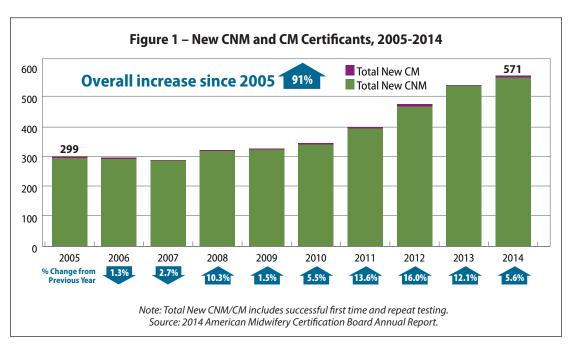




Midwifery Education Trends Report 2015

very year in the United States, 1 million mothers do not receive adequate prenatal care.1 The national shortage of providers of primary, reproductive, and obstetric health care for women is expected to worsen in the coming years. Estimates show that the growth in the numbers of primary care physicians will not be adequate to meet demand by 2020, when the shortage is projected to reach 20,400 physicians.² In addition, the American Congress of Obstetricians and Gynecologists has reported that currently, 49% of U.S. counties do not have obstetric care providers, and a 25% shortage of obstetricians/gynecologists is predicted by 2030.3

A solution to this problem is to increase the number of U.S. midwives, defined herein as certified nurse-midwives (CNMs) and certified midwives (CMs). In 2014, The Lancet published a series on midwifery in order to explore solutions to address the essential needs of childbearing women and their families globally.⁴ The articles in this series make a clear call for the investment in midwives. Recipients of care by midwives in the United States report high levels of satisfaction, and midwifery care results in excellent outcomes and lower costs due to fewer unnecessary, invasive, and expensive interventions.⁵ In a systematic review of midwifery care in the United States, investigators concluded that "the findings provide evidence that care by CNMs is safe and effective. CNMs should be better utilized to address the projected health care workforce shortages."6



The education of CNMs and CMs in the United States involves in-depth, graduate-level preparation that enables them to meet the primary health care needs of women from menarche through menopause and beyond, including during pregnancy and birth. All CNMs and CMs graduate from programs accredited by the Accreditation Commission for Midwifery Education (ACME). Since 1982, ACME has been recognized by the U.S. Department of Education as a programmatic accrediting agency for midwifery education programs. The accreditation process is a voluntary quality assurance activity conducted by the educational institution and ACME that combines self-assessment and peer evaluation.

The Maternity Care Workforce

Presently, midwives represent a small percentage of the health care workforce, but the use of midwives and the need for their services are increasing. During the past 30 years, the number of first year residents entering obstetric/gynecologic (OB/GYN) residencies has remained virtually unchanged.³ However, the percentage of OB/GYN residents who are women has increased dramatically, and nearly 83% of the first year residents in the 2013 class were female. This represents a marked increase from 1975, when only 15% of first year OB/GYN residents were female.⁷ These statistics have important ramifications for the productive capacity of the OB/GYN workforce because female physicians consistently work fewer hours each week, work part-time more frequently, and retire from obstetric practice several years earlier than their male counterparts.^{3,8} In addition, a much larger percentage of OB/GYN residents currently enters subspecialties in which they do not attend births. These changes in the ability of the OB/GYN workforce to adequately meet the need for skilled providers are taking place in the context of a naturally increasing number of women and births.3

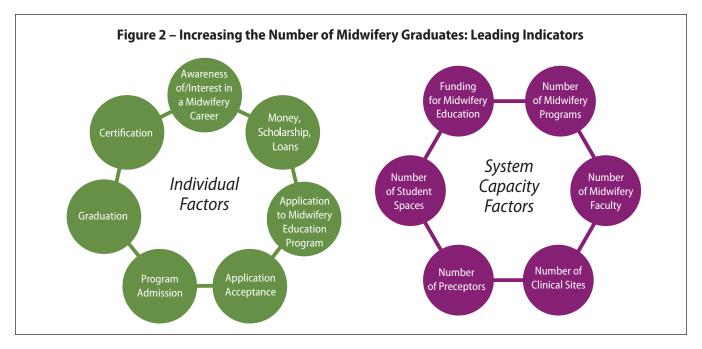
According to the Institute of Medicine, total expenditures for graduate medical education (GME) for medical residents during 2012 were approximately \$15 billion, in excess of \$120,000 per medical resident.9 Past president of the American College of Obstetricians and Gynecologists, Dr. John Jennings, recently stated that GME expenditures specifically for OB/GYN

residents total approximately \$500 million per year. 10 Notwithstanding these expenditures, the nation is in the midst of what will become an increasingly severe shortage of trained maternity care providers. Given this shortage, it is a matter of concern that federal outlays for the education of midwives amount to approximately \$2 million across the entire population of 2,400 midwifery students. Because it is relatively swift and economical to educate midwives, and because midwifery care is appropriate for a very large percentage of pregnant women, a modest public investment in midwifery education could substantially help to alleviate the shortage of trained maternity care providers.

In many other developed countries, the structure of the maternity care workforce emphasizes midwives as the default providers for normal birth. These midwives collaborate and consult with skilled obstetricians to whom they transfer clients when complications arise that require physician skills. This approach has resulted in a workforce structure in which there are 2.5 midwives for every obstetrician. Because most women experience normal birth, a workforce structure that emphasizes development of midwives who specialize in normal birth is an appropriate response to client needs. For a variety of reasons, this approach has not been followed in the United States, where there are approximately 4 obstetricians/gynecologists for every one CNM/CM. 11-13

The purpose of this report is to assess the progress that has been made to increase the midwifery workforce by utilizing the most recent data on applications to, enrollment in, and graduation from midwifery education programs and certification trends for new midwives.

ACNM's strategic plan for 2015-2020 includes the following goals: to strengthen the quality, capacity, affordability, and accessibility of midwifery education; to increase the number and diversity of the midwifery workforce; and to increase the financial support for midwifery education.¹⁴ Data collected annually by the American Midwifery Certification Board (AMCB) demonstrate that the number of CNMs and CMs certified annually continues to increase (Figure 1). AMCB is the national certifying body for candidates in nurse-midwifery and midwifery who have completed graduate-level programs accredited by ACME.



Each year since 2008, the number of newly certified midwives has steadily increased, and the greatest increase was 16% between 2011 and 2012.15 This increase is the result of growth within certain programs rather than an increase in the number of accredited programs.

With the Midwifery Education Trends Report 2011, we began to examine the system capacity factors needed to educate more midwives. The successful graduation of a new midwife depends on the factors that propel an individual to apply to and complete a midwifery education program and on system factors that support students. All of these factors must be monitored in order to understand how best to increase the annual number of midwifery graduates (Figure 2).

Since publication of Midwifery Education Trends Report 2013, ACNM conducted a survey of current and recently lapsed ACNM members to determine the factors that affect a midwife's ability to precept a student learner. 16 Results demonstrated that 83% of respondents were able to accept midwifery students, although 53% were able to only accept midwifery students who were already registered nurses. The primary, motivating factors for preceptors to teach were a commitment to support the profession followed by an interest in teaching. Thirty-eight percent of respondents received payment for precepting. Payment as incentive for precepting was the most mentioned issue in the write-in comments, while only 0.7% reported lack of payment as a barrier. The

most frequently identified barrier to precepting was the need to maintain a high patient volume as reported by 7% of respondents. However, this barrier is essentially a financial issue, as it equates to generating sufficient revenue to meet organizational goals. 16 This year's Midwifery Education Trends Report highlights some of the funding issues that affect midwifery education.

In collaboration with ACME, ACNM will continue to monitor, analyze, and report available leading education indicators and trends. The current ACNM Midwifery Education Trends Report is based on data provided by midwifery programs to ACME in annual monintoring reports (AMR) for the years 2010-2014, the results of the annual certification examination reported by AMCB, and data gathered by ACNM staff. Annual monitoring reports are individual for each midwifery program, and averages reported herein represent averages from all reports. Individual program data are not included herein, and data are not publically available.

This report highlights the following trends in ACMEaccredited, midwifery education programs:

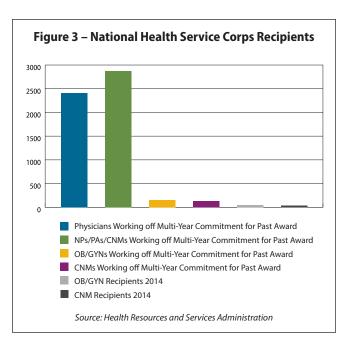
- Funding for midwifery education,
- Number of ACME-accredited education programs,
- Capacity for students (available spaces),
- Number of qualified applications received,
- Number of new students,

- Number of all currently enrolled students,
- Number/percentage of students from diverse backgrounds, and
- Number of graduates.

Funding for Midwifery Education

The majority of ACME-accredited midwifery education programs (35 of 39) are positioned in schools of nursing; therefore, they are eligible for competitive grant funding through the Health Resources and Services Administration (HRSA) (Bureau of Health Workforce, Division of Nursing, Advanced Nurse Education Branch). However, these funds cannot be used to pay clinical preceptors. Funds must be used for specific academic faculty needs, consultants, program equipment, etc. In recognition of the need to reimburse preceptors for all advanced practice nursing education, the Graduate Nurse Education (GNE) demonstration project was launched under the Affordable Care Act. 17 This 4-year, competitive demonstration project was modeled on the graduate medical education (GME) program, which provides funding to hospitals for the education of medical residents.

The GNE demonstration has been transformative for graduate nurse education and has resulted in increased numbers of advanced practice registered nurse graduates, including CNMs, certified registered nurse anesthetists, and nurse practitioners. Of the 5 medical centers that



were funded for years 2012-2015 through this project, only one (University of Pennsylvania) includes a nursemidwifery education program. The midwifery program director at this site reported to ACNM that the project has enabled increases in the number of nurse-midwifery students who have been admitted to the program and in the number of preceptor sites where these additional students are engaged in clinical education (William McCool, PhD, CNM, FACNM, FAAN, Program Director, Midwifery Program, School of Nursing, University of Pennsylvania, personal communication, October 12, 2015). However, given that there were 2,346 midwifery students in 2014, the support offered by the GNE demonstration has had limited effect on the midwifery student population. It has not yet been determined if the GNE demonstration will be continued or expanded; a final report is expected in October of 2017.

The cost of midwifery education varies for the individual student depending on whether the institution is private or public. In 2009, the average cost of a 2-year midwifery education program was \$53,505,18 and costs have increased since then. Options for scholarships and loans for students are available but limited. The National Health Service Corps (NHSC) offers a loan repayment program or scholarships to nurse-midwives and other health care professionals who commit to working in underserved areas across the country. In 2014, the NHSC received 59 applications from CNMs for scholarships and was able to fund 2 recipients who received a total of \$214,748.04. Also in 2014, the NHSC received 110 applications from CNMs for loan repayment and was able to fund 38 who received a total of \$1,763,509.27.19 Current NHSC guidance indicates that the program is open to CNMs but makes no mention of the availability of funding for CMs. Because the NHSC is established to serve a wide range of provider types, the number of CNMs who can be supported by the program will always be relatively small.

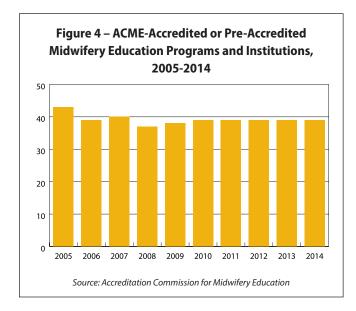
Another option for individual funding is from the A.C.N.M. Foundation, Inc., which provides up to 6 scholarships every year of \$2000-\$4000 each to midwifery students who are ACNM members.

During the 2013-14 academic year, 66 midwifery students received Advanced Nursing Education (ANE) Traineeship funds, and 14 of the 39 midwifery education programs received ANE grant funding (Sara S. Koslosky, BSN, RN, MPH, Chief, Advanced Nursing Education Branch, U.S. Department of Health Human Services, personal communication, September 24, 2015).

Number of ACME-Accredited Midwifery Education Programs

Between 2005 and 2010, the number of ACMEaccredited midwifery education programs decreased, but this number has remained steady at 39 programs since 2010 (Figure 4). During this 5-year period, a few programs have closed, but others have opened so the overall number has remained constant.

In 1994, ACME began to offer accreditation for directentry midwifery education programs using the same criteria as CNM programs. Students are not required to be registered nurses prior to application to directentry midwifery education programs. The purpose of these programs is to prepare the student for the AMCB certification examination to earn the credential of CM. ACME accredited the first direct-entry midwifery education program in 1996, and a second program was accredited in 2010. CNMs and CMs sit for the same AMCB certification examination.



Student Capacity

Student capacity refers to the number of student spaces available in a program. These numbers are reported to ACME by the program directors, and they are captured in the ACME AMR. The numbers of students reported below and the additional data reported in the following sections are derived from the unpublished ACME AMR for 2010-2014. Student capacity is directly affected by a variety of factors, including the number of midwifery education programs, the number of midwifery faculty and clinical preceptors, and the availability of clinical sites. Data on some of these factors are not available. While the number of midwifery education programs has remained constant in the past 5 years, according to the ACME data the number of spaces available for midwifery students has continued to expand from 892 in 2010 to 1,096 in 2014, which represents a 23% increase. There was a 37% increase between 2005 and 2009. It is clear that midwifery education programs continue to support the growth of the midwifery profession by increasing the number of spaces available for midwifery students (Figure 5).

Many midwifery education programs have incorporated distance learning for didactic coursework delivered using web-based technology. National trends show enrollment in distance education courses has rapidly increased in recent years. Distance education uses one or more technologies to deliver instruction to students who are separated from the instructor. The U. S. Department of Education reported that the number of graduate students enrolled in fully online programs across all professional education tracks in the United States was twice as high as the number of undergraduates in traditional classes.²⁰ Since 2011, 6 of the ACME-accredited midwifery programs are distance-based, providing classroom material through web-based technology. As in all midwifery programs, clinical experiences are provided in a hospital or birth center, through placement with midwifery clinical preceptors. The growth of distancebased education has enhanced the capacity of midwifery programs to accept more students and has created an opportunity for innovative methods of education.

Qualified Applicants

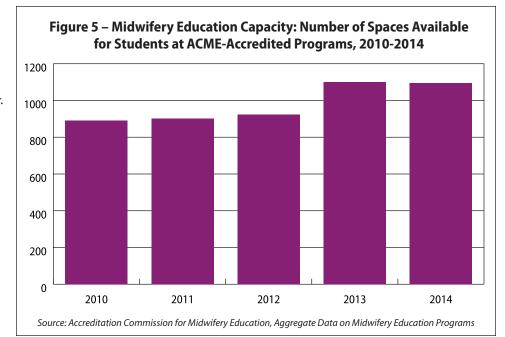
As part of the ACME AMR, midwifery education programs annually report the number of qualified individuals who apply. The aggregate data represent the annual number of qualified applications, not the number of applicants, since individuals may apply to more than one program.

From 2010 through 2014, the number of qualified applications received by ACME-accredited programs increased by 30% (Figure 6). This suggests that the number

of individuals interested in obtaining a midwifery education and who are qualified to do so is increasing.

Admissions

As noted above, the number of qualified applications received and the number of student spaces have increased in recent years. In 2010, there were 1,232 qualified applications for 892 spaces; in 2014, there were 1,600 qualified applications for 1,096 spaces. The number of new students during this 5-year period ranged from 815 in 2010 to 877 in 2013; there was a slight decrease to 845 in 2014.



However, available spaces for new students are still being left unfilled (Figure 6). The number of unfilled spaces increased and decreased during this 5-year period from 77 in 2010, to 138 in 2011, to 90 in 2014. Some of this variation may represent the fact that applicants apply to multiple programs. Reported data indicated that 88.5% of the unfilled spaces occurred in programs that only accept registered nurse applicants, and 21.5% of the unfilled spaces occurred in programs that provide accelerated nursing education for applicants with baccalaureate degrees in areas other than nursing. Currently 18 of the 39 midwifery education programs allow bachelors-prepared individuals who are not

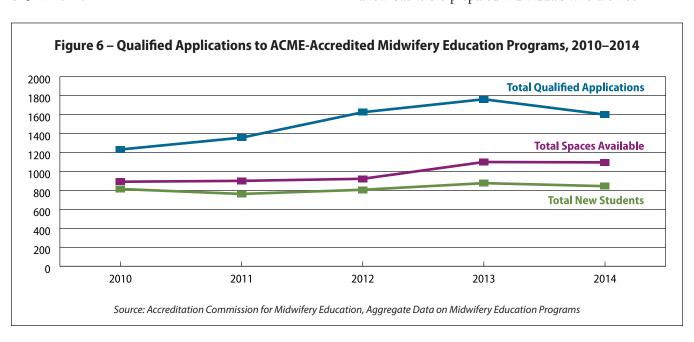


Figure 7 – Diversity of Midwifery Students

Ethnicity/racial characteristics of Students	Year 2013 Number of students who self-identified	Percent of total number of students who self-identified in 2013	Year 2014 Number of students who self-identified	Percent of total number of students who self-identified in 2014	Percent Change between YR 2013 and YR 2014
American Indian/ Alaskan Native	9	0.4%	16	0.7%	77.7%
Asian	38	1.7%	47	2.0%	23.6%
Black/African American (not of Hispanic origin)	198	9.2%	234	10.3%	18.1%
Hispanic/Latino	123	5.7%	143	6.3%	16.2%
Native Hawaiian/ Other Pacific Islander	4	0.1%	14	0.6%	250.0%
Two or More Races	42	2.0%	41	1.8%	-2.3%
Total Number of Diverse Students	414	19.3%	495	21.9%	19.5%
White	1730	80.7%	1767	78.1%	2.0%
Total Self-Identified	2,144		2,262		
Race Unknown	68	3.0% (of total students)	84	4.0% (of total students)	33.3%
Total Students	2,212		2,346		

Source: Accreditation Commission for Midwifery Education, Aggregate Data on Midwifery Education Programs

nurses to enter accelerated nursing programs prior to beginning midwifery education programs. Usually the nursing portion of these programs is one year in length and provides the student with the education necessary to become a registered nurse; the student continues for an additional 2 years to attain a graduate midwifery degree.

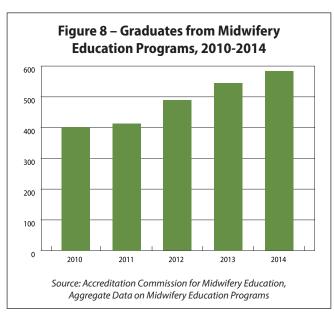
Current Enrollment and Diversity of Students

The number of currently enrolled students has increased consistently: 1,967 in 2010, 2,212 in 2013, and 2,346 in 2014. In addition to increasing the number of midwifery students, ACNM is committed to increasing the diversity of the profession to best serve the diverse population of women in the United States.

Data on the diversity of midwifery students have been inconsistently gathered through ACME AMRs until the past 2 years when ACME began to use the federally designated categories for race and ethnicity. Not all students identify their races or ethnicities in data collected by midwifery programs and/or their institutions.

In 2013, 19.3% of the student population who reported their race/ethnicity selfidentified as American Indian/Alaskan Native, Asian, Black/ African American, Hispanic/Latino, Native Hawaiian/ Other Pacific Islander, or two or more races. In 2014, 21.9% of those who reported their race/ethnicity self-identified within these categories, a 19.5% increase from the previous year. From 2013 to 2104, the number of students who selfidentified as American Indian/Alaskan

Native increased 77.7% and the number of students who self-identified as Asian increased 23.6%. During the same period, the self-identified number of Black/ African American students increased 18.1%, the number of Native American/Hawaiian students increased 250.0%, and the number of Hispanic/Latino students increased 16.2%. The majority of the midwifery student



population self-identified as White (not of Hispanic origin), and this category had the lowest percentage increase in students.

Graduation and Employment

The number of graduates from midwifery education programs steadily increased from 402 in 2010 to 583 in 2014. Program directors consistently indicate that they could further increase graduation rates if more clinical training sites were available for students.

The Bureau of Labor Statistics predicts that employment rates for nurse-midwives will grow by 31% from 2012 to 2022, much faster than the average for all occupations, and attributes this growth primarily to the effect of health care legislation and an increased emphasis on preventative health care.²¹

Conclusion and Recommendations

During the past 5 years, the midwifery community has made great strides to increase the number of midwifery graduates. Nonetheless, if we are to ensure that enough midwives are available to meet the needs of women during normal pregnancies and birth as they are in other developed countries, the number of annual graduates will need to continue to increase.

Monitoring education program capacity reveals that there are still unfilled spaces that could immediately increase the number of annual graduates, but the demand still exceeds the number of spaces. Further investigation needs to be conducted to determine exactly why there continues to be unfilled spaces each year. ACNM and ACME will work in collaboration to gather this information for the next Midwifery Education Trends Report.

We believe that many of the recommendations from the Midwifery Education Trends Report 2011 are still relevant. Some of the recommendations are within the capacity of midwifery education programs; others require the action of many other stakeholders:

 Support increased funding for basic and graduate nursing and midwifery education, specifically focused on support for clinical preceptors.

- Increase recruitment efforts aimed at attracting nursing students and nurses to midwifery careers.
- Increase the number of programs that accept bachelor's-prepared non-nurses.
- Increase the number of spaces for midwifery students in programs that accept bachelor's-prepared non-nurses.

In addition to the above, we believe it will be important to:

- Increase the number of ACME-accredited midwifery education programs throughout the United States;
- Increase the number of clinical education sites through greater collaboration with OB/GYN residency education programs; and
- Increase recruitment efforts aimed at expanding the diversity of the midwifery profession.

It is the hope of ACNM and ACME that publication of the 2015 Midwifery Education Trends Report will continue to shape the dialogue and future efforts toward expanding the midwifery workforce.

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