State of the U.S. Maternal Health Workforce, 2024

November 2024

The United States has a high maternal mortality rate compared to other high-income nations.[1] Furthermore, as many as 60,000 U.S. women each year experience severe maternal morbidity, resulting in short- or long-term health problems.[2] In December 2021, the White House announced a historic Call to Action to improve health outcomes for parents and infants in the United States. The White House Blueprint for Addressing the Maternal Health Crisis included plans to increase access to and coverage of maternal health services, expand and diversify the maternal health workforce, improve data collection, and enhance research[3,4,5] and led to several enhancements to maternal healthcare.[6]

This brief provides data on the maternal health workforce, including information on demographics and comparisons to the female population of childbearing age. The purpose of this data is to assist policymakers and other stakeholders in analyzing the maternal health workforce and developing workforce education, training, and other programs to improve maternal health outcomes, particularly for under-resourced populations.

About the National Center for Health Workforce Analysis

The National Center for Health Workforce Analysis informs public and private sector decision makers on health workforce issues by expanding and improving health workforce data, disseminating workforce data to the public, and improving and updating projections of the supply and demand for health workers.

For more information, visit the Health Workforce Analysis webpage.

Goal One in the White House Blueprint for Addressing the Maternal Health Crisis is to "Increase Access to and Coverage of Comprehensive High-Quality Maternal Health Services, Including Behavioral Health Services."[5] There is still much to be done to achieve this goal, as 10,331,055 women as of 2022 live in U.S. counties with no OBGYN physicians, 4,103,391 of whom are of childbearing age (15-49 years old). This accounts for 6.1% of all women and 5.4% of women of childbearing age in the United States.[7]

Data

Various datasets were used by the National Center for Health Workforce Analysis (NCHWA) to prepare this brief. Data cover the 50 states and Washington, DC, unless otherwise noted. Sources and reference years are noted with each data point. Workforce data are presented as counts of health care providers unless otherwise noted.

Definitions

For this brief, the maternal health workforce includes physicians specializing in family medicine, general internal medicine, obstetrics and gynecology (OBGYN), and neonatology or perinatal health, as well as licensed and employed nurse midwives and registered nurses (RNs) in women's health or with a maternal or perinatal specialization who have patient care responsibilities. While doulas play an important and expanding role in maternal care, data on the number of doulas in the United States is not readily available. As such, doulas are excluded from the discussion of the size of the maternal health workforce below. Similarly, maternal care coordinators are important sources of information about care options and assist women with connecting with maternal health care providers. However, data on the number of care coordinators is also not readily available.

This brief uses the terms "women" and "female" to align with language in cited secondary data sources. The analysis and recommendations presented in this brief are meant to be inclusive of every person giving birth, irrespective of orientation, identity, or demographic background.

The size and composition of the maternal health workforce

- More than 308,000 physicians (family medicine, general internal medicine, OBGYN, and neonatal and perinatal medicine) and approximately 201,000 nurses (nurse midwives and RNs specializing in gynecology, obstetrics, labor and delivery, or neonatology) are considered part of the maternal health workforce (Table 1).

Table 1. Enumeration of Current Maternal Health Workforce in the United States

Occupation	Employment (Reference year)
Family medicine physicians	119,800 (2022)
General internal medicine physicians	138,550 (2022)
Obstetrics and gynecology (OBGYN) physicians	43,889 (2022)
Neonatal and perinatal physicians	6,381 (2022)
Nurse midwives[a]	14,198 (2023)
Maternal health registered nurses (RNs)[b]	200,733 (2021)

Note. Data for physicians is adapted from the American Medical Association's (AMA) Physician Professional Data, 2022. Data for physicians includes hospitalists. Data for nurse midwives is adapted from the *2023 Demographic Report*, by the American Midwifery Certification Board (https://www.amcbmidwife.org/docs/default-source/default-document-library/demographic-report-2023.pdf). Data for RNs is adapted from the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data). [a] Total reflects the number of certified nurse-midwives and certified midwives. [b] Consists of employed and licensed nurse midwives and RNs specializing in gynecology, obstetrics, labor and delivery, or neonatology with patient care responsibilities. RNs includes advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists.

- While the maternal health workforce is expected to grow over the next decade, there is projected to be a shortage of physicians in family medicine and general internal medicine in primary care as well as OBGYN physicians in women's health in 2037, based on current utilization patterns (Table 2). Assuming current patterns of care use continue in the future, there is a projected surplus in nurse midwives, nurse practitioners, and physician assistants in women's health services, after accounting for anticipated demographic changes.
- Meanwhile, the number of women of childbearing age is projected to grow from 75.4 million in 2023 to 78.0 million in 2037, an increase of 2.6 million (Table 3).

Table 2. Projected Surplus or Shortage for the Maternal Health Workforce, 2037

Occupation	Surplus or (Shortage)	Percent Adequacy
Family medicine physicians (primary care)	(43,220)	73%
General internal medicine physicians (primary care)	(36,440)	72%
Obstetrics and gynecology (OBGYN) physicians (women's health)	(9,890)	82%
Nurse midwives (women's health)	4,670	135%
Nurse practitioners (women's health)	8,470	201%
Physician assistants (women's health)	2,860	190%

Note. Adapted from the *National Center for Health Workforce Analysis (NCHWA) Workforce Projections, Primary Care and Women's Health*, by the U.S. Health Resources and Services Administration, 2024 (https://data.hrsa.gov/topics/health-workforce/workforce-projections). Projections reflect the impact of the COVID-19 pandemic. Demand and supply estimates and projections are in full-time equivalents (FTEs), defined as working 40 hours a week. Percent adequacy is calculated as projected supply divided by projected demand.

Table 3. Women of Childbearing Age (15-49 Years Old) in the United States, Selected Years

Year	Population
2023	75,383,576
2030 (projected)	77,811,406
2037 (projected)	78,008,616

Note. Adapted from the *Annual Estimates of the Resident Population for Selected Age Groups by Sex for the United States: April 1, 2020 to July 1, 2023*, by the U.S. Census Bureau, 2023 (https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html#v2023) and the *2023 National Population Projections Datasets: Projected Population by Single Year of Age, Sex, Race, and Hispanic Origin for the United States: 2022 to 2100, Main Series*, by the U.S. Census Bureau, various years (https://www.census.gov/data/datasets/2023/demo/popproj/2023-popproj.html).

- The race/ethnicity of physicians in the maternal health workforce differs by physician type (Table 4a). As of 2022, a greater percent of internal medicine physicians was non-Hispanic Asian (29.4%) compared to all active physicians (20.6%). The percent of maternal health physicians who were non-Hispanic Black or African American ranged from 6.7% in family medicine to 10.7% for OBGYNs, compared to 5.7% for all active physicians. The percent of internal medicine physicians who were non-Hispanic White (52.7%) was lower than the percent for all active physicians (63.9%).
- As of December 31, 2021, the percent of RNs who were non-Hispanic White was higher for maternal health RNs than for all RNs with patient care responsibilities (Table 4b). A greater percent of maternal health RNs was Hispanic than all RNs (12.4% compared to 9.4%).

Table 4a. All and Maternal Health Physicians by Race and Ethnicity, 2022

Physician Type	Total	Hispanic	White (Non-Hispanic)	Black or African American (Non-Hispanic)	Asian (Non-Hispanic)	American Indian or Alaska Native (Non-Hispanic)	Other or Multiple Races (Non-Hispanic)
All active physicians[a]	841,322	6.9%	63.9%	5.7%	20.6%	0.3%	2.6%
Maternal health physicians[a,b]	244,259	7.6%	60.8%	7.8%	21.0%	0.4%	2.4%
Family medicine	104,100	7.9%	66.3%	6.7 %	16.2%	0.6%	2.3%
Internal medicine	101,510	7.2%	52.7%	7.8%	29.4%	0.2%	2.6%
Obstetrics and gynecology (OBGYN)	38,649	7.8%	67.0%	10.7%	12.1%	0.4%	2.0%

Note. Adapted from Physician Specialty Data Report Executive Summary, by the Association of American Medical Colleges (AAMC), 2022 (https://www.aamc.org/data-reports/data/2022-physician-specialty-data-report-executive-summary). Numbers may not add to 100% due to rounding. Due to limited sample sizes, Native Hawaiian and Other Pacific Islanders are included in "Other or Multiple Races." [a] Excludes physicians with unknown race/ethnicity. [b] Includes physicians specializing in 'Family Medicine', 'Internal Medicine', or 'Obstetrics/Gynecology'. Physicians with a neonatal or perinatal specialty are excluded due to data limitations.

Table 4b. All and Maternal Health Registered Nurses (RNs) by Race and Ethnicity, 2021

Nurse Type	Total	Hispanic	White (Non-Hispanic)	Black or African American (Non-Hispanic)	Asian (Non-Hispanic)	American Indian or Alaska Native (Non-Hispanic)	Other or Multiple Races (Non-Hispanic)
All RNs[a]	2,928,675	9.4%	64.7%	11.4%	9.8%	0.4%	4.3%
Maternal health RNs[a,b]	200,733	12.4%	68.5%	9.1%	6.2%	**	3.9%

Note. Adapted from the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data). Numbers may not add to 100% due to rounding. Due to limited sample sizes, Native Hawaiian and Other Pacific Islanders are included in "Other or Multiple Races." [a] Consists of employed and licensed RNs with patient care responsibilities, including advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists. [b] Restricted to employed and licensed nurse midwives and RNs specializing in gynecology, obstetrics, labor and delivery, or neonatology with patient care responsibilities. ** Data withheld due to a high standard error.

Table 5. Maternal Health Workforce and Female Population of Childbearing Age (15-49 Years Old) by Race and Ethnicity

Group (Reference year)	Hispanic	White (Non-Hispanic)	Black or African American (Non-Hispanic)	Asian (Non-Hispanic)	American Indian or Alaska Native (Non-Hispanic)	Other or Multiple Races (Non-Hispanic)
Maternal health physicians[a] (2022)	7.6%	60.8%	7.8%	21.0%	0.4%	2.4%
Maternal health registered nurses (RNs)[b] (2021)	12.4%	68.5%	9.1%	6.2%	**	3.9%
Female population of childbearing age,15-49 years old (2022)	21.6%	53.9%	13.9%	7.1%	0.8%	2.8%
Female population of childbearing age, 15-49 years old (2037)	24.8%	48.4%	14.0%	8.2%	0.7%	3.9%

Note. Adapted from Physician Specialty Data Report Executive Summary, by the Association of American Medical Colleges (AAMC), 2022 (https://www.aamc.org/data-reports/data/2022-physician-specialty-data-report-executive-summary), the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data), and the *2023 National Population Projections Datasets: Projected Population by Single Year of Age, Sex, Race, and Hispanic Origin for the United States: 2022 to 2100, Main Series*, by the U.S. Census Bureau, various years (https://www.census.gov/data/datasets/2023/demo/popproj/2023-popproj.html). Numbers may not add to 100% due to rounding. Due to limited sample sizes, Native Hawaiian and Other Pacific Islanders are included in "Other or Multiple Races." [a] Includes physicians specializing in 'Family Medicine', 'Internal Medicine', or 'Obstetrics/Gynecology'. Excludes physicians with unknown race/ethnicity. Physicians with a neonatal or perinatal specialty are excluded due to data limitations. [b] Consist of employed and licensed nurse midwives and RNs specializing in gynecology, obstetrics, labor and delivery, or neonatology with patient care responsibilities. RNs includes advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists. ** Data withheld due to a high standard error.

- Overall, the percent of maternal health physicians who were Hispanic (7.6%) or non-Hispanic Black or African American (7.8%) was lower than the percent of the female population of childbearing age that was Hispanic (21.6%) or non-Hispanic Black or African American (13.9%) in 2022 (Table 5). In contrast, the percent of maternal health physicians who were non-Hispanic White (60.8%) exceeded the percent of the female population of childbearing age that was non-Hispanic White (53.9%). A similar pattern is observed for maternal health RNs. The percent of maternal health physicians who were non-Hispanic Asian (21.0%) exceeded the percent of the female population of childbearing age that was non-Hispanic Asian (7.1%).
- The age distribution of RNs differs by nurse type (Table 6). As of December 31, 2021, the average age for maternal health RNs was 43.4 years old, compared to 44.6 years old for all RNs with patient care responsibilities. Similarly, 43.6% of maternal health RNs were younger than 40 years old, compared to 40.4% of all RNs.

Table 6. Registered Nurses (RNs)[a], Average Age and Age Distribution, 2021

Nurse Type	Average Age	Less than 40 Years Old	40 to 64 Years Old	65 or Older
All RNs[a]	44.6	40.4%	53.0%	6.6%
Maternal health RNs[a,b]	43.4	43.6%	50.5%	5.8%

Note. Adapted from the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data). Numbers may not add to 100% due to rounding. [a] Consists of employed and licensed RNs with patient care responsibilities, including advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists. [b] Restricted to employed and licensed nurse midwives and RNs specializing in gynecology, obstetrics, labor and delivery, or neonatology with patient care responsibilities.

The geographic distribution of the maternal workforce

- Maternal health physicians tend to be more concentrated in large and medium metropolitan areas than the female population of childbearing age (Table 7). As of 2022, 3.4% of internal medicine physicians and 4.1% of OBGYNs were located in micropolitan and noncore areas (i.e., areas with a population less than 50,000), compared to 10.3% of females ages 15-49. In contrast, the percent of family medicine physicians in micropolitan and noncore areas was similar to the percent of the female childbearing population within those areas. However, family medicine is a broad specialization that includes maternal health as well as other types of health care.
- In 2037, the supply of OBGYN physicians in metro areas is projected to meet 85% of demand. For nonmetro areas, that figure is 51%.[8]
- Analysis of 2014-2019 data from the National Plan and Provider Enumeration System (NPPES) and the American Board of Family Medicine finds there are 12.8 family physicians providing obstetrical services per 100,000 women of childbearing age across the U.S. This ratio is higher for family physicians practicing in nonmetropolitan areas (34.4), particularly noncore areas (49.0), than for their peers practicing in metropolitan areas (9.8).[9]

Table 7. Rurality of Maternal Health Physicians Compared to Female Population of Childbearing Age (15-49 Years Old), 2022

Rurality	Family Medicine Physicians	General Internal Medicine Physicians	Obstetrics and Gynecology (OBGYN) Physicians	Neonatal and Perinatal Physicians	Female Population of Childbearing Age, 15-49 Years Old
Large metropolitan area	26.3%	38.1%	36.5%	41.0%	30.6%
Medium metropolitan area	37.3%	42.3%	41.8%	44.9%	36.3%
Small metropolitan area	25.5%	16.2%	17.5%	12.7%	22.8%
Micropolitan area	9.7%	3.2%	4.0%	1.4%	9.3%
Noncore area	1.2%	0.2%	0.1%	0.05%	1.0%

Note. Adapted from the American Medical Association's (AMA) Physician Professional Data, 2022, and the *Annual County and Puerto Rico Municipio Resident Population Estimates by Selected Age Groups and Sex: April 1, 2020 to July 1, 2023,* by the U.S. Census Bureau, 2022 (https://www.census.gov/data/tables/time-series/demo/popest/2020s-counties-detail.html). Numbers may not add to 100% due to rounding. Rurality based on the National Center for Health Statistics' Urban-Rural Classification Scheme. Large metropolitan areas are counties with a population of 1,000,000 or more. Medium metropolitan areas are counties with a population between 250,000 and 999,999. Small metropolitan areas are counties with a population between 50,000 and 249,999. Micropolitan areas are counties with a population between 10,000 and 49,999. Noncore areas are counties with a population less than 10,000. Rurality designations for Connecticut counties in the AMA Physician Professional Data used 2021 U.S. Census resident county estimates, due to the adoption of Connecticut's nine planning regions within the U.S. Census resident county estimates starting in 2022.

Patient care time among maternal health registered nurses

- Maternal health RNs generally spend a greater percent of their time on patient care than RNs with other specialties. In 2021, maternal health RNs spent an average of 70.0% of their time on patient care, compared to an average across all RNs with patient care responsibilities of 63.7%.[10] In fact, the maternal specialties (gynecology, obstetrics, labor and delivery, and neonatology) are among the top five clinical specialties in terms of the average percent of time spent on patient care (Table 8a).

Table 8a. Registered Nurse Clinical Specialties with Highest Percent of Time Spent on Patient Care, 2021

Clinical Specialty	Percent of Time Spent on Patient Care
Labor and delivery or neonatology	70.7%
Gastrointestinal	70.5%
Surgery, preoperative, postoperative, post-anesthesia care unit (PACU) or anesthesia	70.0%
Obstetrics and gynecology (OBGYN)	69.1%
Critical care or intensive care	67.1%

Note. Adapted from the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data). Data consists of employed and licensed RNs with patient care responsibilities, including advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists.

Table 8b. Registered Nurse Clinical Specialties with Lowest Percent of Time Spent on Patient Care, 2021

Clinical Specialty	Percent of Time Spent on Patient Care
Assisted living or nursing home	40.1%
Infectious or communicable disease	41.7%
Long term care	43.7%
Gerontology	45.5%
Occupational health	47.8%

Note. Adapted from the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data). Data consists of employed and licensed RNs with patient care responsibilities, including advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists.

Conclusion

Given the projected shortages in maternal health physicians and the maldistribution of the maternal health workforce across states and counties, it is important to focus on workforce issues, such as recruitment, placement, and retention, as well as ways to encourage maternal health care providers to locate to under-resourced areas. A review of recent scientific literature and proposals highlight several possible interventions for expanding the maternal health workforce, particularly in under-resourced areas:

- Provide grants for accredited schools of medicine, nursing, and other health professional training to establish or expand maternal/perinatal care programs, including (but not limited to) schools located in areas with a shortage of qualified maternal care.[11,12]
- Encourage collaboration between health care facilities that have obstetric care units and those that do not and provide grants to establish maternal health care provider networks in rural areas.[13]
- Improve rural obstetric readiness by developing standards for obstetrics and maternal health training for practitioners in hospitals without obstetric care units. This can include providing online obstetrics training to Health Resources and Services Administration (HRSA)-funded health centers, and providing free clinics to deliver preconception, prenatal, intrapartum, and postpartum care.[14]
- Support and encourage use of doula care, including providing coverage of doula services under Medicaid and providing funding for hiring and training of doulas in areas with high rates of adverse maternal outcomes.[15,16,17]
- Implement Pregnancy Medical Home demonstration sites, as proposed by the Maternal Health Blueprint. These sites will "emphasize quality and care coordination through a team-based approach to care with the goal of reducing adverse maternal health outcomes and maternal death."[5]
- Support and expand the use of telehealth and other technologies and develop best practices in the use of technology to improve maternal health outcomes.[18]

In addition to these ideas, other options include providing partial repayment of student loans or scholarships for medical students studying maternal health in exchange for a two-year commitment to work in a maternity care health professional target area (MCTA).[19,20]

As described above, there is lack of racial and ethnic diversity in the maternal health workforce compared to the U.S. female population of childbearing age. Some patients feel more comfortable with a health care provider of the same race and/or ethnic origin.[21,22,23,24] Furthermore, subconscious prejudices and implicit bias can lead to adverse maternal outcomes. In fact, the maternal mortality rate for Black women is more than two and a half times higher than for White women, while the rate for American Indian/Alaska Native women is more than twice that of White women.[25,26] In addition to racial/ethnic diversity, gender representation as well as cultural and linguistic representation play an important role in patient satisfaction, provider-patient communication, and improved access to care for minority patients.[27,28,29] A number of recent proposals provide recommendations to help address this issue and reduce

systematic bias in the delivery of maternal care:

- Provide funding to develop training and/or scholarship programs designed to expand and diversify the maternal health workforce, such as scholarships to students from disadvantaged communities to train in maternal health.[30]
- Train maternal health care providers on implicit bias, as well as culturally- and linguistically-appropriate care. This could include supporting maternal health care providers to identify and avoid bias as well as engaging with the National Academy of Medicine to make recommendations on the inclusion of implicit bias training at accredited medical schools.[5]
- Develop community needs assessments, develop and expand digital tools to enhance maternal care, and train students and maternal health care providers to identify the social determinants of health that drive differences in maternal outcomes.[5]
- Conduct translational science research on treatments and interventions to improve women's health and reduce health disparities.[31]

Other potential ways to increase the maternal health workforce and improve maternal health care include providing funding and support for programs that develop and implement training on maternal mental health and substance use disorder.[5] Furthermore, additional training for nurse practitioners, certified nurse midwifes, physician assistants, and other maternal health care providers in the recognition and treatment of high risk pregnancy conditions such as diabetes, endometriosis, fibroids, and preeclampsia could help improve maternal outcomes.

In September 2023, in support of the White House Blueprint, HRSA announced the allocation of nearly $90 million in awards to improve maternal health mortality and overall health.[32] The awards aim to facilitate access to maternal health care (especially in rural and underserved areas), increase the maternal health workforce, strengthen community-based support, and expand screening and treatment for maternal mental health and substance use disorders. Also in 2023, HRSA started the National Maternal Mental Health Hotline for maternal mental health issues.[33] The hotline provides access to a professional counselor via phone or text, 24 hours a day, seven days a week. For more on HRSA's approach to maternal health, see Maternal Health at HRSA and How We Improve Maternal Health.

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[7] *Note.* Adapted from the American Medical Association's (AMA) Physician Professional Data, 2022, and the *Annual County and Puerto Rico Municipio Resident Population Estimates by Selected Age Groups and Sex: April 1, 2020 to July 1, 2023,* by the U.S. Census Bureau (https://www.census.gov/data/tables/time-series/demo/popest/2020s-counties-detail.html).

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[10] *Note.* Adapted from the National Sample Survey of Registered Nurses (NSSRN), by the U.S. Health Resources and Services Administration, 2022 (https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data). Data consists of employed and licensed RNs with patient care responsibilities, including advanced practice registered nurses (APRNs), which are nurse practitioners, certified nurse midwives, clinical nurse specialists, and nurse anesthetists. Maternal health RNs consists of employed and licensed nurse midwives and RNs specializing in gynecology, obstetrics, labor and delivery, or neonatology with patient care responsibilities.

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