Penn LDI
Leonard Davis Institute of Health Economics

Interdisciplinary Nursing Quality Research Initiative

RESEARCH BRIEF
November 2014

Primary Care Shortages: It's More Than Just a Head Count

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This report reviews the evidence of a primary care shortage and how the ACA might affect current and future patterns of delivering care.

At the end of the first open enrollment period of the Affordable Care Act, it is estimated that 8 million people signed up for coverage through the new marketplaces, and 3 million signed up through Medicaid. Many enrollees will be newly covered, and coverage will encourage people to seek care that they might have gone without when they were uninsured. There could be a large, rapid increase in the demand for all medical services, with primary care services of special *concern*. Who will treat the newly insured, and will this exacerbate existing workforce shortages? And if shortages become worse, how will they affect how consumers seek care and how health professionals organize to deliver that care?

The aging population, declining numbers of new physicians choosing primary care specialties, and increased rates of insurance could coalesce into a significantly greater barrier to primary care access in the US, or at least in certain underserved areas, as *Huang & Finegold (2013)* note. Even without the ACA, *Schwartz (2012)* estimated that the demand for primary care will increase by 29% between 2005 and 2025, largely due to population trends and the aging of the Baby Boomer generation, the eldest of whom became Medicare-eligible in 2011. However, the effects of these trends are unclear, because the health system's capacity to meet demands varies by geography, and patients' primary care access varies by socioeconomic indicators and type of insurance.

The existence of a primary care physician shortage, even prior to the ACA, is not universally accepted. A new *report* by the Institute on Medicine found "no credible evidence" that the nation faces a looming physician shortage in primary care specialties. There is greater consensus about a maldistribution of physicians, in terms of specialty, geography, and practice settings. This report reviews the evidence and how the ACA might affect current and future patterns of delivering primary care.

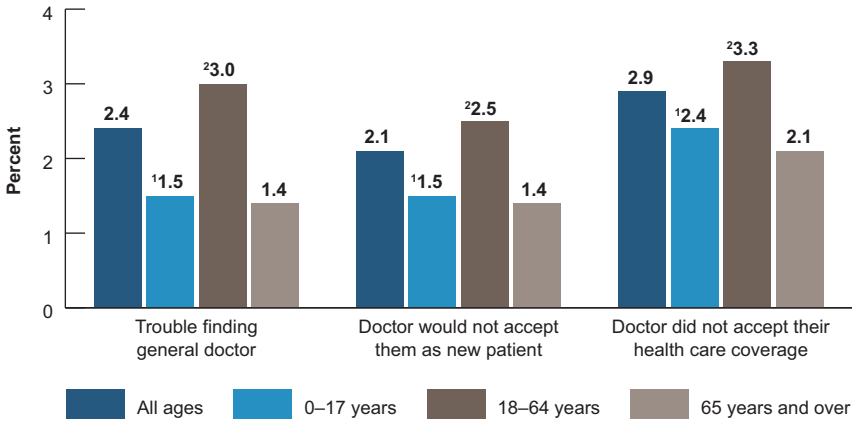
What would a primary care shortage look like?

About 30 million people are expected to gain coverage through the ACA, prompting fears of primary care shortage. What might that look like? It could mean that the newly insured will have difficulty finding a regular source of care or, especially among those insured by Medicaid, finding someone who accepts their insurance. It could mean limited availability of timely care for urgent problems, delayed or foregone care for chronic problems, or an increase in emergency room visits for non-emergent problems. A primary care shortage could also affect the currently-insured through longer wait times or shorter appointments.

Robert Wood Johnson Foundation

Prior to the implementation of the ACA, a number of studies tried to measure access to care in different ways. For example, the 2012 *National Health Insurance Survey* asked whether respondents had trouble finding a doctor, whether a doctor would not accept them as a new patient, and whether a doctor did not accept their health care coverage in the previous 12 months. Overall, few people reported these difficulties:

Figure 1
Percentage of people who had selected experiences with physician availability in the past 12 months, by age group: United States, 2012



1 Significantly different from adults aged 18–64.
2 Significantly different from adults aged 65 and over.
SOURCE: CDC/NCHS, National Health Interview Survey, 2012.

Rhodes et al. (2014) used a different technique to measure primary care access in 2012: simulated patients called primary care offices requesting the first available appointment for either routine or urgent care. Across 10 states, 85% of privately insured patients could get an appointment, compared to 78% of uninsured patients (with $75 payment) and 58% of Medicaid patients. Among those able to obtain appointments, median wait times were typically less than 1 week. *Further analyses* of these data revealed that Federally Qualified Health Centers (FQHCs) were more willing than other providers to accommodate new Medicaid patients and offer low-cost appointments to uninsured patients, with similar wait times. These studies suggests that Medicaid patients may have more trouble finding a new primary care physician than commercially-insured patients, but that most gain access over the course of a year.

From the supply side, *HRSA* designates 6,000 "primary care shortage areas" based on a physician to population ratio of 1:3,500. Taking future demand into account, HRSA projects a shortage of 20,400 primary care physicians by 2020. This is the number needed to keep wait times and visit length at current levels, if the system for delivering primary care were to remain fundamentally unchanged. Aging and population growth account for 81% of the change in demand, with the remainder

Aging and population growth will account for 81% of the change in demand for primary care by 2020.

due to expansion of health insurance coverage under full implementation of the ACA (including Medicaid expansion in every state). However, the HRSA projections are national averages and do not account for workforce distribution; they also assume that the supply and demand for primary care physicians was balanced in 2010, except for the number of physicians that would be needed (about 7,500) to alleviate primary care shortages in federal-designated underserved areas. Some analysts claim that the population ratio understates the severity of the existing shortage, because it can result in patient panel sizes that exceed the number of patients to whom a physician could reasonably offer timely care.

Other studies estimate far greater shortages, depending on the assumptions of the model, sometimes *twice* as large. *Auerbach et al. (2013)* estimated a shortage of 45,000 primary care physicians in 2025 – 20% below demand. One problem with these and other projections is that they hold existing patterns of care constant. Ratios of patients per primary care physician fail to account for changes in demand as well as changes in how health care is delivered (*Green et al. 2013*). They do not account for how physicians may alter their scope of services to meet demand, nor how different delivery systems may emerge or expand to respond to consumer needs.

Changes in how primary care is delivered are already underway. Models such as the patient-centered medical home (PCMH) and retail clinics have the potential to address symptoms of a physician shortage, such as wait times and shorter visits. *Auerbach et al. (2013)* modeled the effects of accelerating the trend toward the PCMH and nurse-managed health centers, which make greater use of advanced practice nurses to deliver primary care. These scholars estimated that if the share of primary care delivered in medical homes rose from 15% in 2010 to 45% in 2025, the primary care physician shortage would be reduced by 25%. They predicted an effect of similar size if nurse-managed clinics increased their share of primary care from 0.5% to 5% in 2025. Their predictions rest on an assumption (as yet, unproven) that these alternative models of care would be more productive (i.e., able to handle greater patient panel sizes).

ACA provisions to expand the primary health care workforce

These estimates do not include the programs and policies in the ACA that could help strengthen access to primary care and mitigate any adverse effects on wait times or visit lengths. However, no one suggests that these provisions alone could address the maldistribution of the workforce. HHS estimates that the ACA workforce investments will produce *4,500 additional primary care providers* over the next five years. The provisions include a $1.5 billion investment in National Health Service Corps Scholarship and Loan Repayment programs over five years; a substantial expansion of Community Health Centers; $230 million over five years to train medical residents in community-based settings, as well as funding to increase the number of nurse practitioners (NPs) and physician assistants (PAs) trained in primary care. The ACA also includes incentives that encourage changes in care delivery that could make more effective use of the primary care workforce, such as medical homes and Accountable Care Organizations. Finally, the ACA authorized primary care payment incentives: 10% bonus payments from 2011-2015 for primary care

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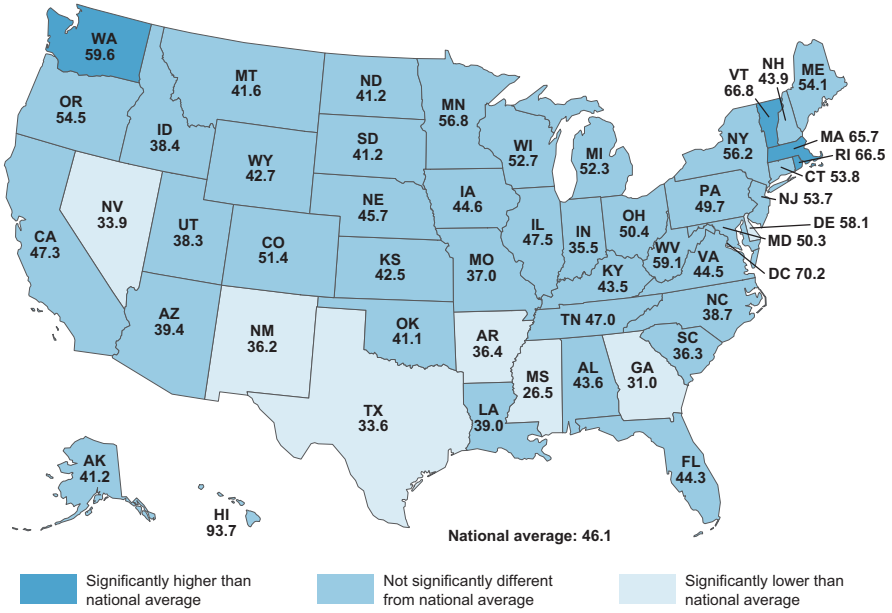
providers in Medicare, and a boost to Medicare payment levels for primary care physicians in Medicaid in 2013 and 2014.

Who delivers primary care now?

It is clear that estimates of an impending primary care shortage depend on the area under study, who is delivering that care now, and how that might change in the future. According to the *National Ambulatory Medical Care Survey*, there are 46 primary care physicians per 100,000 population, but that varies by state:

Figure 2
Number of primary care physicians per 100,000 population: United States, 2012

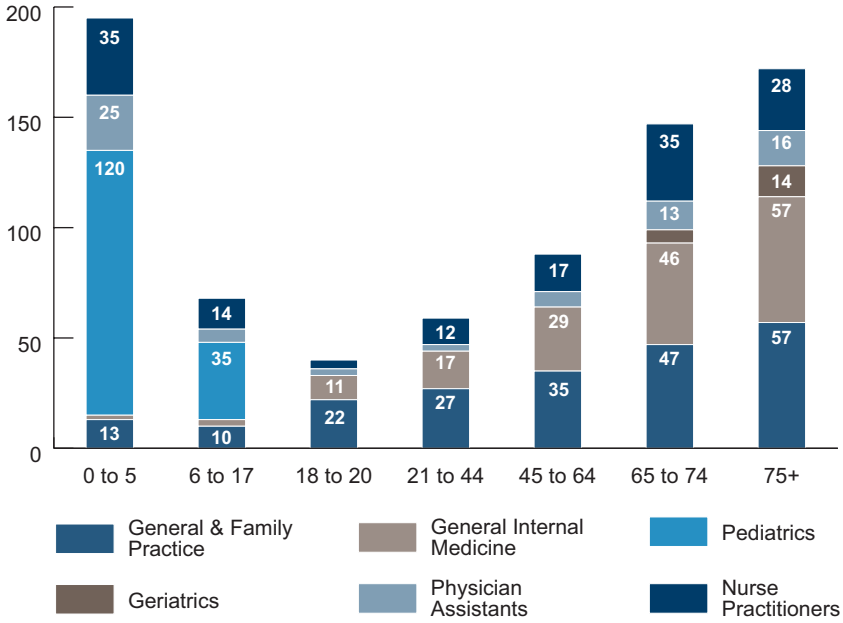


NOTES: Primary care physicians include those in family and general practice, internal medicine, geriatrics, and pediatrics.
SOURCE: CDC/NCHS, National Health Interview Survey, Electronic Health Records Survey.

Non-physician clinicians (such as nurse practitioners and physician assistants) now deliver substantial amounts of primary care, especially to the very young and elderly.

Primary care can be delivered by medical specialists as well, although a new *study* suggests that they represent a decreasing percentage of primary care visits (from 8% in 1997 to 4.8% in 2010). Of course, primary care is also delivered by health professionals other than physicians. *HRSA* studied how the current primary care workload is distributed across patients (by age) and primary care discipline. Non-physician clinicians deliver substantial amounts of primary care to the very young and the elderly. The following figure describes how the workload is distributed by type of health professional:

Figure 3
Estimated Use of PCPs (FTEs) per 100,000 Persons Within Each Age Group, 2010



DATA SOURCE: HRSA, Projecting the Supply and Demand for Primary Care Practitioners Through 2020.

This distribution is changing rapidly. *Kuo et al. (2013)* documented that between 1998 and 2010, the number of Medicare patients receiving NP-delivered care increased fifteen-fold. In 2012, *32%* of fee-for-service Medicare beneficiaries received at least one service from an advance practice registered nurse (who had billed independently). A far greater percentage had received non-physician services billed under physicians or as part of integrated systems. In 2012, more than two-thirds of NPs qualified for Medicare's *Primary Care Incentive Program* (authorized by the ACA). NPs represented 18% of primary care clinicians who received bonus payments, amounting to 7.5% of the total payments.

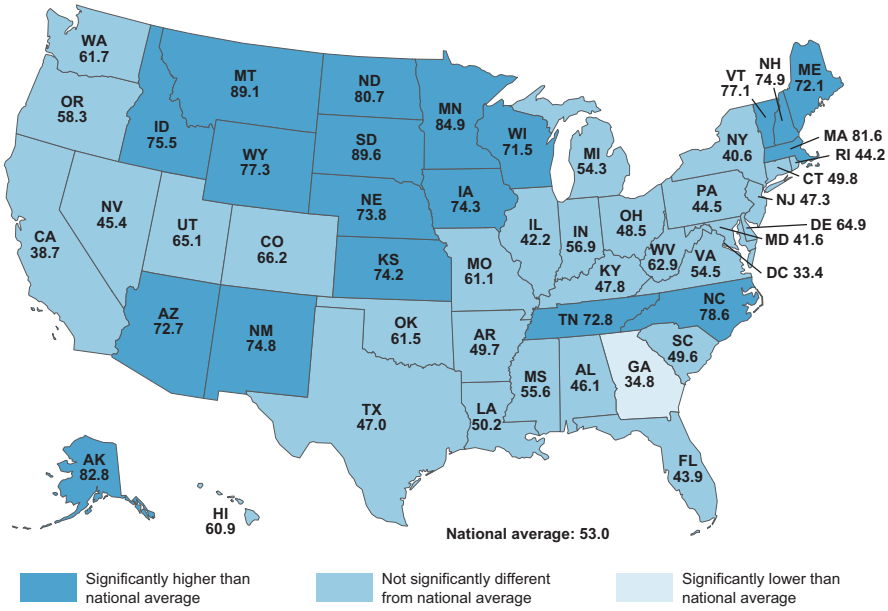
Studies comparing the quality of care provided by physicians and NPs have found no difference in clinical outcomes or patient satisfaction. Surveys find that most people who have seen health professionals other than physicians would choose a non-physician provider if that meant more timely care when needed.

A wealth of *studies* comparing the quality of care provided by physicians and NPs have found no difference in clinical outcomes or patient satisfaction. Surveys find that most people who have seen health professionals other than physicians are satisfied with the experience, and would choose a non-physician provider if that meant receiving more timely care when needed. *Dill et al. (2013)* found that about half of patients expressed a preference for a physician as primary care provider; about one-quarter for a non-physician provider, and one-quarter had no preference. Recent *systematic reviews* suggest that patient satisfaction with these other professionals is greater than with physicians, and that outcomes are *equivalent*.

According to the *National Ambulatory Medical Care Survey*, more than half of all office-based physicians now work with a nurse-practitioner or physician assistant in their offices. This varies by state and region, with greater percentages in nonmetropolitan areas:

Figure 4

Percentage of office-based primary care physicians with physician assistants or nurse practitioners in their practices: United States, 2012



NOTES: Primary care physicians include those in family and general practice, internal medicine, geriatrics, and pediatrics.

SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey, Electronic Health Records Survey.

Changes in primary care delivery and wider adoption of electronic health records could mitigate the effects of provider shortages.

What are the options for addressing or avoiding a primary care shortage?

In 2011, the Urban Institute released a *report* on how workforce policy could meet the upcoming demand for primary care services. It highlighted four strategies:

- Increasing the supply of primary care physicians via financial and non-financial incentives;
- Improving the *efficiency* of primary care practices through new delivery and payment systems and increased automation;
- Enhancing the role of non-physician clinicians by developing new educational and training programs and modifying scope-of-practice laws;
- Large-scale transformations in the health care system, like decentralizing care and reducing the focus on specialty care

Each of these hold promise, and each has its limitations. There are several barriers that limit the number of new physicians the medical education system can produce, chief among them being the limited number of residency positions available to new medical graduates. *Schwartz (2012)* noted that efforts to increase the supply of primary care physicians will be futile unless Congress increases GME funding, which has been frozen at the same level since 1996. A second problem within medical education is the lack of incentives to motivate medical students to pursue primary care as a specialty. Just 20% of medical school graduates in 2012 are likely choose primary care practice, far fewer than the 40% recommended by the *Council on Graduate Medical Education*. The extensive wage gap in physician salaries is a large barrier to increasing the number of primary care physicians, who earn 54% of what specialists earn.

Some *commentators* question whether increasing the supply of physicians is even the best strategy for meeting population demands for primary care. The US might not need more physicians, they argue, if it produced more non-physician clinicians, and deployed them more effectively. NPs and PAs are far more likely to pursue primary care training and practice than physicians. According to the *Agency for Healthcare Research and Quality*, 33% of physicians are now in primary care (a share that is decreasing as fewer students choose primary care). In contrast, AHRQ estimates that 52%-66% of NPs are in primary care practice (*83%* are trained in primary care), while 43% of PAs are in primary care practice. NPs are also more likely to practice in *rural and underserved areas*, where a primary care shortage is likely to be more acute.

Changes in primary care delivery could also mitigate the effects of a provider shortage. As discussed, an increase in the prevalence of non-traditional delivery systems like PCMHs and NMHCs could be beneficial. Additionally, wider adoption of electronic health records (EHRs) and communication technologies have been touted as a possible means of accommodating more patients by reducing face-to-face encounters. *Green et al. (2013)* proposed that increased use of EHRs and electronic communication might improve productivity, allowing practices to take on greater numbers of patients without

A common thread in this discussion of strategies to meet primary care demand is the need to redesign how primary care is delivered, so that providers are used to the full extent of their knowledge and training.

reducing quality of care. However, existing payment policies that are based on patient visits will limit widespread adoption of these technologies.

The rapid growth of retail clinics, usually staffed by NPs, offers another non-traditional alternative for delivering care. There are more than 1,400 retail clinics nationwide, a number predicted to *double* in the next three years. Retail clinics are usually located in high-traffic retail stores and offer a limited range of services to treat uncomplicated acute illness or deliver preventive services such as vaccinations. They offer extended hours and are often open on weekends.

Cassel (2012) notes that retail clinics are sites where first-line roles for advanced practice nurses and pharmacists have already been shown to be effective in managing acute uncomplicated conditions. Many clinics have adopted electronic health records and have developed relationships with health systems to overcome concerns about discontinuity of care. In a 2010 survey, consumers pointed to the convenience, immediacy, and reduced costs as reasons for their retail clinic visit. However, retail clinics still account for *less than 5%* of outpatient visits, and their role in the post-ACA world is uncertain. The high deductibles in many plans purchased through the new marketplaces may make the less-expensive retail clinics more attractive to consumers, many of whom will be responsible for first-dollar coverage.

Spetz et al. (2013) found that retail clinics have lower costs than non-retail visits for common conditions, including upper respiratory, ear, urinary tract and eye infections, allergies and influenza, as well as lower rates of subsequent urgent and emergency visits and hospitalizations. In states where NPs could practice independently, the costs of treating these conditions in the retail setting were even lower.

Recently, Walmart, the nation's largest retailer, announced the opening of several primary care clinics that would charge $40 for an initial visit (usually with a NP, no insurance accepted). This model goes far beyond delivering acute care and vaccinations; instead, Walmart envisions these clinics as full-service primary care providers. The potential impact of this initiative on primary care access is large, given the thousands of Walmart stores, many located in rural areas.

The common thread: "top of license" practice

A common thread in this discussion of strategies to meet primary care demand is the need to redesign how primary care is delivered, so that providers are used to the full extent of their knowledge and training. This is true for physicians as well as other health professionals. *Ghorob & Bodenheimer (2012)* articulate the benefits for physicians of greater involvement of non-physician clinicians, particularly in prescription refills and chronic care management. These two tasks consume a great deal of physicians' time — 37% of primary care doctors' time is spent on chronic care alone — but could easily be handled by other providers. They cite physician resistance as a major barrier to greater utilization of team-based care. *Ladden et al. (2013)* note that in effective primary care teams, physicians gain an understanding of new team members' roles and training, and learn to "trust their teammates."

In the long run, the ability to meet increased demands for primary care from an older, more universally insured population will depend less on head counts of providers and more on new, more efficient ways of delivering that care.

The greatest barrier to top-of-license practice for nurse-practitioners is the patchwork of state regulations that restrict their scope-of-practice (SOP). As of July 2014, 19 states and the District of Columbia allow APRNs to diagnose, treat, and refer patients and prescribe medications without physician supervision. Other states require varying degrees of physician involvement, depending on the element of practice. *Kuo et al. (2013)* found that states with the least restrictive regulations of NP practice had a 2.5-fold greater likelihood of Medicare patients' receiving their primary care from NPs than did the most restrictive states.

A growing chorus of authorities is calling for loosening or eliminating restrictions on NP practice. In 2012, the National Governors Association released a *report* that endorsed widening SOP laws to allow APRNs to practice with greater autonomy and utilize the full extent of their training. In a *2013 research brief*, the National Institute for Health Care Reform likewise supported liberalizing SOP nationwide and reducing physician requirements. The Federal Trade Commission framed the issue in economic terms in its *2014 report* on the regulation of advanced practice nurses. The report concluded that broadening the roles of other health professionals is fundamentally an issue of competition, and that increasing competition within primary care would benefit consumers and the health system alike.

Scope-of-practice laws also have a substantial *indirect impact* because requirements for physician supervision affect practice opportunities for NPs and may influence payer policies. Such policies include whether NPs are recognized as primary care providers and included by health plans in provider networks and whether NPs can bill and be paid directly. States with more restrictive scope-of-practice laws are associated with more challenging environments for NPs to bill public and private payers, order certain tests, and establish independent primary care practices. *Spetz et al. (2013)* noted that eliminating restrictions on NPs' scope of practice could have a large impact on the cost savings that can be achieved by retail clinics.

Thus, removing SOP restrictions will not, in itself, ensure that NPs practice at the top of their licenses. The NIHCR suggests that policymakers consider regulatory changes beyond revising scope-of-practice laws, such as explicitly granting NPs authority as primary care providers under Medicaid or encouraging health plans to pay nurse practitioners directly.

Conclusions

Providing coverage to a few million previously uninsured patients will no doubt increase the demand for primary care services. At this point, it is unlikely that the influx of patients and the demand for primary care will overwhelm our present capacity, as measured by existing availability of appointments and wait times. However, primary care shortages may be felt in certain geographic areas (mostly rural) and perhaps by certain providers, such as federally-qualified health centers, who already provide disproportionate amounts of care to Medicaid and uninsured patients. Anecdotal *reports* in the first half of 2014 suggest that primary care systems overall are meeting the immediate demand for care, with a few exceptions. In the long run

however, the ability to meet increased demands for primary care from an older, more universally insured population will depend less on head counts of providers and more on new, more efficient ways of delivering that care. Planning for that future now--and embracing the most promising strategies that fully utilize non-physician professionals in new systems of care--can avoid primary care shortages even in the long run.

The authors thank the following reviewers for their helpful comments on drafts of this paper: Linda Aiken, Erin Fraher, Julie Fairman, Sue Hassmiller, Richard Lindrooth, Lori Melichar, Joanne Spetz, and Olga Yakusheva.