## Planned home and hospital births in South Australia, 1991–2006: differences in outcomes

Hannah G Dahlen, Caroline S E Homer, Sally K Tracy and Andrew M Bisits

**To the Editor:** The aim of the study by Kennare and colleagues[1] was to establish data on home and hospital birth outcomes for the period 1991–2006, before the Policy for Planned Birth at Home in South Australia was introduced in 2007.[2] One significant shortcoming of the study was the lack of data regarding the type of birth attendant, the degree of cooperation with the local hospital and the quality of transfer arrangements. Currently, there are virtually no home birth policies in Australia governing women's access to qualified midwives with hospital visiting rights that enable appropriate transfer. Women who intend to have a home birth are forced to rely on the charity of midwives who provide care without professional indemnity insurance. Failing this, women are known to give birth without a midwife.

Kennare et al[1] suggested that the Bachelor of Midwifery program will increase the number of midwives planning to offer home birth. However, their study did not examine whether women were attended by registered midwives, non-registered midwives, doulas, untrained birth helpers or a professional of any capacity, and assumed that planned home birth equates to home birth under the care of a qualified registered midwife. This has been a weakness of previous Australian studies.[3] Overseas studies which identify the status of the midwives have shown that, for low-risk pregnancies, births at home attended by competent registered midwives in a networked system have outcomes that are comparable to hospital births.[4,5] We have previously detailed other limitations of the study, including the inclusion of women who planned a home birth at booking but subsequently developed risk factors and gave birth in hospital, as well as the difficulty of examining the rare outcome of intrapartum death or intrapartum asphyxia in such a sample, as the wide confidence intervals show.[6]

Kennare and colleagues[1] provide useful recommendations about risk assessment, transfer to hospital and fetal monitoring, and rightly highlight that the system must be so terrible for some women that they choose to give birth outside of it, even with risk factors. Despite a malfunctioning system in Australia — where midwives are uninsured and have no visiting rights, and home birth is unfunded and often hard to access — the perinatal mortality rate was no different for home births compared with hospital births. Risk assessment, transfer to hospital and fetal monitoring will be improved when midwives are no longer excluded from mainstream services.

*Competing interests:* Hannah Dahlen is the Vice President of the Australian College of Midwives. Caroline Homer is an active member of the Australian College of Midwives and was on the Review Team for the Review of Homebirths in Western Australia (2007–2008), funded by the WA Department of Health.

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Kenneth C Johnson and Betty-Anne Daviss

**To the Editor:** Kennare and colleagues are to be congratulated.[1] Careful, systematic collection and analysis of data on planned home births and planned hospital births creates evidence that women need to make intelligent and safe choices about perinatal care.

A central medical cause of concern in the article[1] and accompanying editorial[2] is a high relative risk of death caused by intrapartum asphyxia in the planned home birth group. But, on closer examination, the underlying cause appears more likely to be a lack of proper integration of home birth midwives into the health care system.

Of the nine infant deaths in the study, five were, by definition, unrelated to the place of birth — three were antenatal deaths that occurred after transfer to hospital (all unrelated to type of antenatal care) and two occurred in cases where the baby was born at home but had a fatal congenital anomaly. Three of the other four deaths (two of them due to intrapartum asphyxia) occurred after the parents persisted in their home birth choice despite advice against it, resulting in delayed transfer to hospital, or declined intervention after transfer to hospital — factors thought to have contributed to the deaths.

Thus, an underlying contributing cause of the higher risk of intrapartum asphyxia appears to be some parents' perception that care in hospital was not best for them or their baby. This perception is not entirely baseless, given that the caesarean section rate for planned hospital births in South Australia was 27.1%, 3.7 times the risk associated with planned home births after factoring in differences in maternal characteristics and obstetric conditions between the two groups (adjusted odds ratio, 0.27; 95% CI, 0.22–0.34)[1] and about double to triple the 10%–15% rates recommended by the World Health Organization.[3] Furthermore, women had seven times the risk of episiotomy for planned hospital births compared with planned home births, and three times the risk of instrumental delivery.[1]

Recent large, high-quality studies of home birth in Canada[4,5] and the Netherlands[6] demonstrated that — when home birth midwives are an integral, accepted, insured and funded part of the health care system — home birth is safe and refusal of midwife-recommended care by patients does not

appear to be an issue. We suggest that an evidence-based solution to the underlying causes of excess asphyxia and perinatal mortality highlighted in Kennare et al's study would be to follow the lead of countries such as the Netherlands and Canada — provide state funding for independent home birth midwifery practice, provide professional indemnity insurance and provide home birth midwives with access to hospital privileges as autonomous caregivers. When women can depend on continuity of care during transport, they are less likely to refuse or delay necessary care or transfer to hospital.

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## Marc J N C Keirse, Robyn M Kennare, Graeme R Tucker and Annabelle C Chan

***In reply:*** Dahlen and colleagues overlooked that we excluded births without professional antenatal care ($n = 1217$), ensuring that all 1141 planned home births in our study were cared for by registered midwives.[1] Nonetheless, we appreciate their acknowledgement that our article contains useful recommendations. Yet, they failed to endorse these recommendations in their letter and in the earlier critique to which they refer. They instead draw attention to a lack of difference in total mortality, but dismiss large differences in intrapartum and asphyxia-attributed mortality through their misinterpretation of confidence intervals. Rare outcomes, such as these, inevitably have wide confidence intervals. However, it is wrong and misleading to use the lack of precision in how much more frequent they are as an argument to dismiss their significantly much higher frequency.

We tend to agree with the above correspondents, though, that proper integration of home birth care in maternity services might prevent some avoidable deaths that are a recurrent feature in Australian home birth studies.[1-3] Indeed, we postulated this too.[1] However, it is fallacious to assume that differences in outcome between Australia and other countries, to which the correspondents refer, are merely an issue of funding and access to hospital privileges for autonomous practitioners. The Netherlands,[4] for example, has more than 40 000 home births a year, but only three midwifery academies, with a 4-year curriculum. Australia has less than 1000 home births a year, fewer than it has midwifery students, most of whom learn both nursing and midwifery within 4 years. Midwives in the Netherlands are medical professionals and carefully select only low-risk pregnancies for home birth.[4] In Australia, on the contrary, many independent midwives accept home birth for pregnancies that are not low risk.[1,2] Adherence to approved policies for planned home birth[5] and collaboration with hospital services must be a prerequisite to their integration into maternity services. Unless leaders and teachers of the midwifery profession in Australia unequivocally condemn home birth for women with substantial risks, such as twin pregnancy or previous caesarean section, babies will continue to die needlessly, irrespective of any funding models.

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