

by education or licensure, the fundamental flaw of this paper. ■

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REPLY

We appreciate the comments made by Vallee-Pouliot et al concerning our publication “Early and total neonatal mortality in relation to birth setting in the United States, 2006-2009.”¹

The aim of our study was to evaluate neonatal death in relation to birth settings in the United States, and we showed that planned midwife births at home were associated with unacceptably high neonatal mortality rates. As the authors acknowledge, there is considerable variation in requirements for licensure of midwives in the states, especially when compared with Canada, England, and the Netherlands. Further evaluation of outcomes based on midwife credentials was beyond the scope of this study and may be addressed in future studies.

The authors correctly state that transfers from midwives within the hospital-to-hospital physicians decrease midwife

neonatal deaths and potentially increase physicians’ neonatal mortality rates because these transfers usually are attributed to physicians in the Centers for Disease Control and Prevention database. Vallee-Pouliot et al neglect to mention that this principle also applies to transfers from attempted planned midwife home births to the hospital. Neonatal mortality rates among supposedly low-risk planned midwife home births were >2-fold higher (neonatal mortality rates in planned midwife home births when compared with physician hospital births: 1.26 per 1000 births vs 0.55 per 1000 births for hospital physicians). If neonatal deaths after transfers from planned home births to the hospital were included in planned home births, the already unacceptably high neonatal mortality rates among homebirths would likely be even worse than the Centers for Disease Control and Prevention data show.

The authors’ reference to Dutch midwives is inappropriate because Dutch midwives have strict uniform selection criteria for homebirths, but US midwives do not. In a recently accepted study, we show that planned midwife home births in the United States have an unacceptably high number of risks.²

As the authors state, differences of patient characteristics between home births and hospital deliveries are stated clearly in our patient characteristics Table. This is an accepted scientific method to account for differences among patient populations.

We believe that the major contributor to the increase in neonatal deaths in planned midwife homebirths is a function of its location (with delayed access to hospital care and cesarean deliveries) and the unavailability of essential services, medication, equipment, and well-trained personnel. Inadequate midwife education and training and the absence of patient selection criteria among midwives who perform home births in the United States may contribute further to the increased neonatal mortality rates in home births.

We believe the unacceptably high neonatal mortality rates among US planned midwife home birth shown in our study¹ must be disclosed as an essential component part of the informed consent process with all patients who consider a planned home birth.³ ■

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Contraception with levonorgestrel system and risks of breast cancer

TO THE EDITORS: Werth et al¹ reported that Hispanic women were more likely to choose a long-acting reversible contraceptive (LARC) method compared with non-Hispanic women and had a high rate of continuation and satisfaction of this method. LARC included levonorgestrel intrauterine system, subdermal implant, and copper intrauterine device. The Contraceptive CHOICE Project promoted the use of LARC methods. In this study, a levonorgestrel intrauterine system was inserted in 3549 women, and a progestogen implant was inserted in 1390 women, for a total of 7403 women.

However, in this study these women were not informed on the potential risks of levonorgestrel on the breast; progestagen as contraception seems to play an important role in the development of breast cancers *in vitro* and *in vivo*.

Indeed, in the study of Soini et al,² levonorgestrel-releasing intrauterine system use was associated with a higher incidence of breast cancer compared with the general population.

Ruan et al³ showed that levonorgestrel increased the proliferation in MCF-7 breast cancer cells by overexpressing the progesterone receptor.

Furthermore, women with familial history of breast cancer and carriers of BCRA1 or BCRA2 mutations were not screened and not excluded from hormonal LARC methods.

The continuation of levonorgestrel intrauterine system is not recommended for women with a history of breast cancer. Unfortunately, there was no information concerning cancer history of women who were included in this study. Indeed, the recurrence of breast cancer is increased in women who continue to use the levonorgestrel intrauterine system.⁴

We understand that oral contraceptives do not prevent abortions and unwanted pregnancies sufficiently; however, the enthusiasm around hormonal LARC methods should be moderated by the new studies on the increased risks of breast cancer. The screening of risks factors for breast tumors should be reinforced before these methods are prescribed.

Short-, median-, and long-term follow-up examination and evaluation of side-effects on the breast are necessary when the levonorgestrel contraceptive system is inserted. ■

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REPLY

We thank Dr Alouini et al for their thoughts on our recent article regarding continuation and satisfaction of long-acting reversible contraception among Hispanic women in the Contraceptive CHOICE Project (CHOICE). They state that “women were not informed on the potential risks of levonorgestrel on the breast where progestagen as contraception seems to play an important role in the development of breast cancers *in vitro* and *in vivo*.” However, the references Dr Alouini et al present do not support a causal association between the levonorgestrel intrauterine (LNG-IUS) system and breast cancer.

Despite the claims of Dr Alouini et al, there is no clear association of the LNG-IUS system and breast cancer. In their letter, they fail to mention 2 other large epidemiologic studies that found no increased risk of breast cancer with the use of the LNG-IUS system.^{1,2} The one study that found a modest association (odds ratio, 1.19) failed to control for important confounders such as parity, family history, lifestyle factors, and use of exogenous hormones.