

# Rural Availability of the Obstetrician & Gynecologist and Certified Nurse Midwife Workforce

## Sources & Methods

### Sources

#### Background

Cabasag, C, Rubio, V, Williams, D. (2019). *Arizona maternal mortality review program report*. (). Retrieved from <https://azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/maternal-mortality-review-2012-2015.pdf>

Harvard Chan School Center of Excellence in Maternal and Child Health. (No Date). Maternal health task force. Retrieved from <https://www.mhtf.org/topics/maternal-health-in-the-united-states/>

WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. (2019). Maternal mortality: Levels and trends 2000 to 2017. (2019). Retrieved from <https://www.who.int/reproductivehealth/publications/maternal-mortality-2000-2017/en/>

#### Definitions

Karney, P. (2000). Women's health: An evolving mosaic. *Journal of General Internal Medicine*, 15(8), 600

U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). National and regional projections of supply and demand for women's health service providers: 2013-2025.

#### Rural Arizona Maternal Health Workforce

Koch B, Coates S, Brady B, Campos-Outcalt D, Carter H, and Derksen D. (2020) Arizona Health Workforce Report: Obstetricians, Gynecologists, and Certified Nurse Midwives.

March of Dimes. (2018). Nowhere to go: Maternity care deserts across the U.S. Retrieved from [https://www.marchofdimes.org/materials/Nowhere\\_to\\_Go\\_Final.pdf](https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf)

#### How Workforce Shortages Affect Rural Mothers

Anderson, B, Gingery, A, McClellan, M, Rose, R, Schmitz, D, Schou, P. (2019). NRHA policy paper: Access to rural maternity care. Retrieved from [https://www.ruralhealthweb.org/NRHA/media/Emerge\\_NRHA/Advocacy/Policy%20documents/01-16-19-NRHA-Policy-Access-to-Rural-Maternity-Care.pdf](https://www.ruralhealthweb.org/NRHA/media/Emerge_NRHA/Advocacy/Policy%20documents/01-16-19-NRHA-Policy-Access-to-Rural-Maternity-Care.pdf)

Clement, M. S. (2005). Perinatal care in Arizona 1950–2002: A study of the positive impact of technology, regionalization and the Arizona perinatal trust. *Journal of Perinatology*, 25(8), 503.

Kozhimannil, K. B., Casey, M. M., Hung, P., Prasad, S., & Moscovice, I. S. (2016). Location of childbirth for rural women: Implications for maternal levels of care. *American Journal of Obstetrics and Gynecology*, 214(5), 661. e1-661. e10.

March of Dimes. (2018). Nowhere to go: Maternity care deserts across the U.S. Retrieved from [https://www.marchofdimes.org/materials/Nowhere\\_to\\_Go\\_Final.pdf](https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf)

### Methods

#### Workforce Estimates

The physician ob-gyn data in this brief is from the state licensure file from the Arizona Medical Board and the Arizona Board of Osteopathic Examiners—AMB Data. These boards provide a single-point-in-time, data snapshot of

physician licensee information in Arizona. The data represents ob-gyn with an Arizona license, Arizona practice location, and who is younger than 69 years old (to account for retirement). For CNMs, this report uses the National Plan and Provider Enumeration System (NPPES) data from June 2019 to identify the number CNMs with an Arizona practice location. CNMs were identified by 'Advanced Practice Midwife' or a credential that includes "CNM" in the text field. To identify practice location, we extracted data where the "Provider Business Practice Location Address State Name" was AZ. Only providers with a Clinical Location of Arizona and a Clinical License State of AZ were retained for analysis. Urban and rural geography relies on the Rural – Urban Commuting area codes. Population data at the zip-code and county level is from the U.S. Census, American Community Survey 2017.

Limitations to the workforce data lack of information on whether or not an ob-gyn physician is actively employed, if they are full-time or part-time, or how much of their time is devoted to clinical practice. Practice location data (i.e., zip code) is also limited as physicians can practice at multiple locations, practice location addresses can change during the two-year license interval, physicians can move out of state or retire, and data is not collected on FTE clinical effort by practice sites. The data sources do not contain information on board certification or whether physicians maintain an active clinical practice. The AMB data also may not include providers who work at federal health care facilities (e.g., Indian Health Service and Veterans Affairs hospitals).

More details about the methods can be found in Koch B, Coates S, Brady B, Campos-Outcalt D, Carter H, and Derksen D. (2020) Arizona Health Workforce Report: Obstetricians, Gynecologists, and Certified Nurse Midwives.

## Map

The data by county comes from multiple sources. The workforce estimates are details above. Percentage of births covered by the state Medicaid program (AHCCCS) is provided by the Arizona Department of Health Services, Vital Statistics. The number of hospitals with obstetric care comes from the Health Resources and Services Administration (HRSA), Area Health Resource File (AHRF). Obstetric care is measured as an affirmative response to the American Hospital Association Facility Survey item about obstetrics beds. There are some cases (e.g., Apache County) where the AHRF lists zero hospitals with obstetrics care. However, data from the Arizona Department of Health Services show hospitals in Apache County reporting births in 2018. Thus a county with zero hospitals with obstetric beds may still have maternal health services and resources.

If you have questions about this data brief please contact Bryna Koch, MPH at [brynak@email.arizona.edu](mailto:brynak@email.arizona.edu)

If you have questions about health service shortage area designations or official state and federal workforce estimates, please visit the Arizona Department of Health Services, Health System Development page: <https://www.azdhs.gov/prevention/health-systems-development/index.php>