NURSE-MIDWIFERY IN 2008: Evidence-Based Practice

A Summary of Research on
Midwifery Practice in the United States

AMERICAN COLLEGE of NURSE-MIDWIVES
With women, for a lifetime®

Revised June 2008

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PHILOSOPHY OF THE AMERICAN COLLEGE OF NURSE-MIDWIVES

We, the midwives of the American College of Nurse-Midwives, affirm the power and strength of women and the importance of their health in the well-being of families, communities and nations. We believe in the basic human rights of all persons, recognizing that women often incur an undue burden of risk when these rights are violated.

We believe every person has a right to:

- Equitable, ethical, accessible quality health care that promotes healing and health
- Health care that respects human dignity, individuality and diversity among groups
- Complete and accurate information to make informed health care decisions
- Self-determination and active participation in health care decisions
- Involvement of a woman's designated family members, to the extent desired, in all health care experiences

We believe the best model of health care for a woman and her family:

- Promotes a continuous and compassionate partnership
- Acknowledges a person's life experiences and knowledge
- Includes individualized methods of care and healing guided by the best evidence available
- Involves therapeutic use of human presence and skillful communication

We honor the normalcy of women's lifecycle events. We believe in:

- Watchful waiting and non-intervention in normal processes
- Appropriate use of interventions and technology for current or potential health problems
- Consultation, collaboration and referral with other members of the health care team as needed to provide optimal health care

We affirm that midwifery care incorporates these qualities and that women's health care needs are well-served through midwifery care.

Finally, we value formal education, lifelong individual learning, and the development and application of research to guide ethical and competent midwifery practice. These beliefs and values provide the foundation for commitment to individual and collective leadership at the community, state, national and international level to improve the health of women and their families worldwide.

Revised: September 2004

INTRODUCTION

The vast majority of midwives in the United States are Certified Nurse-Midwives (CNMs) and Certified Midwives (CMs); according to the American Midwifery Certification Board, there are currently 11,320 CNMs and CMs. Since 1991, the number of midwife-attended births in the United States has nearly doubled. CNMs are licensed and have prescriptive authority in every state. CMs are licensed in three states. The growth of midwifery in the US has been supported by published research which demonstrates that CNMs (when compared with obstetrician/gynecologists) provide high-quality care with comparable or better outcomes, high levels of patient satisfaction, and at lower costs due to fewer unnecessary, invasive, and expensive technologic interventions.

This document offers an overview of research and statistics that describe midwifery practice in the United States up to 2008.

Additional information is available on the ACNM web site at www.midwife.org.

Our country is in dire need of a movement to reduce the medicalization of childbirth and routine use of unnecessary interventions for low-risk women in the United States. Midwives are absolutely essential to that movement.

Lorrie Kline Kaplan
ACNM Executive Director

DEFINITION OF MIDWIFERY PRACTICE

Midwifery practice, as conducted by certified nurse-midwives and certified midwives, is the independent management of women's health care focusing particularly on common primary care issues, family planning and gynecologic needs of women, pregnancy, childbirth, the postpartum period, and the care of the newborn. The certified nurse-midwife and certified midwife practice within a health care system that provides for consultation, collaborative management, or referral, as indicated by the health status of the client. Certified nurse-midwives and certified midwives practice in accord with the Standards for the Practice of Midwifery, as defined by the American College of Nurse-Midwives (ACNM).

DEFINITION OF A CERTIFIED NURSE-MIDWIFE AND CERTIFIED MIDWIFE

A certified nurse-midwife (CNM) is an individual educated in the two disciplines of nursing and midwifery, who possesses evidence of certification according to the requirements of ACNM. A certified midwife (CM) is an individual educated in the discipline of midwifery, who possesses evidence of certification according to the requirements of ACNM.

JOINT STATEMENT OF PRACTICE RELATIONS BETWEEN OBSTETRICIAN-GYNECOLOGISTS AND CERTIFIED NURSE-MIDWIVES/CERTIFIED MIDWIVES

The American College of Obstetricians and Gynecologists (ACOG) and the American College of Nurse-Midwives (ACNM) recognize that in those circumstances in which obstetrician-gynecologists and certified nurse-midwives/certified midwives collaborate in the care of women, the quality of those practices is enhanced by a working relationship characterized by mutual respect and trust as well as professional responsibility and accountability. When obstetrician-gynecologists and certified nurse-midwives/certified midwives collaborate, they should concur on a clear mechanism for consultation, collaboration and referral based on the individual needs of each patient.

Recognizing the high level of responsibility that obstetrician-gynecologists and certified nurse-midwives/certified midwives assume when providing care to women, ACOG and ACNM affirm their commitment to promote appropriate standards for education and certification of their respective members, to support appropriate practice guidelines, and to facilitate communication and collegial relationships between obstetrician-gynecologists and certified nurse-midwives/certified midwives.

Approved October 1, 2002 by the American College of Nurse-Midwives and American College of Obstetricians and Gynecologists

HIGH QUALITY CARE AND EXCELLENT OUTCOMES

Certified nurse-midwives caring for low-risk women improve the infant mortality rate in both hospitals and birth centers when compared to physicians caring for equally low-risk women.

- Birth certificate data were examined for all singleton vaginal deliveries between 35 and 43 weeks. After adjusting for sociodemographic and medical risk factors, the outcomes for physicians and nurse-midwives were compared:
  - 33% lower risk of neonatal mortality with CNM-attended births;
  - 31% lower risk of low birth weight babies with CNM-attended births;
  - 19% lower infant mortality rate for CNM-attended births.

  This nationwide study supports the findings of other studies that women receiving care from certified nurse-midwives have excellent birth outcomes.[1]

- In a study published in *Obstetrics & Gynecology*, which compared obstetrician/gynecologists, family physicians, and certified nurse-midwives who delivered prenatal care, "Certified nurse-midwives recorded a standard of practice that most closely matched that recommended by American College of Obstetricians and Gynecologists."[2]

- A review of maternity care processes by nurse-midwives and physicians concluded that care processes are heavily influenced by the provider group:
  - Women in the nurse-midwife group were much more likely to experience prenatal education focusing on health promotion and risk reduction activities.
  - Women in the nurse-midwife group also experienced, in general, a more hands-on approach that relied on less technologic interventions and a closer supportive relationship with their provider during labor and delivery.
  - Women in the physician group were much more likely to have care based on expensive medical interventions such as invasive tests during intrapartum care.[3]

- A large matched cohort study demonstrated that women who received their care in a CenteringPregnancy® group experienced a significant reduction in prematurity and low birth weight when compared to their study counterparts who received traditional prenatal care.[4] CenteringPregnancy® is a midwifery-based, woman-centered model which incorporates risk assessment, support, and education into a unified program of group prenatal care.

- Fewer women managed collaboratively by certified nurse-midwives and obstetricians were admitted in early labor than women managed only by obstetricians.
  - Women receiving obstetrician-only care admitted in early labor had 6% to 34% fewer spontaneous vaginal deliveries.[5]

- The majority of CNM-attended births occur in hospitals. In 2005, 96.7 % of CNM-attended deliveries occurred in hospitals, 2% in freestanding birth centers, and 1.3% in the home.[6]

- The reported outcomes of intended home births in nurse-midwifery practices demonstrate safe, high-quality care. Reports on the outcomes of one study demonstrated that:
  - Only 9.1 % of women were transferred to the hospital during labor or postpartum
  - Just 1.1 % of infants were transferred to the hospital[7]
- Certified nurse-midwives are less likely to be named as co-defendants in a plaintiff's liability claim against an obstetrician when compared with other potential co-defendants.[8]

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1 MacDorman MF, Singh GK. Midwifery care, social and medical risk factors, and birth outcomes in the USA. J Epidemiol Community Health, 1998; 52:310-317

2 Baldwin LM, Raine T, Jenkins LD, et al. Do providers adhere to ACOG standards? The care of prenatal care. Obstet Gynecol 1994; 84:549-56.

3 Oakley D, Murland T, Mayes F, Hayashi R, Petersen BA, Rorie C, Anderson F., Processes of care, comparisons of certified nurse-midwives and obstetricians. Journal of Nurse-Midwifery 1995; 40:5:399-409

4 Ickovics JR et al.Group prenatal care and preterm birth weight: results from a matched cohort study at public clinics.

5 Jackson DJ, Lang JM, Ecker J, Swartz WH, Heeren T. Impact of collaborative management and early admission in labor on method of delivery. JOGNN 2003; 32:2:147-157.

6 Martin JA, Hamilton BE, et. al. Births: Final data for 2005. National vital statistics reports; vol 56 no 6. Hyattsville, MD: National Center for Health Statistics. 2007.

7 Murphy PA, Fullerton J. Outcomes of intended home births in nurse-midwifery practice: a prospective descriptive study. Obstet Gynecol 1998; 92:461-470

8 Survey of nurse- midwives as employees and co-defendants in liability claims, American College of Obstetricians and Gynecologists, 2003. See

CERTIFIED NURSE-MIDWIVES ARE PRIMARY CARE PROVIDERS

The primary health care of women was incorporated into the ACNM Core Competencies for Basic Midwifery Practice in 1997.

- Just over 50% of 581 certified nurse-midwives surveyed on their scope of practice in the 1999-2000 ACC Task Analysis of American Nurse-Midwifery and Midwifery Practice reported providing non-reproductive primary care services. A partial list of clinical primary care conditions that are managed independently or collaboratively by CNMs is included in this reference.[9]

- Outcomes of primary care services provided by nurse-practitioners, including nurse-midwives, compare favorably to those of physicians. A large prospective randomized controlled trial (n=1316) published in 2000 comparing primary care outcomes for patients treated by nurse-practitioners to those treated by physicians demonstrated no significant differences in health status, health service utilization, or patient satisfaction between groups.[10]

- A cross-case qualitative analysis exploring the components of Innovation and Quality Improvement in Health Care Micro-Systems issued by the Institute of Medicine in 2000 demonstrated that the systems with the highest levels of quality and innovation used models based on interdependent multidisciplinary teams where free flow of information formed the basis for relationships. The study findings indicated furthermore that in the systems with the lowest levels of quality improvement and innovation, "often physicians have difficulty working with non-physician providers, giving them the control."[11]

HIGH LEVELS OF PATIENT SATISFACTION

Surveys show that women like having nurse-midwives as their care givers. This can have a positive effect on patient follow-up, compliance, and health care outcomes.

- Patients accept the collaborative practice model and feel that it offers quicker appointments, more time with the provider, more health information, and more specific diet information than do physician-only practices.[12]

- "Certified nurse-midwives are more adept than physicians at providing services that depend on communication with patients and preventative actions," according to a review published by the Office of Technology Assessment of the US Congress.[13]

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http://www.acog.org/from_home/publications/press_releases/nr07-16-04.cfm for more information.]

9 Oshio S, Johnson P, Fullerton JT. 2000. Task analysis of American nurse-midwifery and midwifery practice: a project report and survey analysis of the practice of nurse-midwifery and midwifery within the United States. ACNM Certification Council, Landover, MD: p.12

10 Mundinger MO et al. Primary care outcomes in patients treated by nurse practitioners or physicians: a randomized trial.

11 Donaldson M & Mohr J. 2000. Exploring Innovation and Quality Improvement in Health Care Micro-Systems: A Cross-Case Analysis http://www.nap.edu/catalog/10096.html , p 48)

12 Hankins GD, Shaw SB, Cruess DF, Lawrence HC, Harris CD. Patient satisfaction with collaborative practice. Obstet and Gynecol 1996;88:6:1011-1015.]

13 Source: US Congress, Office of Technology Assessment. Nurse practitioners, physician assistants and certified nurse-midwives: A policy analysis. Health Technology Case Study 37, OTA-HCS-37. Washington, DC: US Government Printing Office, 1986.

FEWER CESAREAN SECTIONS

Cesarean section was uncommon in the United States until the 1980s; today almost one in three women are delivering by cesarean section. However, there are no data to support claims that maternal and child health outcomes have improved from the increase of this major surgery.

- Between 1970 and 2005, the cesarean section delivery rate in the United States increased dramatically, from 5% to 31%.[14] To date, there is no published research that demonstrates significant maternal or child health indicators have improved in the wake of the increased cesarean section rate.[15]

- While all standard medical and obstetric procedures are accessible to CNM clients, their application is based on the condition of the woman and her baby. CNMs provide intermittent fetal monitoring for low risk mothers, allowing greater patient mobility and comfort, and resulting in better outcomes. This care is less invasive, less expensive, and less likely to result in misdiagnosis of fetal distress. As a result, unnecessary cesarean sections, forceps and vacuum extractions are avoided. One study determined that:
    - The cesarean section rate for clients of CNMs was 4.8 % lower than obstetricians.
    - Certified nurse-midwives used 12.2 % fewer interventions (e.g., unnecessary epidural anesthesia, episiotomies, and instrumental deliveries) than physicians with comparable outcomes for low-risk women. [16]

- Women who received care from a collaborative practice of CNMs and obstetricians with the option of delivering at a freestanding birth center were more likely to have a normal spontaneous vaginal delivery. Specifically, the data in this study demonstrated that 80.9% of patients in the collaborative practice group delivered normally, versus only 62.8% in an all physician practice. [17]

- The National Birth Center Study, published by the *New England Journal of Medicine* in 1989, reported on the outcomes of care for more than 11,000 women who were admitted in labor to more than 80 birth centers throughout the country. The results included:
    - No maternal mortality
    - Neonatal mortality of 1.3 births/1000
    - Cesarean section rate approximately one half the rate found in studies of low risk, in-hospital births [18]

- A study of all births >35 weeks gestation from 1996 and 1999 in an Indian Health Service hospital in Santa Fe, NM, where nurse-midwives primarily manage all labors and attend all vaginal births, reported a total cesarean rate of 9.6%. This rate was much lower than the rates reported for the state of NM (16.4%) and the nation (21.2%) in the same time period, despite a greater frequency of medical and demographic risk factors observed in the study population.[19]

14 Martin JA, Hamilton BE, et. al. Births: Final data for 2005. National vital statistics reports; vol 56 no 6. Hyattsville, MD: National Center for Health Statistics. 2007.

15 Births: Preliminary Data for 2003. NVSR Volume 53, Number 9. 18 pp. (PHS) 2004-1120. Online at http://www.cdc.gov/nchs/pressroom/04facts/birthrates.htm.

16 Rosenblatt RA, Dobie SA, Hart LG, Schneeweiss R, Gould D, Raine TR, et. al. Interspeciality differences in the obstetric care of low-risk women. Am J of Public Health 1997; 387:344-351

17 Source: Jackson DJ, Lang JM, Swartz WH, Ganiats TG, Fullerton J, Ecker J, Nguyen U. Outcomes, safety, and resource utilization in a collaborative care birth center pro Am J of Public Health 2003. 93; 6:999-1006

18 Rooks JP, Weatherby NL, Ernst EKM, Stapleton S, Rosen D, Rosenfeld A. Outcomes of care in birth centers: the national birth center study. N Engl J of Med 1989; 321:1804-1811

19 Mahoney, S, Halinka Malcoe, L. Cesarean Delivery in Native American Women: Are Low Rates Explained by Practices Common to the Indian Health Service? BIRTH 32:3, pages 170-178, September 2005.

PROVIDING COST-EFFECTIVE CARE

Health care payors benefit because nurse-midwifery care is cost-effective.

- The lower costs associated with nurse-midwifery care are due to:
  - Lower rates of technological intervention
  - Shorter lengths of stay in hospitals
  - Lower payroll costs[20]

- Women in collaborative care had shorter lengths of stay in the birth facility, with 28% more being discharged before 24 hours, and almost 6% fewer having stays longer than 72 hours. During pregnancy, 9% fewer women in collaborative care than in physician only care made visits to the emergency room. Overall neonatal outcomes were similar across these groups.
  - This suggests that both the collaborative care model and the traditional physician-based perinatal care model offer similar safe outcomes for mothers and infants, but that these two models are also associated with substantially different levels of use of medical resources and procedures. [21]

- In a nationwide comparison of birth center costs with hospital costs, it is estimated that:
  - If 100,000 births were attended in birth centers, not only would access to care be greatly improved, but annual savings would total more than $314 million
  - For every 1,000 women who avoid unnecessary cesarean birth as a result of choosing a birth center, savings could amount to at least $7.4 million
  - This research is based on the following assumptions:
    - All charges include professional and facility fees
    - Birth center charges are based on an average stay of 9 hours postpartum and include a comprehensive education program for early discharge as well as careful and continuous home follow-up
    - Hospital charges for vaginal birth are based on a stay of 48 hours postpartum and include ancillary charges
    - Hospital charges for cesarean birth are based on a stay of 72 hours postpartum and include ancillary charges[22]

- Guidance from the Institute of Medicine suggests that for ambulatory care, nurses and nurse practitioners [ed., including nurse-midwives] can manage a substantial proportion of the work. Only the most complicated work would be directed to the more highly trained practitioners.[23]

20 Gabay M, Wolfe SM. Nurse-midwifery: the beneficial alternative. Public Health Reports 1997; 112:386-395

21 Jackson DJ, Lang JM, Swartz WH, Ganiats TG, Fullerton J, Ecker J, Nguyen U. Outcomes, safety, and resource utilization in a collaborative care birth center program compared with traditional physician-based perinatal care. American Journal of Public Health 2003. 93; 6:999-1006

22 Health Insurance Association of America and National Association of Childbearing Centers Annual Survey Data, 1995.

23 Excerpted from pages 120-122 of "Crossing the quality chasm: a new health system for the 21st century" by the Committee on Quality Health Care in America at the Institute of Medicine. Copyright 2001. Summary available online at http://www.nap.edu/execsumm/0309072808.html

WHAT WOMEN SAY

Patients from The Maternity Center, Bethesda, MD

- "Excellent personal care, prompt call-back after leaving message with answering service, excellent in-depth explanations when I found myself in 'special circumstances.' Keep it up! I also appreciate the option of selecting the birth center or hospital for a place to give birth."

- "I wish all women could find the experience of natural care offered here. I will be forever grateful for the full birth experiences I have had laboring and delivering here. My birth experiences will forever be a part of who I am and something for which I am so grateful. Thank you for being here."

- "The best part of the maternity center is the friendly and helpful staff and midwives. Especially during the birthing process - everyone seems to know exactly what to do and say - thank you!"

- "I am not suggesting that the midwives are the only good thing about [an] obstetric practice - but they are by far the best thing!"

WHAT THE EXPERTS SAY

- "Midwives understand and protect the normal physiology of childbirth, and provide safe, satisfying and supportive care to women and their babies." - Maureen P. Corry, MPH, Executive Director, Childbirth Connection

- "Studies demonstrate over and over again not only the high-quality of care that midwives offer to women, but also the enormous satisfaction that women experience with their midwifery care." - Judy Norsigian, Executive Director, Our Bodies Ourselves

- "Midwives offer evidence-based health care services. In today's world of high technology, midwifery services provide the individualized care women need." - Doug Laube, MD, Former President, American College of Obstetricians and Gynecologists

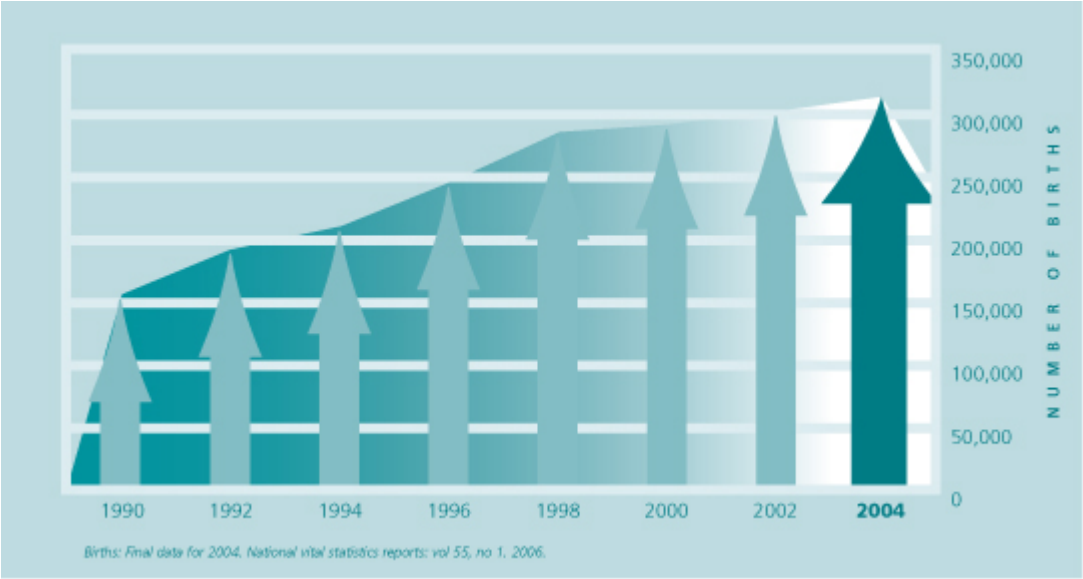
- "The best of both possible worlds, in my opinion, is to have a nurse-midwife at your side in a hospital. Then you get the nurturing and the advocacy and the backup if there are complications." - Ann Pleshette Murphy, Parenting Contributor, *Good Morning America*

"Midwives are my heroes," – Ricki Lake, Executive Producer of *The Business of Being Born*

BIRTHS ATTENDED BY CERTIFIED NURSE-MIDWIVES

- There were 306,377 births attended by certified nurse-midwives (CNMs) in the U.S. in 2005, according the National Center for Health Statistics.[24] This figure accounts for 7.4% of all births and 10.6 % of all spontaneous vaginal births.
- Midwife-attended births have been reported on birth certificate data since 1975. In 1975, CNMs delivered 19,686 live-born infants in hospitals, or 0.6% of all births that year.
- In 1989, the birth certificate form was altered to distinguish between different types of midwives (nurse-midwives, other midwives). That year, CNMs attended the births of 132,286 infants, or 3.2% of all births and 4% of all spontaneous vaginal births. In 2005, the percentage of midwife-attended births by certified nurse midwives was 94.2%.
- The majority of CNM-attended births occur in hospitals. In 2005, 96.7% of CNM-attended deliveries occurred in hospitals, 2% in freestanding birth centers and 1.3% at home.
- Due to underreporting of midwife-attended deliveries, these data should be considered lower estimates of the actual number of midwife-attended births.

Trends in Certified Nurse-Midwife Attended Births (1990-2004)



24 Martin JA, Hamilton BE, et. al. Births: Final data for 2005. National vital statistics reports; vol 56 no 6. Hyattsville, MD: National Center for Health Statistics. 2007.