

IHWC Papers: Comparisons of the Restructured Primary Care in the IMWC
Countries- United States of America

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Introduction

The World Health Organization 2008 World Health Report, *Primary Health Care Now More than Ever*, recognized the important roles and value of primary care, including comprehensiveness, integration, continuity, patient empowerment, bridging personal, family, and community health, prevention and health promotion, and team-based care.¹ Primary care is a foundational element of the health care system in the United States (U.S.) and is needed to improve quality, increase access, and contain costs; however, the U.S. primary care system is struggling under increasing demands and expectations, diminishing economic margins, and increasing workforce attrition compounded by diminishing recruitment of new physicians to primary care.²

Sir Michael Marmot, Chair of the WHO Commission on Social Determinants of Health, stated, “There is no question that part of improving health in poorer countries, as in richer, is the provision of comprehensive primary care.”³ The lack of effective primary care implementation in the United States is cited as a key reason why the U.S. falls farther behind in population health measures and continues to have wide disparities.⁴ Whether the focus is personal, population, or health system, good access to primary care is associated with more timely care, better preventive care, avoiding unnecessary care, improved costs, and lower mortality.⁵

Current health reform efforts in the U.S. include considerable focus on primary care. There are several primary care enhancements in the Patient Protection and Affordable Care Act (PPACA) Many of these policies are responding to evidence that primary care is eroding. Approximately 1/3rd of physicians currently practice in primary care but fewer than 1-in-4 current graduates are going into primary care and the Council on Graduate Medical Education is concerned that the trend could go to less than 1-in-5.^{6,7} This level of primary care production cannot sustain the current primary care workforce in the US, and certainly cannot increase its standing relative to other specialties as in other developed countries.

Providers of Primary Care in the United States

Physicians

Of the 624,434 physicians who spend the majority of their time in direct patient care in the United States, slightly less than 1/3 are specialists in primary care. The primary care physician workforce consists of family physicians, general practitioners, general pediatricians, general internists, and geriatricians. In 2008, Americans made nearly 956 million visits to office-based physicians, 51.3% of the time to primary care physicians (Figure 1).⁸ As noted above, production of primary care physicians has fallen precipitously in the last decade such that the American Board of Internal Medicine reports that less than 20% of trainees entering general internal medicine residencies will go on to practice in primary care, choosing instead to subspecialize or provide hospital-based care. General pediatricians are also increasingly subspecializing. Family medicine training has very few subspecialty options but there is disturbing trend of reduction of scope once in practice (less maternity, hospital, minor surgical, and pediatric care). Family physicians (FPs) have largely replaced general practitioners over the last forty years and loss of the broad scope of practice is concerning, especially since FPs are more likely to

practice in rural and underserved areas than other primary care physicians, and these settings require broader scope of primary care due to lack of other physician specialties.

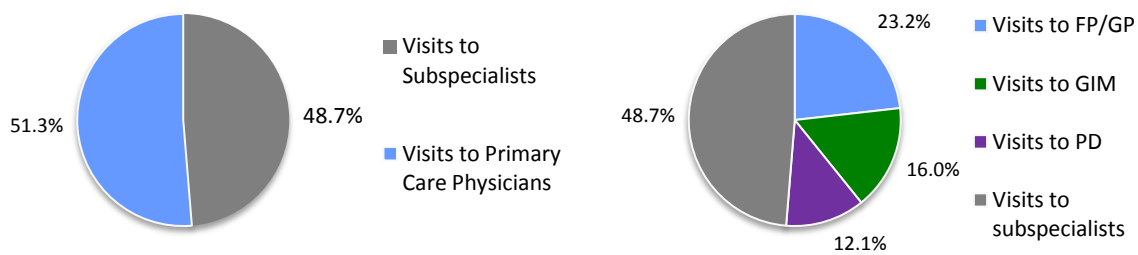


Figure 1: Visits to office-based physicians, non-primary care vs primary care, and within primary care (FP/GP = Family Physician/General Practitioner, GIM = General Internists Medicine, PD = General Pediatrician)

How many practicing primary care physicians are there in the U.S?

According to the 2010 American Medical Association Masterfile, there are slightly more than 246,000 primary care physicians in the U.S. This number, however, overestimates the number of practicing physicians for two main reasons: the AMA Masterfile includes some retired physicians and others who have left the workforce; and, a substantial number of primary care physicians now practice as hospitalists and in emergency departments. After adjusting for these two factors, the number of practicing primary care physicians in the U.S. is estimated to be approximately 209,000. (Table 1)

Table 1. Primary Care Physicians, 2010

	PCPs in direct patient care*	Adjusting for retirement	Percent estimated to be practicing primary care	Primary Care Physicians Practicing Primary Care
FM	87,650	84,033	0.95	79,831
GER	3,260	3,157	0.95	2,999
GP	11,883	9,557	1.00	9,557
GIM	93,655	89,359	0.80	71,487
PD	49,642	47,297	0.95	44,933
Total	246,090	233,403		208,807

*AMA Masterfile 2010(FP/GP = Family Medicine, GER = Geriatrics, GP =General Practice, GIM= General Internal Medicine, PD = General Pediatrics)

Nurse Practitioners and Physician Assistants in Primary Care

Nurse Practitioners (NPs) and Physician Assistants (PAs) are health professions begun in the U.S. in the 1960s in response to a shortage and uneven distribution of physicians. They are licensed in all states but there is considerable variation in the laws governing their scope of practice. They play important roles in many health care fields including primary care.

The Center for Medicare and Medicaid Services maintains the National Provider Identifier (NPI) dataset which listed 106,000 practicing nurse practitioners and 70,000 practicing physician assistants in 2010. While this estimate represents approximately 10,000 fewer practicing physician assistants than projected by the American Academy of Physician Assistants, it represents approximately 10,000 more nurse practitioners than report having NP in their title.⁹ Unfortunately, there is no consistent, comprehensive NP data source, hampering understanding of how many are clinically active, what specialties they practice, and in what settings.

In order to estimate the number of nurse practitioners and physician assistants that are practicing primary care, the NPI database was used to examine the practice partners of each nurse practitioner and physician assistant. Nurse practitioners and physician assistants that practiced alone or with primary care physicians were counted as practicing primary care. NPs and PAs that practiced with groups of physician subspecialists were not counted as practicing primary care. NPs and PAs that practice with mixed groups of primary care and subspecialist physicians were counted as practicing primary care in proportion to the percentage of primary care physicians in the practice. This inferential assignment to primary care suggests that less than half of physician assistants currently practice primary care and slightly more than half of nurse practitioners are practicing primary care. Based on this method, there were approximately 55,000 nurse practitioners and 30,000 physician assistants practicing primary care in the U.S. in 2010 (Table 2). American Academy of Physician Assistants data (2008) and RN Sample Survey (2008) both suggest that the method described above overestimates the percentage of PAs and NPs practicing primary care.

Table 2. Estimated Number of Nurse Practitioners and Physician Assistants Practicing Primary Care in the U.S.

Provider type	Total	Number in Primary Care	Percent Primary Care
Nurse Practitioners	106,073	55,625	52.0%
Physician Assistants	70,383	30,402	43.4%

National Provider Identifier File, 2010

Distribution of the US Primary Care Workforce and Access Equity

The U.S. primary care workforce includes nearly 300,000 primary care professionals or almost one for every 1000 people in the US; however inequitable distribution of the health care workforce is a pressing problem for access in the U.S. Rural areas are a prime example. Rural areas have approximately 64 primary care providers per 100,000 people compared to urban areas which average 84 per 100,000. Primary care physicians are more likely to practice in rural areas than non-primary care specialists, and within primary care, family physicians and general practitioners are more likely than either general internists or pediatricians to practice in rural areas, and distribute more similar to the US population (Table 3).

NPs and PAs are more likely than physicians to locate in rural areas (16% vs 9%), and primary care NPs and PAs are much more likely to be rural (28% and 18%, respectively)(Table 3). This rural distribution is a higher proportion than even primary care physicians but similar to family physicians (22 %). Their distribution is very state-dependent and highly correlated with state scope of practice.

Table 3. Geographic Distribution of Primary Care Health Care Professionals, 2010

Geography	All			Primary Care					US Population
	NP	PA	Physicians	NP	PA	Family Medicine	General Internal Medicine	General Pediatrics	
Urban	84.3%	84.4%	91.0%	72.1%	75.1%	77.5%	89.8%	77.6%	80%
Large Rural	8.9%	8.8%	6.5%	11.0%	11.6%	11.1%	6.7%	9.6%	10%
Small Rural	3.9%	3.7%	1.7%	7.7%	6.9%	7.2%	2.4%	7.3%	5%
Isolated Rural, Frontier	2.8%	3.0%	0.7%	9.1%	6.3%	4.2%	1.1%	5.5%	5%

(National Provider Identifier file, November, 2010; US Census Bureau)

The problem of inequitable distribution means that some areas are in relative shortage while others may be in surplus. Using the Health Resources and Services Administration (HRSA) goal of a 2000:1 population-to-provider ratio¹⁰, roughly 28% of the rural population lives in a health professional shortage area compared to 15% of the urban population. To eliminate provider shortages at a 2000:1 level it would be necessary to increase the supply of providers by approximately 2,670 in rural areas and 3,970 in urban shortage areas. The Health Resources and Services Administration (HRSA) estimates the total need to be 17,727 physicians if physicians currently serving under federal programs are withdrawn.⁴ To achieve a population-to-provider ratio of 1500:1, that is, one physician more than the HRSA shortage threshold of 3000:1, it would be necessary to increase the supply of providers by 6,930 in rural areas and 13,640 in urban areas (more if federally-supported physicians are withdrawn). This problem of maldistribution is long-standing and impervious to most policy solutions. The PPACA reforms more than doubled funding for the National Health Service Corps, which may help, and an inadvertent reduction of eligibility for the PPACA primary care bonus for rural physicians (due to their expanded scope of practice) was partially fixed by regulatory change. Reductions in primary care and general surgery production will continue to hamper rural workforce improvement.

Expansion of Primary Care

It is estimated that the PPACA reforms of 2010 will offer health insurance to an additional 34 million people in the U.S. by 2014. Many of the uninsured are clustered in areas of existing underservice. This policy will add to the number of needed primary care providers and to the existing geographic disparity in access to care.

Over the past decade, researchers have differed over the existence of a physician shortage. The Association of American Medical Colleges (AAMC) has projected a shortage of 46,000 PCPs by 2025 while Colwill projected a shortage of 44,000 by 2025.¹¹ Others contend that the most pressing, current primary care shortages are largely due to geographic maldistribution, which may not improve by simply increasing supply. Regardless, most past shortage estimates have not considered more universal health insurance in the U.S. Following insurance expansion in Massachusetts, reports suggested increased wait times to see physicians.¹² The AAMC projected that universal coverage will increase physician use by 4% while the Bureau of Health Professions projected a 5.2% increase.¹³ Either estimate suggests a need of 8,000 – 10,000 primary care providers beyond what population growth and aging will already demand, and it will arrive abruptly in 2014. This number may need to be multiplied unless strong incentives are also created for providers to locate where the newly insured are clustered. Law makers tried to deal with this need in some specific ways.

In addition to the PPACA improvements directed at increasing primary care production and dispersion already mentioned, the law increased Medicaid primary care reimbursements for three years, created a 10% Medicare primary care incentive payments, created teaching health center grants to increase training in outpatient care sites that cater to the underserved, and set up a process for reviewing (and potentially resolving) long-standing disparities in generalist care reimbursement under Medicare. After passage of the law, the Health Resources and Services Administration also dedicated more than \$160 million to creating nearly 250 more primary care training positions for five years. The 10% Medicare bonus for primary care physicians is for physicians who meet claims-based threshold of primary care delivery. The thresholds for the incentive payment in the law would have excluded the majority of rural physicians, due to their expanded scope of practice, but a regulatory change now includes a majority of them.

These reforms are important to expanding primary care but may not be sufficient given the potent pressures for health care trainees to pursue other professional paths. There are many cultural, educational, and lifestyle factors that make primary care less desirable, but the growing gap between primary care income and that of nonprimary care specialties is probably the most potent, reducing the odds of a medical student entering primary care by half.¹³ Currently, primary care physicians' income is approximately 55% of that of nonprimary care specialists. Research done for the U.S. Council on Graduate Medical Education suggests that this would need to rise to at least 70% (and perhaps 80-85%) in order to change the trend in primary care production from 22% to 40% of medical trainees.¹⁴ The PPACA calls for review of payment equity for primary care, and the Secretary of Health and Human Services has commissioned a study of how current payment systems might improve payment equity – and of alternatives. The Medicare Payment Advisory Committee (Medpac), a payment advisory body to the U.S. Congress, and the Centers of Medicare & Medicaid Services area also reviewing options. The

upshot is that even in a time of fiscal austerity, there is active effort to make primary care a more prominent feature of the U.S. health care system.

Emerging Models of Care

The US lacks key health system features of other countries, many of which have demonstrably better population health outcomes. One is that the primary care is not as foundational. Primary care is not the majority of the health care workforce as elsewhere in the world. It is much more relatively underpaid, underinvested, and generally undervalued. Canada recently found itself slipping toward similar primary care problems in the US and made major changes to primary care workforce, relative income, and infrastructure investments.¹⁵ Denmark has made remarkable strides in reducing unnecessary health care utilization, largely through improving its primary care systems, to the point that they have been able to reduce the number of hospitals from 97 in 1987 to 40 in 2010.¹⁶ Primary care practices are privately owned in both countries.

A second problem is that access to primary care is not universal as in most other developed countries, and that there are significant problems with underinsurance as well. Both barriers to timely care affect receipt of preventive services and of adequate chronic care.¹⁷

A third is that the US long ago created a schism between primary care and public health that, among other things, means that we largely fail at population health management. Lack of universal access, disruptive insurance coverage changes, or any rational service area planning mean that there is no assigned accountability for populations of patients-- at least not in a way that allows a health care entity to monitor and track health care and outcomes for their patients. There are exceptions, most notably integrated delivery systems such as Geisinger and Group Health. In the UK, Primary Care Trusts fulfill this function until recently, and Australia recently modeled this regional population management scheme with the creation of 'Medicare Locals'.¹⁸

There are certainly other differences between our health system and others that explain some of the variation in US health outcomes compared to other countries, but these three are among the most important.

The PPACA offers some hope in moving the US health care system in some key ways that begin to model some of these international lessons. We already mentioned expansion of health insurance, although underinsurance will likely remain a problem. There are also some important steps towards improving primary care payment and access expansion, also discussed above. Another important element is improving primary care infrastructure and creating entities that have accountability for identified populations of people. The first opportunity builds on a movement toward transforming primary care practices into patient-centered medical homes (PCMHs).¹⁹ Hallmarks of the PCMH including providing access to care on the patient's time frame, and managing chronic disease and populations^{20 21}, an information system that supports care and helps monitor quality²², teams of individuals to support coordination of care and links to community resources²³, and a multidisciplinary team that delivers and continually improves care.²⁴ The second is a more recent construct, the accountable care organization (ACO).²⁵ ACOs are suggested to increase accountability by focusing on patient panels and managing the quality and costs of care for a defined group. The PCMH and ACO are uniquely different entities but closely related. The US Medicare Payment Advisory Committee regards medical homes as building

blocks of effective ACOs.²⁶ The PPACA launches demonstrations of both and allows them to be combined.

The success of these two models will depend on a strong primary care foundation newly enabled to link population health and the tenets of patient-centeredness, as recommended by the Institute of Medicine.²⁷

Conclusion

The US has a large, interdisciplinary primary care workforce that suffers from recent reductions in young trainees choosing primary care careers, and from an intransigent maldistribution. Health reform allows small but important steps towards reversing a decade of erosion of its primary care workforce production. The size of these steps, particularly in re-valuing primary care and lack of investment in primary care infrastructure, and length of the US training pipeline suggest that the US will suffer a prolonged primary care shortage that will soon be worsened by a large number of newly insured people. The Affordable Care Act's provisions of more universal insurance and access points for care should help reduce our health care disparities relative to other countries. Development of new models of care and population accountability are also important for raising overall health status. These reforms will also be key to reducing the large and growing economic burden that the health care system is for the US, but it remains to be seen if the initial investments needed to reduce long-term costs will be politically palatable, or if slowing of this important engine of the US economy will be tolerated.

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