

Impact of the Nurse-Midwifery Workforce on Maternity Care

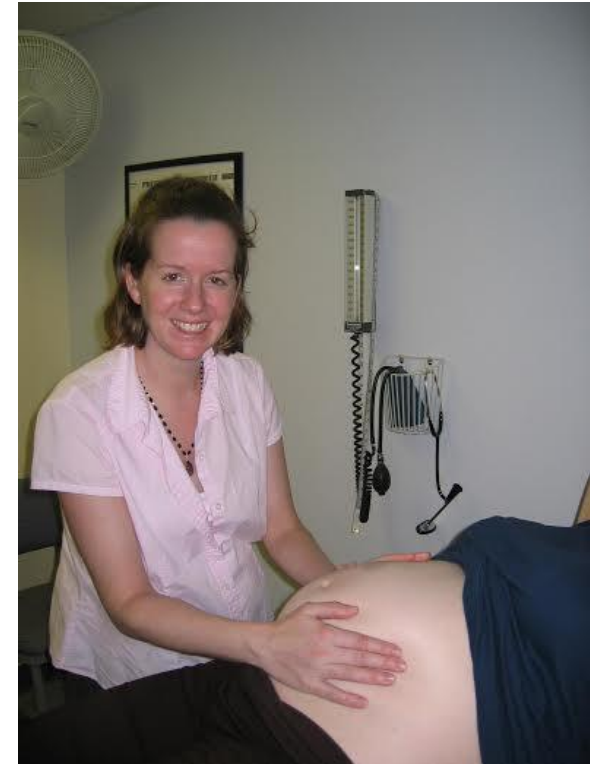


Suzanne Wertman, MSN, CNM
State Government Affairs Consultant, ACNM
Ami L. Goldstein, MSN, CNM, FNP
President NC ACNM

With great thanks to the North Carolina Certified Nurse-Midwives and mothers for sharing photos of working midwives

Impact of Nurse-Midwifery Care

- Outcomes
- Data collection challenges
- Regulatory impact on the workforce
- Questions



Outcomes

- CNMs compared with OBs (Newhouse, 2011)
 - Similar APGARs and low birth weight infants
 - Same or lower NICU admit
 - Lower perineal laceration rate
 - Improved outcomes with epidural, episiotomy, induction and increased initiation of breastfeeding
- States with full practice authority for CNMs (Yang, et al, 2016)
 - 13% decreased odds cesarean section
 - 13% decreased odds preterm birth
 - 11% decreased odds low birth weight infant



Integrated Care

- Improved access to midwifery care across all birth settings (Vedam, 2018)
 - Higher vaginal birth rates
 - Higher vaginal birth after cesarean section rates
 - Increased breastfeeding rates at birth & six months
 - Decreased preterm births
 - Decreased low birth rate babies



<https://www.sadiewildphotography.com/>

Increased Access To Midwifery Care Is Correlated With Improved Outcomes For Families

increase in
midwifery
**Integration
Density
Access**



increased breastfeeding



reduced interventions



increased vaginal delivery and VBAC



lower neonatal death



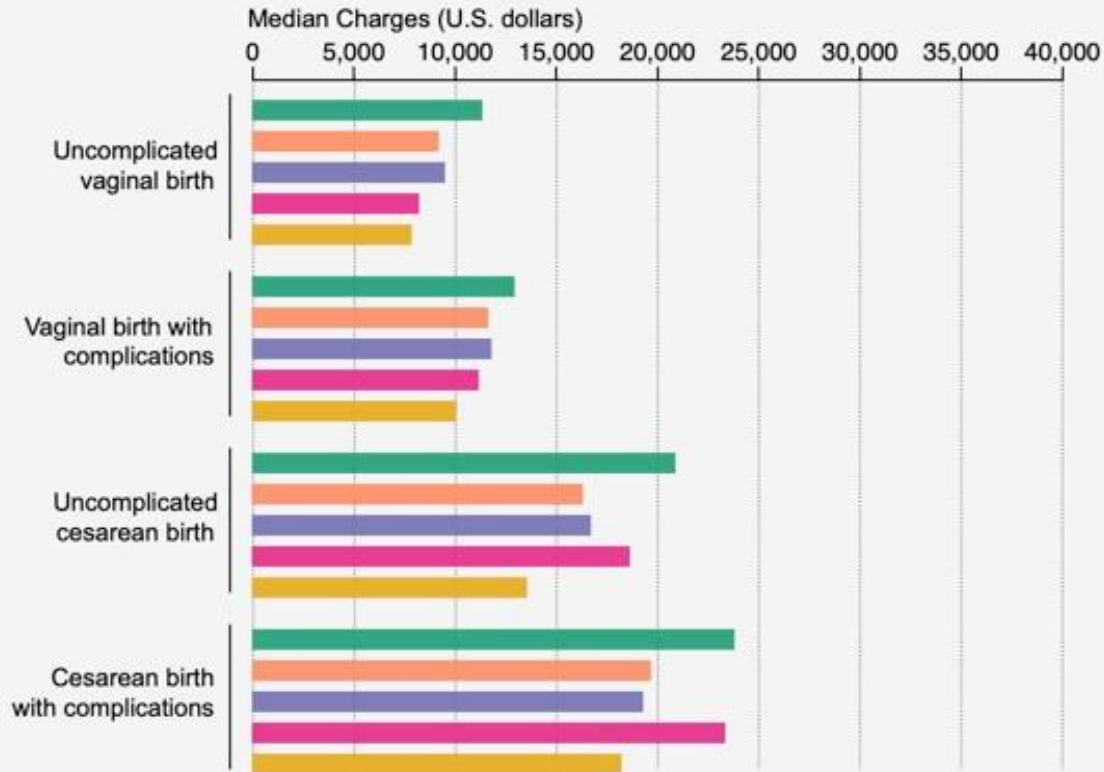
For more information, visit birthplacelab.org

Choose your state:

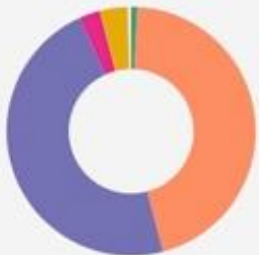
North Carolina

**Payer
Categories**

- Medicare
- Medicaid
- Private insurer
- Uninsured
- Other
- Unknown



Percentage of
total births by
payer category



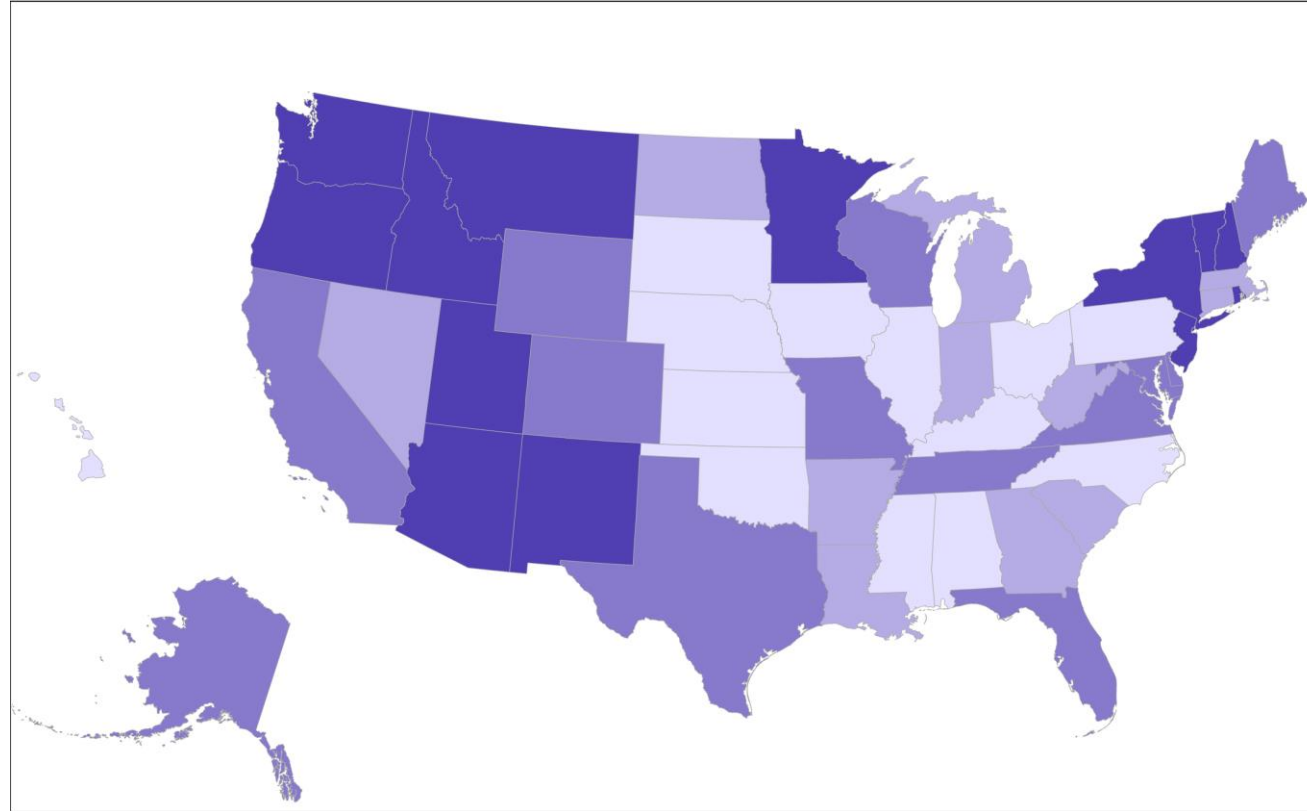
SCIENTIFIC AMERICAN®

The Costs of Giving Birth in U.S.

January 2019

- <https://blogs.scientificamerican.com/sa-visual/the-cost-of-giving-birth-in-the-u-s/#>
- Credit: Amanda Montañez; Source: Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services

Map of Midwifery Integration



Map of midwifery integration across the United States. Levels of integration displayed by quartiles of MISS scores. Deeper shades of purple represent higher integration and lighter shades represent lower integration of midwives. (Vedam, 2018)

Nurse-Midwives in Integrated Maternity Care

- Inter-professional Laborist Model (obstetricians and midwives providing care together) compared to physician-only care (Neal 2018)
 - Decreased oxytocin use (both induction & augmentation)
 - Decreased cesarean section
- Midwife- and Physician-Staffed Laborist Model
 - Improved outcomes (Rosenstein, 2105)
 - Decreased primary cesarean sections
 - Increased vaginal birth after cesarean section



Strong Start – CMS Results

Freestanding Birth Centers – Midwifery Model of Care

Birth Outcomes in Birth Center Participants and Matched Comparison Group

Outcome	Birth Center Participants	Matched Comparison Group
Preterm birth rate	6.3%	8.5%
Rate of low birth weight infants	5.9%	7.4%
Average gestational age	39 weeks	38.6 weeks
Average birth weight	3342 grams	3262 grams
C-section birth rate	17.5%	29%
Vaginal birth rate for women with a previous c-section	24.2%	12.5%
Weekend birth rate (indicating fewer scheduled inductions or c-sections)	23.7%	19.8%
Infant emergency department visits	0.86	0.99
Hospitalization among infants after birth	0.07	0.08

* Note that all comparisons were statistically significant at or below the 0.05 level.

Source: CMS Joint Information Bulletin. November 9, 2018. Available at: <https://www.medicaid.gov/federal-policy-guidance/downloads/cib119018.pdf>

Strong Start – Health Disparities

AABC (Freestanding Birth Centers)

Racial/Ethnic Group	Low Birth Weight Rates Among AABC Strong Start Participants	National Low Birth Weight Rates
African American	6%	13.7%
Hispanic	4%	6.4%
White	3%	7.2%

Sources: Centers for Medicare and Medicaid Services. Strong Start Final Evaluation. 2018;1:78; available at: <https://innovation.cms.gov/initiatives/strong-start>; Martin JA, Hamilton BE, Osterman MJK, Driscoll AK, Drake P. Births: Final data for 2016. NVSR. 2018;67 (1). Hyattsville, MD. National Center for Health Statistics; available at: https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_01.pdf.

Strong Start Conclusions

KEY TAKEAWAYS

Women who received prenatal care in Strong Start Birth Centers had better birth outcomes and lower costs relative to similar Medicaid beneficiaries not enrolled in Strong Start. In particular, rates of preterm birth, low birthweight, and cesarean section were lower among Birth Center participants, and costs were more than \$2,000 lower per mother-infant pair during birth and the following year.

These promising Birth Center results may be useful to state Medicaid programs seeking to improve the health outcomes of their covered populations.

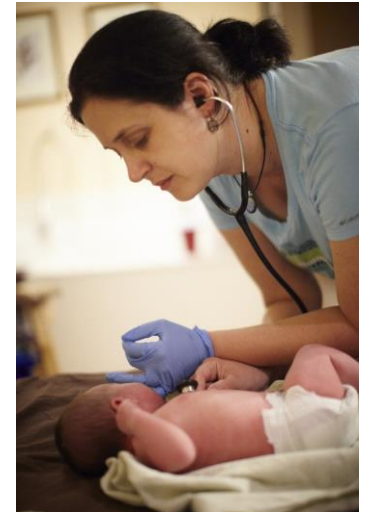
	Maternity Care Homes 	Group Prenatal Care 	Birth Centers 
Quality	This mode experienced: Preterm birth: 13% Low birthweight: 11% C-section: 31%	After controlling for risks, no significant differences in outcomes between Group Prenatal Care and Maternity Care Homes.	After controlling for risks, <ul style="list-style-type: none">• Lower rates of preterm birth• Lower rates of low birthweight• Lower rates of C-section• Higher rates of VBAC

Workforce Data

- State regulations related to health professional practice are often developed in the absence of health workforce data
 - Data may not exist at the state level
 - North Carolina does not collect specific practice data for Certified Nurse-Midwives
 - Unable to determine who attends births, provides maternity care or well woman care
 - May not be easily accessible to legislators
 - May not be organized in a meaningful, interpretable format that allows policymakers to draw evidence-based conclusions
 - National Institute of Medicine's Future of Nursing Report, whose eighth key point states:
 - Build an infrastructure for the collection and analysis of inter-professional health care workforce data.

Impact of Practice Laws on the Workforce

- **Autonomous practice** (Yang, Attanasio, Kozhimannil, 2016)
 - Double supply of midwives per 1000 births
 - 60% chance of having a midwife as delivery attendant
- **Increase in NP supply as well** (Conover, 2016 presentation)
 - 24.4 % increase across the board for APRN's in least restrictive states



Relationship between Regulations & Access to Care

- 1994 (Sekscinki et. al., 1994)
 - Initial development of scale with points for legal status, prescriptive authority and reimbursement
 - Higher practice score correlated with more CNMs per capita and a larger workforce
- 2004
 - Updated scoring system
 - Relationship between higher score and increased CNMs per capita

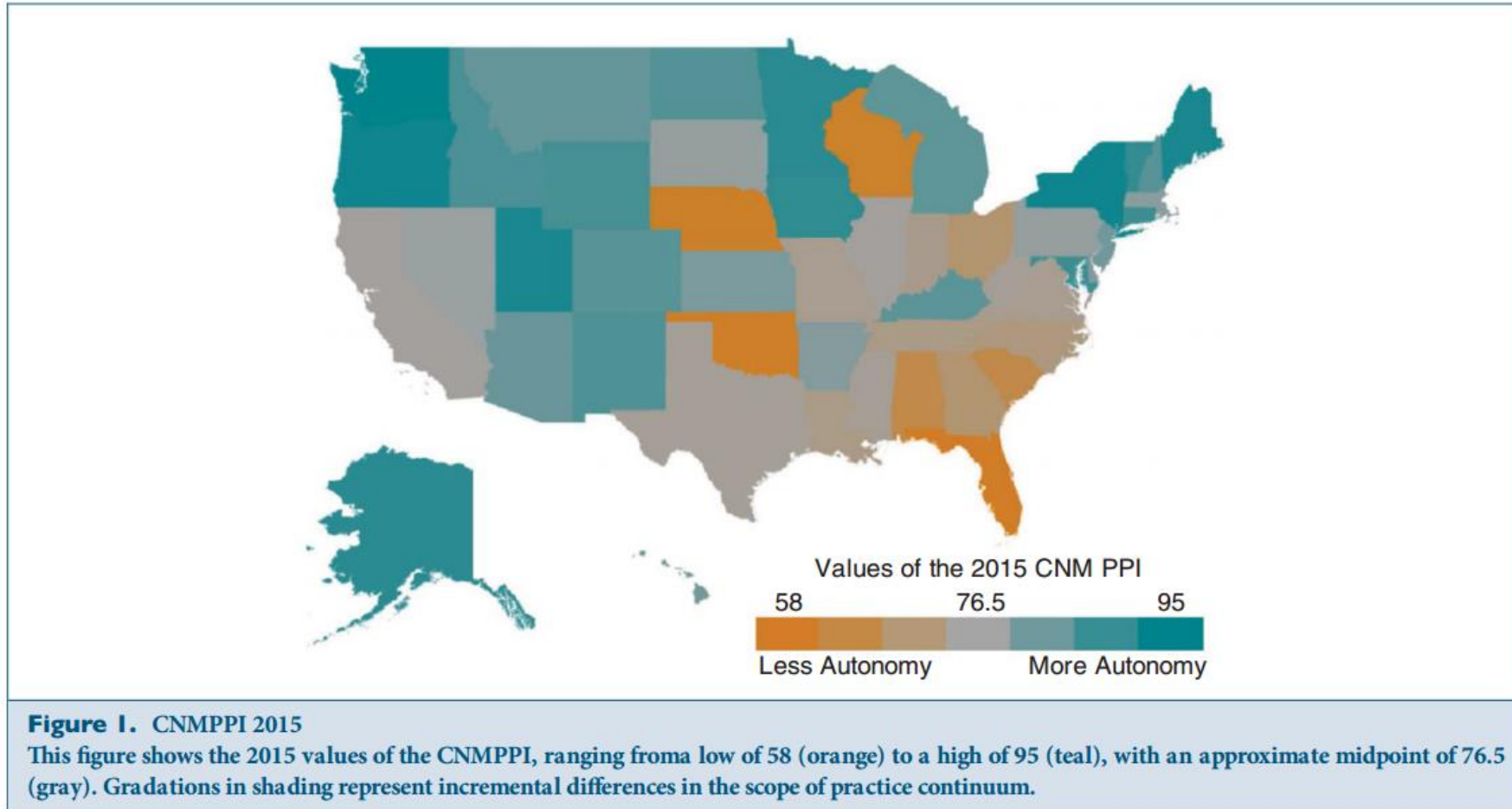


CNM Professional Practice Index

- 2015 by Beal, Batzl and Hoyt
 - Reviewed 2000-2015
- Changes in state regulations over time
 - Improvement in prescriptive authority
 - Tends to mirror that of neighboring states
 - For legal status and prescriptive authority
 - Inverse for reimbursement

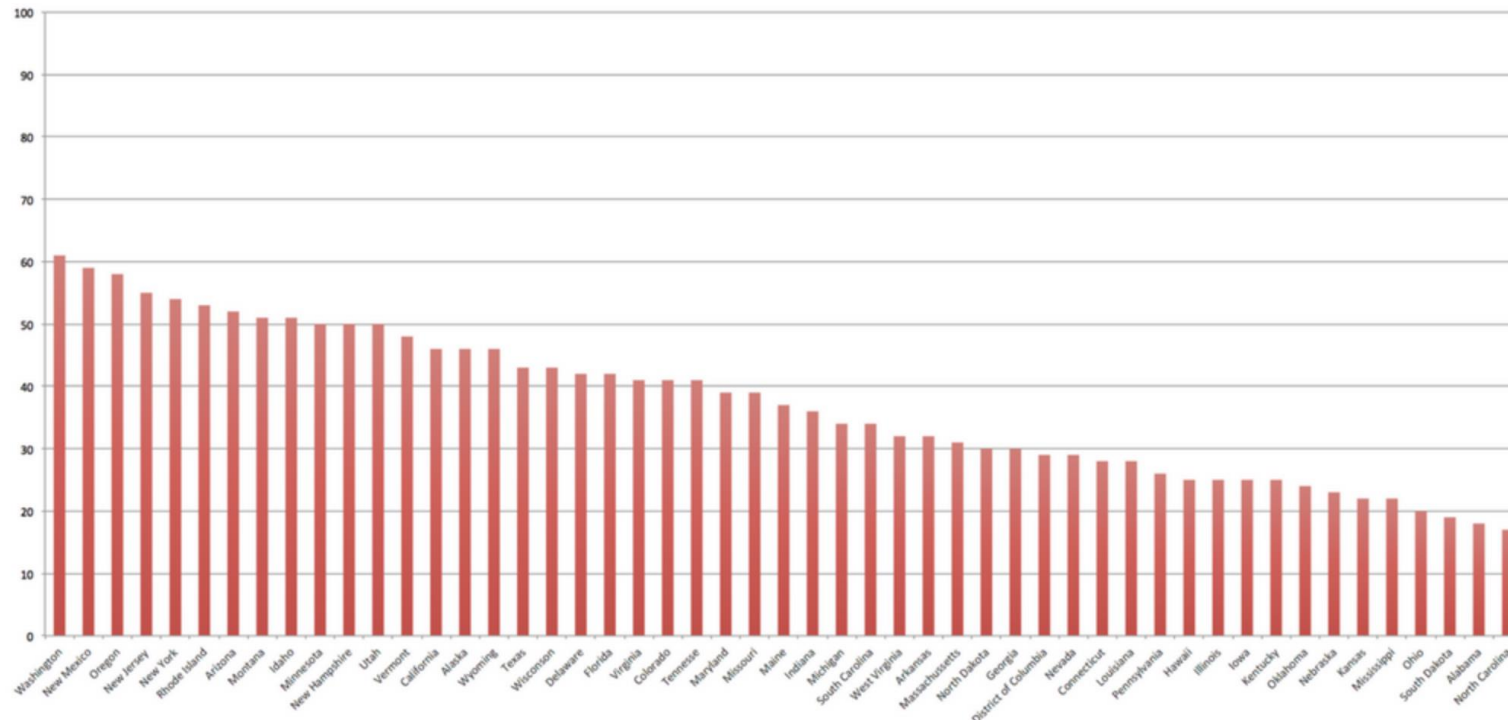


Professional Practice Index



Where is North Carolina?

State Ranking of Midwifery Integration Scores 2014-2015



Decreased Integration Scores →

What can we do next?

- Follow the lead of other states with better outcomes and remove the outdated regulatory burden of “supervision”.
- Ob-gyns and CNMs should have access to a system of care that fosters collaboration among licensed, independent providers in order to provide highest quality and seamless care.
- Include midwives in teaching management of physiologic birth to nurses, medical students and residents.
- Interprofessional education.
- Work together and amplify our unique strengths on a level playing field because people are counting on us and we can do better.

Questions?



Bibliography

- Beal, Batzli, Hoyt, (2015). Regulation of certified nurse-midwife scope of practice: Change in the professional practice index, 2000 to 2015. *J Midwifery Womens Health* 2015;60:510–518.
- Fullerton, Sipe, Hastings-Tolsma, McFarlin, Schuiling, Bright, Havens, Krulewitch. (2015). The Midwifery Workforce: ACNM 2012 and AMCB 2013 Core Data. *J Midwifery Womens Health* 60:751–761.
- Health Resources and Services Administration. (2004). A Comparison of Changes in the Professional Practice of Nurse Practitioners, Physician Assistants, and Certified Nurse Midwives: 1992 and 2000. Rockville, MD: Dept. HHS, HRSA, Bureau of Health Professions.
- Neal JL, Carlson NS, Phillippi JC, et al. (2018). Midwifery presence in United States medical centers and labor care and birth outcomes among low-risk nulliparous women: A Consortium on Safe Labor study. *Birth*. 00:1–12.
- Newhouse, Robin P., Julie Stanik-Hutt, Kathleen M. White, Meg Johantgen, Eric B. Bass, George Zangaro, Renee F. Wilson, Lily Fountain, Donald M. Steinwachs, Lou Heindel and Jonathan P. Weiner. (2011). Advanced Practice Nurse Outcomes 1990-2008: A Systematic Review. *Nursing Economics* 29, no. 5:230+.
- North Carolina Health Professions Data System. (2014). North Carolina Health Professions 2012 Data Book: A Report on Health Care Resources in North Carolina Chapel Hill, NC: The North Carolina Health Professions Data System, Program on Health Workforce Research and Policy, Cecil G. Sheps Center for Health Services Research.
- Oliver, Gina M., Lila Pennington and Sara Revelle. (2014). Nurse Practitioners and Health Outcomes. *Missouri Nurse* 83, no. 1 (2014a): 13-16.
- Oliver, Gina M., Lila Pennington, Sara Revelle and Marilyn Rantz. (2014). Impact of Nurse Practitioners on Health Outcomes of Medicare and Medicaid Patients. *Nursing Outlook* 62, no. 6 (2014b): 440-447.
- Rosenstein, Nijagal, Nakagawa, Gregorich, Kuppermann. (2015). The Association of Expanded Access to a Collaborative Midwifery and Laborist Model With Cesarean Delivery Rates. *Obstet Gynecol*. 126(4): 716–723.
- Reagan, Patricia B and Pamela J Salsberry. (2013). The Effects of State-Level Scope-of-Practice Regulations on the Number and Growth of Nurse Practitioners. *Nursing outlook* 61, no. 6: 392-399.
- Sekscenki, Sansom, Bazel et. al. (1994). State practice environments and the supply of physician assistants, nurse practitioners, and certified nurse midwives. *N. Eng. J. of Med*. 33 (19) 1266-1271.
- Vedam, Stoll, MacDorman, Declercq, Cramer, Cheyney, Fisher, Butt, Yang, Powell Kennedy. (2018). Mapping integration of midwives across the United States: Impact on access, equity, and outcomes. *PLoS ONE* 13(2): e0192523.
- Yang, Attanasio, Kozhimannil. (2016). State Scope of Practice Laws, Nurse-Midwifery Workforce, and Childbirth Procedures and Outcomes. *Women's Health Issues*, in press.