OFFICE OF INSPECTOR GENERAL

The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health and Human Services' (HHS) programs as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by three OIG operating components: the Office of Audit Services, the Office of Investigations, and the Office of Evaluation and Inspections. The OIG also informs the Secretary of HHS of program, and management problems, and recommends courses to correct them.

OFFICE OF AUDIT SERVICES

The OIG's Office of Audit Services (OAS) provides all auditing services for HHS, either by conducting audits with its own audit resources or by overseeing audit work done by others. Audits examine the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities and are intended to provide independent assessments of HHS programs and operations in order to reduce waste, abuse, and mismanagement and to promote economy and efficiency throughout the Department.

OFFICE OF INVESTIGATIONS

The OIG's Office of Investigations (O1) conducts criminal, civil, and administrative investigations of allegations of wrongdoing in HHS programs or to HHS beneficiaries and of unjust enrichment by providers. The investigative efforts of O1 lead to criminal convictions, administrative sanctions, or civil money penalties. The OI also oversees State Medicaid fraud control units which investigate and prosecute fraud and patient abuse in the Medicaid program.

OFFICE OF EVALUATION AND INSPECTIONS

The OIG's Office of Evaluation and Inspections (OEI) conducts short-term management and program evaluations (called inspections) that focus on issues of concern to the Department, the Congress, and the public. The findings and recommendations contained in these inspection reports generate rapid, accurate, and up-to-date information on the efficiency, vulnerability, and effectiveness of departmental programs.

OEI's Atlanta Regional Office staff prepared this report under the direction of Jesse J. Flowers, Regional Inspector General, and Christopher Koehler, Deputy Regional Inspector General. Principal OEI staff included:

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A SURVEY OF CERTIFIED
NURSE-MIDWIVES
EXECUTIVE SUMMARY

PURPOSE

To describe the practices of certified nurse-midwives and what they perceive as barriers to their profession.

BACKGROUND

A certified nurse-midwife (CNM) is a registered nurse who is educated in the two disciplines of nursing and midwifery, and who has been certified by the American College of Nurse-Midwives (ACNM). CNMs may provide prenatal care, intrapartum care, postpartum care, normal newborn care, and well-woman gynecology.

Access to prenatal care and the nation’s high infant mortality rate are growing national issues. Between 1988 and 1992, the Secretary, Department of Health and Human Services, expressed strong concern about infant mortality, and he recently stated that all children deserve a "healthy start." In 1989 the nationwide infant mortality rate was 9.8 per 1000. In 1990 over one half million pregnant women had little or no access to prenatal care.

A decrease in physician obstetrical care providers throughout the nation exacerbates the problem of access to prenatal care. Many obstetrician/gynecologists (OB/GYNs) and family physicians no longer deliver babies largely due to fears of malpractice suits and many will not take Medicaid patients.

Certified nurse-midwives (CNMs) can make prenatal care more accessible. They are historically credited with improving geographic distribution of care and providing care to underserved populations in inner cities and remote areas.

METHODOLOGY

We mailed a survey questionnaire to a random sample of 542 CNMs residing in the United States. In addition, we reviewed the practice of 26 CNMs at 5 settings, interviewed knowledgeable people, and reviewed literature on CNM practices and barriers.

FINDINGS

CNMs ARE WELL QUALIFIED AND PRACTICE IN A WIDE VARIETY OF SETTINGS

- Most CNMs are practicing their profession.
- Most CNMs are women who are well educated and have extensive experience in their profession.
o Few CNMs work in rural areas.
o CNMs provide services in a variety of settings.
o Most CNMs work for an organization or institution.
o CNMs serve a wide range of patients.

**CNMs CITE BARRIERS TO THEIR PROFESSION**

o CNMs cite attitudes and perceptions of the medical community as the most important barrier to their profession.

o Other barriers frequently identified by CNMs included
  - Limitations on prescriptive privileges,
  - Restrictive hospital admitting privileges, and
  - Attitudes and perceptions of the general public.

o CNMs who are closely affiliated with physicians and physician-governed organizations are less likely to cite barriers.
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INTRODUCTION

PURPOSE

To describe the practices of certified nurse-midwives and what they perceive as barriers to their profession.

DEFINITIONS

Certified Nurse-Midwife: A certified nurse-midwife (CNM) is a registered nurse who is educated in the two disciplines of nursing and midwifery. The Omnibus Reconciliation Act of 1987 defines "certified nurse-midwife" to mean a registered nurse who has successfully completed a program of study, including clinical experience in nurse-midwifery, has been certified by the American College of Nurse-Midwives (ACNM), and provides care for mothers and babies throughout the maternity cycle.

CNM Services: CNMs may provide services to normal, healthy women and their babies, including prenatal care; labor and delivery management; postpartum care; normal newborn care; and well-woman gynecology.

Infant Mortality Rate: The infant mortality rate is the measurement of the number of deaths in the first year of life for every 1000 live births. The infant mortality rate is a generally-accepted indicator of the state of health care in a nation.

BACKGROUND

Midwifery and Prenatal Care

A decrease in the number of physician obstetrical care providers throughout the nation exacerbates a problem of access to prenatal care, which is "the single factor most likely to prevent low birthweight babies and infant deaths."¹ CNMs are historically credited with improving geographic distribution of care and providing care to underserved populations, care that would otherwise be unavailable in inner cities and remote areas.² Three separate organizations, the National Academy of Science's Institute of Medicine, the Southern Governor's Association Task Force on Infant Mortality, and the Children's Defense Fund, have highlighted the contributions of CNMs to the prevention of low birthweight.³

Nurse-midwives have existed in this country since the 1920s.⁴ In 1971 the American College of Nurse-Midwives (ACNM) officially established the profession of certified nurse-midwife (CNM) through a national certification examination which assesses the competency of each nurse-midwife⁵. The Department of Health and Human Services (HHS) grants reimbursement eligibility under Medicaid and Medicare only to CNMs certified by ACNM. As of August of 1991, over 4500 nurse-midwives had been certified by ACNM.⁶
The ACNM grants certification in nurse-midwifery to individuals who:

1. are registered nurses, licensed in one of the United States or United States territories;
2. have graduated from a nurse-midwifery educational program approved, or with approval pending, by ACNM; and
3. have achieved a passing score on the ACNM examination.

In 1989 the American Hospital Association conducted a survey and found that of 2440 responding hospitals, 11 percent employed CNMs and another 8 percent contracted with CNMs for their services.

In 1987 midwives attended only 2.6 percent of approximately four million women who gave birth in U.S. hospitals. In 1988, midwives were the principal and only birth attendant for at least 70 percent of the births in European countries. We hope the information provided in this report will help the Department ascertain how CNMs might alleviate problems.

Prenatal Care and Infant Mortality

Access to adequate prenatal care and the nation’s high infant mortality rate are growing national issues. In 1989 the nationwide infant mortality rate was 9.8 per 1000. In 1987, the U.S. ranked 19th worldwide in infant mortality. In 1990 over one half million pregnant women had little or no access to prenatal care.

Many obstetrician/gynecologists (OB/GYNs) no longer deliver babies largely due to fears of malpractice suits and many will not take Medicaid patients. Family physicians are also discontinuing or decreasing the provision of obstetrical care.

Government Programs to Decrease Infant Mortality

The Secretary and other officials of HHS are concerned about infant mortality and are committed to developing programs and initiatives which address the problem. Various programs and organizations have been developed throughout this century to improve access to prenatal care and to lower the infant mortality rate. Some of the programs and organizations are highlighted below.

1. In 1935, Title V of the Social Security Act authorized grants for maternal and child health. In 1981 Title V was amended, creating Maternal and Child Health Block Grants to provide consolidated funding for programs to reduce infant mortality.
The Medicaid program began funding prenatal and postnatal care for low income women and infants in the 1960s. In recent years the program has been amended to expand services.

In the 1970s the Public Health Services Act authorized grants for establishing Community Health Centers and Migrant Health Centers. These centers include perinatal and prenatal care among their services. Beginning in Fiscal Year 1988, Congress appropriated funds for the Comprehensive Perinatal Care Program to improve pregnancy outcomes and the health status of women and infants who are served by Community and Migrant Health Centers.

In 1974 the U. S. Department of Agriculture funded the first Supplemental Food Program for Women, Infants, and Children (WIC). This program, now nationwide, provides nutritional education and supplemental food to women who are at nutritional risk and are low-income, pregnant or nursing and infants and young children who are at nutritional risk.

The Rural Health Clinic Services Act authorized grants in 1977 which allowed clinics to provide CNM services as defined under the Medicare program.

The Omnibus Reconciliation Act of 1987 (OBRA 87) granted reimbursement eligibility to CNMs under the Medicare and Medicaid programs by expanding the definition of "mid-level practitioner."

The Secretary, Department of Health and Human Services, has initiated a "Healthy Start" program. The program's purpose is to reduce infant mortality through additional support for comprehensive service delivery. The HHS has made grants to fifteen communities for developing innovative approaches to achieve this objective.

METHODOLOGY

To obtain information on CNM practices and barriers, we mailed a survey questionnaire to a random sample of CNMs. We also interviewed selected CNMs at their place of practice, and individuals in other organizations who are knowledgeable about CNM practices. Finally, we conducted a literature review of CNM practices and barriers.

We obtained from ACNM a universe of 2985 CNMs who were ACNM members. From this universe, we randomly selected 542 CNMs residing in the United States. We mailed all 542 CNMs a survey questionnaire designed to obtain information on their practices and their perceptions of barriers to their profession. Four hundred and sixty-two CNMs responded to the survey questionnaire. We then eliminated 124 CNMs who worked for the military, the Indian Health Service (IHS), or who were not presently practicing as a CNM. We used responses from the remaining 338 CNMs for
our analysis of CNMs' practices and barriers to their profession. The 338 CNMs represent slightly more than 62 percent of our sample of 542.

Our survey questionnaire contained three parts. The first part requested demographic information, such as age, salary range, years of experience, and sex. The second part contained a list of 14 possible barriers from which CNMs were instructed to select as many as they perceived to be a barrier to their profession. The third part contained the same 14 possible barriers, plus a category called "other" and one called "no barriers." In the third part CNMs were instructed to choose the one most important barrier to their profession. Appendix A contains the entire survey instrument and a summary of sampled CNMs' responses to each question.

To obtain a better understanding of CNM practices and barriers, we reviewed the practices of 26 CNMs at 5 employment locations. We also reviewed numerous published reports, articles, and papers on the practice of midwifery and barriers to that profession.

We obtained policy statements on midwifery from the American Hospital Association, the American College of Obstetricians and Gynecologists and the American Academy of Family Physicians. We attempted to obtain a statement from the American Medical Association. However, we did not make a systematic attempt to determine the general view of physicians, hospitals, and other professionals or health care entities on the profession of midwifery. Our study is primarily based on the response of CNMs themselves.
FINDINGS

CNMs ARE WELL QUALIFIED AND PRACTICE IN A WIDE VARIETY OF SETTINGS

Most CNMs Are Practicing Their Profession

- Of the 462 CNMs who responded to the survey, 78 percent (361) of them are actively engaged in their profession.

Most CNMs Are Women Who Are Well Educated And Have Extensive Experience In Their Profession

Ninety-nine percent of the CNM respondents were women and the majority held at least a Masters degree and had practiced their profession for at least six years.

- Approximately 61 percent of the CNMs held a Masters degree in Nursing and nearly two and a half percent held a Doctorate in Nursing.
- About 60 percent of the CNMs had practiced midwifery for 6 years or longer, and twenty-six percent had between 11 and 20 years of practice.

Most CNMs earned at least $30,000, and a few earned over $80,000.

- About 88 percent of the CNMs earned over $30,000 and almost 34 percent earned between $40,000 and $49,999.
- Less than one percent (.9 percent) earned over $80,000.

Few CNMs Work In Rural Areas

The vast majority of the CNMs practiced in urban and suburban areas.

- Sixty percent and 23 percent respectively worked in urban and suburban settings.
- Only eleven percent practiced in rural areas.

CNMs Provide Services In A Variety Of Settings

Most CNM outpatient services are provided in either the private offices of a physician or a CNM practice.

- Thirty-one percent of CNMs provided their outpatient services in the private offices of either a physician or a CNM practice.
About 19 and 18 percent respectively practiced at community health centers and teaching hospitals.

About 11 percent practiced at an HMO.

Small percentages (under 5 percent) of CNMs provided their outpatient services in freestanding birthing centers, hospital birthing centers or rooms, and homes.

Less than one percent of CNMs provided outpatient services in rural health centers.

Most CNMs provided intrapartum (birth) care in traditional settings, such as hospital birthing centers, birthing rooms, or traditional hospital delivery rooms.

Forty-five percent of CNMs provided intrapartum care in hospital birthing centers or birthing rooms.

Twenty-nine percent and 5 percent respectively provided intrapartum care in traditional hospital delivery rooms and freestanding birthing centers.

One and a half percent of the CNMs delivered babies at home because they lacked hospital admitting privileges.

Only .6 percent said that they delivered babies at home by choice.

About 17 percent of the CNMs said they did not deliver babies at all.

Appendix B summarizes all settings where CNMs provide outpatient and intrapartum services.

Most CNMs Work For an Organization or Institution

Most CNMs were employed full-time by hospitals and medical centers. Very few were self-employed or in partnership with other nurse-midwives.

Only 8 percent (25) of the 314 respondents who answered this question, worked independently as self-employed CNMs or in a partnership with other nurse-midwives.

Nearly half worked for a hospital or medical center.

One CNM did not respond to this question, and 23 CNMs responded by reporting multiple, part-time employers rather than one full-time employer. These 24 people were not included in our analysis. The following chart shows full-time employers of 314 of the 338 CNMs included in our analysis.
Appendix C provides a brief case study on CNM practices at each of five selected organizations.

**CNMs Serve a Wide Range of Patients**

CNMs accepted both insured and uninsured patients, and a large percentage of them accepted Medicaid patients.

- Seventy percent of the CNMs responding to our survey questionnaire said they accepted Medicaid patients, and nine percent served Medicare patients.
- About 21 percent said they provided uncompensated care.
- Sixty-two percent said they had self-paying patients.
- Sixty-one percent said they had third-party payer patients and thirty-two percent served HMO patients.
CNMs CITE BARRIERS TO THEIR PROFESSION

CNMs Considered Attitudes And Perceptions Of The Medical Community To Be The Most Significant Barrier

We asked the CNMs to select the most important barrier from a list of 14 possible barriers. Three hundred and seventeen of the 338 CNMs responded to this question. They selected attitudes and perceptions of the medical community as the most significant barrier. The CNMs cited a lack of physician support as the primary reason for medical community attitudes and perceptions being a barrier. Appendix D summarizes the most important barriers identified by 317 of the 338 CNMs responding to our survey questionnaire, ranked in order of importance.

Medical community attitudes and perceptions may also have an impact on other barriers discussed below—particularly prescriptive privileges and hospital admitting privileges.

Our examination of the policies of key medical organizations indicates that there is a basis for CNMs’ perceptions. These organizations discourage independent CNM practices as a matter of policy. For example, the American Medical Association resolved in 1985 to "oppose new legislation extending medical practice to nonphysician providers." Likewise, the American Academy of Family Physicians (AAFP) issued a policy statement in 1990 which said, in part:

- "The AAFP believes that ideally obstetrics should be practiced only by fully licensed, qualified physicians, however, the AAFP recognizes that the practice of medicine has many aspects and utilizes many resources in the responsible delivery of quality health care."

- Further, "The AAFP is strongly opposed to independent practice of obstetrics and gynecology by nonphysicians."

- Finally, "The CNM should not function independently as a health care practitioner. The AAFP believes that the certified nurse-midwife should only function as part of the health care team which includes a physician qualified in obstetrics. The certified nurse-midwife should be employed only as a means of providing limited care, always under the direction and responsible supervision of a practicing, licensed physician with all reimbursement for services being through the responsible supervising physician."

CNMs Cite Other Important Barriers To Their Profession

We asked CNMs to choose from the same list of 14 possible barriers all those which they perceived as barriers to their profession. They also provided reasons for choosing a barrier. The barriers identified most frequently were:
- **Limitations on prescriptive privileges:** Sixty-four percent of the CNMs sampled said their lack of prescriptive privileges is a barrier. Authority to independently prescribe, administer, and dispense drugs, immunizing agents, and devices necessary for the practice of midwifery is limited by State and local laws and regulations. Some CNMs included vitamins in these privileges.

- **Community attitudes and perceptions:** Sixty percent of the CNMs said community attitudes and perceptions is a barrier. CNMs sampled said how the general public perceives and comprehends their capabilities and services can limit their practices.

- **Medical community attitudes and perceptions:** Fifty-six percent of the CNMs said medical community attitudes and perceptions is a barrier. The CNMs cited lack of physician support as the primary reason for this barrier, which can influence many other barriers. As discussed above, when asked to select the single most important barrier to their profession, nearly 24 percent of the CNMs cited medical community attitudes and perceptions.

- **Restrictions on hospital admitting privileges:** Forty-three percent of the CNMs said lack of hospital admitting privileges is a barrier. Privileges are granted by a hospital governing board to allow health professionals to admit patients in their own name. CNMs said hospital policy may preclude them from admitting patients.

- **Medical malpractice insurance:** Malpractice insurance may become an important barrier to CNM practices. The 338 CNMs responding to our survey questionnaire ranked malpractice insurance eighth out of 14 barriers. However, if a recently proposed increase of between 45 and 47 percent in medical malpractice insurance premiums is approved, it could become a more important barrier for CNMs. The effective date of the increased rates has been delayed from August 1, 1991 pending further negotiations.

  CNMs earning less than $30,000 and between $70-80,000 cited malpractice insurance as a barrier (59 percent and 50 percent respectively) more frequently than CNMs in other salary ranges. Malpractice insurance is more frequently perceived as a barrier by CNMs who are in partnership with physicians, self-employed, or in partnership with other nurse-midwives than by CNMs in other employer categories.

Appendix E summarizes all of the barriers identified by the 338 CNMs responding to our survey questionnaire. The barriers are ranked based on the number of CNMs who selected them.
CNMs Who Are Closely Affiliated With Physicians and Physician-governed Organizations Are Less Likely To Perceive Barriers

Perceived barriers are influenced in part by employer. The table below shows the eight major employers of CNMs. The table further shows that CNMs who were closely affiliated with physicians or medical organizations were less likely to perceive barriers to their practices than were those CNMs who worked more independently, such as the self-employed.

Of the 338 responding CNMs, 314 identified their full-time employers and 298 of those said they worked for one of eight major employers listed in our questionnaire. The remaining 16 said they worked for small employers--consolidated in our questionnaire in a category called "other."

<table>
<thead>
<tr>
<th>Employer</th>
<th>Number of CNMs</th>
<th>Prescriptive Privileges</th>
<th>Community Attitudes &amp; Perceptions</th>
<th>Medical Community Attitudes &amp; Perceptions</th>
<th>Hospital Admitting Privileges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Employed</td>
<td>12</td>
<td>100</td>
<td>92</td>
<td>92</td>
<td>67</td>
</tr>
<tr>
<td>College or University</td>
<td>17</td>
<td>100</td>
<td>94</td>
<td>82</td>
<td>65</td>
</tr>
<tr>
<td>Partnership with Nurse-Midwife</td>
<td>13</td>
<td>92</td>
<td>77</td>
<td>77</td>
<td>54</td>
</tr>
<tr>
<td>Partnership with Physician</td>
<td>4</td>
<td>75</td>
<td>50</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>Hospital or Medical Center</td>
<td>145</td>
<td>64</td>
<td>53</td>
<td>52</td>
<td>30</td>
</tr>
<tr>
<td>Public Health Agency</td>
<td>15</td>
<td>60</td>
<td>67</td>
<td>53</td>
<td>60</td>
</tr>
<tr>
<td>HMO</td>
<td>31</td>
<td>58</td>
<td>55</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>Physician Practice</td>
<td>61</td>
<td>54</td>
<td>66</td>
<td>54</td>
<td>52</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>314</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Twenty-one CNMs said there are no barriers to their profession, regardless of employer, but most of them were clearly associated with the medical community. Fifteen of the 21 worked for a hospital, medical center, physician, or other medical organization. Three worked for a college or university. Two worked for someone other than one of the eight major employers identified in the survey questionnaire. Only one self-employed CNM said there were no barriers.

Our review of the literature tended to corroborate our findings relating to CNM practices and barriers. Appendix F summarizes our literature review findings.
APPENDIX A

SURVEY QUESTIONNAIRE AND
SUMMARY OF CNM RESPONSES TO EACH QUESTION

A -1
1. STATE OF PRIMARY PRACTICE SITE __

2. GENDER  334 FEMALE  4 MALE (Total: 338)

3. AGE
   __0  24 or YOUNGER
   __10 25 - 29
   __154 30 - 39
   __130 40 - 49
   __44 50 or OLDER

4. ARE YOU CURRENTLY IN CLINICAL PRACTICE AS A CNM?
   __338  YES
   __124 NO: WHY NOT? PLEASE CHECK ONLY ONE RESPONSE.
      __22  I AM A STUDENT
      __19  I AM RETIRED
      __3  MALPRACTICE INSURANCE NOT AVAILABLE OR PREMIUMS TOO HIGH
      __0  CNM INCOME TOO LOW
      __3  LACK OF HOSPITAL ADMITTING PRIVILEGES
      __0  LACK OF PRESCRIPTIVE PRIVILEGES
      __1  LACK OF HEALTH CARE PERSONNEL FOR RELIEF
      __0  LICENSE REVOKED/SUSPENDED
      __49  OTHER (PLEASE EXPLAIN):

IF YOU ANSWERED "NO" TO THIS QUESTION, PLEASE STOP HERE AND MAIL BACK THIS GUIDE IN THE ENCLOSED POSTAGE PAID ENVELOPE. THANK YOU.
5. WHO EMPLOYS YOU AS A PRACTICING CNM?

_145_ HOSPITAL OR MEDICAL CENTER

_17_ COLLEGE OR UNIVERSITY

_31_ HEALTH MAINTENANCE ORGANIZATION

_0_ U. S. PUBLIC HEALTH SERVICE

_2_ TITLE V FUNDED PUBLIC HEALTH AGENCY

_13_ OTHER PUBLIC HEALTH AGENCY

_61_ PHYSICIAN-OWNED PRACTICE

_4_ PARTNERSHIP WITH PHYSICIAN(S)

_13_ PARTNERSHIP WITH NURSE-MIDWIVES

_12_ SELF-EMPLOYED

_15_ MILITARY

_8_ INDIAN HEALTH SERVICE

_16_ OTHER (SPECIFY): ____________________________

337: 23 CNMs showed multiple, part-time employers and were not included, for a total of 314 respondents

IF YOU ANSWERED "MILITARY" OR "INDIAN HEALTH SERVICE" PLEASE STOP HERE AND MAIL BACK THIS GUIDE IN THE ENCLOSED POSTAGE PAID ENVELOPE. THANK YOU.

6. CHARACTERIZE THE GEOGRAPHIC AREA IN WHICH YOU WORK:

_218_ URBAN

_75_ SUBURBAN

_37_ RURAL

330

CNM Discussion Guide
7. WHAT IS THE POPULATION OF THIS AREA?

   __10__ LESS THAN 10,000
   ___31___ 10,000 - 49,999
   ___44___ 50,000 - 99,999
   ___76___ 100,000 - 499,999
   ___57___ 500,000 - 999,999
   ___60___ 1,000,000 - 4,999,999
   ___43___ 5,000,000 OR MORE

8. CHECK HIGHEST EARNED NURSING DEGREE.

   __36__ DIPLOMA IN NURSING
   __23__ ASSOCIATE DEGREE IN NURSING
   __63__ BACHELOR'S DEGREE IN NURSING
   __207__ MASTER'S DEGREE IN NURSING
   __8__ DOCTORATE IN NURSING
   __337__

9. WHICH OF THE FOLLOWING CNM EDUCATION PROGRAMS DID YOU ATTEND?

   __6__ PRE-CERTIFICATE PROGRAM
   __135__ CERTIFICATE PROGRAM
   __186__ MASTER'S DEGREE PROGRAM
   __4__ DOCTORAL PROGRAM
   __5__ OTHER ____________________________

CNM Discussion Guide

A -4
10. DID THE SCHOOL YOU ATTENDED FOR YOUR CNM EDUCATION HAVE A PLACEMENT PROGRAM FOR CNMs?

   24  YES  302  NO

11. DID YOU RECEIVE FINANCIAL ASSISTANCE FROM ANY OF THE FOLLOWING SOURCES FOR CNM EDUCATION?

   9  PHYSICIAN OR CLINIC SPONSOR
   7  HOSPITAL SPONSOR
  36  STATE SCHOLARSHIP OR GRANT
  29  STATE LOAN REPAYMENT
  14  MILITARY
  9  NATIONAL HEALTH SERVICE CORPS SCHOLARSHIP
  2  NATIONAL HEALTH SERVICE CORPS LOAN REPAYMENT
  11  FEDERAL NURSING EDUCATION LOAN REPAYMENT
  52  FEDERAL NURSING EDUCATION SCHOLARSHIP
   0  INDIAN HEALTH SERVICE
  44  OTHER FEDERAL SCHOLARSHIP OR GRANT
  22  FEDERAL LOAN REPAYMENT
  46  OTHER (SPECIFY): ____________________
12. WHAT IS YOUR APPROXIMATE ANNUAL SALARY FROM YOUR CNM PRACTICE? (EXCLUDE BENEFITS AND MALPRACTICE INSURANCE COSTS).

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>LESS THAN $20,000</td>
<td>18</td>
</tr>
<tr>
<td>$20,000 - $29,999</td>
<td>21</td>
</tr>
<tr>
<td>$30,000 - $39,999</td>
<td>72</td>
</tr>
<tr>
<td>$40,000 - $49,999</td>
<td>112</td>
</tr>
<tr>
<td>$50,000 - $59,999</td>
<td>67</td>
</tr>
<tr>
<td>$60,000 - $69,999</td>
<td>31</td>
</tr>
<tr>
<td>$70,000 - $79,999</td>
<td>8</td>
</tr>
<tr>
<td>$80,000 OR MORE</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>332</td>
</tr>
</tbody>
</table>

13. SINCE YOUR CERTIFICATION, HOW MANY TOTAL YEARS HAVE YOU PRACTICED AS A CNM?

<table>
<thead>
<tr>
<th>Years Range</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>LESS THAN 1 YEAR</td>
<td>24</td>
</tr>
<tr>
<td>1 - 5 YEARS</td>
<td>112</td>
</tr>
<tr>
<td>6 - 10 YEARS</td>
<td>100</td>
</tr>
<tr>
<td>11 - 20 YEARS</td>
<td>87</td>
</tr>
<tr>
<td>MORE THAN 20 YEARS</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>338</td>
</tr>
</tbody>
</table>

CNM Discussion Guide
14. WHAT PERCENTAGE OF YOUR CLIENTS ARE COVERED BY: (numbers represent CNMs who recorded a percentage in each category)

- 236 % MEDICAID
- 30 % MEDICARE
- 205 % PRIVATE THIRD-PARTY PAYER
- 107 % HEALTH MAINTENANCE ORGANIZATION
- 211 % SELF-PAY
- 71 % UNCOMPENSATED CARE
- 50 % CHAMPUS
- 26 % DON'T KNOW
- 25 % OTHER (SPECIFY): __________________________

15. WHERE DO YOU PROVIDE THE MAJORITY OF OUTPATIENT SERVICES? (PLEASE CHECK ONLY ONE SETTING)

- 102_ PRIVATE OFFICE (PHYSICIAN OR CNM PRACTICE)
- 12_ FREESTANDING BIRTHING CENTER
- 5_ HOSPITAL BIRTHING CENTER
- 3_ HOME
- 37_ HEALTH MAINTENANCE ORGANIZATION
- 63_ COMMUNITY HEALTH CENTER
- 0_ MIGRANT HEALTH CENTER
- 3_ RURAL HEALTH CENTER
- 59_ TEACHING HOSPITAL
- 30_ OTHER HOSPITAL
- 19_ OTHER (SPECIFY): __________________________

333 OTHER (SPECIFY): __________________________
16. WHERE DO YOU PROVIDE THE MAJORITY OF INTRAPARTUM CARE?  
(PLEASE CHOOSE ONLY ONE SETTING)  

 _57_ DO NOT DELIVER  
 _148_ HOSPITAL BIRTHING CENTER  
 _95_ HOSPITAL TRADITIONAL DELIVERY ROOM  
 _2_ HOME - BY CHOICE  
 _5_ HOME - DO NOT HAVE HOSPITAL ADMITTING PRIVILEGES  
 _15_ FREESTANDING BIRTHING CENTER  
 _7_ OTHER (SPECIFY): ______________________

329
PLEASE CHECK ANY ITEMS BELOW WHICH YOU PERCEIVE TO BE A BARRIER TO YOUR CNM PRACTICE. THEN CHECK THE MAIN REASON WHY THIS IS A BARRIER TO YOUR PRACTICE. CHOOSE ONLY ONE REASON.

17. REIMBURSEMENT BY MEDICAID

   WHY?
   94 PAYMENT TOO LOW
   24 ALL SERVICES NOT COVERED (MOST IMPORTANT SERVICE NOT COVERED):

   ________________

   13 CAN'T OBTAIN IDENTIFICATION NUMBER
   27 DELAYED PAYMENTS
   10 OTHER (EXPLAIN): ________________

18. REIMBURSEMENT BY MEDICARE

   WHY?
   28 PAYMENT TOO LOW
   11 ALL SERVICES NOT COVERED (MOST IMPORTANT SERVICE NOT COVERED):

   ________________

   4 CAN'T OBTAIN IDENTIFICATION NUMBER
   1 DELAYED PAYMENTS
   3 OTHER (EXPLAIN): ________________
19. __135__ PRIVATE THIRD-PARTY REIMBURSEMENT

WHY?

16 __ PAYMENT TOO LOW

23 __ ALL SERVICES NOT COVERED (MOST IMPORTANT SERVICE NOT COVERED):

______________________________

10 __ DELAYED PAYMENTS

84 __ FEW PRIVATE INSURERS REIMBURSE CNMs FOR SERVICES

15 __ OTHER (EXPLAIN): _________________

20. __218__ PRESCRIPTIVE PRIVILEGES

WHY?

51 __ CAN'T GET DEA NUMBER

179 __ LIMITED BY STATE OR LOCAL LAWS/REGULATIONS

14 __ OTHER (EXPLAIN): _________________

21. __142__ HOSPITAL ADMITTING PRIVILEGES

WHY?

10 __ LIMITED BY STATE OR LOCAL LAWS/REGULATIONS

120 __ LIMITED BY HOSPITAL POLICY

20 __ OTHER (EXPLAIN): _________________
22. **STATE LAWS AND REGULATIONS**

   **WHY?**
   
   **23** SCOPE OF SERVICES LIMITED (MOST IMPORTANT SERVICE LIMITED):
   
   ________________
   
   **14** OPTIONS FOR PRACTICE SETTING LIMITED
   
   **24** OTHER (EXPLAIN): ________________

23. **LOCAL LAWS AND REGULATIONS**

   **WHY?**
   
   **4** SCOPE OF SERVICES LIMITED (MOST IMPORTANT SERVICE LIMITED):
   
   ________________
   
   **10** OPTIONS FOR PRACTICE SETTING LIMITED
   
   **3** OTHER (EXPLAIN): ________________

24. **AVAILABILITY OF PHYSICIAN BACKUP**

   **WHY?**
   
   **4** NO PHYSICIAN(S) IN GEOGRAPHIC AREA
   
   **100** PHYSICIAN(S) UNWILLING TO SERVE AS BACKUP.
   **WHY?** ________________
   
   **17** OTHER (EXPLAIN): ________________

CNM Discussion Guide
25.  **35** COST OF PHYSICIAN BACKUP

**WHY?**

**18** COST IS TOO HIGH
(How much do you pay for physician backup? ____per____
i.e. $400 delivery or $4000 per month)

**5** PAYMENT SCHEDULE IS DIFFICULT
(i.e. per month or delivery)

**9** OTHER (EXPLAIN): ____________________

26.  **92** REQUIREMENTS OF PHYSICIAN BACKUP

**WHY?**

**35** PHYSICIAN MUST BE CONSULTED FOR TOO MANY
COMMON OR STANDARD PROCEDURES

**47** PHYSICIAN MUST BE IN HOSPITAL DURING DELIVERY

**13** REQUIREMENTS ARE UNCLEAR

**10** OTHER (EXPLAIN): ____________________

27.  **111** MALPRACTICE INSURANCE

**WHY?**

**12** IS NOT AVAILABLE

**18** COVERAGE IS LIMITED

**78** COST IS TOO HIGH

**20** OTHER (EXPLAIN): ____________________

CNM Discussion Guide
28. CONTINUING EDUCATION

WHY?

11 TOO MANY UNITS ARE REQUIRED

31 CAN'T GET TIME OFF TO OBTAIN CONTINUING EDUCATION UNITS

17 NONE OFFERED IN MY AREA

21 OTHER (EXPLAIN): ________________

29. MEDICAL COMMUNITY ATTITUDES AND PERCEPTIONS

WHY?

151 LACK OF PHYSICIAN SUPPORT

56 LACK OF NURSE SUPPORT

31 LACK OF OTHER HEALTH CARE PERSONNEL SUPPORT

14 OTHER (EXPLAIN): ________________

30. COMMUNITY ATTITUDES AND PERCEPTIONS

WHY?

13 NEGATIVE MEDIA COVERAGE

163 POPULATION UNAWARE OF CNM CAPABILITIES AND SERVICES

102 POPULATION DOES NOT DISTINGUISH BETWEEN LAY MIDLWIVES AND CNMs

7 OTHER (EXPLAIN): ________________

CNM Discussion Guide
31. PLEASE LIST AND EXPLAIN ANY OTHER BARRIERS TO YOUR PRACTICE AS A CNM.
32. BELOW ARE LISTED ALL OF THE ABOVE MENTIONED POSSIBLE BARRIERS. PLEASE CHECK THE MOST IMPORTANT BARRIER TO YOUR CNM PRACTICE. CHOOSE ONLY ONE.

16. REIMBURSEMENT BY MEDICAID
1. REIMBURSEMENT BY MEDICARE
12. PRIVATE THIRD-PARTY REIMBURSEMENT
51. PRESCRIPTIVE PRIVILEGES
28. HOSPITAL ADMITTING PRIVILEGES
13. STATE LAWS AND REGULATIONS
3. LOCAL LAWS AND REGULATIONS
26. AVAILABILITY OF PHYSICIAN BACKUP
1. COST OF PHYSICIAN BACKUP
14. REQUIREMENTS OF PHYSICIAN BACKUP
18. MALPRACTICE INSURANCE
2. CONTINUING EDUCATION
75. MEDICAL COMMUNITY ATTITUDES AND PERCEPTIONS
25. COMMUNITY ATTITUDES AND PERCEPTIONS
11. OTHER _____________________________
21. NO BARRIERS
317
33. WHAT ARE SOME SOLUTIONS TO THE BARRIERS YOU EXPERIENCE AS A CNM?

34. PLEASE SUPPLY ANY ADDITIONAL INFORMATION THAT YOU THINK WOULD BE HELPFUL TO UNDERSTANDING THE PRACTICE OF NURSE-MIDWIFERY.

THANK YOU FOR COMPLETING THIS GUIDE. NOW MAIL IT BACK IN THE ENCLOSED POSTAGE PAID ENVELOPE. WE APPRECIATE YOUR TIME AND EFFORT IN HELPING US CONDUCT THIS STUDY.
### APPENDIX B

**CNMs PROVIDE SERVICES AT A VARIETY OF SITES**

<table>
<thead>
<tr>
<th>Outpatient Service Site</th>
<th># of CNMs</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Office of a Physician</td>
<td>102</td>
<td>31.0</td>
</tr>
<tr>
<td>or a CNM Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Health Center</td>
<td>63</td>
<td>19.1</td>
</tr>
<tr>
<td>Teaching Hospital</td>
<td>59</td>
<td>17.9</td>
</tr>
<tr>
<td>HMO</td>
<td>37</td>
<td>11.2</td>
</tr>
<tr>
<td>Other Hospital</td>
<td>30</td>
<td>9.1</td>
</tr>
<tr>
<td>Freestanding Birthing Center</td>
<td>12</td>
<td>3.6</td>
</tr>
<tr>
<td>Hospital Birthing Center/Room</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>Home</td>
<td>3</td>
<td>.9</td>
</tr>
<tr>
<td>Rural Health Center</td>
<td>3</td>
<td>.9</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>330</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intrapartum Care Site</th>
<th># of CNMs</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Birthing Center/Rooms</td>
<td>148</td>
<td>45.0</td>
</tr>
<tr>
<td>Hospital Traditional Delivery Room</td>
<td>95</td>
<td>28.9</td>
</tr>
<tr>
<td>Do Not Deliver</td>
<td>57</td>
<td>17.3</td>
</tr>
<tr>
<td>Freestanding Birthing Center</td>
<td>15</td>
<td>4.6</td>
</tr>
<tr>
<td>Home-Do not have hospital admitting privileges</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>Home-By choice</td>
<td>2</td>
<td>.6</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>329</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

* Of 338 CNMs, 330 answered this question

** Of 338 CNMs, 329 answered this question
APPENDIX C

SAMPLE SETTINGS

We reviewed practices of 26 CNMs at five employment locations to gain an understanding of variation in CNM practices. Our observations are summarized below.

Medical School Hospital: Baylor College of Medicine, Department of Obstetrics and Gynecology, Houston, Texas

Twelve CNMs practice at the medical school hospital, at an associated public city hospital and at county-run clinics. The CNMs see approximately 8000 patients annually in the practice. They provide prenatal, perinatal, well-infant and some gynecological care to mostly low-income, Medicaid-eligible, hispanic patients. Eighty-five percent of the deliveries performed by the CNMs are uncompensated.

Texas law does not give CNMs explicit prescriptive privileges. It authorizes physicians to "delegate" those privileges. CNMs may admit patients to a hospital with a physician's approval within 24 hours. Barriers for these CNMs are minimized because their back-up physicians are also Baylor employees, and are readily available to provide assistance. Malpractice insurance is provided through the college, which is self-insured.

Partnership with CNMs: Catawba Nurse Midwives, Inc., Rock Hill, South Carolina

This practice is a partnership of three CNMs and a fourth CNM employed by the partners. The CNMs provide prenatal services to over 50 patients a day at a county health department clinic, which contracts for the CNMs' services. Ninety percent of the patients receive Medicaid. Some private insurance companies will reimburse CNMs for their services but some will not.

Some procedures, such as lab services and ultra-sound tests, must be done off-site at a doctor's office or at a laboratory which accepts Medicaid patients. Although CNMs cannot prescribe medicines, including vitamins, they may dispense certain medicines which clinics keep on hand.

About 45 babies are delivered each month at a nearby hospital, the Piedmont Medical Center. The CNMs must admit patients under the names of three doctors who serve as their back-up. Many doctors in the community accept CNMs and their practice; however, some pediatricians have refused to see babies delivered by CNMs. The CNMs pay for their own malpractice insurance.

Four CNMs work for this physician-owned corporation. The CNMs provide a full range of well-woman care in two private medical offices. Most of the patients are healthy, white, middle and upper income women who have made a conscious choice to be cared for by a CNM. Over 80 percent of the patients have private insurance. Billing is done under a physician’s name.

The CNMs and a physician deliver around 23 babies a month at two nearby private hospitals. State laws recognize and license CNMs as nurses only. CNMs must admit patients under a physician’s name and a physician must be in the hospital during deliveries. CNMs may only prescribe certain drugs through delegated physicians’ orders, and all prescriptions must be cosigned by a physician.

The physician-owned corporation pays for the CNMs’ malpractice insurance through a company that provides malpractice insurance for CNMs nationwide. The corporation’s malpractice insurance carrier attempted to impose a surcharge on the policy for working with CNMs. This surcharge was challenged in court and prohibited.

Freestanding Birthing Center: Holy Family Services, Weslaco, Texas

Three CNMs practice at a freestanding birth center, which is run by the Catholic Diocese of Brownsville. The CNMs provide prenatal outpatient and educational services to over 400 patients a month. A consulting doctor has an office on site, which allows certain prescription drugs to be kept on site. Five other consulting physicians have left the practice due to malpractice insurance surcharges.

CNMs deliver over 20 babies in the center’s four birthing rooms each month. CNMs make two home visits for each mother and baby. Ninety-five percent of the center’s patients are Hispanic, and many delay seeking prenatal care. Half of the patients are covered under Medicaid. Some patients and their families work off their debt to the clinic by doing janitorial work or other work for the center. A health insurance company for the largest employer in the area will not reimburse CNM services to employees of that company.


The Health Maintenance Organization (HMO) employs four CNMs. They provide outpatient obstetrical and gynecological services at the HMO. CNMs and physicians take a team approach to patient care. Approximately 95 percent of the CNMs’
patients are enrollees in the HMO. The remainder are self-paying or uncompensated care patients.

CNMs perform over 25 percent of the 40-50 deliveries occurring monthly at an associated hospital. The six HMO staff physicians must admit patients to the hospital and be in immediate proximity at the time of delivery. CNMs may not write prescriptions but may write refill orders which one of the doctors must sign. The HMO carries "umbrella" malpractice insurance covering all of its employees--including CNMs.
## APPENDIX D

### BARRIERS IDENTIFIED AS THE MOST SIGNIFICANT

<table>
<thead>
<tr>
<th>RANK</th>
<th>BARRIER</th>
<th># OF CNMs</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medical Community Attitudes and Perceptions</td>
<td>75</td>
<td>23.7</td>
</tr>
<tr>
<td>2</td>
<td>Prescriptive Privileges</td>
<td>51</td>
<td>16.1</td>
</tr>
<tr>
<td>3</td>
<td>Hospital Admitting Privileges</td>
<td>28</td>
<td>8.8</td>
</tr>
<tr>
<td>4</td>
<td>Availability of Physician Backup</td>
<td>26</td>
<td>8.2</td>
</tr>
<tr>
<td>5</td>
<td>Community Attitudes &amp; Perceptions</td>
<td>25</td>
<td>7.9</td>
</tr>
<tr>
<td>6</td>
<td>Malpractice Insurance</td>
<td>18</td>
<td>5.7</td>
</tr>
<tr>
<td>7</td>
<td>Reimbursement by Medicaid</td>
<td>16</td>
<td>5.0</td>
</tr>
<tr>
<td>8</td>
<td>Requirements of Physician Backup</td>
<td>14</td>
<td>4.4</td>
</tr>
<tr>
<td>9</td>
<td>State Laws and Regulations</td>
<td>13</td>
<td>4.1</td>
</tr>
<tr>
<td>10</td>
<td>Private Third-Party Reimbursement</td>
<td>12</td>
<td>3.8</td>
</tr>
<tr>
<td>11</td>
<td>Local Laws and Regulations</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>12</td>
<td>Continuing Education</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>13</td>
<td>Reimbursement by Medicare</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>14</td>
<td>Cost of Physician Backup</td>
<td>1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CNMs who said &quot;no barriers&quot;</td>
<td>21</td>
<td>6.6</td>
</tr>
<tr>
<td>CNMs who chose &quot;other&quot;</td>
<td>11</td>
<td>3.6</td>
</tr>
</tbody>
</table>

* Of 338 responding CNMs, 317 answered this question
## APPENDIX E

### FREQUENCY OF SELECTION OF BARRIERS IDENTIFIED BY CNMs

<table>
<thead>
<tr>
<th>BARRIER AND MAJOR CONCERN</th>
<th># OF CNMs</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescriptive Privileges: Limited by State &amp; Local Laws &amp; Regulations</td>
<td>218</td>
<td>64</td>
</tr>
<tr>
<td>Community Attitudes &amp; Perceptions: Population Unaware of CNM Capabilities &amp; Services</td>
<td>202</td>
<td>60</td>
</tr>
<tr>
<td>Medical Comm. Attitudes &amp; Perceptions: Lack of Physician Support</td>
<td>189</td>
<td>56</td>
</tr>
<tr>
<td>Hospital Admitting Privileges: Limited by Hospital Policy</td>
<td>142</td>
<td>42</td>
</tr>
<tr>
<td>Reimbursement by Medicaid: Payment Too Low</td>
<td>141</td>
<td>42</td>
</tr>
<tr>
<td>Private Third-Party Payer Reimbursement: Few Private Insurers Reimburse CNMs</td>
<td>135</td>
<td>40</td>
</tr>
<tr>
<td>Availability of Physician Backup: Physicians Unwilling to Serve as Backup</td>
<td>119</td>
<td>35</td>
</tr>
<tr>
<td>Malpractice Insurance: Cost Too High</td>
<td>111</td>
<td>33</td>
</tr>
<tr>
<td>Requirements of Physician Backup: Physician Must Be in Hospital During Delivery</td>
<td>92</td>
<td>27</td>
</tr>
<tr>
<td>Continuing Education Units: Can’t Get Time Off To Obtain</td>
<td>61</td>
<td>18</td>
</tr>
<tr>
<td>State Laws &amp; Regulations: Scope of Services Limited</td>
<td>58</td>
<td>17</td>
</tr>
<tr>
<td>Reimbursement by Medicare: Payment Too Low</td>
<td>47</td>
<td>14</td>
</tr>
<tr>
<td>Cost of Physician Backup: Cost Too High</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>Local Laws &amp; Regulations: Options for Practice Setting Limited</td>
<td>17</td>
<td>5</td>
</tr>
</tbody>
</table>
Our literature review showed a significant body of information on barriers to certified nurse-midwives' (CNMs') profession. The literature also provided information on numerous other aspects of CNMs' profession, including impact of CNMs' practices on access to care and infant mortality, quality and cost-effectiveness of CNM services, and a need for further publicity and research regarding the work of CNMs.

CNMs Can Help Alleviate Problems Of Access To Care And Infant Mortality

- CNMs can provide care to underserved populations and improve access for those populations.

CNMs are historically credited with improving geographic distribution of care. According to a 1986 report by the Office of Technology Assessment, CNMs can provide safe care that would otherwise be unavailable in inner cities and remote areas.¹⁵

A 1981 "Journal of Nurse-Midwifery" article on infant mortality reported that high-risk women in other countries have a better opportunity to obtain in-depth medical attention than such women have in America. The system in other countries relies heavily on nurse-midwives and America's system relies on obstetrical care.¹⁶

The maternity system in this country is fundamentally flawed and overly complex according to the Institute of Medicine. Their 1988 report said that we need a new system dedicated to drawing all women into prenatal care. Further, this new system should use physicians and CNMs.¹⁷

- Midwives have a positive impact on preventing low birthweight and reducing infant mortality.

In 1984 a "Public Health Report" article on out-of-hospital births concluded that, regardless of a mother’s age group, babies delivered by midwives were less likely to be low birthweight.¹⁸ Likewise, researchers for the American College of Nurse-Midwives Foundation reported in 1986 that when nurse-midwives were used in previously underserved areas, maternal and infant mortality and morbidity were reduced. This occurred irrespective of whether the delivery occurred at home or in a hospital setting.¹⁹

A 1971 study reported in the American Journal of Obstetrics and Gynecology showed that when a nurse-midwife program was installed in a hospital, prematurity and neonatal death rates decreased and pregnant women kept
more prenatal care appointments. When the program was terminated, the prematurity and neonatal death rates rose.\textsuperscript{20}

In countries with a lower rate of infant mortality than the United States, well trained midwives provide the majority of family planning and obstetrical care. An article in "Journal of Nurse-Midwifery" showed in 1981 that if we hope to improve pregnancy outcomes and decrease infant mortality in this country, we must increase the number of nurse-midwives and expand their services.\textsuperscript{21}

In 1988, a representative of the World Health Organization testified before the U. S. Commission to Prevent Infant Mortality, stating that, "Every country in Europe with perinatal mortality and infant mortality rates lower than the United States uses midwives as the principal and only birth attendant for at least 70% of all births." Further, "The United States should spend far less money on interventionist obstetric care and put more resources into building up a large strong midwifery position."\textsuperscript{22}

**CNMs Can Provide Quality And Cost-Effective Health Care**

CNMs can provide quality care within their area of competence.

The quality of CNM care is equivalent to physicians' care within their area of competence, according to a 1986 study by the Office of Technology Assessment. Further, they are better than physicians at providing services which depend on communications with patients and preventative action.\textsuperscript{23}

The "American Journal of Obstetrics and Gynecology" reported in 1976, that outcomes for CNMs pertaining to prenatal period, labor, and delivery were not significantly different from those for physicians with two exceptions. CNMs' patients were far more likely to keep prenatal care appointments and physicians reported a higher rate of forceps deliveries. The study concluded that, in a hospital setting, the care of low-risk maternity patients provided by CNMs was as effective as that of physicians.\textsuperscript{24}

A 1986 Office of Technology Assessment report stated that CNMs can manage normal pregnancies safely and can manage them as well as, if not better than, physicians. Finally, given that quality is equivalent, it would appear to be cost-effective to use nonphysicians rather than physicians.\textsuperscript{25}

A 1988 Canadian study of birth outcomes showed that nurse-midwives provide prenatal care to low-risk women that is comparable, if not superior, to the care provided by family physicians. Also, nurse-midwives provide more adequate and comprehensive care to pregnant women than family physicians do.\textsuperscript{26} Another study, conducted by an HMO in 1989, showed that CNMs do not adversely affect maternal and perinatal mortality rates, and were an unqualified success as part of the obstetrical team.\textsuperscript{27}
Nurse-midwives can provide cost effective care in certain contexts.

"Nurse-Midwifery in America," a report published by the American College of Nurse-Midwives in 1986, stated that normal pregnancies managed by nurse-midwives in freestanding birth centers cost 40 percent of the traditional obstetrical care costs. Furthermore, a CNM practice operating at full capacity can provide less costly maternal and infant care.28

The American College of Nurse-Midwives Foundation's 1986 report described the effects of a nurse-midwife program in four rural Georgia counties. After the program was implemented, perinatal care expenses and infant mortality rates decreased.29

Payroll costs were reduced by 13 percent in the obstetrics and gynecology department of an HMO through the use of CNMs. However, in an office setting CNMs did not generate a significant savings.30

Attitudes And Perceptions Of Medical Community And General Public Are Barriers To CNMs' Profession

CNMs may not be readily accepted within medical communities.

CNMs have encountered difficulty in gaining acceptance by practicing physicians, medical societies, and hospital departments. For example, according to a 1986 Office of Technology Assessment study on nonphysicians, OB/GYNs are threatened by CNM practices. Such physicians are no longer sole providers of prenatal and obstetrical care and must compete with CNMs.31

Likewise, the Boston Globe published an April 1991 article by the Massachusetts Medical Society President who discouraged practices by nonphysicians. He said, "We should not attempt to solve the access problems for medical care by expanding the role of the limited-licensed practitioners."32

In 1986, the American College of Nurse-Midwives (ACNM) reported that physicians directly influence barriers to CNMs practices. Those who oppose the practice of nurse-midwifery are tightening the financial noose via denial of hospital privileges, restrictive state statutes and regulations, and harassment of supportive physicians.33

CNMs may not be well understood by the general public.

CNMs' practices and services are not well understood by the general public and health-care decision makers. The American College of Nurse-Midwives (ACNM) reported in 1986 that a lack of information about nurse-midwives is the most important barrier to making CNM services available in the country.
The ACNM also reported that the general public had a poor understanding of nurse-midwives.\textsuperscript{34}

Further, a 1989 study on one HMO showed that over 50 percent of patients surveyed lacked knowledge of CNMs. However, they expressed receptiveness to CNMs after learning their role and qualifications.\textsuperscript{35}

In order to help each woman make an informed decision regarding birth care and technology, the roles and services of all birth care providers, including CNMs, should be publicized throughout a community, according to a World Health Organization (WHO) article published in Lancet in 1985. The WHO encourages governments to act as coordinator in assessing birth technology and disseminating information about that technology at all levels.\textsuperscript{36}

**Further Research Is Needed On The Roles And Practices Of CNMs**

- The cost and effect of CNM care should be documented.

According to numerous authoritative organizations, there is a need for more research and more data about all facets of CNM roles and practices. For example, in 1982 the General Accounting Office reported a general lack of data to evaluate use, or Federal effort to encourage use, of nurse-midwives.\textsuperscript{37}

The American College of Nurse-Midwives Foundation recommended in their 1986 report that studies be conducted to record the contributions of nurse-midwives to care for the poor, to measure the effect of nurse-midwifery care on health-care costs, and to document the effect of nurse-midwifery care on the health of mothers, babies and the families served. Further, the Foundation recommended increased documentation of client satisfaction with and the safety and quality of care received from nurse-midwives.\textsuperscript{38}

Further, in 1988 the National Commission to Prevent Infant Mortality recommended that demonstration projects be undertaken to test innovative ways to increase participation of physicians and CNMs in Medicaid and underserved communities.\textsuperscript{39}

- Physician attitudes should be studied and analyzed.

The American College of Nurse-Midwives stated in 1986 that we cannot make assumptions regarding the attitudes and behaviors of physicians practicing obstetrics.\textsuperscript{40} A physician stated in a 1986 article in the Journal of Nurse-Midwifery that before we can hope to bring physicians and midwives into closer relationships we need some good research about physician attitudes so we know exactly what the problem is.\textsuperscript{41}


13. Hughes and Rosenbaum.


15. Office of Technology Assessment.


22. Nancy E. DeVore, CNM, MS, and Bertrand M. Bell, MD. "Midwifery and the Shortage of Obstetrical Care Providers." Presented on October 24, 1989 at the meeting of the American Public Health Association, p. 8.

23. Office of Technology Assessment.


25. Office of Technology Assessment.


27. Bell and Mills.

28. Rooks and Haas.

29. Rooks and Haas.

30. Bell and Mills.

31. Office of Technology Assessment.

33. Rooks and Haas, p. 113.

34. Rooks and Haas, p. 2.

35. Bell and Mills.


38. Rooks and Haas, p. 42.


40. Rooks and Haas, p. 65.