When President Obama took the oath of office in January 2009, there was mounting evidence that primary care not only improved patient and population outcomes, but also contained costs [1-3]. It was clear that improved access to quality primary care would be a focus of his administration. Responding to the 2008 economic crisis and recognizing tremendous gaps in the health care delivery system—particularly in the primary care workforce—Congress passed the American Recovery and Reinvestment Act (ARRA) in 2009. The act addressed a number of health delivery system issues; it implemented the Health Information Technology for Economic and Clinical Health (HITECH) Act, which introduced the concept of meaningful use of electronic health records; created the Office of the National Coordinator for Health Information Technology; reinvigorated the National Health Service Corps (NHSC) with a $300 million investment; and expanded the Health Resources and Services Administration (HRSA) workforce programs, including the NHSC, by close to 50 percent [4].

Societal undervaluation of primary care services continued, however, reflected by the lackluster investment in primary care infrastructure that has not reimbursed for foundational components of primary practice such as care coordination and chronic care management. Instead, the fee-for-service model of payment has incentivized increased services, procedures, and tests [5, 6]. The widening income gap between generalists and specialists and the failure of the Resource-Based Relative Value Scale (used by HMOs to determine clinician payments) to reduce the inequality between office visit fees and payments for procedures [7] have contributed to the trend.

The Council on Graduate Medical Education (COGME) is authorized by law to advise the Secretary of Health and Human Services and Congress on the supply and distribution of physicians in the United States [8]. In light of both primary care’s contribution to improved outcomes and longevity and the attrition of primary care physicians, the COGME recommended that at least 40 percent of the physician workforce should practice primary care and that their salaries should average no less than 70 percent of specialists’ salaries [9].

Five years ago, on the heels of the financial crisis, the Affordable Care Act (ACA) was signed into law. More than 48 million people in the nation were uninsured [10], and many were ineligible for coverage due to preexisting conditions. Simultaneously, out-of-
pocket costs were rising, premiums were increasing, and the health share of the gross
domestic product (GDP) was at an all-time high [11-13]. The ACA supported two
seemingly conflicting goals: expanding insurance coverage to more people and for more
care—e.g., preexisting conditions and preventive care services—while at the same time
containing costs.

A major focus of the ACA is covering primary care services, such as preventive services
and annual wellness visits for Medicare beneficiaries. Under the act, primary care
physicians, who provide 60 percent of services in qualifying evaluation and management
codes, could receive a 10 percent bonus in Medicare payments for five years, beginning
in 2011 [14]. For certain primary care services, Medicaid payments administered by
states would be required to match those of Medicare in 2013 and 2014 [15].

The principles underlying the ARRA and the ACA are similar; both attempt to improve
outcomes and lower costs by enhancing access to care through federal investments and
by modifying health care delivery, payment, and regulatory incentives. The strategies
encompass a number of tactics, including implementation of the patient-centered
medical home to decrease fragmentation and improve care coordination. New payment
models are based both on services rendered (fee for service) and value added or
outcomes—a sea change in reimbursement policy. Medicare spending in highly
capitated (i.e., fixed payment per patient) practices has been shown to cost less per
beneficiary than fee-for-service-based practices [16-18]. Although these policies were a
step in the right direction, none can be effective without widespread, robust, and
accessible primary care [19].

In order to improve access, the ARRA and the ACA together provided enough funding to
double the safety net system through community health centers (CHCs) and federally
qualified health centers (FQHCs). These are private nonprofit organizations that provide
primary health care and fully comprehensive “enabling” or support services in defined
medically underserved areas. They receive federal grant funding through section 330 of
the Public Health Service Act [20] and enhanced reimbursement from Medicaid and
Medicare. They also accept private insurance and must accept all patients regardless of
insurance status. The aim is to improve access to care for low-income, underserved, and
vulnerable populations. In 2013, there were more than 9,000 CHC service sites serving
almost 22 million patients [21].

**Primary Care Delivery and Payment Transformation**

The primary care workforce shortage has been well documented [22, 23], and many
underserved urban and rural areas don’t have the workforce capability to provide the
most basic health care services [24]. Due to the increasing trend in physician
specialization [25], there has been little improvement in the ratio of primary care
physicians to patients during a period when the overall physician-to-population ratio has increased dramatically [25].

**Primary Care and the Public Good**

With compelling evidence that health systems with high-functioning primary care services have decreased mortality and improved health outcomes [9], the sector can be classified as a public good, similar to police and fire services. Physicians are empowered by society to collectively and individually be agents of change, but changing society requires advocacy and a demand for social justice [26]. All physicians have taken an oath to serve in the public trust, an obligation that can be fulfilled through service as well as education [27]. Yet medical school graduates are shunning primary care in favor of more lucrative subspecialty careers, as evidenced by a direct correlation between mean overall specialty salary and US graduates’ residency fill rates [28].

Because almost all graduates of family medicine residency programs go on to practice in primary care (unlike internal medicine graduates, who tend to subspecialize or limit their practices to hospital care), family medicine can be used as a proxy for medical school primary care production. Prior to 2000, 73 percent of entering family medicine residents were graduates of US allopathic schools, but the percentage shrank to 46.1 percent for those entering the workforce between 2001 and 2013 [29]. Conversely, more than one-third of those entering the workforce between 2001 and 2013 were international graduates, who made up 13 percent of those entering the workforce before 2000 [29]. Even with increasing numbers of international graduates entering the US workforce through primary care residencies [30, 31], the nation is falling behind on projected primary care needs, which are burgeoning due to population growth, increased insurance coverage, and impending physician retirements [22].

High student debt, which may disproportionately affect students with a lower socioeconomic status, has been cited as a deterrent to entering primary care practice [32]. The low value ascribed to primary care during medical school also may affect career choice, suggesting that altering school culture and supporting motivated students could be effective in enhancing the primary care workforce [32, 33]. Providing meaningful training experiences in safety net settings encourages and supports students to choose primary care and physicians to practice in similar environments [34, 35].

**Inducements to Pursue Primary Care**

Congress provided a raft of inducements to attract patients into primary care offices. Did they do the same to attract physicians into those same offices to provide care for the newly insured? Specifically, the ARRA and the ACA made five changes to induce medical students to pursue primary care careers and to support primary care training programs.
Decreased payback time and penalty fees for the Primary Care Loan (PCL). The PCL is a low-interest loan program for medical students who intend to pursue primary care; the decrease in fees comes without any cost to the government.

Investments in the National Health Service Corps (NHSC). NHSC resources are used to recruit primary care clinicians to underserved areas or populations through student debt relief. Sixty percent of NHSC physicians continue to practice in underserved communities ten years after their service commitment has ended [36], and the workforce treating the underserved as of 2014 was estimated at more than 2,400 physicians (personal communication from Craig Kennedy, executive director, Association of Clinicians for the Underserved, May 5, 2015). The ARRA provided $300 million toward debt repayment for participating physicians, and the ACA increased the award amount available to NHSC members. In 2014, $283 million was invested in NHSC awards to a variety of clinicians, including primary care physicians [4, 37].

Investments in the Teaching Health Center GME program (THCGME) and primary care residency program expansions. Federally funded by $230 million over five years, beginning in 2011 [38], THCGMEs are community-based ambulatory patient care centers (such as community health centers—including those operated by the Indian Health Service or receiving Title X grants—rural health clinics, or community mental health centers) that operate primary care residency programs. This funding supports new resident slots or the establishment of new programs. NHSC members may fulfill 50 percent of their service obligation time through clinical teaching at THCGME programs [39]. Congress authorized, but did not fund, THCGME development grants, which would have allowed programs to plan curricula and enhance faculty [40].

Enhancements to Title VII programs. The US Public Health Service Act, title VII, was enhanced to include opportunities for primary care capacity building [41]. Authorized by this act and the ARRA, the Primary Care Training and Enhancement (PCTE) grants fund training programs for primary care students, residents, faculty, and academic units [42]. Funding was authorized for $125 million per year [40, 41], but subsequent annual appropriations have ranged from $37 million to $39 million [43], and the estimated award amount for federal fiscal year 2015 was less than $37 million overall [44].

Technical changes to Medicare GME support. Under title VII authority, $168 million from the Public Health and Prevention Fund was used to support community-based primary care residents over a five-year period, at a rate of $80,000 annually—which is lower than other graduate medical education (GME) program support per position [45-48]. Projected production was almost 900 supported resident years, although the actual number of physicians who are going on to practice is still not known [49], nor is it known if these positions will be supported after 2015 when the funding ends.
A technical but important shift in Medicare GME reimbursement to sponsoring institutions was the new policy that allows programs to pay residents training in nonhospital (ambulatory) settings. It removed much of the disincentive for community-based ambulatory rotations and longitudinal primary care. In addition, Medicare allowed certain residency training slots to be redistributed among departments within an institution to high-need specialty areas [50]. The residency slots redistribution, though a step in the right direction, has been anticipated to have minimal impact [51].

Although Congress authorized many incentives, appropriations were not forthcoming for others.

**Options to Enhance Primary Care GME**

Released in 2010, the Council on Graduate Medical Education’s twentieth report, *Advancing Primary Care*, recognizes the importance of primary care as a mechanism for enhancing health and decreasing costs nationally [9]. The council recommends that no less than 40 percent of the physician workforce practice primary care; that existing primary care practices be transformed into new models such as patient-centered medical homes; and that payment reward care that is comprehensive, continuous, coordinated, and community-based, all hallmarks of high quality.

The report identifies recruitment of primary-care-oriented students, faculty support of primary care practice, and curriculum enhancements as key factors in promoting and sustaining change. It urges GME leaders to address maldistribution and train residents about the social determinants of health disparities.

Certain changes in the medical education curriculum have the potential to attract students and improve residency graduates’ preparation for providing high-quality and meaningful service in primary care. These changes would emphasize caring for a defined patient population over time, working on health teams that include multiple professions such as behavioral health professionals and pharmacists, and working with communities as part of a larger health system such as an accountable care organization. Finally, and importantly, we should encourage commitment to leadership and research investments in population and health services among residents who become faculty [52].

**Conclusions**

The ARRA and the ACA have directly funded and provided windows of opportunity for the development of primary care physicians and practices. Whether they have done as much as they could have is yet to be seen. Nevertheless, so much is changing that “change management” has become a popular topic in faculty development and primary care delivery settings. Primary care physicians, educators, academic health centers, medical school leaders, and policy pundits must respond to the public need by embracing change. Students and residents deserve to be inspired by the opportunities the health care crisis
provides us, to make change, to be part of change: to make a difference. Indeed, educators and curriculum designers should encourage them to take leadership positions and make demands for the social justice and health equity that improve the well-being of the whole population.

Strategies for change include engaging, promoting, and developing primary care faculty; recruiting primary care-oriented students; and enhancing primary care curricula and training experiences to make longitudinal care of patients relevant and compelling as a profession. Primary care residency programs in academic health centers where students are initially exposed to primary care practice must be improved so that the purviews of primary care are presented and viewed as the complex and interesting systems that they are, as exciting as the beating heart in the interventional cardiology suite. Longitudinal care experiences that foster interest in and familiarity with primary care should not have to compete for time and attention with concurrent inpatient/hospital duties. Primary care time should be protected, not tacitly treated as unimportant.

Commonly referred to in motivational learning settings is the dual meaning of the Chinese symbol for “crisis”: “danger” and “opportunity.” The crisis in primary care is here: the realization of opportunity depends on vision, leadership, and support reforms to revitalize the long-neglected and overtaxed primary care system. Linking primary care with the communities it serves to improve the quality of health care and slow the rate of spending must become a priority.

References


41. “For purposes of carrying out this section (other than subsection (b)(1)(B)), there are authorized to be appropriated $125,000,000 for fiscal year 2010, and such sums as may be necessary for each of fiscal years 2011 through 2014.” Primary Care Training and Enhancement, 42 USC sec 293k (2011). http://www.law.cornell.edu/uscode/text/42/293k. Accessed May 31, 2015.


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