Purpose and Introduction

This informational hearing of the Assembly Health Committee will examine the core concepts of the patient-centered medical home (PCMH) model and evaluate how it can be appropriately utilized as a key tool in successful chronic disease management.

The Burden of Chronic Disease

Chronic illnesses are ongoing (usually lasting a year or more), generally incurable, illnesses or conditions that require continuous medical attention and affect a person’s daily life. Some of the most prevalent and costly chronic diseases include arthritis, asthma, cancer, heart disease, depression, and diabetes.

According to data from the California HealthCare Foundation (CHCF), 42% of the American population, approximately 125 million people, live with one or more chronic medical conditions. This group already accounts for more than 80% of all health care spending and is expected to increase by 25% over the next two decades. According to CHCF, hypertension, asthma, heart disease, and diabetes, in particular, present a significant public health challenge in California. According to the latest available data from a CHCF 2007 snapshot, in 2007, 36% of California adults lived with at least one chronic health condition. Hypertension is by far the most prevalent, and often leads to other conditions such as stroke and heart disease. Annual health care costs per capita for people with heart disease ($12,900) are more than five times that of the general adult population ($2,400).
Chronic illness is rarely confined to a single disease. According to a March 2009 report from the AARP Public Policy Institute entitled “Chronic Care: A Call to Action for Health Reform,” about 20% of the 50 years and older population has just one chronic condition, while about 32% has between two and four chronic illnesses. Nearly 7% of older Americans suffer from five or more chronic conditions. In addition, the AARP report points out that some chronic illnesses carry a higher risk of co-morbidity than other conditions. For example, people with congestive heart failure, kidney disease, and stroke are much more likely to have five or more other chronic conditions than people with arthritis, mental illness, or cancer. Older Americans are more likely to suffer from chronic diseases, while minorities bear a disproportionate burden of certain chronic conditions, such as high blood pressure, diabetes, and stroke, which are associated with a number of complications that can impact physiological, functional, and cognitive well-being.

Chronic illness takes a toll on many of the core functions and activities of daily life. People with chronic illness often need help performing basic activities of daily living (ADLs), such as bathing, eating, dressing, using the restroom, or getting out of bed or a chair. One-third of people with kidney disease require assistance with at least one of these ADLs. Other tasks, such as standing for extended periods, lifting, or going up steps, also become more difficult for those with chronic conditions. More than half of people with congestive heart failure, dementia, arthritis, kidney disease, or back problems have difficulty with at least one core function.

An October 2007 Milken Institute report entitled “An Unhealthy America: The Economic Burden of Chronic Disease,” found that consequences of chronic disease include increased health risks, reduced quality of life, decreased productivity at the workplace from ill employees and their caregivers who are forced either to miss work days (absenteeism) or to show up but not perform well (presenteeism); and, greater financial costs for patients and payers, e.g. Medicare, Medicaid, insurance companies, and employers. The Milken report cites 2003 data showing that the impact of lost workdays and lower employee productivity resulted in an annual economic loss in California of $106.2 billion.

THE WAGNER CHRONIC CARE MODEL

The Wagner Chronic Care Model (CCM) was developed by Dr. Ed Wagner, director of the MacColl Institute for Healthcare Innovation in Seattle, WA (Institute) to focus on improving the care of individuals with chronic illness. The CCM is considered an important framework for addressing the various deficiencies that have been identified in the health care system’s current management of chronic disease. According to the Institute, these deficiencies include rushed practitioners who do not follow established practice guidelines; lack of care coordination and active follow-up to ensure the best outcomes; and, inadequate training of patients to manage their illnesses.

The Institute states that overcoming these deficiencies will require nothing less than a transformation of health care, from a system that is essentially reactive, i.e. responding mainly when a person is sick, to one that is proactive and focused on keeping a person as healthy as possible. To speed this
transformation, Dr. Wagner created the CCM to emphasize the basic elements for improving care in health systems at the community, organization, practice, and patient levels.

Under the CCM, effective outpatient chronic illness care is characterized by productive interactions between activated patients (as well as their family and caregivers) and a prepared practice team. This care takes place in a health care system that utilizes community resources. At the level of clinical practice, six elements influence the ability to deliver effective chronic illness care: self-management support, delivery system design, decision support, clinical information systems, organizational leadership; and, community resources. The goal of the CCM is to deliver care that is safe, effective, timely, patient-centered, efficient and equitable.

The following diagram illustrates the components of the model:
The major objectives of each element of the CCM for redesigning care are discussed in more detail below.

- **Self-management support**: Empower and prepare patients (and their families) to manage their health and health care.
  - Emphasize the patient’s central role in managing their health.
  - Use effective self-management support strategies that include assessment, goal-setting, action planning, problem-solving, and follow-up.
  - Organize internal and community resources to provide ongoing self-management support to patients.

- **Delivery system design**: Assure the delivery of effective, efficient clinical care and self-management support.
  - Define roles and distribute tasks among team members.
  - Use planned interactions to support evidence-based care.
  - Provide clinical case management services for complex patients.
  - Ensure regular follow-up by the care team.
  - Give care that patients understand and that fits with their cultural background.

- **Decision support**: Promote clinical care that is consistent with scientific evidence and patient preferences.
  - Embed evidence-based guidelines into daily clinical practice.
  - Integrate specialist expertise and primary care.
  - Use proven provider education methods.
  - Share evidence-based guidelines and information with patients to encourage their participation.

- **Clinical information system**: Organize patient and population data to facilitate efficient and effective care.
  - Provide timely reminders for providers and patients.
  - Identify relevant subpopulations for proactive care.
  - Facilitate individual patient care planning.
  - Share information with patients and providers to coordinate care.
  - Monitor performance of practice team and care system.

- **Health care organization**: Create a culture, organization and mechanisms that promote safe, high quality care.
  - Visibly support improvement at all levels of the organization, beginning with the senior leader.
Promote effective improvement strategies aimed at comprehensive system change.
Encourage open and systematic handling of errors and quality problems to improve care.
Provide incentives based on quality of care.
Develop agreements that facilitate care coordination within and across organizations.

- **Community:** Mobilize community resources to meet needs of patients.
  - Encourage patients to participate in effective community programs.
  - Form partnerships with community organizations to support and develop interventions that fill gaps in needed services.
  - Advocate for policies to improve patient care.

A February 2012 report by the Commonwealth Fund entitled “Guiding Transformation: How Medical Practices Can Become Patient-Centered Medical Homes,” states that the CCM and the PCMH are complementary: one, the CCM, describes how care should be structured and delivered; while the other, the PCMH, describes what patients should expect from their health care provider and how the practice can meet those expectations. Both models emphasize the centrality of the primary care provider and patient/family relationship, and both advocate for empowering patients and their families to have a greater role in every aspect of their health and health care.

**DEFINING THE PCMH**

The medical home concept first arose in the 1960s as a way of improving care for children with special health care needs, and policy interest developed outside of pediatrics over time. According to the federal Agency for Healthcare Research and Quality (AHRQ), the PCMH holds promise as a way to improve health care by transforming how primary care is organized and delivered. A review of the research on the PCMH model by noted health services researcher, Dr. Barbara Starfield, found “International and within-nation studies indicate that a relationship with a medical home is associated with better health, on both the individual and population levels, with lower overall costs of care and with reductions in disparities in health between socially disadvantaged subpopulations and more socially advantaged populations.” Her research notes that these positive findings depend upon the patient’s identification with a particular primary care physician.

Building on the work of a large and growing community, the AHRQ defines a PCMH as the organization of primary health care that encompasses the following five core functions:

- **Comprehensive Care:** The PCMH is accountable for meeting the large majority of each patient’s physical and mental health care needs, including prevention and wellness, acute care, and chronic care. Providing comprehensive care requires a team of care providers. This team might include physicians, advanced practice nurses, physician assistants, nurses, pharmacists, nutritionists, social
workers, educators, and care coordinators. Although some medical home practices may bring together large and diverse teams of care providers to meet the needs of their patients, many others, including smaller practices, build virtual teams linking themselves and their patients to providers and services in their communities.

- **Patient-Centered:** The PCMH provides primary health care that is relationship-based with an orientation toward the whole person. Partnering with patients and their families requires understanding and respecting each patient’s unique needs, culture, values, and preferences. The medical home practice actively supports patients in learning to manage and organize their own care at the level the patient chooses. Recognizing that patients and families are core members of the care team, medical home practices ensure that they are fully informed partners in establishing care plans.

- **Coordinated Care:** The PCMH coordinates care across all elements of the broader health care system, including specialty care, hospitals, home health care, and community services and supports. Such coordination is particularly critical during transitions between sites of care, such as when patients are being discharged from the hospital. Medical home practices also excel at building clear and open communication among patients and families, the medical home, and members of the broader care team.

- **Accessible Services:** The PCMH delivers accessible services with shorter waiting times for urgent needs, enhanced in-person hours, around-the-clock telephone or electronic access to a member of the care team, and alternative methods of communication, such as email and telephone care. The medical home practice is responsive to patients’ preferences regarding access.

- **Quality and Safety:** The PCMH demonstrates a commitment to quality and quality improvement by ongoing engagement in activities, such as using evidence-based medicine and clinical decision-support tools, to guide shared decision-making with patients and families, engaging in performance measurement and improvement, measuring and responding to patient experiences and patient satisfaction, and practicing population health management. Sharing robust quality and safety data and improvement activities publicly is also an important marker of a system-level commitment to quality.

**PCMH ACCREDITATION STANDARDS**

Accreditation offers formal recognition and a stamp of approval to health care providers who successfully meet specific standards and requirements. Medical home accreditation is available from various national accreditation organizations; however, a few states have developed their own standards. While certain providers, such as community health centers, already embody many elements of the PCMH, many are seeking formal recognition as this model of care. Medical practices that participate in certain medical home pilot programs for Medicaid or Children’s Health Insurance
Program beneficiaries often qualify for enhanced reimbursement rates, or receive other financial incentives for coordinating care.

In 2007, multiple primary care organizations (American College of Physicians, American Academy of Family Physicians, American Academy of Pediatrics, and the American Osteopathic Association) agreed upon the basic elements of a PCMH. In an effort to promote the adoption of these elements, the National Center for Quality Assurance (NCQA), in consultation with the same primary care organizations, established a set of standards for achieving a PCMH. Under the NCQA, PCMH recognition is based on meeting standards that align with the following core components of primary care: enhance access and continuity; identify and manage patient populations; plan and manage care; provide self-care support and community resources; track and coordinate care; and, measure and improve performance. Additionally, practices seeking NCQA recognition must achieve a score of 50% or higher on certain criteria governing access during office hours; data for population management; referral tracking and follow-up; and, continuous quality improvement measures, among others.

Aside from the NCQA, other organizations have developed, or are in the process of developing, their own programs to recognize and/or accredit various health care organizations as a PCMH. For example, URAC, formerly known as the Utilization Review Accreditation Commission, has developed its Patient Centered Health Care Home (PCHCH) Program Toolkit to provide a framework, using self-assessment and progress tracking tools, to guide practices, health plans, demonstration programs, and other third party sponsoring organizations into becoming a fully functional PCHCH.

In July 2011, the Joint Commission launched a PCMH certification option for its accredited ambulatory care clinics. This certification option focuses on care coordination, access to care, and how effectively a primary care clinician and interdisciplinary team work in partnership with the patient or patient’s family. The Joint Commission plans to extend the PCMH certification option to accredited hospitals and critical access hospitals in 2013, and to offer a Behavioral Health Care Home certification option to organizations accredited under the behavioral health care program in 2014. According to the Joint Commission, these options will enable improvements in quality of care and patient safety that a practice achieves through accreditation to be combined with increased reimbursement through recognition of an additional 52 PCMH-specific requirements that cover five key operational areas.

The Accreditation Association for Ambulatory Health Care (AAAHC) develops standards to advance and promote patient safety, quality, and value for ambulatory health care through peer-based accreditation processes, education and research. Accreditation is awarded to organizations that are found to be in compliance with the AAAHC’s standards via a peer-based survey. An organization can be accredited as a medical home by achieving additional standards aligned with the tenets of a PCMH. The AAAHC also offers on-site certification surveys for organizations seeking medical home accreditation. Accreditation consists of a survey of practice staff, the facility, equipment, medical
procedures and coordination, and quality of care procedures. The AAAHC medical home surveys are peer-based and conducted by professionals who are experienced ambulatory health care providers.

**PCMH IMPLEMENTATION**

According to the National Conference of State Legislatures, as of January 2012, 41 states had policies to promote the medical home model for some beneficiaries of Medicaid or the Children’s Health Insurance Program. PCMH continues to evolve and not all medical homes look alike or use the same strategies to reduce costs, improve quality, and coordinate care. While the model was originally developed for pediatrics and has since been refined to serve chronically ill patients, it has also been applied in programs serving both the public and private sectors. See Appendix A for a comprehensive summary of PCMH initiatives across the country.

**Public Examples**

Community Care of North Carolina (CCNC) is one of the oldest coordinated care primary practice medical home programs in the nation. It is a public-private partnership which started as a Medicaid managed care pilot program in 1998 and, since then, has expanded to a statewide program. Today, CCNC consists of 14 local nonprofit community networks across the state. The networks, which serve more than 950,000 Medicaid enrollees, are comprised of hospitals, health and social service departments, and 1,380 practices and clinics. Medicaid pays networks $3 per member per month ($8 for beneficiaries with complex conditions such as the aged, blind, and disabled) to coordinate care and hire local case managers. Medical home providers receive $2.50 per member per month ($5 for those with complex medical conditions) to implement evidence-based patient treatment plans and provide 24/7 access.

Within each network, each CCNC enrollee is linked to a primary care provider to serve as a medical home that provides acute and preventive care, manages chronic illnesses, coordinates specialty care, and provides 24/7 on-call assistance. The network works with primary care providers and case managers to implement a wide array of disease and care management initiatives, such as providing targeted education and care coordination, implementing best practice guidelines, and monitoring results. CCNC has a built-in data monitoring and reporting mechanism to facilitate continuous quality improvement on a physician, network, and program-wide basis. Several studies have evaluated the CCNC model and identified savings and efficiencies. An analysis by the Mercer Consulting Group found that, from 2003-07, CCNC achieved savings relative to what the state would have spent under its previous primary care case management program. In 2007, estimated savings were between $135 and $149 million. However, these savings did not account for enhanced payments to participating providers and network fees. The Mercer analysis also identified greater reductions in inpatient hospital admissions and emergency room visits and higher rates of achievement on performance measures such as primary care visits and blood pressure readings.
Vermont enacted legislation in 2007 that established three integrated care pilot programs and required commercial insurers and public medical care programs to participate in the pilots. The Director of Blueprint for Health, the state’s comprehensive health reform initiative, established these medical home projects for Medicaid beneficiaries, employees enrolled in the state health plan, and those covered by the state’s health plan for the uninsured. Blueprint for Health uses an integrated health service model that has three key components: PCMHs, community health teams that support the medical homes in each community; and, health information and evaluation systems. Vermont’s three major insurers (Blue Cross-Blue Shield, MVP Health Care, and Cigna), Vermont Medicaid and the state share the cost of the community health care teams.

Intermountain Health Care is an integrated delivery system based in Utah and Idaho. It operates 22 hospitals, more than 150 clinics and is affiliated with the health insurance company Select Health. Although Intermountain has an employed physician group and health insurance plan, the majority of its care is performed by independent, community-based physicians and is paid for by government and commercial payers. Intermountain uses electronic health records to improve care for at-risk patients and those with chronic diseases. Data on cost outcomes for Intermountain indicates a 10% relative reduction in total hospitalizations, with even greater reductions among the subset of patients with complex chronic diseases. Outcomes data also show a net reduction in total costs of $640 per patient per year and $1,650 savings per patient per year among highest risk patients.

The Office of Patient Care Services within the Primary Care Program Office in the US Department of Veterans Affairs (VA) is undertaking a new initiative to implement a PCMH at all VA primary care sites. This effort is referred to as the Patient Aligned Care Team (PACT). This initiative supports the VA’s plan to redesign its health care delivery system through increasing access, coordination, communication, and continuity of care. PACT provides accessible, coordinated, comprehensive, patient-centered care, and is managed by primary care providers with the active involvement of other clinical and non-clinical staff. PACT allows patients to have a more active role in their health care and is associated with increased quality improvement, patient satisfaction, and a decrease in hospital costs due to fewer hospital visits and readmissions. The PACT program office has developed a variety of tools to assist primary care staff with the transformation process towards becoming patient-centered medical homes.

Private Examples

Private companies have also implemented the PCMH model in an effort to drive down health care costs while improving quality. IBM is one of the founders of the Patient Centered Primary Care Collaborative, a coalition of large employers and employer groups, consumer organizations, and medical providers dedicated to promoting the PCMH concept. IBM partnered with its insurer, UnitedHealth Group to pilot the PCMH model for the company. The company gave 26 doctors at seven medical groups more direct responsibility for coordinating the care of 7,000 patients. UnitedHealth also agreed to pay doctors for overall quality of care, rather than just for the services provided.
CareFirst BlueCross BlueShield developed a voluntary medical home program for its members in and around Washington, D.C. In this program, a registered nurse care coordinator, under the guidance of the primary care physician, is responsible for ongoing care coordination and leads a care coordination team comprised of nutritionists, health educators, physical therapists, pharmacists, mental health professionals, and other medical professionals. The primary care physician participating in the program receives a 12% fee increase, additional payments for developing a care plan when needed, and incentive payments tied to quality and efficiency.

In another example of private-sector leadership in developing medical homes, the Geisinger Health System in Pennsylvania operates a medical home initiative that provides 24-hour access to primary and specialty care services for 2.5 million patients who are, on average, poorer, older, and sicker than patients nationally. These medical homes provide nurse-care coordinators, care-management support, and home-based monitoring. Geisinger attracts physicians to the initiative by paying each physician a monthly amount of $1,800 in addition to stipends of $5,000 per 1,000 Medicare patients for the salaries of the additional staff needed in a medical home. Physicians are eligible to share in savings from treating patients at lower-than-expected costs, as long as certain quality metrics are met.

PCMH AND THE FEDERAL AFFORDABLE CARE ACT

The Affordable Care Act (ACA) presents several opportunities to advance the medical home concept and improve the continuum of care for people with chronic conditions and functional impairment, thereby creating and strengthening linkages between medical care and supportive services.

The ACA defines a medical home as a “model of care that includes personal physicians; whole person orientation; coordinated and integrated care; safe and high-quality care through evidence informed medicine; appropriate use of health information technology; continuous quality improvements; expanded access to care; and, payment that recognizes added value from additional components of patient-centered care.” Key provisions in the ACA that recognize alternate models of organizing care, such as the PCMH, include the following:

- Gives states the option of enrolling Medicaid beneficiaries with chronic conditions into a health home. Health homes would be composed of a team of health professionals and provide a comprehensive set of medical services, including care coordination. Provides states with 90% federal money for two years to deliver these wraparound services.

- Creates a more rapid environment to develop, test, and expand innovative payment and delivery models that improve quality while controlling costs through the establishment of the Center for Medicare and Medicaid Innovation (CMI). When considering which demonstration projects to support, the ACA directs the CMI to give greater weight to those projects that address the key
elements of person-centered care coordination, such as individualized assessment, direct engagement with patients and their caregivers, and interdisciplinary team care.

- Provides grants to develop and operate training programs; provide financial assistance to trainees and faculty; enhance faculty development in primary care and physician assistant programs; and, establish, maintain, and improve academic units in primary care. Priority is given to programs that educate students in team-based approaches to care, including the PCMH model.

**CONCLUSION**

An emphasis on encouraging providers, hospitals, and other health care stakeholders to work more closely together to better coordinate patient care through integrated goals and data sharing is at the core of the CCM and the PCMH models. Both models facilitate team-based approaches to care by giving patients a greater role in health care decision-making and aim to achieve better health outcomes at lower cost. The PCMH model is still emerging and evolving among health care practitioners, but the potential exists for implementation across a much broader community of patients, outside of pediatrics and chronic disease. While the ACA lays the foundation for a more cost-efficient and person-centered approach to care, it will take leadership and vision to get there. As policymakers, we must insist that these various system transformation projects be built with the patient, who is the ultimate stakeholder, in mind.