



# Primary Care *for the* 21<sup>st</sup> Century

*Ensuring a Quality,  
Physician-led Team  
for Every Patient*

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AMERICAN ACADEMY OF  
FAMILY PHYSICIANS  

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STRONG MEDICINE FOR AMERICA



# Executive Summary



The United States is adopting a new model of primary care built around patients and delivered by teams. As a key element of this approach, primary care medical practices are being called upon to do more, and to do it better, while managing resources ever more wisely. This approach is generally known as the patient-centered medical home (PCMH).<sup>1</sup> It has proven to increase quality of care for the patient and cost-effectiveness for the health care system.<sup>2</sup>

Within a medical home, each patient has an ongoing relationship with a personal physician trained to provide first contact, complex diagnosis, and continuous, comprehensive care. The personal physician leads a team of professionals at the practice level who are collectively responsible for the ongoing care of patients—many of whom are living with one or more chronic conditions. This reorganization puts primary care at the center of the patient's team and better enables doctors, nurse practitioners (NPs), physician assistants, nurses, and other health care professionals to work side by side in caring for patients.



Yet even as the role and complexity of primary care practice expands, there has been a significant amount of discussion within the health care and public policy communities about advanced practice nurses directing primary care practices on their own, without a physician on staff. This effort to have nurses practice

independent of physicians comes at the very same moment that medical practice itself is changing to an integrated, team-based approach that includes physicians and other health professionals. These two approaches take the country and our health care system in opposite and conflicting directions.

The rationale behind most proposals to allow nurse practitioners to practice independently is that the nation is facing a primary care physician shortage. This is true. But substituting NPs for doctors cannot be the answer. Nurse practitioners are not doctors, and responsible leaders of nursing acknowledge this fact. Dr. Kathleen Potempa, the dean of the University of Michigan School of Nursing and president of the American Association of Colleges of Nursing told the *New York Times* that, “Nurses are very proud of the fact that they’re nurses, and if nurses had wanted to be doctors, they would have gone to medical school.”<sup>3</sup> Dr. Potempa is right—nurse practitioners do not have the substance of doctor training or the length of clinical experience required to be doctors.<sup>4</sup> For example, for licensure, NPs receive only 5.5-7 years of education compared with 11 years for a physician.<sup>5</sup> The clinical experience that NPs receive within that education is only one-fifth of the clinical experience a physician receives.<sup>6</sup>

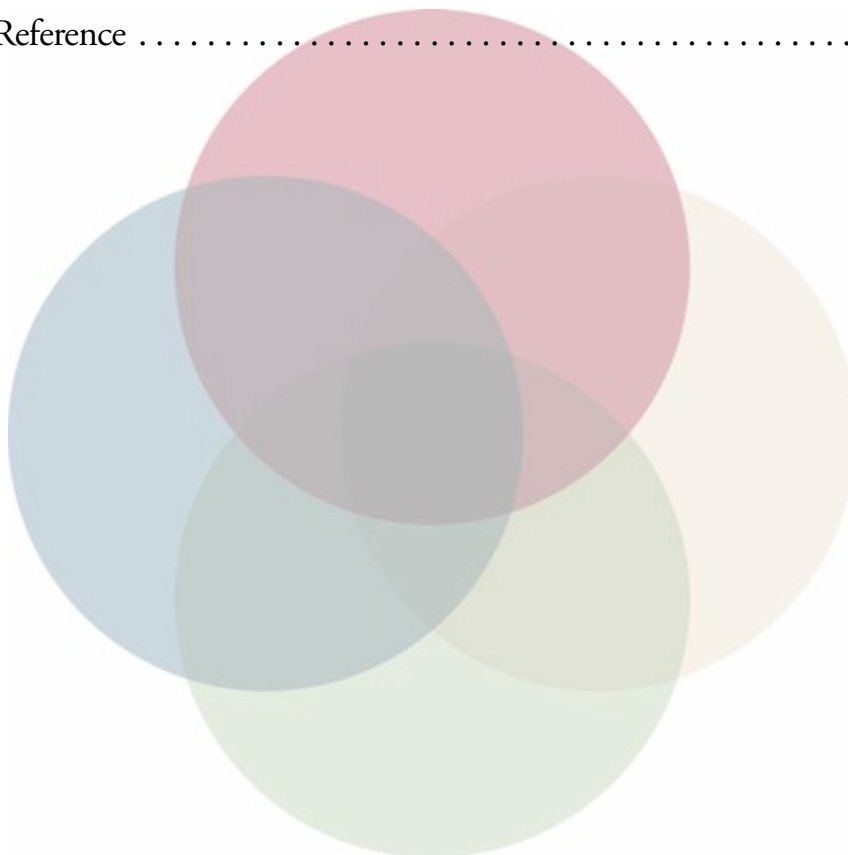


### *Patient-Centered Medical Home*

The nation can fill the primary care gap through the continuing transition to team-based care in medical homes, with all health professionals playing valuable and appropriate roles. Studies show the ideal practice ratio of NPs to physicians is approximately 4-to-1.<sup>7</sup> With PCMHs built around that ratio, everyone can have a primary care doctor and receive the benefits of team-based care. The American Academy of Family Physicians believes it is axiomatic that every American *should* have a primary care physician and benefit from care provided in a PCMH where team-based care leads to improved quality and cost efficiency.

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# Our Primary Care System is Changing



Health care as Americans know it is undergoing fundamental change. This change is not just in public policy, in covering more of the uninsured, in technology, or in the health care profession—it is in the *delivery* of care and in the role of the patient. The United States is moving toward a patient-centered model of care, which is proven to increase quality and cost-effectiveness.<sup>8</sup> This model is anchored by the patient-centered medical home (PCMH), in which patients have a relationship with a primary care physician-led team who manages their care. Through this approach, an integrated team of professionals and support staff provides care in a practice organized around the patient.<sup>9</sup> In turn, patients have access to personalized, coordinated, and comprehensive primary care when they need it, when it's convenient for them, and from the right professional—be it a doctor, nurse, physician assistant, physical therapist, dietitian, or other clinician.

**Why now?** As Dorrie Fontaine, dean of the University of Virginia's School of Nursing, recently put it: "nothing in health care is getting less complex."<sup>10</sup> For frustrated patients, members of the medical community, and payers, the change to a PCMH model is long overdue. Although the term *medical home* had been used initially by the American Academy of Pediatrics in 1967, the model of care had not been practiced broadly.<sup>11</sup> The term *medical home* was used to describe a partnership approach with families who had children with special health care needs to provide primary care that was accessible, family-centered, coordinated, comprehensive, continuous, compassionate, and culturally effective. Although this idea posed a promising concept, the partnership approach did not take root broadly in primary care practices in the United States for several decades.

**A breakthrough** for the PCMH came in 2002 when the leadership of seven national family medicine organizations, including the American Academy of Family Physicians (AAFP), recognized "growing frustration among family physicians, confusion among the public about the role of family physicians, and continuing inequities and inefficiencies in the U.S. health care system."<sup>12</sup> They

channeled this frustration into an opportunity to improve the situation and to “shape their own destinies by redesigning their model of practice.”<sup>13</sup> Together, the organizations initiated the Future of Family Medicine project, “to transform and renew the specialty of family medicine to meet the needs of people and society in a changing environment. The Future of Family Medicine project identified core values, a new model of practice, and a process for development, research, education, partnership, and change with great potential to transform the ability of family medicine to improve the health and health care of the nation.”<sup>14</sup> The proposed new model of practice had characteristics very similar to a PCMH.<sup>15</sup>

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Today, the PCMH has become a fast-growing model that is remaking health care across the country.<sup>16</sup> Successfully piloted in several locations, the PCMH model facilitates improved primary care and will likely become a reality for most Americans in some form in the next decade.

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**Today,** the PCMH has become a fast-growing model that is redesigning primary care across the country. Successfully piloted in several locations, the PCMH model facilitates improved primary care and will likely become a reality for most Americans in some form in the next decade. The Institute of Medicine (IOM) has developed a commonly accepted definition of primary care: “Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community” (IOM, 1996). The term “integrated” in the IOM definition encompasses “the provision of comprehensive, coordinated, and continuous services that provide a seamless process of care.”

**For the PCMH to become a reality,** primary care practices must provide and perform as the strong foundation where medical homes reside. Not surprisingly, many U.S. primary care practices several years ago were not immediately able to perform as a medical home. However, organizations such as the AAFP and others have spent roughly eight years working to help physicians and their teams make the change. In 2005, the AAFP created TransforMED to provide best practices, educational seminars, guidelines,



launch tips, principles, research, online courses, step-by-step explanations, training programs, and webinars. The AAFP offers family physicians and their teams the tools they need to transform their practices into medical homes. The mission of TransforMED is nothing less than the transformation of health care delivery to achieve optimal patient care, professional satisfaction, and the success of 21st century primary care practices.

# About the PCMH



**A medical home** is characterized by every patient/family having a personal physician who provides first-contact care, understands the health care needs of the patient/family, facilitates planned co-management across the lifespan, and has the resources and capacity to meet the patient/family needs.<sup>17</sup> As TransformMED CEO Dr. Terry McGeeney described it, “everything that goes on in a practice is for the benefit of the patient, and the patient is central to all activities and decisions. However, the concept goes much further than this. It implies trust, respect, shared decision making, cultural sensitivity, mindful communication in the exam room, whole-person orientation, and a continuous relationship over time. These are the strengths—the core values of family medicine.”<sup>18</sup>

**Patient-centered care** offers a full array of health care services using a team-based approach. This includes delivering care for all stages and ages of life, acute care, chronic care, behavioral and mental health care, preventive services, and end-of-life care. It also includes coordinating and/or integrating care for services not provided by the PCMH across all elements of the complex health care system (e.g., subspecialty care, hospitals, home health agencies, nursing homes) and the patient community (e.g., family, public, and private community-based services).<sup>19</sup>



## **In short, the PCMH model is a win-win for the patient because it:**

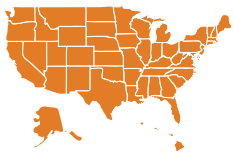
- Implements patient- and family-centered care based on the needs and preferences of patients, families, and caregivers;
- Incorporates shared decision making;
- Encourages and supports self-management and self-care techniques;
- Facilitates complete and accurate information sharing and effective communication;
- Encourages active collaboration of patients/families in the design and implementation of care delivery;
- Ensures cultural and linguistic competency among clinicians and staff; and
- Collects and acts upon patient, family, and caregiver experience and satisfaction data.<sup>20</sup>

**Bringing down the cost of care.** The cost of health care continues to be a major hurdle for our nation. While there is no silver bullet, there is growing evidence that the PCMH model—which emphasizes improved access to more robust primary care teams—can reduce total costs. A recent report by the Patient-Centered Primary Care Collaborative provides 34 examples of private insurance companies, and state and federal entities implementing the PCMH model and finding that “outcomes of better health, better care and lower costs are being achieved.”<sup>21</sup> It also found that, “major insurers are driving primary care transformation through payments for patient-centered services nationwide as a means to increase access to care, control costs, improve patient satisfaction and make Americans healthier.”<sup>22</sup> BlueCross BlueShield has tested the cost savings of the PCMH model and their first-year results showed “nearly 60 percent of eligible PCMH groups recorded lower than expected health care costs.”<sup>23</sup> The CareFirst BlueCross BlueShield president and CEO, Chet Burrell, said, “The program demonstrates to primary care providers that we recognize the critical role they can play in improving care and meaningfully reducing costs over the long term.”<sup>24</sup> In regions across the United States, outcomes from the PCMH model have shown reductions in emergency room visits, decreases in hospital admissions, and fewer total hospital inpatient days.<sup>25</sup>

**The PCMH Team.** Health professionals share a common goal of providing high-quality, patient-centered, and team-based care that improves the health status of those they serve. The reorganization of care to a PCMH model puts primary care in the center of the health care system with doctors, nurse practitioners, physician assistants, nurses, and other health care professionals working side by side to care for patients. It draws on a team and uses the specific training and strengths of each member. For example, family physicians are trained to make complex diagnoses, often when a patient presents confusing symptoms. Nurse practitioners, on the other hand, are specifically trained to follow through on the treatment of a patient after a diagnosis and to implement protocols for chronic disease management.

Leadership is required in a medical home just as it is required in businesses, governments, schools, athletics, and other organizations. Just as every American should have a primary care doctor, every medical home must have a physician serving as a leader who brings the highest level of training and preparation to guide the integrated, multi-disciplinary team. Delivering on this promise of a PCMH means it will be increasingly difficult for a health care professional to work alone. With each professional playing his or her specific role, the interdisciplinary PCMH team can deliver the highest quality care with the greatest cost-effectiveness. But a patient-centered team approach is the key.

# Meeting the Country's Need for Primary Care Physicians



There is ample evidence supporting primary care physicians as the foundation for a more efficient and effective health care system, but physician shortages are a reality. According to the Association of American Medical Colleges' projections reported in 2010, "America will face a shortage of more than 90,000 doctors in 10 years" and "there will be 45,000 too few primary care physicians" by 2020.<sup>26</sup> The shortage must be overcome with the right incentives for doctors so patients receive the quality care they deserve. Physicians are far from being the only health providers who are in high demand. Our country also needs more nurses, physician assistants, and other health care professionals. According to the American Association of Colleges of Nursing, "the U.S. nursing shortage is projected to grow to 260,000 registered nurses by 2025."<sup>27</sup>

There has been a significant amount of discussion among the health care and policy communities about expanding the roles of nurse practitioners to practice independently and direct medical homes without a physician on staff. The rationale is to cover health care needs resulting from the primary care physician shortage. The movement for nurses to treat patients without a physician comes at the same time as the medical practice itself is changing to a team-based approach. These two approaches take this country in opposite and conflicting directions. Granting independent practice to nurse practitioners would be creating two classes of care: one run by a physician-led team and one run by less-qualified health professionals. Americans should not be forced into this two-tier scenario. Everyone deserves to be under the care of a doctor.

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Substituting nurses—even advanced practice nurses—for licensed physicians cannot be the answer in a system built around medical homes.

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**Nurse practitioners** are a vital part of the health care team, but they cannot fulfill the need for a fully trained physician. A physician brings a broader and deeper expertise to the diagnosis and treatment of all health problems, ranging from strep throat to chronic obstructive pulmonary disease, from unsightly moles to cancer, from stress headaches to refractory multiple sclerosis. The family physician is trained to provide a 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.<sup>28</sup>

Today, 22 states and the District of Columbia allow nurse practitioners autonomy in diagnosis and treatment. About half of those, however, require involvement of a physician for prescribing all or certain drugs.<sup>29</sup> Some have called for removing scope-of-practice barriers for advanced practice registered nurses, or APRNs, in all states. The reality, however, is that the education and training of physicians and APRNs are substantially different, and physicians and nurses are not interchangeable. Dr. Bruce Bagley described this scenario well, saying that “with four years of medical school and three years of residency training, the physician's depth of understanding of complex medical problems cannot be equaled by lesser-trained professionals. It's in the patient's best interest for family physicians and nurse practitioners to work together.”<sup>30</sup>

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Research shows that the best care is achieved when the ratio of nurse practitioners to physicians is about 4-to-1.<sup>31</sup> At this ratio, we can provide everyone a physician-led team, and fill the primary care shortage.

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# Education & Training



Physicians and nurse practitioners complete their education and training with different types and levels of knowledge, skills, and abilities that are not equivalent but are complementary. Primary care physicians receive far more education, clinical training, and continuing medical education to ensure they are well-equipped to diagnose and manage patient care.

Many family physician practices have embraced nurse practitioners and physician assistants as physician extenders in their offices.

**Most nurse practitioners**—also known as APRNs and advanced registered nurse practitioners—typically receive their education through a one-and-a-half to three-year degree program that confers a Master of Science in Nursing (MSN), depending on the prior education of the student. Approximately 77 percent of nurse practitioners hold an MSN degree. Many of the remainder used alternate pathways available in their states to achieve nurse practitioner licensure without an advanced degree.<sup>32</sup> Typically, for entry into master's level nursing programs, students are required to at least have passed the National Council Licensure Examination for Registered Nurses and to have satisfactorily completed the Graduate Record Examination.<sup>33</sup> Eleven states and the District of Columbia do not require that nurse practitioners hold a master's degree.

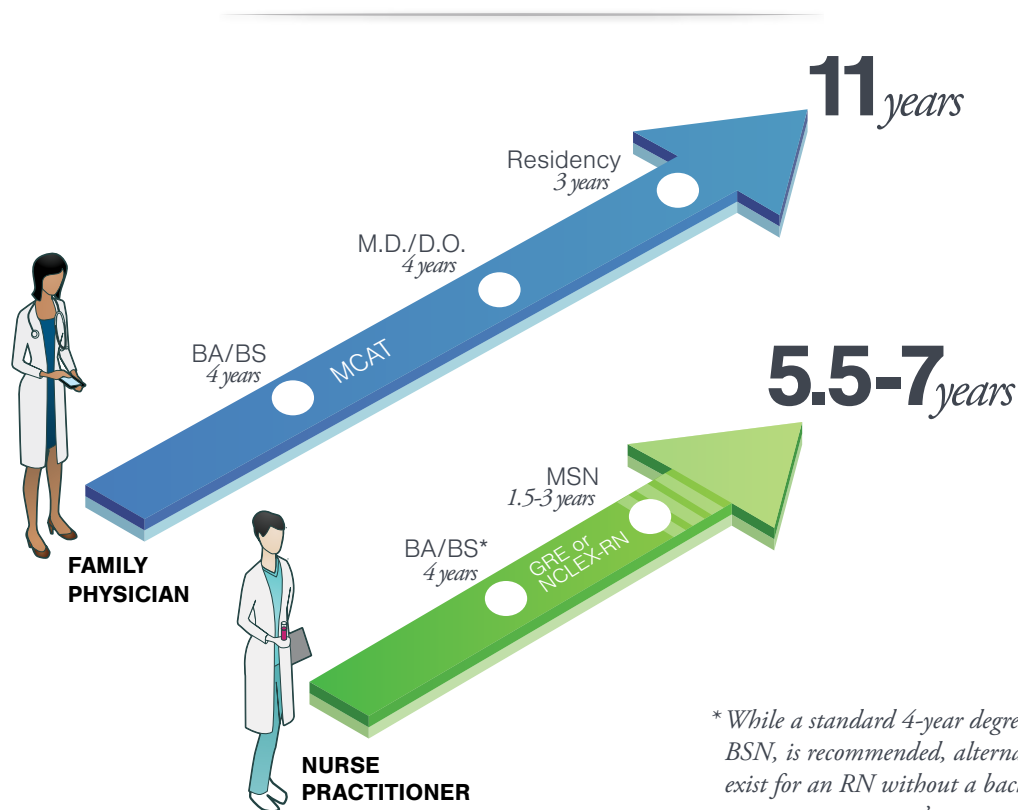
The training and certification nurse practitioners receive is appropriate for dealing with patients who need basic preventive care or treatment of straightforward acute illnesses and previously diagnosed, uncomplicated chronic conditions. But patients with complex problems, multiple diagnoses, or difficult management challenges require the expertise of primary care physicians working with a team of health care professionals.

**Family physicians** typically receive their education through a four-year graduate degree program at one of the 130 accredited medical schools in the United States and an additional three-year program of clinical residency. Students must pass the Medical College Admissions Test for entrance into medical school. Medical students spend nearly 9,000 hours in lectures, clinical study, laboratories, and direct patient care. The overall training process begins with medical school and continues through residency. During their time in

medical school, students take two “step” examinations, called the United States Medical Licensing Examination, and must take core clerkships, or periods of clinical instruction. Passing both examinations and the clerkships grants students the Medical Doctor (MD) degree, which entitles them to start full clinical training in a residency program.<sup>34</sup> Physicians can also earn a doctor of osteopathic medicine (DO) degree through colleges of osteopathic medicine.<sup>35</sup> The residency program, as defined by the American Medical Association, “is three to seven years or more of professional training under the supervision of senior physician educators. The length of residency training varies depending on the medical specialty chosen: family practice [medicine], internal medicine, and pediatrics, for example, require three years of training.”

## Degrees Required & Time to Completion.

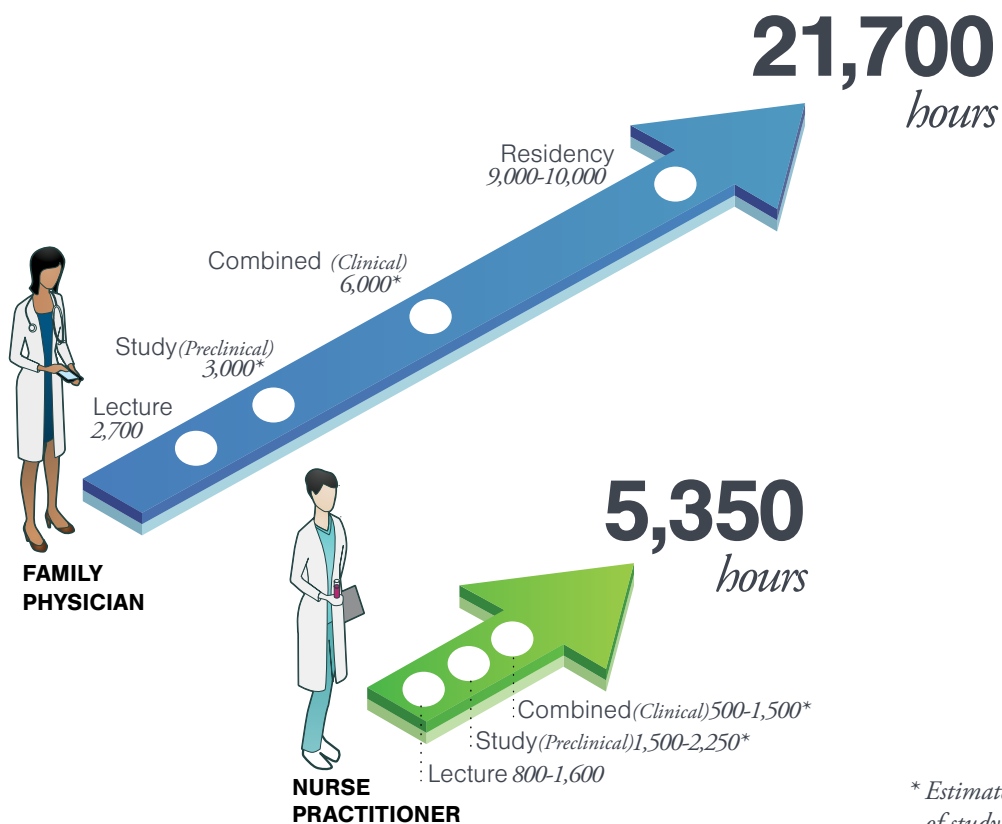
The graphic below offers a side-by-side comparison of the education required to become a family physician versus the requirements to become a nurse practitioner.





## Training & Clinical Hours Required.

The graphic below offers a side-by-side comparison of the training involved in becoming a family physician versus the requirements for becoming a nurse practitioner.



**When it comes to costs** associated with replacing physicians with nurse practitioners or nonphysicians in health care practices, a recent study titled *The Impact of Nonphysician Clinicians. Do They Improve the Quality and Cost-Effectiveness of Health Care Services?* found that “the evidence that role revision increases health care efficiency or lowers costs is weak and contradictory. Health care planners need to be alert to the possibility that, while nonphysicians cost less to employ than physicians, savings on salaries may be offset by lower productivity and less efficient use of non-staff resources.”<sup>37</sup> Utilizing all health professionals in a team approach will work for the patient and the practice. It is important to recognize that “involving nurse practitioners in a practice team and exerting their full capabilities is a promising way to expand primary care workforce.”<sup>38</sup>

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“The primary-care doctor — a category that includes family physicians, general internists and general pediatricians — has been held up as the gatekeeper in keeping people out of emergency rooms and controlling health care costs.”<sup>36</sup>

—*USA Today*

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# The Future of Care



Nurse practitioners and primary care physicians have plenty of demand for their skills. And when they join together to provide care for patients in a team setting, those skills are put to the best use.

The team approach gives the patient access to the full range of health care services without sacrificing the medical expertise that ensures the most accurate diagnoses and the most appropriate treatments in the timeliest manner. In the end, patients want to see and have access to a physician. In fact, three in five Americans say they receive the best medical care from their primary care physician.<sup>39</sup>

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The interests of patients are best served when their care is provided by a physician or through an integrated practice supervised directly by a physician.<sup>40</sup>  
We must not compromise quality for any American, and we don't have to.

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**The AAFP encourages** health professionals to work together as clinically integrated teams in the best interest of patients. Integrated practice arrangements should include a licensed physician supervising one or more nonphysician health care providers (physician assistants, advanced registered nurse practitioners, certified nurse midwives, various levels of nursing personnel, and other nonphysician providers), and possibly other physicians working as an interdependent team. The central goal of an integrated health care practice is to provide the most effective, accessible, and efficient care to the patient, based upon clinical and patient-focused outcome measures or assessments. The team member assuming lead responsibility for various aspects of patient care will ultimately be determined by matching team members' clinical competencies and skills with patient needs.<sup>41</sup> A nurse practitioner, for example, may take the lead to manage care for a patient with stable diabetes.

The PCMH represents an example of an integrated practice arrangement in which a licensed physician (MD/DO) works jointly with other health care

personnel to manage the care of an individual patient and a population of patients using an integrated approach to health care. The arrangement should support an interdependent, team-based approach to care. It should address patient needs for high-quality, accessible health care and reflect the skills, training, and abilities of each health care team member to the full extent of his or her license. The characteristics of the highest-quality PCMH include:

**Personal physician**—Each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous, and comprehensive care.

**Physician-directed medical practice**—The personal physician leads a team of individuals at the practice level who all take responsibility for the ongoing care of patients.

**Whole-person orientation**—The personal physician provides for all the patient's health care needs or takes responsibility for appropriately arranging care with other qualified professionals. This includes care for all stages of life, acute care, chronic care, preventive services, and end-of-life care.

**Care is coordinated and/or integrated across** all elements of the complex health care system (e.g., subspecialty care, hospitals, home health agencies, nursing homes) and the patient's community (e.g., family, public, and private community-based services). Care is facilitated by registries, information technology, health information exchange, and other means to ensure that patients get the indicated care when and where they need/want it, in a culturally and linguistically appropriate manner.

**Quality and safety** are hallmarks of the medical home:

- Medical practices advocate for their patients to help them attain optimal, patient-centered outcomes defined by a care-planning process that is driven by a compassionate, robust partnership between physicians, patients, and patients' families.
- Evidence-based medicine and clinical decision-support tools guide decision making.
- Physicians in the practice accept accountability for continuous quality improvement through voluntary engagement in performance measurement and improvement.

- Patients actively participate in decision making, and feedback is sought to ensure patients' expectations are met.
- Information technology is utilized appropriately to support optimal patient care, performance measurement, patient education, and enhanced communication.
- Practices go through a voluntary recognition process by an appropriate nongovernmental entity to demonstrate that they have the capabilities to provide patient-centered services consistent with the medical home model. Patients and families participate in quality-improvement activities at the practice level.

**Enhanced access** to care is available through systems such as open scheduling, expanded hours, and new options for communication between patients, their personal physicians, and practice staff.

# What It Takes to Get There



National workforce policies should ensure adequate supplies of family physicians and other health care professionals in primary care to improve access to quality care and avert anticipated shortages of primary care clinicians. Workforce policies and payment systems must recognize that *training more nurse practitioners and physician assistants neither eliminates the need nor substitutes for increasing the numbers of physicians trained to provide primary care.* Flexibility in federal and state regulation is essential to ensuring that each medical practice can determine—within a defined spectrum—the appropriate physician ratios, supervision processes, and clinical roles within the medical team.

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Americans must have access to the primary care physicians who have the medical expertise to treat 80 percent of the health care problems that people have.<sup>42</sup>

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Since 2006, the AAFP has called for physician workforce policies that can reverse this alarming physician shortage trend.<sup>43</sup> Critical investment in training and education will not only help guide health system change to achieve optimal, cost-efficient health for everyone, but it will support “the most rapidly growing sector in terms of employment through 2020.” Federal investment must support efforts to train and place the necessary primary care workforce, especially in rural and underserved areas. To meet any and all of our health care needs, the United States must:

- Increase the number of family physicians by increasing support for primary care physician education;
- Increase support for programs that help medical students pay back or defray the burden of their medical school debt so the option of a primary care medical career is truly available; and
- Improve primary care physician payment to encourage these students to consider family medicine and primary care for their careers.<sup>44</sup>

**Family physicians** and other primary care doctors provide the front door to our health care system. They are the physicians to whom patients turn for diagnosis of sometimes complex and confusing symptoms and for help navigating our health care system. We need primary care doctors in PCMHs leading teams that deliver high-quality, cost-effective 21st century primary care. Physicians offer an unmatched service to patients and without their skills, patients would receive second-tier care. We must not downgrade Americans' care by offering them nurses instead of doctors. We can fill the need by having all health professionals on the team in the right roles.

# References

- <sup>1</sup> [http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/policy/fed/jointprinciplespcmh0207.Par.0001.File.tmp/022107medicalhome.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/policy/fed/jointprinciplespcmh0207.Par.0001.File.tmp/022107medicalhome.pdf)
- <sup>2</sup> Grumbach K, Bodenheimer T, Grundy P. The Outcomes of Implementing Patient-Centered Medical Home Interventions: A Review of the Evidence on Quality, Access and Costs from Recent Prospective Evaluation Studies, August 2009. Rep. Washington, DC: 2009. Updated, November 16, 2010. <[http://www.pcpcc.net/files/pcmh\\_evidence\\_outcomes\\_2009.pdf](http://www.pcpcc.net/files/pcmh_evidence_outcomes_2009.pdf)>.
- <sup>3</sup> <http://www.nytimes.com/2011/10/02/health/policy/02docs.html?pagewanted=all>
- <sup>4</sup> Martin, Greg. "Education and Training: Family Physicians and Nurse Practitioners." Web. 12 June 2012. <[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/press/nurse-practitioners/nurse-practitioners-training.Par.0001.File.tmp/NP-Kit-FP-NP-UPDATED.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/press/nurse-practitioners/nurse-practitioners-training.Par.0001.File.tmp/NP-Kit-FP-NP-UPDATED.pdf)>.
- <sup>5</sup> Ibid
- <sup>6</sup> Ibid
- <sup>7</sup> *Investing in Health*. New York: Published for the World Bank, Oxford UP, 1993. Print.
- <sup>8</sup> "Evidence of the Effectiveness of the PCMH on Quality of Care and Cost," Patient-Centered Primary Care Collaborative. <http://www.pcpcc.net/evaluation-evidence> Web. 20 June 2012
- <sup>9</sup> <http://www.aafp.org/online/en/home/membership/initiatives/pcmh/ptexperience.html>
- <sup>10</sup> <http://www.readthehook.com/104409/nurse-practitioners-theyll-save-your-life-and-money>
- <sup>11</sup> "The Patient Centered Medical Home: History, Seven Core Features, Evidence, and Transformational Change." Robert Graham Center. Web. 12 June 2012. <[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/about/pcmh.Par.0001.File.dat/PCMH.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/about/pcmh.Par.0001.File.dat/PCMH.pdf)>.
- <sup>12</sup> Martin, James C. The Future of Family Medicine: A Collaborative Project of the Family Medicine Community. Web. 12 June 2012. <[http://www.annfammed.org/content/2/suppl\\_1/S3.full.pdf+html](http://www.annfammed.org/content/2/suppl_1/S3.full.pdf+html)>.
- <sup>13</sup> Ibid
- <sup>14</sup> Ibid
- <sup>15</sup> Ibid
- <sup>16</sup> AAFP, AAP, ACP, and AOA. Guidelines for Patient-Centered Medical Home (PCMH) Recognition and Accreditation Programs. Web. 12 June 2012. <[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/membership/pcmh/pcmhtools/pcmhguidelines.Par.0001.File.dat/GuidelinesPCMHRecognitionAccreditationPrograms.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/membership/pcmh/pcmhtools/pcmhguidelines.Par.0001.File.dat/GuidelinesPCMHRecognitionAccreditationPrograms.pdf)>.
- <sup>17</sup> Ibid
- <sup>18</sup> "Report from CEO Terry McGeeney, A House Does Not A Home Make." Web. 8 August 2012. <<http://www.transformed.com/CEOREports/AHouseDoesNotAHomeMake.cfm>>
- <sup>19</sup> AAFP, AAP, ACP, and AOA. "Guidelines for Patient-Centered Medical Home (PCMH) Recognition and Accreditation Programs." Web. 12 June 2012. <[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/membership/pcmh/pcmhtools/pcmhguidelines.Par.0001.File.dat/GuidelinesPCMHRecognitionAccreditationPrograms.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/membership/pcmh/pcmhtools/pcmhguidelines.Par.0001.File.dat/GuidelinesPCMHRecognitionAccreditationPrograms.pdf)>.
- <sup>20</sup> Ibid
- <sup>21</sup> Nielsen, M., Langner, B., Zema, C. Hacker, T., and Grundy, P. (2012, September). *Benefits of Implementing*



*the PCMH: A Review of Cost & Quality Results, 2012.*

<sup>22</sup> Ibid

<sup>23</sup> “CareFirst BlueCross BlueShield Announces First-Year Patient-Centered Medical Home Results.” CareFirst BlueCross BlueShield. Web. 12 June 2012. <[https://member.carefirst.com/wps/portal/!ut/p/c5/04\\_SB8K8xLLM9MSSzPy8xBz9CP0os3hLbzN\\_Q09LYwN\\_Z1dHA09fV09TPx8fAwMXM6B8JG55f0OKdBsR0B0Oci1eFXjQa7DK28EkTfAARwN9P088nNT9QryQyMMMj11ARBWi1g/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfOU52TzFJOTMwT0RIMTBJTThVQUhSUjEwQTY!/?WCM\\_GLOBAL\\_CONTEXT=/wcmwps/wcm/connect/content-member/carefirst/memberportal/medianews/popup/medianews20120607](https://member.carefirst.com/wps/portal/!ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3hLbzN_Q09LYwN_Z1dHA09fV09TPx8fAwMXM6B8JG55f0OKdBsR0B0Oci1eFXjQa7DK28EkTfAARwN9P088nNT9QryQyMMMj11ARBWi1g/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfOU52TzFJOTMwT0RIMTBJTThVQUhSUjEwQTY!/?WCM_GLOBAL_CONTEXT=/wcmwps/wcm/connect/content-member/carefirst/memberportal/medianews/popup/medianews20120607)>.

<sup>24</sup> Ibid

<sup>25</sup> “Proof in Practice: A Compilation of Patient Centered Medical Home Pilot and Demonstration Projects.” Web. 12 June 2012. <<http://www.pcpc.net/files/PilotGuidePip.pdf>>.

<sup>26</sup> [https://www.aamc.org/download/150584/data/physician\\_shortages\\_factsheet.pdf](https://www.aamc.org/download/150584/data/physician_shortages_factsheet.pdf)

<sup>27</sup> Buerhas, Peter I., David I. Auerbach, and Douglas O. Staiger. *The Recent Surge in Nurse Employment: Causes and Implications*. Web. 12 June 2012. <<http://content.healthaffairs.org/content/28/4/w657.abstract>>.

<sup>28</sup> “Family Physician and Nurse Practitioner Training.” American Academy of Family Physicians, n.d. Web. 12 June 2012. <[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/press/nurse-practitioners/np-training.Par.0001.File.tmp/NP\\_Info\\_FP-NPTraining-Compare-4pgs.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/press/nurse-practitioners/np-training.Par.0001.File.tmp/NP_Info_FP-NPTraining-Compare-4pgs.pdf)>.

<sup>29</sup> American College of Physicians. *Nurse Practitioners in Primary Care*. Philadelphia: American College of Physicians; 2009: Policy Monograph. (Available from American College of Physicians, 190 N. Independence Mall West, Philadelphia, PA 19106.)

<sup>30</sup> <http://www.aafp.org/fpm/1998/1000/p34.html>

<sup>31</sup> *Investing in Health*. New York: Published for the World Bank, Oxford UP, 1993. Print.

<sup>32</sup> Martin, Greg. “Education and Training: Family Physicians and Nurse Practitioners.” Web. 12 June 2012. <[http://www.aafp.org/online/etc/medialib/aafp\\_org/documents/press/nurse-practitioners/nurse-practitioners-training.Par.0001.File.tmp/NP-Kit-FP-NP-UPDATED.pdf](http://www.aafp.org/online/etc/medialib/aafp_org/documents/press/nurse-practitioners/nurse-practitioners-training.Par.0001.File.tmp/NP-Kit-FP-NP-UPDATED.pdf)>.

<sup>33</sup> Ibid

<sup>34</sup> Ibid

<sup>35</sup> <http://www.aacom.org/about/osteomed/Pages/default.aspx>

<sup>36</sup> [http://www.usatoday.com/news/health/2009-08-17-doctor-gp-shortage\\_N.htm](http://www.usatoday.com/news/health/2009-08-17-doctor-gp-shortage_N.htm)

<sup>37</sup> “The Impact of Nonphysician Clinicians.” *The Impact of Nonphysician Clinicians*. Sage Journals. Web. 12 June 2012. <[http://mcr.sagepub.com/content/66/6\\_suppl/36S](http://mcr.sagepub.com/content/66/6_suppl/36S)>.

<sup>38</sup> Liu, Nan, and Thomas D’Aunno. *The Productivity and Cost-Efficiency of Models for Involving Nurse Practitioners in Primary Care: A Perspective from Queuing Analysis*. Web. 12 June 2012. <<http://www.columbia.edu/~nl2320/doc/NP%20practice%20model-HSR%202011.pdf>>.

<sup>39</sup> “Primary Care Providers Deliver Better Patient Care.” *Primary Care Providers Deliver Better Patient Care*. Practice Fusion. Web. 12 June 2012. <[http://www.practicefusion.com/pages/pr/primary-care-providers-deliver-better-care.html?utm\\_source=prnewswire](http://www.practicefusion.com/pages/pr/primary-care-providers-deliver-better-care.html?utm_source=prnewswire)>.

<sup>40</sup> “Integrated Practice Arrangements.” — AAFP Policies. Web. 12 June 2012. <<http://www.aafp.org/online/en/home/policy/policies/i/integratedpracticearrangements.html>>.

<sup>41</sup> Ibid

<sup>42</sup> Epperly, Ted. “AAFP Statement: Recruitment Report Reconfirms Worsening Shortage of Primary Care Physicians.” American Academy of Family Physicians. Web. 12 June 2012. <<http://www.aafp.org/online/en/home/media/releases/newsreleases-statements-2009/merrithawkins-physiciansshortage.html>>.

<sup>43</sup> Ibid

<sup>44</sup> Ibid

