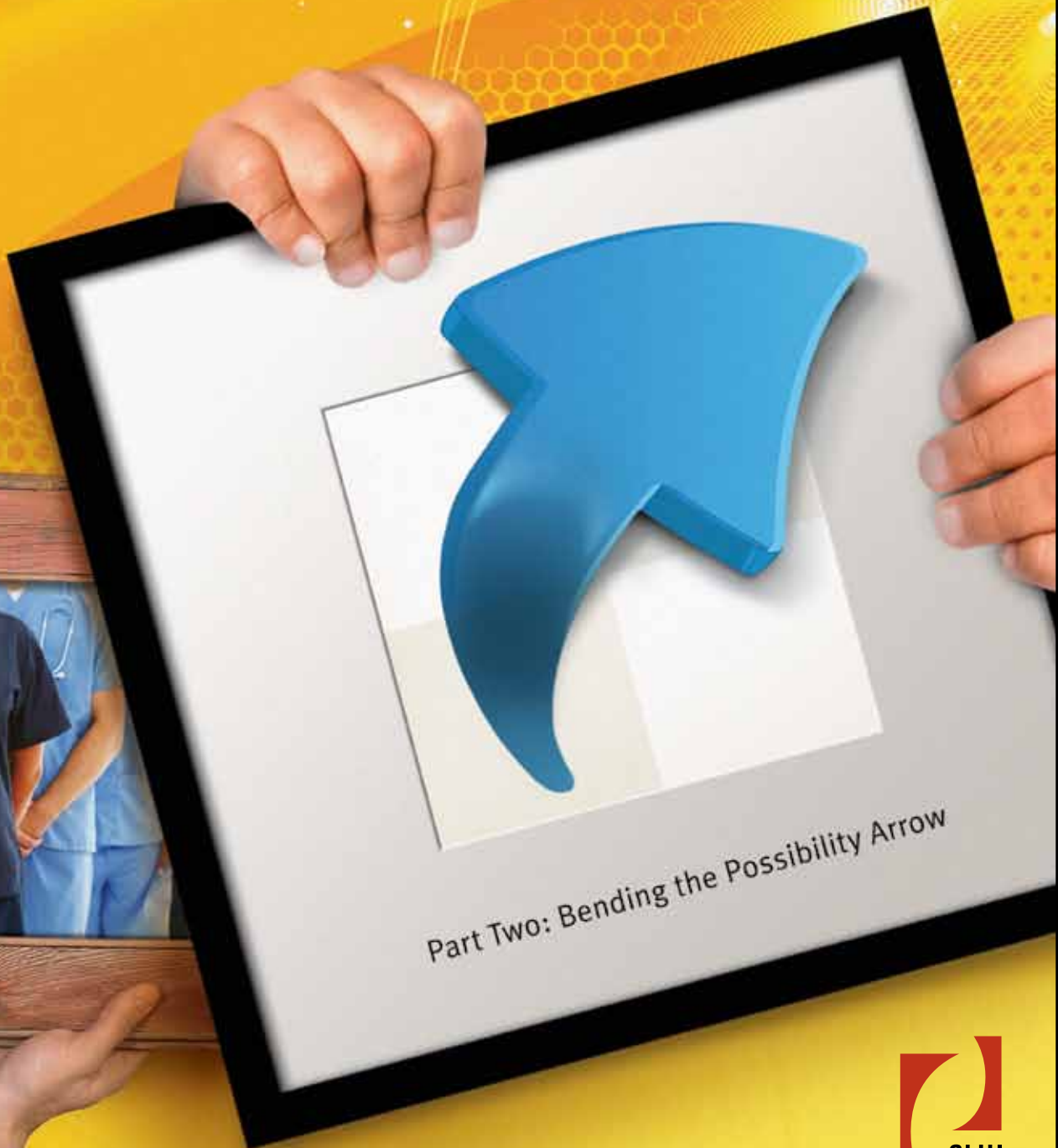


ARIZONA HEALTH FUTURES

JANUARY 2010

GOODBYE, HELLO

Framing the Future of Primary Care: An Arizona Perspective



GOODBYE, HELLO. *It's the journey metaphor of life. It's the process of change, the stories we tell one another, the attitudes, values and beliefs we hold, the lessons learned in our coming and going from one landscape to another.*

GOODBYE, HELLO. *It's a suggestive metaphor for framing the process of change in American health care, and the future of primary care in particular.*



In Part One of *Goodbye, Hello: Framing the Future of Primary Care*, we culled the research literature, feedback from eight focus groups of clinicians and consumers, and 25 interviews with various experts and stakeholders to paint a picture of the current primary care “parade” – and why practically no one thinks it is sustainable in the future.

But there is a formidable challenge to overcome. Different groups are heavily vested in parts of the larger health care system in which primary care is situated. Their professional identities and economic interests are hard-wired to these parts and how they relate to others in the same practice environment. They are motivated to protect and even expand their roles and identity. It is *others* who need to change, not them.

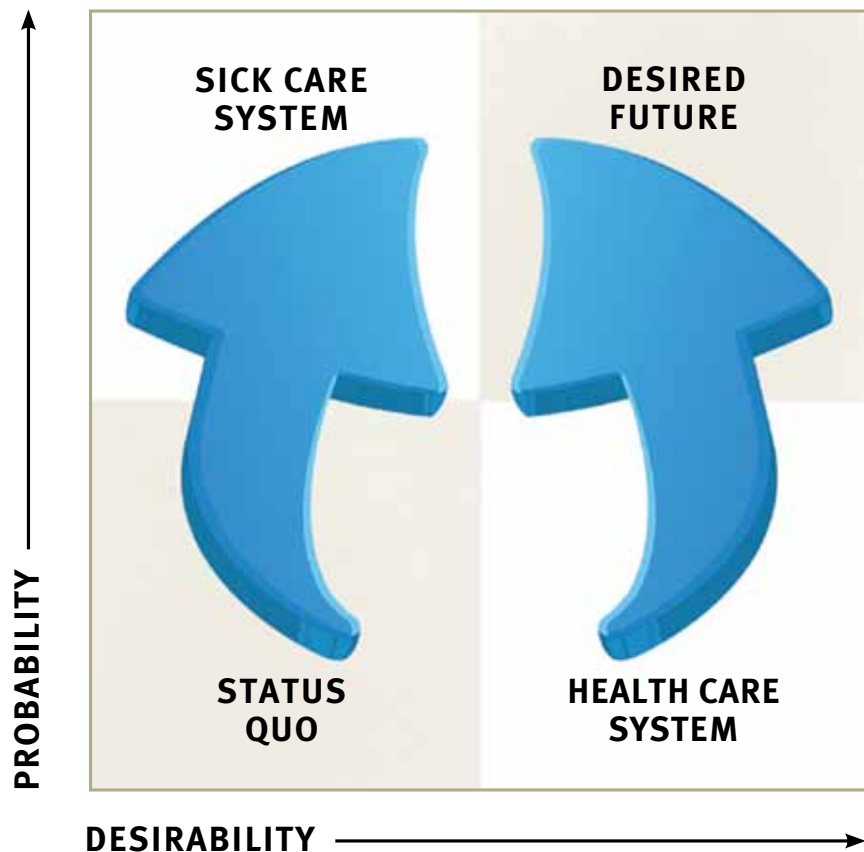
And so it goes. “Change is good: You go first.”

In Part Two of our report, we apply the results of our research to explore alternative models of primary care in the future, and where we might be headed. We conclude with sketches of the future, and how we can begin to bend the primary care possibility arrow in Arizona.

FIGURE 1 Bending the Possibility Arrow

“We have great potential. Anything we do for primary care is going to be an improvement, because we’re doing all of it wrong now.”

family medicine physician/educator



The Possibility Arrow

There are at least two ways of thinking about the future: *probability* and *desirability*.

In Figure 1 we use these descriptors to map the future of primary care into four vectors:

- **VECTOR 1** is the *status quo* of primary care. It is neither desirable nor – in the long term at least – probable, given the strong dislocating forces of economic and social conditions.
- **VECTOR 2** is America's dominant *sick care system*, which we have characterized as an expensive, fragmented, episodic, specialty-driven “non-system.” Many find it undesirable, but without major changes in the way we structure and incentivize health care today, it may well be probable for the near term. Long term, it is unsustainable.
- **VECTOR 3** is the *desired future*: a patient-centered system of affordable, coordinated, comprehensive and continuous care focused on promoting health and not just on addressing sickness. It is a system built on a strong base of holistic, evidence-based, prevention-oriented primary care; a value-based payment system, complete transparency, a strong element of personal involvement and responsibility, and a culture of continuous system improvement.
- **VECTOR 4** is the desired *health care system*, but with lower probability.

To realize our desired future, we have to bend the *possibility arrow*: link that which is desirable with that which is possible and, by our collective action, *make the possible probable*.

Bending the possibility arrow is the realm of *proactive human agency*. It's a tall order, because America's industrialized “sick care” system generates a huge revenue stream and millions of well paying jobs. Powerful interests are looking for ways to bring more people into this system, not keep them out.

Nevertheless, efforts are underway in Arizona and across the nation to create a more desirable future for American health care built on the principles and preferred strategies of primary care. In this section we highlight some of those strategies, with particular attention to the fault points in the definition of primary care noted in Part One. In our view, the future of primary care will not be any *one* thing, but is likely to include many different modes of delivery for different populations, needs and interests, as well as a diversity of care providers.

All of the strategies and models we discuss could be placed within the four vectors of the possibility arrow diagram. This would result in a variety of *strategy scattergrams*, depending on who is engaged in the exercise.

Indeed, where each of us sits colors what we would describe as a desirable future for primary care.



Emerging Models of Care

The Patient-Centered Medical Home

The patient-centered medical home (PCMH) – the latest buzzword to transform health care – is an attempt to redefine and locate primary care at the center of the healthcare system: patient-centered over time, first contact care, comprehensiveness of care and coordination of care.

Ask different individuals and groups what they think ‘medical home’ means – and *should* mean – and you’ll get different answers that underscore the fault lines in primary care:

“To me, the medical home is primary care. Taking care of the primary needs of the patient, managing and coordinating care and being the longitudinal care person.” – pediatrician

“Maybe in the medical home model we’ll be able to practice medicine like we used to.” – family medicine physician

“I think the medical home concept is really not a medical home. It’s about practicing medicine like the early 80s and before. It’s ‘be Marcus Welby’ again.” – family practice physician/educator

FIGURE 2 The Patient-Centered Medical Home (PCMH)¹

- 
- Care Coordination**
 - Specialist care is coordinated, and systems are in place to prevent errors that occur when multiple physicians are involved.
 - Follow-up and support are provided.
 - Team Care**
 - Integrated and coordinated team care depends on a free flow of communication among physicians, nurses, case managers and other health professionals.
 - Duplication of tests and procedures is avoided.
 - Patient Feedback**
 - Patients routinely provide feedback to doctors; practices take advantage of low-cost, internet-based patient surveys to learn from patients and inform treatment plans.
 - Superb Access to Care**
 - Patients can easily make appointments and select the day and time.
 - Waiting times are short.
 - Email and telephone consultations are offered.
 - Off-hour service is available.
 - Patient Engagement in Care**
 - Patients have the option of being informed and engaged partners in their care.
 - Practices provide information on treatment plans, preventive and follow-up care reminders, access to medical records, assistance with self-care, and counseling.
 - Clinical Information Systems**
 - These systems support high-quality care, practice-based learning, and quality improvement.
 - Practices maintain patient registries; monitor adherence to treatment; have easy access to lab and test results; and receive reminders, decision support, and information on recommended treatments.

“In the future, a lot of health care is going to be driven back into the home and the community. I like the medical home concept, but I wonder about the number of practitioners it will require, and whether we’ll be able to deliver that. NP-led medical homes are one solution.”

– nurse practitioner/educator

The PCMH may not be for everybody:

“A lot of people don’t necessarily want a face-to-face holistic relationship [in primary care]. The 30-somethings, for example. They want control. They want to pick and choose if and when they see a physician on their own. You can’t really create a medical home for everybody. What we’ve [commercial health plan] been trying to do is to see if there are sub-populations we can identify and create incentives for medical home development, both at the consumer level and then at the physician level. Like diabetics or Medicare patients with other chronic diseases who are more likely to benefit from that [medical home]. If you try to develop a program that has an incentive system in place for the entire population in commercial planning, it has no ROI [return on investment]. In fact, it just creates additional costs.” – health plan medical director

“I hear some physicians say that we need to take control, comments like that. And my honest reaction is that we [physicians] have never been in control, nor will we be. If there is a competitive alternative, like a convenience care clinic or urgent care clinic, that meets the needs of someone who is young, mobile, not really very sick, not really thinking about a primary care relationship, that’s where they are going to go. And it’s not going to be physicians saying, stop all of that, everybody get into the medical home.” – health plan medical director



An Arizona PCMH Pilot

Arizona is one of five states where UnitedHealthcare, in collaboration with IBM, is testing the PCMH concept.

The three-year project formally commenced in April 2009 across seven practice sites – four in Tucson, three in Phoenix – of varying sizes, including one solo physician. The practices serve about 14,000 United members (including Medicare, Medicaid and self-funded commercial). UnitedHealthcare provides practice transformation, care coordination, and infrastructure support designed to improve quality and lower costs over time for such things as hospital readmissions and ED use. In addition to traditional fee-for-service payment, physicians receive a “prospective care management” fee and a “retrospective performance bonus” that increases with meeting national standards of care.

Dr. Bob Beauchamp, UnitedHealthcare’s Medical Director, Western States Region, had these initial thoughts on the pilots:

“How do you implement a medical home model in a small practice? We’re trying to bring our [health plan] resources to the table. We have literally hundreds of nurses who are trained to do disease management, case management, who understand the concept of a patient’s readiness for change and help bring that much closer to a small practice so the physician can actually involve those people as if they were working right there in his or her office...”

“The individual who chooses to go into a small practice today probably has some reservation about using a third party, whether it’s an insurance company or something else, to do case and disease management. So that’s why this [medical home demonstration] is truly a pilot. We are testing some things and using a lot of communication with these physicians to see what works and what doesn’t...”

“One of the things we struggle with in the early stages of defining a medical home is the ability to have a list of patients with specific diseases and being able to find them. We don’t go quite so far as to say that all this has to be fully automated with an electronic medical record, but it’s clear that it would be easier, faster and more thorough to have that.”

THE ADVANCED PRIMARY CARE MODEL (APC)²

Everyone has their favorite nomenclature and twist on the patient-centered medical home. One of the latest is the Advanced Primary Care Model (APC), which “links multiple points of health delivery by utilizing a team approach with the patient at the center. The care model emphasizes prevention, health information technology, care coordination and shared decision making among patients and their providers.”

In other words, a patient-centered medical home.

Medicare is currently rolling out a Multi-Payer Advanced Primary Care Initiative to encourage state innovation across different payer and provider groups to implement the APC model. We note it to illustrate the hype and confusion surrounding the medical home concept.

Some don't like the PCMH concept at all, or else prefer a different term or approach:

“My honest opinion on the medical home concept is the same I have for No Child Left Behind or Physician Guidelines. By the time you have to have standards, you have already lost the ballgame. I am concerned that people are using the continuity of the medical home as a way to fund primary care by people who don't understand primary care, and who don't really do very much in primary care. Continuity in primary care exists in other nations where there is an infrastructure in place to do that. The United States has basically lost that infrastructure, so it [medical home concept] is a fancy term that I think is going to be used to help generate grants and funding.”

– family practice physician/educator

“It should be a patient-centered health home, not a medical home. When we talk about the future of primary care, it works best when everybody works together to promote health.” – naturopathic physician

“The accountable care organization [ACO] is a broader concept than the medical home. It may be a constellation of medical homes around a hospital, for example. So pick whatever think tank definition you like and go with it.” – health plan medical director

The medical home is not a new concept. It goes back to 1967, when the American Academy of Pediatrics defined the medical home as a way to improve care for children with special health care needs. Some assert it's simply a retread of earlier models of primary care that never took off due to physician shortages, the deteriorating economics of primary care practice and the conflation of primary care with the “gatekeeper” role in a bottom-line driven managed care environment.

Today, the concept is back in vogue and has been endorsed by multiple professional organizations, each attuned to the central role of their members – physicians, NPs, PAs, behavioral health specialists, etc. There are medical home projects underway in some 45 states, including Arizona (see box on page 5), that involve major public and private payers. Most of them revolve around family medicine and internal medicine practices, and there is a heavy emphasis on more clinically effective and economically efficient models of care:³

- For Geisinger Health System in Pennsylvania, the PCMH utilizes a team-based model of care that makes extensive use of non-physician professions like NPs and home-based monitoring technology.
- For HealthEast in the Minnesota Twin Cities, the PCMH focuses on “discharge coaches” who ease patients' transition from the inpatient to the outpatient setting, focusing in particular on medication reconciliation.
- For Group Health Cooperative in Seattle, the PCMH means more primary care physicians, smaller panel sizes and longer patient visits.



Does the PCMH Model Work in Small Practices?

All of these medical home practices have cited positive results, as measured by reduced ED utilization, fewer readmissions and higher patient satisfaction scores. All occur in large health systems with resources and health information technology (HIT) not available in most primary care settings. In less integrated, smaller settings, physicians are skeptical that an up-front investment in practice changes to implement the PCMH will continue once a practice has actually changed its behavior. They worry that having achieved change, the squeeze on payments will occur again, and expectations for what they must deliver will become another “unfunded mandate.”

There are also those who argue that expecting a solo physician or small group practice to play the role of coordinator across a continuum of care “imposes accountability for areas of care that are often beyond the coordinator’s control....Furthermore, the information, skills and perspective required to play the role of an effective advisor are not uniquely instilled in physicians.”⁴ In this perspective, responsibility for coordination and integration needs to occur at a higher level of care in a true integrated system, and not at the individual clinician level.

Nevertheless, new payment incentives for team-based care coordination and grants for HIT and the PCMH model are becoming more available. We agree with many of our informants that while the medical home model will not be a panacea for what ails the U.S. health care system, it has an important role to play, especially with specific populations and the management of chronic diseases. It will require significant changes in the way we pay clinicians and more extensive adoption of electronic health records (EHR), although technology alone is hardly sufficient for the kind of change in practice culture and infrastructure the PCMH requires.



The Virtual Health Home (VHH)⁵

The other half of the PCMH. A web-based center of integrated applications. The patient plays a more proactive role by managing *inside out*, in contrast to the clinician managing *outside in*.

- Information prescriptions sent by producers of “information therapy.”⁶
- Personal self-management and self-monitoring plans for chronic conditions.
- Individual wellness and prevention plans based on health-action commitments.
- Trusted, easily searchable consumer health information.
- Patient’s view of clinical records from multiple providers.
- Links to social networks and other online support.

In the VHH:

- Hospitals, clinics, clinician offices and others link to the VHH via electronic health information exchanges.
- Major IT companies supply innovative platform software.
- Public and private health plans guarantee that all members have a VHH as a basic core benefit.

The Advanced Health Care Home

The following assessment from an Arizona health plan director stresses three levels to the “advanced health care home.” Note the emphasis on the term ‘health,’ and not ‘medical’:

“I see three levels to the health care home. The first level is this kind of primary care gateway, the first point of contact. The second level is expanding to the social as well as behavioral health needs and the broader patient-centered, family care needs. Then the third level, the advanced health care home, is all that plus more community health needs. Our public health system has been totally taxed to do that [population, community health issues], but I would see the advanced health care homes as being part of that vanguard. But we have to pay for that. We have to reimburse for that. We have to build the infrastructure for that... because it’s not going to happen naturally.”

– health plan director

Micropractice

Some physicians are not satisfied by the focus on the PCMH, and what they characterize as its emphasis on office processes and lower emphasis on quality of care and relationships. They are promoting a process based on several national models, including the Institute for Healthcare Improvement’s Triple Aim⁷ and Wagner’s Chronic Care Model,⁸ to create a new spin on medical practice: The *micropractice*.

Early studies have been promising, especially when looking at the patient’s satisfaction with care. One of the leaders in the micropractice movement, Gordon Moore, has written extensively on his move to a one-man practice, which later expanded to include a nurse as well. The theory behind the clinic “microsystem” is that by reducing overhead and using open access scheduling, a physician can see fewer patients in higher quality interactions without the financial and time pressures that productivity-based compensation models require.

By reducing overhead, physicians can actually increase their take-home pay. They also increase their ability to spend quality time with patients and to focus on what patients want and need. Drs. Moore and John Wasson now lead the Institute for the Ideal Medical Home,⁹ which helps clinicians work through the transition to these clinical microsystems.

Micropractices ideally embody four principles:

- 1. ACCESS** Patients have unlimited access to the care and information they need, when they need it.
- 2. INTERACTION** Interaction between the patient and care team is deep and personal. The care team has “memory” of the patient.
- 3. RELIABILITY** The system exhibits high reliability by providing all and only that care known to be effective.
- 4. VITALITY** The practice has vitality: happy employees, a spirit of innovation and financial viability.¹⁰



TABLE 1 The Ideal Medical Practice¹¹

IDEAL MEDICAL PRACTICES	TYPICAL PRACTICES
Care is driven by the patient’s needs, goals and values.	Care is driven by the practice’s priorities.
Access is 24-7.	Access is 9-5.
The care team uses technology to its fullest (e.g., electronic health records, e-mail, internet scheduling).	The care team avoids new technology.
Patients can see their own physician whenever they choose.	Patients must see whoever is available.
The majority of the office visit is spent with the physician.	The majority of the office visit is spent waiting.
Overhead is low.	Overhead is high.
Patients are seen the same day they call the office.	Patients typically wait for an appointment.
Physicians are able to see fewer patients per day.	Physicians must generate high numbers of visits per day to cover overhead.
Practices measure themselves regularly.	Practices have little or no performance data.
Practices are proactive in their care of patients with chronic illnesses.	Practices are reactive in their care of patients with chronic illnesses.
Physicians are satisfied and feel in control.	Physicians feel harried and overbooked.

Although most of the literature on the micropractice model is focused on physician/small office practices, there is no reason its principles and strategies could not be employed by other clinicians as well. Some of the NPs and PAs in our focus groups worked independently in small practices, many of them in rural areas, where technologies such as the Internet and cell phones help improve their efficiency and effectiveness. Like their physician colleagues, they would like to get paid to use these technologies to coordinate and manage care.

Another View

In contrast to clinicians who prefer to work independently in small practices, a number of physicians in the focus groups thought larger, more integrated practice settings were better for primary care:

“It’s easier to do primary care in larger groups, where you have electronic health records and the resources to have labs on site, ultrasound on site, bone density on site. It’s much better and easier for everybody.” –internist

“The beauty of these large integrated systems is the fact that physicians are on salary, they know and trust one another, they work together, and they have a system in place where you can get the electronic record and see immediately what is happening now, and what happened in the past with the patient.” –pediatrician

Whether clinicians preferred the micropractice setting or large groups, they all stressed the need for electronic health records and connectivity to the Internet.

THE MICROPRACTICE LIFE

A Maine family physician in solo practice employs the micropractice model by using phone, email and even text messaging to communicate with her patients. She sees a panel of approximately 800 patients on Medicaid, Medicare and two commercial plans. She uses both open access scheduling and planned visits, and goes home to garden when she has a gap in her schedule. She began this model of care after years of working in a traditional practice model, and says “this is why I went to medical school!”

The Ambulatory Intensive Caring Unit (A-ICU)

One model currently being tested with several large employers around the country is the Ambulatory Intensive Caring Unit (A-ICU). In the words of Renaissance Health, the model's developer:

"We have developed a new model of care, called the Ambulatory Intensive Caring Unit (A-ICU), which is built to exclusively serve the 20 percent highest risk segment of patients, with multiple cost-saving innovations "baked-in" to primary care delivery and referral relationships with high-efficiency specialists, hospitals, and other non-primary care service providers. The goal of the A-ICU is to allow "high-performing," high-risk patients and clinical teams that specialize in high-risk patients to attain breakthroughs in the affordability of better health care."¹²

FIGURE 3 The A-ICU: A "Super-Model" of Primary Care¹³



The A-ICU involves explicit tiering of access to care (Figure 3) that makes extensive use of nonphysician clinicians and staff who are fully integrated into the practice with health information technology and a focus on health coaching, proactive outreach and preventive screenings. The physicians are focused on managing the team and providing direct clinical care to the most complex patients. The goal is to keep people as healthy as possible and reduce the “downstream” utilization of expensive interventions, complications and hospitalizations.

Large employers are willing to invest in “enhanced primary care” if in fact it can help to reduce costs and increase quality over time. They “want to use physician expertise efficiently and effectively, and place high value on systems management and complexity management capabilities.”¹⁴

But is the A-ICU model one in which most primary care physicians will want to practice? Do they want only to spend their time dealing with complex patients? Are they willing to give up the “down time” of simple blood pressure checks and other procedures?

Whatever the case, clearly the training of primary care clinicians is going to have to be much more focused in the future on working together in teams, which will take many different forms.

Team-Based Care

Team-based care is increasingly the model in primary care practices designed for maximum effectiveness and efficiency. The principle is to allow each member of the health care team to coordinate their work in a manner that maximizes and integrates their skills.

In the team-based care model, the assessment, knowledge and teaching are no longer the sole purview of the chief clinician. Whether the tasks are driven by practice protocols where the receptionist and medical assistant follow guidelines for gathering information relevant to the patient’s concern, or by disease management education delivered by a trained health educator or nurse, the workload is divided among members of the healthcare team.¹⁵

“The primary care practices that work best use both physicians and nurse practitioners and others like care coordinators and referral specialists. You see more people, you get better outcomes, you’re more efficient.” – hospital administrator

“The medical system needs to provide incentives for teams to provide good preventive care, good chronic care. But the problem is, it treads on the feet of the doctor as the person in charge, and that’s a tricky culture to change.” – pediatrician/educator

“Some of the older physicians don’t get the team concept, but the younger ones do. It’s a different generation.” – pediatrician

A Home Run Hitter’s Ballpark

Mountain Park Health Center, a nonprofit community-based health center with five locations in Maricopa County, is an innovator when it comes to team-based primary care.

They are integrating behavioral health with primary care by co-locating behavioral health professionals within all medical care teams. These team members may schedule several follow-up visits with patients and have the rest of their time available to work with patients seen that day by the physician. They use motivational interviewing and health education models to help with the behavioral changes necessary to achieve good outcomes in care, especially for chronic diseases like diabetes and asthma.

Mountain Park has data that document those improved outcomes. They are believers in integrating behavioral health within the primary care team. “It’s a home run hitter’s ballpark,” says Bill Rosenfeld, a psychologist with Mountain Park. “Far more people are getting better far more quickly.”



"We have good relationships with physicians. We're part of a team. We refer people to specialists, and they trust us. You have to work together. We know what we can do, and what we can't. No one does it alone." – physician assistant

One of the family medicine physicians we interviewed is planning a team-based practice expansion that will complement and enhance her ability to provide care – partnering with a clinical psychologist and a nutritionist. She wants to add someone to help advise and guide her patients on exercise and physical therapy/rehabilitation as well:

"Every day I see people who need something beyond what I can offer them one on one. It is a huge pleasure and relief to have someone available to help. I want to shift my patients to be less disease- and more wellness-focused. So I need to shift my practice to be less disease- and more wellness-focused."

– family medicine physician

Virtual Teams

One approach to team-based care is the use of electronic health records and the Internet to create "virtual" teams of clinicians working with the same group of patients. At Kaiser Permanente in Colorado, for example, virtual teams of primary care doctors, pharmacists, nurses and cardiologists use EHRs to help people with chronic heart disease stay healthy.¹⁶ Some even envision a "virtual health home" that lets patients manage their own health (see p. 7).

However, having EHRs in place is a necessary, but not sufficient, condition to creating effective virtual medical teams:

"I don't think you can necessarily create a virtual medical home [through the use of electronic health records]. The issue is community culture. Places like Indianapolis have that kind of culture. Cincinnati is moving in that direction. But other places lack the cooperation between all the various hospitals and physician groups to create that culture." – health plan medical director

Virtual teams are also possible through the use of telemedicine and remote monitoring of care:



"One of our big issues [in Indian Health Services] is access and the remoteness of many of our sites. I am very hopeful that we can get more and more involved in telemedicine. We're looking for that virtual presence. There are good examples... in the emergency room, tele-trauma activities and any number of things where the primary care doctor is able to do a lot of things but feels like he has that [specialist] expertise available when he's not familiar with certain situations, especially rare ones." – internist, IHS

“In the future we will have technology that allows for remote monitoring of individuals. So your family medicine physicians, geriatricians, pediatricians, et cetera, will become like a command center for a broader population they are monitoring remotely. We have to think of the primary care physician as that command center for a population. They are looking at the personal health needs, the mental health needs, the social service needs, and public health needs of that population.” – health plan director

Whether practicing together in physical settings or linked remotely through technology, the key to creating a functional team is to enter the process *consciously, generously, and openly*.

- **CONSCIOUSLY** create defined goals and measurable objectives for the team and agree on systems and protocols for care.
- **GENEROUSLY** recognize the skills and capabilities of all members of the team, and assign roles that maximize those skills and capabilities.
- **OPENLY** discuss what works and what doesn't in sharing care for the patient.

Group Visits

Group visits, where multiple patients share a medical appointment for routine and follow-up care for a specific condition, have proven to be effective in maximizing both patient and provider time in the primary care setting. They are more prevalent in larger, team-based practices, where patients not only have improved access to their primary care clinician, but also benefit from counseling by other team members such as behaviorists, nutritionists and health educators. Most importantly, the patients benefit from interaction with each other:

“Group visits can be good. It's been very helpful [for me] to be in a group of cancer survivors. It was like a support group, but it was really a trust, a brain trust, because most of the people in the group are active in their own disease, and we learn from each other.” – patient

Online Visits

For some physicians and patients, the world of primary care is moving online.

Targeting the “sweet spot” of the so-called “invincibles” – young, healthy people who forego expensive monthly insurance premiums in favor of paying clinicians directly and buying high-deductible policies for emergencies – technology companies are developing platforms that are part electronic health record, part practice management system, and part social networking site, complete with photos of doctors and patients, and all in a secure environment that complies with federal privacy standards.

Hello Health

One such example is Hello Health,¹⁷ one of a number of emerging primary care practice platforms that are touted as significantly reducing overhead, increasing time with patients, simplifying payment and taking advantage of all the Internet conveniences to give physicians time to do their job well. At Hello Health, patients pay a \$35 monthly subscription fee and \$100 to \$200 per hour for online or office visits. Some may pay less as physicians use more online visits to slash costs. Most email queries are free. For the doctor, the platform helps to manage time – there are lists of upcoming appointments and prescription refill requests – and to communicate with patients and other clinicians more quickly and directly.¹⁸

It is the patient's responsibility to file for insurance. Few insurers cover e-visits today, but the number is bound to increase as the technology develops and consumer interest grows. Whether Hello Health or similar practice platforms grow and prosper remains to be seen – there is a fair amount of hype in the so-called “Health 2.0” field – but it is a foregone conclusion that the Internet will figure prominently in health care design and delivery. More than a few of the clinicians we talked to believe the use of communications technology is going to drive the future of primary care, and it could well be the place where physicians – and patients – will want to be:

“I think this is an exciting time to be going into primary care. If you're a medical student and are wondering about what is going to be interesting and stimulating, and how you are going to be able to use your knowledge and all the technology, reaching people at the right place and right time with all the new things that are going to be available, then I would highly recommend it.” – internist

“Patients learn how to adapt and use a particular system, and it can work well. So I have a doctor who is alert and personable. Who is not grouchy or grumpy. It may be a different doctor each time, but you know what, they have my records, they know about me, I can see them in all these different ways. Patients' expectations are changing at the same time that the practice setting is changing. So you can be optimistic that we'll eventually find the right balance. It's an evolution.” – health plan medical director

Concierge Practices

Concierge medicine is a model of care where physicians receive a retainer in addition to their fee-for-service billing. The retainer can range anywhere from a few hundred dollars to several thousand dollars per year, and allows physicians to have a smaller panel of (paying) patients to whom they can devote more time, as well as possibly to invest in EHRs and interdisciplinary teams. An annual physical exam, some visits and ongoing online support may be included in the retainer fee. The fact that some patients are willing to pay a retainer as well as make monthly insurance premium payments is testimony to how hard it can be to find acceptable primary care, and the importance placed on a significant, continuous relationship with a provider.

“I see more docs in primary care who are leaving and setting up concierge practices, which makes perfect sense. You have more control, you can make decent money, and you can spend more time with your patients.” – internist

Concierge practices in primary care are increasing in Arizona and elsewhere across the country as more physicians feel overburdened and undercompensated in the stranglehold of public and private health plans. While they represent a rational response to a deteriorating practice environment, they in fact restrict access to care for a significant portion of the population who cannot afford to pay retainer fees, and who may have higher rates of chronic diseases and other serious health conditions than the upper strata clientele of many concierge practices.

Unless the primary care practice environment measurably improves in the near term, we can predict more interest in concierge practices, including online variations noted above. It is a strategy to increase quality, but not access, and is, therefore, problematic from a broader population health perspective.



Retail Clinics

A relatively recent development in the delivery of basic health care services has been the proliferation of health clinics in retail locations like pharmacies and grocery stores. They have grown rapidly since their introduction around 2000 – there were approximately 1,200 retail clinics in the U.S in 2008, and they are expected by some to double to 2,400 by 2013.¹⁹

This could be optimistic, given the recent unsustainability of stand-alone retail clinics without linkages to other health care tie-ins such as hospitals, pharmacies, larger “branded” clinics and workplace sites.

Staffed primarily by NPs, retail health clinics provide a relatively limited menu of common, acute medical services on a walk-in basis. According to one study, patients visiting retail clinics are younger – those between 18-44 years old accounted for 43% of retail clinic visits, compared to 23% of those visiting primary care physician offices. Only 39% of these patients said they had a primary care doctor, compared to 80% of people surveyed nationally.²⁰

Retail clinics are viewed as convenient and filling an immediate need:

“I haven’t been to a health clinic in a pharmacy, but my daughter has. She was home last Christmas and had a sinus infection, so she went to the store clinic on a Saturday and saw the nurse and got it treated. It worked fine. The nurse even called her the next Monday to see how she was.” – patient

A Dim View

Despite recent evidence that retail clinics provide services at a lower cost than alternative settings with similar (or, in the case of EDs, better) quality care,²¹ some physicians take a dim view of them, along with urgent care centers:

“The whole growth of urgent care clinics and minute clinics, where people have come to feel that need to be seen within two hours of getting sick, is a major problem. How many notes are we going to get for the patients who went to the urgent care and got antibiotics for the ear infection they didn’t have, bronchitis that they didn’t have, but they got the antibiotics anyway? It’s just unbelievably bad care.” – pediatrician

Harbingers of a Profound Shift

Others look at retail and urgent care clinics as harbingers of a more profound shift in the role of primary care in the future:

“You can see the convenience care clinics and urgent care clinics sucking off some of the really simple stuff [in primary care]. And that’s not necessarily bad. Simple things ought to be handled at the lowest level possible to be efficient and effective. But over time it starts to change what primary care practice is. Down the road, primary care practices will be pivotal to health care reform. But it’s probably going to be much more about prevention and managing chronic disease than it has been in the past. And if you start to see greater penetration for this model among all the payers, you start to see a brighter picture for primary care.” – health plan medical director

As primary care practices adapt to changes in “convenience care” by utilizing more flexible hours, open-access scheduling and five-minute “QuickSick” visits for less complex, non-acute



“Primary care has changed over the years, because fewer people have a regular primary care provider. But there’s still a go-to person for most people, and that could be a nurse practitioner in a retail clinic or whatever.”

nurse practitioner



“In the company I work for, they have us do physical fitness things. They take our weight and measures, have different menus to follow, and give us time to exercise, and if you meet the requirements, they give you back a portion of your annual [insurance] premium that you put in. So right now, I think my wife and I are up to 50 dollars this year....Last year we got back 200 dollars.”

patient

illnesses,²² we may see less growth in the retail clinic market, especially if they have to raise their rates to make the model economically sustainable. In the meantime, they represent one more “disruptive” innovation in service delivery models. They are not a substitute for meeting the health care needs of complex patients with acute and chronic diseases, but for garden variety illnesses, they could fill a niche in the primary care market.

Worksite Health and Wellness Programs

Another emerging model in primary care delivery is the growing number of large employers that are adding worksite health and wellness programs to their employees’ health benefit packages. In addition to providing education programs and financial incentives for employees to more effectively manage their own health (weight, hypertension, cholesterol, etc.), some have added on-site health clinics where employees can access basic health services without having to take hours off work. Companies find it’s a way to cut health care costs, prevent illnesses and increase employee productivity.

“We put in primary care clinics that are specifically for large employers, and they provide services for their employees and dependents. They are open three days a week and a half day on Saturday so we catch the kids. There are no co-pays, and they get their drugs administered on site for free. We do a blood-based health risk assessment, 28-test panel, and it’s focused on risk assessment, wellness and prevention. We don’t generate claims. The employer pays for all of it....and is saving between 10 and 15 percent on their medical costs per year over time. Typically these clinics start as urgent care centers, and people say, ‘I’ve got my own doctor. I’ve been seeing this doctor for 10 years.’ But then, they feel crummy. They go in – they don’t have to wait – they see a doctor, and it’s a good experience. If they have an abnormal lab, they are contacted by a health coach who says, ‘You’ve got high triglycerides; let me help you make an appointment with the doctor so you can discuss it.’ And one of my docs emailed me and said, ‘I just saw a patient who has lost 20 pounds since we’ve been open, has controlled their hypertension, and doesn’t have a knee problem anymore. I’m psyched.’” – clinic administrator

Maricopa County, which employs over 12,000 people, set up a health clinic and pharmacy earlier this year in a partnership with Walgreens’ Take Care Health Systems, a subsidiary that operates retail clinics in their stores. A NP provides basic treatment for acute, episodic conditions, and patients can get their prescriptions filled at work. Done correctly, it holds the potential to lower the County’s health care costs.

Worksite health programs are another example of basic primary, preventive and wellness care moving out into the community, and not simply remaining in the lock step of traditional medical practice settings.

Community Health Centers

We cannot list emerging models in the delivery of primary care without noting the critical importance of long-standing, federally-qualified health centers and community health centers. In Arizona, these centers operate in over 100 locations and share a core mission of improving the health of individuals and families who need primary care services, but may not have the financial resources or health insurance to pay for them.

As noted earlier, community health centers are innovators in linking behavioral and primary care services, and have been early adopters of team-based, coordinated and

integrated care. Continuing to recruit, train and place primary care clinicians in the medically underserved areas where community health centers are located is vital to the health of many Arizonans. Community health centers should figure prominently in any effort to improve access to primary care in the state.

Nurse-Managed Health Centers

A variation of primary care community health centers are nurse-managed health centers (NMHCs), which provide health services to mostly low-income, uninsured and underinsured patients. Arizona State University, in fact, created the first NMHC in the nation over 25 years ago, and currently operates five nonprofit sites in Maricopa County. There are now over 250 NMHCs in 40 states, with some 2.5 million annual patient visits.

Studies have substantiated that patients of primary care NPs have comparable outcomes to patients of primary care physicians.²³ Financing is one of the critical issues – even though over one-third of managed care companies credential NPs as primary care providers, the majority do not.²⁴ While physician and nursing organizations continue to debate scope of practice issues, the fact remains that millions of underserved people need access to basic and coordinated primary care, and NPs are among those professional clinicians who are capable of providing it. NMHCs are one important piece of the primary care service delivery puzzle. It will take everyone working together – and no one professional group alone – to meet the growing demand for basic health access.

Home-Based Care

The future of primary care is likely to include updated versions of a model that was once a dominant part of the American health care landscape: the house call.

The focus will be on providing better care and coordination to those patients with multiple chronic illnesses who are responsible for the great majority of health care costs. By maintaining the health of people in their own homes, significant cost savings can be achieved through reduced hospital days, nursing home care and related intensive interventions.

The Independence at Home Act, part of the current health care reform package that actually enjoys bipartisan support, proposes to create independence at home care teams of health care professionals directed by physicians or nurse practitioners with training in the care of complex chronically ill Medicare patients. They will coordinate an eligible beneficiary's health care across all treatment settings and provide patient-centered care coordination services in the patient's home.²⁵ The program expects to pay for itself by reducing Medicare expenditures by at least 5%.

The Veteran's Administration, whose Home-Based Primary Care Program has been in operation for 32 years, is one model. It currently exists in 130 locations across 48 states, treats 17,000 chronically ill patients, and has documented reductions in hospital stays by 62%, nursing home days by 88%, and overall costs by 24% – all with the highest patient satisfaction scores of any VA health care program. Other programs such as the Urban Medical House Call Program in Boston, the Call Doctor Medical Group in San Diego, and the Virginia Commonwealth Medical Center in Richmond have been in existence 20 years or more, and achieved similar results.²⁶

With improvements in home monitoring technology and the use of home-based tests and diagnostics by patients themselves, we predict a healthy market for home-based primary care. In the future, a robust home-based health network may include a hospital, when today a hospital network may include a home-based care component. It's a distinction with a difference as primary care moves out and across large institutional boundaries.



Emerging Payment Models

“Pay primary care doctors more, and I guarantee you’ll see more medical students go into the field.”

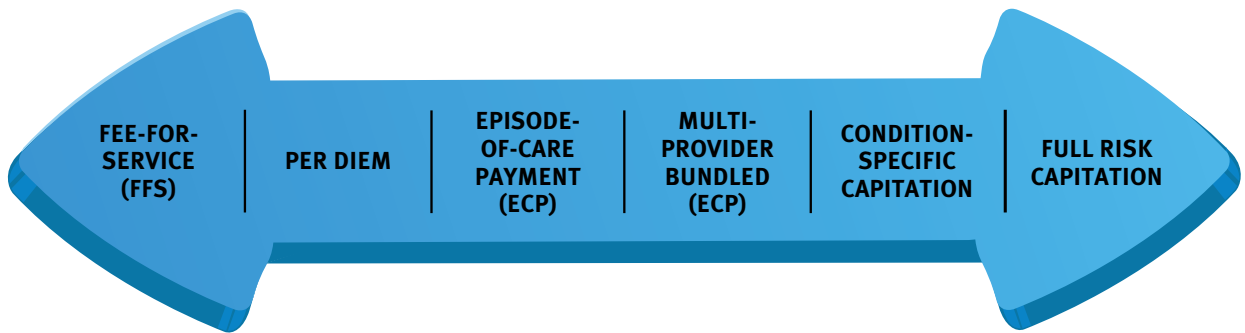
family medicine physician

As we discussed in Part One, there are significant disparities between the income of primary care physicians and those in other specialties. Many believe that until we narrow the gap between primary care and other medical specialties, we will continue to see a physician shortage in the primary care arena:

“Primary care providers would be attracted to the state if we pay them more than what Medicare reimburses them and reduce the hassle factors in practice.” – health plan director

Highly compensated specialists agree that primary care physicians should be paid more, so long as their own fees are not reduced in the process. While professional associations negotiate the politically charged minefield of payment disparity between physician specialties and the “equal pay for equal work” issue raised by NPs, efforts are underway to design and experiment with alternative payment models that avoid the flaws of traditional fee-for-service (“do too much”) and strict capitation (“do too little”) payment models, and reward quality, efficiency, care coordination and value at the same time.

FIGURE 4 The Continuum of Health Care Payment²⁷



- 1. FEE-FOR-SERVICE (FFS)** A provider is paid a fee for each specific service rendered.
- 2. PER DIEM** A provider is paid a fee for each day of care, covering all services rendered.
- 3. EPISODE-OF-CARE PAYMENT (ECP)** A provider is paid a fee for all services rendered during a single episode of care or portion of an episode of care.
- 4. MULTI-PROVIDER BUNDLED ECP PAYMENT** Two or more providers are jointly paid a fee for their combined services rendered during a single episode of care.
- 5. CONDITION-SPECIFIC CAPITATION** A fee is paid to cover all services rendered by all providers to deal with a particular condition, either on a one-time basis for short-term conditions or on a regular, periodic basis for longer-term conditions, such as chronic diseases.
- 6. CAPITATION** A regular, periodic fee is paid to cover some or all services rendered by all providers for all conditions affecting a particular patient.

Some of these models are tied to primary care and the goal of encouraging coordinated care in medical homes.²⁸ Others apply more generally across the broader health care system:

- **SUPPLEMENTAL FEE** This is the most common payment method used to encourage the development of primary care medical homes. Usually it is a per-member/per-month fee (currently in the \$3-\$6 range) for medical home services that is paid on top of existing fee-for-service payments. Many payers tie this to meeting specific standards, such as going through the National Committee for Quality Assurance (NCQA) medical home recognition process. In UnitedHealthcare’s Arizona medical home demonstration project, the supplemental fee is called a “prospective case management fee” and covers the follow-up and care coordination required for managing patients with chronic diseases.

In Medicare’s upcoming medical home demonstration project, the government will pay a normal fee-for-service plus a substantial per-member/per-month fee – approximately \$40-\$52, depending on whether the practice qualifies as a Tier 1 or Tier 2 medical home – that will be adjusted upward or downward to account for severity of illness. They expect to see savings in hospital and ED use, of which practices will also receive a share.²⁹

- **PAY FOR PERFORMANCE (P4P)³⁰** Often supplemental fees are accompanied by some form of “pay for performance” payment that is given to the practice for meeting evidence-based, quality standards of care as developed by the NCQA and other national organizations. In United Healthcare’s Arizona medical home pilots, this is a “boosted fee” called the “retrospective performance bonus” and is tied to meeting NCQA standards. In other cases, practices may share in any savings to total health care spending that can be attributed to their medical home model.

The subject of P4P payment came up in our physician focus groups, and generally was not well received:

“Pay for performance is a joke. Doctors I know could care less. It has nothing to do with how well you interact with the patient or how well you actually coordinate care or how much you do in-house versus send out. Nobody changes their practices because the direct reimbursement for it [pay for performance measures] is a pittance.” – internist/psychiatrist

- **INCREASED PAYMENT FOR DESIGNATED SERVICES/NEW SERVICE CODES** Some payers will increase payment for designated billing codes associated with improved quality and efficiency (EPSDT, immunizations, well-child care, etc.); others are developing new fee-for-service codes to pay for medical home strategies that are not included in current fee schedules (e.g., time spent in coordinating referrals, follow-up, chronic disease management, meetings with family caregivers, etc.).
- **EPISODE OF CARE PAYMENTS (ECPS)** As Figure 4 illustrates, ECPs are on one end of a continuum that ends with full-risk capitation – a term that most people in health care avoid because of its negative fallout from strict capitation managed care plans of the 90s. Terms more in vogue today include ‘bundled’ and ‘global’ payments, where some or all of the services related to the management of a patient’s chronic or acute medical condition are “bundled” together and paid for in a lump (“global”) sum. For example, all of the facility, clinician, pharmacy and follow-up chronic care disease management services might be bundled together for patients with diabetes.



Still, the downside of capitation – doing less to earn more – could still be there:

“We need to try new things like bundling payments, like when I get a global fee for a problem and then have to adjudicate who gets the physical therapy or who gets the MRI. But I’m not sure that’s really a good answer, because I would hate to think that I am going to double my income by withholding tests from patients.” – internist

In other settings, researchers refer to ECPs as “evidence-based case rates,” or ECRs. Again, this is a single, risk-adjusted, prospective (or retrospective) payment given to providers across outpatient and inpatient settings to care for a patient diagnosed with a specific condition. Payment amounts are calculated based on the resources required to provide care as recommended in accepted clinical guidelines.

A Two-Tiered System in Primary Care

Whatever the nomenclature, bundled payments for episodes of care presuppose not only a defined “episode” of care, but also a delineation of all of the team-based resources necessary to effectively treat and manage that episode, and an understanding of how – and on what basis – the payment is to be distributed across the team. This is harder to do in a primary care setting than, say, an orthopedic practice focusing on hip replacements, where the episode of care can be more precisely defined. Primary care clinicians often see the undifferentiated patient, who may need a simple protocol of care (strep throat, UTI) or, in other cases, the patient who has multiple complex, chronic diseases and requires ongoing treatment and management.

In one scenario, the use of bundled payments like ECPs might lead to a two-tier system of primary care:

- **Tier One** – the province of NPs and PAs receiving “case rate” payments for more routine conditions that can be diagnosed and treated by rule-based interventions.
- **Tier Two** – the province of primary care physicians who receive bundled payments to treat and manage the more complex chronic diseases.

Tier Two physicians would staff, say, an intensive primary care clinic focusing on the high-risk patients who consume most of the health care dollar. The bundled payment would include fees for a registered nurse care manager, a behaviorist and other team members who might be necessary to keep the patient out of the ED and expensive inpatient hospital settings. Presumably the money spent in the bundled care management program would be more than offset by the savings from fewer hospital admissions and ED use.

As it currently stands, the use of ECPs and other “bundled” alternatives to traditional fee-for-service payment is in the experimental phase, and there is insufficient evidence to determine whether they can in fact contain medical costs and encourage better care and coordination across the health care system. Still, they are suggestive of the ways primary care might be rearranged in the future to take advantage of the scope of practice of a broad range of clinicians, and redefine the role of the primary care physician as a critical – but not the only – member of a care management team.



The Emerging Technology Infrastructure

The future of primary care is destined to be hard-wired to an emerging technological infrastructure of health information exchange, data analytics and the pervasive “infosphere” of the Internet. That infrastructure has literally upended and transformed other industries, and health care will be no exception:

“Probably the biggest complaint between patients and physicians and other physicians is when they cannot get information back and forth, because we depend on medical records and faxing them, mailing them, and that is going to go away. Whether it’s 5 or 10 or 20 years, I don’t know, but we will have an electronic information exchange, and that will make a huge difference.” – internist

It’s already started in Arizona and across the nation:

“I have had an opportunity to work on a new health information exchange in Arizona for the past year, and it’s been just incredible for me to be able to look up a patient and see all of that information in one place...It enabled me to not have to repeat a bunch of labs that were already done, and I found lots of medications that the patient was taking but didn’t report to me. I mean, I have been on the staff at [name of hospital] for ten years, and I think I might have had two discharge summaries for the whole time.” – internist/psychiatrist

It’s electronic health records –

“To varying degrees there’s an electronic health record Indian Health Services uses that was essentially adapted from the VA. And I think it’s helped to integrate the care somewhat.” – family medicine physician, IHS

And telemedicine –

“Ultimately, what we’re going to see is a lot more telemedicine [in the rural areas]. Telemedicine is done best between doctor and doctor, not between a doctor in a remote site and a patient. For a primary care physician in a remote setting to be able to get subspecialty input, that’s outstanding.”

– family practice physician/educator

And other modalities and settings.

“We’re starting to give our third-year students lectures via iTunes so they can learn with the modalities they already use. And why not make iTunes or something like that be a way that people could monitor their own preventive care? I mean, do you need to have a doctor necessarily tell you what shots you’re due for?” – family practice physician/educator

In SLHI’s 2007 *Collaborate to Compete* report,³¹ we outlined the technological infrastructure and practice arrangements of a value-based health care system, where primary care plays a pivotal role. We allude to some of the examples illustrated there, with an emphasis on an emerging consumer-driven web of technologies and media interfaces that holds the potential to usher in a true patient-centric system of care.



Electronic Health Records

Emerging models of primary care all depend on a connected system of electronic health records (EHRs) and a portal to the world wide web of secure information exchange. The patient's EHR is situated in a medical trading area (MTA) – a geographical configuration of clinicians, hospitals, labs, pharmacies and other providers who work together to serve a population of patients – and then linked through the Internet to other place-based and space-based (virtual) communities providing opportunities for prevention, education and other support activities and services to optimize health.³²

The operative term here is *connected*. In Arizona:

- Approximately one in six physicians doesn't even have Internet or email in their practices. Paper files – not EHRs – are still the prevalent method of data storage. Only 28% of physicians have eliminated the use of paper medical records.
- For those using EHRs, a little more than half (54%) transmit data electronically to other parts of the health care system.
- Among solo practitioners with EHRs, only 8% utilize some type of health information exchange.
- Younger physicians are more likely to install and utilize EHRs than their older colleagues.³³

The Landscape is Changing

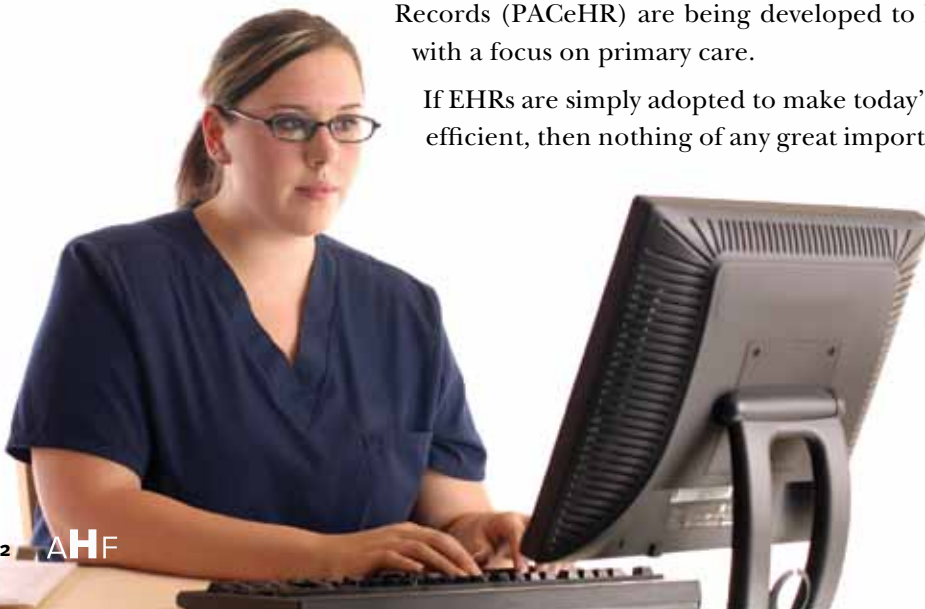
But the landscape is changing:

- Federal funding from the American Recovery and Reinvestment Act (ARRA) will be invested in Arizona and other states to leverage the use of EHRs, especially in primary care practices utilizing coordinated team-based approaches to treat and manage chronic diseases.
- Arizona state and regional health information exchanges such as the Arizona Medical Information Exchange (AMIE) and the Southern Arizona Health Information Exchange (SAHIE) are being developed, consistent with the state's Health-e Connection Roadmap developed in 2006. The state's dire budget picture may negatively impact this.
- Interoperable, web-based EHR products are coming into the market, and organizations such as the Purchasing and Assistance Collaborative for Electronic Health Records (PACeHR) are being developed to help install and support them – again with a focus on primary care.

If EHRs are simply adopted to make today's primary care workflow patterns more efficient, then nothing of any great import will be gained. It is only when practice configurations change to take maximum advantage of the EHR to integrate care across the entire health care and community health spectrum that the technology's true potential to improve health and promote wellness will be realized.

“We have the World Wide Web, and it's becoming more intelligent in its searching. It's more interactive. There is untold potential for what people might be able to do with self-management and self-care if people had the right information at the right time available to them.”

David Kibbe, MD, American Academy of Family Practice³⁴



Diagnosics, Monitoring, Algorithms and Online Connectivity

Changes in technology are beginning to shift some aspects of primary care from the clinic to the home, and from physicians to mid-level clinicians and even consumers themselves. Just as consumers today can purchase over 700 medications over-the-counter (OTC) that formerly required a prescription, so is it likely that some tests and treatments performed today by a physician will move into the OTC world and to the virtual connectivity of the Internet.

These emerging technologies fall into three categories:³⁵

- **Diagnosics, Monitoring and Treatment**

Rapid advances in technology will allow both clinicians and patients to diagnose, monitor and treat diseases in lower acuity settings, such as a clinic or home.

- Point-of-care tests for infectious and immune diseases, some cancers and other ailments are becoming available for use in the clinician's office instead of requiring external lab technicians. Reverse engineering of expensive technology in the U.S. for use in developing countries (e.g., heart monitors that cost \$1,000 instead of \$10,000, mobile imaging systems) could find their way into primary care clinicians' offices for the diagnosis, monitoring and treatment of complex chronic diseases. Other technology combines in-home patient devices with online interfaces that clinicians use to monitor and manage care remotely.
- Advances in microchips and information processing make possible accurate home tests for common ailments (UTI, strep throat), blood coagulation, cholesterol levels, blood pressure and glucose levels, etc. Online services use saliva samples to provide a person's genetic makeup and predisposition to various conditions. Patients with chronic diseases, working with clinicians, can use online and mobile phone technology to help comply with drug and treatment regimens, assess progress and determine interventions.

- **Algorithms**

Algorithms – sets of standards, protocols and treatment guidelines grounded in evidence-based medicine – are increasingly being combined with patient data to produce reliable diagnoses and treatments.

- NPs and PAs, working with physicians or independently, can treat many common ailments and conduct early triage with rule-based care.
- Online tests for psychiatric conditions such as depression or addiction are available for initial screening.
- Algorithm software tools, combined with medical knowledge databases, are available through personal computing devices such as PDAs and tablets to assist physicians and others in diagnosis and treatment options.
- Stand-alone kiosks for conditions such as urinary tract infection (UTI) and chlamydia are being used in urgent care clinics and other primary care settings.



“BrainTalk
[online patient
support groups
for neurology]
is not only much
smarter than any
single patient,
but is also
smarter, or
at least more
comprehensive,
than many
physicians –
even many
medical
specialists.”

Daniel Hoch, MD,
Harvard neurologist³⁶

• Online Search, Information and Interconnectivity

Web-based technologies are being widely used by consumers to find information about diseases and new treatments, to try new medical products and learn how to use them at home, and connect with other patients with similar conditions and interests for information, monitoring and support.

- Health web sites are among the most popular consumer destinations, with millions of people visiting *webmd.com*, *nih.gov*, *mayoclinic.com*, *revolutionhealth.com* and many other destinations for up-to-date health information.
- Sites such as *Sermo.com* provide physicians with peer clinical knowledge networks organized by specialty.
- Patients with specific diseases utilize knowledge and social support sites such as *patientslikeme.com* and *diabetesmine.com*, where they can connect with each other more conveniently than in face-to-face support groups.
- Large social networking sites like *Facebook* and *MySpace* are used by patients who seek out others with similar conditions.
- *Wikipedia*, online forums and message boards, video-sharing, blogs and live chat rooms are other platforms used by consumers and clinicians alike for sharing health-related information, knowledge, experiences and perspectives.



The Three Realms of Medicine³⁷

One “disruptive” innovation proposed to “right” America’s health care ship is to divide it into three realms:

- 1. PRECISION MEDICINE** Care for diseases that can be diagnosed precisely and for which treatments are predictably effective through algorithm-driven interventions. In primary care, these are things like strep throat, UTIs, and other common ailments.
- 2. EMPIRICAL MEDICINE** Diseases for which treatment outcomes can be described in probabilistic terms, such as heart attacks and strokes.
- 3. INTUITIVE MEDICINE** Conditions that are diagnosed by symptoms and treated with therapies of uncertain efficacy, such as depression, lupus, multiple sclerosis and many cancers. This is the realm of specialists working together in teams – a “solution shop” approach to the patient’s particular problem.

Where is primary care in this model? The precision medicine part is in the hands of NPs and PAs following algorithms of care, along with generalist physicians when necessary. Meanwhile, generalist physician training has shifted to the management of complex chronic diseases and wellness services, as well as the provision of testing, imaging and other services that specialists now provide. Primary care becomes preventive care. It is increasingly provided through real-time and online networks, all focused on – and involving – the patient.

TeleHealth

In Part One of *Goodbye, Hello*, participants in the focus groups and interviews noted that Arizona has one of the most highly regarded telemedicine programs in the country. The system links up regional hubs with sites in less populated and rural areas to provide an array of telehealth services through the use of technologies such as video conferencing and digital imaging. This is especially important for primary care clinicians in remote sites, who lack access to specialists and are able to consult with them over a real-time video hook-up. It saves thousands of dollars in costly transportation, improves patient care and ameliorates the sense of isolation that can occur while practicing without “backup.”

Real time, point-to-point video over the Web is becoming more common as bandwidth increases and the technology improves. It is not unrealistic to forecast a future where clinicians will “see” some patients at home and other remote settings, “read” vital signs from home input devices, make diagnoses, implement a course of treatment and monitor progress.

In the current environment, most of our informants commented that the real value of telehealth was the facilitated exchange of information between clinicians. Tomorrow, it may well be the patient herself who “logs in” to a video appointment with a member of her primary care team.

The Double-Edged Sword of Technology

The web of information technology that is enveloping the world is a double-edged sword. It’s worth highlighting a few of the edges in primary care:

- **Information technology has the potential to both integrate and fragment care at the same time.** It provides the infrastructure for the integration of team-based care in ever larger settings where information is readily transparent, shared and applied in more effective and efficient clinical practice. But it also allows for ever more narrow and fragmented feedback loops between parts of the system, such as patients who “disappear” into social networks that don’t include their primary care clinician, specialists who create their own mini-networks for ever greater control, or health plans that build closed feedback loops for their own networks and members. Information may want to be free, but many people prefer to cloister and charge for it – especially within their own profitable silos.
- **Information technology has the potential to increase the disparity in access and quality of care among populations.** There are places in Arizona that still lack phone service and running water, let alone have the advantages of a broadband Internet hookup. One quarter of American adults do not own a computer, and presumably many more lack both the interest and skills to populate a personal health record and critically sift through the noise of health care data and competing commercial interests to find nuggets of real value.
- **Information technology is both a liberator and slave of time.** The potential of HIT to increase clinical efficiency, reduce errors and improve outcomes is well known; so, too, is the potential of HIT to eat up time in system implementation and data entry, sifting through an endless stream of often irrelevant data and messages, and responding to technical input, monitoring and analytical requirements.
- **Information technology both enables and inhibits continuous personal relationships.** Among clinicians and patients we talked to, we were struck by a shared sense of loss in establishing and maintaining a personal relationship in today’s technology-

“Decision-making algorithms will disrupt solution shops, putting the perspective of the world’s most expert specialists into the hands of primary care physicians. Where the lack of technological progress limits the decentralization of these capabilities, connectivity in many instances will enable virtual decentralization – a movement commonly called telemedicine.”

The Innovator’s Prescription³⁸

“The future has already arrived. It’s just not evenly distributed.”

William Gibson

saturated culture. They agreed that technology can enable a relationship between patients and clinicians in both virtual and physical settings, but it can also wall off people from each other and inhibit face-to-face communication (the example of a patient text messaging on a cell phone while being examined by her physician).

Technology is a means, but not the end, to a more efficient and effective healthcare system. When it becomes an end in itself, then clinicians will effectively become machines.

Training

How should we optimally recruit, train and retain clinicians in primary care? What changes should be made to ensure that the promise of primary care – integrated, comprehensive, coordinated, continuous and accountable care – is realized?

Contextual Realities

Any changes in training have to deal with the following contextual realities:

- **AMBIGUOUS ROLE** What exactly are we training primary care clinicians *for*? Diagnosis and treatment, coordination of care within a larger system, monitoring of chronic illnesses, “first stop” gatekeepers, forming long-term relationships with patients? What is the critical role for the primary care clinician that no one else can – or should – play?
- **DIFFERENTIATION** Primary care clinicians are viewed in overlapping and sometimes competing fields and terms: family medicine, general internist, general pediatrician, generalist, general practitioner, family practitioner, family practice doctor, nurse practitioner, physician assistant, alternative health care provider. All of these terms stake out a piece of the primary care turf, and the public is often unable to differentiate between them.
- **A CULTURE OF SPECIALISM** The “promise” of primary care as the foundation of all health care has been buffeted by a culture and political environment of specialism rather than generalism. Money, prestige and public opinion follow the former, not the latter. Many believe almost anything can be fixed if you can just get past a generalist to a specialist. Much of the current culture of medical training reinforces this.
- **SOCIAL FRAGMENTATION** It’s hard to be a health home of continuous, coordinated and comprehensive care in a discontinuous and fragmented society. It’s hard to practice family medicine when the traditional ‘family’ is being redefined in a rainbow of new configurations. For millions of uninsured and disenfranchised people, there is no accessible, organized system of care at all.



General Principles and Strategies for Training in Primary Care

Primary care is more than just the “first stop” in the labyrinth of American health care. It is the essence of health care reform itself: moving from a fragmented, specialty-driven “non-system” of care to a patient-centered, coordinated and integrated system of care across the entire health continuum based on the principles of prevention and wellness.

Scope of Practice

Of all of the dimensions of primary care, the issue of *who* should provide it – who is most *qualified* to provide it by virtue of their training and scope of practice – is the most contentious, judged both in the current medical literature and in our Arizona-specific focus groups and interviews.

‘Scope of Practice’ is a term used by state licensing boards to describe the actions, procedures and processes that are permitted for the licensed professional, such as a physician or nurse practitioner. Where the controversy comes is in *overlapping* scope of practice. Specifically, a good portion of general primary care falls within the scope of practice of physicians, nurse practitioners and physician assistants. Scope of practice for PAs is less disputed, for they are legally required to practice under physician supervision. Not so for NPs, at least in Arizona and five other states, where they can diagnose, treat and prescribe autonomously without physician collaboration or supervision.

Some NPs are perfectly content in working with physicians and under their direction. Others seek to practice independently in such configurations as nurse-managed health centers and health homes. Some physicians view this as an invasion of their practice “turf,” and a potential diminishment of quality of care, based on differences in breadth and depth of medical knowledge and clinical training between themselves and NPs. Conversely, NPs point to studies showing no significant difference in outcomes between physician-led and NP-led primary care clinics, and argue that it makes economic and clinical sense to expand the role of NPs in primary care, especially considering a shortage of all primary care health professionals.

In all industries dependent on increasing levels of knowledge and skills, professionals practice at the top of their scope of training, and push the more routine, algorithm-based knowledge and skills down to mid-level professionals. Generalist physicians, if they are to continue to increase their income and professional respect, will utilize their knowledge and skills on more complex and acute patients, and let others such as NPs and PAs take care of most of the everyday clinic traffic. It’s not an efficient use of their time or training to do tasks that others with less training could do just as well.

In any event, scope of practice will adjust itself according to advances in knowledge, technology and the economics of the health care industry. The primary care physician of the future could well be spending as much time on system design, monitoring of processes and quality, the management of chronic diseases and the use of ever more ubiquitous testing and imaging technology that is currently the province of other specialists.

It’s not what they’re training for today. But it could well be what they train for in the future.

“The best MD is better than the best NP, but there is a lot of overlap between the bubbles.”

health plan medical director



vs.



Health reform starts with medical training. The following principles and strategies should be inculcated and applied at every step:

1. Instill an educational culture that values, supports and promotes the principles and practices of primary care. In addition to expertise in diagnosis and treatment, coordination of care, the management of complex diseases, working in teams and the use of information technology should be ingrained in the curriculum.
2. Focus on problem-solving and self-directed learning in an era of exploding knowledge. Mastery of knowledge, skills and systems is a life-long, not a discrete, process.
3. Ensure that students in primary care experience continuity of care for individual patients, especially those with chronic illnesses. Develop clinical training sites based on the principles and practices of patient-centered health homes.
4. Place less emphasis on hospital venues and more on outpatient community settings as training sites. Hospital-based training is necessary to expose students to the breadth and depth of acute disease states, but it is equally important that they are exposed to strategies to keep patients out of hospitals through better outpatient management.
5. Prepare students to work effectively as members of professional teams. No single clinician can diagnose, treat and manage everything. Skills in communication

A Clinical Presentation Training Model

A new medical training program in the state – A.T. Still University-School of Osteopathic Medicine in Arizona (ATSU-SOMA) – is based on a *clinical presentation* training curriculum developed by Calgary University in Canada. Some of its features and adaptations at ATSU-SOMA include:

- Patients “present” to physicians in approximately 120+/-5 ways based on history, physical examination and laboratory abnormalities. Students begin by studying these presentations (e.g., ways in which patients present with chest pain), which then serve as a scaffold onto which basic and clinical knowledge are structured and integrated as training progresses.
- Lectures are reduced in deference to students spending more time in small teams working on case-based problem solving.
- Students are in classes the first year, then move out into community health centers for the second year, where they learn additional clinical presentations, observe patient care, and gain an understanding of the local health system and community health practices.
- Third- and fourth-year students function much as they would in a traditional medical school curriculum, with clinical rotations at their community campuses, associated hospitals and affiliated healthcare providers. Osteopathic principles and practices are integrated throughout the curriculum.
- Primary care is continually emphasized. On the interview day for admission, students are asked if they will spend at least one year serving a disadvantaged population, such as in community health centers.

The clinical presentation model is not the only innovation in medical training, but it does represent a departure from the traditional approach of students spending their first two years taking courses in the basic biosciences, then moving on to clinical training. Many other medical schools are beginning to experiment with versions of this approach. In our view, such innovations should be encouraged, then held to the light of critical evidence in terms of whether graduates provide high-quality, effective and efficient care in comparison to graduates trained in other modalities.

and working in harmony with others – including patients – will define the future of medical education.

6. Provide ample opportunity to learn and apply health information technology to improve health care quality, patient safety and more effective and efficient practice management. The 21st century clinician must have the knowledge and technical expertise to provide personal, high-quality care in an information age environment.
7. Expose students to the principles and concepts of public health, mental health, and the importance of social and environmental determinants of illness.
8. Develop the teaching and mentoring skills of faculty. Reward and retain faculty who are experienced in, and dedicated to, the principles and practices of comprehensive primary care.

Physicians

Training generalist physicians to practice in primary care settings is likely to proceed differently for different specialties:

- **FAMILY MEDICINE PHYSICIANS** Of all the “specialties” in the primary care arena, the family medicine physician is the *archetypal generalist*. Their training explicitly incorporates biological, behavioral, psychological and social aspects of care. The difficulty is that while large segments of the population still depend on family medicine generalists for their care, they are swimming upstream in a culture of rampant medical specialization. In our view, for family medicine physicians to flourish, they will have to be more aggressive in convincing the public that their specialty is grounded in the same science and technology as other specialties; become more adept at managing relationships, information and processes; actively promote the concept of patient-centered, continuous, integrated and coordinated care in settings like health homes; and close the income gap with other specialties.

The family medicine physician is the archetypal generalist. Their training explicitly incorporates biological, behavioral, psychological and social aspects of care.

“Few students (or residents) have the opportunity to observe the optimal care for patients with chronic diseases. Few outpatient teaching sites have established contemporary models of chronic disease management, in which teams of health care professionals are guided by the principles of patient-centered care and are supported by information technology systems needed to provide high-quality ambulatory care. As a consequence, we believe that the clerkships discourage many students from pursuing residency training in a primary care specialty, because they are concerned that they will not be adequately prepared to meet the responsibilities of such a practice.”

*New England Journal of Medicine*³⁹





THE COMPREHENSIVE CARE INTERNIST⁴⁰

The American Board of Internal Medicine proposes a credential in comprehensive care internal medicine: the personal, longitudinal and coordinated care – including prevention and wellness care – for a defined population of patients with undifferentiated, acute and/or chronic problems.

Competencies include:

- An expert diagnostician and clinician
- A patient advocate
- An effective communicator
- A team leader and an effective teammate
- A systems manager
- An effective user of health information technology and health data
- An effective change agent
- A practitioner accountable for efficient, accessible care

- **GENERAL INTERNAL MEDICINE** Internal medicine stresses both competence in generalism and specialism, inpatient as well as outpatient care, and continuity and coordination of care. The trend, however, is toward increased specialization in internal medicine – hospitalist, cardiologist, intensivist, pulmonologist, etc. Fewer residents are choosing careers as general internists, and we suspect that trend is likely to continue, especially given the income disparity between generalists and specialists. There is an effort underway to encourage office practice internists to become credentialed as “comprehensive care internists” (see sidebar) and participate in the vanguard of delivery system redesign around the patient-centered medical home. It remains to be seen, however, whether this “re-branding” of the general internist will take hold. If internal medicine is serious about training generalists, “it must look hard at its faculty composition, the training model of its residency programs, its relative neglect of many of the components of geriatric medicine, and how it supports ambulatory practice.”⁴¹
- **PEDIATRICS** General pediatrics is in better shape when it comes to producing physicians who are interested in primary care. Students are drawn to pediatrics in large part because of their love of children and their natural resiliency, and a large portion of them will probably continue to gravitate toward general practice. Interestingly, in many other countries pediatricians “are not primary care providers, but consultants to those providers.” There are some U.S. educators who believe that routine well-child care and some acute care management in otherwise healthy children should become the province of nurse practitioners and the general family physician, “who are working in collaboration with the pediatric generalist.” Meanwhile, the pediatric generalist or subspecialist will focus their efforts on more complex pediatric problems.⁴²

P4⁴³

TransforMED, the American Academy of Family Physician’s (AAFP) practice redesign arm, is working with 14 family medicine residency programs to change the way family physicians are trained. Instead of implementing changes proposed by top-down experts, they are encouraging bottom-up innovation from residency directors and their staff. Some illustrative examples:

- Adding a fourth year of residency, with the opportunity to complete a master’s degree in public health and increase ambulatory care experience for residents.
- Relocating training from hospitals to community-based practices, where residents learn to implement innovations like group visits and chronic disease management.
- Immersing residents in the health home setting by increasing the amount of time they spend in the outpatient clinics and the use of electronic resources.

The idea is to try different approaches to enhancing training, see what works and what doesn’t, and adapt practice accordingly. What a novel concept: live and learn.

Nurse Practitioners

Primary care physician training is grounded in a background of in-depth biosciences, rotations among the various medical specialties and a subsequent clinical residency with exposure to the diagnosis and treatment of a broad range of medical conditions. NP training is grounded in similar but arguably less intensive clinical training in hospital, community and home-based settings, along with a focus on health education, health promotion, and a broad introduction to diseases and medical management strategies. According to many in the nursing profession, it is the particular focus on illness prevention, health promotion, and teaching effective self-care that distinguishes the NP from the physician, and which ought to be stressed in establishing a more effective partnership between physicians and NPs in primary care settings.⁴⁴

Some believe this very interest in establishing a relationship with the individual patient is driving NPs away from the treadmill of primary care and into specialty-based practice:

“NPs like the one-on-one thing. That’s why they went to nursing school, that’s why you like NPs, because they will sit down and talk with you, which is what they always wanted to do anyway. Well, you can’t get that these days in primary care, but you can in specialty care. So you’re seeing more NPs in cardiology or oncology or other fields.” – family medicine physician/educator

This raises an important point. Simply recruiting and training more clinicians to work in a dysfunctional healthcare system will get us nowhere. Training more NPs to substitute for a shortage of physicians and have them engage in the same revolver-like pace of fly-by primary care will result in even more professional frustration, career burn-out and patient dissatisfaction. If we are serious about wanting to transform primary care as the epicenter of a patient-centered integrated and coordinated health system focused on wellness and prevention, then we have to change both the practice setting and training pipeline simultaneously.

Sameness or Difference?

NPs have a critical role to play in this transformation, but their leaders will have to decide whether the profession’s future lies in replacing generalist physicians by taking over a larger slice of clinical diagnosis and treatment – the *sameness* of practice approach – or by stressing how their style of practice, which is grounded in illness prevention, health promotion and the deep qualities of nurturing and caring, leads to better health outcomes – the *difference* of practice approach.

The training and culture of NPs and physicians are not substitutable, nor should they be. The irony is, while professional groups jockey for position on who should do what in primary care, the most effective future leaders in integrated, coordinated health care teams will come from all manner of professional backgrounds – physicians, nursing, business, engineering, health informatics and, in some cases, even patients themselves. The list of competencies outlined for the “comprehensive care internist” (see sidebar on facing page) is one example of how skill sets and roles (team leader, teammate) might change.

It may be hard to imagine how traditional approaches to training professionals for careers in health care – steeped as they are in almost a century of ritualistic behavior and narrow definitions of self interest – are going to change, but in the face of inexorable economic, social and cultural forces, we believe it’s a foregone conclusion.

The present course is simply unsustainable.

The training and culture of NPs and physicians are not substitutable, nor should they be.

The Once and Future Patient

As Table 2 suggests, if some physicians and other primary care providers are upset today with recalcitrant, pushy, non-compliant patients who want it all – and want it all on their terms – they are likely to be even more frustrated in the future.

The characteristics of future patients will cover the gamut:

- From the “young invincibles” focused on choice and convenience to seriously ill adults focused on stability, trust and comfort.
- From informed, disciplined patients actively engaged in prevention and wellness to less disciplined patients engaged in risky, unhealthy behaviors.
- From the educated techno-literate to the less educated techno-illiterate.
- From those with comprehensive health care benefits and a usual source of care to those with few or no benefits, and no usual source of care.
- From the socially connected to the socially isolated.
- From the worried well to the chronically ill.
- From upper income, resource-rich communities to lower income, resource-poor communities.
- From those who seek easily accessible, limited services to those who seek a full continuum of services to meet complex needs.

TABLE 2 Consumers’ Attitudes and Dispositions Toward Health Providers By Generation⁴⁵

Generation	Trust	Personal Responsibility	Physician/Patient Relationship	Information Needs
Greatest/Silent Generation (pre-1945)	Respect authority, professional expertise.	Feel personally responsible, willing to defer gratification.	Loyal, value long-term relationships.	Look for trusted, credible, reliable sources of information. Limited techno-literacy.
Boomers (1946-1964)	More distrustful of institutions than predecessors.	Live for today, less willing to defer gratification.	Demand high-quality, personal service.	More techno-literate.
Generation X (1965-1981)	Skeptical of institutions/processes. Like to challenge authority, idea of permanence.	Live for today, dislike bureaucracy, seek flexibility.	Don’t necessarily seek or value in-person meetings. Like to negotiate with/challenge others. Do not like to be told what to do.	Techno-literate. Skeptical and critical of information.
Generation Y/Millennials (1982-2000)	More likely to trust authority and collaborate than Gen X’ers.	Want to be recognized and rewarded. Desire to understand “why” something is being done.	Consult with an array of people, not just a physician. Desire services “tailored” to individual needs/desires.	Techno-literate. Need information quickly. Use multiple information sources. Less likely to be critical of information – it’s all “good.”

- From those interested in critically sifting through information and managing their own health to those who prefer others to sift through information and manage their health for them.
- From those inclined to accept expertise and authority of professional clinicians to those inclined to question their expertise and authority.

Just as the once and future American patient won't fit into a tidy demographic profile, so, too won't the future primary care landscape be dominated by any one approach, but will be as diverse – and divergent – as its customer base.

We say 'customer' and not 'patient,' because that is how the future is apparently shaping up. It's an empirical question, of course. There are many who believe that the continuing commodification and industrialization of American medicine is neither a desirable nor foregone conclusion, and they are actively engaged in the promotion of policies and practices at all levels to reclaim the healing soul of medicine from the money-mad machine of procedures, products and services.

The Pessimistic View

Consumers will demand more from primary care – more information, more services tailored to fit individual and complex needs, more time and attention, and fewer hassles getting what they want, when and where they want it. Too many consumers will continue to engage in bad behavior and won't accept responsibility for their own health. They are the customer, after all. The provider is there to serve *them*.

The Optimistic View

Consumers will be more receptive to and adept at using a variety of tools and resources to help manage their health. They will use technology to solicit health information. They will access social networks to help them make informed decisions and become engaged in circles of mutual support. They will actively work with their primary care team, respond positively to incentives, and be focused on both personal and community wellness and prevention.

A pipe dream? Not if we care or work hard and smart enough to change things. Systems, incentives and practices can be created that allow both primary care providers and patients to leverage such tools and resources to their own mutual advantage in a patient-centered health system built on the principles and practices of integrated, continuous and comprehensive primary care.

It's possible. But to make the possible probable, we have to collectively engage in bending the possibility arrow.



The Changing American Demographic

According to a recent white paper,⁴⁶ the “average” American is probably gone forever.

Consider the family: The iconic American family – married couple with children – will account for just 22% of households in 2010. The most prevalent type of household is a married couple with no kids, followed closely by single-person households.

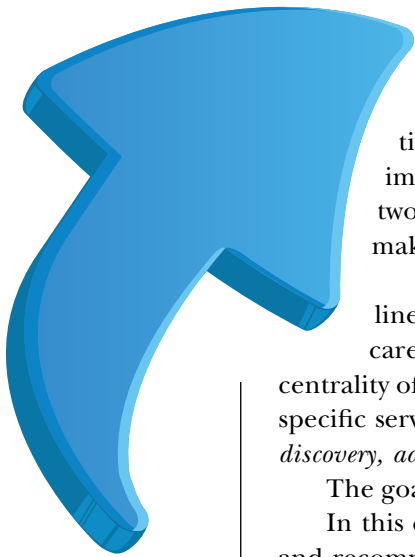
With families taking their children to pediatricians, and seniors increasingly seeking out specialists, what is the future patient base for the primary care family practice physician?

The family isn't the half of it. In 2010, 80% of those over 65 will be white non-Hispanics. That portion declines to 54% for those 18 years and younger.

In Arizona, with over 50% of the births now in the AHCCCS (Medicaid) program, the demographic future skews minority and lower income. Meanwhile, students entering medical school continue to be predominantly white and from upper income backgrounds.

Clearly, admissions policies and training programs need to be restructured to accommodate the changing American demographic.

Bending the Possibility Arrow: The Future of Primary Care



We can't predict the future of primary care, but we can work together to help shape it.

Both in the national discussion on health care reform and our conversations with Arizona clinicians and consumers, there is a strong consensus on the importance of primary care in fostering the health care system we desire. In this two-part report, we've explored both the challenges and opportunities we face in making this shared vision a reality.

Making the possible probable – bending the possibility arrow – is hardly a linear, straightforward process. There is no final destination in value-based health care. It is the *journey* that defines the end: continuous quality improvement. The centrality of primary care in that journey does not generate any one set of practice models, specific services or providers to the exclusion of others, but depends itself on the cycle of *discovery*, *adaptation* and *learning* in the face of ever-changing circumstances.

The goal is to create an environment that maximizes this process.

In this concluding section, we offer alternative sketches of primary care in the future and recommendations on changes in policy, practice and training to create together the future we desire.

The Future We Desire

A patient-centered system of affordable, coordinated, comprehensive and continuous care focused on promoting health, and not just on addressing sickness. A system built on a strong base of holistic, evidence-based, prevention-oriented primary care; a value-based payment system, complete transparency, a strong element of personal involvement and responsibility, and a culture of continuous system improvement.

Sketches of Primary Care

The future of primary care is likely to include many different modes of delivery for different populations, needs and interests, as well as a diversity of care providers. Ideally, they will share four common features to a greater or lesser degree:

- 1. FIRST CONTACT CARE** The gateway – not the gatekeeper – into the healthcare system. More than just the “first stop.”
- 2. COMPREHENSIVE CARE** Holistic health – the integration of mind, body and spirit within a responsive community.
- 3. CONTINUITY OF CARE** The ability and resources to follow and assist the patient over time. A health “home.”
- 4. COORDINATED CARE** Implementing, managing and monitoring relationships with other parts of the health care system and broader community.

Accountability, of course, is required throughout.

“If we could predict the future, there would be nothing to learn.”

These primary care sketches, which hardly exhaust the options, are presented from the patient's point of view.

My Rural Life | nurse-managed health center

Sally S. lives in a small Arizona town of 500 residents. For her regular checkups and routine care, she goes to a NP-managed community health center that serves her rural region. Today she is going there for a telehealth consultation with a cardiologist who is following up on her recent heart surgery in the city.

"I get great care at the clinic," Sally effuses. "The NP has helped me get my diet under control, plus he gave me the name of a psychologist not far from here who helps with depression. They have a whole network of people I can talk to, plus they told me about an online support group for people with heart disease. I'm going to check it out."

A New Millennial retail clinic / work clinic

Jamie H. is a young graphic artist who works for a large tech company in the city. Generally in good health, she goes to one of the retail health clinics dotting the city whenever she thinks she needs to see someone, and has also visited the clinic that is available at work two days a week.

"I don't care what initials they have by their name, so long as they know what they're doing," Jamie says. "They all can access my records, they know about me, they can write prescriptions, and they even phone me the next day to see how I'm doing. I don't need a regular doctor right now, but if something major happened, for sure I'd go to see one."

Mr. Mom | local family practice clinic

Ted P. is a recent widower with two young children. Constantly short of time and focused on quality and convenience, he takes the kids and himself to a family practice clinic in an office complex less than a mile from his house, staffed by a family medicine physician, an internist, three NPs and an RN.

"It's convenient, and they are all pros," Ted says. "The kids usually see one of the NPs for their checkups and stuff like ear infections. I always see the internist, who has been my doctor for a long time. He knows me and always takes the time to listen, which lately has been important. The grief has really got me down, and he referred me to a counselor. Plus I have to get regular colonoscopies, and he hooked me up with a gastroenterologist. It's good to have a trusted guide for a doctor."

A Vet's Story | VA health system

David N. is a Vietnam-era Marine with heart disease, arthritis, Parkinson's disease and pulmonary fibrosis. He's in the VA system and says it's the best care he's ever received. He has a team of specialists working with him, all of it coordinated by an internist who specializes in comprehensive care.

"She takes the time to explain everything that's going on," he says. "They're all working with one medical record, so everybody knows what meds I'm on and who's doing what. Actually, I talk as much to my pharmacist as I do to anybody else. I'm on a lot of drugs, and he knows how they all interact."

"I don't have long to live, you know. They've talked to me about hospice. They have my best interests in mind."



Nature's Way

alternative health providers

Lisa G. believes in the healing power of nature and not taking medications unless it's absolutely necessary. She sees a naturopathic physician for her basic care and an acupuncturist for managing pain in her lower back.

"I'm totally focused on wellness and prevention," Lisa says. "My doctor prescribes natural remedies and gives me good advice, but she also knows when I should see a medical specialist. My mother died from colon cancer, so she said I should have a colonoscopy every five years or so to be on the safe side. She has a network of specialists she can refer me to, so I think I have most of the bases pretty well covered."

"But that's just me," Lisa adds. "My kids see a fabulous pediatrician, and my husband only goes to urgent care or to specialists. We all have choices."

Promotoras

home care / community outreach

Mary C. lives alone in a small house in a low income section of town. She's has diabetes, and she thinks her memory is failing. She looks forward to her visits with Maria, one of ten promotoras – community health outreach workers – who work for a multi-neighborhood family practice medical "home" staffed by one family physician, four NPs, an on-site behaviorist and on-call specialists. All of the promotoras live in the neighborhoods and were trained in a community college health outreach program.

"Maria is a friend of one of my daughter's," Mary C. says. "She takes my blood pressure and checks to make sure I'm taking my medication, and she gets me to the clinic for my appointments. I don't know what I'd do without her."

A Connected World

Whatever the modalities of primary care in the future, they all depend on connected and transparent health information systems to securely communicate and exchange data. A value-based health care system that is based on demonstrated quality outcomes, transparency of price and positive incentives for patients, providers and payers to work together effectively and efficiently cannot be realized without a seamless health information infrastructure.

In SLHI's *Collaborate to Compete* report,⁴⁷ we provided schematics and scenarios for what this might look like in Arizona. This type of robust Internet-based, health information infrastructure is assumed in the portraits of primary care we sketch here.

Totally Wired

self-help / Internet

Susan T. says she is “too busy to be sick.” She manages the health of her two children, her husband and herself in ways that save time and money.

Recently her son awoke with a sore throat. She used an at-home strep test to take a swab of his throat and put it on a card. Within minutes, the test confirmed her son had strep. Through an embedded RFID sensor in the card, the test results were wirelessly transmitted to her computer’s reader, which prompted her to connect the incoming test results to her son’s personal health record. Next, she electronically sent the test results to a retail clinic one mile away so they could accelerate her visit by pre-issuing an e-prescription. Finally, she sent an email to her son’s teacher that he wouldn’t be in school that day.

“I’m totally wired,” Susan admits. “I do e-visits and as much health testing and monitoring at home and electronically as possible. Plus our family doctor makes house calls. He comes with wi-fi and a blood testing kit.”

A Surgeon's Care

large integrated health network

Tom A. is a successful cardiac surgeon in a 200-physician multi-specialty practice in the Phoenix metro area that is affiliated with a large hospital-community wellness network that ranks among the best in the nation in terms of documented quality outcomes, prevention services, chronic disease management and the integration of medical and behavioral health services. Naturally, that’s where he and his family go for their primary care.

Tom says, “I get my annual physical exam with an internist. My kids mostly see NPs for the basic stuff at one of our outpatient pediatric clinics, and my wife really likes going to a young woman who specializes in family practice but also does geriatrics. Everybody works in teams, most of us are on salaries, and network payment is primarily from evidence-based case rates.

“I’m really good at doing one thing, but I’m amazed at how good our primary teams are at doing so many different things. The care is comprehensive, coordinated and constantly updated. The reason our network is so successful is because it’s built around primary care.”

A Team of Angels

safety net clinic / community outreach

Alvin L. has seen hard times. On and off the streets, mostly out of work and a long-time diabetic with a history of drug abuse, he doesn’t have a family or people he can turn to for support. Except for Dr. Kate, a family practice physician who runs a clinic for the homeless with three NPs and a network of specialists who volunteer their time to help those who can’t always help themselves.

“Dr. Kate is my guardian angel,” Alvin beams.

“In fact, I’ve got a team of angels looking out for me. They have all my records there in the computer, they make sure I get to my appointments with my drug abuse counselor, and they check my blood and stuff. I don’t have a home right now, but they got me on a list for an apartment, and this lady from the clinic comes down to the shelter to check up on me sometimes.

“I don’t have a family, but if I did, I’d want one like Dr. Kate and her team.”

Personal Attention

concierge practice

Ted J. is a successful writer who lives by himself and travels frequently. He pays a member fee of \$200 per month for 24/7 access to a general internist who is part of a three-physician concierge practice with a total panel of 1,500 patients.

“Yes, it costs extra, but it’s worth it,” Ted says. “I get an executive physical and unlimited email and internet video consultations as a member, but I still have to pay for office visits and tests and such. The best thing is my doc knows me. He’s always there for me. A few weeks ago I awoke with this pain in my chest and thought maybe it was the beginning of a heart attack. So I called him up at 1 a.m., and he asked me some questions about the pain and said it’s probably heartburn, but he was coming right over anyway.

“And he did. And it turned out to be heartburn. And he gave me some tips on how to distinguish between heartburn and a heart attack. And he never sent me a bill.”

What Links These Primary Care Sketches?

1. Care settings and modalities that focus first on the needs and interests of the *patient*, not on the requirements of the system.
2. Electronic health records linked in a secure, transparent, accessible health information exchange.
3. First contact care. Even when it's ad hoc and transitory, it's linked to other levels in the system.
4. Coordinated care. Sometimes the patient is the coordinator, sometimes it's the clinician.
5. Continuous care. At the level the patient prefers. Some desire a long-term relationship, some don't.
6. Comprehensive care. When it's necessary and desired. Not everything has to be in one place, but it does have to be easily accessible, coordinated and accountable.
7. Holistic health. Primary care as the integration of physical, behavioral and spiritual health within a responsive community.
8. A focus on wellness and prevention.
9. Clinicians who practice at the top of their scope of practice, and not somewhere above or beneath it.
10. Team-based care, both physical and virtual. Sometimes it's the patient who prefers to put the team together and manage it. Sometimes the team needs to be managed for them.
11. Diversity and redundancy. A diversity of size and practice configurations and providers, and redundancy of care modalities to absorb potential system dislocation. In short, a resilient health care system.
12. Greater patient involvement and responsibility for their own health. There will be just as much patient variability of circumstances in the future as there is today. Nevertheless, we should ask for and expect more of others and ourselves whenever possible.
13. Social networks/Communities of Practice. Real time or virtual, health is improved by reducing isolation and increasing social connection. We learn from each other.
14. Use of home-based and portable lab and diagnostic equipment. Selected technology will become less expensive and more powerful. Patients and primary care clinicians will benefit.



Goodbye, Hello: *An Arizona Agenda*

It's 2010. Arizona's economy is sputtering. The state budget deficit is one of the worst in the country. Programs are being slashed, people are out of work. The mood has taken a cautious, guarded turn.

Say goodbye to all that.

Say hello to the power of human creativity and imagination.

Say hello to the pursuit of health and wellness in individuals and communities, not a fixation on disease and sickness.

Say hello to a vision of the future that starts with our collective strengths and assets, not with our deficits and needs.

Say hello to the reinvention – and not simply the revitalization – of primary care.

We conclude with recommendations for creating a proactive agenda in Arizona to improve individual and community health by focusing on the values and strategies of primary care that have been articulated in this two-part report. These recommendations are grounded in conversations with Arizonans both within and without the formal healthcare system, as well as in recent research.

With regard to recommendations for developing a primary care workforce to meet Arizona's needs in the future, we refer readers to the *Report of the Primary Care Workgroup* released in Spring 2009.⁴⁸ We excerpt many of those recommendations here for emphasis.

Finally, a system built on the principles and strategies of primary care is at the heart of *value-based health care* – the characteristics of which have grounded SLHI's work in health policy for the past six years.⁴⁹ We urge our collective commitment to this shared vision in order to create a future in which all of us can be well, stay well, and contribute to the health and well-being of each other.



What is Primary Care?⁵⁰

Primary care is the provision of integrated, effective health care services delivered in accessible and efficient ambulatory settings by clinicians who, in partnership with patients, are accountable for addressing a large majority of personal health care needs, practice in the context of family and community, and focus on wellness and prevention. The attributes of primary care are that it is comprehensive, coordinated and continuous within a diversity of clinical and community health settings.

Federal Recommendations

Certain things need to get done at the national level to support primary care funding and training. A variety of organizations, including the Arizona Primary Care Workgroup, have made recommendations, some of which we note in short form here:

1. Establish and expand training venues in non-hospital primary care settings (e.g., community health centers), including rural and underserved areas. Focus on *both* primary care physicians and NPs. Support for the teaching role in community health centers is one example.
2. Reform graduate medical education (GME) to incentivize a primary care-based system. Currently, it is driven by the workforce needs of teaching hospitals, which favor turning out profitable subspecialists.
3. Take steps to correct the income disparity between primary care and subspecialty physicians. This includes not only GME reforms, but also increasing federal payments for primary care services.
4. Ensure that GME sites become laboratories for innovations in primary care delivery. Clinicians should be exposed early on to a focus on prevention and early intervention, especially for chronic diseases.
5. Promote new methods of payment and practice that recognize, support and reward quality and efficiency gains through coordinated primary care (e.g., patient-centered health homes, accountable care organizations, bundled payments). Include reimbursement for methods of diagnosis, care and management besides the face-to-face clinical office encounter (e.g., email, online visit, phone, video).
6. Increase funding for primary care training programs, scholarships and loan repayments under Title VII.
7. Increase funding for National Health Service Corps (NHSC) scholarships and loan repayment programs.
8. Establish a national health workforce policy that ensures the country has an adequate supply of all clinicians to provide comprehensive, continuous and coordinated primary care in a variety of practice settings.
9. Establish a permanent, independent, and representative national health workforce commission to provide planning and oversight at the federal level.
10. Continue to invest long term in the development of national standards and interoperability of electronic health records and information exchanges, as well as provide incentives for implementation, technical assistance and ongoing training at the state level.
11. Along with states, foundations and other sources, provide funding for the creation of national, regional and local “innovation” networks for seeding, testing and disseminating what works in extending and improving outcomes in primary care.
12. Develop a cooperative extension service modeled after that used by the Department of Agriculture to help primary care clinicians transform their practices along such lines as patient-centered health homes and other emerging practice configurations.
13. Facilitate a dialogue on widening the role of nurse practitioners and physician assistants in primary care, including broader participation in credentialed provider networks. Encourage thoughtful experimentation with modalities of practice where all clinicians can practice at the top of their scope of training.

14. Extend the Federal Tort Claims Act (FTCA) to all primary care clinicians (MDs, DOs, NPs, PAs) practicing in rural and medically underserved areas. Clinicians considering opportunities in these locations would find it attractive to practice without the threat of a malpractice suit hanging over their every move.

Infrastructure

HEALTH PLANNING A laissez-faire approach to health planning won't cut it in today's global marketplace and the intense competition for finite resources. Elsewhere⁵¹ we have outlined a model for developing an Arizona Health Planning Bridge that can be used to link planning activities in a variety of areas that are central to the reinvention of primary care. The following could be combined through the health planning bridge model in a number of interesting ways:

- **Arizona Health Workforce Collaborative.** An independent, representative body to plan, monitor and evaluate steps to ensure a 21st century workforce to meet the state's healthcare needs. A robust primary care workforce is critical to the future development of the state.
- **Arizona Health Planning Data Collaborative.** Arizona lacks up-to-date, comprehensive and relevant information to inform health planning at all levels, including workforce and primary care. We have a number of comprehensive data aggregation and analytical activities to build on, but they remain uncoordinated, sporadic and unsustainable. A state health planning data collaborative would collect, analyze and disseminate data about supply and demand, demographics, distribution, productivity, education and employment trends, migration patterns and other factors for a full range of healthcare providers.
- **Arizona Primary Care Innovation Collaborative.** This "community of practice" would conduct research and disseminate best practices and innovations that lead to better outcomes in primary care. It could include an "innovations in primary care practice" award fund to recognize and encourage system efficiencies and positive health outcomes. It could live as an independent "self-organizing" community of practice, part of the Arizona Health Planning Data Collaborative, or within a university-based research structure, to name a few options.
- **Arizona Healthcare Workforce Job Clearinghouse.** We can meet the need of connecting people, communities and jobs through an integrated electronic database. Often Arizona communities have openings for primary care and other health professionals, but don't know where to look or how to attract qualified applicants. Conversely, qualified applicants may be interested in these positions, but don't know where they are or whom to contact.

ELECTRONIC HEALTH RECORDS Arizona primary care clinicians – indeed, all clinicians – must have access to electronic health records and a statewide system of health information exchanges to share clinical and patient information in a secure, confidential setting. Coordination, continuity, effectiveness and efficiency of care will increasingly depend on it. Arizona is well-positioned to take advantage of federal grants and



other resources earmarked for health information technology, and the Arizona Health-Connection roadmap provides a structure in which to move forward. Of particular importance to primary care is providing funding and technical assistance to small and mid-size practices to install electronic health records and create collaborative communities in which clinicians can share information and learn from each other. The Arizona Health-Connection organization, among others, should provide leadership and help to coordinate efforts, particularly with regard to competing for significant federal funds now available for health information technology.

TELEHEALTH We should build on our strengths and expand Arizona’s telehealth network to increase the ability of primary care clinicians to more efficiently provide an extended scope of general and specialty services in rural and underserved communities. This will be further enhanced as technology improves in the area of web-based real-time video networks.

DISTANCE LEARNING An increasing number of health professions training programs are now utilizing integrated web-based technologies (webinars, video conferencing, email discussion lists, etc.) to deliver high-quality instructional content to trainees in their own home and at their convenience. Arizona should step up its efforts to utilize distance learning modalities to deliver high-quality education and training.

Recruitment and Retention

CONTINUE FUNDING FOR CURRENT STATE LOAN REPAYMENT PROGRAMS for primary care clinicians practicing in rural and medically underserved areas. When the economy improves, funding should be enhanced. Consider expanding the length of service possible under these programs and developing a matching-funds program for employers to increase the amount of the loan repayment.

PASS LEGISLATION THAT PAYS OFF MEDICAL AND OTHER PROFESSIONAL SCHOOL LOANS for physicians, NPs and PAs who practice primary care in high-need, medically underserved areas of the state. Given Arizona’s disastrous budget picture, we suggest exploration of alternative sources of revenue, such as a tax on alcohol, soda and candy as a way of discouraging excessive consumption of such products and providing funding for wellness and prevention activities, including better access to coordinated primary care.

ENHANCE PROGRAMS THAT TARGET RECRUITMENT OF PRIMARY CARE TRAINEES FROM RURAL AND UNDERSERVED AREAS. Trainees who come from these areas, or who otherwise participate in rural residencies, rotations or internships, are more likely to return to practice there than those who do not have this background or experience.

TARGET RECRUITMENT AND RETENTION EFFORTS OF PRIMARY CARE CLINICIANS FROM UNDERREPRESENTED POPULATION GROUPS. Lack of diversity in the U.S. health workforce generally, and in Arizona specifically, is well documented. The state’s primary care workforce should reflect the population it serves. First, of course, we have to get more students from underrepresented populations



interested in health careers. The Arizona Health and Occupation Students of America program, a K-12 outreach and scholarship effort supported by the Arizona Department of Education, is one successful example of targeting students from underrepresented populations, as are selected Arizona Health Education Center (AHEC) programs.

GIVE AHCCCS THE AUTHORITY to pay primary care clinicians in rural and underserved areas of the state more than they pay them in urban/better served areas. More primary care clinicians might be attracted to practice in Arizona if Medicaid paid them more than what Medicare reimburses them.

SET UP A RECRUITING ARIZONA PHYSICIANS (RAP) OFFICE to assist with the coordination of all physician recruitment initiatives – and focus on primary care physicians specifically. This could be implemented under the Arizona Health Workforce Collaborative recommended above. RAP could also partner with other groups, such as Federally Qualified Health Centers, to develop an Arizona Incubator Model to transition out-of-state physicians to Arizona practice settings.

PURSUE TORT REFORM FOR MALPRACTICE. In addition to placing a cap on the amount of malpractice awards, the state might also consider allocating a percentage of all malpractice awards to a revolving fund to be used for recruitment efforts in medically underserved areas, with a focus on necessary and cost-effective services such as primary care.

Training and Practice

ELEVATE THE PRINCIPLES AND EVIDENCE-BASED PRACTICES OF PRIMARY CARE among Arizona medical and nursing school deans and faculty. Educators exert significant influence over what and where clinical students choose to practice. Because the “primacy” of primary care is grounded in medical research on system outcomes and principles of effectiveness and efficiency, it should be promoted by all educators in training, public education and advocacy.

RE-EVALUATE ARIZONA GME FUNDING ALLOCATIONS. For example, Arizona GME funds could be leveraged to provide incentives for programs that provide educational experiences for residents in integrated health homes, primary care services in rural areas, etc.

ENCOURAGE TEAM-BASED SERVICES. Arizona should be a laboratory for experimenting with new ways of incentivizing team-based care and management of chronic and complex diseases. This is enhanced by changing the way we pay for health care services, as well as new approaches to training:

- Expand initiatives and projects that provide a monthly risk-adjusted per patient global fee to cover all primary care services, with part of the amount covering the coordination, management and communication services associated with a patient-centered health home practice (team-based services, group visits, email, video consultation, etc.). Additional payments could be tied to meeting agreed upon quality benchmarks.
- Revise training to include more emphasis on, and experience with, working with transdisciplinary teams in coordinated practice settings. The increasing prevalence

More primary care clinicians might be attracted to practice in Arizona if Medicaid paid them more than what Medicare reimburses them.

Training sites should be representative of team-based comprehensive and coordinated care with exemplary clinicians.

of complex and chronic diseases, together with the explosion of medical knowledge, makes coordination and communication between teams of providers a necessity.

- Regionalize clinical education. With training “centers of excellence” as regional hubs, use regular and mini-residencies, web-based education, on-site visits from training faculty and other means to extend continuing education opportunities to ever wider networks of primary care clinicians and other healthcare professionals working in coordinated teams.

FOCUS TRAINING ON MODEL SETTINGS WHERE CLINICIANS WILL ACTUALLY BE PRACTICING PRIMARY CARE – private offices, community health centers, large multi-specialty practices, etc. These training sites should be representative of team-based comprehensive and coordinated care with exemplary clinicians, and not the “patient mills” of fragmented, episodic care that discourage clinicians from careers in primary care. Clinical training opportunities in rural and underserved areas need to be expanded. They should be coordinated with and supported by local community leaders to influence the student’s choice of career in primary care. This is not meant to replace hospital-based training, where clinicians are exposed to critically ill patients and complex diseases, and access to a broad continuum of specialists. Given the financial precariousness of many hospital primary care residencies, however, we need to rethink and expand training sites.

REDUCE THE HASSLE FACTOR. Work with payers to improve their policies and procedures so primary care and other clinicians can more efficiently and effectively practice medicine. Just *some* of the hassle factors that should be addressed include:

- Provide consistency of health plan requirements, forms, policies and procedures (credentialing, referrals, prior authorizations, diagnostic testing requests, etc.).
- Provide adequate health plan phone service for clinicians and support staff so they don’t have to spend large amounts of unproductive time “on hold.”
- Allow all generic medications without prior authorization. In areas where prior authorization is necessary, streamline all aspects of the process.
- Do not allow health plans to change payment schedules without first notifying clinicians.
- Reduce duplicative and unnecessary documentation.
- Provide electronic formularies for all clinical sites consistent with their practice needs and keep them updated.

PROVIDE MORE TRAINING IN, AND BETTER COORDINATION WITH, MENTAL/BEHAVIORAL HEALTH CONDITIONS. A majority of these conditions can be diagnosed and treated in primary care settings. Patients actually prefer it to entering a separate behavioral health system. All primary care clinicians should be trained to diagnose and treat these conditions, and refer out as necessary. On the practice side in Arizona, we might allow qualified primary care clinicians to prescribe medications for AHCCCS patients to treat mental illness and behavioral issues. We could also provide support for care coordinators, social workers and psychologists to either be housed in, or rotate through, primary care settings. This is at the core of an *integrated* health home model.

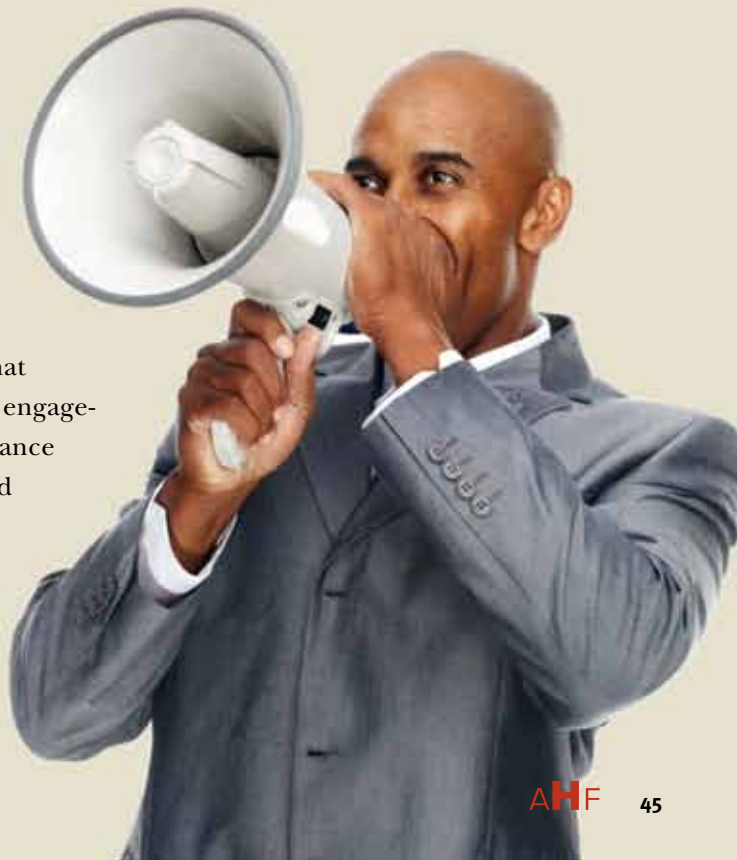
EXPAND THE ROLE OF NPS AND PAS IN PRIMARY CARE SETTINGS. Like their physician colleagues, NPs and PAs are under the same financial and “lifestyle” pressures to specialize. There are examples of stellar primary care clinics staffed and run by NPs all across the

nation and in Arizona, and they should be encouraged and expanded wherever possible and appropriate. Health plans can encourage this by credentialing NPs in their networks and reimbursing them appropriately, as some health plans already do. There is an especially acute shortage of primary care clinicians in rural and underserved areas of the state, and more well-trained NPs and PAs can help to meet that need. The organizing principle is this: All clinicians should operate at the top of their scope of practice, and not above or below it. There's plenty of work to do along the entire health continuum, and Arizona needs all hands on deck working *together* in collegial team settings to get the job done. That includes complementary and alternative health care providers as well.

The Community

EMBED PRIMARY CARE IN THE BROADER COMMUNITY. Everyone doesn't need to be in a "medical home" to understand and appreciate the role that good primary care plays in a community health approach to wellness and prevention. From regular checkups to immunizations, from distributing nutrition plans to disease screenings, from health fairs to school-based clinics, from outreach workers to mobile health clinics, comprehensive primary care teams are part of the social fabric of healthy, resilient communities. For primary care to be viewed as more than just the "first stop" in an expensive, fragmented system of high-tech specialty services, these teams (clinicians, counselors, educators from a broad array of disciplines and backgrounds) must engage communities in developing policies and activities that promote wellness and prevention through patient-centered primary care. That means moving primary care out of the stand-alone medical clinic or office and into homes, schools, churches, civic organizations, businesses – anywhere people congregate and have opportunity to engage and learn from each other about how to be well and stay well. To realize the full promise of integrated health care, primary care needs to adopt a community-embedded, population-based focus.

EXPAND PRIMARY CARE PUBLIC EDUCATION AND CIVIC ENGAGEMENT. Arizona is fortunate to have a number of active professional organizations engaged in various aspects of primary care, population health and chronic diseases (Arizona Adolescent Health Coalition, Arizona Asthma Coalition, Arizona Chapter of the American Academy of Pediatrics, Arizona Academy of Family Physicians, Arizona Public Health Association, etc.). In this climate of intense national debate about health care reform, we recommend that these organizations step up their public education and civic engagement activities with a clear, focused message on the importance of primary care in increasing access, controlling costs and improving quality. For example this might be a coordinated education and advocacy campaign within the Primary Care Innovation Collaborative described earlier. Whatever the format, the message of reforming America's health care system around the principles and practices of patient-centered primary care should be front and center.



The goal is clear: We need to say goodbye to a fragmented, “non-system” based on sick care and expensive, procedure-driven medicine, and say hello to an integrated system based on health care and the principles of wellness and prevention. Central to this journey is the advancement of patient-centered primary care, the principles and strategies of which we have outlined in this report.

The challenges are significant, and the temptation to hunker down in the face of Arizona’s financial challenges is strong. But we can’t see our way to a better future by looking backwards. Arizona has a significant number of leaders in health care and community health who see the need to transform primary care and want to be involved in moving a common agenda forward. We have strong, innovative training programs, outreach programs and model programs to build on. With a compelling vision and goals to pursue, we have places to apply for resources and support.

The conclusion of the Arizona Primary Care Workgroup’s report puts the charge clearly:

We call on Arizona’s political,
business and civic leaders to join in this
common and necessary enterprise.

We call on our friends and colleagues
in Arizona’s healthcare system
to adopt and extend the principles
and practices set forth here.

Finally, we call on all Arizona citizens
to take greater responsibility
for their own health based on ability
and need, and to support public policy
that directs more time, attention
and resources to development
of a strong system of primary care
based on commitment and planning,
effectiveness and efficiency,
and wellness and prevention.

Sources and Notes

- 1 Adapted from the Patient Centered Primary Care Collaborative. www.pcpcc.net/content/general-presentation-materials.
- 2 *Fact Sheet: Medicare-Medicaid Advanced Primary Care Demonstration Initiative*. Fall, 2009. <http://www.healthreform.gov/newsroom/factsheet/medicalhomes.html>.
- 3 Jenkins, S. "Medical Home: the New Rorschach Test." *Sg2, Online Health Care Community*. July 6, 2009. www.sg2.com.
- 4 Christensen, C. et. al. *The Innovator's Prescription: A Disruptive Solution for Health Care*. 2009. New York: McGraw-Hill, p. 130.
- 5 Adapted from Kemper, D., Hall, L. "The Virtual Health Home." *Hospital and Health Networks*. April 4, 2009. <http://www.hhnmag.com>.
- 6 Information therapy is a term used to describe the timely prescription and availability of evidence-based health information to meet individuals' specific needs and to support sound decision making.
- 7 The Triple Aim is the concept that healthcare improvement designs must simultaneously accomplish three critical objectives: (1) Improve the health of the population, (2) enhance the patient experience of care (including quality, access, and reliability); and (3) reduce, or at least control, the per capita cost of care. <http://www.ihl.org/IHI/Programs/StrategicInitiatives/TripleAim.htm>.
- 8 Wagner EH. "Chronic disease management: What will it take to improve care for chronic illness?" *Effective Clinical Practice*. 1998; 1(1): pp. 2-4.
- 9 www.idealmedicalhome.org.
- 10 Moore LG. "Going Solo: One Doc, One Room, One Year Later." *Family Practice Management*. March, 2002, 9(6): pp. 45-50.
- 11 Moore LG, Wasson JH. "The Ideal Medical Practice Model: Improving Efficiency, Quality and the Doctor-Patient Relationship." *Family Practice Management*. September 2007; 14(8): pp. 20-24.
- 12 Renaissance Health. *The Ambulatory Intensive Caring Unit*. <http://www.renhealth.net/ambulatoryicu/background.html>.
- 13 Renaissance Health. *The Ambulatory Intensive Caring Unit*. <http://www.renhealth.net/ambulatoryicu/design.html>.
- 14 Baron, R.J., Cassel, C.K. "21st Century Primary Care." *Journal of the American Medical Association*. April 2, 2008; 299(13), p. 1596.
- 15 Lawrence D. *From Chaos to Care: The Promise of Team-Based Medicine*. Da Capo Press, 2002.
- 16 Olson, K., et. al. "Outcomes of Patients Discharged From Pharmacy-Managed Cardiovascular Disease Management." *American Journal of Managed Care*. August 2009; 15(8): pp. 497-503.
- 17 www.hellohealth.com.
- 18 Salter, C. "The Doctor of the Future." *Fast Company*. May 1, 2009. www.fastcompany.com.
- 19 Estimates from Kalorama Information (market research), cited in Kavalanz, P. "Wal-Mart Wants Your Rash and Strep Throat." *CNNMoney.com*. April 14, 2009. http://money.cnn.com/2009/04/13/news/economy/healthcare_retailclinics/index.htm.
- 20 Mehrotra, A. et. al. "Retail Clinics, Primary Care Physicians, and Emergency Departments: A Comparison of Patient Visits." *Health Affairs*, September/October 2008; (27)(5): pp. 1272-1282.
- 21 Mehrotra, A. et. al. "Comparing Costs and Quality of Care at Retail Clinics With That of Other Medical Settings for 3 Common Illnesses." *Annals of Internal Medicine*, September 1, 2009; (151)(5): pp. 321-328.
- 22 Costello, D. "A Checkup for Retail Medicine." *Health Affairs*, September/October 2008; (27)(5): pp. 1299-1303.
- 23 Mundinger, MO. et. al. "Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians: A Randomized Trial." *Journal of the American Medical Association*. January 5, 2000; 283: pp. 59-68.
- 24 Ritter, A. "Managed Care Credentialing and Reimbursement Policies: Barriers to Healthcare Access and Consumer Choice." *National Nursing Centers Consortium*, September 2005, p. 2.
- 25 Independence at Home Act. May 26, 2009. <http://www.aanp.org/NR/rdonlyres/D7E6B79A-0C72-47F7-8BCC-3471E8DB81E7/3262/IAHSum52609.pdf>.
- 26 Ibid.
- 27 Miller, H.D. "Creating Payment Systems to Accelerate Value-Driven Health Care: Issues and Options for Policy Reform." *The Commonwealth Fund*. September 24, 2007; Vol. 72, p. 4.
- 28 Haas, P. "Medical Home Model Calls for New Payment Models." *American Academy of Family Physicians*. News Now. February 17, 2009. www.aafp.org.
- 29 Ibid.
- 30 There is also P4P as "payment for participation" and "payment for process." A complete discussion of health care payment models is beyond the scope of this report.
- 31 Hughes, R., McNamee, E. *Collaborate to Compete: A Prescription for Value-Based Health Care in Arizona*. St. Luke's Health Initiatives. April 2007. www.slhi.org.
- 32 A diagram of this approach is found at Ibid. p. 28.
- 33 Johnson, WG. et. al. *The Use of Electronic Medical Records and Physicians' Attitudes Toward a Health Information Exchange*. Center for Health Information and Research. Arizona State University Biomedicine. September 2009.
- 34 Quoted in Sarasohn-Khan, J. *The Wisdom of Patients: Health Care Meets Online Social Media*. California HealthCare Foundation. April 2008, p. 10. www.chcf.org.
- 35 Scott, MK. *Health Care Without the Doctor: How New Devices and Technologies Aid Clinicians and Consumers*. California HealthCare Foundation. May 2009, p. 3. www.chcf.org.
- 36 Sarasohn-Kahn, J. op. cit. , p. 6.
- 37 Christensen, C. et. al. op. cit.
- 38 Christensen, C. op. cit. p. 101.
- 39 Whitcomb, ME., Cohen, JJ. "The Future of Primary Care Medicine." *New England Journal of Medicine*. August 12, 2004; 351:7, p. 711.
- 40 *Comprehensive Care Internal Medicine*. American Board of Internal Medicine. Fall 2007. www.ccimreport.org/report.html.
- 41 Schroeder, SA. "Primary Care at a Crossroads." *Academic Medicine*. August 2002; Vol. 77, No. 8, p. 772.
- 42 Quoted in Ibid.
- 43 "New Primary Care Initiative Targets Doctors in Training." *TransforMED*. February 2, 2007. www.transformed.com/news-eventsdetailpage.cfm?listingID=16.
- 44 Mundinger, MO. "Twenty-first-century Primary Care: New Partnerships between Nurses and Doctors." *Academic Medicine*. August 2002; Vol. 77, No. 8, pp. 776-780.
- 45 Adapted from Aubrey, K. "A Boomer's Guide to Communicating with Gen X and Gen Y." *Business Week*. August 14, 2008; Denham, TJ, Godbow, N. "Literature review: Factors Affecting the Development of Generation X and Millennials." Retrieved from ERIC database (ED478488); "Generational Learning." Retrieved from http://blogs.edweek.org/edweek/Leader-Talk/2009/06/generational_learning.html; Smith, WS. *Decoding Generational Differences*. 2008, Deloitte, LLP.
- 46 Francese, Peter. "2010 America." *Advertising Age*. October 12, 2009. http://adage.com/article?article_id=139592.
- 47 Hughes, R., McNamee, E. op. cit., p. 28.
- 48 *The Report of the Arizona Primary Care Workgroup*, April 2009 is available at www.slhi.org/publications/studies_research/pdfs/PCWorkgroupfinalreport.pdf.
- 49 See *Collaborate to Compete, Dancing on a Pin, Arizona CAN* and other SLHI reports for further information and examples. www.slhi.org.
- 50 This definition is an expansion of the Institute of Medicine's 1996 definition discussed on Part One of this *Goodbye, Hello* report, p. 9. www.slhi.org.
- 51 Hughes, R., Lockhart, C. *Dancing on a Pin: Health Planning in Arizona*. St. Luke's Health Initiatives. November 2005, pp. 42-45. www.slhi.org.



St. Luke's Health Initiatives

A Catalyst for Community Health

2929 N Central Ave
Suite 1550
Phoenix Arizona 85012

www.slhi.org
info@slhi.org

602.385.6500
602.385.6510 fax

NONPROFIT
U.S. Postage
PAID
Phoenix, Arizona
Permit No. 4288

Our Mission

To improve the health of people and their communities in Arizona, with an emphasis on helping people in need and building the capacity of communities to help themselves.

The purpose of *Arizona Health Futures* is to unravel an important health policy topic of relevance to Arizonans, provide a general summary of the critical issues, background information and different perspectives on approaches to the topic, tap into the expertise of informed citizens, and suggest strategies for action.

Arizona Health Futures is available through our mailing list and also on our web site at www.slhi.org. If you would like to receive extra copies or be added to the list, please call 602.385.6500 or email us at info@slhi.org.

**ARIZONA
HEALTH
FUTURES**

Comments and suggestions for future issues,
as always, are welcome.

St. Luke's Health Initiatives is a public foundation formed through the sale of the St. Luke's Health System in 1995. Our resources are directed toward service, public education and advocacy that improve access to health care and improve health outcomes for all Arizonans, especially those in need.

Analysts:

*Roger A. Hughes,
PhD*

*Peggy Stemmler,
MD, MBA*

Focus Group Facilitation:

*Sharon Flanagan-
Hyde, MA*

Graphic Design: Chalk Design

© 2010 All Rights Reserved.

Material may be reproduced
without permission when
proper acknowledgement
is made.