EMPOWER MISSISSIPPI

# NURSE PRACTITIONERS AND THE QUALITY OF CARE

by Conor Norris

# KEY POINTS

- MS has the 2nd worst physician shortage in the nation. Four counties have no physicians. Half the physicians are located in 4 metro areas.
- Nurse Practitioners (NPs) provide high-quality primary care similar to physicians.
- 26 states and DC – but not MS – have granted NPs "full practice authority" (FPA), allowing them to practice to the extent of their training.
- FPA does not allow NPs to act beyond their scope of training. It removes unnecessary regulations on their ability to offer care they are trained to provide.
- When NPs encounter conditions beyond their training, they refer patients to doctors with relevant training and experience, just as physicians do.
- All NPs must take same national certification exams, regardless of the location or structure of their education. Qualifying to take such an exam requires significant hours of supervised hands-on experience.
- In states with FPA, malpractice claims against NPs are no more common than in states like MS that do not have FPA.
- Rural areas hardest hit by primary care physician shortage would benefit from full practice authority for NPs.

# NURSE PRACTITIONERS AND THE QUALITY OF CARE

Mississippi is suffering from the second worst physician shortage in the nation, which is expected to grow. By 2030, the state is projected to be the worst by far, needing an additional 3,709 physicians to keep up with patients' needs. In four counties, there are no physicians. While most of the state is rural, half of the physicians are located in just 4 metropolitan areas.

One simple solution is to increase the number of physicians and encourage them to practice in rural areas. But simple doesn't mean feasible, at least in the short term.

A more immediate type of reform that many states are turning to involves the increased use of other healthcare professionals we already have, namely Nurse Practitioners (NPs). NPs are nurses who obtain a master's degree, or even a doctorate, usually with an emphasis in primary care.

So far, 26 states and DC – but not Mississippi – have granted NPs broader authority, known as "full practice authority" (FPA). FPA allows NPs to practice within the extent of their training, without requiring them to have a "collaborative agreement" with a physician, which can unnecessarily limit the scope of the NP's practice.

A collaborative agreement is not synonymous with supervision, though the terms are often wrongly used interchangeably. Under a collaborative agreement, a physician – who usually is not at the same location as the NP – periodically reviews a limited number of the NP's patient files (as few as 20 per month), sometimes weeks after the patients' visits. For that service, physicians often charge the NP thousands of dollars a month, adding to the cost of providing care without increasing the quality of care.

Full practice authority does not expand NPs' authority to act beyond their scope of training. It does not give them the breadth of authority physicians have. Rather, it removes unnecessary regulations that encumber their ability to offer care they are trained to provide.

# EFFECT ON QUALITY OF HEALTH CARE

Some worry that NPs, if given full practice authority, may make more mistakes, like wrong diagnoses, missed diagnoses, and other medical errors, because they lack the same education as physicians. Some, including physician groups, oppose full practice authority, expressing concerns over the use of NPs as primary care providers, because physicians undergo longer and more in-depth medical education and residency programs than NPs.

There is no question physicians are more highly trained than NPs. But even they have limits. It is quite common for physicians to consult with and refer patients to other physicians who have more training or expertise in treating a certain disease or condition. NPs do the same.

Research consistently finds that NPs provide high-quality care similar to physicians.

- A study of patients, half who were treated by NPs and half by physicians, found that at six months and two years after their office visits, there was no difference between the NP- and physician-treated groups "in health status, disease-specific physiologic measures, satisfaction, or use of specialist, emergency room, or inpatient services."
- According to a study published in the International Journal for Quality in Health Care, NPs have been found to provide better care, with "equal or better outcomes than physician groups for physiologic measures, patient satisfaction, and cost."
- A study in the Journal of Health Economics concludes, "Our results indicate that allowing NPs to practice and prescribe drugs without physician oversight increases medical care for underserved populations."
- There is some evidence that NPs can *improve* patient outcomes. When states have full practice authority for NPs, their use as primary care providers is associated with fewer unnecessary hospitalizations and better health outcomes.

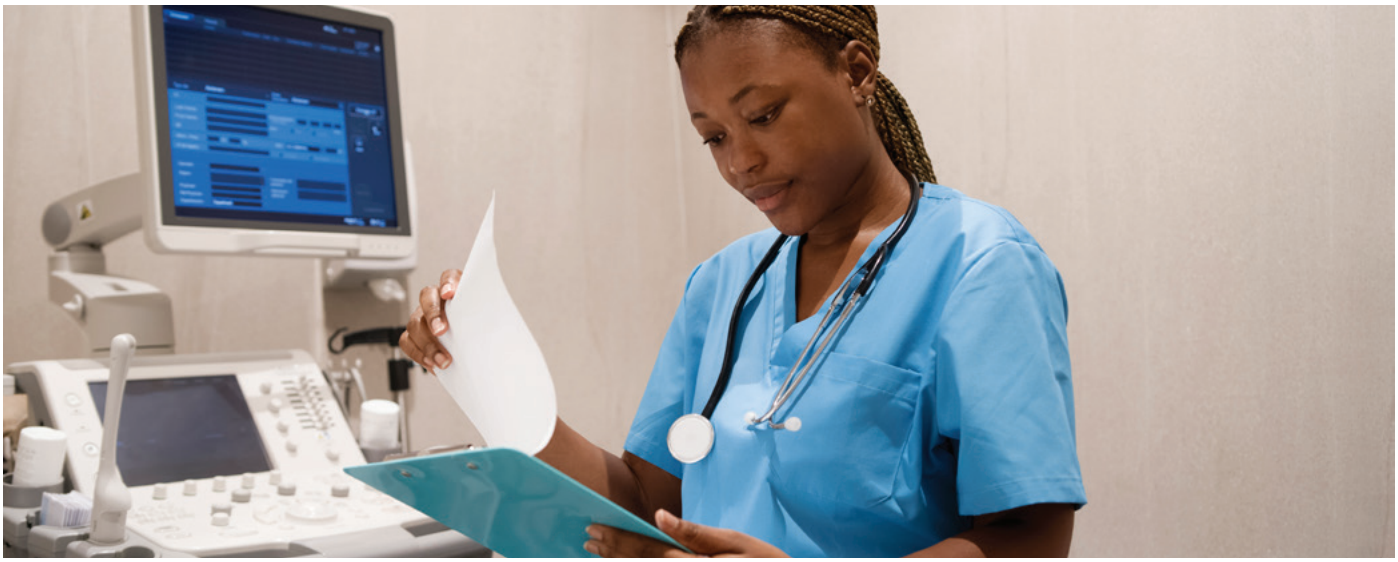
There can be some drawbacks to primary care from NPs. For instance, NPs have been found to order more (by 0.3%) patient diagnostic imaging services, which can increase healthcare spending. But such studies primarily focus on situations where NPs practice under physician oversight or with physician collaboration, so they are not accurate predictions for the effect of independent full practice authority.

# NURSE PRACTITIONER EDUCATION AND EXPERIENCE REQUIREMENTS

Mississippi nursing regulations require a Master of Science in Nursing (MSN) degree for all aspiring nurse practitioners. While these regulations do not regulate the education programs themselves, they do require applicants for these programs to first obtain a license as a Registered Nurse (RN).

Nearly all NP training programs require applicants to have clinical practice as an RN, usually one-to-three years, not simply a license itself, before being accepted into the program. A few NP programs don't require prior clinical experience beyond that obtained in RN training, so NPs who moved immediately from obtaining their RN training to their NP training, their only hands-on experience might be that which was required as part of the training itself. This is rare, but the concern could be addressed in legislation.


Because most NP programs are designed for RNs to return to school mid-career, and because returning to school as a full-time student is costly for a mid-career professional, some NP candidates opt for part-time programs that allow them to continue to work. Some of these schools offer online degrees, which some people consider less rigorous than traditional, in-person education.



It's important to note that all NPs must pass the same national licensing exam, including the exam in their specialty, regardless of the location and structure of their training. There may be differences between courses and credit hours, but all programs have to prepare nursing students to pass the same exams.

This should alleviate concerns about the quality of "book knowledge" obtained in NP training.

However, there is also a concern, which is heightened for out-of-state online programs, that NP training programs might not require sufficient or adequately documented clinical "hands-on" experience.

To take a national certification exam, there has been a requirement of at least 500 hours of supervised, hands-on clinical experience. But very recently, in November 2022, the national standards were changed to increase that number of required hours to 750.

Again, that is the number of hours that will be required to simply take the exam. It is also the minimum requirement for training-program accreditation. Although training programs have not yet had time to implement these recommendations, most were well above the minimum 500 hours already, averaging 647 hours among the 50 programs I reviewed.

As for the concern about online programs, *accredited* online MSN programs have clinical experience requirements similar to in-person programs.

To explore whether online programs were less rigorous in their clinical training requirement, I compiled the clinical training hour requirements for online MSN programs with a focus in Family Practice. I chose the 50 fully accredited programs with the lowest tuition in the nation, based on Get Educated's list of most affordable online programs. The required clinical hours for each program according to the university website, can be found in Appendix 2.

The average number of clinical rotation hours required by these 50 programs is 647. Every program requires at least 500 hours of clinical experience, which is required for a program's accreditation (soon to increase to 750, as described above). However, it is important to note that some online programs require clinical hours to be completed in-state. In effect, they are not open to Mississippi residents to complete remotely. I do not find evidence that any MSN programs allow NPs to graduate with little direct experience.

# NURSE PRACTITIONERS AND MALPRACTICE RISK

Another, more direct method of measuring the risk of significant errors by NPs involves considering the risk of adverse events that lead to malpractice claims. Even if most NPs offer similar primary care to physicians, if there was a greater likelihood of adverse events from care provided by NPs in states that provide them full practice authority (FPA), FPA could be seen to pose a risk to patients. Although it is not comprehensive, some work has been done in this area.

First, we can compare malpractice insurance claims in states with FPA to those without FPA. Because insurance premiums are set by private companies with their own money at risk, those companies have a vested interest in accurately assessing the risk of having valid malpractice claims against NPs they insure.

In a forthcoming study, Sara Markowitz (Emory University and the National Bureau of Economic Research) and Andrew Smith (Emory University) looked at medical malpractice claims against NPs. They used data from the National Practitioner Data Bank, which gathers reports of malpractice claims for an array of healthcare professions. They compared the number of malpractice payment reports for states with full practice authority for NPs and states without full practice authority. If these were higher in states with full practice authority, it would suggest that NPs with FPA do make more mistakes than those without.

Markowitz and Smith find that when states allow NPs to have full practice authority, they do not experience an increase in malpractice claims against NPs. They also do not find evidence of more unsafe practices or prescription violations when states move to FPA. The place they do find evidence of sanctions is for regulatory violations. This should not be surprising, as the changing scope of practice laws is likely to generate some confusion among professionals. This does underscore the importance of clearly explaining regulatory changes to healthcare professionals.

The malpractice claims against NPs can also vary based on practice setting. If malpractice claims are more common when NPs do not have collaboration with physicians, this could also cause concerns about the quality of care offered by NPs. A report by the Institute for Safe Medication Practices analyzed malpractice incidents against NPs who had malpractice insurance through CNA. CNA is the insurer of 26,000 NPs. Between 2012 and 2016, there were 2236 adverse incidents resulting in 287 closed cases against NPs. They found that 35.7% of the NPs with malpractice claims practiced in physician offices, while 16.4% practiced in NP-owned offices, and the claims against NPs in physicians' offices were twice as large as those for NPs that practiced in NP offices. While this is just a small percentage of all malpractice claims against NPs, it does not provide evidence that NPs offer substandard or riskier care outside of physician oversight.

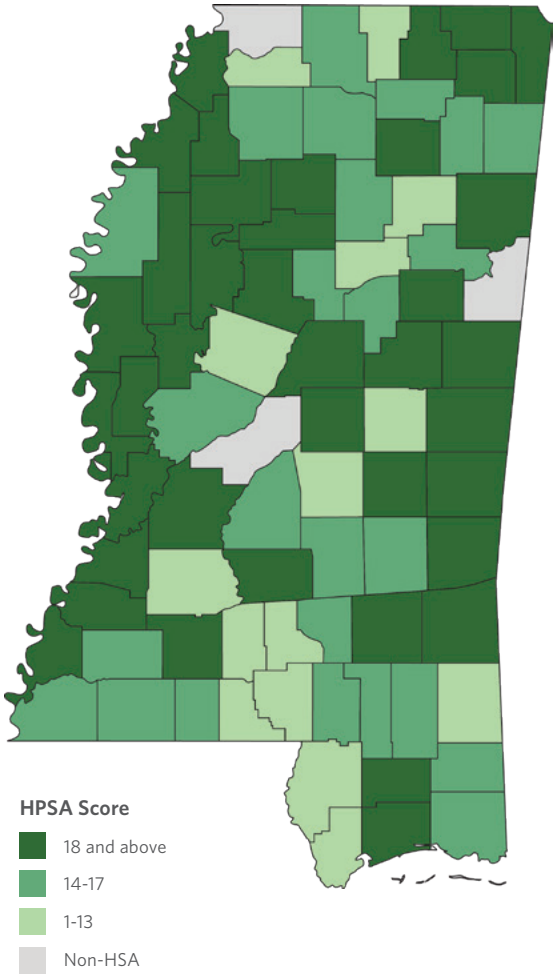
# WHY IS THIS IMPORTANT FOR MISSISSIPPI?

Primary care is important for the management of chronic conditions and for catching health problems early. Ensuring access to primary care is important in Mississippi, which has some of the highest rates of chronic conditions and poor health in the country. For example, counties with a greater number of primary care professionals have lower levels of adult obesity.

Difficulty accessing primary care has a real impact on patients. Having to drive a long distance to primary care discourages some from seeking treatment or delaying until the condition worsens. For others, it makes the routine maintenance of chronic conditions more challenging.

Rural areas are particularly hard hit by the primary care physician shortage because physicians are less willing to locate there. Ninety percent of the state is considered a health professional shortage area (HPSA) for primary care, making it difficult for residents to access primary care. A HPSA is defined as an area with one physician for 3,500 or more residents. Figure 1 below shows the health professional shortage areas for primary care in Mississippi. A higher score, represented by darker shades of green, means a greater shortage of primary care physicians.

***Fig. 1 :*** *Health Professional Shortage Areas (HPSA) - Primary Care*



# CONCLUSION

Patients want convenient access to primary care, but they also want high-quality care. Regulation should balance these concerns. Fortunately, this is not a tradeoff we need to worry about with NPs, as they are able to offer similar quality of primary care as physicians. Although they are not a replacement for physicians, NPs provide quality care and go through rigorous educational programs.

With one of the worst physician shortages in the nation, NPs offer Mississippians a source of skilled primary care to patients who need it most, in a timely and affordable – and safe – fashion. Twenty-seven other states have given NPs full practice authority. It's time for Mississippi to join them.

# APPENDIX 1:

Summary of Recent Studies on Scope of Practice Laws for Advanced Practice Registered Nurses and Healthcare Quality

| STUDY | PROFESSIONAL | SUBJECT | SCOPE OF PRACTICE LAW | FINDINGS |
|---|---|---|---|---|
| **Kleiner et al. (2016)** | Nurse Practitioners | Quality; cost | Full Practice Authority and Prescription Authority | FPA slightly improves some measures of infant health |
| **Kurtzman et al. (2017)** | Nurse Practitioners | Quality | Full Practice Authority and Prescription Authority | FPA has no effect on quality |
| **Markowitz et al. (2017)** | Certified Nurse Midwives | Access; quality | Full Practice Authority and Prescription Authority | FPA improves some measures of infant health and increases access |
| **Perloff et al. (2017)** | Nurse Practitioners | Quality | Full Practice Authority and Prescription Authority | FPA has no effect on quality |
| **Traczynski and Udalova (2018)** | Nurse Practitioners | Access; quality | Full Practice Authority | FPA increases access and improves quality |
| **Ortiz et al. (2018)** | Advanced Practice Registered Nurses | Quality | Full Practice Authority | FPA has no effect on quality |
| **Mileski et al. (2020)** | Nurse Practitioners | Quality; access | Full Practice Authority | FPA increases access and improves quality |
| **Poghosyan et al. (2018)** | Nurse Practitioners | Quality | Full Practice Authority | FPA improves quality |
| **Baerhaus et al. (2018)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA improves quality |
| **Yang et al. (2018)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Kippenbrock ety al. (2020)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA improves quality |
| **Muench et al. (2018)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA improves some measures of quality |
| **Jiao et al. (2018)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Liu et al. (2020)** | Nurse Practitioners | Quality; cost | None (compared physicians and NPs offering primary care) | FPA improves access and improves health outcomes |
| **Park, Han, and Pittman (2020)** | Nurse Practitioners | Quality; Access | Full Practice Authority and Prescription Authority | FPA improves quality |
| **Muench et al. (2021)** | Nurse Practitioners | Quality | Full Practice Authority and Prescription Authority | FPA improves quality |
| **Laurant et al. (2005)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Lenz et al. (2004)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Mundinger et al. (2000)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Swan et al. (2015)** | Advanced Practice Registered Nurses | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Hughes et al. (2015)** | Advanced Practice Registered Nurses | Quality; cost | None (compared physicians and NPs offering primary care) | FPA increases spending |
| **Gaglioti et al. (2016)** | Primary Care Providers | Quality | None (compared primary care access) | Access to PCPs improves quality |
| **Bhai and Mitchell (2021)** | Nurse Practitioners | Quality | Full Practice Authority | FPA improves quality |
| **Alexander and Schnell (2019)** | Nurse Practitioners | Quality | Prescriptive Authority | Prescription authority improves quality |
| **Groover (2018)** | Nurse Practitioners | Quality | Prescriptive Authority | Prescription authority improves quality |
| **Perloff et al. (2019)** | Nurse Practitioner | Quality | Full Practice Authority | FPA has no effect on quality |
| **Kuo et al. (2015)** | Nurse Practitioners | Quality | None (compared physicians and NPs offering primary care) | FPA has no effect on quality |
| **Grecu and Spector (2019)** | Nurse Practitioners | Quality | Prescriptive Authority | Prescription authority increases opioid treatment |

# APPENDIX 2:

Clinical hour requirements for accredited online programs designated by GetEducated.com as the 50 "Most Affordable Online Family Nurse Practitioner Programs"

| SCHOOL | HOURS |
|---|---|
| AdventHealth University | 600 |
| Allen College | 600 |
| Auburn University at Montgomery | 780 |
| Austin Peay State University | 600 |
| Ball State University | 690 |
| Campbellsville University | 660 |
| Carson-Newman University | 660 |
| Cedarville University | 600 |
| Clarkson College | 750 |
| Columbus State University | 765 |
| Cox College | 600 |
| East Tennessee State University | 540 |
| Eastern Kentucky University | 750 |
| ECPI University | 540 |
| Fairleigh Dickinson University | 650 |
| Florida National University | 500 |
| Franklin University | 600 |
| Henderson State University | 540 |
| Indiana State University | 750 |
| Memphis University | 720 |
| Midwestern State University | 512 |
| Morningside College | 600 |
| New England Institute of Technology | 750 |
| Northern Kentucky University | 600 |
| Ohio University | 500 |
| Post University | 540 |
| Saint Francis Medical Center College of Nursing | 700 |
| Saint Francis University | 702 |
| Saint Joseph's College of Maine | 600 |
| Stephen F. Austin State University | 720 |
| Tennessee State University | 600 |
| Texas A & M International University | 675 |
| Texas A & M University-Corpus Christi | 630 |
| Texas Tech University Health Sciences Center | 578 |
| Texas Woman's University | 780 |
| Troy University | 705 |
| University of Missouri-Columbia | 780 |
| University of Missouri-Kansas City | 660 |
| University of North Alabama | 600 |
| University of South Alabama | 600 |
| University of Southern Indiana | 665 |
| University of Southern Mississippi | 810 |
| University of Texas at Arlington | 720 |
| University of Texas at El Paso | 775 |
| University of Texas at Tyler | 625 |
| University of West Florida | 600 |
| Western Governors University | 650 |
| Wheeling University | 672 |
| Wilkes University | 584 |
| Wright State University | 616 |
| Youngstown State University | 600 |

**The University of Texas Medical Branch, Old Dominion University, and Morehead State appeared on the list, but the hours of clinical experience requirements were not available on their website or course catalogue.*
***Does not offer MSN program. The clinical hours listed are for the Doctor of Nursing Practice (DNP) program.*

**Conor Norris is Assistant Director for the Knee Center for the Study of Occupational Regulation at the John Chambers College of Business and Economics, West Virginia University. His research has been published in scholarly journals including the *Journal of Regulatory Economics, Health Policy, Seminars in Dialysis, Quarterly Journal of Finance and Accounting, Journal of Entrepreneurship and Public Policy, and Nursing Practice*. His research has been cited by the popular press, including the *Chicago Tribune, Houston Chronicle, Columbia Dispatch, the Tennessean, Western Journal, Arizona Daily Star, Clarion Ledger,* and more.**

For a full list of sources, please visit **https://empowerms.org/np-report/**

EMPOWER
MISSISSIPPI

Founded in 2014, Empower Mississippi is a solutions center, working with stakeholders to tackle Mississippi's biggest challenges. We believe every Mississippian can rise, so our work focuses on removing barriers to opportunity so that people in the Magnolia State can earn success, contribute to their families and communities, and live meaningful lives.

To find out more, please visit **empowerms.org.**