants in the intervention arm having significantly fewer days without immunisation coverage in their first 15 months, than those in the control arm. Furthermore those in the intervention group were more likely to be up to date with their immunisation at 12 months old than those in the control arm.[1] The new model of care at SAGP mirrors this American intervention.

Relevance to clinical practice

The strengths of this model of care are the improved immunisation rates of infants and their subsequent health outcomes. Grant et al's[7,8] studies illustrated that infants in New Zealand who were not immunised on time, had a four to six fold increased risk of being hospitalised with pertussis. We can therefore expect that the majority of infants registered with SAGP will have a four – six fold reduced risk of hospitalisation for pertussis because they will have been immunised on time.

Further evaluation

Research into barriers to access immunisations is needed in New Zealand, particularly for Māori and Pacific infants who suffer the highest burden of disease from vaccine preventable illnesses. Disseminating the SAGP's new model of care nationally, may result in widespread improved immunisation rates.

The International Journal of Person Centred Medicine
Volume 1 Issue 3 pp 618-626

References

[1] Hambidge SJ, Phibbs SL, Chandramouli V, et al. 2009. A stepped intervention increases well-child care and immunization rates in a disadvantaged population. *Pediatrics* 124(2): 455–64.

[2] Ajwani S, Blakely T, Robson B, et al. 2003. *Decades of Disparity: Ethnic mortality trends in New Zealand 1980–1999*. Wellington: University of Otago.

[3] Guyer B, Hughart N, Holt E, et al. 1994. Immunization coverage and its relationship to preventive health care visits among inner-city children in Baltimore. *Pediatrics* 94(1): 53–8.

[4] Cowley S (ed). 2008. *Community Public Health in Policy and Practice*. Philadelphia: Elsevier.

[5] Ministry of Health. 2010 (cited 6 January 2011). *National Immunisation Register*. Available from: http://www.moh.govt.nz/nir.

[6] BPAC. 2010 (cited 7 October 2010). *Immunisation in Children by Age Two Years*. Available from: http://www.bpac.org.nz/magazine/2010/july/immunisation.asp.

[7] Grant C, Roberts M, Scragg R. 2003. Delayed immunisation and risk of pertussis in infants: unmatched case-control study. *British Medical Journal* 326(7394): 852–3.

[8] Grant C, Turner N, York D. 2010. Factors associated with immunisation coverage and timeliness in New Zealand. *British Journal of General Practice* 60(572): 113–20.

[9] Ministry of Health. 2010 (cited 7 October 2010). *Primary Health Care*. Available from: http://www.moh.govt.nz/primaryhealthcare.

[10] Ministry of Health. 2010 (cited 7 October 2010). *Primary Health Care: Capitation rates from 1 July 2010*. Available from: http://www.moh.govt.nz/moh.nsf/indexmh/phcs-funding-capitation-rates#verylow.

[11] Salmond C, Crampton P, Atkinson J. 2007. *NZDep06 Index of Deprivation*. Wellington: Department of Public Health, University of Otago.

[12] Statistics New Zealand. 2009 (cited 8 October 2010). Manurewa. Available from: http://search.stats.govt.nz/search?w=Manurewa.

[13] Counties Manukau District Health Board. 2007 (cited 26 November 2010). *Primary Health Care Plan 2007–2010*. Available from: http://www.cmdhb.org.nz/about_cmdhb/planning/Primary-Care-Plan/CMDHB-PHCplan-2007-2010.pdf.

[14] Counties Manukau District Health Board. 2008 (cited 26 November 2010). *Our Localities*. Available from: http://www.cmdhb.org.nz/about_cmdhb/overview/Our-Localities/1.1Population-size-composition.htm.

[15] UNICEF. 2001. *A League Table of Teenage Births in Rich Nations*. Florence, Italy: Innocenti Research Centre.

[16] Paterson J, Schluter P, Percival T, et al. 2006. Immunisation of a cohort Pacific children living in New Zealand over the first two years of life. *Vaccine* 24: 4883–9.

[17] Acheson D. 1988. *Public Health in England: The report of the committee of inquiry into the future development of the public health function*. London: HMSO.

The International Journal of Person Centred Medicine
Volume 1 Issue 3 pp 618-626

[18] Department of Health. 2007. *Facing the Future. A review of the role of health visitors.* London.

[19] Jacobson V, Szilagyi P. 2005. Patient reminder and patient recall systems to improve immunization rates. *Cochrane Database of Systematic Reviews* CD003941. 20 (3).

[20] Nursing Council of New Zealand. 2008 (cited 7 October 2010). *Nurse Practitioner – Scope of Practice.* Available from: http://www.nursingcouncil.org.nz/index.cfm/1,41,0,0,html/Nurse-Practitioner.

[21] Ministry of Health. 2011. *Immunisation Handbook.* Wellington: Ministry of Health.

[22] Rosenthal T. 2008. The medical home: growing evidence to support a new approach to primary care. *Journal of the American Board of Family Medicine* 21(5): 427–40.

[23] Gergen KJ. 2009. *An Invitation to Social Construction* (2nd ed). London: Sage Publications Ltd.

[24] Raskin J. 2008. The evolution of constructivism. *Journal of Constructivist Psychology* 21: 1–24.

[25] NHS. 2008 (cited 26 November 2010). *NHS Choices.* Available from: http://www.nhs.uk/Tools/Pages/NHSTimeline.aspx.

[26] Sia C, Tonniges T, Osterhus E, et al. History of the medical home concept. *Pediatrics* 113(S5): 1473–8.

[27] Lantz PM, Lichtenstein RL, Pollack H. 2007. Health policy approaches to population health: the limits of medicalization. *Health Affairs* 26: 1253–7.

Reproduced with permission from the International Journal of Person Centred Medicine

The International Journal of Person Centred Medicine
Volume 1 Issue 3 pp 618-626

Appendix 3: Ensuring all babies have a great start

Source: Karen Hoare. 2012. *New Zealand Doctor: Practice*, 26 September 2012 (www.nzdoctor.co.nz)

Actively managing pregnant women ensures newborn enrolment and better infant health, especially for the at-risk

A new Ministry of Health "Preliminary Newborn Enrolment Policy" will be rolled out to general practice across New Zealand from 1 October.

This policy will ensure that newborns can be entered into the Patient Management System (PMS) of a general practice and be funded for the first quarter, prior to the practice receiving a signed enrolment form. Their registration status will be code "B". If an infant attends a clinic other than the one nominated by its parents at birth via the National Immunisation Register (NIR), there will be no fee-for-service clawback in the first quarter. However, full enrolment of the baby must be completed by the second quarter.

Immunisation rates and their effect on the pertussis epidemic

Under the existing system, less than half of newborns are enrolled with a general practice by 12 weeks of age. Consequently, many infants aren't immunised. Vaccination timeliness is one of the strongest predictors of immunisation completion rates. Studies in New Zealand show a four- to six-fold hospitalisation rate for pertussis in infants with delayed or incomplete immunisation status.

We have a whooping cough epidemic in New Zealand at the moment and there have been 3435 cases since the first surveillance week of 2012, compared with 504 for the same period in 2011.

Introducing the practice "birth book"

Beginning in May 2008, our general practice has kept a "birth book". This is a notebook containing demographic details of pregnant women enrolled with us, along with the name of their nominated midwife. In January 2011, the birth book went electronic, and is now kept as an Excel spreadsheet on a shared computer drive that all practitioners can access.

Our birth book is an essential tool for anticipating newborn enrolments. Once a woman is confirmed as pregnant by a GP or nurse, the practice's "child champion" (myself) and practice manager are tasked with dealing with this information. I enter the information into the birth book and the practice manager claims maternity funding. The woman is then contacted and midwifery care arranged, if this is requested.

In our area this is an essential service, as women in our pregnant population often have no money on their cellphones to call a midwife; are young and shy; have English only as a second language; and find the health service complex to navigate.

“Best for baby” kite

One month prior to delivery, at 36 weeks gestation, the woman’s midwife is contacted to make sure all is well with the pregnancy. The woman is then invited to the practice to receive her “Best for baby” kite (the Maori word for bag) – see picture. It contains a sheet of paper listing the contents of the kite, plus an invitation to discuss family violence, if this is an issue. The GP or nurse also explains the “icons” contained in the bag and their meaning.

> *Our small patients have a four to six times reduced risk of being hospitalised with whooping cough because they are immunised on time*

This “Best for baby” kite (bag) aims to help mothers give their babies the best start in life – whatever the family’s income level

For example, the bar of soap is to remind all friends and whanau to wash their hands before they touch the baby. The Ministry’s breastfeeding DVD is also in the bag and promotes this method of feeding. A “My First” board book represents the importance of reading, talking and singing to the baby right from the start, and two electrical socket covers are reminders of home safety.

The aim of the kite is to provide a gift from the practice as a gesture towards working in partnership with the pregnant woman and her whanau to keep the infant safe and well. Establishing a relationship at this stage in the pregnancy allows the GP team to support the midwife in giving anticipatory guidance on newborn care, including the value of breastfeeding, as well as reminding the woman about the need for a smoke-free environment and immunisations.

Name	Age	Address	Telephone	Midwife and telephone number	EDD	Actual birth

A simple Excel-based birth book.

Routine reminders promote immunisation after the birth

About four weeks after delivery, following notification of the infant’s birth from the NIR, a letter of congratulations is sent from the practice. In addition, the mother is invited to bring the infant for his or her six-week check and first immunisation. At five weeks after delivery, a telephone reminder helps to ensure the infant is brought in on time for his or her first immunisation. At the infant’s first appointment, a second appointment for the next immunisation is written into the Well Child Book and the parents/carers are asked to enter the date and time of the infant’s next immunisation into their mobile phone. The same happens at the infant’s three-month immunisation visit.

Internationally, it has been shown that well-organised primary care can compensate for substantial disadvantage. Our practice is situated in one of the poorest areas in New Zealand, with very high rates of child poverty and attendant poor health statistics. But, our infants will be enrolled with us from birth, as we have included a practice enrolment form in the baby kite.

We anticipate that our small patients have a four to six times reduced risk of being hospitalised with whooping cough because they are immunised on time. In addition, we have eliminated the inequality of access to immunisation between different ethnic groups in our practice because of our high immunisation rates for all ethnic groups. We have the advantage of knowing when our patients are pregnant, as they come to us for confirmation of their pregnancy, so we know when their babies will be born.

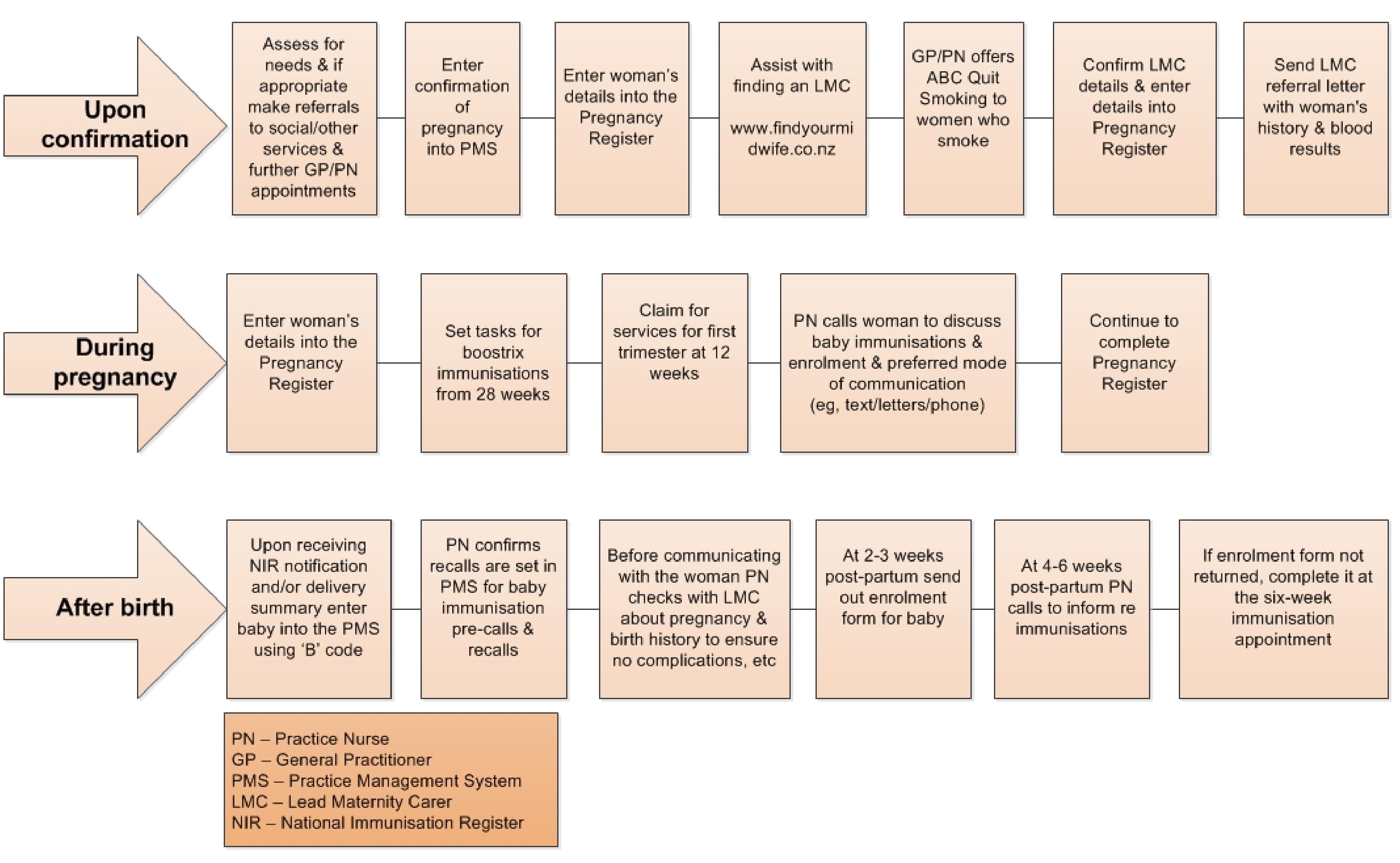
The Ministry has taken the first step towards improving primary health care for infants nationally by providing funds to enrol them from birth. The next step for us all is to coordinate midwifery and general practice care.

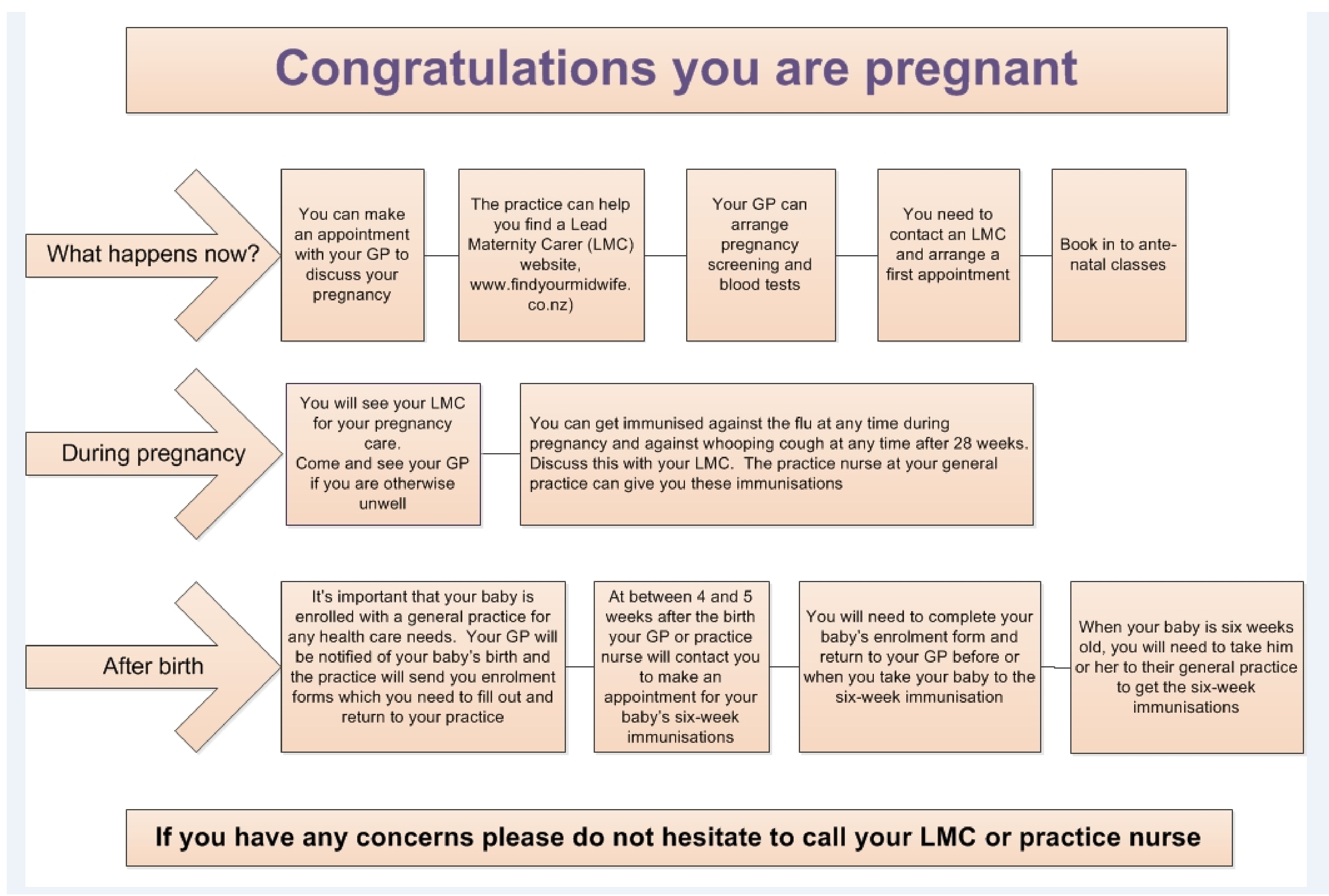
Karen Hoare is a nurse practitioner specialising in children and young people, and practises in Auckland.

Copyright of *New Zealand Doctor* is the property of MIMS (NZ) Ltd. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Reproduced with permission from the author and *New Zealand Doctor*.

Appendix 4: Flow charts




Congratulations you are pregnant
What happens now?
You can make an appointment with your GP to discuss your pregnancy
The practice can help you find a Lead Maternity Carer (LMC) website, www.findyourmidwife.co.nz)
Your GP can arrange pregnancy screening and blood tests
You need to contact an LMC and arrange a first appointment
Book in to ante-natal classes
During pregnancy
You will see your LMC for your pregnancy care. Come and see your GP if you are otherwise unwell
You can get immunised against the flu at any time during pregnancy and against whooping cough at any time after 28 weeks. Discuss this with your LMC. The practice nurse at your general practice can give you these immunisations
After birth
It's important that your baby is enrolled with a general practice for any health care needs. Your GP will be notified of your baby's birth and the practice will send you enrolment forms which you need to fill out and return to your practice
At between 4 and 5 weeks after the birth your GP or practice nurse will contact you to make an appointment for your baby's six-week immunisations
You will need to complete your baby's enrolment form and return to your GP before or when you take your baby to the six-week immunisation
When your baby is six weeks old, you will need to take him or her to their general practice to get the six-week immunisations
If you have any concerns please do not hesitate to call your LMC or practice nurse