

The Safety of Home Birth

Home birth can be a safe option for 90% of mothers, with appropriate prenatal care and attendant personnel. It makes both financial sense and medical sense for state laws to permit home birth attended by midwives, for insurers to reimburse for home delivery, and for hospitals and obstetricians to provide medical back-up. Obstetricians need to take their blinders off and learn to cooperate with folks who want to deliver in their own homes.

WHAT'S NEW!

Kenneth C Johnson and Betty-Anne Daviss [Outcomes of planned home births with certified professional midwives: large prospective study in North America](#). BMJ 2005;330:1416 (18 June). The study included prospectively reported data from more than 5000 women planning home births with Certified Professional Midwives in the year 2000 in the U.S. and Can, and found that outcomes for mothers and babies were the same as for low-risk mothers giving birth in hospitals, but with a fraction of the interventions.

Macfarlane A, McCandlish R, Campbell R.

Choosing between home and hospital delivery. There is no evidence that hospital is the safest place to give birth.

British Medical Journal. 2000 Mar 18;320(7237):798.

Olsen O, Jewell MD. [The Nordic Cochrane Centre, Rigshospitalet, Blegdamsvej 9, dept. 7112, Copenhagen, Denmark, DK-2100 O.

o.olsen@cochrane.dk] **Home versus hospital birth**. Cochrane Database Syst Rev 2000;(2) **BACKGROUND:** A meta-analysis of observational studies have suggested that planned home birth may be safe and with less interventions than planned hospital birth.

OBJECTIVES: The objective of this review was to assess the effects of planned home birth compared to hospital birth on the rates of interventions, complications and morbidity as determined in randomised trials. **SEARCH STRATEGY:** We searched the

Cochrane Pregnancy and Childbirth Group trials register and the Cochrane Controlled Trials Register. Date of last search: September 1999. **SELECTION CRITERIA:** Controlled trials comparing planned hospital birth to planned home birth in selected women, assisted by an experienced home birth practitioner, and backed up by a modern hospital system in case transfer should be necessary. **DATA COLLECTION AND ANALYSIS:** Trial quality was assessed and data were extracted by one reviewer and checked by the other reviewer. Study authors were contacted for additional information. **MAIN RESULTS:** One study involving 11 women was included. The trial was of reasonable quality, but was too small to be able to draw conclusions. **REVIEWER'S CONCLUSIONS:** **There is no strong evidence to favour either planned hospital birth or planned home birth for low risk pregnant women.**

Anderson RE. Anderson DA.[Dept. of Economics, Centre College, Danville, KY 40422, USA.]**The cost-effectiveness of home birth.**Journal of Nurse-Midwifery. 44(1):30-5, 1999 Jan-Feb.As health care costs increase and a growing number of women are without insurance, the one health service that every family needs deserves further attention. Even for the 40% of births covered by Medicaid, safe birthing alternatives that permit a reduction in the \$150 billion Medicaid burden would allow the United States to devote more resources to other urgent priorities. Informed birthing decisions cannot be made without information on costs, success rates, and any necessary tradeoffs between the two. This article provides the relevant information for hospital, home, and birth center births. The average uncomplicated vaginal birth costs 68% less in a home than in a hospital, and births initiated in the home offer a lower combined rate of intrapartum and neonatal mortality and a lower incidence of cesarean delivery.

Chamberlain G, Wraight A, Crowley P[Obstetrics at Singleton Hospital, Swansea, UK]**Birth at home.**Pract Midwife 1999 Jul-Aug;2(7):35-9Recently the National Birthday Trust performed a confidential survey of home births in the United Kingdom. A good

response rate was obtained from midwives, who recruited two groups of women prospectively; those planned and accepted as suitable for a home delivery at 37 weeks and a matched group of similar women who were booked for hospital by 37 weeks. Some 16% of such women were transferred to hospital in late pregnancy (4%) or in labour (12%). This figure rose to 40% among the primiparous women in the survey. The survey report presents an analysis of 4,500 home births and 3,300 hospital controls. Outcomes could therefore be presented by the woman's intent or by what actually happened. In essence it seems that a woman who is appropriately selected and screened for a home birth is putting herself and her baby at no greater risk than a mother of a similar low-risk profile who is hospital booked and delivered. Home births will probably increase to 4-5% of all maternities in UK during the next decade and this needs preparatory planning.

Aikins Murphy P, Feinland JB Perineal outcomes in a home birth setting. [Department of Obstetrics and Gynecology, Columbia University College of Physicians and Surgeons, New York, USA.] Birth 1998 Dec;25(4):226-34 **BACKGROUND:** Perineal lacerations are a source of significant discomfort to many women. This descriptive study examined perineal outcomes in a home birth population, and provides a preliminary description of factors associated with perineal laceration and episiotomy. **METHODS:** Data were drawn from a prospective cohort study of 1404 intended home births in nurse-midwifery practices. Analyses focused on a subgroup of 1068 women in 28 midwifery practices who delivered at home with a midwife in attendance. Perineal trauma included both episiotomy and lacerations. Minor abrasions and superficial lacerations that did not require suturing were included with the intact perineum group. Associations between perineal trauma and study variables were examined in the pooled dataset and for multiparous and nulliparous women separately. **RESULTS:** In this sample 69.6 percent of the women had an intact perineum, 15 (1.4%) had an episiotomy, 28.9 percent had first- or second-degree lacerations, and 7 women (0.7%) had third- or fourth-degree lacerations. Logistic regression analyses showed that in multiparas, low socioeconomic status and higher parity were associated with

intact perineum, whereas older age (≥ 40 yr), previous episiotomy, weight gain of over 40 pounds, prolonged second stage, and the use of oils or lubricants were associated with perineal trauma. Among nulliparas, low socioeconomic status, kneeling or hands-and-knees position at delivery, and manual support of the perineum at delivery were associated with intact perineum, whereas perineal massage during delivery was associated with perineal trauma. **CONCLUSIONS:** The results of this study suggest that it is possible for midwives to achieve a high rate of intact perineums and a low rate of episiotomy in a select setting and with a select population.

Wieggers TA. van der Zee J. Keirse MJ. [The Netherlands Institute of Primary Health Care, Utrecht, The Netherlands.] **Maternity care in The Netherlands: the changing home birth rate.** *Birth.* 25(3):190-7, 1998 Sep. In 1965 two-thirds of all births in The Netherlands occurred at home. In the next 25 years, that situation became reversed with more than two-thirds of births occurring in hospital and fewer than one-third at home. Several factors have influenced that change, including the introduction of short-stay hospital birth, hospital facilities for independent midwives, increased referral rates from primary to secondary care, changes in the share of the different professionals involved in maternity care, medical technology, and demographic changes. After a decline up to 1978 and a period of relative stability between 1978 and 1988, the home birth rate started to decline further, to the extent that it might destabilize the Dutch maternity care system and the role of midwives in it. The Dutch maternity care system depends heavily on primary caregivers, midwives and general practitioners who are responsible for the care of women with low-risk pregnancies, and on obstetricians who provide care for high-risk pregnancies. Its preservation requires a high level of cooperation among the different caregivers, and a functional selection system to ensure that all women receive the type of care that is best suited to their needs. Preserving the home birth option in the Dutch maternity care system necessitates the maintenance of high training and postgraduate standards for midwives, the continued provision of maternity home care assistants, and giving women with

uncomplicated pregnancies enough confidence in themselves and the system to feel safe in choosing a home birth.

Olsen, O. Meta-analysis of the Safety of Home Birth. *Birth*. 24(1): 4-13, 1997.

Concludes: "Home birth is an acceptable alternative to hospital confinement for selected pregnant women, and leads to reduced medical interventions."

Hafner-Eaton C. Pearce LK. Oregon State University **Birth choices, the law, and medicine: balancing individual freedoms and protection of the public's health.** *Journal of Health Politics, Policy & Law*. 19(4):813-35, 1994 Winter. To many Americans, the idea of home birth, the use of a "direct-entry midwife," or both seem archaic. Although much of the professional medical community disapproves of either, state laws regarding birth choices vary dramatically and are not necessarily based on empirical findings of childbirth outcomes. Public health practitioners, policymakers, and consumers view childbirth from the perspectives of safety, cost, freedom of choice, quality of the care experience, and legality, yet the professional, policy, and lay literatures have not offered an unemotional, balanced presentation of evidence. Reviewing the full spectrum of literature from the United States and abroad, we present a Constitutional medical-legal analysis of whether home birth with direct-entry midwives is in fact a safe alternative to physician-attended hospital births, and whether there is a legal basis for allowing alternative health policy choices is such an important yet personal family matter as childbirth. The literature shows that low- to moderate-risk home births attended by direct-entry midwives are at least as safe as hospital births attended by either physicians or midwives. The policy ramifications include important changes in state regulation of medical and alternative health personnel, the allowance of the home as a medically acceptable and legal birth setting, and reimbursement of this lower-cost option through private and public

health insurers.

Murphy PA. Fullerton J.[Department of Obstetrics and Gynecology, Columbia University College of Physicians and Surgeons, New York, New York 10032, USA. pam15@columbia.edu]**Outcomes of intended home births in nurse-midwifery practice: a prospective descriptive study.**Obstetrics & Gynecology. 92(3):461-70, 1998
Sep.OBJECTIVE: To describe the outcomes of intended home birth in the practices of certified nurse-midwives. METHODS: Twenty-nine US nurse-midwifery practices were recruited for the study in 1994. Women presenting for intended home birth in these practices were enrolled in the study from late 1994 to late 1995. Outcomes for all enrolled women were ascertained. Validity and reliability of submitted data were established. RESULTS: Of 1404 enrolled women intending home births, 6% miscarried, terminated the pregnancy or changed plans. Another 7.4% became ineligible for home birth prior to the onset of labor at term due to the development of perinatal problems and were referred for planned hospital birth. Of those women beginning labor with the intention of delivering at home, 102 (8.3%) were transferred to the hospital during labor. Ten mothers (0.8%) were transferred to the hospital after delivery, and 14 infants (1.1%) were transferred after birth. Overall intrapartal fetal and neonatal mortality for women beginning labor with the intention of delivering at home was 2.5 per 1000. For women actually delivering at home, intrapartal fetal and neonatal mortality was 1.8 per 1000. **CONCLUSION: Home birth can be accomplished with good outcomes under the care of qualified practitioners and within a system that facilitates transfer to hospital care when necessary. Intrapartal mortality during intended home birth is concentrated in postdates pregnancies with evidence of meconium passage.**

Bastian H. Keirse MJ.Lancaster PA. [PO Box 569, Blackwood SA 5051, Australia. hilda.bastian@flinders.edu.au]**Perinatal death associated with planned home birth in Australia: population**

based study.BMJ. 317(7155):384-8, 1998 Aug 8.OBJECTIVE: To assess the risk of perinatal death in planned home births in Australia. DESIGN: Comparison of data on planned home births during 1985-90, notified to Homebirth Australia, with national data on perinatal deaths and outcomes of home births internationally. RESULTS: 50 perinatal deaths occurred in 7002 planned home births in Australia during 1985-90: 7.1 per 1000 (95% confidence interval 5.2 to 9.1) according to Australian definitions and 6.4 per 1000 (4.6 to 8.3) according to World Health Organisation definitions. The perinatal death rate in infants weighing more than 2500 g was higher than the national average (5.7 versus 3.6 per 1000: relative risk 1.6; 1.1 to 2.4) as were intrapartum deaths not due to malformations or immaturity (2.7 versus 0.9 per 1000: 3.0; 1.9 to 4.8). More than half (52%) of the deaths were associated with intrapartum asphyxia. CONCLUSIONS: Australian home births carried a high death rate compared with both all Australian births and home births elsewhere. The two largest contributors to the excess mortality were underestimation of the risks associated with post-term birth, twin pregnancy and breech presentation, and a lack of response to fetal distress.

Janssen PA. Holt VL. Myers SJ**Licensed midwife-attended, out-of-hospital births in Washington state: are they safe?**Birth. 21(3):141-8, 1994 Sep.The safety of out-of-hospital births attended by midwives who are licensed according to international standards has not been established in the United States. To address this issue, outcomes of births attended out of hospital by licensed midwives in Washington state were compared with those attended by physicians and certified nurse-midwives in hospital and certified nurse-midwives out of hospital between 1981 and 1990. Outcomes measured included low birthweight, low five-minute Apgar scores, and neonatal and postneonatal mortality. Associations between attendant and outcomes were measured using odds ratios to estimate relative risks. Multivariate analysis using logistic regression controlled for confounding variables. Overall, births attended by licensed midwives out of hospital had a significantly

lower risk for low birthweight than those attended in hospital by certified nurse-midwives, but no significant differences were found between licensed midwives and any of the comparison groups on any other outcomes measured. When the analysis was limited to low-risk women, certified nurse-midwives were no more likely to deliver low-birthweight infants than were licensed midwives, but births attended by physicians had a higher risk of low birthweight. The results of this study indicate that in Washington state the practice of licensed nonnurse-midwives, whose training meets standards set by international professional organizations, may be as safe as that of physicians in hospital and certified nurse-midwives in and out of hospital.

Olsen O. Afdeling for Social Medicin, Kobenhavns Universitet [**Home delivery and scientific reasoning**]. [**Norwegian**] Source Tidsskrift for Den Norske Laegeforening. 114(30):3655-7, 1994 Dec 10. Doctors commonly assume that it is safer for all women to give birth in hospital rather than at home. Nevertheless, all statistical comparisons relevant to Nordic women today show that for healthy pregnant women it is at least as safe to give birth at home--and perhaps even safer. Furthermore, many randomised clinical trials consistently show that several of the elements which characterize home births make the births proceed much easier. The question is raised, in what ways it is possible to convince obstetricians that they should base their judgements and advice regarding place of birth on empirical evidence rather than on "well established" but pre-scientific dog-mas.

Woodcock HC. Read AW. Bower C. Stanley FJ. Moore DJA **matched cohort study of planned home and hospital births in Western Australia 1981-1987** Midwifery. 10(3):125-35, 1994 Sep. OBJECTIVE: to evaluate practice comparing planned home birth with planned hospital birth DESIGN: a retrospective analysis of a cohort who had planned to have a home birth compared with a matched hospital birth group SETTING: Western Australia (WA) PARTICIPANTS: all women (N = 976) who 'booked' to have a

home birth 1981-1987 and 2928 matched women who had a planned hospital birth (singleton births only). **MEASUREMENTS AND FINDINGS:** women in the home birth group had a longer labour, were less likely to have had labour induced or to have had any sort of operative delivery. They were less likely overall to have had complications of labour, but more likely to have had a postpartum haemorrhage and more likely to have had a retained placenta. Babies in the home birth group were heavier and more likely to be post-term. They were less likely to have had an Apgar score below 8 at 5 minutes, to have taken more than 1 minute to establish respiration or to have received resuscitation. The crude odds ratio for planned home births for perinatal mortality was 1.25 (95% CI 0.44-3.55). Postneonatal mortality was more common in the hospital group. Planned home births were generally associated with less intervention than hospital births and with less maternal and neonatal morbidity, with the exception of third stage complications. Although not significant, the increase in perinatal mortality has been observed in other Australian studies of home births and requires continuing evaluation. **KEY CONCLUSIONS:** Planned home births in WA appear to be associated with less overall maternal and neonatal morbidity and less intervention than hospital births. **IMPLICATIONS FOR PRACTICE:** whether these observed differences in intervention and morbidity have any relationship to the small, non-significant increase in perinatal mortality could not be determined in this study. Continuing evaluation of home birth practice and outcome is essential.

Bortin S. Alzugaray M. Dowd J. Kalman J. Santa Cruz Women's Health Center, California **A feminist perspective on the study of home birth. Application of a midwifery care framework** Journal of Nurse-Midwifery. 39(3):142-9, 1994 May-Jun. Studies of home birth have compared it with hospital birth, with a focus on perinatal outcomes. Although such studies have established the safety of midwife-attended home births, this narrow view does not include all of the concepts represented in a proposed midwifery care framework derived from the philosophy of the American College of Nurse-Midwives. In this essay, the authors recommend the employment of qualitative research with a feminist perspective

as a method to elucidate other concepts in the midwifery care framework, and suggest that future home birth research should explore the recognition and validation of the woman and her experiences, appropriate use of technology, and the influences of the birth environment. [References: 51]

Davis-Floyd RE.[Department of Anthropology, University of Texas at Austin 78712]**The technocratic body: American childbirth as cultural expression. [Review]** Social Science & Medicine. 38(8): 1125-40, 1994 Apr.The dominant mythology of a culture is often displayed in the rituals with which it surrounds birth. In contemporary Western society, that mythology--the mythology of the technocracy--is enacted through obstetrical procedures, the rituals of hospital birth. This article explores the links between our culture's mythological technocratic model of birth and the body images, individual belief and value systems, and birth choices of forty middle-class women--32 professional women who accept the technocratic paradigm, and eight homebirthers who reject it. The conceptual separation of mother and child is fundamental to technocratic notions of parenthood, and constitutes a logical corollary of the Cartesian mind-body separation that has been fundamental to the development of both industrial society and post-industrial technocracy. The professionals' body images and lifestyles express these principles of separation, while the holistic ideology of the homebirthers stresses mind-body and parent-child integration. The conclusion considers the ideological hegemony of the technocratic paradigm as potential future-shaper. [References: 45]

Kerssens, J. J.**Patient satisfaction with home-birth care in The Netherlands.**Journal of Advanced Nursing 20(4), 1994: 344-50.One of the necessary elements in an obstetric system of home confinements is well-organized postnatal home care. In The Netherlands home care assistants assist midwives during home delivery, they care for the new mother as well as the newborn baby, instruct the family on infant health care and carry out

household duties. The growing demand for postnatal home care is difficult to meet; this has resulted in a short supply of the most popular day care programme and a level of provision which does not result in adequate services. This study acknowledges the patient perspective of maternity home care in order to contribute to its organization. The majority (79%) of service centres were willing to participate. A total of 1812 (81%) women who recently gave birth to a child responded to a postal questionnaire addressing the quality of care according to five dimensions: availability, continuity, interpersonal relationships, outcome and assistant's expertise. Almost one-third of the new mothers rated the availability as inadequate while the assistant's expertise was rated positively. Postnatal maternity home care is personalized, small-scale, and recognizes childbirth as a life event. Furthermore, it is relatively inexpensive and contributes to the satisfaction of recipients.

Sakala C.[Health Policy Institute, Boston University, MA 02215]**Midwifery care and out-of-hospital birth settings: how do they reduce unnecessary cesarean section births?**Social Science & Medicine. 37(10):1233-50, 1993 Nov.In studies using matched or adjusted cohorts, U.S. women beginning labor with midwives and/or in out-of-hospital settings have attained cesarean section rates that are considerably lower than similar women using prevailing forms of care--physicians in hospitals. This cesarean reduction involved no compromise in mortality and morbidity outcome measures. Moreover, groups of women at elevated risk for adverse perinatal outcomes have attained excellent outcomes and cesarean rates well below the general population rate with these care arrangements. How do midwives and out-of-hospital birth settings so effectively help women to avoid unnecessary cesareans? This paper explores this question by presenting data from interviews with midwives who work in home settings. The midwives' understanding of and approaches to major medical indications for cesarean birth contrast strikingly with prevailing medical knowledge and practice. From the midwives' perspective, many women receive cesareans due to pseudo-problems, to problems that might easily be prevented, or to problems that might

be addressed through less drastic measures. Policy reports addressing the problem of unnecessary cesarean births in the U.S. have failed to highlight the substantial reduction in such births that may be expected to accompany greatly expanded use of midwives and out-of-hospital birth settings. The present study--together with cohort studies documenting such a reduction, studies showing other benefits of such forms of care, and the increasing reluctance of physicians to provide obstetrical services--suggests that childbearing families would realize many benefits from greatly expanded use of midwives and out-of-hospital birth settings.

Kenny P. King MT. Cameron S. Shiell A **Satisfaction with postnatal care--the choice of home or hospital** Midwifery. 9(3):146-53, 1993 Sep. This paper reports the findings of a study of client satisfaction with postnatal midwifery care. Women could choose one of two forms of care; either domiciliary care following early discharge, or hospital care until discharge. Consumers' perceptions of their postnatal care were examined at the end of the period of care. Women assessed the midwives' interest and caring, education and information provided, their own progress with feeding and baby care, and their own physical and emotional health. They were also asked about their expectations of and gains from postnatal care. The findings indicated that women choosing domiciliary care and women choosing hospital care had different expectations of their postnatal care, but were largely satisfied with the quality of the care they chose. The women who chose domiciliary care rated their postnatal care more highly than the women who stayed in hospital. The findings reinforce the importance of providing women with choices for the maternity care which best suits their needs.

Declercq ER. [Merrimack College, North Andover, Massachusetts] **Where babies are born and who attends their births: findings from the revised 1989 United States Standard Certificate of Live Birth** Obstetrics & Gynecology. 81(6):997-1004, 1993 Jun. OBJECTIVE: To examine the results of changes in

the birth certificate with regard to characteristics of the mothers and the birth weights of their infants. The United States Standard Certificate of Live Birth was revised in 1989 to include specific designations for the place of births out of hospital and the presence of a nurse-midwife or other midwife at the birth. METHODS: All results are based on data from the Natality, Marriage and Divorce Statistics Branch of the National Center for Health Statistics, Centers for Disease Control. In all cases reported here, the data represent at least 91% of all United States births in 1989.

RESULTS: Different patterns of birth attendance emerged in different settings. In residential births, other midwives and "others" attended 66% of all births, whereas in freestanding birth centers, physicians and certified nurse-midwives attended 75.1% of all births. The characteristics of the mothers differed substantially according to who attended their births in these settings. Substantial interstate variations in place and attendant were also documented. CONCLUSION: The positive outcomes achieved in certain settings indicate a need for further research into the factors that influence birth outcomes.

MacVicar J. Dobbie G. Owen-Johnstone L. Jagger C. Hopkins M. Kennedy J. Department of Obstetrics & Gynaecology, Leicester Royal Infirmary, UK **Simulated home delivery in hospital: a randomised controlled trial** British Journal of Obstetrics & Gynaecology. 100(4):316-23, 1993 Apr. OBJECTIVES: To compare the outcome of two methods of maternity care during the antenatal period and at delivery. One was to be midwife-led for both antenatal care and delivery, the latter taking place in rooms similar to those in one's own home to simulate home confinement. The other would be consultant-led with the mothers labouring in the delivery suite rooms with resuscitation equipment for both mother and baby in evidence, monitors present and a delivery bed on which both anaesthetic and obstetric procedures could be easily and safely carried out. DESIGN: Randomised controlled trial. SETTING: Leicester Royal Infirmary Maternity Hospital. SUBJECTS: Of 3510 women who were randomised, 2304 were assigned to the midwife-led scheme and 1206 were assigned to the consultant-led scheme. MAIN OUTCOME MEASURES:

Complications in the antenatal, intrapartum and postpartum periods were compared as was maternal morbidity and fetal mortality and morbidity. Satisfaction of the women with care over different periods of the pregnancy and birth were assessed. RESULTS: There were few significant differences in antepartum, intrapartum and postpartum events between the two groups. There was no difference in the percentage of mothers and babies discharged home alive and well. Generally higher levels of satisfaction with care antenatally and during labour and delivery were shown in those women allocated to midwife care.

Cunningham JD.[School of Behavioural Sciences, Macquarie University, Sydney, NSW, Australia]**Experiences of Australian mothers who gave birth either at home, at a birth centre, or in hospital labour wards**Social Science & Medicine. 36(4):475-83, 1993 Feb.In order to compare their antenatal education levels, reasons for choosing the birthplace, experiences during labor and childbirth, analgesia, satisfaction with birth attendants and others present, and related attitudes 395 Sydney-area mothers were recruited within one year of giving birth. Five sources were used to obtain mail-questionnaire responses from 239 who gave birth in a hospital labor ward, 35 at a birth centre, and 121 who chose to give birth at home. Homebirth mothers were older, more educated, more feminist, more willing to accept responsibility for maintaining their own health, better read on childbirth, more likely to be multiparous, and gave higher rating of their midwives than labour-ward mothers, with birth-centre mothers generally scoring between the other two groups. As well, homebirth and birth-centre mothers were more likely to feel the birthplace affected the bonding process and were less likely to regard birth as a medical condition than labour-ward mothers. In regression analysis birth venue (among other variables) significantly predicted satisfaction with doctor, if present during labour and delivery, and five variables correlated with birth venue significantly predicted satisfaction with midwife, husband/partner, and other support person. Findings are discussed in the light of the current struggle between medical and 'natural' models of childbirth.

Eskes TK.[Department of Obstetrics and Gynaecology, University Hospital Nijmegen, The Netherlands]**Home deliveries in The Netherlands--perinatal mortality and morbidity**International Journal of Gynaecology & Obstetrics. 38(3):161-9, 1992 Jul.The obstetrical organizational system in the Netherlands is based on the selection for risk factors. We conclude that: (i) The reporting of perinatal death is not complete. (ii) Perinatal mortality can be reduced. (iii) More iatrogenic interventions are present in low-risk deliveries in hospitals. (iv) Neurological behavior of low-risk babies born at home is equal to those born at the hospital, despite the worse maternal profile of the latter and the level of acidemia at birth in the first. Good data especially in referred cases are necessary before adopting a similar system.

van Steensel-Moll HA. van Duijn CM. Valkenburg HA. van Zanen GE.[Department of Epidemiology and Biostatistics, Erasmus University Medical School, Rotterdam, The Netherlands]**Predominance of hospital deliveries among children with acute lymphocytic leukemia: speculations about neonatal exposure to fluorescent light**Cancer Causes & Control. 3(4):389-90, 1992 Jul.

Duran AM.[Department of Health, Commonwealth of the Northern Marianas Islands, Rota]**The safety of home birth: the farm study**American Journal of Public Health. 82(3):450-3, 1992 Mar.Pregnancy outcomes of 1707 women, who enrolled for care between 1971 and 1989 with a home birth service run by lay midwives in rural Tennessee, were compared with outcomes from 14,033 physician-attended hospital deliveries derived from the 1980 US National Natality/National Fetal Mortality Survey. Based on rates of perinatal death, of low 5-minute Apgar scores, of a composite index of labor complications, and of use of assisted delivery, the results suggest that, under certain circumstances, home births attended by lay midwives can be accomplished as

safely as, and with less intervention than, physician-attended hospital deliveries.

Ford C. Iliffe S. Franklin O.[Department of Primary Health Care, Whittington Hospital, London]**Outcome of planned home births in an inner city practice**BMJ. 303(6816):1517-9, 1991 Dec 14.OBJECTIVE--To assess the outcome of pregnancy for women booking for home births in an inner London practice between 1977 and 1989. DESIGN--Retrospective review of practice obstetric records. SETTING--A general practice in London. SUBJECTS--285 women registered with the practice or referred by neighbouring general practitioners or local community midwives. MAIN OUTCOME MEASURES--Place of birth and number of cases transferred to specialist care before, during, and after labour. RESULTS--Of 285 women who booked for home births, eight left the practice area before the onset of labour, giving a study population of 277 women. Six had spontaneous abortions, 26 were transferred to specialist care during pregnancy, another 26 were transferred during labour, and four were transferred in the postpartum period. 215 women (77.6%, 95% confidence interval 72.7 to 82.5) had normal births at home without needing specialist help. Transfer to specialist care during pregnancy was not significantly related to parity, but nulliparous women were significantly more likely to require transfer during labour ($p = 0.00002$). Postnatal complications requiring specialist attention were uncommon among mothers delivered at home (four cases) and rare among their babies (three cases). CONCLUSIONS--Birth at home is practical and safe for a self selected population of multiparous women, but nulliparous women are more likely to require transfer to hospital during labour because of delay in labour. Close cooperation between the general practitioner and both community midwives and hospital obstetricians is important in minimising the risks of trial of labour at home.

Abel S. Kearns RA.[Department of Anthropology, University of Auckland, New Zealand]**Birth places: a geographical**

perspective on planned home birth in New Zealand *Social Science & Medicine*. 33(7):825-34, 1991. In New Zealand until the 1920s, most births occurred at home or in small maternity hospitals under the care of a midwife. Births subsequently came under the control of the medical profession and the prevalent medical ideology continues to support hospitalised birth in the interests of safety for mother and child. Despite resistance from the medical profession, recent (1990) legislation has reinstated the autonomy of midwives and this has come at a time when the demand for home births is increasing. This paper locates these changes within the geographical context of home as a primary place within human experience. It is argued that the medical profession has been an agent of an essentially patriarchal society in engendering particular experiences of time and place for women in labour. Narrative data indicate that the choice of home as a birth place is related to three dimensions of experience unavailable in a hospital context: control, continuity and the familiarity of home.

Albers LL. Katz VL. [University of Medicine and Dentistry of New Jersey] **Birth setting for low-risk pregnancies. An analysis of the current literature** *Journal of Nurse-Midwifery*. 36(4):215-20, 1991 Jul-Aug. This article reviews the literature on birth settings for women with low-risk pregnancies. Methodological issues of the existing research include nonrandom designs, small samples, selection differences, data limitation, and confounding bias. Studies for four birth sites are summarized: the home, freestanding birth centers, in-hospital birthing centers or birthing rooms, and traditional hospital settings. Despite the methodological limitations, nontraditional birth settings present advantages for low-risk women as compared with traditional hospital settings: lower costs for maternity care, and lower use of childbirth procedures, without significant differences in perinatal mortality. [References: 57]

Chamberlain M. Soderstrom B. Kaitell C. Stewart P **Consumer interest in alternatives to physician-centred hospital birth in Ottawa** *Midwifery*. 7(2):74-81, 1991 Jun. A survey of 1109 women who delivered in a hospital or at home in a major city in Canada

was conducted. The women were asked to respond to questions concerning the type of health professional they would like to provide reproductive care. The choices they were offered were: midwife, obstetrician, general practitioner or nurse, or a combination. Respondents were also asked to identify if they had an interest in an alternative such as a birthing room, birthing centre or home birth, to hospital labour ward care. Almost 60% of women were interested in some form of midwifery care with the major emphasis placed on counselling and support. Of the women who expressed an interest in midwifery services a large number elected for that service to be shared with an obstetrician. Women who were older and had achieved a high level of education were more interested in midwifery services than other women. If given choices of a hospital labour, birthing room, birthing centre or home birth 53% of women would choose to give birth in a hospital labour ward. A major reason for this choice was the accessibility of epidural analgesia. The majority of women who had experienced a home birth would make the same choice again. There was a strong positive association between interest in using midwifery services and interest in a birthing centre and home birth.

Kleiverda G. Steen AM. Andersen I. Treffers PE. Everaerd W. [Department of Obstetrics and Gynaecology, Academic Medical Centre, University of Amsterdam, The Netherlands] **Place of delivery in The Netherlands: actual location of confinement** European Journal of Obstetrics, Gynecology, & Reproductive Biology. 39(2):139-46, 1991 Apr 16. Preferred and actual locations of confinement were compared in a group of 170 nulliparous women. Voluntary changes in preferred location for birth were rare and concerned only changes from hospital to home confinement. Obligatory changes due to referral to consultant obstetricians occurred frequently: 58.8% of the total sample. Fewer referrals were found for women with an initial preference for a home confinement (53%) than for those who preferred a hospital confinement (64%). Most referrals occurred in the group of older women initially in doubt about their preferred location for giving birth: 72%. The differences were not significant, however. To reveal differences between referrals and non-referrals, discriminant

analysis was performed at the 18th week of gestation. The explained variance for the total group of referrals was 64.7%. Partially, the variables pertaining to the explained variance were the same as those related to a preferred hospital confinement. The explained variance for the group of referrals in which psychosocial influences were presupposed was not better, with the exception of referrals due to insufficient progress during labour: 76.4% of the variance could be explained at the 34th gestational week. When birth weight and amenorrhoea were included, these percentages increased to 79.0 and 84.8%, respectively.

Mathews JJ, Zadak K.[Loyola University Medical Center, Maywood, IL 60163]**The alternative birth movement in the United States: history and current status**Women & Health. 17(1):39-56, 1991.The alternative birth movement is a consumer reaction to paternalistic and mechanistic medical obstetrical practices which developed in the United States early in this century. Alternative birth settings developed as single labor-delivery-recovery rooms in the hospital or as free-standing birth centers. Both alternatives offer family-centered, home-like, low technological maternity care. In order to overcome physician resistance to non-traditional maternity care, alternative birth center policies eliminate all women who are expected to have a complicated pregnancy or delivery. Physician resistance to alternative birthing is publicly based on the issue of maternal and infant safety. Additional issues, however, are that physicians fear economic competition and resist loss of control over obstetric practice. This paper (1) traces the historical antecedents and social factors leading to the alternative birth movement, (2) describes the types of alternative birthing methods, and (3) describes ways in which the obstetrical community has maintained and rationalized dominance over the birthing process.

Anderson R, Greener DA **descriptive analysis of home births attended by CNMs in two nurse-midwifery services**Journal of Nurse-Midwifery. 36(2):95-103, 1991 Mar-Apr.This study

examined outcome data from two nurse-midwifery operated home birth services in Texas. All clients who planned a home birth within the two services during 1987 comprised the population. Analyses revealed that women choosing home birth with these nurse-midwives were more frequently married, usually white, and more educated when compared with the overall U.S. childbearing population. Analgesia, episiotomy, and cesarean delivery were all found at lower rates than is reported when birth occurs in a hospital setting; complications occurred less frequently or at similar rates to those reported in the home birth literature and national statistics. Research, educational, and clinical implications of the study are discussed.

Tyson H**Outcomes of 1001 midwife-attended home births in Toronto, 1983-1988***Birth*. 18(1):14-9, 1991 Mar. A retrospective descriptive study of 1001 midwife-attended home births in Toronto, Ontario, was carried out between January 1983 and July 1988. Interviews with 26 midwives and reviews of client records provided data on maternal age, socio-economic status, gestation, ruptured membranes, length of labor, episiotomies and perineal lacerations, transfer to hospital of mother or baby or both, infant resuscitation, and breastfeeding. Of 1001 planned home births, 361 involved primiparous women, of whom 245 (68%) remained at home and 116 (32%) required transfer of mother or baby to hospital during labor or the first four postpartum days. Of the 640 multiparous births, 591 (92%) women remained at home and 49 (8%) required transfer to hospital. Among women transferred, 91 had spontaneous vaginal births, 34 had forceps deliveries, and 35 had cesarean sections. Variables significantly associated with maternal transfer for both primiparas and multiparas were length of latent and active phases of the first stage of labor, length of the second stage of labor, and duration of ruptured membranes. Five neonates were transferred and two died, one each after birth at home and in hospital. There were no maternal deaths. The proportion of mothers breastfeeding without supplement at 28 days postpartum was 98.6 percent.