TAFP POLICY BRIEF

The Question of Independent Diagnosis and Prescriptive Authority for Advanced Practice Registered Nurses in Texas: Is the Reward Worth the Risk?

By Marie-Elizabeth Ramas, M.D.

Texas faces a growing demand for primary care services, particularly in rural and underserved regions. The Texas Department of State Health Services reports that 16,830 primary care physicians were in active practice in Texas in 2009, or approximately 68 for every 100,000 people. The national average is 81 primary care physicians per 100,000 population. This shortage is compounded by a prevalent maldistribution of physicians across the state. Of Texas' 254 counties, 118 were considered whole county health professional shortage areas, or HPSAs, and 71 contained either special populations or geographic areas that qualified for the designation of partial-county HPSA. Twenty-six counties had no primary care physician in 2009.[1]

In recent years, organizations representing advanced practice registered nurses, or APRNs, have pursued policy changes that would allow these practitioners to provide medical services independently, arguing that such changes would help alleviate physician shortages. Despite assertions that APRNs function as effectively as physicians, there exists little if any substantial objective information to support these claims.

Given the impending addition of even greater stress on the state's health care delivery system, it is clear that a comprehensive discussion of how to increase access to primary care throughout the state is necessary. One seemingly logical solution would be to extend independent diagnostic and prescriptive authority to APRNs in the state of Texas. While such action may be politically expedient in the short term, the risks outweigh what may be a hollow reward.

Many reforms implemented by the Texas Legislature in recent sessions are successfully shifting the state's health care delivery system in a direction supported by acclaimed medical and economic research, toward the integration of care in a collaborative, team-based model in which all aspects of a patient's care are coordinated across multiple settings and various health care providers. Such an efficient system based on a solid primary care foundation leads to improved quality, reduced errors, and fewer instances of unnecessary care and duplication of services, resulting in lower costs.[2, 3, 4, 5] Allowing APRNs to practice medical acts independently would fracture that transition, increasing the fragmentation of care Texans experience.

Furthermore, redefining the educational and licensure standard required to conduct medical acts so that APRNs can practice independently will not guarantee that Texans will have greater access to primary care. No data exists to support claims that APRNs are more likely to practice in underserved areas, though significant evidence shows they tend to preferentially distribute in metropolitan and suburban communities at a similar rate to other health care providers.

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Should the Legislature decide to grant APRNs independent practice, the state may experience an unintended erosion of its primary care workforce, as students interested in primary care eschew the rigorous educational requirements and financial investment of medical education in favor of the easier, shorter, and less costly pursuit of nurse practice.

Definition Under the Nurse Practice Act

To properly discuss the prospect of expanding the scope of practice of APRNs, it is important to clarify the roles of the different levels of nursing in the state of Texas. Not all nurses are created equal. By definition under Title 3, Subtitle E, Chapter 301, Section 301.002(2), Occupations Code (Nurse Practice Act):

> "Professional nursing" means the performance of an act that requires substantial specialized judgment and skill, the proper performance of which is based on knowledge and application of the principles of biological, physical, and social science as acquired by a completed course in an approved school of professional nursing. The term does not include acts of medical diagnosis or the prescription of therapeutic or corrective measures. Professional nursing involves: (A) the observation, assessment, intervention, evaluation, rehabilitation, care and counsel, or health teachings of a person who is ill, injured, infirm, or experiencing a change in normal health processes; (B) the maintenance of health or prevention of illness; (C) the administration of a medication or treatment as ordered by a physician, podiatrist, or dentist; (D) the supervision or teaching of nursing; (E) the administration, supervision, and evaluation of nursing practices, policies, and procedures; (F) the requesting, receiving, signing for, and distribution of prescription drug samples to patients at sites in which a registered nurse is authorized to sign prescription drug orders as provided by Subchapter B, Chapter 157; (G) the performance of an act delegated by a physician under Section 157.052, 157.053, 157.054, 157.0541, 157.0542, 157.058, or 157.059; and (H) the development of the nursing care plan.

It is important to note that by definition, a nurse's scope of practice does not include independent diagnosis and treatment of disease processes. These two functions are distinctly reserved for physicians under Texas law, and are considered medical acts.

The term "nurse" usually encompasses all levels of nursing training. This includes certified nursing aides, who perform non-medical acts mostly in a supportive role for patients incapable or unable to perform basic activities of daily living, and licensed vocational nurses, or LVNs, who usually obtain certification within one year, as described in the Texas Occupations Code, and who may work in medical settings with the ability to administer medications or treatments as ordered by a physician. One who works with a bachelor's degree in nursing, a BSN, has completed a four-year degree including the basic sciences, limited pharmacology, some clinical exposure, and has completed a standardized test.

APRNs include a variety of subcategories of nursing that require extended training, usually on a master's level, which comprises up to two additional years of school and more clinical exposure. Examples of APRNs include certified nurse midwives, nurse anesthetists, and nurse practitioners. Nurse practitioners are further grouped into subspecialties that range from general or family practice to hematology and oncology. Although many unofficial subspecialties for nurse practitioners exist, nine are recognized by the most widely used credentialing service, the American Nursing Credentialing Center: acute care NPs, adult NPs, adult psychiatric and mental health NPs, diabetes management NPs, family NPs, family psychiatric and mental health NPs, gerontological NPs, pediatric NPs, and school NPs.[6]

Requisites to obtain an advanced degree are delegated by each state nursing board, but generally require at least one year of extra schooling that focuses on pathophysiology and pharmacology, and some clinical exposure. For the purposes of this paper, attention will focus on primary care nurse practitioners, which represent general, geriatric and pediatric NPs. While obstetrics is considered a primary care service, certified nurse midwives cover this aspect of nursing rather than nurse practitioners.

Comparing the Education of Nurse Practitioners and Family Physicians

Little data exists comparing the quality and cost of care provided by nurse practitioners, but the difference in training is starkly evident. Nurse practitioner training programs vary greatly in the quality and requirements of their curricula and lack national standardization, especially in comparison to the highly standardized process of medical training. While one NP program may allow for a degree online with a few hours of clinical exposure, another, such as the UT-Austin Nurse Practitioner program, requires 48 credit hours and 720 hours of additional clinical exposure with a licensed provider.[7]

FIGURE 1: DEGREES REQUIRED AND TIME TO COMPLETION

	Undergraduate degree	Entrance exam	Post-graduate schooling	Residency and duration	TOTAL TIME FOR COMPLETION
Family physician (M.D. or D.O.)	Standard 4-year BA/BS	Medical College Admissions Test (MCAT)	4 years, doctoral program (M.D. or D.O.)	REQUIRED, 3 years minimum	**11 years**
Nurse practitioner	Standard 4-year BA/BS*	Graduate Record Examination (GRE) & National Council Licensure Exam for Registered Nurses (NCLEX-RN) required for MSN programs	1.5 – 3 years, master's program (MSN)	NONE	**5.5 – 7 years**

MEDICAL/PROFESSIONAL SCHOOL AND RESIDENCY/POST-GRADUATE HOURS FOR COMPLETION

	Lecture hours (pre-clinical years)	Study hours (pre-clinical years)	Combined hours (clinical years)	Residency hours	TOTAL HOURS
Family physician	2,700	3,000**	6,000	9,000 – 10,000	**20,700 – 21,700**
Doctorate of Nursing Practice	800 – 1,600	1,500 – 2,250**	500 – 1,500	0	**2,800 – 5,350**
Difference between FP and NP hours of professional training	1,100 – 1,900 more for FPs	750 – 1,500 more for FPs	4,500 – 5,500 more for FPs	9,000 – 10,000 more for FPs	**15,350 – 18,900 more for FPs**

* While a standard 4-year degree, preferably a BSN, is recommended, alternate pathways exist for an RN without a bachelor's degree to enter some master's programs.

** Estimate based on 750 hours of study dedicated by a student per year.

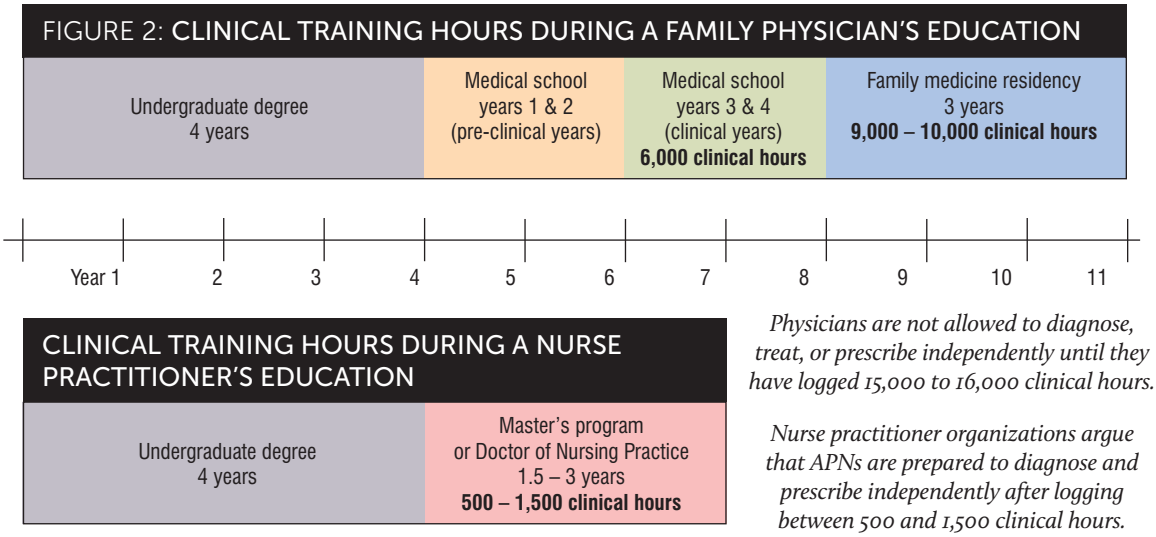
Sources: Vanderbilt University Family Nurse Practitioner Program information, http://www.nursing.vanderbilt.edu/msn/fnp_plan.html, and the Vanderbilt University School of Nursing Handbook 2009-2010, http://www.nursing.vanderbilt.edu/current/handbook.pdf.
American Academy of Family Physicians, Primary Health Care Professionals: A Comparison, http://www.aafp.org/online/en/home/media/kits/fp-np.html.

During their education, nurse practitioners experience between 500 and 1,500 hours of clinical training. At the completion of medical school and residency training, a family physician has experienced between 15,000 and 16,000 clinical hours.[8] (Figures 1, 2)

A 2007 study published in the American Journal of Nurse Practitioners reported that more than half of practicing nurse practitioners responding to a survey believed they were "only somewhat or minimally prepared to practice" after completing either a master's or a certificate program. In the area of pharmacology, 46 percent reported they were not "generally or well prepared" for practice. "In no uncertain terms, respondents indicated that they desired and needed more out of their clinical education, in terms of content, clinical experience, and competency testing," the authors wrote. "Our results indicate that formal NP education is not preparing new NPs to feel ready for practice and suggests several areas where NP educational programs need to be strengthened."[9]

Geographic Distribution and Primary Care Productivity of Nurse Practitioners Compared to Family Physicians

Organizations hoping to win independent practice for NPs argue that with such an expansion in their scope of practice, NPs would be more likely than other health care providers to practice in rural and underserved regions, though no evidence exists to support the claim. In Texas, NPs can practice nursing in any location they choose with total independence. Should they wish to practice medical acts, they must do so by receiving standing delegation orders from a supervising physician. Depending upon where they wish to practice, requirements to satisfy the supervisory rules vary. If the clinic is in an underserved region, the su-



pervising physician must visit the clinic during business hours at least once every 10 business days for the purpose of observation, and must review at least 10 percent of the NPs' patient charts. Even these meager safeguards can be waived by the Texas Medical Board if petitioned. Yet the distribution of NPs across Texas follows the same pattern as that of physicians, with the vast majority choosing to practice in metropolitan and suburban communities.

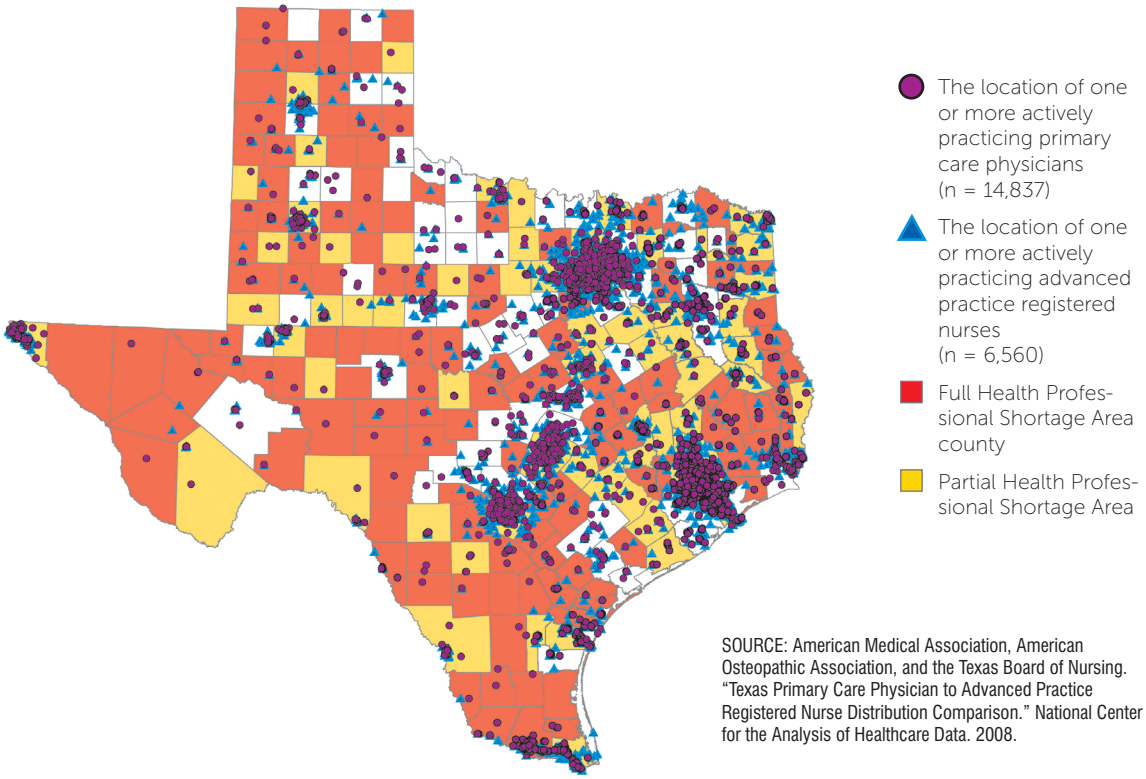
DSHS reports that in 2009, 5,745 NPs were in active practice in Texas, though the report does not distinguish how many of these practiced primary care and how many practiced in subspecialties. The number of NPs per 100,000 population was 25.1 in metropolitan non-border areas, but only 8.3 in rural border regions.[10]

States that have granted NPs the authority to independently diagnose patients and prescribe pharmaceuticals for treatment have not experienced significant migrations of NPs into underserved regions. The American Medical Association has conducted extensive geographic distribution studies in all 50 states, concluding that NPs and physicians tend to distribute in the same patterns, regardless of the states' levels of supervisory safeguards on the practice of medicine by NPs. Evidence of these similar practice patterns is demonstrated in AMA geographic distribution maps in Figure 4. Utah, Oregon, Idaho, and Arizona are four states that allow NPs to diagnose and prescribe without ever collaborating with physicians, and their practice distribution patterns are no different than that of Texas, with vast expanses of HPSAs where patients have scant access to primary care.[11, 12, 13, 14, 15] (Figures 3 and 4)

Proponents of independent diagnosis and prescriptive authority for NPs frequently argue that NPs can alleviate the lack of access to primary care services many Texans experience. In reality, NPs across the country are choosing to enter more lucrative subspecialties rather than remaining in primary care, a trend prevalent among physicians as well. One recent study published in the journal Health Affairs estimates that fewer than half of all nurse practitioners in the United States practice in office-based primary care settings, and reports that 42 percent of patient visits to nurse practitioners and physician assistants in office-based practices are in the offices of specialists.[16]

Robert C. Bowman, M.D., professor of family medicine at the A.T. Still School of Osteopathic Medicine in Arizona and noted expert on the nation's physician workforce, reports that since 2004, the number of nurse practitioners entering primary care has dropped by 40 percent. To measure the productivity of various health care providers over their careers, Bowman designed a formula to calculate what he calls the standard primary care year. Using this measurement, Bowman found that family physicians deliver 29.3 standard primary care years over an expected 35-year career, while nurse practitioners deliver only three standard primary care years. According to Bowman, it would take almost 10 nurse practitioners to equal the primary care productivity of one family physician.[17]

FIGURE 3: GEOGRAPHIC DISTRIBUTION OF PRIMARY CARE PHYSICIANS COMPARED TO ADVANCED PRACTICE REGISTERED NURSES IN TEXAS



SOURCE: American Medical Association, American Osteopathic Association, and the Texas Board of Nursing. "Texas Primary Care Physician to Advanced Practice Registered Nurse Distribution Comparison." National Center for the Analysis of Healthcare Data. 2008.

A Lack of Credible Research Comparing Care Delivered by NPs to Physicians

Supporters of expanding scope of practice for nurse practitioners quote studies that suggest a higher level of patient satisfaction and no difference in outcomes when comparing primary care services delivered by NPs to those of family physicians. In 2004, the Cochrane Review analyzed this literature, screening 4,253 articles, and finding 25 that related to 16 studies that met their inclusion criteria. While the authors concluded the review suggested that "appropriately trained" nurses could produce as high of quality of care as primary care physicians, "this conclusion should be viewed with caution given that only one study was powered to assess equivalence of care, many studies had methodological limitations, and patient follow-up was generally 12 months or less."[18]

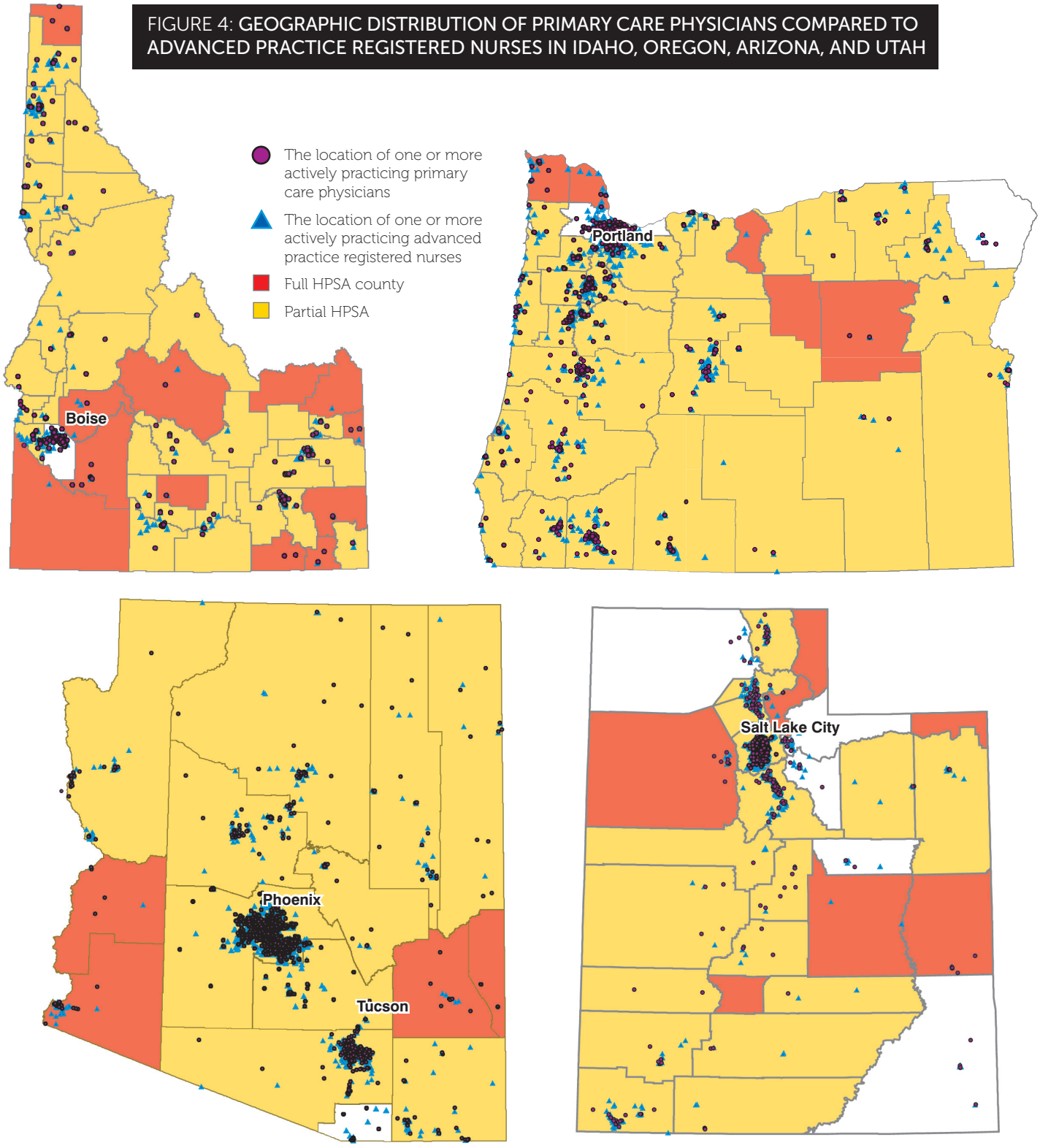
Because the phenomenon of states granting APRNs independent practice is relatively young, these studies measure the work of NPs who have practiced for some amount of time in collaboration with physicians. There simply are no studies that measure the quality of care provided by NPs who never learn from or work with physicians.

The Fallacy of Possible Cost Savings Delivered by NPs

Proponents of independent practice for NPs also argue that such a policy change would result in reduced health spending, presumably based on the knowledge that NPs earn less than physicians. The Cochrane review suggests that this differential may be offset by increased utilization of services and referrals by NPs.[19]

This assertion was confirmed in a study by the American College of Physicians that compared utilization rates among physicians, residents, and nurse practitioners in the journal Effective Clinical Practice. Researchers showed that utilization of medical services was higher for patients assigned to nurse practitioners than for patients assigned to medical residents in 14 of 17 utilization measures, and higher in 10 of 17 measures when compared with patients assigned to attending physicians. The patient group assigned to nurse practitioners in the study experienced 13 more hospitalizations annually for each 100 patients and 108 more specialty visits per year per 100 patients than the patient cohort receiving care from physicians.[20]

FIGURE 4: GEOGRAPHIC DISTRIBUTION OF PRIMARY CARE PHYSICIANS COMPARED TO ADVANCED PRACTICE REGISTERED NURSES IN IDAHO, OREGON, ARIZONA, AND UTAH



SOURCES: American Medical Association, American Osteopathic Association, and the Idaho Board of Nursing. "Idaho Primary Care Physician to Advanced Practice Registered Nurse Distribution Comparison."
AMA, AOA, and the Oregon State Board of Nursing. "Oregon Primary Care Physician to Advanced Practice Registered Nurse Distribution Comparison."
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AMA, AOA, and Utah Division of Occupational and Professional Licensing. "Utah Primary Care Physician to Advanced Practice Registered Nurse Distribution Comparison." National Center for the Analysis of Healthcare Data. 2008. All maps courtesy of the American Medical Association.

Policy Considerations

In deciding whether to allow NPs to practice medicine without medical degrees, or the knowledge and skills acquired over thousands of hours spent in residency training, legislators should consider the following policy questions.

1. Does the Texas Board of Nursing have the capacity and the expertise to regulate the practice of medicine by NPs? Is the Nurse Practice Act a sufficient statutory document to contain the regulation of medical practice by nurse practitioners? If granted the authority to practice medicine, should nurse practitioners do so under the regulatory aegis of the Medical Practice Act, and should they receive licensure and oversight through the Texas Medical Board?

2. In the interest of safety and quality, should the state set a minimum standard of education and training to receive an APRN degree and license? Today, a medical school graduate cannot receive a license to practice medicine independently. He or she must complete residency training before being granted a license to practice independently. However, newly licensed NPs have only completed about the same number of years of education as a third-year medical student, and many would argue that the education obtained during those years is far from comparable.

3. If the Legislature grants NPs the authority to practice medicine independently and without achieving the standard of training, examination, and licensure currently required to do so, what will become of the state's future supply of primary care physicians? Put bluntly, why would anyone choose to enter medical school after earning a bachelor's degree, to work 80-hour weeks for little pay for three years in a primary care residency, to incur all of the educational debt required to achieve such a high level of education, all while delaying their optimum earning potential for seven or more years when all they have to do to practice medicine is become an NP? If the state elects to grant the privilege and responsibility of medical practice to people other than physicians, what damage will be done to what is already a depleted primary care physician workforce?

As Texas grapples with the implications of inadequate access to primary care in some parts of the state, it is easy to consider whether lawmakers should agree to settle for something rather than nothing. In other words, isn't some level of health care better than none at all? We believe short-term solutions will harbor long-term consequences. For instance, if fewer physicians practice primary care, leaving those valuable services to NPs, who will provide general surgery and other complex procedures in the small safety net hospitals providing care to rural communities? Today, those hospitals depend on family physicians to perform such services. The answer to the scope-of-practice question therefore must encompass a distinct and deliberate vision for creating a better landscape for primary care delivery for Texas.

The American Academy of Family Physicians may have described this vision best in a January 2011 letter to the Institutes of Medicine and the Robert Wood Johnson Foundation: "Today, optimal care is best provided in a team-based setting with different health care professionals working together. Therefore, the goal should be to develop collaborative, team-based models that allow every member of the team to practice to the full level of his or her training while recognizing important differences among team members in background and skills."

While APRNs are trained to emphasize health promotion, patient education, and disease prevention, they lack the broader and deeper expertise needed to recognize cases in which multiple symptoms suggest more serious conditions. The primary care physician is expertly trained to provide complex differential diagnosis, develop a treatment plan that addresses multiple organ systems, and order and interpret tests within the context of the patient's overall health condition.

APRNs are a vital part of Texas' health care workforce. As part of a team dedicated to improving the health of our citizens, nurse practitioners collaborate with physicians to increase access to well-coordinated medical care in communities across the state. It is no secret that Texas suffers from a shortage of primary care physicians, and that we must find ways to increase the number of physicians, nurse practitioners, and registered nurses practicing primary care to meet that need. But granting nurse practitioners the authority to diagnose, treat, and prescribe without any physician collaboration is not the solution to Texas' primary care workforce shortage.

Rather, the Legislature should continue to support the numerous programs past Legislatures initiated to encourage our best and brightest to become primary care physicians, and to increase integration and coordination of our health care delivery system so that every Texan has a primary care medical home. That is the right answer for Texas.

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Marie-Elizabeth Ramas, M.D., is a third-year resident at the Conroe Family Medicine Residency Program in Conroe, Texas. As a National Health Service Corps scholar, she is dedicated to serving the underserved.

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