



NEW ZEALAND  
COLLEGE OF  
MIDWIVES (INC)

## JOURNAL

### **New Zealand Research**

Is it time for midwives in New Zealand to review sexually transmitted infection screening in pregnancy?

Karen Daniells

New Zealand Midwives and Tertiary Study

Jean Patterson and Deborah Davis

Young and Pregnant

Liz Smythe and Julie Payne

### **Practice Wisdom**

Active Breech Birth:  
The Point of Least Resistance

Maggie Banks

### **Practice Issue**

Iodine and selenium – ‘trace’ minerals in New Zealand

Sandra Elias

### **Discussion Article on a Practice Issue**

The Current Global Effort to Prevent Postpartum Haemorrhage: How likely is it to be effective?

Karen Guilliland

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Please note: on 16 December 2006 the Editorial Board disbanded and an interim Editor was appointed for 6 months.

Maggie was our very first contributor to this column in October 2003. In this issue she writes on the topic for which, I can confidently say, she is most famous amongst midwives. Any comments you care to make can be made to Maggie directly at banks@ihug.co.nz or to the interim editor Rhondda Davies: rhondda.d@clear.net.nz

## Active Breech Birth: The Point of Least Resistance

Maggie Banks, Home Birth Midwife.

In March 2006 I attended the first international Breech Birth Conference in Vancouver, Canada, which gathered together midwives, medical practitioners and researchers to discuss such issues as research, safety and techniques used during vaginal breech birth. Presenters came from eight different countries - Canada, Germany, Norway, Belgium, United Kingdom, Netherlands, Australia and New Zealand. It was a valuable time of exchanging ideas and heartening to meet other supporters of vaginal breech birth equally committed to growing and maintaining the skills necessary to support women during the experience. The multi-disciplinary programme meant accessibility to different approaches as well as an international flavour.

One workshop I attended was on symphysiotomy – the surgical division of the fibro cartilaginous symphysis pubis and its reinforcing ligaments by way of a scalpel blade through the mons pubis. This technique is an obstetric strategy to allow birth of the often dreaded - but rarely occurring - head entrapment of the breech baby. The workshop presenter noted this occurs probably once in every five hundred breech births when cephalo-pelvic disproportion has been excluded (Menticoglou, 2006). Gruesome you may say - but it was actually very affirming for me as it re-emphasised the importance that the woman's position plays for giving birth to her breech baby to avoid what I term 'bed dystocia'.

Bed dystocia occurs when the baby's progress is halted due to, firstly, reduction of the woman's lumbar spine curvature (lordosis), secondly, the backward tilting of the pelvis and, thirdly, entrapment of the sacrum by maternal weight, all of which can occur if the woman is lying on a firm bed. These changes mean the brim of the woman's pelvis is less accessible to the baby's after-coming head (or shoulders in cephalic presentation), most particularly, if the woman is in the stranded beetle position (lithotomy). Equally, the antero-posterior diameter of the woman's pelvic outlet is reduced as her sacrum is hampered in moving outwards.

The iatrogenic cause of, and corrective strategies for, bed dystocia have clearly been demonstrated by Gherman and others. Their radiological examination of pelvic diameters of women at least 37 weeks pregnant, studied the dorsal lithotomy position as well as during the McRoberts' manoeuvre (hyper flexion of the woman's legs onto her chest). The authors note "McRoberts' manoeuvre does not change the actual dimensions of the maternal pelvis, it straightens the sacrum relative to the lumbar spine, with a cephalic rotation of the symphysis pubis sliding over the fetal shoulder" (Gherman, Tramont, Muffley & Goodley, 2000, p45). Thus the manoeuvre is a correctional technique used to release the entrapped sacrum held by the woman's weight on the obstetric bed.

Russell's 1969 study of pelvic x-rays of 96 women in the last trimester of pregnancy in both the dorsal and sitting positions identified the gains that can be made to increase all pelvic diameters by positional changes (Russell, 1969). Further, the 'primitive' birthing positions such as upright positions with the hips abducted – as in a supported squat – "considerably increases the outlet measurement of the pelvis" (Russell, 1982, p712). Equally, the forward tilting of the pelvis slides the innominate bones forward and down to increase the anterior-posterior diameter of the inlet. This tilting forward of the pelvis is a movement an active breech birthing woman intuitively takes as she pokes out her buttocks. Depending on when she does it, this can effectively help the baby's head into the pelvic brim, roll the baby's head down into the posterior space or precipitate the action of the face sweeping over the perineum as the pubic arch acts as a fulcrum for the baby's head (Banks, 1998).

The 28 percent increase in the pelvic outlet – 1cm in the transverse diameter and 2cm in the antero-posterior diameter (Russell, 1982) of active birthing is greater than that which is normally achieved by symphysiotomy, which, primarily, increases the transverse diameters by 1cm (Menticoglou, 1990). While medicine describes symphysiotomy as part of "the obstetric arsenal" (Bjorklund, 2002), women giving birth to their breech babies can feel comforted that the midwifery approach of utilising active birthing positions will not wage war on their bodies and impede their babies' descent. Instead it facilitates breech birth with both woman and baby as active participants to optimise maternal pelvic diameters and the birth of the baby's after-coming head.

*While medicine describes symphysiotomy as part of "the obstetric arsenal" (Bjorklund, 2002), women giving birth to their breech babies can feel comforted that the midwifery approach of utilising active birthing positions will not wage war on their bodies and impede their babies' descent.*

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## Is it time for midwives in New Zealand to review sexually transmitted infection screening in pregnancy?

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### Abstract

Increasing rates of sexually transmitted infections (STIs) in the developed world have been documented both internationally and within New Zealand, with the adverse effects of STIs on fetal, neonatal and women's health recurring themes within the midwifery, obstetric and sexual health literature. Rates of STIs are also unequally distributed amongst the New Zealand population affecting higher proportions of youth, Māori and Pacific peoples. Although provision is made for maternal sexual health screening, the deteriorating sexual health profile of New Zealand and high rates of mother-to-child-transmitted STIs raise questions as to the effectiveness of this programme. This paper considers the existing literature to reaffirm the grounds for a competent sexual health component to maternity care and its contribution to equality of outcome and the promotion of normal birth. The findings of a small local survey of midwives' sexual health screening practice are presented, suggesting the need for closer examination of midwives' current knowledge, understanding and practice. A case is made for a nationwide strategy to address sexual health issues in New Zealand that takes advantage of the important role midwives could play in executing such a strategy.

### Introduction

Increasing rates of sexually transmitted infections (STIs) in the developed world have been the subject of international concern in recent years (Centers for Disease Control, 2003; Department of Health (UK), 2002; Munro, 2002; Ortega, O'Rourke & Badkar, 2003), and the latest statistics confirm this is a trend that extends to New Zealand (STI Surveillance Group, 2006). Franklin (2003) has described New Zealand's sexual health as a major public health problem.

The adverse effects of STIs on fetal, neonatal and women's health are well documented in the midwifery, obstetric and sexual health literature (Ament & Whalen, 1996; Burst, 1998; Goldenburg, Andrews, Yuan, MacKay & St Louis, 1997; Hunt & Martin, 2001; Killion, 1994; Weissbord, Koumans, Toomey, Grayson & Markowitz, 2001; Stray-Pederson, 1997). There is an assumption that maternity care providers will conduct antenatal sexual health screening appropriate to the population they serve. The deteriorating sexual health profile of New Zealand, and high rates of mother-to-child-transmitted STIs (Ortega et al, 2003; STI Surveillance Group, 2006), however, must alert us to a need to improve the effectiveness of antenatal sexual health screening.

Since 1990 (Nurses' Amendment Act, 1990), women in New Zealand have been able to choose to have their maternity care coordinated and provided by one of three health professionals: a midwife, a general practitioner qualified to provide maternity care or an obstetrician. This professional is then known as their Lead Maternity Carer (LMC). Independent midwives currently provide around 78% of lead maternity care in New Zealand (Ministry of Health, 2006). As the largest providers of maternity care, therefore, midwives are key to the development of robust systems of antenatal sexual health screening that respond to the current state of New Zealand's sexual health.

However, as an independent midwife practising in New Zealand, my own experience was of not feeling able to confidently provide antenatal STI assessment and screening. To help address this, I undertook a one-year course in sexual health, focusing on maternity care. This paper is a product of that programme, and aims to reaffirm the grounds for a competent sexual health component to maternity care, and present the findings of a small local survey of midwives' sexual health screening practice.

In considering the literature available in the field along with data from New Zealand sexual health clinics, a case is developed for midwives to place greater attention on those STIs that

are not screened for during routine blood tests, but which are affecting increasing proportions of the population. It also underscores the need for midwives to participate in a national strategy that aims to address New Zealand's sexual health statistics, and looks critically at the STI testing regime currently in practice. The findings of the small study undertaken also indicate a need for closer examination of midwives' sexual health screening practices in New Zealand.

### SEXUALLY TRANSMITTED INFECTIONS IN NEW ZEALAND

#### STI Prevalence in New Zealand

Many developed nations report increasing rates of STIs (Centers for Disease Control, 2003; De-

partment of Health (UK), 2002; STI Surveillance Group, 2006); however accurate STI prevalence data in New Zealand is simply not available. Instead, insight and trends are derived by the Institute of Environmental Science and Research (ESR) from three sources. One involves the collection of

data from sentinel sexual health clinics (SHC), family planning centres (FPC) and student and youth health centres (SYHS). The second involves chlamydia and gonorrhoea reporting by laboratories in Auckland, Waikato and the Bay of Plenty (BOP). Laboratories from other regions are progressively being included. Acquired Immune Deficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV) data is collected by the AIDS Epidemiology Group (AIDS Epidemiology Group, 2005)

The STI Surveillance Team, as part of the ESR, produces an annual report using data from the above sources (STI Surveillance Group, 2006). Interpretation is complex and cautionary notes are detailed in the report. The populations that choose to visit centres may vary from populations that do not, meaning that generalising on the basis of the data can be problematic. Traditionally SHCs have been seen as the best indicators of change in sexual health and behaviour. However, as a greater proportion of sexual health is diagnosed and managed in primary care (such as by GPs and midwives), the ESR suggests that comprehensive laboratory

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## Is it time for midwives in New Zealand to review sexually transmitted infection screening in pregnancy?

data may more accurately reflect the incidence of STIs. Laboratory data also suggests that STI rates vary considerably between regions.

The data collected by centres or laboratories, however, only reflects the population that has been tested. Many STIs are asymptomatic, creating a reservoir of people with STIs who remain untested. Data from the second year of England's national chlamydia screening programme, which offers opportunistic screening to under-25-year-olds in primary care, detected undiagnosed chlamydia in 10.9% and 11.9% of females and males respectively (Chlamydia Advisory Group, 2005). Some STIs may also be misdiagnosed and others treated without positive diagnosis, for example receiving antibiotic therapy for suspected endometritis where perhaps only a high vaginal swab is sent for culture, or an infant commenced on antibiotic therapy for pneumonia. Recommended testing may also be declined by some people. The data collected by ESR therefore underestimates the true prevalence of disease.

Whilst the data has its limitations – and indeed the report argues for more robust surveillance to enable appropriate public health action – it does provide the only guide to sexual health in New Zealand. The following presents some of its key findings.

### Chlamydia:

Chlamydia is the most commonly diagnosed STI and the most common bacterial communicable disease in New Zealand. From 2000-2005 the total number of chlamydia cases has increased by 38.9% in SHCs, and doubled in FPCs and SYHCs. The rates of chlamydia diagnosed at SHCs have increased by 16.8% over the same time period. Rates are determined by dividing the number of cases by the total number of clinic visits.

Laboratory-derived population rates are obtained by dividing the total number of reported cases of chlamydia and gonorrhoea for the BOP, Waikato and Auckland regions' DHBs by the "usually resident" population data for the DHBs in each region as per 2001 census. From 2001 to 2005, the overall rate of chlamydia diagnosed rose by 51.6% from 491/100,000 to 744 per 100,000. The highest rate of 892/100,000 was in the BOP, with an alarming rate of 11,018/100,000 in the 15-19-year-old group. Youth, Māori and Pacific Peoples were identified as at increased risk. Particularly concerning for midwives are the rates among those less than one year of age: 290/100,000 in the BOP, 341/100,000 in Waikato, 357/100,000 in Auckland (a total of 113 cases). Neonates are

identified as an at-risk group. More effective antenatal screening and careful observation of neonatal conjunctivitis are urged.

Increasing trends were evident in all three regions and in both sexes. Part of the rise could be explained by increased testing, higher professional awareness and the introduction of more sensitive diagnostic techniques. However, the report concludes that a significant proportion of the increase is likely to be real.

### Gonorrhoea:

Between 2000 and 2005 the total number of gonorrhoea cases reported increased by 32.2% in SHCs, 87% in FPCs and almost doubled in SYHCs. The rate of gonorrhoea diagnosed in males at SHCs has increased by 31.5% and the rate in females was unchanged. The majority of all cases were in people less than 25 years old and there were higher rates among Māori and Pacific peoples.

In the participating laboratories, all genital swabs are cultured for gonorrhoea. From 2001 to 2005, the overall rate of gonorrhoea diagnosed rose by 57% from 71/100,000 to 111/100,000. The highest rate was in Auckland 129/100,000. The rate in females was nearly double that of males in Auckland and the BOP. The majority of all gonorrhoea cases were among people aged less than 25 years. The rate for the less-than-one-year age group was 49/100,000 in Auckland, with no cases in the other areas. As the number of laboratories and the methods used in these regions has not changed over the 2000-2005 period, the ESR concludes that these trends reflect a real increase.

### Genital Herpes (first presentation):

SHCs, FPCs and SYHCs reported case increases of 2.7%, 19% and 50% respectively. Eberhart-Phillips et al (2001) found an HSV 2 prevalence of 11% when conducting serological testing on 26-year-olds from the Dunedin birth cohort study.

### Genital Warts (first presentation):

Between 2000 and 2005 cases have increased by 18.4%. The overall rate has varied between 4.3 to 4.5% during the same period. The majority of first presentations were in individuals who were less than 25 years old.

### Syphilis:

SHCs reported 47 cases of infectious syphilis in 2005, an increase of 6.8% compared with 2004. FPCs reported two cases, and no cases were reported by SYHCs. Of the cases reported, 34 were among males and 15 among females. Between 2000 and 2005, the rate of syphilis diagnosed in

SHCs had more than doubled, with the majority of the increase in Auckland thought to be among men who have sex with men. Since 2001 there have been at least two cases of infectious syphilis in pregnant women.

### HIV:

One hundred and eighty-three people were diagnosed with HIV in New Zealand in 2005, the highest annual number since 1985 (Ministry of Health, 2006). The number of heterosexually transmitted diagnoses in 2004 to 2005 is nearing those diagnosed as a result of homosexual transmission (ibid). Twenty-one percent were New Zealand European, Māori or Pacific ethnicity, with the majority of heterosexually transmitted HIV – including all blood-product acquired infection – contracted overseas (STI Surveillance Group, 2006). Since 1997, 20 children born in New Zealand have contracted HIV via mother-to-child transmission (Ministry of Health, 2006). None of these mothers' HIV was diagnosed antenatally. Routine HIV screening began in Waikato DHB in March 2006. This will be progressively implemented around New Zealand.

### AIDS:

There were 49 notifications of AIDS in 2005. Twenty-two cases were contracted through heterosexual transmission, 20 cases via homosexual/bisexual transmission, two perinatally, one homosexually or via intravenous drug use (IDU) and the remaining four are unknown. There were eight deaths. Deaths from AIDS have remained at around 10 to 11 for the last few years (STI Surveillance Group, 2006).

### STI prevalence in pregnant women

There is no data available in New Zealand for STI prevalence in pregnant women. A recent audit of a community medical laboratory database in New Zealand to determine rates of chlamydia testing and infections in pregnancy found that the overall rate of testing was 37.5% with 4.8% tests proving positive for chlamydia (Lawton et al, 2004). The research team recommended routine antenatal chlamydia testing to come in line with international best practice. A further study of 1465 pregnant/non pregnant women in New York showed higher rates of chlamydia in pregnant women and less consistent condom use (Wilson, Minkoff, McCalla, Pertterkin & Jaccard, 1996).

### Explaining Deteriorating Sexual Health

Explanations for the deterioration of sexual health in developed nations include changes in social and gender roles, relationship patterns, age of sexual

initiation and sexual behaviours (Burst, 1998; Ministry of Health, 2001). Also implicated are the availability of hormonal contraception, increased ease of travel and the increased use and availability of recreational drugs (Ament & Whalen, 1996; Killion, 1994; Ministry of Health, 2001).

In addition to social and behavioural explanations, several critics have attributed blame to inadequate and inappropriate sexual health care provision and strategy (Akid, 2001; British Medical Association, 2002; Legge, 2002). Franklin (2003), in his damning summation of New Zealand sexual health, attributes responsibility to a failure to recognise the problem, insufficient resources and the lack of a well-directed and coordinated strategy. Midwives have not been explicitly included in previous sexual health strategy, yet we provide care for over 50,000 sexually active women a year (Ministry of Health, 2006). Improved antenatal sexual health screening that recognises the deterioration of and inequalities in national sexual health would make a difference to the well being of mothers and babies and help to protect normal, healthy childbearing.

## **THE CASE FOR OFFERING STI SCREENING IN PREGNANCY**

### **STIs in Pregnancy: Susceptibility and Impact on Childbearing**

It is generally recognised that women are disproportionately affected by STIs (Burst, 1998; Chief Medical Officer (CMO) Expert Advisory Group, 2001; Killion, 1994). The vagina is conducive to the growth of certain organisms and susceptible to tears that facilitate organism entry. Certain STIs are more easily transmitted to women, for example gonorrhoea and HIV (Burst, 1998). A large proportion of STIs are asymptomatic in women until complications develop (Killion, 1994). Complications also tend to be more severe: ectopic pregnancy secondary to chlamydial tubal damage, for example, can be fatal. In pregnancy, cervical ectropion, promoted by hormonal changes and cell-mediated immuno-suppression, may increase susceptibility. Symptoms in pregnancy may also be more severe; the proliferation of genital warts, for example (Killion, 1994; Watts & Brunham, 2001).

The impact of STIs on childbearing is well documented (Benoit, 1998; Burst, 1998; Goldenburg et al, 1997; Jackson & Soper, 1997; Killion, 1994; Watts & Brunham, 2001; Peck, 2001). The following serves only as a summary to support the case for offering STI screening in pregnancy.

Chlamydia, gonorrhoea and trichomonas are often asymptomatic and have been associated with

premature labour and endometritis (Steadman, 1998; Watts & Brunham, 2001). Chlamydia and gonorrhoea are also implicated in pelvic inflammatory disease, fallopian tube damage, ectopic pregnancy, infertility and premature rupture of the membranes (Burst, 1998; Watts & Brunham, 2001). Neonatal infection occurs during birth or with prolonged rupture of the membranes. Neonates infected with chlamydia may suffer corneal damage secondary to conjunctivitis or develop late onset pneumonia (Watts & Brunham, 2001). Neonates infected with gonorrhoea can develop ophthalmia neonatorum or gonococcal sepsis (ibid). Chlamydia, gonorrhoea and trichomonas are all easily detected and treated in pregnancy.

Syphilis is transmitted transplacentally, and pregnant women are usually asymptomatic. Congenital syphilis is disabling or fatal, yet can be prevented by early diagnosis in, and treatment of, the pregnant woman (Burst, 1998; Watts & Brunham, 2001). Primary genital herpes (HSV) can provoke miscarriage and premature labour, and infection of the neonate – usually contracted during vaginal birth with primary lesions – can be devastating or fatal. Caesarian section in the presence of intact membranes and primary lesions can significantly reduce transmission. Safe sex and suppressive therapy for HSV-positive partners may help reduce primary HSV in HSV-negative pregnant women (Professional Advisory Board of the New Zealand Herpes Foundation, 2000). Hepatitis B can result in chronic liver disease, cirrhosis and hepatocellular carcinoma. Non-invasive labour care, vaccination and immunoglobulin administration can reduce neonatal infection from 80% to 5-15% (Watts & Brunham, 2001).

Genital warts are caused by the human papilloma viruses (HPV). Genital warts may cause embarrassment if they proliferate in pregnancy. Rarely, proliferation may be severe enough to warrant caesarian section or cause haemorrhage (Jackson & Soper, 1997; Steadman, 1998). Occasionally infants develop laryngeal papillomas (Wood, 1991). Cervical intraepithelial neoplasia (CIN) may also deteriorate in pregnancy secondary to increased HPV replication (Watts & Brunham, 2001).

HIV is a relatively new retrovirus that progresses to AIDS and is eventually fatal. Medical management significantly delays disease progression. Appropriate drug therapy, non-invasive labour care, selective use of elective caesarian section and refraining from breastfeeding can reduce transmission from mother to child from 25% to 1-2% (Bartlett & Anderson (May, 2001); Watts & Brunham, 2001).

STIs have implications for pregnancy, labour care, risk of caesarian section, postnatal morbidity and fetal and neonatal well being.

### **STIs in Pregnancy: Social and Behavioural Factors**

Most pregnant women have had unprotected sexual intercourse. In 2003, 55,212 women gave birth in New Zealand (Ministry of Health, 2006). Nearly 50% of these women were under 30 and 24.6% were under 25 years old. Over 30% were Māori or Pacific Peoples and 12.5% were Māori or Pacific Peoples less than 25 years old. The demographic profile alone suggests a significant proportion of pregnant women are at increased risk of STIs.

Social and economic gender inequalities mean that women and girls are more likely to experience non-consensual sex and less able to negotiate the terms of sexual engagement (Burst, 1998; Killion, 1994). Recent reports suggest between 17 and 22% of pregnant women experience violence (Campbell, 1995; Hunt & Martin, 2001). Women who are subject to violent and sexual abuse are also at increased risk of STIs (Martin et al, 1999).

Contrary to societal assumptions about sexual risk in pregnancy, Dwyer's 2001 study on the association between pre-term delivery, genital hygiene and sexual behaviour in young pregnant women found significant rates of anal/anal-vaginal sex and poor condom use. Twenty-seven percent of these women reported having multiple partners during the pregnancy. High-risk sexual behaviour throughout pregnancy may be more common than is appreciated. The sexual behaviour of pregnant women's partners also needs consideration and illumination.

STIs present an important health problem in pregnancy. They can be detected early, relatively easily and reliably, and are likely to have significant prevalence in certain pregnant populations. Most can be easily treated; all can be positively managed. STI screening in pregnancy thus fulfils the basic World Health Organization screening criteria (National Health Committee, 2003). Offering robust antenatal sexual health screening is consistent with midwifery partnership and information sharing philosophy and in keeping with the Principle of Equality within the Treaty of Waitangi. In its report on HIV screening in pregnancy, the National Health Committee (NHC) (National Health Committee, 2004) highlights the general lack of antenatal screening guidelines and recommends a review of antenatal tests and protocols.

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# Is it time for midwives in New Zealand to review sexually transmitted infection screening in pregnancy?

## Antenatal STI Screening in Pregnancy: A Local Inquiry

Antenatal STI screening in New Zealand is opportunistic, i.e. it is offered to women perceived to be at risk but who are actually presenting for pregnancy care. Currently, all pregnant women are offered screening for syphilis and hepatitis B. LMCs are also meant to routinely assess HIV infection risks and offer testing to those at increased or unclear risk (Ministry of Health, 1997). This strategy is being replaced by the staggered roll-out of universal opt-out antenatal HIV screening over three years commencing in 2006 (Ministry of Health, 2005). It is assumed that LMCs also screen pregnant women at risk for other STIs, but there are no comprehensive guidelines or criteria for antenatal STI screening. The NHC (National Health Committee, 2004) concluded that the risk-based antenatal HIV screening guidelines were not

## Method

A questionnaire was posted to the 37 midwives providing the majority of their LMC care in the chosen area. A letter accompanied the questionnaire explaining the purpose of the survey, informing the midwives that the survey was anonymous and that it had Ethics Committee approval. Due to time restraints the questionnaire was not piloted and assessed for clarity or reliability. The midwives were given two weeks to respond. Questionnaires were returned by post.

## Results

Thirteen questionnaires were returned, giving a response rate of 35%. Whilst this was disappointing and limited statistical information can be obtained from this survey, the findings support the need for more rigorous enquiry into this area.

tory of STIs, symptoms, and if the woman had multiple partners.

## HIV

No midwives offered an HIV test to all clients, nine offered an HIV test to women with risk factors and four did not offer an antenatal HIV test. Risk factors included: being younger than 25 years of age, IV drug use, new/multiple partners, recent African/Asian immigrant, sexual orientation of self/partner. No midwives used the full risk criteria for screening recommended by the Ministry of Health (Ministry of Health, 1997). Four midwives said they conducted the HIV test themselves, five referred to another service. Six midwives offer the test at booking, two would offer the test with the emergence of risk factors, and one midwife would test at the second visit. Estimates of the percentage of clients screened for HIV varied from 1% to 20%.

**Table 1. Results from small local survey of midwives' STI screening practices**

	HIV+	Chlamydia	Gonorrhoea	Trichomonas	Syphilis*	Herpes Simplex Virus	Hepatitis B*	HPV
Midwives routinely screening	0	5	6	5	10	1	11	1
Midwives offer test with presence of risk factors	9	6	5	6	1	9	0	5
Midwives not offering test	4	2	2	2	2	3	2	7

\*Automatically screened via antenatal blood tests. + Screened currently via antenatal blood tests in the Waikato only, as a trial.

well implemented by LMCs. It is perhaps unlikely then, that consistent and appropriate general antenatal STI screening would flourish in the absence of any guidelines. Research is needed to assess current practice and contribute to the development of more effective antenatal STI screening strategies. A survey of local midwives' practice was undertaken as an initial inquiry into this area.

## Local Midwives Survey

Independent midwives in New Zealand come from a diverse range of training backgrounds and experience. Over 75% of LMCs in New Zealand are midwives (Ministry of Health, 2006), and regardless of the LMC professional, there is always a midwifery component to antenatal care. Given midwives' exposure to pregnant women and the ESR (STI Surveillance Group, 2006) concern regarding mother-to-child transmission of STIs, midwives' practice is an important area of investigation. A small survey was undertaken in June 2003 to gain insight into local midwifery practice as part of an assessment for a postgraduate course in sexual health.

## Midwife respondent characteristics

Six midwives had practised for more than 10 years, three had practised for between five and 10 years, three had practised between two and five years and one had practised for less than one year. Eight respondents held nurse/midwife qualifications, four held a direct-entry midwifery degree/diploma and one did not respond. Eight respondents were independent midwives, three were hospital team midwives and one was employed by a primary health organization. A variety of experience, qualifications and employment type were represented. None of the midwives defined herself as a cervical smear taker.

## History Taking

Nine respondents routinely took a sexual history of their clients, four did not. Of the midwives that did not take sexual histories, three were independent midwives and one worked for a primary care organisation. Three had been practising as midwives for more than five years and one was a new graduate midwife. Of the midwives that took sexual histories, the three most important questions identified included a previous his-

## Chlamydia

Five midwives offered screening to all women for chlamydia, six offered screening to women with risk factors, one if symptomatic, one did not screen in pregnancy, and one did not respond. Risk factors used included: under 25 years, no recent STI screen, new partner, IV drug use, symptoms. Seven midwives said they conducted chlamydia tests and five said they referred to another service. Three midwives used a first pass urine, one used a high vaginal swab (HVS) or first pass urine, one used a midstream urine/first pass urine and two used urine (unspecified). Eight midwives screened for chlamydia at booking, one tested on the second or third visit, one did tests of cure, three only screened if symptomatic.

Thirty-eight percent of these midwives routinely offered screening for chlamydia. There was variability in the risk factors identified and some misunderstanding of appropriate tests. No midwife used an endocervical swab.

## Gonorrhoea

Six midwives said they offered screening to all

women for gonorrhoea, five screened on the basis of risk factors and two did not screen in pregnancy. Risk factors given included: IV drug use, multiple partners, under 25 years, sex worker, new partner, symptomatic. Nine midwives tested for gonorrhoea, two referred to another service. Two midwives stated that gonorrhoea was tested for in the routine antenatal bloods. Four used an HVS, one used a blood test and two used a urine test. No midwife used an endocervical or urethral swab. Eight midwives said they screened for gonorrhoea at booking, one would test on the second or third visit and two only if symptomatic. One mentioned a test of cure. Practice varied and there was misunderstanding of appropriate tests.

### **Trichomonas**

Five midwives said they offered screening routinely, six said they screen women with risk factors/symptoms, and two do not screen in pregnancy. Risk factors included: IV drug user, sex worker, multiple partners, symptoms, green discharge, under 25 years old, new partner. Eight midwives conduct screening and three refer to another service. Four midwives use an HVS, two use a swab (unidentified) and one used a urine test. One midwife stated that trichomonas was tested in the first antenatal bloods. Again practice varied and there was some misunderstanding of appropriate tests.

### **Syphilis**

Ten midwives said they offered screening routinely, two do not screen in pregnancy and one if symptomatic. Ten midwives screened with a blood test, one did not report on testing method. Ten screened for syphilis at booking and a further one if symptomatic. Nine said they screened 100% of their clients. Although only nine midwives said they routinely screened women for syphilis, it seems possible that the other midwives were unaware that a syphilis screen is part of the first antenatal blood tests.

### **Hepatitis B**

Eleven midwives said they routinely offered screening to pregnant women for hepatitis B, while two reported that they do not screen in pregnancy. The midwives that screen reported that they do so with a blood test. From these results it cannot be assumed that the two midwives were aware that the first antenatal bloods screen for hepatitis B.

### **Herpes Simplex Virus (HSV)**

One midwife offered screening to all women, nine midwives said they screen women with risk factors, three do not screen in pregnancy. Risk factors

included: lesions, partner with herpes, IV drug user, symptoms, multiple partners, under 25 years old, new partner. Three midwives include partner history of HSV. Five conduct the test and five refer to another service. Tests conducted include: blood, HVS, LVS, swab (unidentified) and putting swab in viral medium. There was misunderstanding of appropriate test methods.

### **Human Papilloma Viruses (HPV)**

One midwife reports offering screening routinely by observation and five report screening women with risk factors, seven do not screen in pregnancy. The five midwives that offer testing do so on the basis of symptoms and refer to another service. HPV was interpreted by three midwives as relating to genital warts. One midwife made reference to cervical smears. Two midwives stated that they were unsure how to test for HPV.

Eight midwives identified sexual health training needs.

### **Discussion**

The problematic methodology of this survey makes the reliability of the responses difficult to assess. The poor response rate means that the representativeness of the responses for this group of midwives is also unknown. Despite these limitations, the apparent variability in practice and understanding of risk factors and appropriate tests lends support for more rigorous research into this area. Three main areas arose that could guide further research: sexual-history taking, identifying at-risk populations and applying appropriate testing methods.

#### **Sexual-history taking**

Thirty-one percent of the midwives who responded did not take a sexual history. It would be useful to know what proportion of midwives do take sexual histories and what kind of histories they take.

If some midwives do not take a sexual history it would be useful to explore why they do not – is it that sexual health is not seen as relevant to their practice? Do they lack confidence, skills or know-how in this area?

### **Identifying at-risk populations**

No individual midwife appeared to have a comprehensive knowledge of risk factors for all STIs. Five midwives noted youth as a risk factor for bacterial STIs and no midwife noted ethnicity for any STI. Only three midwives identified new partner as a risk factor, but three used the term multiple partners. Two mentioned partners' sexual histories and no midwife mentioned contraceptive

history or sexual/violent abuse as risk factors. Seven midwives did not respond to the question requesting them to list the risk factors they used for specific STI screening. A large proportion of the midwives documented that they would initiate testing if women were symptomatic. It was not clear whether the group appreciated that many STIs are asymptomatic. Clarifying the basis of midwives' STI screening practice would be valuable.

*Every year antenatal care offers over 50,000 sexually active women, who have had unprotected sex, access to timely sexual health screening. New Zealand's current sexual ill-health, the adverse effects of STIs on childbearing, high rates of STI mother-to-child transmission, and the tentative findings of this local survey, should push us to explore our current antenatal sexual health screening practice.*

### **Appropriate Test Methods**

Knowledge of appropriate test methods, especially for gonorrhoea and herpes, seemed to be poor. Even allowing for problematic methodology, it is perhaps notable that the routine screening for syphilis and hepatitis B was not appreciated by a minority of midwives. Clarifying actual screening practice would be useful.

Despite methodological flaws, the results indicate that antenatal STI risk assessment and screening may vary considerably. More rigorous research into midwives' STI screening practice would help to illuminate areas that need attention and provide a foundation for formulating an action plan to improve antenatal STI screening effectiveness.

### **Tackling Antenatal STI Screening Practice**

STIs are a significant health problem in New Zealand. STI prevalence in pregnant women is unknown but the babies that have contracted STIs through mother-to-child transmission indicate that antenatal sexual health screening can be improved. The small survey conducted suggests that midwives' STI screening practice may need attention. This finding is perhaps unsurprising when midwives work independently, come from diverse training backgrounds, have different inter-

*continued over...*



## Is it time for midwives in New Zealand to review sexually transmitted infection screening in pregnancy?

national and cultural experience and there are no antenatal STI screening guidelines to refer to. International literature suggests there are four main components to effective sexual health screening: including primary practitioners in sexual health strategy; distributing easily accessible guidelines; providing health professionals training; and quality processes.

There is recognition in New Zealand, the United Kingdom and the USA that primary care is a necessary part of an effective sexual health strategy (CMO Expert Advisory Group, 2001; Franklin, 2003; Legge, 2002; Ministry of Health, 2001; Pimenta et al, 2000; STI Surveillance Group, 2006). However, midwives have not been explicitly included in previous New Zealand sexual health strategy (Ministry of Health, 2001). In the absence of guidelines, it is also unlikely that there is consistent antenatal STI screening across other maternity providers. Improving antenatal STI screening demands a multi-disciplinary approach.

Consistent and appropriate practice requires guidelines. Research into the practice of obstetricians in Georgia, USA, concluded that having a written office policy improved STI screening practice (Weisbord et al, 2001). The UK Sexual Health Strategy (Department of Health (UK), 2002) proposes the publishing of best-practice guidance for reproductive health services and primary care; similarly, the UK Chief Medical Officer's Expert Committee's strategy for chlamydia (CMO Expert Advisory Group, 2001) recommends national multi-disciplinary guidelines for testing, management and follow-up. Easily accessible New Zealand-based guidelines for antenatal STI screening seem central to developing more effective screening practice.

The provision of primary care professionals' training is also viewed as essential in much of the international literature (Legge, 2002; Munro, 2002; Matthews & Fletcher, 2001; Paul, 2000; Sherrard, 2001). The introduction of antenatal HIV and hepatitis B screening in the UK, for example, was accompanied by research into the training needs and performance of midwives (Bruce et al, 2001; Foley et al, 2001; Keane et al, 2002). The UK National Strategy for Sexual Health and HIV (Department of Health (UK), 2002) includes assessing the training needs of doctors, midwives, nurses and other relevant professionals. A survey of HIV testing uptake in two major London hospitals suggested that uptake of HIV screening was significantly higher when midwives had received appropriate training (Duffy et al, 1998).

The introduction of antenatal risk based HIV screening in New Zealand was not accompanied by professionals' training and the NHC (National Health Committee, 2004) acknowledges that the policy has not been effectively implemented.

Guidelines and training may still be insufficient to transform practice. Mak, D'Arcy and Holman (2000) concluded that strong leadership and clinical audit are required to push guidelines and training into everyday practice. Quality systems may therefore be needed to monitor practice and outcomes. The Midwifery Standards Review process (New Zealand College of Midwives, 2005) and the compulsory Midwifery Technical Skills workshops could provide useful vehicles for effecting change.

### Conclusion

Every year antenatal care offers over 50,000 sexually active women, who have had unprotected sex, access to timely sexual health screening. New Zealand's current sexual ill-health, the adverse effects of STIs on childbearing, high rates of STI mother-to-child transmission, and the tentative findings of this local survey, should push us to explore our current antenatal sexual health screening practice.

STIs are a significant health problem in New Zealand. Current directives require the routine offering of screening for syphilis, hepatitis B and HIV, and mother-to-child transmission of these devastating diseases can be hugely reduced with timely treatment and intervention. However, while the fall-out of other STIs for maternity may not be so dramatic, they affect far greater proportions of the population and cause significant morbidity for childbearing women and their babies. Sexual health is unequally distributed amongst the population affecting higher numbers of youth, Māori and Pacific peoples. Effective STI screening in pregnancy helps us to facilitate both normal, healthy childbearing and equality of outcome.

To realise effective antenatal sexual health screening, international research recommends the inclusion of primary practitioners in sexual health strategy, easy access to best practice guidelines, the provision of appropriate professional training and the implementation of quality processes. In the absence of any of these, it is unrealistic to expect antenatal STI screening to be effective. New Zealand Sexual Health Strategy (Ministry of Health, 2001) advocates a coordinated, multi-disciplinary approach that is culturally appropriate and fosters community participation. Maternal sexual health needs to be explicitly on the agenda

and midwives need to be involved in developing strategy for the future.

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## NEW ZEALAND RESEARCH

### New Zealand Midwives and Tertiary Study

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#### Abstract

To elicit factors influencing practising midwives with regard to tertiary study, a national survey was distributed attracting 386 responses from midwives working in a variety of settings. Many midwives engaged in tertiary study, cited personal interest and practice development as motivational factors, with midwifery practice topics providing the most interest. However midwives' time restrictions, the cost of papers and lack of financial or other incentives inhibited study. Midwives preferred face-to-face delivery with other midwives rather than mixed classes, followed by distance delivery with paper-based materials. Mixed modes of face-to-face and distance, or Internet based delivery, were not favoured by the midwives. These factors should be considered when design-

ing tertiary programmes for practising midwives, incorporating adequate information, interaction and communication.

#### Introduction

The landscape of maternity care has changed dramatically over the last 15 years and along with it the learning needs of midwives and the developmental needs of the profession. Midwifery education in New Zealand moved to the baccalaureate level in 1992 with the introduction of direct entry Bachelor of Midwifery programmes. This enabled the midwifery profession to better prepare graduates to meet the needs of the maternity care context post Nurses Amendment Act 1990.

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## New Zealand Midwives and Tertiary Study

The educational needs of the profession are varied. The profession requires competent graduates to take up a variety of roles within the workforce and also needs to develop the knowledge and skills of registered midwives currently in practice. Midwives need to be able to: update or build on their practice knowledge and skills, respond to a changing healthcare context, provide leadership and contribute to the knowledge base of midwifery. Postgraduate midwifery education has an important part to play in developing the profession of midwifery for the future. This article presents and discusses the results of a national survey that explored midwives' engagement with postgraduate study.

### What do we know about midwives and post registration tertiary study?

The Nursing Council of New Zealand (NCNZ), the body regulating midwives in New Zealand up until 2004, collected information about midwives who were applying for their annual practising certificate. This described the type of registration held by midwives in New Zealand but did not capture information about the tertiary qualifications gained post registration, or factors influencing tertiary study. In 2000 the NCNZ conducted a survey investigating the educational qualifications of nurses and midwives registered in New Zealand. A total of 1726 registered midwives actively working in midwifery responded, representing 85% of midwives holding annual practising certificates in 1999 (NCNZ, 2000). This survey did not explore what influences midwives to engage in tertiary study but it is useful for comparing specific information from 1999 with that of 2004.

The Midwifery Council of New Zealand (MCNZ) took responsibility for the regulation of the profession following the enactment of the Healthcare Practitioner's Competency Assurance Act 2003. A more comprehensive workforce survey was included with the invoices for annual practising certificates sent to 3510 midwives. Of these, 2828 midwives completed this survey and a selection of results is published on the MCNZ (2006) website. The MCNZ workforce data is useful in terms of establishing the demographics, role, work place, and qualifications of the midwifery workforce but this survey was not aimed at eliciting information regarding factors that influence midwives' decisions or preferences in relation to tertiary study. Additionally some of the categories used in the MCNZ initiative are different to those used in this survey making direct comparison of results difficult.

Little is known about either tertiary level post registration qualifications attained by midwives, or the factors that motivate or hinder their en-

gagement with tertiary study. There is a dearth of literature specific to the midwifery profession that is useful for informing the decisions of educators involved with the design and delivery of tertiary level post registration midwifery programmes. This survey aims to address these issues.

### Research aims

The aims of this research project were to:

- ascertain the formal tertiary qualifications registered midwives in New Zealand have gained post registration.
- describe the motivations of midwives who have undertaken tertiary level post registration studies.
- describe the main reasons midwives do not undertake tertiary level post registration study.
- describe the influence of specific factors in encouraging midwives to undertake tertiary study.
- ascertain the preferred paper delivery mode and class mix of potential midwifery tertiary students.

### Survey development

This survey was developed towards the end of 2004. It contained an introduction, information regarding the research, and consisted of four major sections. Part A requested demographic information, Part B information on the midwife's experience, qualifications and (recent, current or planned) engagement with tertiary level post registration study. Respondents completed Part C if they had recently completed, were currently engaged in, or had definite plans to engage in, tertiary study (this group is referred to as 'engaged' in tertiary study). Part D was completed by respondents who had not recently completed, were not currently engaged in, nor planning to engage in, tertiary study (this group is referred to as 'not engaged' in tertiary study). The questions in Part A required a tick box response, while those in Part B consisted mostly of questions requiring a tick box response with some that required a short written answer. Parts C and D consisted mostly of questions that required a response on a Likert Scale, some required a tick box response and some required a short written response. The questions requiring responses on the Likert scale asked respondents about the significance of select factors (such as cost) in influencing their decisions to engage in tertiary study. Respondents were provided with four options ranging from 1 (very insignificant) to 4 (very significant). A mid point was omitted to force respondents to choose between the positive or negative pole on the scale.

The survey was available in two formats: hard copy and on-line. The hard copy when folded exposed a reply-paid postage section allowing for easy return. The on-line survey, developed using the commercial programme "Select Survey", consisted of the same sections and questions as the hard copy. Responses were required in similar formats to the hard copy survey (for example tick box, Likert scale or short written answers) though the on-line survey included questions that required the selection of an option from a drop down menu, where this would have been a tick box option on the hard copy.

The hard copy of the survey was pilot tested by six midwives, the on-line version by three, from a variety of practice settings in Otago. Minor changes were made to the layout of the questionnaire and to some response categories. We intended to alter four questions (two in Section C and the two corresponding questions in Section D) to provide an additional available response. However in the final draft only the change

*The landscape of maternity care has changed dramatically over the last 15 years and along with it, the learning needs of midwives and the developmental needs of the profession.*

to Section C was made, the change in Section D was neglected.

### Ethical issues

Ethical approval from the Otago Polytechnic Ethics Committee was obtained. Respondents were not personally identified thus in most cases preserving their anonymity. However in a small population such as New Zealand some responses to questions (for example, those responding that they had completed a PhD) could come from a small group of midwives only. To aid confidentiality, demographic data have not been linked with responses to any other survey questions. Completion and return (of the hard copy) or submission (of the on-line version) constituted consent.

### Recruitment

Registered midwives were recruited in one of three ways. The hard copy survey was included as an 'insert' in the Midwifery News (2005) sent to all New Zealand College of Midwives (NZCOM) members, to which most self-employed midwives or midwives carrying a caseload belong. Midwives who staff maternity facilities as employed, core facility midwives, are less likely to be NZCOM members. For this reason, hard copies of the survey were also distributed to the 16 largest maternity facilities in New Zealand.

The on-line version of the survey was available through a website address. This address and an

information sheet were circulated by email to all District Health Boards (DHB) with a published email contact. Recipients were asked to forward the email to the relevant managers or departments within the DHB. The electronic survey highlighted that the same survey had been circulated in hard copy and respondents were asked to complete one version only, either the electronic or the hard copy.

### Analysis of results

Two thousand eight hundred hard copies of the survey were circulated of which 326 were returned by post. One hard copy response was received after analysis was completed and was excluded. Sixty-one electronic responses were received. The final distribution of the electronic version of the survey is unknown, thus the response rate is undeterminable. With the hard copies and electronic format pooled, 386 responses were combined for analysis.

Responses to questions requiring a tick box or Likert scale response were encoded. Responses to short answer questions were recorded verbatim at initial data entry, categorised then encoded. All data were entered into the database and imported into the Statistical Package for the Social Sciences (SPSS), Version 14.0 (2005). Descriptive statistics and frequency tables were generated from the data.

### Results

#### Demographics

The majority of respondents were female (98.7%, n=381) between the ages 40 and 54 (62.1%, n=204). Most respondents identified as NZ European (74.4%, n=287), other European representing the next largest category (13%, n=50), and 3.4% (n=13) identified as New Zealand Māori.

The majority of respondents (60.9%, n=235) identified their locality as a main urban centre (population >30 000). A large proportion of respondents resided in the Auckland region (19.4%, n=75),

**Table 1. Type of work undertaken by respondents**

Work category	Percentage
Caseload	46.1
Core facility	35.8
Other	6.5
Education	4.4
Administration/ management	2.1
Midwifery professional/ policy development	0.8
Midwifery research	0.3
Missing data	4.1

**Table 2. Type of qualification completed post midwifery registration**

	Bachelor's Degree	Postgrad. Cert.	Postgrad. Dip.	Master's	PhD	Other	Totals
Midwifery	27	11	17	16		2	73
Other health science	31	23	16	9		36	115
Admin./ management			3	2		1	6
Other	2	1	2			7	12
Not identified	3	2	3	1	1	4	14
<b>Total</b>	<b>63</b>	<b>37</b>	<b>41</b>	<b>28</b>	<b>1</b>	<b>50</b>	<b>220</b>

*Note: The category "midwifery" above includes degrees in midwifery and health science (Midwifery) or Arts (Midwifery). "Other health sciences" include qualifications in nursing, social sciences, obstetrics, public health, sexual health, child or neonatal health, nutrition, and breast-feeding. Qualifications in administration of management include health service management and public policy management and the category "other" includes qualifications in the area of health law, education and counselling.*

followed by Canterbury (15%, n=58), Waikato (11.9%, n=46) and Otago (10.6%, n=41).

Most respondents were employed (57.3%, n=221), followed by 39.6% (n=153) self employed, and 0.8% (n=3) 'other'. Respondents were asked to identify the type of work they undertake. 'Case loading' was identified as the main type of work undertaken, followed by 'core facility'. Table 1 illustrates this.

#### Qualifications

Respondents were asked about their first midwifery qualification with the majority, 37% (n=143), selecting 'other or overseas qualification' followed by 25.6% (n=99) who selected 'Bachelors degree in midwifery'.

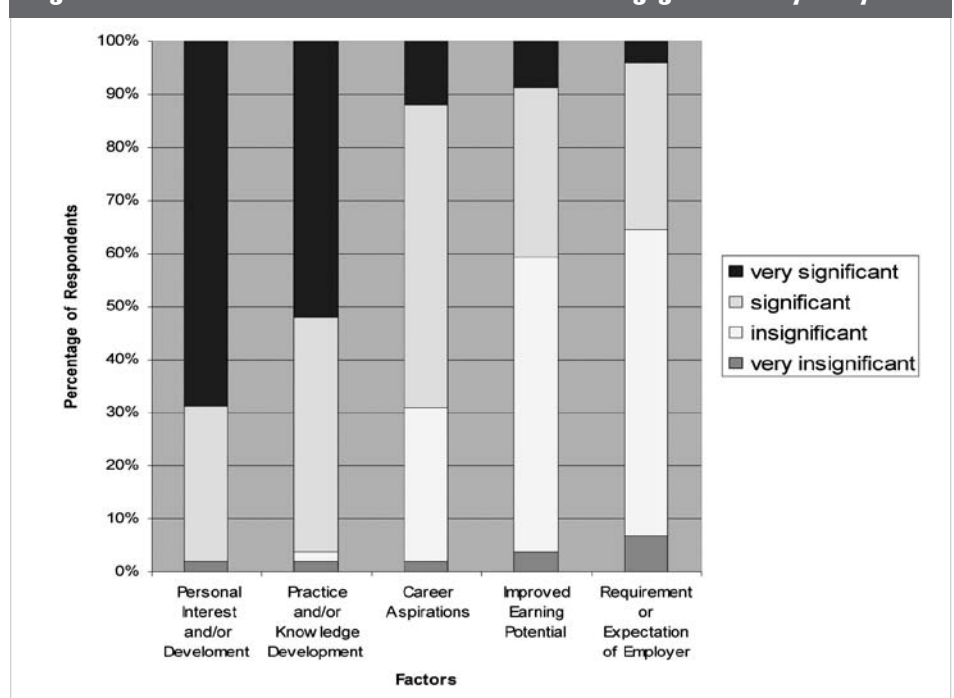
Just under half the respondents (40.7%, n=157) had completed a qualification since their initial midwifery registration, 17.9% (n=69) were currently engaged in tertiary study and 9.8% (n=38) had definite plans for tertiary study in the immediate future.

#### Midwives engaged in tertiary study

In total 157 respondents completed 220 post registration qualifications, indicating some respondents had completed more than one qualification. Table 2 illustrates the area of study showing the number and form of qualifications completed.

Respondents engaged in tertiary study were asked questions about the significance of select factors influencing the decision to study. Questions used a Likert scale with four options: very insignificant,

**Figure 1. Influence of selected factors on decision to engage in tertiary study**



continued over...

## New Zealand Midwives and Tertiary Study

insignificant, significant and very significant. Responses are shown in Figure 1.

These respondents were clearly motivated toward tertiary study by personal interest and development and/or practice and knowledge development, rather than the potential for improved earnings, career aspirations, or the requirements of employers.

**Table 3. Topics appealing to midwives engaged in tertiary study**

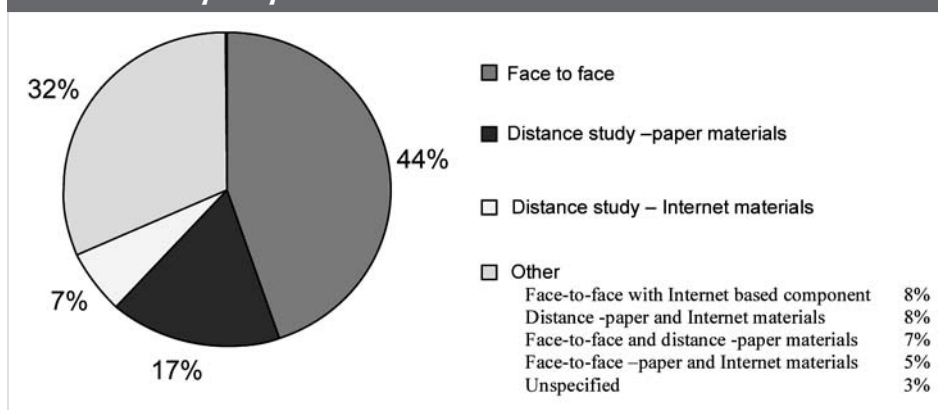
Topics	Number of times stated
Midwifery	
Teenage pregnancy	
Neonatal issues	
Breastfeeding	
Midwifery theory	
Normal birth	
Post natal depression	55
Research	
Epidemiology	
Evidence based practice	18
Applied Science	
Nutrition	
Psychology	
Physiology	
Anthropology	
Bioscience	12
Social Science	
Sociology	
Sociology of health	
Understanding community and poverty	11
Business	
Small business management	6
Education	
Teaching	
Adult learning	4
Other	
Complementary therapies,	
Legal issues	3
<b>Total</b>	<b>109</b>

The preferred mode of presentation for the majority of respondents engaged in tertiary study was face-to-face delivery (44%, n=48) with 17% (n=18) preferring distance study with paper-based materials. These preferred modes of presentation are detailed in Figure 2.

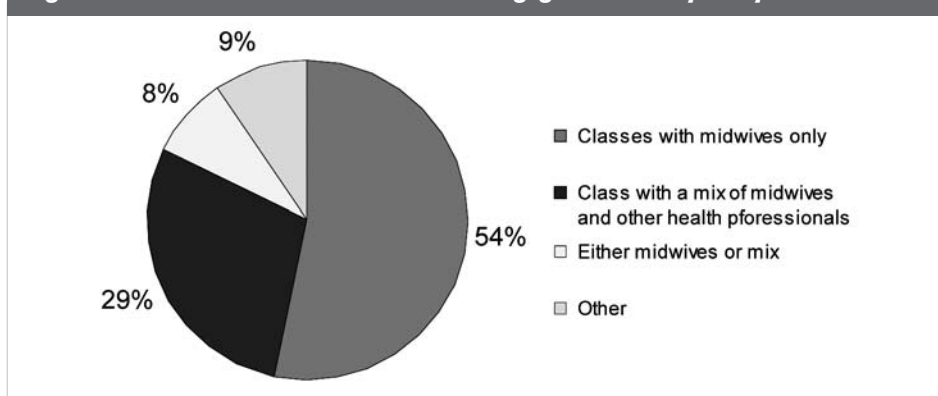
Respondents engaged in tertiary study were also asked about the study topics that appealed to them. Eighty-one respondents identified 109 topics which are summarised in Table 3.

Most respondents engaged in tertiary study (54%, n=57) preferred classes with other mid-

**Figure 2. Preferred modes of class presentation of midwives engaged in tertiary study**



**Figure 3. Preferred class mix of midwives engaged in tertiary study**



wives while 29% (n=31) preferred classes with a mix of midwives and other health professionals. Eight percent (n=9) elected both the categories 'midwives only' and 'mix of midwives and other health professionals'. Nine percent (n=10) cited 'other' as their preferred class mix.

### Midwives not engaged in tertiary study

Respondents not engaged tertiary study, were asked to state the main reasons for not studying. The reasons stated by the 247 respondents who answered this question are shown in Table 4.

Respondents not engaged in tertiary study were asked questions to identify the significance of select factors that might influence them to consider future study. Respondents were presented with a Likert scale with four options: very insignificant, insignificant, significant and very significant. Figure 4 illustrates the responses for each of these categories expressed as a percentage of the total responses to that question.

The expense of tertiary papers was a significant factor in the decision-making concerning tertiary study for those respondents not engaged in tertiary study. This group of respondents was asked to state an affordable and reasonable cost for a tertiary paper; the results are illustrated in Figure 5.

**Table 4. Reasons for not engaging in tertiary study**

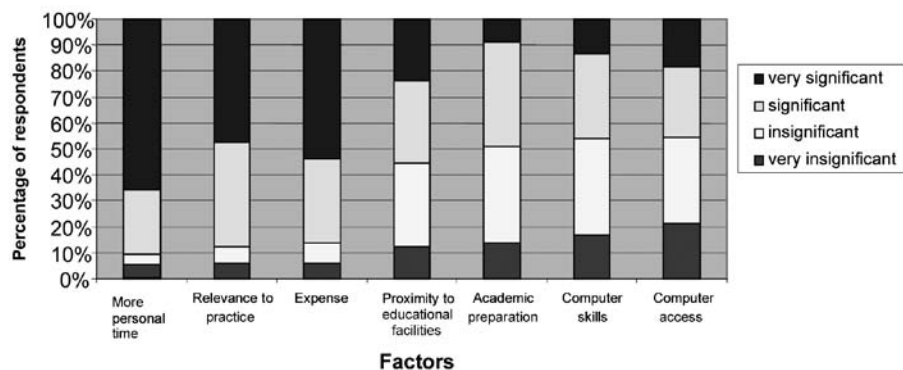
Reason	Number of times stated
Lack of time	73
Family commitments	54
Other*	54
No incentive or interest	45
Cost	45
Work commitments	36
Recent study	16
New midwife	11
Close to retirement	6
<b>Total</b>	<b>340</b>

\* Includes too lazy, don't know what to do, stress involved, distance to tertiary institution, lack of computer skills, fear of failure and lack of programme or paper appeal.

This group of respondents was also asked which paper topics appealed to them. Ninety-nine respondents identified 119 topics summarised in Table 5.

The majority of respondents not engaged in tertiary study would prefer face-to-face delivery of a tertiary course (39% n=86), with 13% (n=29)

**Figure 4. Influence of select factors in consideration of tertiary study for respondents not engaged in tertiary study**



**Table 5. Paper topics appealing to midwives not engaged in tertiary study**

Topics	Number of times stated
Midwifery	63
Applied Science	20
Other	11
Research	10
Social Science	9
Business	4
Education	2
<b>Total</b>	<b>110</b>

women in their mature years often have significant family commitments. These may include the care of children as well as older family members. Her children's educational needs are often given priority over those of the woman (Hill, MacGregor & Dewar, 1997). In addition, different modes of course material delivery offered in the digital age can further challenge older midwives with regard to their computer access and confidence in tackling the educational programmes on offer.

**Sample representativeness**

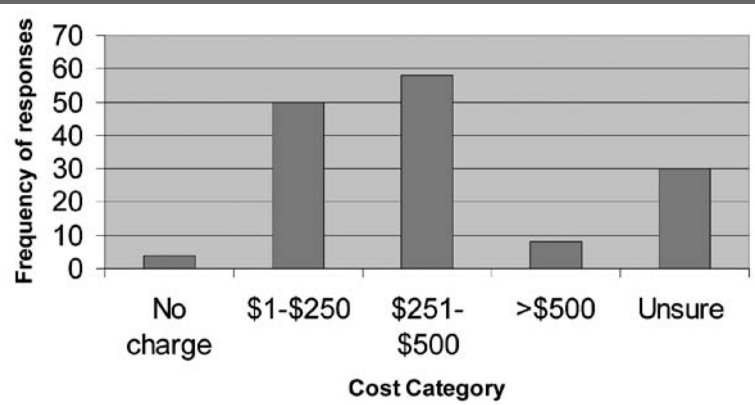
To gauge the representativeness of those midwives who participated in this survey, their demographics have been compared to those captured by the MCNZ workforce data (2006). Both sources revealed similar gender and age distributions, with MCNZ data demonstrating a peak age range between 40 and 54 years. This survey captured more midwives aged 40-54, and fewer midwives aged 55 years or more, than the MCNZ workforce data. The percentage of respondents that gained a Bachelor's degree in midwifery in this survey was slightly higher than that of the respondents of the MCNZ workforce data (26% and 20% respectively). Ethnicity categories in this survey were different to those used in the MCNZ workforce data, therefore comparisons cannot be made.

**Challenges for midwives when undertaking postgraduate study**

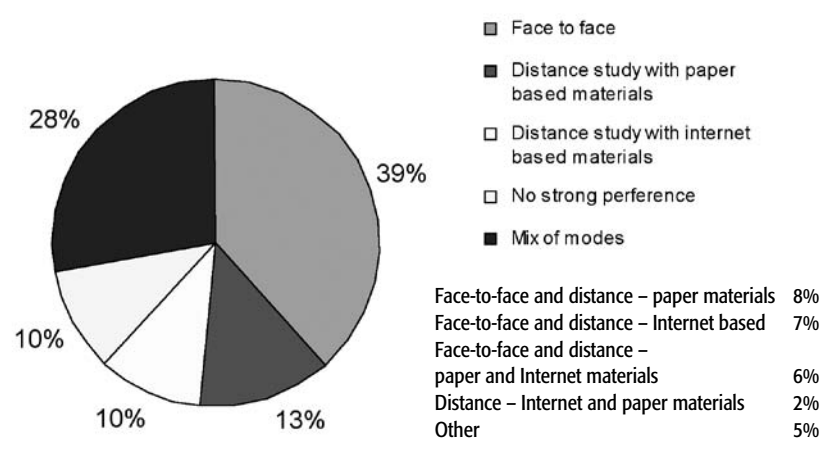
Degree programmes are educating an increasing proportion of midwives in New Zealand. In this study twenty six percent of respondents gained a Bachelor's degree as their initial midwifery qualification. This is a significant increase from the 7% identified in 2000 by the NCNZ. While many postgraduate midwifery programmes do not require a Bachelor's degree in their entry criteria, lack of academic experience may impact on the midwife's confidence or preparedness for tertiary study. While seasoned midwifery practitioners have considerable personal and clinical insights

*continued over...*

**Figure 5. Reasonable and affordable cost of tertiary paper as suggested by respondents not engaged in tertiary study**



**Figure 6. Preferred mode of presentation for midwives not engaged in tertiary study**



preferring distance study with paper based materials. These results are illustrated in Figure 6.

As illustrated in Figure 7 the majority of those who had a preference (34%, n=76) preferred classes with other midwives only, while 44% (n=100) had no strong preference.

**Discussion**

The participants in this study comprised largely of mature women with age frequencies in peaking in the 40-49 age range (representing 45.4% of respondents). Midwives aged less than 40 comprised 24.4% of the sample and 75.4% were equal to or greater than 40 years of age. 30% were over 50 years of age. This age distribution has implications for post registration midwifery education as

## New Zealand Midwives and Tertiary Study

to bring to their post registration studies, in midwifery practice and particularly when studying at a postgraduate level there is an increasing expectation for practitioners to be able to read and understand research. Indeed Veeramah (2004) found that many midwives have difficulty in finding and understanding research reports, particularly the statistics in reports, having been inadequately prepared for this skill in their basic midwifery education. This was reflected in this study with 48.9% of respondents not engaged in tertiary study, citing preparedness for academic study as a significant or very significant factor influencing their decision-making in regards to tertiary study.

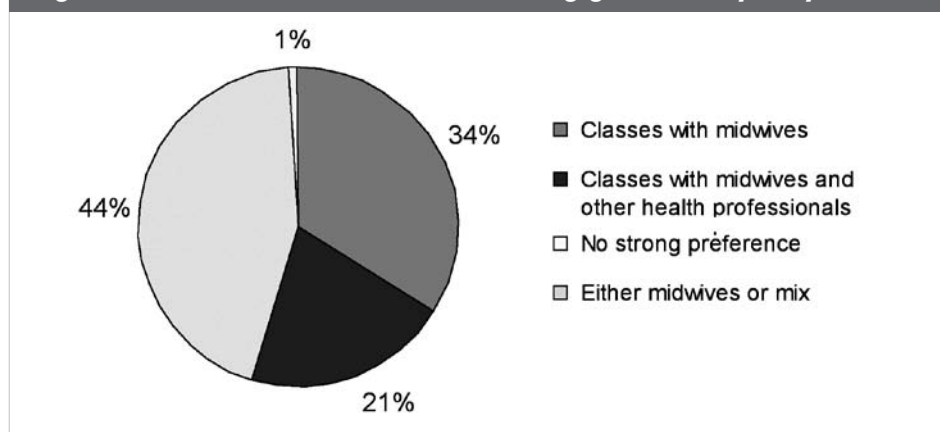
While tertiary study provides benefits for students, the commitment to study intrudes on their time and relationships. Significantly, 91% of midwives not engaged with tertiary study, rated lack of time as a significant or very significant factor influencing their decision-making surrounding tertiary study. 54 respondents also cited family commitments as a reason for not engaging in tertiary study.

Lore and Tait (2004) looked at time pressures in regard to expectations of lifelong learning, and suggest that organisations no longer provide the time nor place for formal education. Rather, the individual is required to fit study around their family and work lives. Competing with this expectation is the need for work/life balance with regard to health and wellbeing. Lore and Tait suggest women structure their time differently than men, and for both sexes *"the boundaries between private and public time are increasingly becoming blurred"* (p.3). Study is frequently undertaken at home, during weekends and evenings, with many committing holiday breaks to this purpose. This means social life is constrained and relationships are affected, particularly where the partner is unsupportive. The demands of study according to Hill, MacGregor and Dewar exposed deep prejudices from some partners and teenage children to the aspirations of the mature student and the impact on domestic arrangements (Hill et al, 1997). This is exacerbated in some instances by increased financial outlay. Despite the downsides, the majority of participants in this study reported a sense of personal achievement, confidence and satisfaction that made the sacrifices worthwhile (ibid).

### What's in it for me? Rethinking traditional postgraduate course delivery

A large proportion of respondents engaged in tertiary study cited 'personal interest and /or development' (95%) and 'practice and /or knowledge development' (95%) as very significant

Figure 7. Preferred class mix of midwives not engaged in tertiary study



or significant factors influencing their decision to engage in tertiary study. Less influential factors included 'career aspirations' where 66% of respondents cited this factor as very significant or significant, 'earning potential' cited by only 32% and 'employer expectations' by 27%. The respondents (both engaged in, and not engaged in, tertiary study) were clearly interested in subject areas directly related to midwifery, with 88% of respondents not engaged in tertiary study rating 'relevance to practice' as a very significant or significant factor in influencing them to consider tertiary study.

In a qualitative New Zealand study involving twenty nurses, Spence (2004a, 2004b) explored the impact of postgraduate education on advancing nursing practice. Spence found that postgraduate nurse education contributed significantly to the personal and professional development and clinical practice of nurses in her study. Like the midwives participating in this study, these nurses were challenged by family commitments and by a lack of time. They were similarly motivated by more intrinsic than extrinsic factors because they were not rewarded financially for postgraduate study, their career pathway did not depend on it, and often their employers and colleagues were unsupportive.

The clinical career pathway for many midwives in New Zealand is not directly related to tertiary qualifications. For many practising midwives (whether employed or self employed) additional tertiary qualifications do little to improve their financial situation or advance their careers. It is not surprising that 'personal interest and/ or development', and 'practice knowledge' are the most significant motivational factors for tertiary study. Tempting midwives to dip their toe into post registration tertiary study is the first challenge for educators, thus it is important to know what motivates midwives to make this important first move. In 2005 the Midwifery Council (in response to the

Health Practitioner's Competency Assurance Act, 2003) introduced the recertification programme for midwives. This requires that midwives provide evidence of ongoing educational activities in order to maintain an Annual Practising Certificate. These activities need not be at the tertiary level but tertiary studies will contribute significantly to the number of points required over three years. This may prove in the future to be a factor motivating midwives toward tertiary study.

In the United Kingdom, where tertiary education was promoted as a way of improving the quality of health services, Hill et al (1997) looked at motivating factors for health practitioners to engage in tertiary study. They reported that more mature nurses and midwives felt threatened by newer graduates who were more familiar with the academic environment. In addition when these mature nurses and midwives returned to study there were domestic and financial challenges. To mitigate these problems a blended programme mixing distance and college based tutorials was devised. The courses were adapted to meet the practical issues encountered in a work environment by incorporating scenarios as an initial focus.

Bankert and Kozel (2005) concur suggesting that adult learners have specific needs that require educators to rethink the traditional teacher/ learner roles with regard to material presentation and assessment within courses. Adult students have a higher level of motivation, commitment to the programme and life experience (Bankert & Kozel, 2005). This does not preclude their feeling apprehensive about the academic environment. Thus these students benefit most from a *"collaborative pedagogy where the teacher is sensitive to the individuality of all learners and engaged in their educational experience"* (ibid, p.227). This can occur when there is collaborative development of course requirements with the option for students to pursue a topic of particular interest.

Whyte, Lugton and Tonks evaluated how the current Masters courses offered in Edinburgh met student needs. The respondents suggested that the higher qualification had opened up opportunities for them and contributed to their work whether in clinical, management or education. In addition there was a sense of satisfaction with Masters status and personal growth. The latter concept was thought to contribute to a "broadening of perspectives and the development of advanced powers of reasoning" (Whyte et al, 2000, p.1073). Thus there was a benefit across their lifestyles and not just related to their work. Of particular interest was that 50% of the graduates were working in education, thus the challenge is to provide Masters preparation that keeps midwives in practice.

In New Zealand, midwifery undergraduate education has been a focus for midwifery to this point. Although post registration midwifery education may play an important role in the retention of midwives and development of the profession, to date this area has received little research attention. This survey provides a useful starting point while a number of future lines of inquiry would be beneficial. This could include a study similar to that carried out by Whyte, Lugton and Tonks (2000) in Edinburgh, which explored the relevance of Masters level education for participants over the long term.

Webber (2004) also looked at what motivated mature practising managers to study. Webber suggested motivations for study were not simply due to personality factors but a complex cognitive process that focused on their personal intentions as a learner. This motivation was not simply to progress their career but also to increase their confidence and self esteem.

### The use of digital technology in tertiary education

Advances in computer and Internet technology have changed the landscape of tertiary education. However 46% of respondents not engaged in tertiary study stated difficulty in gaining access to a computer and lack of computer skills as very significant or significant influences on their decision surrounding tertiary study. Thus midwives returning to study, who have not kept pace with technological changes, may be less likely to enrol in a course delivered online. To attract midwives to tertiary study creative course design is essential. Of the 107 respondents engaged with tertiary study, 44% preferred face-to-face delivery. Ad-

ditionally 39% of those not engaged with tertiary study expressed a preference for face-to-face course delivery.

To design an effective online course Brown (1997) suggests the course must meet both the informational needs as well as the interactional communication needs of the student. Martyn (2003) outlines a hybrid model of online education, which proved successful for a cohort of non-traditional students. This hybrid model places the student at the centre of the model and aims for the "best characteristics of online education and the interactivity that typically characterizes face-to-face classroom instruction" (ibid, p.18). The course de-

*To influence midwives to consider tertiary study, creative course design and the vital elements of information, interaction and communication need to be incorporated.*

veloped by Martyn begins with a face-to-face first class orientation where all the online components are worked through with the students completing some online quizzes. Throughout the course a mix of contact methods, such as email, chat groups, and online threaded discussions, is engaged with by the individual, tutor and fellow students. These sessions are a mix of synchronous and asynchronous discussion. The contact is frequent throughout. Finally the last class is face-to-face and includes any final examinations required. This model appears to have the range of elements that would offer the option of distance learning with the additional communication and interactive components that might engage midwifery practitioners in tertiary study.

### The limitations of this study

While the midwife respondents appeared to represent a cross section of the New Zealand midwifery population we are unable to assume this to be the case. For example while all members of NZCOM had easy access to the survey, midwives working in employed situations had a limited opportunity to hear about the study, or to receive a survey form. At best this study provides some insights into the content and delivery modes of postgraduate courses that might attract those currently not engaged in postgraduate study and what strategies educators might employ to encourage participation.

### Conclusion

Midwives in New Zealand are a mature group of women who have much to offer from personal and practice experience. Most of these practitioners need to fit the demands of study around busy family and practice lives within which there is competition for time, money and study space. The main incentives for undertaking tertiary study

are related to personal and practice development, but participation may be impeded by a perceived lack of academic ability and/ or lack of adequate computer access. The move to more online courses means that this group may be reluctant to engage in tertiary study. Thus to influence midwives to consider tertiary study, creative course design and the vital elements of information, interaction and communication need to be incorporated.

### Acknowledgements

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## Young and Pregnant

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### Abstract

This study reveals the experience of 'being pregnant' as a young woman. The research is set in the context of South Auckland, New Zealand, where women under the age of 19 face the opinions and judgments of a societal view that they are too young to be pregnant. Using a phenomenological approach it captures their perspective of the many tensions they face. 'Being pregnant' changed the young women in this study. They talked of 'coming to accept' being pregnant while 'becoming' significantly different. Even with the 'shock' of the news and the implications of it, these young women talk about having a sense that it was 'right' to keep on with the pregnancy. In the face of many difficulties young women show how they adapt to the changes thrown upon them. They are influenced by peers, impacted by society and frightened of the future. It is only when the pregnancy 'hits' young women that they comprehend what it means to be pregnant. In this experience young women seek out 'others' who will provide them with necessary support and care. One significant 'other' is the midwife. This study has exposed the need for midwives to 'work alongside' young pregnant women assisting them in making the experience of 'being pregnant' easier. It is vital that midwives earn the trust of young women so that they can provide effective midwifery care.

### Introduction

When a midwife sees a sixteen year old, sitting and waiting in her waiting room, how does she begin to understand what it is like for her to be pregnant? Teenage pregnancy is seen as one of the most significant teenage health issues in

New Zealand (Condon & Corkindale, 2002) with figures described as "alarming" (Shepherd, 2004, p.74). In 2002 in New Zealand there were 3697 births to teenage mothers, 6.9% of the total number of births that year (Ministry of Health (MOH), 2004). From the peak in 1972, the general trend has been downward with an historical low in 2002 (ibid) though New Zealand still has the third highest teenage pregnancy rate amongst 119 industrialised countries (Statistics NZ, 2003). The teenage fertility rate is high at 52 per 1000 known pregnancies, and out of those, 24 per 1000 teenage pregnancies end in abortion (Statistics NZ, 2003).

Statistics of teenage pregnancies tell one story but a named face challenges the midwife to understand how she may deliver care to a young pregnant woman. This paper, drawn from a hermeneutic, phenomenological research study, seeks to bring a face, to humanise the statistics, and to raise awareness of what it might be like to experience pregnancy as a very young woman in New Zealand today. The authors declare their stand points, the literature is reviewed, demonstrating gaps in the research that this small study helps to rectify, the qualitative research approach detailed, the findings, illustrated by verbatim quotes from participants, presented, and finally, implications for practice are listed.

### The authors

Julie Payne, lead researcher in this study, works as an independent midwife with about half her caseload being young pregnant women. She chose to do this study as she recognised that the partnership model she believed in, was challenged and stretched when caring for young pregnant women. She wanted to understand the perspective of what it was like to be pregnant and young so that she could provide safe and effective midwifery care. Julie knew that by conducting this study she could be an advocate for young pregnant women as she has a very high regard for the courage and strength they have.

She clearly articulated her assumptions, regarding young teenage women who were pregnant, prior to this study as those gained from her six years of working as a midwife in South Auckland. In the two other counties Julie has lived in, the statistics of teenage pregnancies sit poles apart; in Niger teenage pregnancy is a norm, in Japan it is hidden. She has been drawn to young pregnant women as she is a young midwife but has felt the tension of not knowing how to feel towards the

inner turmoil, transfixed by such thoughts like, 'it's hard', 'is it wrong?' or 'it's the best way to go'. Her awareness of these thoughts and feelings facilitated her ability to freshly appraise the data when composing her interpretation of the young pregnant women's stories.

Liz Smythe contributed to the interpretation and reviewed the data from her more academic vantage place.

### Literature review

In the past decades there have been over 2000 articles published world wide on teenage pregnancy (Carter & Spear, 2002) revealing it as an issue fraught with controversies, dilemmas, and emotions.

Health professionals have been looking to reduce the rate of teenage pregnancies by exploring the social and health issues (Jewell, Tacchi & Donovan, 2000) but there have been no simple answers (DiCenso, 2002; Family Planning Association, 2002). What have been identified are multiple risk factors, causes, and outcomes of teenage pregnancy. Wilson (2004) believes the issue is far deeper than what is currently understood. Teenage pregnancies have a tremendous impact on individuals, families and communities as a whole (Carter & Spear, 2002). Musick (1993, p.15) suggests that "ill-conceived intervention strategies based on shallow or inadequate understanding of the problem" are causing greater harm. The statistics mask a very complex situation. Within society there is an array of different social, cultural, spiritual and economic factors that influence young women to become pregnant and then to stay pregnant. Jewell, Tacchi and Donovan, (2000) believe that when teenage pregnancy is addressed it is important to make a shift away from blaming young pregnant women. Wilson (2004) believes that teenage pregnancy is not the real problem, rather it is poverty. Being brought up in poverty changes the way young women take control of their lives in terms of using contraception, being sexually active and their response to 'being pregnant' (Killion, 1998).

It has been said that young women are not necessarily becoming pregnant because of their lack of knowledge or the difficulty they may have in accessing contraception (Breheny & Stephans, 2004). It may be their positive or ambivalent feeling about becoming pregnant that means they take little preventative action (Condon & Corkindale, 2002). Pregnancy is viewed as "part of one's fate, in

*much the same way that more advantaged teenagers take college for granted*" (SmithBattle, 1995, p.369). Romans, Marting and Morris (1997) suggest that these views may develop because of family dysfunction or having a history of sexual abuse. This may lead to craving for emotional affection that happens to lead to pregnancy (Berglund, Liljestrand, Marin, Salgado & Zelaya, 1997). There is also a higher incidence of teenage pregnancy when the young women's mothers were themselves pregnant at a young age (Zabin & Hayward, 1993).

Dickson, Sporle, Rimene and Paul (2000) argue that in New Zealand teenage pregnancy and poverty are directly linked to young women's ethnicity. Cook (2004) says that young Maori women are five times more likely than non-Maori to become pregnant, yet Maori Party co-leader, Turiana Turia, is quick to point out that this in itself may not be an issue (NZ Herald, 2004). Durie (1998) draws attention to the different cultural perspectives between non-Māori and Māori which may or may not define teenage pregnancy as an issue.

The literature draws attention to how badly young pregnant women need approval and support from others, especially their families (Bradshaw, 1997; Musick, 1993). McCullough and Scherman (1991) have shown that young women's mothers are the most significant form of support they crave. Martis (2002) stresses how important the support of other young women is in a young pregnant woman's life. It is not 'any' support they want but support from those who understand what they are experiencing.

### Research approach

Hermeneutic phenomenology was chosen as the methodology to uncover and interpret the lived experience of 'being pregnant' for young women. The aim is to lay open that which is taken for granted in our everyday worlds (Heidegger, 1967). Participants are asked to describe an experience "as it is lived" (Berg, Lungren, Hermansson & Wahlberg, 1996, p.12). Researchers bring their own interpretive lenses, and biases (van Manen, 1990). Koch states "data generated by the participant is fused with the experience of the researcher and placed in context" (Koch, 1996, p.176).

### Research Design

Two different sampling techniques were used to recruit participants for this study. The first technique was 'purposive' sampling, which was carried out by distributing participant information sheets to ten independent midwives who worked in South Auckland. The second recruitment approach was to use the technique 'snowballing'. This involved

participants introducing other possible participants to the researcher. Eleven participants aged between 15 and 19 were interviewed once consent was obtained. Parental consent was obtained from those 16 years and under. All the participants were pregnant or had given birth for the first time and had never been married. They all were excited, willing

participants who wanted to tell their story. The interviews were unstructured, conducted in a place allocated by the participant, and lasted about hour. Interviews finished naturally, at a time suitable and comfortable for each participant. The interview questions were open-ended questions. Each interview was taped and then transcribed and strict confidentiality guidelines were followed. Ethical approval was granted by the Auckland Ethics Committee. Because of the diverse cultural backgrounds of the participants, a Māori and Pacific Island representative provided facilitation and advice as a 'gatekeeper' to maintain cultural safety throughout this research (Tolich & Davidson, 1999). Pseudonyms were used to protect the anonymity of the participants.

The interview started with a question like, 'tell me your pregnancy story' or 'what is it like to be pregnant?' At times the replies tended to be brief without moving into 'story' yet once the conversation began to flow the nature of their experiences emerged. Nevertheless, the data were somewhat disjointed, not the rich descriptive story commonly expected in phenomenological studies. The process of crafting involved reading and re-reading the data. Once this was completed a copy of their own stories was sent to participants so that validation could occur. They had an opportunity to correct, comment or withdraw their stories at this stage. van Manen cautions against offering a research report in the traditional scientific sense. He reminds us that the aim is to make lived experience "reflectively understandable and intelligible"

(van Manen, 1990, p.126) and argues that this is the work of writing. The writer/s, the data, and the thinking become merged in an indistinguishable whole. The phenomenon is disclosed reflectively, drawing on both the insights of the participants and the interpretations the researchers. Writing opens the way for readers to be attentive to the saying, to open their own experiences and thinking to more reflection. The findings that follow have emerged from the stories young women have told of their 'experience' of being pregnant.

### Findings

Insights from this study are presented under the themes of 'coming to accept' and 'needing others'.

#### Coming to accept

When a young woman becomes pregnant she is thrown out of her known world. A way of life that she previously took for granted falls away. She must now come to accept a new experience of who she is becoming.

#### Thinking it would not happen

The young women did not think that pregnancy would happen to them:

*I thought it was not going to happen to me. I thought I was invincible, but once it happened I realised I was not. Basically, whatever I did, I thought, "I know better", but I didn't. It has been a big learning curve...* (Christy)

All the participants revealed that they knew that pregnancy was a consequence of sexual activity but they thought it would not happen to them. They are shocked when an announcement or confirmation of the pregnancy occurs. Their invincibility falls apart as they face the vulnerability of suspecting they are pregnant. 'Being pregnant' is neither what they wanted, nor what they chose. These young women, who had been content with the day-to-day activities as normal teenagers, now find themselves faced with the question of who they are. Are they a teenager who is ready to face 'being pregnant'?

#### Keeping the baby

Rose tells the agonizing account of making her decision about 'being pregnant':

*It was a shock when the doctor did the pregnancy test and I was told it was positive. At first I didn't want to keep my baby because I knew that I was too young and at the time I was having problems. I was 16 years old and my life was complicated. I wanted to get out*

*continued over...*

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*of my troubles so I actually thought about having an abortion. I thought about whether I was going to get enough support, especially from my family because I know that most first babies are aborted because of family pressures and things. I thought about it and decided to keep the baby. It took me probably about two or three weeks to make a decision. It was a hard decision to make because at that time I had just left school. The pregnancy was a hard and stressful time that meant I was having doubts about whether the decision I made was right. But when I first saw my baby, that was when, I knew I had made the right decision to keep her. (Rose)*

The pregnancy test dramatically changes everything. Young women are 'now' pregnant in a way they were not before the news came. The nature of the participants in this study is that they decided to keep on 'being pregnant'. The stories show the tension between what is 'right' in their conscience and what is 'right' in their reality. It reveals that "things are not understood in terms of some unchangeable essence. Things are always understood in a context" (Johnson, 2000, p.90). The reality of the young women's lives could have meant abortion was the easy option, but for some reason they rejected that way. Their age, support, and pressures in life all had an impact on their ability to deal with having to make a decision, yet deciding to stay pregnant meant the pregnancy itself took them forward into new experiences. The decision the young women make about 'being pregnant' is caught up in the tension of the unknowns of the future. Often at this stage young women are unaware of what 'being pregnant' really means.

### 'Being 'hit'?

A significant finding of this study is the notion that young women are suddenly 'hit' by the reality of what pregnancy is all about. Vicky introduces this experience:

*I got excited about the pregnancy when my mum bought some little socks. Mum buying me the baby socks was kind of a turning point; it was when I realised what the pregnancy was about. I started buying little stuff, which started to get me excited and then the scan was really cool as that is when it hit again. It felt really different after seeing something inside of me. It was really neat... (Vicky)*

'Being 'hit' is an experience that changes the young women's thoughts, understanding and knowledge about the experience they are going through. Before this experience there is not much connection between 'being pregnant' and having a baby. 'Being 'hit' alters the emotional attachment young women have to their pregnancies and causes them to think about their behaviour.

### Stopping teenage stuff (Drinking alcohol, taking drugs and smoking)

Once a young woman starts to feel connected to her unborn baby she takes on a new sense of responsibility.

*I did kind of give in and do some stupid stuff like drink, smoke and take drugs but I stopped because of the baby. I thought he might get asthma and things like that ... It was hard to know that I was not allowed to do my normal teenage stuff. My whole way of living had to change. I had to find myself a new place to stay and find some new friends because I was hanging around with stupid people. I wanted to enjoy life, but I chose to look after the baby. Everything changed. I think as I have gone along something must've been changing me. I'm glad I stopped now. (Tara)*

Young women who become pregnant may be in a lifestyle detrimental to their baby's wellbeing. Tara explains that once she started to feel responsible for her baby it was not just the drugs and alcohol that she had to give up but her whole way of living. She had to move, let go of friends and 'normal teenage stuff'. Everything changed. The young women in this study showed courage and commitment in making big changes for the sake of their babies.

### Changing plans

Vicky and Ruth portray their experiences of having to change their plans:

*It was scary because I knew I wouldn't get to do all the stuff I wanted. I can't do it now. I really didn't want to get pregnant. I have regrets if I think about it. I am too young for it. (Vicky)*

*Getting pregnant was just a complete waste of my life... I really wanted to be a judge or a lawyer but the desire is just not there any more. I guess I could still probably do it but not now. I think I am just going to have to sit at home being a mother. (Ruth)*

This study has shown that 'being pregnant' for a teenager can be a time of losing old dreams and hopes and a time of gaining new plans that involve their babies. Young women are constantly living in the future and in the past, in the unknown and the 'suspected'. 'Being pregnant' dramatically alters young women's perceptions of self. They are changed; their being will never be how it was again. 'Being pregnant' and then 'being a mother' become part of them as their new plans develop.

### Needing Others

Young women's relationship with others is altered when pregnancy occurs. The presence or absence, the participation or non-participation, of others in the young women's lives, make a considerable difference to their experience of 'being pregnant'.

### Needing their mother

Telling their mother was a big step for participants. Emma describes this experience:

*I can't really explain how I really felt about becoming pregnant, but I can say that I was scared to tell my mum. I was really scared because my mum would be really against it because I was so young. It was nerve-racking telling my mum. I couldn't put it into words, I just cried. I thought I was going to be in trouble. (Emma)*

The secret of 'being pregnant' is overwhelming. The fear of having to tell others, especially their mother, about 'being pregnant' is a time of turbulence in which they are hostage until the 'telling' has been done. The young women show a longing to be understood and accepted by their mothers even though they have broken a spoken or unspoken rule about the importance of not getting pregnant. Emma goes on to describe how her hope for support was not met:

*I cry a lot. I don't know why. I used to respect my mum until I was the age of 15 years, but lost respect completely because my mum was not there for me, she was out a lot and was not worrying about me. I know I have grown up, but she should still act like a mum and support me. She should still be here for her kids whether they are old or young. (Emma)*

As a mother-to-be Emma has very clear expectations that the responsibilities of mothering go on for many years. She is distressed that her own mother has let her down and is not giving her the attention she needs. She is very clear that being a mother means 'being there for the children'. It raises the question of who is 'there' for young pregnant women when the family does not take that role.

### Needing partner

The young women use the terms 'boyfriend' or 'partner' to describe this 'other' in their lives. The male involved has a choice whether or not to commit to being father, boyfriend or partner, just as the young women have a choice in how much they seek to involve them. Amy and Anna give some insights into their experiences:

*He didn't believe me so I just left it at that when I was pregnant because there was not much else I could do about it. Once the baby was born, the first time he saw him he knew instantly it was his so there is no doubt in his mind now. But he has not seen him again. It's better on my own. There is no one to tell me what to do. And no one tells me I am doing it wrong. (Amy)*

*My partner is one thing I am so grateful for. My partner is really good. He rubs my back for me. All my friends don't have partners, except for one of them, and they find it very hard. I'll tell you now, if*

he wasn't happy about this whole thing, I wouldn't be happy but because he is happy about it and gives me support, that's what makes it so easy. A lot of guys should be more understanding. I know I am really lucky. (Anna)

Anna values the commitment of her partner. But for many of the young women 'the committing other' is not available. With this lack of availability comes the decision to do it without them. Young women have to be self-resourceful to cope with 'being pregnant'. They do not have the emotional reserve to give to the fathers of their babies if the young men are not willing to give back. Tensions in their relationships are too much for young women to cope with while 'being pregnant'. Life has to stay as simple as possible. And so being alone may be better than struggling with the hope of support and being disappointed. Participants expressed that they would rather do without a male partner unless he has commitment.

### Needing friends

Rose expresses her thoughts about her friends: *My older friends aged 23 and 18; they helped me and are good friends. They were a big help. The 18-year-old friend has a baby. She gave me ideas on what to expect and stuff. It was important to be able to talk to my friends that had actually been through a pregnancy. They understand how you are feeling... I know that if I was at school and one of my friends was pregnant I would probably still keep in touch.* (Rose)

As young women live the experience of 'being pregnant', they are faced with finding new friends. Friends are significant 'others' who provide help, understanding and connection. It seems to be a great relief for young women to know that they have friends who will be there for them. It may be some antenatal activity that brings young pregnant women into contact with each other giving them the opportunity to find new friends who understand.

### Needing financial support

Young women need financial support during their pregnancies. They need to provide for themselves and for when their babies arrive. Tara talks about this:

*I have always known that if I got pregnant there is going to be the Benefit due me. My friends told me that I will get so much from the government. They have, and I think I am getting enough money to support myself during my pregnancy. If I need more money, I ask my mum and others in the family...* (Tara)

Stories show that young women want to fulfil their responsibility to provide for their babies but they

seem to be living day-by-day, simply surviving on income from the government supplemented by help from family and friends. Young women's experiences of 'being pregnant' are affected by 'others providing'. When there is not enough financial support available, to whom do they turn?

### Needing a midwife

At some stage during her pregnancy the young woman seeks midwifery care. Vicky compares her care to that received by her friends:

*My mum told me I had to get a midwife so I went into the clinic and found myself a midwife who was working there. I'm pleased I found my midwife because a friend of mine had a midwife and a doctor and when it came time for her to deliver she couldn't contact anyone... My midwife has been with me since I was first pregnant, it's different, and it's like a friendship. It is a very important relationship.* (Vicky)

It is unlikely that these young women have much understanding of choices of care and just make an initial approach to a midwifery service. In hindsight, Vicky captures the essential element for her: relationship. Her midwife was there for her when she needed her, just like a friend. The craving for support is a strong theme emerging from this study. Are midwives willing and resourced sufficiently to provide the depth of relationship these young women need? Jane and Amy describe their midwifery care:

*My midwife always thought about how it was going to feel for me and she would always tell me what was going to happen the next appointment. I was always home by myself, and the midwife would always come and see me because she knew that I did not have any way of getting out to see her... She made me feel comfortable, so it was easy to talk about general stuff as well as pregnancy issues. She was interested in what I was doing.* (Jane)

*It was good when she came to see me at home. Like a lot of 14, 15 or 16 year olds, I did not have my own car and my family and friends did not agree with me 'being pregnant'. It was nice having one midwife who came over regularly. It would have been harder when I was pregnant if she had not done that. She made it easy. I had her, just one person, one face.* (Amy)

The stories told above show a powerful glimpse of what midwives could do to assist young women in the experience of 'being pregnant'. An appoint-

ment becomes an event that changes the young woman's perspective of life. A relationship is formed that appears to be based on mutual respect, trust and care. This relationship is significant because the midwife may be the only person in a young woman's life who accepts her pregnancy and helps her to regain confidence. The continuity of care provides young women with stability and trust. They have someone they know they can turn to for help and support. Yet how does a midwife carry the burden of these vulnerable, need-intensive young women who may have few others to call upon for support?

It is very clear that young women 'need' support during their experience of 'being pregnant'. Support appears to include many different things. It may be encouragement, understanding, empathy or a place to rest. In a larger existential sense, young women are searching in the experience of 'being

pregnant' for the 'other', for the communal, the social. They search for a sense of purpose in life, meaningfulness and grounds for living (van Manen, 1990). 'Being pregnant' has complicated their lives and they want and need 'others' who will make it easier. They will avoid 'others' that cause harm. They search out those 'others' who will provide what they need in a non-judgemental caring manner. They yearn to be understood and have people around them who will share their anticipation of the baby.

### Implications for practice

'Being pregnant' causes young pregnant women to face challenging tensions in their lives. Everything in their taken-for-granted world is thrown into disarray. They sense the shame imposed on them by society (Howie & Carlisle, 2005). Health professionals who tell young women that they are pregnant have an important responsibility to provide reassurance and guidance, to explain the choice of abortion, to equip them with relevant material, and to inform them of support services (Harrison, 2005). They are likely to be faced with 'being pregnant' on top of many other complex issues in their life (Heazell & Gibbs, 2005). Continuing the pregnancy may be more a felt 'rightness' than a rational consideration of pros and cons.

Young women know that they will need support during their pregnancies; perhaps from the very people they would rather be distancing themselves

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from. They find 'telling' very difficult as they fear 'being in trouble' and losing the support they know they need. Heazell and Gibbs (2005) suggest that young women frequently overestimate the support they will receive. Health professionals who connect with these young pregnant women have an important facilitative role to play in helping the family to adjust and in linking the young woman with other available support services.

Losing their friends seems to be a consequence of becoming pregnant. When they connect with peers who are also pregnant there are possibilities of new friendships. Midwives may play a key role in bringing this cohort together (Howie & Carlisle, 2005). Friendships that develop may be a far greater gift to them than the original purpose for the group gathering.

Stopping 'teenage stuff' because of the harmful side effects on their babies is a struggle for some young women. Alcohol, smoking and drugs may have become part of their everyday coping mechanism and the focus of social activity (Mead, 1975). To stop means to take away much more than the harmful substance itself. It is to cast them outside of what to them has been a familiar and valued social experience. Midwives need to be sensitive to the huge 'ask' placed upon these young woman and look for alternative support and social opportunities to help them make such adjustments.

Particular experiences appear to 'hit' young women with heightened understanding of what it means to be pregnant. The early pregnancy ultrasound scans seems to provide such understanding by giving a 'real' picture of their very own baby. It suddenly 'hits' them that they will become mother to the baby growing within them. This revelation seems to assist some young women to stop 'teenage stuff' and to better accept the changes they are going through. A scan is more than a scan. It is an important catalyst to health promotive behaviours.

Young pregnant women have a fear of being judged by others, including midwives. The first encounter with a midwife is critical. Midwives need to examine the attitudes they have about teenage pregnancies (Brett, 2005; Wray, 2005). A safe and trusting relationship is vital for midwifery care to be effective. Young women want to be accepted for who they are, with all the complexi-

ties and potentials in their situations. Listening respectfully, gently questioning and seeking to understand are essential to achieving effective communication (Fleming, 1998). Midwives have to earn and sustain a trusting relationship not only with the young pregnant woman but also with her family.

### Discussion

Midwives have an important role in walking with the young woman and her family through challenging times and in ensuring that the unborn baby has the best possible start in life. They also need to recognise when to refer to more appropriately skilled health professionals and not seek to carry the burden of being social worker, drug and alcohol counsellor, and family therapist as well. Yet, if the midwife is the one trusted person it may be that she finds herself drawn beyond normal professional boundaries. Continuity of care and the willingness to visit at

home seem to be the key to making the experience easier for young women. Midwives must be flexible, yet set firm boundaries. There is a danger that the young woman comes to expect too much, and the midwife becomes overburdened and exhausted. It is strongly recommended that midwives who have a caseload with high numbers of young women utilise the support of professional supervision. However there are other forms of debriefing and reflective processes they can access. Further, funding mechanisms need to be in place to enable them to practise with a reduced case load so that time is available to 'be' with young pregnant women.

The young woman who conceives is not just another pregnant teenager. She has a name. She cries in the night. She is both very frightened and excited. She deserves to be respected, trusted and 'seen'. She wants the best for her baby even if she did not plan to get pregnant. She needs support, as she does not quite know how to make that happen, especially as sometimes life itself is so hard (Russell & Lee, 2004; Langville, Flowedew & Andreou, 2004). She needs a midwife who is willing to get to know the person behind the name and to understand the life context that challenges so many taken-for-granted assumptions of women's experience of pregnancy. Being young and pregnant is often a consequence of an already complex life situation. The midwife may become the solid rock amidst confusion and chaos if she

perceives the vulnerability of the young woman and reaches out to her in a way that engenders feelings of "here is someone I can trust". It may be unusual in her life to feel cared for, encouraged and supported. This is a gift a midwife can offer. Through this, the young mother is able to look back on all she has accomplished with pride and a growing sense of self-worth. That makes such a difference to her mothering.

### Conclusion

This study has implications for practice primarily in underlining to midwives the vital nature of empathy, and a strictly non-judgemental approach, both being of particular importance when, overwhelmingly, society sees women younger than 18 being too young to have babies. It struggles to understand, preferring quickly to condemn.

As a qualitative study it is restricted in not being generalisable, however it contributes invaluable 'lived experience' data to illustrate the phenomenon of being so young and dealing with motherhood, directly from those who know. 'Coming to accept' and 'needing others' are clear themes to emerge from the study and enlighten and guide an effective midwifery approach.

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## Iodine and selenium – 'trace' minerals in New Zealand

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### Abstract

The trace minerals iodine and selenium have many important functions during pregnancy and lactation, including a vital role in fetal and neonatal brain development. Although these nutrients are only required in small amounts, the dietary intake of these trace minerals in New Zealand has been reported to be suboptimal. There is a limited supply of iodine and selenium available in the New Zealand food supply. Therefore strategies, including regular consumption of foods containing these minerals and possibly supplementation, are required to ensure pregnant and lactating women consume adequate amounts of these minerals.

### Introduction

Iodine and selenium are important nutrients required during pregnancy for a variety of functions including normal immune function and for the production of thyroid hormones and essential compounds such as glutathione peroxidase. Most importantly, iodine and selenium are necessary for normal brain development in the fetus and neonate. Worldwide, iodine deficiency is the leading cause of preventable brain damage (Delange, 2001). This is of potential concern for pregnant women particularly in countries such as New Zealand where the availability and intake of iodine and selenium are low (Thomson, 2004). The following article provides an overview of the general functions and major food sources of iodine and selenium followed by the effects of inadequate intakes of these trace minerals in pregnancy. I focus on the importance of these trace minerals during pregnancy and highlight the difficulties in attaining adequate iodine and selenium status in New Zealand.

### What are trace minerals?

Trace minerals are defined as nutrients required by the body in small amounts, typically less than 100 mg/day, for good health. Iron, zinc, copper, iodine and selenium are examples of trace minerals.

### Iodine

Iodine is a chemical element found in relatively constant amounts in seawater; however its distribution on land and in fresh water varies geographically (International Council for the Control of Iodine Deficiency Disorders, 2001). The primary function of iodine is in the production of two hormones, tri-iodothyronine (T3) and thyroxine (T4), by the thyroid gland (Figure 1). These hormones have an essential role in growth and development throughout life including the fetal and neonatal stages. Thyroid hormones are involved in stimulating the basal rate of metabolism, oxygen consumption, heat production, and in the production of key proteins, some of which are involved in brain development and linear growth (Groff & Gropper, 2000).

### Selenium

The selenium concentration in foods also varies worldwide, with the New Zealand food supply having relatively low levels (Thomson, 2004). Selenium has a variety of roles in the human

### Strategies to ensure optimal iodine and selenium status for pregnancy and lactation

- Consume iodine and selenium rich foods on a daily basis.
- Consider using iodised salt in place of non-iodised salt.
- Consider the use of selenium supplements.

body including its role in iodine metabolism. Selenium is present in a variety of proteins referred to as selenoproteins. These proteins are essential for the formation of the thyroid hormones, the importance of which has already been described (Groff & Gropper, 2000). Therefore selenium, like iodine has an important role in ensuring normal growth and development early in life.

### Consequences of inadequate iodine and selenium intakes

#### Iodine

A spectrum of conditions called iodine deficiency disorders (IDD) have been reported in the literature. These conditions include mental retardation, hypothyroidism, goitre, cretinism, and a variety of other growth and developmental abnormalities (Institute of Medicine Standing Committee on the Scientific Evaluation of Dietary Reference Intakes, 2000).

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## Iodine and selenium – ‘trace’ minerals in New Zealand

Low dietary intakes of iodine can result in the reduction of circulating thyroid hormones referred to as hypothyroidism. There are also other causes of hypothyroidism however these will not be discussed here. Over time low iodine intake results in an increased thyroid volume, a slightly enlarged thyroid gland detected through palpation or ultrasound, a condition referred to as goitre. Goitre is the earliest clinical feature that appears with inadequate iodine intake and is the thyroid gland's attempt to sequester more iodine for synthesising thyroid hormones (Hetzel & Clugston, 1999). This condition in pregnancy, if not corrected, can lead to serious conditions that have detrimental effects on the fetus and newborn. A major target organ for the thyroid hormones is the developing brain (fetal and neonate) where they ensure normal myelination of the central nervous system. Iodine deficiency in pregnancy, resulting in a reduction of circulating thyroid hormones, can therefore lead to mental retardation and cretinism, as well as increased perinatal death and infant mortality (Delange, 2001).

### Selenium

Selenium deficiency is associated with Keshan disease, a fatal form of cardiomyopathy. Keshan disease has been reported in areas of China where selenium soil levels are extremely low. Although selenium soil levels in New Zealand are also low, Keshan disease has not been reported here. The reason for this is unknown. Nevertheless the selenium status of New Zealanders is considered by nutrition experts to be suboptimal (Thomson, 2004).

As with iodine deficiency, a deficiency in selenium can lead to abnormal thyroid function and subsequently altered brain development due to its role in thyroid hormone production (Figure 1). More recently selenium deficiency has been associated with certain forms of cancer (Combs, 2005). Glutathione peroxidase, and other selenium-containing compounds, appear to have antitumorigenic properties, however not all clinical trials of selenium supplementation have reported a reduction in cancer rates (ibid). Selenium deficiency has also been associated with an increased prevalence of asthma in children (Rubin, Navon & Cassano, 2004). It is not known whether low intakes of selenium and iodine during pregnancy or lactation are in any way related to cancer or childhood asthma.

### Trace mineral recommendations for pregnancy and lactation

To prevent the clinical manifestations that arise from iodine and selenium deficiency, nutrient recommendations have been established. Recommendations for trace minerals during pregnancy are derived from studies that examined the effect of supplementation in pregnancy as well as the

level and status of trace minerals in infants (Table 1). The recommendations for lactation meet the needs of an adult female and take into consideration the amount of trace minerals needed to replace that which is secreted into breast milk (Australian National Health and Medical Research Council, 2005). Recommendations for pregnancy and lactation are higher than for non-pregnant and non-lactating women to accommodate the needs of the fetus and neonate who are dependent on the mother to obtain these trace minerals.

Using standard nutrient intake methods such as diet records, the mean selenium intake of New Zealand females over the past three decades has ranged from 11-55 micrograms/day (Thomson, 2004). Although this data does not include lactating women it does include data from one study of pregnant women (McLachlan, Thomson, Ferguson & McKenzie, 2004). There is no evidence to suggest that dietary intakes of lactating women are significantly different than those of pregnant women therefore similar intakes for lactating

**Table 1. Selenium and iodine recommendations for pregnancy and lactation in New Zealand<sup>1</sup>**

Iodine (micrograms/day)			Selenium (micrograms/day)		
Non-pregnant	Pregnancy	Lactation	Non-pregnant	Pregnancy	Lactation
150	220	270	60	65	75
150	220	290	55	60	70
140	140	140	60	60	75

<sup>1</sup>Reference: Australian Government National Health and Medical Research Council, 2005

### Do pregnant and breastfeeding women in New Zealand consume adequate intakes of iodine and selenium?

While there is an increased need and recommendation for both iodine and selenium in pregnancy and lactation, pregnant and lactating women in New Zealand do not appear to achieve these recommendations. It is difficult to obtain accurate dietary intakes for iodine. This is due in part to incomplete nutrient databases, varying and inconsistent practices by food manufacturers to use iodised salt and discretionary use of iodised table salt that is often not captured by dietary records (Thomson, 2004). Therefore, in place of dietary records urinary iodine excretion is considered the gold standard for assessing iodine intake (ibid). The majority of iodine consumed is excreted by the kidneys; therefore, the greater the urinary iodine excretion the greater the iodine intake. Skeaff, Thomson & Gibson (2003) measured the urinary iodine concentration in a group of pregnant New Zealand women, predominantly of New Zealand European descent (n=50), and found that despite the use of iodised salt by participants the women were not consuming adequate iodine intakes. Despite a relatively small and homogenous sample size, with respect to ethnicity, it remains the only evidence to suggest that pregnant New Zealand women have poor iodine intakes. Clinical indicators of iodine deficiency, namely goitre, are not widespread in New Zealand and were not reported here, however Skeaff, Thomson and Gibson (2003) suggest that based on urinary iodine concentrations, mild to moderate iodine deficiency has re-emerged in New Zealand. New Zealand breast-fed infants have also been reported to have suboptimal iodine status suggesting that lactating mothers likewise do not consume adequate intakes of iodine (Skeaff et al, 2005).

women might be expected. The data reveals low intakes of selenium, far less than the recommendations of 60 and 75 micrograms/day for pregnancy and lactation, respectively.

Despite limited data on the iodine and selenium intakes of pregnant and lactating New Zealand women, it appears from data available that recommendations for both iodine and selenium are not being met by these groups.

### How to ensure adequate intakes of iodine and selenium

#### Iodine

There are few foods rich in iodine, however due to the constant level of iodine in seawater; reliable food sources of iodine include fish, shellfish and seaweeds. During pregnancy however women should limit their intake of large predatory fish such as shark, swordfish, barramundi, orange roughy and southern bluefin tuna to four serves (of 150g) per week due to their high mercury content (Food Standards Australia New Zealand, 2001). The level of iodine in soil and freshwater however is more variable. In New Zealand the soil concentrations of iodine are relatively low compared to other countries such as Australia and the United States; therefore fruits, vegetables and grain products grown in New Zealand are not good sources of iodine (Thomson, 2004). In contrast, animal foods such as dairy products, eggs and meat are good sources of iodine in New Zealand because animals concentrate iodine and livestock are usually supplemented with iodine (ibid). It is of no surprise therefore that vegetarians, in particular strict vegetarians whose diet is devoid of animal products, are at increased risk

for iodine deficiency (Krajcovicova-Kudlackova, Buckova, Klimes & Sebokova, 2003).

The other source of iodine in the New Zealand food supply is iodised salt. Iodisation of salt however is not mandatory in New Zealand and all salts with iodine added must be clearly labelled as 'iodised salt'. Although processed foods often contain high levels of salt, food manufacturers do not routinely use iodised salt. Finally, natural salts including sea salt and rock salt are poor sources of iodine because much of the iodine evaporates during the drying process (Aqaron, 2000). The New Zealand Ministry of Health nutrition guidelines for all adults including pregnant and lactating women do not recommend increasing salt intake as a strategy to increase one's iodine intake, in part because high salt intakes are associated with elevated blood pressure, a risk factor for heart disease. Instead the guidelines state that if individuals use salt they should choose iodised salt (Ministry of Health, 2003; Ministry of Health, 2006).

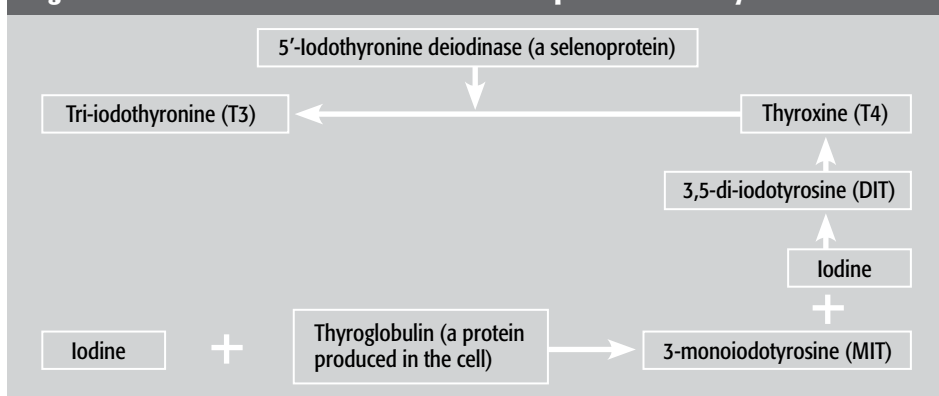
In addition to foods, supplements containing iodine can be used to meet iodine requirements. However, in New Zealand iodine-containing supplements including seaweed or kelp supplements are not recommended for pregnant and lactating women because these supplements tend to have excessive levels of iodine that may result in iodine toxicity to the mother, fetus or neonate (Ministry of Health, 2006). Iodine toxicity may result in a variety of conditions ranging from fetal and neonatal hypothyroidism and goitre, iodine-induced hyperthyroidism, thyroid underactivity, papillary thyroid cancer and an increased incidence of autoimmune thyroid disorders such as Hashimoto and Graves Disease (Dorea, 2002; International Council for the Control of Iodine Deficiency Disorders, 2001)

There are also several non-conventional means of obtaining iodine during pregnancy and labour. An indirect means of obtaining rather large doses of iodine is through the use of iodine-containing antiseptic solutions such as those used for caesarean sections. Although these solutions are absorbed and passed into breast milk, they are eliminated relatively quickly with no adverse effects on the infant. The use of iodine-containing medications such as potassium iodate throughout pregnancy however must be monitored as chronically high intakes of iodine may result in fetal and neonatal hypothyroidism and goitre (Dorea, 2002).

#### Selenium

The main dietary sources of selenium in New Zealand are seafood, poultry, eggs and muscle meats. Other sources include organ meats, Brazil nuts, legumes and cereals such as wheat that are grown in selenium-rich soil (Thomson, 2004).

**Figure 1. The role of iodine and selenium in the production of thyroid hormones**



Although the number of selenium-rich foods is limited in New Zealand, the amount of imported foods containing selenium and the use of supplemental selenium in New Zealand animal feeds has increased over the years (ibid). However, as highlighted earlier, selenium intakes in pregnant and lactating women are low, less than the recommended intakes.

Other than consuming selenium-rich foods pregnant women may consider selenium supplementation to ensure intakes that meet but do not greatly exceed the recommendations. Selenium supplements in New Zealand must be labelled with a recommended daily dose of no more than 150 micrograms/day, well below the safe upper intake level of 400 micrograms/day (Dietary Supplements Regulations 1985).

#### Conclusion

The levels of iodine and selenium in the New Zealand food supply are low relative to other countries. Although this has not resulted in widespread goitre, hypothyroidism, thyroid disorders or Keshan disease, intakes of iodine and selenium are below recommended intakes. This is of concern for both pregnant and lactating women due to the important role both iodine and selenium have in brain development and growth. Pregnant and lactating women should therefore make a concerted effort to choose iodine and selenium-rich foods on a daily basis.

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## The Current Global Effort to prevent Postpartum Haemorrhage: How likely is it to be effective?

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### Abstract

This paper outlines the global effort by health professional agencies to reduce maternal deaths by managing the third stage of labour actively. It explores the tensions in the way midwifery and obstetric practice changes evolve, and are implemented, within developing and developed worlds. It questions the effectiveness of introducing the Western birth management practice of actively intervening in the third stage of every woman's birth when that intervention relies on certainty of access to pharmaceuticals.

It argues that complex problems require complex solutions, and that the midwifery profession should have a clear rationale for its decisions in relation to any intervention in labour and birth before promulgating major change.

### Introduction

New Zealand midwives continue to have some reservations about the joint campaign of the United States Agency for International Development (USAID), the International Federation of Gynaecologists and Obstetricians (FIGO), and the International Confederation of Midwives (ICM) to promote the use of uterotonic drug intervention in third stage of labour as the primary way to prevent postpartum haemorrhage (PPH), and reduce the maternal mortality rate. The original joint Statement promoting active management of third stage was drafted by FIGO with assistance from ICM Head Office in 2003, as part of the Safe Motherhood program, to try and reduce the numbers of maternal deaths in the developing world (International Confederation of Midwives and International Federation of Gynaecologists

and Obstetricians, 2003). In 2004 USAID funded FIGO and ICM to distribute the Statement worldwide. Called the Prevention of Post Partum Haemorrhage Initiative (POPHI), the task force was led by FIGO/USAID and assisted by the ICM Head Office and the College of American Nurse/Midwives. The Statement, despite not having had the input of the ICM Council nor the support of the official Asia Pacific Region of ICM, was launched jointly with FIGO at the ICM Asia Pacific Regional Conference in Hong Kong in November 2003. The statement was then belatedly presented for official ratification of the ICM Congress meeting in Brisbane 2006. In the meantime it has been actively promoted by these joint agencies throughout the world.

There is no doubt something has to be done to help reduce the maternal mortality rates of the developing world. There is abundant literature on maternal mortality and the part PPH has in contributing to these deaths (United Nations Fund for Population Activities, 2005). There is simply not the space to elaborate here. This mostly preventable loss of lives is completely unacceptable.

Neither is there any doubt that those responsible for the active management movement are good and well meaning in their effort to provide answers. All midwives empathise with those who have to face the tragedy of maternal death. The fact that we often feel helpless in the face of such tragedy means we are desperate for ways to prevent and treat obstetric emergencies.

### What is the issue?

The use of uterotonic drugs to prevent serious PPH for at-risk women has the potential to reduce maternal mortality. Women who are denied the basic human rights of access to health services, adequate food and water supplies, shelter and family planning, or who are physically unwell, are likely to benefit the most from the use of active management of the third stage of labour. However drugs alone do not carry guarantees. Although the consistent and skilful application of active management may help women in developing countries, there are multiple obstacles to its being successfully implemented. Not removing these obstacles, but instead teaching active management, as the only approach, to midwives and birth attendants in developing countries, could actually increase the rates of PPH and maternal mortality. Further, applying routine active management of

third stage to healthy women seems to actually increase the rate of PPH.

### Why is the New Zealand midwifery profession concerned?

Some of the New Zealand midwives concerns about the development of the USAID/FIGO/ICM Joint Statement on active management of the third stage of labour were allayed when it was redrafted following challenging discussion at the 2006 ICM Council Meeting and Congress in Brisbane. There was a good number of NZ midwives present including myself as one of the two ICM Asia Pacific Representatives. This discussion centered on the invisibility of the women's context in the statement and the practical realities of midwives trying to implement a guideline that relied on drug administration. More significant however was that the often heated discussion illustrated the wide diversity of midwifery views on what components constituted the 'proper' management of third stage, both active and physiological. This diversity of practice amongst the highly motivated and well informed ICM Council Members is evidence, in New Zealand's view, that the PPH prevention program faces major hurdles in the training and implementation of effective active management at the workplace in developing worlds where the level of education and skilled midwifery attendance can be inadequate or even absent (ibid; personal communication).

However the discussion did result in a consensus that the knowledge and teaching of physiological management is as important as that of active management in any guidelines relating to the prevention of PPH. ICM set up a working party and changes were made to the Joint Statement which reflected that view. ICM Board was directed to recommend to FIGO that the Statement include and emphasise the principle that educating all midwives regarding the correct physiological management of third stage, must always accompany the teaching of active management. It also noted that the Statement was primarily based on evidence in relation to women in resource-poor countries and that the guideline should be clear that its primary purpose was its application to resource-poor countries (ICM, 2006a). There is no evidence that the same level of routine intervention is necessary with healthy low-risk women, especially in the domiciliary setting (Elbourne, Prendiville, Carroli, Wood & McDonald, 2001; Cotter, Ness & Tolosa, 2005). If FIGO was unwilling to change its position, the ICM Board was

directed to draft a separate statement to reflect and clarify the international midwifery position. As a result of this, FIGO agreed with the overall principles behind ICM's views, and changes were made. The new follow-up Statement is entitled "Prevention and Treatment of PPH: New Advances for Low Resource Settings" (ICM, 2006a).

It is concerning therefore to read ICM/FIGO reports of the workshops held so far (ICM, 2006b). *International Midwifery*, the journal of the ICM, published a supplement in volume 19 which was produced jointly by FIGO and POPPHI on Prevention of Post Partum Haemorrhage (ibid). It reported on the launch of the follow-up Joint Statement at the FIGO World Congress in 2006. There is little evidence, from ICM reporting, that the new Statement is being actioned to promote and teach both the physiological and active methods of management of third stage. The activities are all in relation to teaching active management and not one mentions the importance of both methods being understood. Furthermore the FIGO/ICM Declaration of Support on the back page of the same report (which can be viewed on [www.figo.org/docs/PPH%20Joint%20Statement.pdf](http://www.figo.org/docs/PPH%20Joint%20Statement.pdf)) ignores the role of physiological management completely. The declaration also appears to promote active management for all women, not just for those living in developing countries.

### **The implications for midwives**

Midwives from some Asia Pacific countries have expressed their reservations about the wisdom of expecting a reliable supply of pharmaceuticals in countries where women have little, if any, status and therefore are unlikely to be prioritised for treatment. Given the abortifacient effects of uterotonics, the drug itself attracts an alternative market, one where the price it can command for this use may well overwhelm the likelihood of the women receiving it as a treatment. (Personal communication from Asia Pacific midwives, ICM Congress, Brisbane, 2006). These midwives' experience is that they cannot get basic items such as gloves let alone a reliable source of uterotonic drugs. In the absence of the active management drugs, midwives must know the physiological management of the third stage if mothers are to have the best chance of safely progressing through third stage.

The experience of colonising Western cultures, which try to introduce new and 'better' knowledge into resource-strapped countries, is that the knowledge can be distorted and inappropriately

applied. An example comes from a midwife reporting from Egypt (Pett, 2004) noting a worrying trend that an increasing proportion of maternal deaths in Egypt are due to medical intervention, in particular the inappropriate use of uterotonics in labour, although she does not indicate if this is related to management of the third stage.

Promoting active management in the evangelistic manner currently reported (ICM, 2006b) can distort the importance and relevance of physiological management. For example, the pressure on midwives to use the active management method of controlled cord traction (CCT) is quite relentless and is therefore likely to be the chosen method whether the prerequisite uterotonics (ecbolics/oxytocins) are available or not. CCT applied in the absence of these drugs may well cause PPH, not prevent it.

Unplanned effects, of the unwarranted intervention or the introduction of poorly researched practices, can be illustrated in a number of other ways. The Term Breech Trial (Hannah, Hannah, & Hewson, 2000), indicating caesarean section was safer for all breech presenting babies, changed practice internationally over a very short time. Many midwives were highly critical and new data collected in 2006 has overturned the initial findings (Glezerman, 2006). Kotaska (2004) criticised the term breech trial methodology and drew attention to the limitations of applying randomisation methodologies inappropriately to complex phenomena. He cautioned about underestimating the impact of clinical judgement and skill required for complex populations and procedures.

What little we do know about the active versus expectant (physiological) management of third stage also fits into this category. Most of the proactive method evidence arose from a small number of randomised trials. Most of these were carried out in obstetric base hospitals where active third stage management was the norm (Prendiville, Elbourne & MacDonald, 2005; Rogers, Wood, McCandlish et al, 1998). Given the complexity of those hospital environments maybe we are still only seeing the results of entrenched obstetric and

midwifery management behaviour, rather than an illustration of the failure of physiological birth. Many midwives and medical practitioners over the years have examined the management of third stage practices and some have questioned how appropriate the hospital-based environment is for making judgements about outcomes. Gyte (1994),

Wickham (1999), Featherstone (1999), Enkin, Keirse, Renfrew, & Neilson, 2000), and Buckley (2005) have all offered extensive comment and review of third stage management and the available research literature.

However obstetrics has a history of introducing new practices without any sort of trial, randomised or not. The Western world's

alarmingly high rate of caesarean section is also a reflection of non-evidence based intervention taking over from the physiological process. As with active management of third stage, there is no doubt that caesarean section is lifesaving when it is required and when carried out appropriately. Unfortunately Western cultures have increasingly applied this intervention inappropriately to well women and well babies. Often this is because it has become such a common intervention that many doctors and midwives are more comfortable with this surgical knowledge than they are with normal birth (Althabe et al, 2006). Some recent research warns us about the dangers of applying emergency measures routinely (Villar et al, 2006). Caesarean section is an intervention which, when applied to all women regardless of their risk, can cause harm to both mothers and babies (MacDorman, Declercq, Menacker & Molloy, 2006).

The ecological study from South America by Althabe and colleagues, concludes that, where women are healthy and live in medium to high-income countries, there is no correlation between mortality and the caesarean section rates (Althabe et al, 2006). That is, the operation does not reduce the rate of mortality. On the other hand in low-income countries, where women can have access to caesarean section, it does lower mortality rates. Once again, as with the prevention of PPH, well women do not require the same level

*Women who are denied the basic human rights of access to health services, adequate food and water supplies, shelter and family planning, or who are physically unwell, are likely to benefit the most from the use of active management of the third stage of labour.*

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of intervention as unhealthy women do. Healthy eating/lifestyle, family planning, good hygiene, one-on-one labour support and skilled midwifery care offer women more chance of a positive maternity experience than inappropriately applied medicalised intervention.

An editorial in *The New England Journal of Medicine* by Michael Green MD (2006) suggested that intrapartum electronic fetal heart monitoring is another example of obstetric services underestimating the pitfalls of intervening in labour inappropriately. Green states:

*"More than 30 years ago the new technology of electronic fetal heart monitoring was introduced with the noble aspiration to eliminate cerebral palsy. We now find ourselves in a far less noble position of seeking new technology to mitigate the unintended and undesirable consequences of our last ineffective, but nonetheless persistent, technologic innovation".* (Green, 2006, p.2248).

Another editorial, this time in *Birth*, records Murray Enkin (2006) saying the same sort of thing.

*"The fundamental mistake of evidence based medicine is to treat complex problems as if they were merely complicated.....Naive efforts to simplify the management of pregnancy and childbirth through standardised formulas, evidence based protocols, are failing, and we are beginning to recognise anew the complexity of pregnancy and birth as life events to be experienced rather than diseases to be managed"* (Enkin, 2006, p. 268).

The observations of Green and Enkin should be kept in mind when evaluating the possible consequences of the wide scale introduction of the intervention of active management of the third stage in the developing world. There is not one single answer to the prevention of maternal death and neither is there one only to the prevention of PPH. Women and midwives live in a complicated, individual and cultural contexts. This effectively negates a 'one size fits all' approach.

However, even if we consider the context, there is still missing evidence around the effectiveness of the active management method itself. No clinical trial has identified the relative importance of each of the active management components (Diaz-Rossello, 2006). Debate on the identification and development of the knowledge base around management of the third stage is still in progress (Long, 2003). As a result during the course of the prevention of PPH campaign, the components of the Joint Statement active management ac-

tion plan have changed. For example early cord clamping, still thought of as an essential element in most countries practising active management, is now no longer included in the definition (ICM, 2006b).

The argument is that when women are dying there is no choice but to intervene. The real question in this instance is: intervene how? The intervention being promoted carries its own dangers besides those related to haemorrhage. For example, active management of third stage may increase the risk of anaemia for neonates by denying them their physiologically defined blood volumes. Badly executed active management is likely to expose the neonate to even further risk (MacLean, 2007). The ideal timing of drug administration for active management and cord clamping is still poorly understood and as such its use may have as much adverse impact on the neonate as her/his mother (Mercer, 2001).

The reasons for PPH are complex and it will take complex solutions to change the environment that is behind the causes of haemorrhage. One solution is to provide some women and some midwives with uterotonic drugs to actively manage the birth of the placenta. Current evidence would suggest this is particularly useful if those women and midwives are in the obstetric base hospital setting (Enkin et al, 2000).

Another solution is enhanced education of midwives around good practice in relation to third stage, but this cannot be in isolation from other midwifery competencies, or from the social, education, economic context of the woman and her family (Harris, 2001). Early cord clamping and the timing of administering uterotonics were introduced largely without supporting evidence, yet, as is the case with fetal electronic monitoring, the intervention remains routine in many Western countries. We are left with the ironic situation of having to prove the value of normal birth. It would seem we know more about birth as it is medically managed than we do about birth when it is 'allowed' to progress normally. Unless we really understand the consequences of active management and of introducing drugs into every woman's labour, regardless of the woman's risk,

the setting, or the education level of the attending midwives, we may be promoting pointless innovation and risking the failure of the intervention. As a result more women may suffer and more may die. Are we generating "an unintended and undesirable consequence" (Green, 2006, p. 2248)?

### The implications of routine active management when women are healthy and well

It is the application of solutions intended for at-risk women (particularly those women in the developing world) to healthy, well women that also concerns NZ midwives. The biggest risk to healthy New Zealand women, and this is the same in many Western cultures, is that the majority are giving birth in high-risk hospital settings. Birthing at home or in the community setting, with a midwife providing continuity of care, is more likely to reduce the woman and baby's risk of poor outcomes and unnecessary intervention than setting rigid protocols (Benjamin, Walsh & Taub, 2001; Roberts, Tracey & Peat, 2000; Johnson & Daviss, 2005; NZCOM, 2007).

In New Zealand about 30% of all the women, with a midwife lead maternity carer (LMC) who is a member of the New Zealand College of Midwives' Maternity Provider Organisation (MMPO), have physiological management of third stage of labour (NZCOM, 2007). The women *choose* this option as a result of the informed consent culture in New Zealand. This allows them to assess their own risk and make their own decisions about care.

Out of a total cohort of 12,061 women cared for by 369 midwives in 2004, the rate of PPH in those 30% of healthy women (who chose physiological management) was lower than that of the healthy women who chose active management (ibid).

In NZ most women start their pregnancy with an LMC and some 78% in 2003 had a midwife LMC. (Ministry of Health, 2006). It is common therefore for midwife LMCs to have a mixed caseload of low to moderate risk women. They either provide care for these women on their own responsibility or they work in consultation with specialists.

*These observations are offered in the hope that we can continue to discuss the most appropriate way of helping more women and babies survive childbirth without losing sight of the power of the normal birth process and the midwifery wisdom that helps them achieve this, thus enabling us to use all our knowledge, both midwifery and medical, to increase women's confidence and safety in giving birth.*

The incidence overall of PPH following vaginal birth in the MMPO 2004 cohort of mixed low to moderate risk status women was 8.3%. Of the women who chose an actively managed third stage, some 6% had a PPH of between 500 and 999mLs, compared to 3% of women who chose a physiologically managed third stage. Some 1% of women in the actively managed group had a PPH over 1000mLs. No women in the physiologically managed group had a PPH over 1000mLs. Manual removal of the placenta was required for 0.4% of the women, and this was the same rate in both groups. The main incidence of PPH in this cohort, and in New Zealand in general, was not following spontaneous vaginal birth but was predominantly associated with operative birth, both forceps and caesarean section (Women's Hospitals Australasia, 2005).

The USAID/FIGO/ICM campaign to promote active management of third stage has also hit New Zealand. Obstetricians, previously accepting of women's right to choose and make their own decisions on these matters of complexity, are now trying to impose active management for all women. Midwives report several hospitals have introduced active management protocols recently, quoting the Joint Statement as the driver (personal communication, Midwifery Advisor, NZCOM, 2007).

## Conclusion

These observations are offered in the hope that we can continue to discuss the most appropriate way of helping more women and babies survive childbirth without losing sight of the power of the normal birth process and the midwifery wisdom that helps them achieve this, thus enabling us to use all our knowledge, both midwifery and medical, to increase women's confidence and safety in giving birth. Even in resource-poor countries not all women are unhealthy, and in resource-rich countries we do not always provide the best level of care necessary to keep mothers and babies well.

We have not had adequate debate about these issues in a holistic, women-centred way. The response so far has largely been from the medical community, and is based on current management ideologies and limited science. It is not based on the understanding of physiology or normal birth mechanisms. Pregnancy and childbirth must always be examined in light of the social, economic, cultural, physical and emotional context in which women live if we are to save lives. To not do so is to let women down and we are likely to do further harm. We will only progress if we continue to debate our concerns honestly and openly. ICM

must take an informed *midwifery* position on this issue in order to provide leadership to midwives, and reliable information to women and their families.

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## LETTER TO THE EDITOR

Well Halleluia! At last someone has spoken out about Reflux. [Practice Wisdom, Journal 35, October 2006].

As a newly recruited LMC at Wairau Hospital in Blenheim, I was required to do a short presentation at our monthly 'in house' Maternity Education meeting.

Having recently come across it in a baby of one of my women, I thought that it would be a good choice.

Little did I know the furore it would cause.

I presented Reflux to a group of my peers, an obstetrician, & paediatrician.

I never got past the third acetate.

I wasn't aware that the paediatrician had an intense belief the reflux was rarely if ever a problem in babies!

My colleagues sat looking embarrassed, & although I gave as good as I got, I did not manage to complete the lecture.

Afterwards, my manager commended me on choosing a lighthearted subject, & said that he looked forward to hearing something serious next time.

At no time did anyone support me.

It is refreshing to revisit Reflux in a serious context, & I sympathise with the problems that Gail had.

All I can say is "Well Done" on surviving it & on writing such an informative & sensitive article.

The web site is a mine of information, and is a boon for both health professionals & mums alike.

Regards,

**Marion Preston LMC Midwife  
Ward 1, Wairau Hospital**

## BOOK REVIEWS

### Varney's Pocket Midwife (2nd Ed)

**Kriebs, J.M., & Gregor, C.L. (2005)**

Sudbury, MA: Jones and Bartlett Publishers

ISBN: 0-7637-2671-0

Reviewer: *Barbara J. Aherne, RGN, RM, BHS (Midwifery)  
Midwife*

As a student midwife about to sit state registration examination, I was keen to get my hot little hands on Varney's Pocket Midwife. Working on the principle that the more you read the more you know, I waited in anticipation for said book to arrive in my letterbox. My first impression was of a compact publication – easy to carry around but too large to fit in your pocket. It is about the size that will fit in a traditional doctor's coat pocket, and I conjured up pictures of white-coated American new grads thumbing through it for inspiration. With deep spiral binding it is perfect for leaving open at the page of your choice.

The first seven pages cover American standards, and the Hallmarks of Midwifery (p. 6) offer a truly holistic approach. However, by page 11 my "cover to cover" approach to this book had led me to "Questions to Ensure a Complete Sexual History". "Does your sexual history include vaginal entry?" seemed an unusual question to be asking a pregnant woman, although maybe not given the range of methods available to women today of becoming pregnant....

There follows a chapter on general nutrition, and I was beginning to realise that much of what I was reading was not pregnancy related. I continued on and found sections on "Common Medical Problems in Women", "Infectious Diseases", "Cancer Screening" and "Family Planning Methods" which were all useful revision, but I didn't

feel that many of these topics would come up in state finals. Skipping swiftly forwards to Section 8 "Caring for Older Women" made me definitely think I was moving out of my scope. So I reverted back to the Standards on page 1 to find that The Standards for Midwifery Practice for the American College of Midwives encompass the "independent management of women's health care".

It wasn't until I reached page 203 of this 616 page tome that I discovered major chapters on pregnancy-related care, and from there on I discovered lists .... and lists ..... and more lists .... some of which were useful and some were not. I began to get very confused and decided at that point to leave the book well alone until after my exams!! Not all drugs mentioned are available in New Zealand. Measurements such as blood glucose levels differ, e.g.. "normal is  $\leq 139\text{mg/dl}$ ", which made no sense to me! However, there is a handy body temperature conversion chart inside the back cover in case you travel with your skills and come unstuck (37 degrees C = 98.6 degrees F for those who are interested).

I resumed my book review two months post exam after a phone call from NZCOM wondering what I was up to! And this was probably a good time to be reading the publication. I could now relax and pick my way through it without the intensity of needing to absorb into my subconscious every single word I read in print.

There are lots of handy reference pictures such as Mechanisms of Labour (p. 384-385); and The New Ballard Scale (p. 537-538) although I would have preferred to see the latter on opposing pages rather than back to back. There is also an excellent section describing fetal heart rate patterns (p. 389–400).

I discovered some explicit directions in bold italics: for instance when managing Shoulder Dystocia (p. 462) "Under no circumstances make the mistake of thinking that moving the head will move the shoulders" (as if I would!).

Common Minor Malformations of the Newborn (p. 540) included "shawl scrotum" and "Darwinian tubercle" which made me want to go racing to the Internet for definitions. Amongst the four kinds of digital anomalies I discovered curved fingers (clinodactyly) and bent fingers (camptodactyly) and the possible origins of American slang began to configure in my brain. The cute sounding Menke Kinky Hair Syndrome (steel-wool like hair), Angelman (recurrent bouts of laughter) and Cornelia de Lang (synophrys, phocomelia) were among "Visual Clues that suggest Birth Defects and Genetic Conditions" (p. 541), and again I felt I have much to learn (not least because I have never heard a baby with recurrent bouts of laughter!).

Although highly medicalised, the book does contain at least two (and probably more) references to herbal remedies (Fenugreek – p.581) and "complimentary and alternative therapies" (p. 7), but it is definitely not a source of inspiration for the Earth Mothers amongst us!

In summary I suggest that the book should be avoided at all costs by student midwives: it is far too confusing! However, as a ward-based reference source it is certainly interesting and entertaining and contains many sections which are useful for quick revision. It would likely spark off a desire for information gathering on any unusual topics, and may lead to thought-provoking discussion on a quiet night duty. But take heed of this explicit direction: "Student Midwives: maintain a wide berth!"

# Defiant Birth: Women Who Resist Medical Eugenics

**Tankard Reist, M. (2006).**

Melbourne: Spinifex Press.

ISBN: 1 876756 59 4

Reviewer: Sarah Donovan, RM (not currently practising) and PhD Candidate (Sociology), Victoria University.

Within the last few decades, the development of prenatal screening technologies has steadily changed the way maternity care is conducted. This has contributed to a profound shift in the way pregnancy as an experience is now regarded both by practitioners and pregnant women themselves; the idea that pregnancy is essentially 'risky' and must be closely monitored (Rapp, 1988, 1998; Lippman, 1994; Williams et al, 2002).

Of particular note within the New Zealand context is the significant increase in the routine use of ultrasound in pregnancy, with screens such as the nuchal fold test now commonly offered to all women in the first trimester, despite concerns about inappropriate use of the technology and high false-positive rates (Stone, 2006). Pre-implantation genetic diagnosis, now approved in this country for use in private fertility clinics, similarly seems likely to follow suit as a screening technology increasingly available to those undergoing in vitro fertilization (IVF) treatment (Scoop.co.nz, 2005).

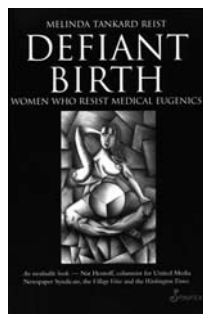
The social impact of these technologies has had surprisingly little exposure. What research has been done on the ways women experience their pregnancies as risky, and how they come to terms with the ethically and emotionally fraught issues screening often raises, appear to have had little impact on the reality of clinical practice.

Even less visible are the experiences of those who choose not to comply with the current imperative to screen, either declining it outright, or choosing to continue pregnancies where abnormalities have been detected.

Defiant Birth gives voice to the experience of such women, who for a variety of reasons regard prenatal screening as an unnecessary and unwelcome spectre of negativity in their lives.

Such stories are deeply compelling on a number of levels, not least because of the highly personal nature of what is shared. A number of women describe considerable medical pressure to terminate wanted pregnancies, and a sense of devastating isolation around their choices. Stories of apparent abnormality detected on ultrasound later found

to be incorrectly diagnosed raise particularly uncomfortable questions around the issue of selective termination. The psychological and emotional impact of false-positive diagnosis of conditions such as Down syndrome on women's experience of pregnancy, and on their subsequent birth and postnatal experiences, surely has considerable relevance for how midwives choose to approach the issue of screening with women in their care.



The common thread of these accounts is the sense that for these women the experience of prenatal screening was less about genuine choice and autonomy than it was a

medical and even societal obligation. Lack of adequate information and advice about options and the difficulty of resisting unwanted medical advice – the “benevolent tyranny of expertise” (p16) – were also a common experience. In addition, the sense that refusing screening somehow cast doubt on the moral character of pregnant women is a particularly thought-provoking theme of the stories.

Ethical debates generally occur at a comfortable remove from lived reality. The stories in Defiant Birth personalize the politics of disability in a way that confronts the reader with questions likely to resonate uncomfortably for many who work in pregnancy care. The way in which such accounts inevitably reframe 'ethics' as an abstract idea into something with tangible, everyday implications for real people is, in my view, one of the key strengths of a book of this kind. Another is the exploration of the idea of women's 'defiance' of screening, and the difficult paradox prenatal screening raises for champions of normal, low intervention pregnancy and birth - if midwives accept routine, increasingly technical prenatal screening as part of 'normal' pregnancy care, are we comfortable with the potential impact on women's sense of anxiety and 'riskiness' on their ability to birth well? What does this mean for midwifery philosophy and the definition of normality we promote?

In terms of day-to-day midwifery practice perhaps the most compelling question the book raises is - do we equally inform and support those women in our care who choose to decline screening as those who wish to undertake it?

Defiant Birth is an accessible, concise exposed of some of the concerns prenatal screening raises for pregnant women. The author's foreword and

conclusion provide a useful (although arguably not impartial) overview of some of the current theoretical debates on the issue for anybody interested in this topic, as well as broader issues such as medicalisation of pregnancy and disability rights.

As the key theme of the book, the proposition that prenatal screening is driven by a 'eugenic agenda' certainly deserves investigation, however at times I felt Tankard Reist's personal convictions weighed a little too heavily. In places the use of language made me question the political subtext of the editorial content.

An Australian journalist and researcher, Tankard Reist has published a number of articles in the popular media, including “However it's discussed, abortion is the deadly price of choice” (Onlineopinion.com, 2004). While it is commendable to wish to generate debate on an issue such as prenatal screening and question whether it is in fact women's choice, if the author does actively advocate a pro-life position then in my opinion this would ideally be more explicitly stated in a book such as this.

Perhaps the inclusion of the story of a woman who had chosen to terminate when advised of a fetal abnormality would have added something valuable to the collection? Surely that is also a story worth telling. It seems to me that the issue of women's choices, freely-made, informed choices, are at the heart of how midwives can continue to promote and fight for normal birth within what is now a 'screening culture'. Stories such as those told in Defiant Birth may make us question why women are considered deviant for 'opting out' of routine screening. Perhaps we should be asking whether a better approach might be for women to be supported to make an informed choice to 'opt in'?

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*continued over...*

## Principles and Practice of Research in Midwifery (2nd Ed)

**Cluett, E. & Bluff, R. (Eds). (2006)**

*Sydney, Australia: Churchill Livingstone/Elsevier.*

*ISBN: 13 978-0-443-10194-6*

*Reviewer: Catherine Donaldson*

*RM, ADM, MSc Advanced Midwifery Practice*

*Midwife and Independent Midwifery Educator*

The second edition of this popular research text has been updated to appeal not only to undergraduate midwifery students being introduced to the concepts of midwifery research but also to midwives either involved in undertaking research, or looking for tools to assist them in honing their skills as evidence based practitioners. This is

achieved with the inclusion of a new chapter about evidence based practice and a more user friendly readable style of language throughout the text. Each chapter is supported by examples from actual midwifery research as well as appropriate references and Internet web links to assist in further enquiry into the research worldview.

The two major research approaches, qualitative and quantitative, are well presented in this text with the addition of a new chapter covering various aspects of interview techniques so often utilised by qualitative midwifery researchers. The framework in chapter 11 assists midwives with cues to critically reflect upon current research to determine

if it warrants incorporation into practice, and as part of their lifelong learning process.

This book will also enable practitioners to meet Standard 10 of their professional Standards of Practice (NZCOM) as it concludes with a review of the processes required to move research findings into practice as practice based purely upon tradition knowledge is no longer acceptable.

### Reference

New Zealand College Of Midwives. (2005). *Midwives Handbook for Practice* (2nd Ed). Christchurch, NZ: NZCOM.

**Adverts to come**

## Adverts to come



The NZCOM journal is published in April and October each year. It focuses on midwifery issues and has a readership of midwives and other people involved in pregnancy and childbearing, both in New Zealand and overseas. The journal welcomes original articles which have not previously been published in any form. In general, articles should be between 500-4000 words.

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- Separate sheet containing biographical details of all authors (name, occupation, current area of expertise/practice, qualifications, contact address including phone and / or email details).
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### Book

Page, L. (Ed.). (2000). *The new midwifery*. London: Churchill Livingstone.

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### Contacts for the Editor:

- Rhondda Davies, Interim Editor, [rhondda.d@clear.net.nz](mailto:rhondda.d@clear.net.nz)

### Reference

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5<sup>th</sup> ed.). Washington, DC: American Psychological Association.

*Last updated March 2007*