KAMU
Kansas Association for the Medically Underserved
The State Primary Care Association

Building Medical Homes:
A Strategy for Improving Health Care Quality, Reducing Cost, and Enhancing Access

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WHAT YOU NEED TO KNOW:

- The medical home model is an emerging concept. Medical home definitions vary, but all agree that the model is a bundle of medical practice characteristics that improve both individual patient outcomes and the health of populations.
- Medical homes not only improve patient care, but they make a positive contribution to health policy. They improve quality by assuring that the right services are provided at the right times. They reduce costs by reducing avoidable hospitalizations for many chronic conditions. And they enhance access by increasing provider availability and using patient-centered scheduling.
- Kansas safety net clinics strongly endorse the medical home model and many of them already employ practices characteristic of a medical home.
- According to a recent study, community health centers – one type of Kansas safety net clinic – "appear well positioned to inform the growing call for… 'patient-centered medical homes.'"

Three themes have dominated the nation's health policy agenda in the past few decades: access, cost and quality. Policies that influence access focus on providing services to the underserved, such as the elderly and the poor, and assuring availability of commercial health insurance. Cost containment has been a primary focus of both public and private policy initiatives since the early 1970s. Fueled by technology and increases in longevity, the United States witnessed a 15-fold increase in health care spending in the years between 1960 and 2002.[1] More recently, public attention to the quality of health services and patient safety has

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This white paper is the second in a series produced by the Kansas Association for the Medically Underserved.

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grown as several reports have concentrated on health system inefficiencies, medical errors and preventable deaths.

There is agreement that access, cost and quality are central health policy issues, but it is difficult to keep all three balls in the air at the same time. Indeed, administrators of the Oregon Health Plan once placed a sign on the wall that read: "Cost, access, quality – pick any two."[2] Many health policy experts have argued that it is difficult to focus concurrently on all three because of the interactions between them – for example, increased access drives up health care costs, but cost cutting may come at the expense of both access and quality. While these generalizations may oversimplify the relationship among the three issues, few public policies have attempted to address the three issues concurrently and systematically. Instead policies focus on one issue at a time, in seeming isolation from the others.

One humble proposal that has floated on the periphery of the policy debate for the last two decades – the promotion of medical homes – holds promise for positively addressing all three issues simultaneously by recognizing the interactions between them. It does so not through command-and-control dictates, but through a subtle – yet substantial – restructuring of medical practice.

This paper discusses the relationship of medical homes to health reform in Kansas. The first section presents the attributes and benefits of a medical home, using the policy framework of access, cost and quality. The final pages describe the use of the medical home model in the safety net clinics of Kansas.

What Is a Medical Home?

The term "medical home" is used with increased frequency in discussions of health care reform. Despite its wide use, there is not one agreed-upon definition of the term or of the set of characteristics that make a medical practice a medical home.

Still, progress has been made in forging a consensus. In March 2007, the American College of Physicians, the American Academy of Family Physicians, the American Academy of Pediatrics, and the American Osteopathic Association issued a joint statement on medical home principals. In June 2007, researchers from the Commonwealth Fund released a study in which they offered a definition of "medical home" that the Kansas Health Policy Authority is using as its working definition. By this definition, a medical home provides "primary care that is accessible, continuous, comprehensive, compassionate, and culturally effective."[3]

The Characteristics of a Medical Home

- **Accessible**
  Practice is accessible by public transportation.
  Practice is open evening and weekend hours.
  Patients can speak to a provider about a medical problem 24/7.
  Practice has adopted open-access scheduling of appointments.

- **Patient-centered**
  Practice has adopted a whole-person orientation to care delivery.
  Practice provides clear, unbiased, and complete information about health and disease that is shared with patients.
  Patients have access to their medical records.
  Patients share responsibility in decision making.
  Practice provides patient support and enabling services, such as reminders for routine preventive care, patient education, translation, and transportation.

- **Continuous**
  The same professionals are available to provide care over time.
  The practice participates in discharge planning when the patient is hospitalized.

- **Comprehensive**
  Preventive care is provided.
  Preventive, primary, and tertiary care needs are addressed.
  Patients are supported in managing their chronic conditions.
  Practice provides or arranges for providing other health services, such as oral and behavioral health.

- **Coordinated**
  A plan of care is developed by the physician and the patient and shared with other providers, agencies, organizations, and individuals involved with care of the patient.
  Care provided by multiple providers is coordinated through the medical home.
  A central record containing all pertinent health information is maintained at the practice.
  Practice arranges for referrals as needed and shares information with other providers.
  Medical home provider evaluates and interprets consultants' treatment recommendations and implements recommendations that are indicated and appropriate.

- **Culturally effective**
  The patient's cultural background (beliefs, rituals, and customs) is recognized, valued, and respected.
  All efforts are made to assure that the patient understands the results of the clinical encounter and the treatment plan.
  Translators and interpreters are available as needed.
  Written instructions are provided in the patient's primary language.

Sources: American Academy of Pediatrics, 2007[4]; Starfield and Shi, 2004[5]; *Joint Principles of the Patient-Centered Medical Home,* 2007[6]; REACH Healthcare Foundation, 2007[7]

The Multiple Dimensions of Quality[8]

Elements of quality care	Potential quality problem
People get the care they need	Underuse of care or services
People need the care they get	Overuse of care or services
Care is provided safely	Errors in care
Care is timely	Delays in care
Care is patient-centered	Unresponsive providers
Care is delivered equitably	Disparities in care
Care is delivered efficiently	Waste in care or services

While the concept of a medical home has developed over time and definitions differ in their particulars, most view medical homes as a bundle of practice characteristics that make health care safer and more effective, patient-centered, timely, efficient and equitable. (See chart on page 3.) Medical homes, like more traditional "homes," share certain attributes. They are places that are familiar, secure, accommodating, accepting, and supportive.

The central question in relation to health reform is "How do the major tenets of the medical home concept contribute to controlling health costs, improving access to services, and assuring quality?" Because quality, in many ways, is the linchpin of the health policy triad, it's a good place to start the discussion.

Quality

The most widely accepted definition of quality comes from the Institute of Medicine: Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge.[9]

To measure the quality of health care, three types of quality problems must be considered: underuse, overuse, and misuse. Underuse occurs when people do not get the care they need. Overuse results when people do not need the care they receive. And misuse happens when flaws and errors in technical and interpersonal aspects of care take place.[10]

Underuse

Preventable complications and deaths are the result of underuse. It is somewhat easier to identify overuse than underuse, because many of the individuals who suffer from underuse never enter the health care system. Nevertheless, several studies have shown that large gaps exist between the health care interventions known to improve people's health and the health care services they actually receive.[11]

One recent study estimated that American adults receive approximately one-half of recommended medical services.[12] The conditions for which patients most frequently do not receive the recommended care include diabetes, hypertension, heart attack, pneumonia and colon cancer. The prevalence of these chronic and acute conditions is high, especially among the medically underserved.

Medical homes can play a key role in reducing underuse. Three-fourths (74 percent) of patients who reported having a medical home said they receive all the care they need,

compared with 38 percent of patients who do not have a usual source of care.[13] The rate of African-American and Hispanic medical home users who say they receive all the care they need is identical to the rate of white users, suggesting that the use of medical homes may also eliminate racial and ethnic access disparities.[14]

Prevention is another hallmark of medical homes. They provide preventive services and develop plans to manage care at home more frequently than other practices do. For example, 75 percent of patients under the regular care of a doctor received a cholesterol check within the past year, compared to 51 percent of patients without a regular doctor.[15] Seventy-seven percent of adults report that their doctor gives them a plan to manage their care at home compared to only 35 percent of adult patients without a medical home.

The use of patient reminders – a key practice employed by medical homes – is related to higher rates of preventive screening. For example, 82 percent of adults who received a reminder had their cholesterol checked, compared with approximately 50 percent who did not receive a reminder. Likewise, 70 percent of men who received a reminder were screened for prostate cancer versus 37 percent who did not get a reminder.[16]

The medical home model clearly reduces the rates of underuse of health services. Increased use of disease screening and other preventive services allows for early detection and treatment, forestalling more expensive treatments and premature death. Enhanced planning for home care improves patient outcomes and fosters a greater sense of personal responsibility for one's own health.

Overuse

Examples of overuse include unnecessary or excessive use of diagnostic tests, unnecessary surgeries, and over-prescribing of prescription drugs. Receiving unnecessary services is not only wasteful, it is dangerous. Ordering unnecessary procedures and drugs often results in still more tests and procedures being ordered. Each encounter renders the patient vulnerable to harmful side effects, infections, and medical errors. Researchers at RAND estimate that patients receive services they do not need approximately 11 percent of the time.[17]

The problem of underuse can also lead to system overuse. When a patient fails to receive needed disease management and preventive services through the primary care system, overuse of hospital services can result. In 2003, researchers from the Agency for Healthcare Research and Quality measured the rate of preventable/avoidable hospital discharges. Kansas was one of the states that provided data to the study.[18]

The study calculated expected hospitalization rates for a number of conditions called ambulatory-care-sensitive conditions and compared them to the combined rates for all of the states that contributed data. (Ambulatory-

Patients with medical homes learn better prevention and self-care habits, which is especially important for controlling chronic – and potentially costly – conditions like diabetes and hypertension.

care-sensitive conditions are conditions or chronic diseases for which timely and effective ambulatory care can help avoid the need for hospitalization.)

Here is what they found in Kansas: The observed hospitalization rate for the selected conditions was 21.4 percent greater than expected in the group 0-17 years of age; 22.8 percent higher for the group 18-39 years of age; and 8.5 percent higher for those 40-64 years of age. The difference between the expected rate and the observed rate can be considered avoidable hospitalizations in Kansas.

It is important to stress that an avoidable hospitalization is *not* an unnecessary one. The hospitalizations in these cases were needed, but they could have been *prevented* by effective primary care. Because they are necessary, avoidable hospitalizations are not counted in estimates of overuse.

Underuse of the health system can lead to overuse in the form of preventable hospitalizations. In Kansas, rates for this type of overuse range from eight to 22 percent, depending on one's age group.

Having a usual source of care or medical home is one way to slow the rate of overuse of health care services. When a patient routinely sees the same provider, it is less likely that the provider will order duplicative tests and medicines that negatively interact. Because medical homes provide more preventive services and do a better job of planning for and teaching medical self-management, the rate of hospitalizations for ambulatory-care-sensitive conditions among patients with a medical home should be less.

Medical homes also coordinate the care of patients *across providers,* which reduces the likelihood that duplicate tests and unnecessary prescriptions will be ordered by other caregivers.

A community health record offers another opportunity to help control overuse of health services. Community health records give providers secure access to a patient's inpatient and outpatient comprehensive medical history at any time of day and from any location. The record can be opened anywhere in the world that has access to the Internet.[19]

Misuse

In addition to medical errors, misuse is caused by shortcomings in technical and interpersonal aspects of care delivery. Examples of misuse include preventable adverse drug interactions; failure to monitor or follow up abnormal laboratory test results; failure to provide appropriate education or information to patients; inadequate coordination of care; and insensitivity to patients' cultural

characteristics, such as language or values and norms that may influence how they think and behave.[20]

Use of electronic health record systems is critical to medical home effectiveness.[21] Electronic health records can help prevent medication errors and improve medical practice through decision-support tools. Other features assure that appropriate services are delivered, such as automated alert systems to remind providers to deliver preventive care and prompts to make sure that patients with chronic diseases receive recommended tests. Electronic health records also create reports that measure practice characteristics as the first step in a quality improvement process.

Effective communication between health care providers and patients is a central characteristic of medical homes. For patients to serve as active participants in the management of their own health, they must be provided with clear, unbiased, and complete information about health and disease. To achieve this goal, practices must become culturally competent.

Some practices have greater need for culturally appropriate services because their communities are home to immigrants and refugees from many different countries and diverse cultures. At a minimum, medical homes provide translation services and written instructions in a variety of languages. Medical home staff members also should participate in cultural competency training programs. These communication efforts lessen the probability that errors will occur as the result of miscommunication.

Per-Person Health Care Expenditures Rise Exponentially with Age (2000 data)[22]

Age of Patient	Average Annual Per-person Expenditures
0 to 17	$1,367
18 to 64	$2,016
65 to 74	$5,397
85+	$6,209

Cost

Many of the quality problems of the health care system, such as waste, errors, overuse, and disparities, contribute substantially to the cost of health services. But the primary drivers of health care cost inflation – both individually and in the aggregate – are demographic changes and increased use of medical technologies and prescription drugs.

Between the census-taking years of 1990 and 2000, the number of Americans age 65 or over increased

Problems with access affect low-income and uninsured people disproportionately. Medical homes have certain features specifically intended to improve access to care.

by 12 percent, a rate of increase about equal to other age cohorts. But the composition of the over-65 group changed dramatically: Americans age 85 and over represent the fastest growing age group in the population. Between 1990 and 2000 this population grew by 38 percent. The growth in this group has profound implications for health care costs, because spending for those over 85 is approximately three times the average per-capita expenditure.[23]

Another source of rising health care costs is the increasing use of advanced technologies, such as diagnostic imaging technologies and new surgical techniques. New technologies typically cost more than those they are intended to replace as manufacturers attempt to recoup the costs of research, development, and marketing associated with the introduction of new products. New technologies proliferate as providers race to offer new services to their patients in increasingly competitive marketplaces.

As in the case of equipment, manufacturers who bring new drugs to the market attempt to recover the costs of research and development. Since the mid-1980s, drug spending has risen annually at double-digit rates. Since the introduction of direct-to-consumer advertising of prescription drugs in 1997, approximately 80 percent of the annual increase in the cost of prescription drugs is due to increased use, with only 20 percent due to price increases.[24]

Clearly, the medical home concept can do nothing to change demographic trends. It is just as clear that many members of society benefit from new technologies and prescription drugs. However, cost and quality problems occur when new technologies and drugs are overused.

As stated previously, through improved coordination, medical homes reduce the overuse of health services both within a practice and across practices. Reduced use of services lowers health system costs. Medical homes – by making better use of preventive services and self-management – also help reduce costs by reducing the number of preventable hospitalizations. While expansion of preventive services requires certain expenditures, these investments help avoid future – and often higher – costs.

Access

"Access" refers to an individual's ability to obtain needed health care services. Access may be limited by a variety of barriers, including poverty, distance to providers, lack of available professionals, discrimination, and language difficulties. Most people with health insurance have access to health services, which is why efforts to improve access often focus on providing or improving health coverage.[25]

Problems with access affect low-income and uninsured people disproportionately. An estimated

901,060 Kansans – 34 percent of the population – have incomes at or below 200 percent of poverty. This is the group that is at greatest risk of not having health insurance or, if they have it, of not being able to consistently afford the monthly premiums and other out-of-pocket expenses. As argued earlier, improving quality of care will reduce costs. If some of these cost savings are invested in improving access to services, costs may be reduced even further.

Certain features of the medical home model are specifically intended to improve individual access to care. For example, having a medical practice open during evening and weekend hours allows patients to access health services without taking time off from work. Medical homes arrange to have practitioners available by telephone around-the-clock to answer questions patients have about their health.

Medical homes also feature open-access scheduling, which lets patients see a doctor on the same day they make an appointment. This prompt treatment can forestall a serious health issue and may break the chain of transmission of a communicable disease through a family or a workplace.

By themselves, medical homes will not solve the problems of health care quality, cost, and access. But they do make a sizable contribution to improving each of these problems with a relatively small investment in systems improvement and an adjustment in medical practice philosophy.

Unfortunately, most insurers do not explicitly recognize the contributions medical homes make to increasing quality and reducing costs. The benefits of medical homes should be properly rewarded through pay-for-performance programs and other payment plans that recognize the value of patient-centered primary care. Despite the value of medical homes to the health care system, only 27 percent of adults report having a medical home.[26]

Clearly, there is room for improvement, and the potential return on investment suggests that promotion of the medical home model is a policy option whose time has arrived.

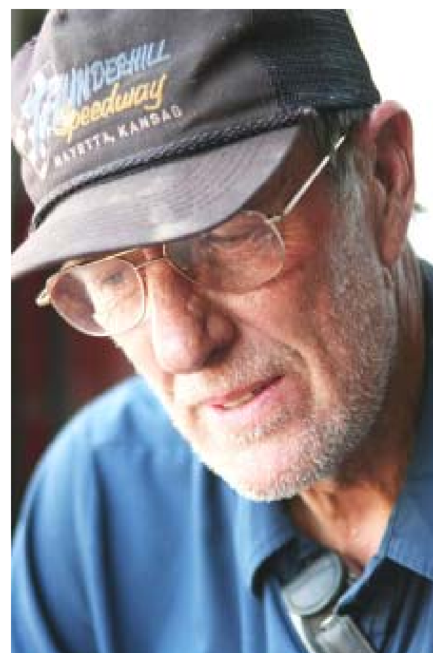
Safety Net Clinics and Medical Homes

The safety net clinics of Kansas are a diverse group. They are large and small; some provide a complete range of ambulatory services and some concentrate on a single health service or sub-population; some are community-based and others are faith-based. The Kansas Association for the Medically Underserved brings them together under one roof. KAMU's mission is to provide affordable, accessible primary care to the underserved.

The medically underserved are those Kansans who are uninsured or underinsured, typically the population who earn less than 200 percent of federal poverty guidelines.

Ninety-two percent of the patient population treated by safety net clinics in Kansas live in families

Given the potential return on investment, promotion of the medical home model is a policy option whose time has arrived.



whose income is less than 200 percent of poverty and 56 percent are uninsured. Approximately one in five patients (19.5 percent) is covered by Medicaid or HealthWave and about one in ten (10.5 percent) has Medicare coverage. Only 13 percent of patients seen in Kansas safety net clinics have private health insurance, and some of them may not be able to afford their deductibles and co-payments.

KAMU has endorsed the concept of a medical home as a guiding vision for its member clinics, and welcomes the attention and acceptance that this model is gaining in our state. In a 2007 white paper, KAMU presented the vision of creating a "primary health care 'home' for vulnerable Kansans across the state." The primary health care home was defined as one that offers:

- Comprehensive care – the full spectrum of preventive, acute, and chronic health care.
- Integrated care – primary, oral, and behavioral health services combined to achieve better health outcomes.
- Sustained relationships – on-going and consistent care based upon personal relationships between providers and clients.

Although not all safety net clinics in Kansas can be properly called medical homes at this time, they all support the concept and are making progress toward becoming medical homes. They all possess some of the practice characteristics of medical homes that are outlined in the chart on page 3.

The federally funded community health centers (CHCs) in particular are well on their way. According to a recent report from the Center for Studying Health System Change, CHCs are in the vanguard of adopting the medical home model:

> CHCs appear well positioned to inform the growing call for renewed emphasis on "patient-centered medical homes." CHCs have established team-based care models that others could examine and emulate, and their progress in recent years in service expansions, infrastructure development and quality improvement initiatives underscores the potential yield from investing in such arrangements.[27]

Types of Safety Net Clinics

- **Community Health Centers,** also known as Federally Qualified Health Centers (FQHCs), are non-profit, consumer-directed health corporations that provide comprehensive primary and preventive health care services. Health centers accept all forms of insurance and provide reduced-fee care to uninsured individuals, but are required by law to see all individuals regardless of their ability to pay. Health centers receive a grant from the U.S. Public Health Service.

- **Primary Care Clinics** were once referred to as Indigent Clinics because they exist to provide services to the medically underserved. Care is delivered by volunteers and paid staff. Some clinics provide care exclusively to low-income uninsured persons, while others accept Medicaid, Medicare and private insurance. Clinic size, hours of operation and services provided vary widely. Primary care clinics in Kansas are either faith-based or community clinics. Some receive grant funding from the state.

The community health centers in Kansas are dedicated to the medical home concept and are deeply involved in quality improvement activities. All Kansas CHCs provide enabling or supportive services to make health care more accessible. Examples include transportation and translation/interpretation services as well as other culturally appropriate services that bridge the gap in communication and improve health literacy. Health centers collect and report clinical performance measures and participate in a regional Health Disparities Collaborative that emphasizes quality improvement approaches developed by the Institute for Health Care Improvement.

Because the population the safety net clinics serve is low-income individuals with a higher prevalence of chronic conditions, there is great potential to achieve a substantial return on investment for any funds contributed to enhancing safety net infrastructure. According to the President of the Commonwealth Fund:

> Providing support to community health centers and other safety net providers to acquire and use health information technologies and become medical homes could make an enormous difference in addressing health disparities among the most vulnerable populations.[28]

The member clinics of KAMU are proud of the leadership they have provided in advancing the medical home concept in Kansas. Our patients clearly benefit from quality enhancements that emerge from this model, such as timely and effective preventive care and chronic disease management. Because of operating efficiencies – patient scheduling improvements, broader use of information technology, and better coordination of care – the costs of providing care are more effectively controlled. These savings are reinvested by the clinics in the safety net system, enabling them to serve more patients.

The medical home model is a low-cost strategy for confronting the quality-cost-access dilemma that has plagued health care and health policy for over forty years. It is good for patients and for medical practice, and it is good public policy – a happy convergence that should be encouraged.

Support for safety net providers could make an enormous difference in addressing health disparities among the most vulnerable populations.

KAMU is dedicated to increasing access to primary health care for underserved Kansans.

Clinic photos by Mark McDonald and Edington-Spencer Photography.

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