Matching Supply to Demand: Addressing the U.S. Primary Care Workforce Shortage

BY EMILY R. CARRIER, TRACY YEE AND LUCY STARK

While there is little debate about a growing primary care workforce shortage in the United States, precise estimates of current and projected need vary. A secondary problem contributing to addressing capacity shortfalls is that the distribution of primary care practitioners often is mismatched with patient needs. For example, patients in rural areas or low-income patients—particularly the uninsured—may have greater problems accessing primary care services than well-insured, suburban residents. Most efforts to improve access to primary care services center on increasing the supply of practitioners through training, educational loan forgiveness or scholarships, credentialing, and higher payment rates. The 2010 Patient Protection and Affordable Care Act (PPACA) includes many provisions promoting these strategies. While existing, longer-term efforts to boost the primary care workforce are necessary, they may be insufficient for some time because a meaningful increase in practitioners will take decades. Rather, policy makers may want to consider ways to increase the productivity of primary care providers and accelerate primary care workforce expansion by, for example, examining how changes in state scope-of-practice policies might increase the supply of non-physician practitioners.

Primary Care Access Problems Likely to Grow

The current and likely growing undersupply of primary care practitioners in the United States is a focus of both state and national policy makers, particularly as overall population growth and aging, coupled with coverage expansions under health reform, will accelerate demand for primary care in the coming years. Collectively, an estimated 400,000 practitioners, including physicians—both allopathic and osteopathic—advanced practice nurses (APNs) and physician assistants (PAs), provide primary care in the United States. Primary care physicians are typically categorized as those with postgraduate medical training in family medicine, pediatrics or internal medicine.

Estimates of primary care shortages vary, reflecting differences in data collection and measurement, but most national studies indicate that while the supply of primary care practitioners is increasing, it is neither sufficient for current needs nor keeping pace with demand. To meet a target of one provider for every 2,000 patients, the Health Resources and Services Administration estimates that an additional 17,722 primary care practitioners are already needed in shortage areas across the country. Further, an analysis of the aging
At the same time, the health reform law encourages new, primary-care-centered models of care delivery to help control health care costs, in part by encouraging patients to use more primary care and preventive services in place of costlier specialty care. Such delivery system reforms, including wider adoption of patient-centered medical homes (PCMHs), may further stretch the primary care workforce. With these concurrent factors at work, approaches beyond those in the PPACA likely are needed to generate adequate primary care capacity in the health system.

Increasing Primary Care Capacity

Policies included in PPACA attempt to address both short-term and long-term elements of primary care workforce capacity. For example, temporary payment rate increases for primary care services may encourage providers to see more patients and deliver more services, increasing their capacity in the short run. Other policies, such as increased funding for loan forgiveness for clinicians willing to work in underserved areas, may attract more practitioners to primary care, increasing total supply in the longer run. The main thrust of PPACA policies to expand primary care workforce capacity include (see Table 1 for more details on PPACA provisions):

- increasing the number of trainees who are likely to pursue careers in primary care;
- encouraging graduates to practice primary care, particularly in underserved geographic areas; and
- adding to the skills of practitioners already working in primary care.

While each of these approaches has the potential to be beneficial, the benefit may not be large—or immediate. In addition, these strategies have undergone only limited evaluation as stand-alone programs and none in combination. For example, the health reform law includes temporary Medicare and Medicaid payment rate increases for primary care services, but how this policy will affect access and delivery is largely unknown. In addition, performance-based incentives for providing high-quality, coordinated care supported by health information technology also could increase overall payment for primary care, but these advances will require substantial investment of time and money by providers.

Even if PPACA policies are highly effective in bringing new practitioners into the workforce, they may be insufficient given the timeline to train new physicians and other primary care practitioners. At the same time, the health reform law includes temporary Medicare and Medicaid payment rate increases for primary care services, but how this policy will affect access and delivery is largely unknown. In addition, performance-based incentives for providing high-quality, coordinated care supported by health information technology also could increase overall payment for primary care, but these advances will require substantial investment of time and money by providers.

Data Source

This analysis is based on a literature review focusing on the primary care workforce composition, projected shortage and policies related to addressing these issues. Policy options were analyzed based on data from various sources describing the primary care supply, projected demand and relevant legislation, as well as the authors’ collective clinical and policy experience.

About the Authors

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the primary care workforce, still well under the American Association of Medical Colleges’ (AAMC) predicted need of about 45,000 primary care physicians.

Other Policy Options

The impact of current policies to expand primary care capacity could be bolstered by complementary approaches that could take effect more rapidly to meet expected jumps in demand. Other approaches that policy makers might consider include:

### Table 1

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<thead>
<tr>
<th>Policy</th>
<th>Description</th>
<th>Potential Impact</th>
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<tr>
<td><strong>Payment Reform</strong></td>
<td>Designated primary care practitioners receive a 10 percent Medicare bonus payment (effective 2011-15); Medicaid payment rates for specific primary care services provided by primary care physicians increased to at least equal Medicare levels (effective 2013-14).</td>
<td>Some modeling suggests higher payment rates can increase the quantity of primary care services provided; however, a temporary increase may have less impact.</td>
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<td><strong>Care Delivery Reforms and Pilot Programs</strong></td>
<td>Medicare Shared Savings/accountable care organizations (ACO) Program; community health teams to support patient-centered medical homes.</td>
<td>Health care organizations, such as ACOs, may encourage development of team-based primary care practices to increase capacity and improve efficiency.</td>
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<td><strong>Support Primary Care Training in Academic Settings</strong></td>
<td>Awards grants to plan, develop and operate training programs in primary care; provides financial assistance to trainees and faculty; enhances faculty development in primary care and physician assistant programs.</td>
<td>Students recruited through targeted training programs are more likely to enter primary care in underserved areas. However, such programs may require large investment with a relatively small yield. Also, if residency slots are fixed, increases in U.S. graduates may merely displace international graduates, resulting in minimal impact on the net primary care workforce.</td>
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<td><strong>Creating New Primary Care Residency Programs</strong></td>
<td>Redistributes residency positions in case of vacancies, and mandates 75 percent of new Medicare-supported residencies be in primary care, including internal medicine; academic medical centers or teaching hospitals may obtain grants for primary care residency programs.</td>
<td>Focusing on residency programs historically has a higher yield than creating academic training programs. Residents can also provide patient care and generate revenue for hospitals during their training.</td>
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<td><strong>Scholarships for Students Planning to Practice Primary Care</strong></td>
<td>Grants to medical schools to recruit students likely to practice in rural areas; grants to train residents in preventive medicine specialties.</td>
<td>Students who are more likely to practice primary care, particularly in underserved areas, are also likely to face financial barriers to obtaining medical training; scholarships can address this barrier.</td>
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<td><strong>Loan Forgiveness and Direct Financial Incentives for Primary Care Practitioners</strong></td>
<td>Increases annual and aggregate maximum on loans for nurses; increase in National Health Service Corps scholarships and loan forgiveness funding for primary care practitioners that practice in shortage areas.</td>
<td>Relative to scholarships, loan forgiveness has much lower dropout rates, higher retention and satisfaction.</td>
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Source: Authors’ analysis of the 2010 Patient Protection and Affordable Care Act

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Evidence of primary care shortages appears to be shifting the debate in some states on scope-of-practice laws. Massachusetts, where APNs may not practice independently, experienced increased shortages of primary care practitioners after state enactment of near-universal health coverage in 2006. Legislation has been introduced but not enacted to expand the state’s scope-of-practice regulations; one bill focuses specifically on primary care. Legislation, citing a shortage of practitioners in many counties, also has been introduced in Michigan to expand the scope of practice for APNs.

Other states’ impetus to reexamine scope-of-practice policies likely will vary depending on their primary care capacity and distribution of practitioners. Currently, 22 states and the District of Columbia permit APNs to practice independently, while others require some level of physician oversight. Two-thirds of states with a shortage of primary care physicians also have restrictive scope-of-practice laws, which may be a barrier to increasing access to primary care services through APNs (see Figure 1).

Not surprisingly, advanced practice nurses and physicians strongly disagree about which professionals are qualified to perform what tasks. While multiple studies show that APNs’ performance on such quality measures as delivery of recom-
mended preventive services, patient satisfaction and short
term mortality are at least equal to that of physicians, these
measures represent only a subset of primary care competen-
cies. Different patients have different needs, and little is
known about what types of patients would benefit more from
the experience and skill set associated with physician train-
ing and which would benefit equally well or more from the
experience and skill set of APNs. The size and resources of the
practice, as well as the preferences of providers themselves,
also may play a role in determining who should perform what
tasks for particular patients.

While state policy makers have jurisdiction over scope-of-
practice laws, federal policy makers also can play a role. One
option at the federal level is to offer more direct funding to
states that allow APNs to practice independently. The PPACA
allocates $50 million annually from 2012-15 for hospitals to
train APNs, along with other provisions allowing increased
use of APNs in primary care. For example, the Medicare
Shared Savings Program for accountable care organizations
(ACOs) recognizes APNs as primary care practitioners,
and these regulations defer to state scope-of-practice poli-
cies. An Institute of Medicine (IOM) panel recently recom-

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Examining scope-of-practice laws and payment reforms to increase productivity of primary care practices may have a greater near-term impact on primary care supply and also increase the effectiveness of longer-term measures included in health reform.

The short term effect on primary care capacity will depend mostly on the degree to which lead practitioners can delegate tasks to others.

Primary care practices that implement team-based models also may be more likely to adopt other modifications that will affect primary care practitioner productivity. For example, supplementing traditional office visits with email and telephone visits may allow primary care practitioners to have personal interactions with more patients. Other approaches, such as care coordination agreements, allow primary care practitioners to initiate care that would previously have been performed by specialists. These agreements may fulfill such important policy goals as diminishing care fragmentation and encouraging care delivery in the lowest-cost setting possible, but they may also create additional responsibilities for busy primary care practitioners.

Despite their promise, there is no guarantee that team-based care models will automatically increase population-level access to primary care. In the short term, these models may have the opposite effect. Many pioneers of team-based care have been motivated by improving care coordination and quality rather than stretching the primary care clinician supply. In fact, several successful PCMH programs have reduced physician patient-panel size. For example, Group Health’s initiative reduced physician panels from an average of 2,327 patients to 1,800. The PCMH run by the Veterans Health Administration, likewise, decreased physician panel size to about 1,000 to 1,100 patients from 1,200.

However, PCMH proponents believe that team-based care will ultimately increase primary care physician satisfaction and lead to an increase in the number of new medical residents specializing in primary care. Whether these gains are realized may depend on how providers implement team-based care. Presumably, under reformed payment policies, a team-based approach designed to increase the productivity of primary care clinicians will lead to higher incomes for participating practitioners, which also could encourage more to enter the field. However, government or philanthropic support may be needed to fund development of such models. State policymakers will have considerable influence over access to and payment for primary care, given the estimated 16 million people that will gain Medicaid coverage by 2019.

Looking Ahead

The approaches to expanding primary care supply included in the PPACA are generally noncontroversial, but it may be a decade or more before their full impact on primary care supply is realized. Even if successful, policy makers will be hard-pressed to continue this investment in the coming years. Notably, the shortage of primary care capacity can be traced back in part to previous volatility in policy support for primary care, when Medicare legislation in the1980s raised payments for primary care, but an inadequate updating process eroded those gains over time, particularly for evaluation and management services.

Policy makers also may want to consider the consequences of capping the number of graduate medical education (GME) residencies and reducing Medicare GME funding. Constraining residency slots might preclude longer-term policies for increasing the supply of primary care physicians. The Council on Graduate Medical Education has recommended increasing residencies in selected specialties with shortages, such as adult primary care and psychiatry. Similarly, the National Health Service Corps (NHSC) currently offers loan repayment to primary care practitioners working in designated health professional shortage areas. Participation in NHSC programs has roughly tripled since 2008 because of increased funding. Such targeted efforts may better align distribution of providers with need, both geographically and by specialty.

Nonetheless, increasing primary care supply in the short and medium term may prove a challenging task. In the current fiscal environment, increasing primary care compensation relative to specialists to levels that have successfully changed the population of practitioners in other nations is unlikely. In addition, unquantifiable factors, such as culture, status and professional identity may play as great a role as payment in determining where and how clinicians provide care. Policy makers may wish to consider how they can address these less-tangible barriers to building primary care supply. For example, opportunities to enhance supply may mean training practitioners to become more comfortable with delegation and larger patient panels.

In the meantime, examining scope-of-practice laws and payment reforms to increase productivity of primary care practices may have a greater near-term impact on primary care supply.
and also increase the effectiveness of longer-term measures included in health reform.

**Notes**


8. AAMC reports on the national residency match consider all medical school graduates matching into internal medicine, family practice or pediatrics as primary care providers. AAMC does not include geriatrics in its primary care estimates given the small number of residency matches, though they are ostensibly considered to be primary care practitioners. This analysis takes into account that about 44 percent of these graduates will go on to specialize rather than remain in primary care. However, it assumes that all new entrants to primary care will participate in full-time clinical care and none of them will displace foreign-educated primary care physicians, both of which are optimistic assumptions.


