Home Birth – is it Safe?

by Anitra Carr, PhD

I like the idea of a homebirth, but is it safe? This is a question that many of us ask when trying to decide on the best place to give birth to our precious babies. After all, all we ever really want is the best for our children, right from conception through to birth and beyond. Childbirth is a natural, physiological process which, until just a few decades ago, took place primarily at home among family and friends. However, because hospital birth has become so entrenched in our society, many women do not even realise that they have a choice of where to give birth. What is even more unfortunate is that most women are not aware of the fact that international scientific research has shown that home birth is at least as safe as, if not safer, than hospital birth for healthy women with low risk of complications.

Safety studies

Researchers who investigate the outcomes and safety of homebirth use three different study methods: retrospective studies, prospective studies and clinical trials. Each of these study types will be described in more detail below, including examples of relevant studies and their main findings.

Types of studies used to investigate home birth safety

Retrospective studies - look backwards
Prospective studies - plan ahead
Clinical trials - subjects randomised

Retrospective studies look backwards, after the event has occurred. For example, researchers would choose a group of women who had given birth at home and investigate the outcomes, e.g. incidences of morbidity (illness) or mortality (death). The researchers may then compare the incidence of these outcomes with a group of women who had given birth in hospital. Although many such retrospective studies have been carried out with respect to homebirth, this type of study is susceptible to bias as the researchers already know the outcome and this may subtly influence their selection of subjects for study.

One retrospective study, carried out in New Zealand, investigated the perinatal and maternal mortality rates for planned home births over the 20 year period from 1973 to 1993. The researchers used data from nearly 9800 planned home births and found that the perinatal mortality rate was not significantly different from the rate for low risk births at National Women's Hospital. The researchers concluded that homebirth was a safe and increasingly popular option for New Zealand women.

Increasing incidence of home birth in New Zealand

1973	0.04%
1993	2%
Present	7%

Another retrospective study, carried out in Australia, examined data on planned home births during 1985 to 1990. The researchers found that, of the 7000 planned home births investigated, home birth for low risk women compared favourably with hospital birth. However, high risk home births involving post-term birth, twin pregnancies and breech presentation, contributed to excess mortality.

Typical exclusion criteria for having a home birth

Pre-existing medical condition
Pregnancy-induced medical condition
More than one previous caesarean section
Multiple birth
Breech presentation
Premature birth (<37 weeks)
Post-term birth (>42 weeks)

Prospective studies look ahead, i.e. what the researchers want to investigate is decided upon before the study is begun, e.g. before the women have given birth. This type of study is less vulnerable to bias compared to retrospective studies as the researchers do not know ahead of time what the outcome will be. Seven prospective studies have been carried out (in the UK, Netherlands, Switzerland, the US, British Colombia, and North America) over the last couple of decades to investigate the outcomes and safety of homebirth. Five of these studies were published in the prestigious British Medical Journal and the largest study involved a whopping 5418 women who planned to birth at home.

Three of the seven prospective studies investigated planned home birth alone, however, the other four studies directly compared home birth with hospital delivery. Overall, the studies found that there were no significant differences in outcomes or safety between the home birth and hospital delivery groups. The durations of labour, occurrence of severe perineal tears, maternal blood loss, condition of the babies and perinatal mortality were similar between the two groups (Apgar scores were often better for babies born at home). Of the women planning to birth at home, an average of only 13% were transferred to hospital for various reasons, including failure to progress, pain relief or exhaustion.

Furthermore, the studies showed very clearly that women who gave birth at home needed significantly less medication and fewer medical interventions during labour. In other words, the home birth groups were less likely to be induced, have epidural analgesia, have labours augmented with oxytocin or prostaglandins, or have an episiotomy, electronic fetal monitoring, forceps delivery, vacuum extraction or caesarean section. The average caesarean section rate for planned hospital deliveries was over three times that for planned home births (17% versus 5%). One study concluded that the lower rate of interventions with home births also meant a lower risk of subsequent complications for mother and baby.

Thus, all of the prospective studies showed that home birth is as safe as, and even safer in some instances, than hospital delivery for healthy low risk women. It is of interest to note that an uncomplicated vaginal birth in hospital (in the US) costs on average three times as much as a similar birth at home with a midwife. The studies showed that midwives can achieve good home birth outcomes without the routine use of expensive and potentially dangerous hospital interventions. One of the studies found that 85% of the women who had had a previous hospital birth preferred the home birth experience, even though 66% had found the hospital experience not unpleasant.

Typical safety equipment carried by home birth midwives

Oxygen cylinder and Hudson mask
Infant Laerdahl inflating bag and mask
Oral suction equipment
Syntocinon and syntometrine

Doppler sonicaid and stethoscope
Sphygmomanometer and thermometer
Intravenous setups and sterile solutions
Cannulation equipment and tourniquet
Syringes and needles
Sterile gloves and swabs

Clinical trial

The gold standard in scientific research is the randomised controlled trial. However, there are a number of practical and ethical issues with respect to carrying out a clinical trial to investigate the safety of home birth versus hospital birth. For example, in a randomised trial, women would be assigned to one of either group, they would not be able to choose for themselves. This could have a major impact on perinatal outcome by inducing insecurity and anxiety in women assigned to give birth in a manner that they did not prefer. Nevertheless, a small clinical trial has been carried out in the UK as a feasibility study. The trial involved 11 low risk women, 5 allocated to home birth and six to hospital birth. The researchers found no difference in outcomes between either group. It is of interest to note that the majority of mothers in the hospital group were disappointed about the allocation, suggesting that properly informed women prefer home birth.

In the Netherlands approximately 30% of women give birth at home, although in many other Western countries usually only a few percent of women choose to birth at home. In New Zealand about 7% of women, and up to 10% of women in some regions, give birth at home. It is likely that the erroneous reputation that home birth has with respect to safety is due to the fact that the outcome statistics for planned homebirths are often combined with the less than ideal outcome statistics for high risk, unplanned, unattended home births. However, if women are provided with sufficient unbiased information regarding the safety of planned home birth for low risk pregnancies, it is likely that more would choose to birth at home. One study subject commented that “It is not for everyone, but freedom of choice is priceless”. Another mother stated that “Although my previous two hospital deliveries were very positive they did not compare to the delight of giving birth at home. It was just so right”.

Reasons mothers have given for preferring home birth

More in control, confident
Prefer to be at home
More natural, non-clinical
Partner more involved
Less intervention
Less stress for baby
No need to leave other children
Safer at home
No transport worries
More relaxed in familiar surroundings
Peaceful, calm, private
Welcome for baby at home
Joyful celebration

The safety studies mentioned in this article can be accessed through the **Canterbury Home Birth Association** website www.canterburyhomebirth.org.nz. More information about home birth can be found at the **Home Birth Aotearoa** website www.homebirth.org.nz. Thanks go to the **Christchurch Homebirth Midwives** for their helpful comments.