A midwife's perspective on homebirth in New Zealand

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Homebirthing is a contentious issue for some in the maternity services, as is evidenced by the use of descriptors such as 'risky', 'unsafe' and 'scary'.

However, for many women, (primigravidas, multigravidas and midwives), their experience of homebirth is one of safety, satisfaction and a real sense of being in control and empowered by their birth experience in an environment of their choosing, while being supported by family and friends that they have chosen to have with them at that time.

There is a recent body of international literature that compares home and hospital birth outcomes for low-risk women cared for by midwives or physicians. The Dutch study by de Jonge *et al* [1] indicates that risks of perinatal mortality and severe morbidity are not increased provided there are well-trained midwives and a good transportation and referral system. Janssen *et al* [2], in a Canadian study comparing outcomes of planned homebirth with registered midwives with planned hospital birth for women cared for by a midwife or physician, found that the perinatal death rates were very low and that there were reduced obstetric interventions. Preliminary findings from a more recent, as yet unpublished, large New Zealand retrospective cohort study of 16,000 low-risk women cared for by lead maternity carer (LMC) midwives show that place of birth has a significant and dramatic effect on emergency caesarean section rates (Birthplace New Zealand Research Group, unpublished data). Low-risk women cared for by an LMC midwife and birthing in a tertiary level hospital are six times more likely to a have an emergency caesarean section than those cared for by an LMC midwife in a primary unit. Those birthing in a secondary level unit are three times more likely to have an emergency caesarean section.

In this article, I present a case of a primigravid woman, who was initially diagnosed with a bicornuate uterus, who chose to have a homebirth. I will use this case to illustrate the systems that were utilised to support her choice of place of birth.

The homebirth experience of one woman

This woman was a PhD student when she unexpectedly fell pregnant for the first time, despite having an intrauterine device in situ. This was not part of her life plan at this stage but she went for an early scan (at approximately six week's gestation) to check if she was pregnant. Two issues were identified: her IUD was not suitably sited, hence the unexpected pregnancy, and she had a bicornuate uterus with the pregnancy in the left horn. Her first action was to have the IUD removed and then, with no resulting after effects, she decided to find an LMC midwife and discuss the issue of the bicornuate uterus.

The woman was referred to an obstetrician for a consultation shortly after she registered with an LMC. The LMC attended the visit to ensure she also understood the information provided, to assist the woman in making the decisions she was faced with, given the complexities of her life at the time of this unexpected pregnancy. Her mother was visiting from Australia and attended the visit as well. The consultation occurred at nine to ten weeks gestation followed by a scan which confirmed fetal viability, but the bicornuate appearance was stated to be no longer obvious and the cervical length was normal. The woman was informed that, with a bicornuate uterus, she had the following risks: cervical incompetence; preterm labour; preterm rupture of membranes; malpresentation; and dysfunctional labour. A plan was put in place which included a possible cervical suture if the cervix was shorter than 2.5cm in length and the need for repeat scans to check cervical length and growth of the baby. The latter scans were recommended for 28, 32 and 26 weeks gestation. It was also agreed that the LMC would remain, providing care for the woman in conjunction with the obstetrician. The woman's pregnancy progressed uneventfully and she had the recommended scans until 32 weeks gestation, at which stage she stated that she felt no need for further scans, as all had progressed accordingly and the baby had grown well.

> *'Low-risk women cared for by an LMC midwife and birthing in a tertiary level hospital are six times more likely to a have an emergency caesarean section than those cared for by an LMC midwife in a primary unit.'*

The issue of place of birth had been discussed on and off during her pregnancy, but decisions were put on hold as there was a need to ensure that her chosen place of birth was appropriate for her situation. The woman had good friends who had a homebirth with their first pregnancy, so she was strongly drawn to it as an option. She read widely on place of birth, as well as regarding her specific challenges. Having weighed up all the options, considering she had not developed any further challenges in relation to her pregnancy and that her baby was well-grown, she opted for a homebirth.

Her expected date of birth was 26 April based on the five to six-week scan. At 41 weeks, she commenced spontaneous labour. She laboured at home supported by her mother and homebirthing friends and called her midwife when the contractions were frequent and strong. Soon after her midwife's arrival, she had a spontaneous rupture of membranes (SRM) with clear liquor draining and verbalised feeling pressure in her bowel and back. Shortly after the SRM, she got into the birthing pool and found she relaxed well and felt more comfortable in the pool. Her baby's heart rate was

auscultated frequently and the temperature of the room and the pool water were checked frequently. About four to six hours later, she felt she could not keep going. A vaginal examination was performed and her cervix was found to be 7cm dilated, fully effaced with the head at station 0, with the posterior fontanelle directly under the symphysis pubis and no membranes felt. This finding encouraged her that she had made good progress. Half an hour later, she felt like having a bowel motion and, despite the fear she felt, she was being well-supported by her birth team. She was eating and drinking and resting well between the contractions. An hour and a half later, she felt an urge to push with a contraction and her cervix was found to be fully dilated. As the contractions continued and her urge to bear down increased, the woman, with the help of her birth team, pushed past her fear and birthed her 3800g baby one hour and 13 minutes after full dilatation was confirmed. After stimulation and drying, the baby cried spontaneously by one minute after birth and required no further resuscitation.

The placenta and membranes were born physiologically less than one hour later, with an estimated blood loss of 250ml and a second degree tear of the perineum, which was well aligned and not bleeding. The woman declined suturing and was educated about perineal care and what to report concerning her own health and that of her baby. The woman and her baby's postnatal period were uneventful. She was still exclusively breastfeeding at the time of discharge and after frequent discussions about her labour and birth, she and her mother wrote the following letter which they have been happy to have published in any appropriate forum.

Homebirth – why not?

Eleven months ago, my youngest daughter, who lives in regional New Zealand, announced that she was considering a water birth at home for her first baby. I received this news at my home in Sydney with some trepidation. As a registered nurse (though my area of expertise is far from maternity), my mind immediately analysed clinical risk, possible outcomes for daughter and baby and likelihood of transfer to hospital once labour had commenced. My own obstetric history (hospital birth with multiple medical interventions on both occasions) added to the sense of discomfort.

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My fears evaporated on meeting the midwife who was to be with my daughter throughout the pregnancy and the six-week postnatal period. I became intrigued by the decision and celebrated the 'normality' associated with it.

I followed the antenatal visits very closely, all of which took place at home. From the first appointment (at around eight weeks), the continuity of service was outstanding: clinical explanation and options were readily forthcoming, response to ad hoc queries were prompt, emotional support was warm but never invasive.

Initially, there was a specific requirement for medical opinion via the high-risk antenatal clinic at the local hospital. The midwife acted as an advocate with the medical staff at the hospital, which resulted in an excellent working partnership rather than a stand-off!

The minor health problems that often occur in pregnancy were never brushed aside, but explanation offered and options and solutions suggested in a consultative process with my daughter. The birth plan was commenced well in advance to allow time for adjustment and discussion. Two delightful midwifery students joined the team and only added to the sense of expertise available.

I felt privileged to be part of the team present at my granddaughter's water birth at home as planned, with friends (which includes the midwives) present in a warm, loving environment.

My nervousness was offset by my well-placed confidence in the midwives and my daughter, who knew exactly what they were doing and were equally keen for the very best outcome for all of us. I asked questions when I was unsure, knowing the answers would be honest and based on clinical expertise and experience. During labour, when pain or tiredness was evident, discussion between my daughter and midwives ensured positive steps were taken to alleviate the discomfort. While my daughter's request for as little intervention as possible was supported, there was open dialogue to ensure the baby's wellbeing.

As a 'long-time RN', I have witnessed an enormous range in levels of professionalism, skill and care in health systems internationally. We – my daughter, granddaughter and myself – have been privileged to experience some of the best I've encountered.

Systems available to support women's choice of homebirth

In New Zealand, registered midwives practice autonomously and can choose to birth women in any setting available to them and for which they have an access agreement, for example, at home, in a primary birthing unit, or in a secondary or tertiary-level hospital. Midwives are required to give women information about the options available in their area to assist them to make an informed decision. The choice is driven by the woman rather than the midwife, however, the midwife guides the woman depending on the health of the woman and her baby. The choice of place of birth is not fixed, but may change at any time during the pregnancy, labour and birth process.

The requirements of lead maternity carers are spelled out in the *Notice Pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000*, which have appended to them guidelines for consultation with obstetric and related specialist medical services. There are three levels of referral which emphasise the need for a three-way consultation between the woman, the specialist and the lead maternity carer. In the case of the woman discussed earlier, the three-way consultation resulted in a plan of care which she agreed to, but then made some unilateral decisions when she deemed further assessments were not required. She always understood that the decision about place of birth was fluid, but was committed to birthing where she was comfortable, as long as she was informed if any deviations from the normal warranted a transfer to the local secondary care hospital.

Present at the birth was her mother, friends, a student midwife who was placed with the lead maternity carer and a back-up midwife. A back-up midwife is always invited to be present at a homebirth to ensure that an extra set of hands is available if required. The LMCs in some districts also provide the woman with linen for the birth, some of which is used to protect the beds and carpets, with all soiled linen and garbage removed at the end of the birth.

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We are recruiting pregnant nulliparous women with a singleton pregnancy, who are having induction of labour. Maternal blood samples are being collected from these women throughout their labour via a second IV cannulae. Timepoints of interest are: just before induction (no hypoxic genes should be present as there have been no uterine contractions); one sample during active labour; and a final sample at the moment of delivery (a number will be hypoxic). Whether the baby was in fact hypoxic will be determined by umbilical cord lactate levels measured immediately after delivery.

RNA molecules are being isolated from these samples in the laboratory. We are using PCR-based platforms that specifically measure genes belonging to the hypoxia pathway. The results are being analysed in conjunction with other information collected, including CTG findings, fetal scalp sampling results if performed, apgar scores at birth and cord lactate results. Preliminary results have been promising, showing that multiple hypoxic genes are increased in expression in cases where fetal distress occurred, but are not increased in the control group.

The ultimate goal of our study is to develop a minimally invasive novel bedside test in delivery suite that better reflects hypoxic status in fetuses than the CTG. Such a test will allow us to reserve operative delivery for fetuses that truly need it and decrease the intervention rates for women.

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In addition, oxytocics are stored in the fridge, either before the labour commences or when the LMC arrives, to ensure that it is available for active management of the third stage if required or for treatment in the case of a postpartum haemorrhage. A birth pack and resuscitation equipment for the mother and the baby are part of the homebirth kit.

In addition to all the equipment, homebirth midwives maintain their knowledge of dealing with unexpected emergencies, such as shoulder dystocia, breech birth (unplanned), neonatal resuscitation, postpartum haemorrhage and cord prolapse. Awareness of ambulance calls and who might be needed for support is also vital when planning a homebirth, as well as good preparation of the family.

Conclusion

Homebirth is different from hospital birth. As stated by Justine Caines from Homebirth Australia, 'Women make decisions about their care. They invite a midwife into their home, rather than be forced to meet the needs of practitioners and organisational convenience, which happens when giving birth in a hospital.' The people to consult about homebirth are the women and the midwives who work with them.

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