# Midwifery Education TRENDS REPORT 2019



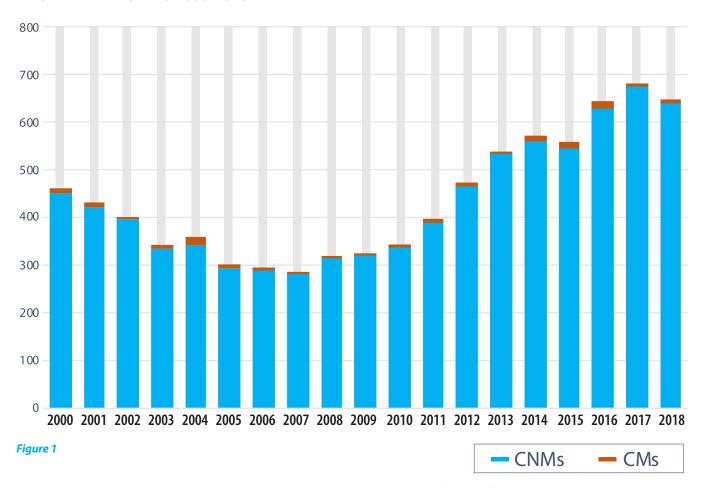
## TRENDS REPORT 2019

he United States is facing a maternity health care provider shortage. A robust and diverse workforce of midwives, educated through ACME-accredited midwifery education programs, can help to reverse this alarming trend.

Maternal mortality rates in the US are higher than many other developed countries, more than doubling from 10.3 per 100,00 live births in 1991¹ to 23.8 in 2014². The most prominent disparity in maternal mortality rates in the US can be defined by ethnicity. Non-Hispanic black women experience maternal deaths at a rate three to four times that of non-Hispanic white women.³ Hispanic, American Indian, and Alaska Native women are two to three times more likely to die from pregnancy-related causes than non-hispanic white women.⁴ In a national study of five medical complications that are common causes of maternal death and injury, black women were two to three times more likely to die than white women who had the same condition.⁵ Uneven geographic distribution of maternity health care providers and socioeconomic status is also contributing to these dismal outcomes.

The US is facing a maternity health care provider shortage. Certified nurse-midwives (CNMs) and certified midwives (CMs) are in short supply, particularly those serving certain patient populations. As of August 2019, 12,655 CNMs and 111 CMs were reported in the US <sup>6</sup>, Figure 1, p. 3. The American College of Obstetricians and Gynecologists (ACOG) puts the current shortage of OB-GYNs at 6,000 to 9,000 OB-GYNs countrywide, a number that is expecting to balloon to 22,000 by 2050.<sup>7</sup> The maternal health care provider shortage is not going to impact just rural areas, but also major cities in the US.

#### TOTAL NEW CNM/CM, INCLUDES SUCCESSFUL 1ST TIME AND REPEAT TESTING 2000-2018



Source: 2018 American Midwifery Certification board (AMCB) Annual Report

Certified nurse-midwives (CNMs) and certified midwives (CMs) provide high-quality health care and can contribute to resolving the women's health care provider crisis the US faces.

We need to invest in the midwifery workforce. We must create more ACME-accredited midwifery education programs and graduate more certified nurse-midwives (CNMs) and certified midwives (CMs).

To communicate with stakeholders about midwifery education, the Accreditation Commission for Midwifery Education (ACME) and the American College of Nurse-Midwives (ACNM) jointly present this Midwifery Education Trends Report. This report is

based on aggregated data provided by midwifery programs to ACME in annual monitoring reports (AMR) from 2014-2019, research, information from ACNM, and the results of the annual certification examination reported by the American Midwifery Certification Board (AMCB).

This report highlights the following trends in ACME-accredited midwifery education programs:

- Educational pathways to midwifery
- Number of ACME-accredited midwifery education programs
- Student Capacity
- Number of qualified applicants, new students, enrolled students, and unfilled spaces
- Midwifery education program formats
- Diversity of midwifery students
- Midwifery graduates and employment
- Doctorate in midwifery
- Increasing funding for midwifery education
- Conclusion and recommendations



All ACME-accredited midwifery programs, regardless of educational pathway, are required to demonstrate compliance with ACME criteria. Certified nurse-midwives (CNMs) and certified midwives (CMs) must pass the same certification exam offered by AMCB.

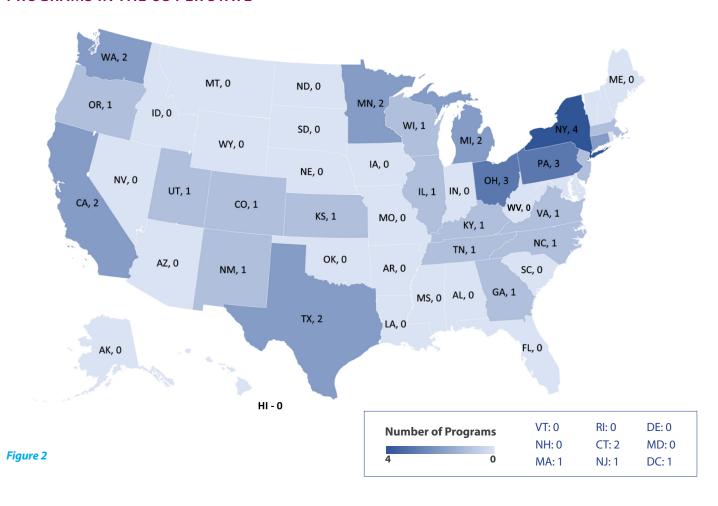
## EDUCATIONAL PATHWAYS TO MIDWIFERY

There are two pathways to ACME-accredited midwifery education. Programs that require students to be registered nurses lead to the CNM credential and programs that do not require students to

be registered nurses lead to the CM credential. As of 2018, 35 of the 38 midwifery programs are housed in schools of nursing that either require incoming students to be registered nurses or allow students to become nurses via an accelerated pathway (Bachelor of Science in Nursing [BSN] to Master of Science in Nursing [MSN] or Doctor of Nursing Practice [DNP]). Five of the thirty-eight ACME-accredited midwifery programs offer the accelerated BSN to MSN or DNP option.

Midwifery education programs leading to the CM credential must meet the same standards as CNM programs and CM graduates take the same certification exam as CNM graduates. CM programs are ACME-accredited using the same criteria as those used to accredit CNM programs. Students seeking the CM education pathway must meet the prerequisite requirements detailed by the midwifery program. To date, states that recognize the CM credential are Delaware, Hawaii, Maine, New Jersey, New York and Rhode Island. As of 2018, two of the 38 ACME-accredited midwifery programs offer the CM credential.

#### NUMBER AND LOCATION OF ACME-ACCREDITED MIDWIFERY EDUCATION PROGRAMS IN THE US PER STATE



## NUMBER OF ACME-ACCREDITED MIDWIFERY EDUCATION PROGRAMS

Despite the compelling need for more midwives to enter the workforce, there has been no growth in the number of ACME-accredited midwifery education programs between 2009 and 2018; see Figure 3, p. 5 and Figure 2, p. 4. In fact, there is one less program now than ten years ago. Most ACME-accredited midwifery programs are geographically on the east coast and west coast with a high concentration of programs in the north east of the country, see Figure 2, p. 4. Historically, looking back at the number of ACME-accredited programs since 1990, the number of midwifery education programs peaked in 1997 with a total of 50 programs, see Figure 4, p. 5.

Since 2010, the number has maintained steady. ACME and ACNM are calling their stakeholders to action and asking for a commitment to support the growth and development of new ACME-accredited midwifery education programs for certified nurse-midwives (CNMs) and certified midwives (CMs) in the US. We are asking that barriers to the expansion

of the profession be removed and a concerted effort be made at a federal, state, and private funding levels to invest in the education of certified nurse-midwives (CNMs) and certified midwives (CMs).

#### ACME-ACCREDITED MIDWIFERY PROGRAMS BY YEAR FROM 2014-2018



Figure 3

#### ACME-ACCREDITED OR PRE-ACCREDITED MIDWIFERY EDUCATION PROGRAMS, 1990-2018

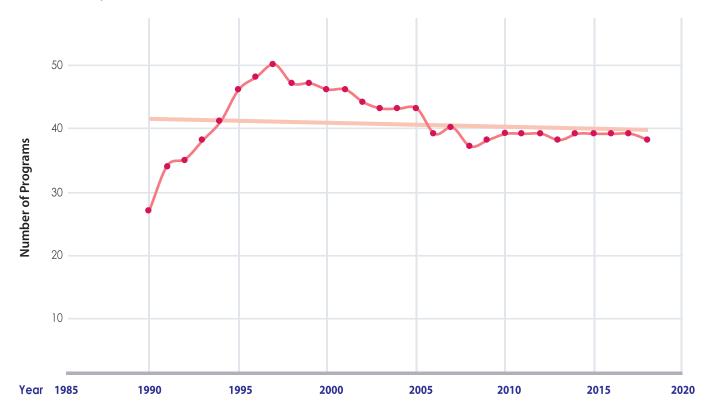


Figure 4



#### STUDENT CAPACITY

Midwifery student capacity, reported to ACME by the midwifery program directors in the annual monitoring reports (AMR), is the number of student spaces available in a midwifery program. Capacity is affected by a variety of factors, including the number of midwifery education programs, the number of faculty and clinical preceptors, the availability of clinical sites and the format of the program. Programs that offer their education through the distance education model have a greater student capacity with fewer limitations on the number of students who can enter a program, compared with traditional education models.

Midwifery education programs report the number of individuals who meet their program's minimum standards for qualified applicants annually. Overall, ACME-accredited midwifery education programs continue to operate at less than their full capacity. Aggregated data between 2014-2018 indicate that, on average, 135 student spaces were vacant each year across all programs, see Figure 5, p. 6. Midwifery education program directors provided ACME with reasons for not reaching capacity which included insufficient qualified applicants, limited clinical sites and preceptors, and applicants accepting positions in other midwifery programs. ACME criteria require all programs to assist students in clinical placement with qualified clinical preceptors.

#### NUMBER OF QUALIFIED APPLICANTS, NEW STUDENTS, ENROLLMENT, AND UNFILLED SPACES

Midwifery education programs report the number of qualified individuals who apply. Each program determines the standards for qualification. The aggregated data represent the annual number of qualified applications for all programs, not the number of applicants, since individuals may apply to more than one program.

Between 2014-2018, the number of qualified applications to all ACME-accredited midwifery programs increased by 25%, see Figure. 5, p. 6. Over the last 10 years, this steady increase supports the conclusions that individuals are more interested in midwifery education than in the past and that the applicant pool is of increasing quality compared with previous periods. As indicated in Figure 5, p. 6, the number of unfilled spaces in 2014 was 158 with a steady decrease to 97 unfilled spaces in 2017. In 2018, data indicate a slight rise in the number of unfilled spaces with 123 vacancies.

The number of new students overall increased in the reporting period 2014 to 2018, see Figure 6, p. 7. Comparing 2014 and 2018 data, new midwifery student enrollment increased by 19%. However, in 2015, the number of new midwifery students slightly declined by 5% compared to 2014 data, and subsequently continued to grow in 2016, 2017 and 2018.

## TOTAL NUMBER OF QUALIFIED APPLICANTS TO ACME-ACCREDITED MIDWIFERY PROGRAMS 2014-2018

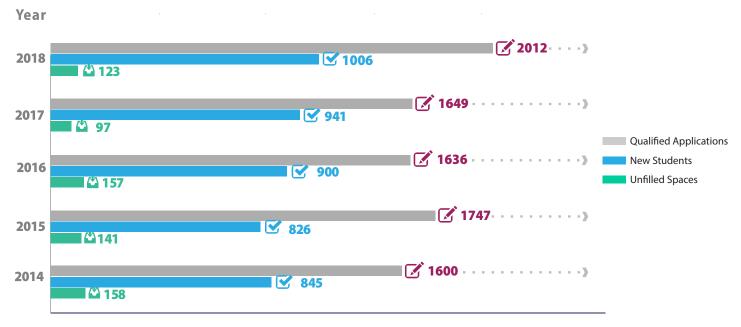


Figure 5

#### **NEW MIDWIFERY STUDENT ENROLLMENT 2014-2018**



Figure 6

## MIDWIFERY EDUCATION PROGRAM FORMATS

Education trends in the US show a continued increase in online education. Overall, the number of students in the US who took at least some of their courses online grew by 5.7 percent.8 One-third of all students in the US have taken at least one online class.9 Online education serves as a flexible option for students who cannot attend traditional campus classes, like those working full-time or with childcare restrictions. National trends indicate that online education has become an increasingly accepted option for education at the graduate level and the number of students taking online courses continues to grow significantly year after year primarily because of reduced tuition costs and accessibility for working students.

Distance education programs have the potential to increase capacity for midwifery student enrollment and provide an opportunity for innovative methods of education. All midwifery programs regardless of setting for didactic learning, provide students with clinical experiences in hospitals or birth centers with the placement of a midwifery clinical preceptor.

As of 2018, 21% of ACME-accredited midwifery programs (8) were fully distance programs, see Figure 7, p. 7. This number represents a slight increase since the 2015

Trends Report when six programs reported to be full distance education models. Forty-five percent (25 programs) of all ACME-accredited midwifery programs offered a hybrid of distance and classroom learning, and 34% (12 programs) were classroom based for didactic coursework delivered using web-based technology, see Figure 7, p. 7.

## FORMATS OF ACME-ACCREDITED MIDWIFERY EDUCATION PROGRAMS IN 2018

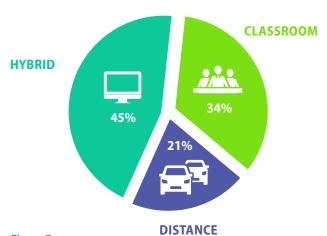


Figure 7



## DIVERSITY OF MIDWIFERY STUDENTS

ACME and ACNM are committed to increasing the number of midwifery students from diverse backgrounds and to enhancing the diversity of the midwifery workforce. Both organizations have committed at a strategic level to identify barriers that may be impacting diversity of the student population. In May 2019, ACME published new criteria that were revised through a diversity and racial equity lens to promote the diversity of midwifery students and remove barriers within the criteria that may be inhibiting the growth of a diverse student body.

There is a great deal of work to do to create a midwifery workforce that reflects the people midwives serve, see Figure 8, p. 8. Diversity data are reported to ACME annually, which gathers this data using the federally designated categories for race and ethnicity. It should be noted, not all students identify their races or ethnicities in data collected

by the midwifery programs and all information is selfreported by the midwifery student.

The diversity of midwifery students in ACME-accredited programs increased by 19%, comparing data from the years 2014 and 2018. 2% of the midwifery students did not report in 2018 compared to 4% in 2014.

From 2014-2018, a majority of the midwifery student population self-identified as White (not Hispanic origin). Native Hawaiian/Other Pacific Islander had the least increase in students who self-identified in this same time period.

Detailed in Figure 9, p. 9, data are organized comparing student diversity year after year in the race/ethnic categories. The two largest increases overall, between 2014 and 2018, have occurred steadily with students who self-identified as Black/African American and Hispanic/Latino.

## DIVERSITY OF MIDWIFERY STUDENT POPULATION IN 2018



<b>0.42</b> % <i>A</i>	American	Indian
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**2.44**% Asian

11.43% Black

7.20% Hispanic

**0.11**% Hawaiian/Pacific

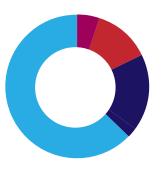
Islander

**3.50**% Two or more races

**72.65**% White

2.25% Race Unknown

#### **DIVERSITY OF US POPULATION**



N/A American Ind
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**5.2**% Asian

**12.6**% Black

**16.9**% Hispanic

**N/A** Hawaiian/Pacific

Islander

**2.3**% Two or more races

**62.0**% White

N/A Race Unknown

Chart comparing race of the midwifery student population in ACME Accredited Midwifery Programs with US population (US Census Bureau. Statisticalatlas.com 2018)

Figure 8



#### MIDWIFERY STUDENT ETHNICITY/ RACE 2014-2018

Ethnicity/Race	<b>AMR</b> 2018	% Increase & Decrease from 2018-2017	<b>AMR</b> 2017	% Increase & Decrease from 2017-2016	<b>AMR</b> 2016	% Increase & Decrease from 2016-2015	<b>AMR</b> 2015	% Increase & Decrease from 2015-2014	<b>AMR</b> 2014
American Indian/Alaskan Native in certificate	0	0%	0	0%	0	0%	0	0%	0
American Indian/Alaskan Native in master	11	-8%	12	0%	12	0%	12	-20%	15
American Indian/Alaskan Native in doctoral	0	-100%	1	-83%	6	100% 🛖	3	200% 🛖	1
Total	15	15%	13	-28%	18	20%	15	-6%	16
Asian in certificate	3	50%	2	100%	1	-67%	3	0%	3
Asian in master	51	-9%	56	12% 🔷	50	9% 🛖	46	15% 🛖	40
Asian in doctoral	10	43% 🛖	7	133% 🛖	3	0%	3	-25%	4
Total	64	-2%	65	20%	54	4%	52	11%	47
Black/African American (non-Hispanic origin) in certificate	23	92% 🔷	12	-25%	16	-33%	24	-4%	25
Black/African American (non-Hispanic origin) in master	242	-7%	261	17%	223	8% 🛖	206	1% 🛖	204
Black/African American (non-Hispanic origin) in doctoral	35	25% 🔷	28	27%	22	57% 🔷	14	56% 🛖	9
Total	300	0%	301	15%	261	7%	244	3%	238
Hispanic/Latino in certificate	5	0%	5	150% 🔷	2	0%	2	-78%	9
Hispanic/Latino in master	165	-1%	167	29% 🔷	129	5% 🔷	123	-2%	126
Hispanic/Latino in doctoral	19	27% 🔷	15	50% 🛖	10	67% 🛖	6	200% 🔷	2
Total	189	1%	187	33%	141	8%	131	-4%	137
Native Hawaiian/Other Pacific Islander in certificate	0	0%	0	0%	0	0%	0	-100%	3
Native Hawaiian/Other Pacific Islander in master	3	-82%	17	183% 🔷	6	20% 🔷	5	-44%	9
Native Hawaiian/Other Pacific Islander in doctoral	0	0%	0	-100%	2	100% 🛖	1	-50%	2
Total	3	-82%	17	113%	8	33%	6	-57%	14
White (non-Hispanic Origin)in certificate	62	55% 🔷	40	-33%	60	-8%	65	-27% 🕇	89
White (non-Hispanic Origin) in master	1713	9% 🛖	1570	-4%	1627	13% 🛖	1444	-5%	1,514
White (non-Hispanic Origin) in doctoral	132	-34%	200	25% 🔷	160	24% 🔷	129	-6%	137
Total	1907	5%	1810	-2%	1847	13%	1638	-6%	1740
Two or more races in certificate	0	-100%	1	0%	1	100% 🔷	0	-100%	1
Two or more races in master	85	4% 🛖	82	17% 🔷	70	46% 🔷	48	23% 🔷	39
Two or more races in doctoral	7	17% 🛖	6	50% 🛖	4	400% 🛖	6	500% 🛖	1
Total	92	3%	89	19%	75	39%	54	32%	41
Race/ethnicity unknown in certificate	0	-100%	3	-67%	9	1000%	0	-100%	7
Race/ethnicity unknown in master	85	25% 🔷	68	0%	68	-3%	70	-8%	76
Race/ethnicity unknown in doctoral	7	250% 🛖	2	200% 🛖	0	-100%	5	100% 🛖	0
Total	92	26%	73	-5%	77	3%	75	-10%	83

Figure 9



## MIDWIFERY GRADUATES & EMPLOYMENT

The number of graduates from midwifery education programs has increased steadily from 583 in 2014 to 683 in 2018, see Figure 10, p. 10. Midwifery program directors consistently indicate that they could increase graduation rates if more clinical sites and preceptors were available for midwifery students.

According to the Bureau of Labor Statistics, the overall employment of nurse-midwives is projected to **grow 26% between 2018 and 2028, much faster than the average** for all occupations. As of May 2018, the Bureau reported the mean annual wage of a certified nurse-midwife at \$103,774 annually.

#### **NUMBER OF GRADUATES PER YEAR**

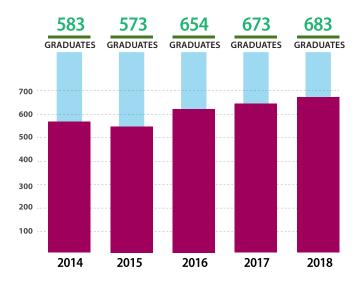


Figure 10

#### **DOCTORATE IN MIDWIFERY**

In 2019, one midwifery program expanded its offerings and graduated their first class from the Doctor of Midwifery (DM) program. This first-ever professional midwifery doctorate is designed to develop leadership skills for mid-career midwives who are already certified and licensed midwives. Currently, ACME does not accredit this doctoral program.

However, the ACME Board of Commissioners is in the process of approving and publishing criteria for this professional doctorate and ACME will seek expansion of their recognition with the US Department of Education. This first DM program is included in its institution's regional/institutional accreditation by the Middle States Commission on Higher Education to provide professional doctoral degrees.



## INCREASING FUNDING FOR MIDWIFERY EDUCATION

Direct funding for midwifery education has been identified by the ACNM as the number one priority for growing the midwifery workforce to meet the urgent needs of the childbearing population, women and individuals throughout the lifespan.

As of printing, the United States Congress has not yet passed a federal budget for FY 2020, but congressional leaders are close to a deal to avert a government shutdown and fund the federal government for the duration of the fiscal year (i.e., through September 30, 2019). The federal government has been operating under a continuing resolution since October 1, 2019, to allow the House and Senate time to reconcile their respective budget bills and come to an agreement on federal spending levels. On December 16, 2019, congressional leaders came to an agreement on funding the federal government for FY 2020. The bipartisan legislation includes several provisions that will benefit midwives and accredited midwifery education programs, including increased funding from FY 2019 levels for the Title VIII Nursing Workforce Development Programs levels for FY 2020 (\$259.972 million, which represents a \$5.5 million increase to existing Title VIII programs and an additional \$5 million to a new line item for the establishment of a Nurse Practitioner Optional Fellowship

Program) and increased funding for the National Institute of Nursing Research (\$169.113 million, which represents a \$6.121 million increase). The final legislative package also includes a provision appropriating \$2.5 million in federal funding for FY 2020 under the Title VII scholarships for disadvantaged students' program. This funding will enable both CNM and CM students attending accredited midwifery education programs to apply for direct funding and would help increase racial and ethnic diversity within the midwifery community. The legislation will be voted on by the House of Representatives on December 17, 2019 and the Senate is expected to vote shortly thereafter. Inclusion of this provision represents a significant accomplishment within the midwifery community in raising awareness amongst policymakers around the benefits of investing in the midwifery model of care. Additional congressional efforts to help grow the midwifery pipeline include the Midwives for Maximizing Optimal Maternity Services Act, H.R. 3849. Introduced by Reps. Lucille Roybal- Allard (D-CA) and Jamie Herrera Beutler (R-WA), this legislation creates two new federal programs under Title VII and Title VIII of the Public Health Service Act to support basic and graduate nursing and midwifery education and training programs, with a specific focus on support for clinical preceptors and designated funding to increase ethnic and racial representation within ACME-accredited midwifery programs.

#### H.R. 3849 – The Midwives for Maximizing Optimal Maternity Services Act

**Specifics of Title VIII Program - Establishes a new "Midwifery Expansion Program"** for accredited midwifery education programs that train nurse-midwifery students. The Health Services and Resources Administration (HRSA) may provide grants to schools of nursing for:

- Direct support of student nurse-midwives;
- Establishment or expansion of an accredited nursemidwifery school or program; and
- Securing, preparing or providing support for increasing the number of preceptors at clinical training sites to precept students training to become CNMs.
- Prioritization will be given to programs that seek to increase racial and ethnic representation and those who agree to serve in a health professional shortage area (HPSA).

**Specifics of Title VII Program – Recognizes "Increasing Funding for Midwifery Education"** as eligible entities to receive grant funding under the Title VII program." HRSA may provide grants to accredited midwifery education programs that are not within schools of nursing for:

 Direct support of midwifery students (CM, CPM and CNM students who are in programs NOT within schools of nursing);

- Establishment or expansion of an accredited midwifery school or program; and
- Securing, preparing or providing support for increasing the number of preceptors at clinical training sites to precept students training to become CMs, CPMs or CNMs.
- Prioritization will be given to programs that seek to increase racial and ethnic representation and students who agree to serve in HPSA.

Another option for individual funding is from The A.C.N.M. Foundation, Inc.,<sup>10</sup> which provides up to eight scholarships every year of \$3,000 each to midwifery students who are ACNM members. With funding from a special endowment, at least two of these scholarships go to student midwives of color.



## CONCLUSION AND RECOMMENDATIONS:

Better integration of the midwifery model of care depends on a robust workforce. The shortage of all types of maternity care providers and of maternity services in rural, low-resourced and underserved areas presents an opportunity to re-envision the maternity care workforce by increasing access to certified nurse-midwives (CNMs) and certified midwives (CMs). Expanding federal funding to accredited midwifery education programs whose graduates provide high-value care and are educated in fewer years at lower cost than physicians; and whose composition better reflects the diversity of childbearing families will increase access to quality care and improve maternal health outcomes across the US.

While we have increased the number of graduates from midwifery education programs and the number of certificates has increased with the exception of the recent five percent drop in 2018, it's not enough to address the maternal health care shortage America faces.



Midwives must be valued for their high-quality care and contributions to reduce maternal mortality in the US. Certified nurse-midwives and certified midwives are a significant part of the solution to the maternal health care provider shortage America is facing.



Midwives must be valued for their high- quality care and contributions to reduce maternal mortality in the US. Certified nurse-midwives (CNMs) and certified midwives (CMs) are a significant part of the solution to the maternal health care provider shortage our America is facing.

#### We are strongly asking all stake holders to prioritize the following recommendations:

- Increase the number of ACME-accredited midwifery programs: Invest in midwifery education programs in particular in states where there is no ACME-accredited midwifery program, the maternal mortality is high, and the number of certified CNM/CMs is low.
- Support & increase federal, state and private funding:
  Continue to develop legislation and prioritize federal
  funding to increase the number of student and program
  grants aimed at diversifying the midwifery workforce
  including funding to pay midwifery clinical midwifery
  preceptors and clinical sites. Model these contributions
  like the OBGYNs federal support. Encourage those who
  are private citizens or foundations to prioritize the funding
  for the development of new midwifery programs and the
  individual education of certified nurse-midwives (CNMs) and
  certified midwives (CMs) in their future giving plans.
- Full practice authority in all 50 states: Pass legislation that provides all CNM and CM with full practice authority and recognition. Eliminate any and all restrictions to practice in any of the 50 states.
- Equal pay: Medicaid programs should pay certified nurse-midwives (CNMs) and certified midwives (CMs) at the same rate they pay doctors for performing the same services, and states should require hospitals to offer certified nurse-midwives (CNMs) and certified midwives (CMs) the same clinical and staff privileges, including hospital admitting privileges that they extend to physicians.
- Interprofessional Education (IPE): Continue to collaborate with other women's health and maternal health care providers to create interprofessional education models that support midwifery education and strengthen the maternal health care workforce.
- **Diversify the midwifery workforce:** Increase the recruitment efforts aimed at expanding the diversity of the midwifery students.

This report is intended to shape the future dialogue and efforts toward expanding the midwifery workforce in the US.

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#### REFERENCES

- <sup>1</sup>Berg, C.J., Chang, J., Callaghan W.M., Whitehead, S.J., (2003). Pregnancy-related mortality in the United States, 1991-1997. Obstet Gynecol, (101), pages 289-96.
- <sup>2</sup> MacDorman M.F., Declercg E., Cabral H., Morton C., (2016). Recent Increases in the U.S. Maternal Mortality Rate: Disentangling Trends From Measurement Issues. Obstet Gynecol, (128), pages 447-55.
- <sup>3</sup> Pregnancy Mortality Surveillance System, (October 2019). https:// www.cdc.gov/reproductivehealth/maternal-mortality/pregnancymortality-surveillance-system.htm.
- <sup>4</sup>Racial/Ethnic Disparities in Pregnancy-Related Deaths United States, 2007–2016 (September 2019). Centers for Disease Control (CDC).
- <sup>5</sup>Tucker M.J., Berg C.J., Callaghan W.M., Hsia J., (2007). The Black-White disparity in pregnancy-related mortality from 5 conditions: differences in prevalence and case-fatality rates. American Journal of Public Health, (97), pages 247-51.
- <sup>6</sup> American Midwifery Certification Board Annual Report. (August 2018). https://www.amcbmidwife.org/docs/default-source/annualreports/2018-amcb-annual-report.pdf?sfvrsn=6aaa6b9c\_2

- <sup>7</sup>Merelli, A., (June 29, 2018). America is running out of OB/GYNs. Quartz. https://gz.com/1315458/the-linkbetween-medicaid-and-americas-shortage-of-obgyns/#targetText=Half%20the%20%20counties%20in%20 the,balloon%20to%2022%2C000%20%20by%202050
- 8 Ginder, S.A., Kelly-Reid, J.E., Mann, F.B., (January 2019) Enrollment and Employees in Postsecondary Institutions, Fall 2017; and Financial Statistics and Academic Libraries, Fiscal Year 2017 First Look (Provisional Data). Department of Education
- 9 Friedman, J. (2018) Study: More Students are Enrolling in Online Courses. US News & World Report. https:// www.usnews.com/higher-education/online-education/ articles/2018-01-11/study-more-students-are-enrolling-inonline-courses. Accessed October 2019.
- <sup>10</sup>The A.C.N.M Foundation, Inc. *The A.C.N.M. Foundation, Inc.* Scholarships and Awards Applications. http://www.midwife. org/Foundation-Scholarships-and- Awards. Accessed October 2019.

