

PUTTING
THE
PRiME
IN PRIMARY CARE



ROOTS



The **Jewish Healthcare Foundation (JHF)** is a public charity that offers a unique blend of research, education, grantmaking and program management to advance the quality of clinical care and health of populations. Its current focus is promoting safety, best practice and efficiency at the front line of care, and building a workforce to sustain this. To accomplish its goals, JHF created the Pittsburgh Regional Health Initiative (PRHI) in 1998 and Health Careers Futures (HCF) in 2003. JHF is also a founding member of the Network for Regional Healthcare Improvement (NRHI). For more information, visit www.jhf.org.



The **Pittsburgh Regional Health Initiative (PRHI)** is an independent catalyst for improving healthcare safety and quality. It operates on the premise that dramatic quality improvement is the best cost-containment strategy for health care. PRHI is the first regional consortium of medical, business, and civic leaders to address healthcare safety and quality improvement as a social and business imperative. Turning its own community into a demonstration lab, PRHI strives to accelerate healthcare quality improvement and set the pace for the nation. PRHI believes that health care is local so Federal policy changes alone cannot achieve needed reform; those who work at the point of care develop quality and safety improvements that work and last. PRHI also believes that continuous improvement in quality and safety requires setting the highest possible standards, to settle for less limits achievement. For more information, visit www.prhi.org.

ROOTS publications explore issues central to the advancement of healthcare quality and value. The national imperative to contain healthcare costs has sharpened the focus to preventing hospitalizations where possible – a common thread among JHF and PRHI projects. Underlying our goal in preparing this issue of **ROOTS** is the conviction that new models of care where best practices are applied reliably with customization and compassion may break the cycle of hospitalizations and readmissions. We consider some innovative models and major policy changes that are promising. Our hope with this issue of **ROOTS**, as with all others, is to educate, inspire conversation, stimulate thinking and encourage creative action.

ACKNOWLEDGEMENT

Author

Robert Ferguson, Program Manager, Jewish Healthcare Foundation

Contributors

Karen Wolk Feinstein, PhD, President and Chief Executive Officer, Jewish Healthcare Foundation and Pittsburgh Regional Health Initiative

Tina Hahn, Director of Education and Coaching, Pittsburgh Regional Health Initiative

Kyle Crawford, MSW, Program Associate, Jewish Healthcare Foundation

Bruce Block, MD, Chief Medical Informatics Officer and Chief Learning Officer, Pittsburgh Regional Health Initiative

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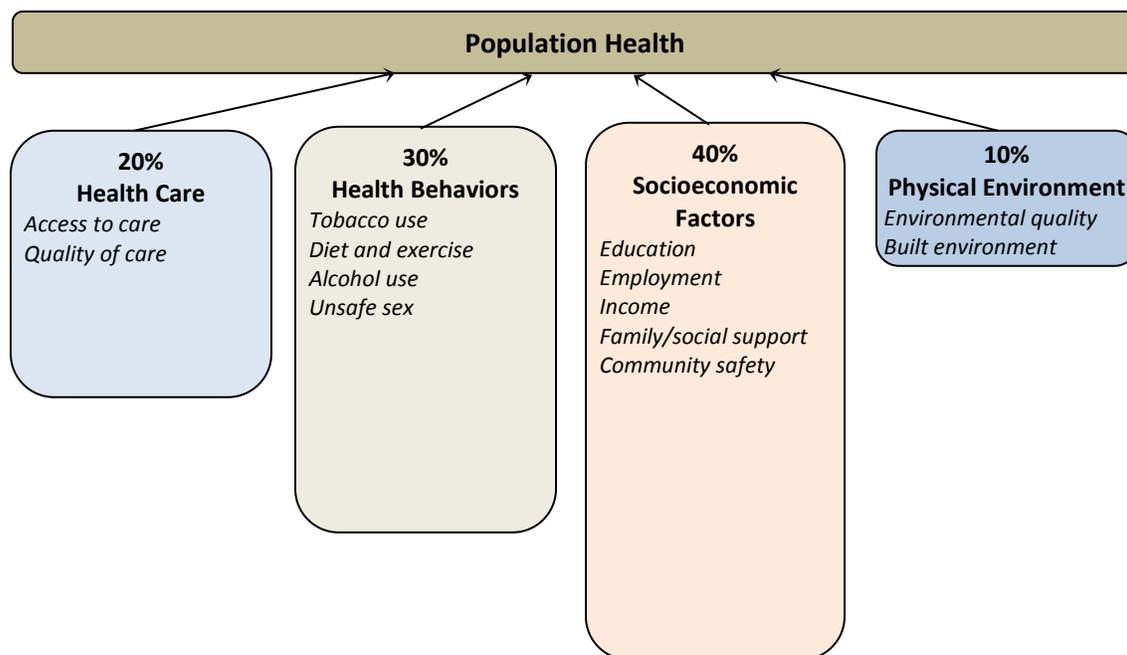
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PREFACE

Blending Buckets and Crossing Divides

A health foundation constructs an agenda around a couple of core questions that go something like this: “What is health and how can we best promote it?” It’s that kernel of “what is health” that defines the rest: what gets funded, how staff resources are allocated, and how activities connect to and reinforce one another. If health is the ability to enjoy life as fully as possible, without pain, disease, sadness, anxiety, disability, hunger, or sleeplessness, then we would fashion a “health” agenda that is perhaps only 20% focused on health care, 30% on good health behaviors, 40% on socioeconomic factors, and 10% on the physical environment (Figure 1). Some researchers assert that only 10% of preventable deaths are attributable to something the medical delivery system could reverse.

Figure 1: Determinants of Health



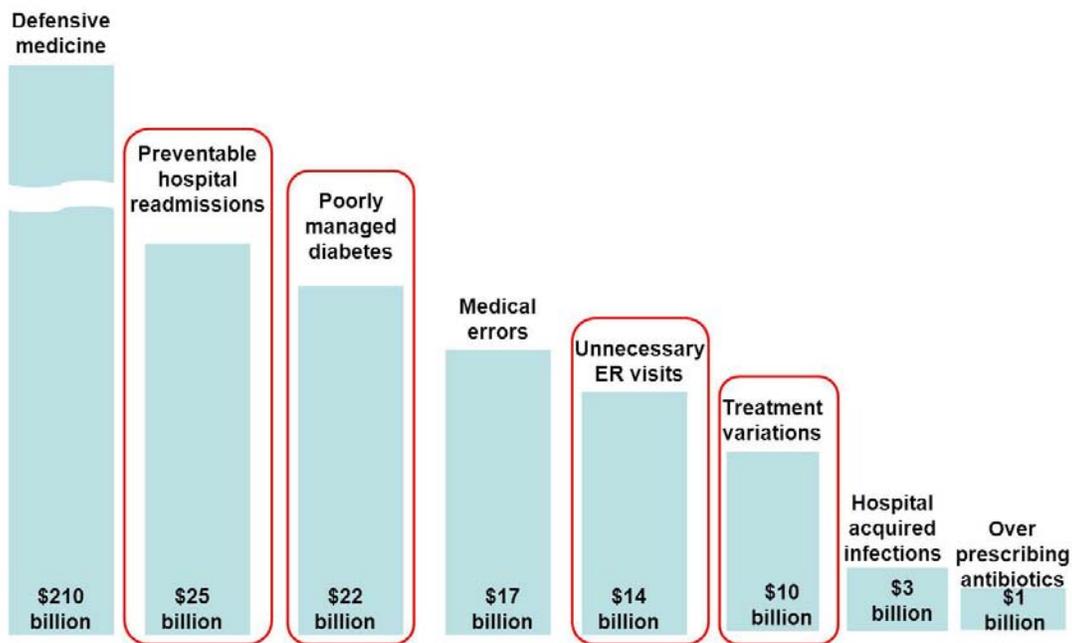
Source: Taken from: Magnan, S., Fisher, E., Kindig, K., Isham, G., Wood, D., Eustis, M., Backstrom, C., & Leitz, S. (November 2012). Achieving Accountability for Health and Health Care. *Minnesota Medicine*, 37-39.

But few health foundations observe this distribution. The Jewish Healthcare Foundation (JHF) does not. For 21 years, we have struggled with the right balance between individual and population health, between clinical care and public health interventions, and between physical health on the one hand and behavioral health and social/environmental factors on the other. So we put our programs, grants, and research into separate buckets: furthering women’s heart health, breast cancer early detection, nutrition, clean air, and vaccination campaigns go into public health; preventing hospitalizations, medical error, inefficient and unreliable clinical practices, and strengthening primary care and transitions of care into another. The former get classified as the Jewish Healthcare Foundation; the

latter as the Pittsburgh Regional Health Initiative (PRHI), an operating arm of JHF. And all our workforce development activities go to Health Careers Futures (HCF), another operating arm of JHF. This all seemed logical, and when the edges bled into one another or a clear definition and assignment wasn't obvious (as with our end-of-life work), we just let the ambiguity ride. But paths have converged with the Affordable Care Act, the Health Information Technology for Economic and Clinical Health (HITECH) Act, and other policy developments of the past four years. The concepts of accountable care for defined populations, value-based purchasing, bundled payments, penalties for recurrent readmissions, medical homes, managed long-term care for dual eligibles, new visions of primary care outreach and neighborhood and community centeredness, performance incentives, "meaningful use" of health information technology, and total cost of care measurements all have narrowed the divides among medical care, mental health services, public health, and social services. We are seeing our own buckets spill quickly into amalgamating vats.

The national imperative to contain healthcare costs has sharpened the focus to preventing hospitalizations where possible (Figure 2). When people ask what the common thread is among all the projects here at JHF, PRHI, and HCF, it is easy for me to say, "They all keep people out of hospitals." And this is no stretch. Whether it is pursuing a better end-of-life, integrating behavioral health into primary care, building secondary care centers to support smaller medical practices, improving clinical care in skilled nursing, or using data to improve the outcomes of care, the common goal is obvious: keep people out of hospitals.

Figure 2: Where the Costs of Waste Lie



Source: Institute of Medicine (1999), "The Factors Fueling Rising Healthcare Costs 2006", PricewaterhouseCoopers (2006), MedPAC (2007), American Association of Endocrinologists (2006), Center for Disease Control and Prevention (2005), Solucient (2007), U.S. Outcomes Research Group of Pfizer Inc. (2005), National Committee for Quality Assurance (2005), Analysis by PricewaterhouseCoopers' Health Research Institute. 2010

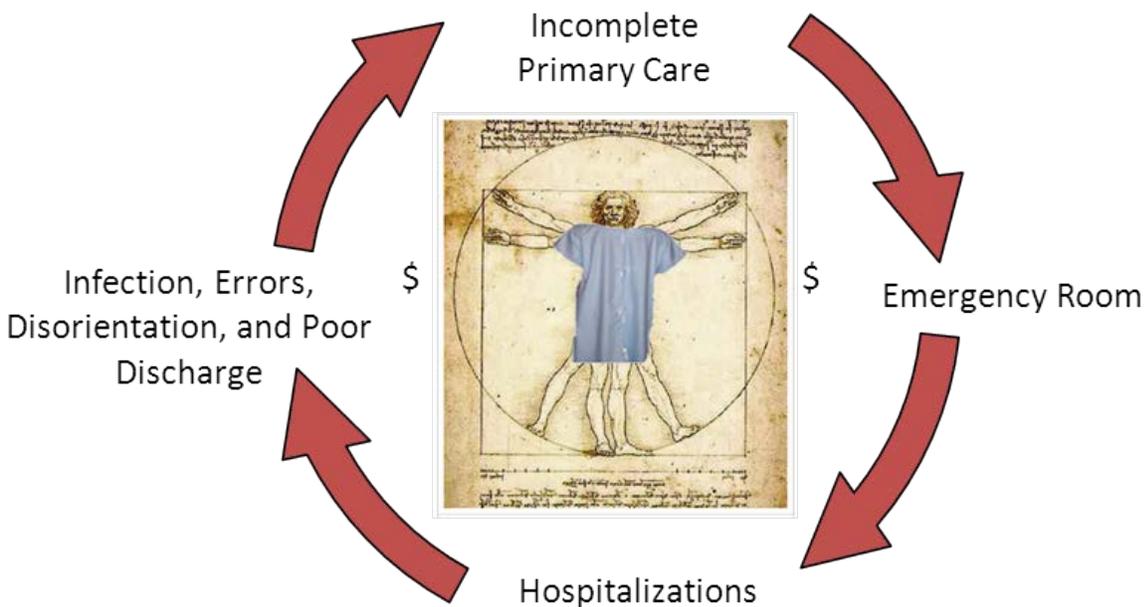
And this is not simply to hold down cost. Hospitals are dangerous places, with superbugs, medication errors, falls, traumas, and other dangers. Perhaps even more sinister is what Harlan Krumholz, MD calls Acquired Transient Vulnerability (also called the co-morbidity of hospitalization) that can result for

certain populations, where the very nature of hospitalization, rather than some error or accident, causes physical and mental impairments that can sap independence and quality of life. For the elderly and disabled, this is particularly serious and can result in permanent institutionalization.

But times are changing. Primary care physicians and their practices are under greater scrutiny to achieve standardized performance on measures of patient satisfaction, reliable evidence-based clinical processes, and outcomes of care. Measures for primary care quality and efficiency are multiplying, whether from the National Committee on Quality Assurance, Centers for Medicare & Medicaid Services, National Quality Forum, commercial insurers, the American Board of Internal Medicine, and individual Medicaid programs, among others. Increasingly, reimbursement will be dependent on achieving certain targets. And the scrutiny is open to the public and the patient, as the Obama administration promotes transparency, public reporting, and the “liberation” of performance data.

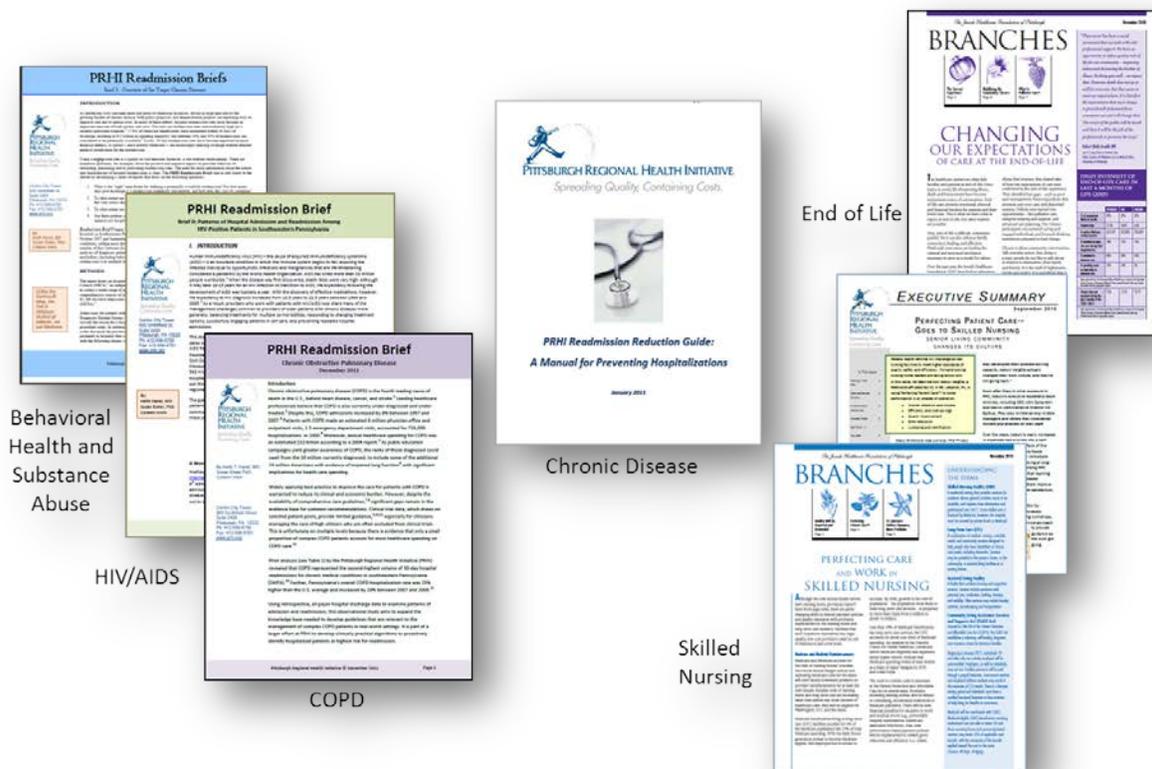
Adherence to clinical care that does not extend beyond the office walls and that does not accommodate prevention and even “hot spotting” (a laser focus on the highest users and most vulnerable), may not result in high performance. The financial penalties alone could cause almost all primary care practices to reevaluate who does what for whom within their organizations. New models of care that are applied reliably with precision and compassion may indeed be necessary to break the cycle of hospitalizations and readmissions (Figure 3). It is timely to consider what those new models could be, and how much of the cost of preventable hospitalizations and poorly managed chronic diseases could be reduced by an assertive primary care system that proactively identifies those most in need and extends its comprehensive approach to care out into the community.

Figure 3: The Readmissions Cycle



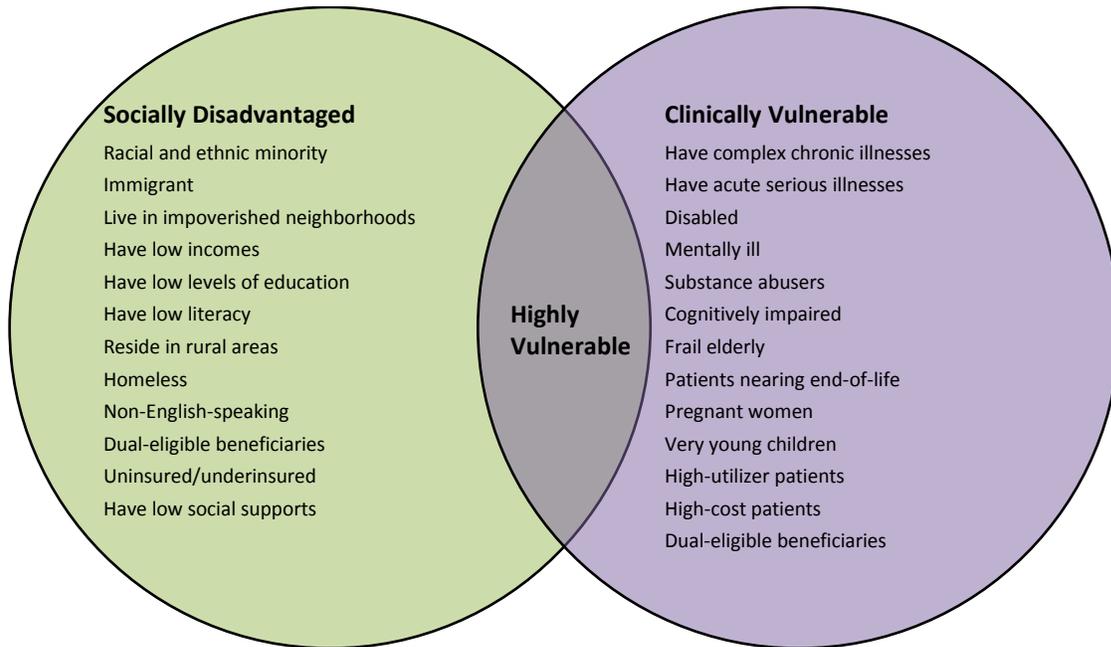
To shed light on the question, “Who is frequently hospitalized?,” JHF’s research team has been mining the Pennsylvania Health Care Cost Containment Council’s (PHC4) all-payer, inpatient claims database. Our research publications (Figure 4) have led us to conclude that the “high utilizers” in southwestern Pennsylvania are disproportionately African American and Medicaid beneficiaries and are most often white women 65 years of age or older and African American males between the ages of 45 and 64. Further, behavioral health concerns appear to be endemic among virtually the entire population of high utilizers. Our research has shaped our focus on mental health and substance use comorbidities, chronic obstructive pulmonary disease, diabetes, heart disease, and heart failure – all of which relate to behaviors and lifestyles and are amendable to prevention.

Figure 4: Let the Data Guide Our Work: The Complex Patient



Among the more promising developments to “blend buckets and cross divides” in the interest of a healthier population is the new focus on redesigning primary care particularly for “vulnerable populations” who intensively use medical and social services (Figure 5). But is this new focus a redesign, or simply an amalgam of models past and present into the future?

Figure 5: Vulnerable Populations



Important Characteristics:

Geographic concentration
High use of social services
Health care concentrated in low-performing healthcare systems

Important Characteristics:

Social needs exacerbate clinical needs
Greatest opportunity to reduce cost, improve quality, and reduce disparities

Important Characteristics:

Geographically dispersed
High use of clinical care
All socioeconomic groups affected

Source: Taken from: Lewis, V. A., Larson, B., K., McClurg, A., B., Boswell, R., G., & Fisher, E., S. (August 2012). The Promise and Peril of Accountable Care for Vulnerable Populations: A Framework for Overcoming Obstacles. *Health Affairs*, 31(8), 1777-1785.

While some may believe they are pioneers reinventing the wheel, primary care “redesigns” often incorporate useful features from historical integrative models that have lively roots in America and may themselves be an improvement over many of the primary care models from abroad that we like to extol. We have a proud tradition of dealing broadly with health in our settlement houses, Office of Economic Opportunity neighborhood health centers, and Federally Qualified Health Centers. All have worked for closer partnerships, permeable boundaries, and interdependencies among the medical, public health, community development, and social service sectors. Particularly for vulnerable populations, these models achieved superior health outcomes. However, they fit poorly into a fee-for-service reimbursement system; and were somewhat inimical to efforts to elevate primary care to an internal medicine specialty where the medical practitioner rejected care that extended beyond the office and the hospital, and beyond traditional medical/clinical services.

Plus ça change, plus c'est la même chose

We can move forward knowing that the more things change, the more they remain the same. We can turn to our advantage Ecclesiastes’ lamentation that there is “nothing new under the sun.” The point here is that we have a rich tradition of crossing the divide between medicine and public health; we aren’t entering uncharted waters.

Any revisiting of older models of integrative care for fragile populations in the U.S. could begin with settlement houses. These institutions were distinctly neighborhood-focused. They recognized above all that physical, mental, and social well-being were inseparable from lifestyle, family, social networks, support systems, education, literacy, employment, income, housing, and the environment. Improving where and how people live, learn, work, and play can have as much impact on health as medical care. Linking obesity, cardiac, pulmonary, and psychiatric problems to employment, transportation, safety, housing, nutrition, culture, language, substance use, and air quality came naturally to the settlement house organizers. And they aren't relics; we have modern versions, though many hang on by a shoestring as their behavioral, social, and home-based service budgets often get axed under the "nice but inessential" fallacy.

A critical element in the neighborhood center approach was prevention. This goes beyond addressing immediate health problems and managing chronic disease to addressing the determinants of health and preventing illnesses, disability, and premature death. Prevention is integral to public health and represents a critical component in addressing what is now termed our nation's "health disadvantage." As a recent National Research Council and Institute of Medicine (IOM) report documented, people in the U.S. experience shorter lives and poorer health than our counterparts in other high-income countries (National Research Council and IOM, 2013) (see Appendix). And the health disadvantage gap is widening. This has serious implications for our nation's competitiveness, our economy, and our delivery systems. The authors note several factors at play, including fragmented primary care and public health systems, unhealthy personal behaviors, social conditions, and income inequalities, as well as harmful factors in the physical and social environments. Traditional primary care will not ameliorate these hazards nor does it typically include aggressive community outreach in the interest of prevention. In this *ROOTS*, we document some interesting models of primary care demonstrating proactive and preventive healthcare services – in, of, and by the community.

We'll begin this issue of *ROOTS* with Chapter One, a brief overview of modern versions of the old settlement house. We define these modern versions as a community center that provides medical, behavioral, and social services in the community, not just within the walls of their office. Indeed, these broad-based attempts to cover many sources of ill-health hold promise, especially for the populations served by Medicaid and Medicare, who are most likely to include vulnerable populations. In fact, in many ways, settlement house models are designed for the most vulnerable. They offer promising approaches for primary care offices, hospitals, and even long-term care facilities that are challenged now to achieve defined outcomes, including reducing preventable readmissions, for complex and hard-to-serve patients. But to incorporate this model, traditional providers will have to step out of their accustomed space to perform home visiting, enlist indigenous leadership, form community organization partnerships, and create multi-disciplinary teams that include new roles for paraprofessionals. Of course, the policy backdrop, against which these actions will succeed or fail, is whether such centers will get reimbursed for their contributions to health broadly-defined.

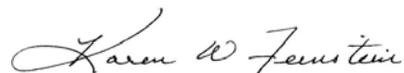
Chapter Two explores updated versions of primary care offices with added capabilities, particularly behavioral health, information technology, medication reconciliation and clinical pharmacy, care management, patient engagement, health education, and quality improvement methodologies. These models could only be feasible if we adopt supportive payment models and reward value in outcomes with reimbursement incentives. An important emphasis is integrating behavioral and physical health, particularly in regard to health assessments and care plans that incorporate medical and behavioral aspects of health. These models differ from those in chapter one, because they are still primarily office-

based and built on the traditional clinical care models. They include the Patient-Centered Medical Home and the Chronic Care Model, which we discuss at some length.

Chapter Three extends the theme of maximum innovation and out-of-the-box thinking by highlighting creative approaches customized for special populations, including “super-users.” An interesting twist on the value of segmenting populations for the purposes of primary care is offered by Porter, Pabo, and Lee in the March 2013 issue of *Health Affairs*. The authors urge the deconstruction of primary care into discrete patient subgroups and the integration of relevant specialty providers: “Thinking about primary care as a single service not only undermines value but also creates a trap that makes value improvement difficult, if not impossible. We will never solve the problem by trying to ‘do primary care better’” (Porter et al., 2013). Instead, the authors argue that we need to do primary care differently, customized to the needs of different patient subgroups. Such primary care models often hinge on “hyper” applications of health information technology and data mining. In some ways, they bring us full circle to the settlement house (on steroids) with modern technology playing a new role, because the care teams extend beyond the office and into the community.

Chapter Four takes a diversion to discuss new roles for old and new primary care providers, including a wide variety of professional and paraprofessional players. These new provider roles are so various and idiosyncratic that we will only be able to touch on a few. But this will provide some perspective on the range of innovation that is now being tested and measured. More and more we hear about team-based models, and these offer the promise of removing pressures on physicians in primary care to be all things to all patients. One sad moment in the popular movie, *Escape Fire*, occurs when a committed young physician leaves her community health center in frustration because her patients have so many needs and she cannot meet them all and fulfill her daily medical responsibilities. By fully engaging non-physician supporters, doctors need not abandon their posts because they cannot do everything that their patients need. Others can step up to support the doctor’s comprehensive treatment plans.

Chapter Five reviews some major policy changes that are either promising or necessary for innovative models of primary care to be effective and enduring. The last four years have been game changing in spawning both a renewed interest in models that cross the chasm between public health and medicine, the birth of enhanced versions of these models, demonstrations to test new roles for new workers in primary care, and payment mechanisms that reward better outcomes. Right now, in fact, our nation is engaged in one of the boldest and most ambitious attempts to experiment with new models of primary care. Whether it is through regional extension centers, demonstrations launched by the Center for Medicare & Medicaid Innovation, applied research sponsored by the Agency for Healthcare Research and Quality, or new worker roles evolving from the new incentives and penalties of value-based purchasing and “meaningful use” requirements, innovation is everywhere. And most helpfully, it is being carefully monitored and measured. This exciting era of experimentation should yield even more evidence on which to design future primary care models.



President & CEO
Jewish Healthcare Foundation

CHAPTER ONE: Primary Care that is in, of, and by the Community

The settlement house set the groundwork for what shaped the neighborhood health center of the “Great Society” and its successor, the Federally Qualified Health Center (FQHC). With an overarching objective to help every citizen live a life as vigorous, comfortable, safe, and satisfying as possible, and to help every citizen engage as fully as possible in the community, these organizations did not regard the provider’s office as the sole location for health interventions. With a focus on community empowerment, public health, and social reform, these models have been overlooked in recent years as efforts focused on refining and updating the medical home models of primary care. The neighborhood health centers, created during the War on Poverty to integrate medicine and public health, were designed with underserved populations in mind. In fact, the settlement house, neighborhood health center, and FQHC linked themselves to their geographic communities by including local residents in governance, employment within the centers, and services planning. Today’s FQHCs have a 51% rule, requiring that 51% of their boards be patients of the FQHC.

Other community-focused interventions often rely on community consortia to develop community action plans by sharing data, reviewing health trends, identifying “hot spots,” and working across organizational boundaries on solving problems and even changing policy with unified advocacy efforts. Non-health workers, such as barbers and salon workers, may even be enlisted to participate in health promotion efforts. FQHCs often participate as a community partner in these interventions. Overall, these community health models focus on population health broadly and work in partnership with other community organizations.

Settlement Houses

The settlement movement arose in the 1800s in response to the recognition that political democracy failed to eliminate poverty and provide a healthy place for the poor to gather. Settlements were built to offer people in impoverished districts educational, cultural, recreational, and social activities; and sometimes even food and shelter. Settlements also served as meeting places for community organizations that empowered community residents. The staff lived at the settlement and immersed themselves in the community to better understand the causes of poverty and the needs of the poor; and to foster relationships with community leaders. The settlement house movement eventually led to the creation of social work, a profession established to improve individual and community health by addressing the complexity of barriers that inhibit a high quality of life.

Modern Settlement Houses

Building upon the movement created by settlement houses, Community Human Services in Pittsburgh, Pennsylvania developed a “modern settlement house” for patients with complex human service needs. An interdisciplinary team of nurses, physicians, social workers, care managers, food service staff, drivers, and volunteers provides social and recreational support, health education and outreach, advocacy, financial literacy consultations, and services for basic needs including food, housing, medical, and social needs.

The modern settlement house provides these community-based and in-home services to people facing multiple challenges, including mental and physical health issues, disabilities, poverty, trauma, chemical dependency, food insecurity, housing crises, social isolation, and stigma. To address hunger and nutrition, for example, Community Human Services provides trips to grocery stores, delivers meals to people's homes, and operates a food pantry.

Community Human Services also offers several healthcare programs. These include in-home services to adults with disabilities, a health clinic with a part-time nurse who provides free consultations and care; as well as a podiatrist, two nurses who perform outreach and physical and mental health care, and a medication management component of their housing services.

To foster a social support network, Community Human Services also creates opportunities for people to share meals and socialize with peers. As part of "Wednesday Wanders," women over the age of 75 (many of whom are widows) meet in the community center to sing, dance, and hear lectures. Community Human Services' comprehensive services enable vulnerable individuals to remain safely in their community and in their homes.

Neighborhood Health Centers

As a key component of the War on Poverty, neighborhood health centers were funded to increase access to health care and integrate public health and medicine under one roof. In the 1950s, Dr. Jack Geiger was working with Drs. Sidney and Emily Kark in South Africa. The Karks created 40 community health centers in South Africa using a framework known as community-oriented primary care (COPC). The COPC model assumes responsibility for a defined population, identifies community health problems, develops remedial programs with the at-risk community, and monitors the impact of those programs.

When Dr. Geiger came back to the United States, he opened the first two neighborhood health centers in Boston and rural Mississippi in 1965 with funding from the Office of Economic Opportunity (OEO). Geiger's team hired and trained staff from the neighborhood, and Dr. Geiger famously began prescribing food for malnutrition that was picked up at grocery stores and billed to the pharmacy, reasoning, the "last time we looked in the book, the specific therapy for malnutrition was food" (DeBuono et al., 2007). After visiting one of the centers, the late Senator Edward Kennedy drafted legislation that eventually resulted in funding for additional health centers. By 1975, there were 40 neighborhood health centers across the country.

Federally Qualified Health Centers

In the 1970s, when the OEO moved to the Department of Health, Education, and Welfare, which is now the Department of Health and Human Services, the community health centers were formalized into non-profits and expanded across the country as Federally Qualified Health Centers. Today, there are over 1,200 FQHCs with more than 8,500 sites in the U.S. Reflecting the principles of their predecessors, FQHCs are required to have a community board. Specifically, 51% must be patients of the health center.

Patients receive comprehensive primary, preventive, and enabling healthcare services in underserved communities. They typically have access to medical, dental, pharmacy, social, and mental health and substance abuse services all under one roof. They also receive enabling services, such as education, translation, transportation, and case management, to facilitate their access to care. To address non-medical needs, FQHCs refer patients to complementary services in the community, including legal services, housing, employment, and food options. Their fees are adjusted based on a sliding fee scale.

For example, In Kansas City, Missouri, Swope Health Services serves as a “one-stop shop” for 55,000 patients per year (the majority of whom are poor) at eight clinic and residential treatment locations. The FQHC provides a range of medical and behavioral health services, including the services listed in the table below.

Table 1: Selection of Services Provided by Swope Health Services as a One-Stop Shop

Medical Services	Behavioral Health Services
Adult Medicine	Central Crisis Response Team
Dental	School-based Social Work
Health Literacy	Substance Abuse Treatment for Adolescents
Laboratory	Residential Treatment
Obstetrics and Gynecology	Rehabilitation
Optometry	Mental Health Court
Pediatrics	Health Ambassadors
Pharmacy	Health Care for the Homeless
Radiology	HIV Testing and Care

Their multidisciplinary team provides medical, dental, diabetes and cardiovascular education, obstetrics, gynecology, vision, pharmacy, and behavioral health services.

The Jewish Healthcare Foundation’s version of the old settlement house in modern guise is actually a network of services closely clustered but serving several contiguous urban neighborhoods in Pittsburgh’s East End. Under the auspices of Jewish communal agencies linked geographically and functionally to an FQHC (the Squirrel Hill Health Center), this complex of services consists of a network of aging services including skilled nursing, home-delivered meals, hospice, assisted living and navigation services, and a food pantry that also offers career counseling and social and mental health services. While open and encouraging to vulnerable populations and families without resources, this network has gained the participation of a full range of socio-demographic, linguistic, religious, and cultural groups. The Squirrel Hill Health Center itself embodies the principles of a settlement house: a center that is in, of, and by the community.

The Squirrel Hill Health Center serves predominately new immigrants and refugees, the elderly, and other medically underserved populations. The FQHC provides comprehensive services including medical, dental, obstetrics, behavioral health, patient education, case management, and language translation. The Medical Director, a geriatrician, leads the team in working closely with patients, caregivers, the broader health system, and community organizations to ensure that their care meets the elderly patients’ physical needs, emotional needs, values, and cultures.

In addition to language translation services in the community or over the telephone, the FQHC has staff who are fluent in Russian, Hebrew, Spanish, Arabic, Nepali, and American Sign Language. The center also provides care to patients in their neighborhoods through the use of its mobile van, which is equipped with an exam room and supplies. As one of the community health centers in the Safety Net Medical Home Initiative, this FQHC is now recognized as a Level III Patient-Centered Medical Home (PCMH) by the National Committee for Quality Assurance (NCQA). The ever-growing population of new

patients, including geriatric patients, is evidence of the community's confidence in the FQHC's ability to deliver care based on the needs of its unique population.

Continuing the legacy of its predecessors, FQHCs have also led the way in demonstrating how primary care offices can partner with community organizations to address the social determinants of health – where people live, learn, work, and play. Kokua Kalihi Valley Comprehensive Family Services in Honolulu, Hawaii transformed 100 acres into a nature park in partnership with local organizations and agencies. The park includes hiking trails, walking and biking paths, community food production, and a cultural learning center. And in Los Angeles, St. John's Well Child and Family Center noticed patients with lead poisoning, skin diseases, and insect and rodent bites. In response, St. John's Well Child and Family Center partnered with a local housing agency, a human rights organization agency, and a tenant rights organization to address the substandard and poor housing conditions.

It must be emphasized that not all FQHCs reflect the historical promise of the settlement house and OEO Neighborhood Health Centers in being engaged in the community and bringing their services out of the office. Some FQHCs exist as small storefront medical practices for the lowest income populations. Often, an FQHC will have a single physician and perhaps a nurse or medical assistant. It is a worthy query whether these small shops offer sufficient services and capacity to achieve satisfactory outcomes for hard-to-serve populations. Perhaps the Health Resources and Services Administration (HRSA) should consider whether consolidations and mergers should be actively encouraged in the interest of developing more comprehensive care centers.

CHAPTER TWO: Expanded Primary Care Models

Another effort to restructure primary care involves adding new capabilities to the office-based, medical model. The Patient-Centered Medical Home (PCMH) is a leading example of revisiting office-based primary care, and the Expanded Chronic Care Model is an under-recognized example of integrating population health promotion and expanded primary care models.

The Patient-Centered Medical Home

In 1967, the term “medical home” was used by the American Academy of Pediatrics to describe a central source of records for children with special health needs, but it was not until 2007 when the concept of a patient-centered medical home was operationalized. Various organizations proposed definitions, standards, and principles. In 2007, four American physician associations adopted a set of joint principles to describe the PCMH as “a healthcare setting that facilitates partnerships between individual patients and their personal physicians and, when appropriate, the patient’s family” (PCPCC, 2007). Later, in 2008 and 2011, the National Committee for Quality Assurance (NCQA) created a series of standards for PCMHs. Following the NCQA’s standards, Qualis Health and the MacColl Center for Health Care Innovation created “Change Concepts” for practice transformation, which include engaged leadership, quality improvement strategy, empanelment, continuous and team-based health relationships, patient-centered interactions, organized, evidence-based care, enhanced access, and care coordination (Safety Net Medical Home Initiative, n.d.). The Change Concepts further strengthened the principles of the PCMH, and are being used in the Commonwealth Fund’s Safety Net Medical Home Initiative.

Today, a PCMH is known as a care setting where a patient has a personal physician who directs a healthcare team and provides or arranges for all of the patient’s healthcare needs, including his or her physical and mental health needs. The medical team coordinates the patient’s care across all the healthcare system’s settings and involves organizations in the patient’s community when needed. The patient receives evidence-based medical care and participates in the decisions regarding his or her care plan, along with his or her family.

The PCMH also provides enhanced access to care through expanded hours, same-day appointments, or enhanced communication methods such as electronic messaging. The medical team also engages in continuous quality improvement, potentially receives payment that recognizes the added value of their services, and uses health information technology to support optimal care and identify and manage patient populations.

The PCMH model provides a way to improve the infrastructure of primary care practices through redesign, and has reinvigorated primary care in the U.S. It is often described as one of the most promising approaches. However, findings from a recent logistic-regression study of community health centers in one county suggest that there may not be a significant relationship between performance on the NCQA assessment of a PCMH and achievement of process or outcome measures for diabetes care (Clarke et al., 2012). Because the PCMH model was only operationalized a few years ago, long-term studies of its impact on care have not yet been published. Nevertheless, there are studies of short-term efficacy, as summarized below.

RECENT LITERATURE

In 2012, Mathematica Policy Research conducted a systematic review of the quantitative evidence on the medical home and found 14 quantitative evaluations of 12 interventions that employed three or more of the five medical home components (Peikes et al., 2012). Six of the 12 interventions had evaluations with rigorous evaluation methods. The evidence from these six interventions indicates some favorable effects on cost, satisfaction, and health; a few unfavorable effects on costs; and many inconclusive results. However, most of the evaluations tested precursors to the medical home, and the authors noted the need for more rigorous analyses.

A second review of medical homes included studies from 2007 to 2010 that examined one or more of the components of the Joint Principles of a PCMH (Hoff et al., 2012). This review concluded that aspects of the medical home show promise, but additional research is needed. Also, an AHRQ-funded review of PCMH studies identified 27 completed studies (54 articles) that met AHRQ's definition of a PCMH and were not disease-specific studies (Williams et al., 2012). The review found that the PCMHs demonstrated the following:

- a small positive impact on patient experiences (effective size median 0.27; five random control trials (RCTs); moderate strength of evidence);
- a small to moderate effect on staff experience (effect size median 0.18; two RCTs; low strength of evidence);
- a small to moderate effect on preventive care services (risk difference median .013; three RCTs; moderate strength of evidence);
- insufficient evidence on process of care (risk difference median .066; two RCTs); and
- insufficient evidence on clinical outcomes (three RCTs).

In summary, the literature reviews note the following:

- aspects of the PCMH show promise;
- most of the studies were conducted in integrated healthcare systems;
- there is insufficient evidence to evaluate whether specific PCMH components are associated with greater effects; and
- additional rigorous research is needed.

In a recent article in *Health Affairs* (Porter et al., 2013), Michael Porter, Erik Pabo, and Thomas Lee write: "The patient-centered medical home is in many ways 'necessary but not sufficient' to implementing a value-based primary care framework. In other words, it is unlikely to solve the fundamental value challenge on its own. At worst, patient-centered medical homes could become just an overlay, in which care coordinators manage dysfunction instead of changing the underlying delivery structure. Practices that apply patient-centered medical home standards simply through adding a patient registry and more care coordination personnel are unlikely to improve the value of care delivery and may see costs rise."

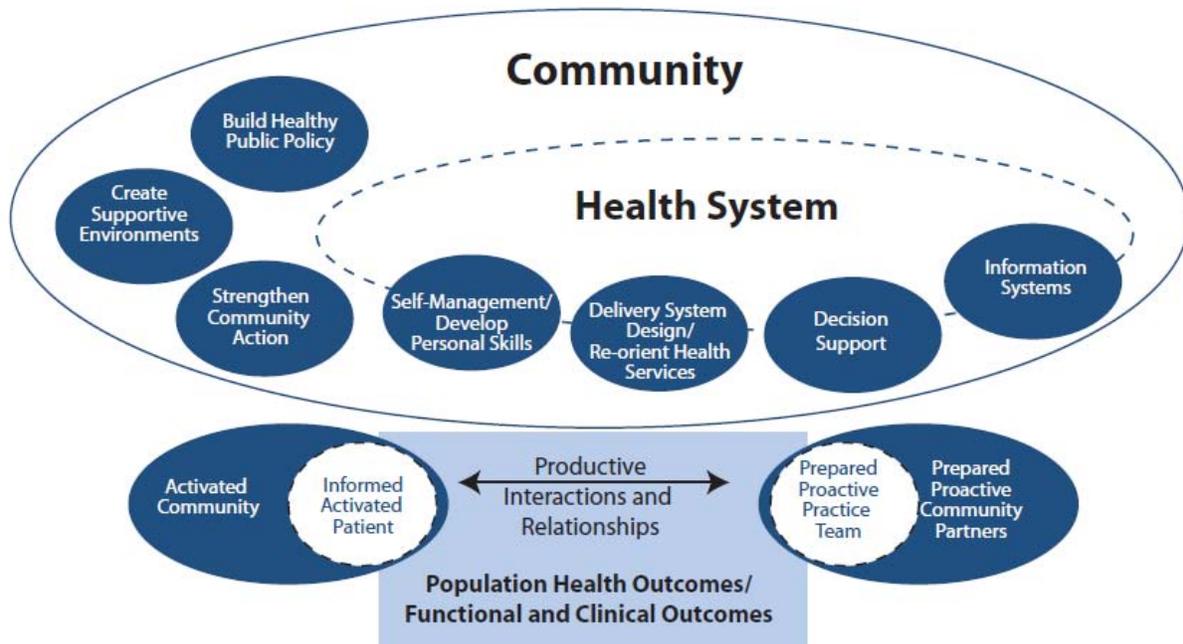
The Expanded Chronic Care Model

In 1998, Dr. Ed Wagner and his team at the MacColl Center for Health Care Innovation developed a healthcare delivery system framework for chronic disease called the Chronic Care Model. In this model, the medical providers are supported by a healthcare system that provides performance-based payment, enables providers to coordinate care within and across healthcare settings, empowers the medical team to be transparent about errors and problems, and enables the team to engage in system change

improvements with support from senior leadership. The medical team uses clinical information systems to identify relevant subpopulations for proactive care, share information with providers and patients, and remind the medical team of treatment guidelines and follow-up care. The patient is empowered to play a central role in the management of his or her health care because the medical team works with him or her on setting goals and developing a plan for attaining them. The team encourages the patient to participate in community resources, such as senior centers and self-help groups, to complement their medical services.

Recognizing that the community elements of the PCMH and Chronic Care Model focus primarily on clinical preventive services and community resources *to support chronic illness care* and do not reflect the principles and strategies of public health promotion, the Vancouver Island Health Authority created the Expanded Chronic Care Model (Figure 6 and Table 2). This model describes how community partners from different sectors can identify the needs of the broader community and address the determinants of health. It offers a framework for the office-based primary care models described above to connect to the community and work in concert with community partners' population health promotion efforts.

Figure 6: The Expanded Chronic Care Model: Integrating Population Health Promotion



Source: Taken from Barr et al.'s article, "The Expanded Chronic Care Model: An Integration of Concepts and Strategies from Population Health Promotion and the Chronic Care Model," in the *Hospital Quarterly* (Barr et al., 2003). Created by: Victoria Barr, Sylvia Robinson, Brenda Marin-Link, Lisa Underhill, Anita Dotts, & Darlene Ravensdale.

Table 2: The Components of the Expanded Chronic Care Model

Components		Examples
Self-Management / Develop Personal Skills	Enhancing skills and capacities for personal health and wellness	<ul style="list-style-type: none"> • Smoking prevention and cessation programs • Seniors' walking programs
Decision Support	Integration of strategies for facilitating the communities abilities to stay healthy	<ul style="list-style-type: none"> • Development of health promotion and prevention "best practice" guidelines
Delivery System Design / Re-orient Health Services	Expansion of mandate to support individuals and communities in a more holistic way	<ul style="list-style-type: none"> • Advocacy on behalf of (and with) vulnerable populations • Emphasis in quality improvement on health and quality of life outcomes, not just clinical outcomes
Information Systems	Creation of broadly based information systems to include community data beyond the healthcare system	<ul style="list-style-type: none"> • Use of broad community needs assessments that take into account: poverty rates, availability of public transportation, and violent crime rate
Public Policy	Development and implementation of policies designed to improve population health	<ul style="list-style-type: none"> • Advocating for/developing: smoking bylaws, walking trails, reductions in the price of whole wheat flour
Supportive Environments	Generating living and employment conditions that are safe, stimulating, satisfying, and enjoyable	<ul style="list-style-type: none"> • Maintaining older people in their homes for as long as possible • Work towards the development of well-lit streets and bicycle paths
Community Action	Working with community groups to set priorities and achieve goals that enhance the health of the community	<ul style="list-style-type: none"> • Supporting the community in addressing the need for safe, affordable housing.

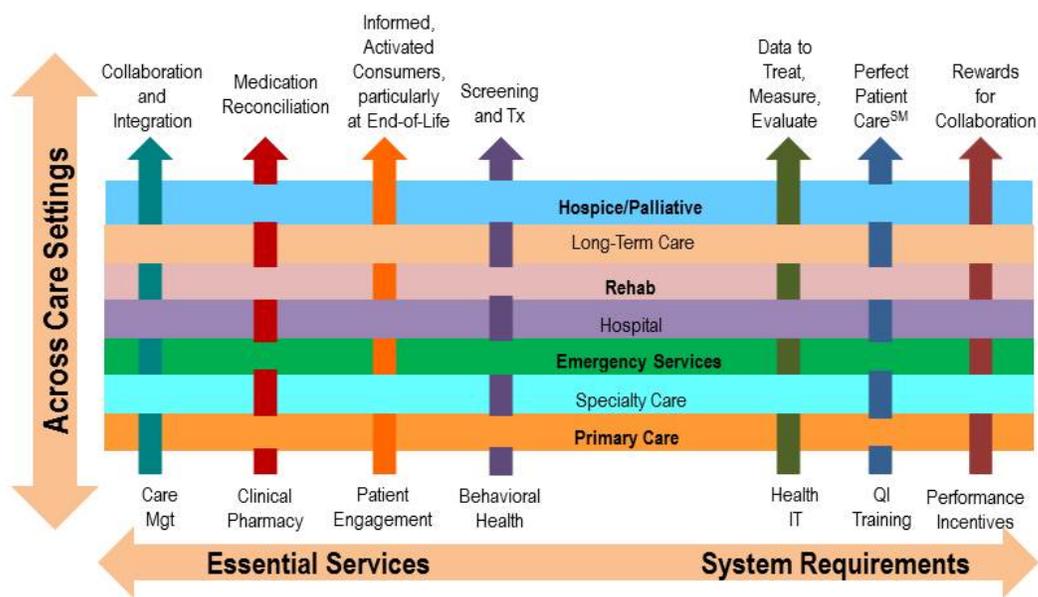
Source: Taken from Barr et al.'s article, "The Expanded Chronic Care Model: An Integration of Concepts and Strategies from Population Health Promotion and the Chronic Care Model," in the *Hospital Quarterly* (Barr et al., 2003).

JHF's Lattice for Transforming Healthcare Systems

The Jewish Healthcare Foundation developed a visual model depicting essential services and system requirements across settings of care that reflects our vision of a high-performing healthcare system (Figure 7). The resulting “lattice” is an attempt to envision the key services that must be present across care domains in order to attain optimal outcomes of care for patients. This vision informs and shapes the many projects currently underway at PRHI and JHF. For example, our primary care demonstration projects are particularly worth mentioning in this publication. They are all focused on integrating physical and behavioral health, reaching out to high-user populations, and adding additional capabilities to standard care in each setting.

Figure 7: JHF's Lattice for Transforming Healthcare Systems

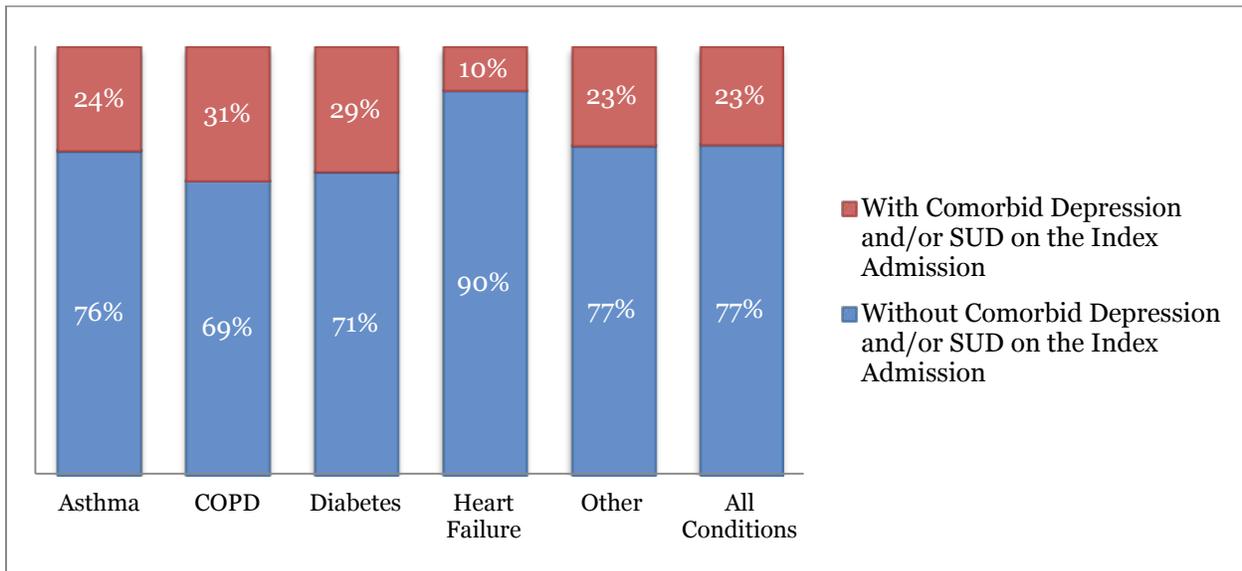
The Systems Vision: Transforming the Care of Complex Patients



Recent research from our own internal research team using data from the Pennsylvania Health Care Cost Containment Council (PHC4) has verified the essentiality of treating depression and substance abuse in the chronically ill, high-user populations:

- Twenty-nine percent of patients with diabetes and 31% of patients with chronic obstructive pulmonary disease (COPD) who were readmitted within 30 days had comorbid depression and/or a substance use disorder (SUD) (Figure 8)

Figure 8: Secondary Depression or Substance Use Disorder (SUD) Diagnoses among 30-Day Readmissions



Source: Pittsburgh Regional Health Initiative (PRHI) analysis of Pennsylvania Health Care Cost Containment Council (PHC4)-provided hospital discharges between October 1, 2007-September 30, 2009 in 11-county southwestern Pennsylvania region

Integrating Depression and Unhealthy Substance Use Services into the Medical Office

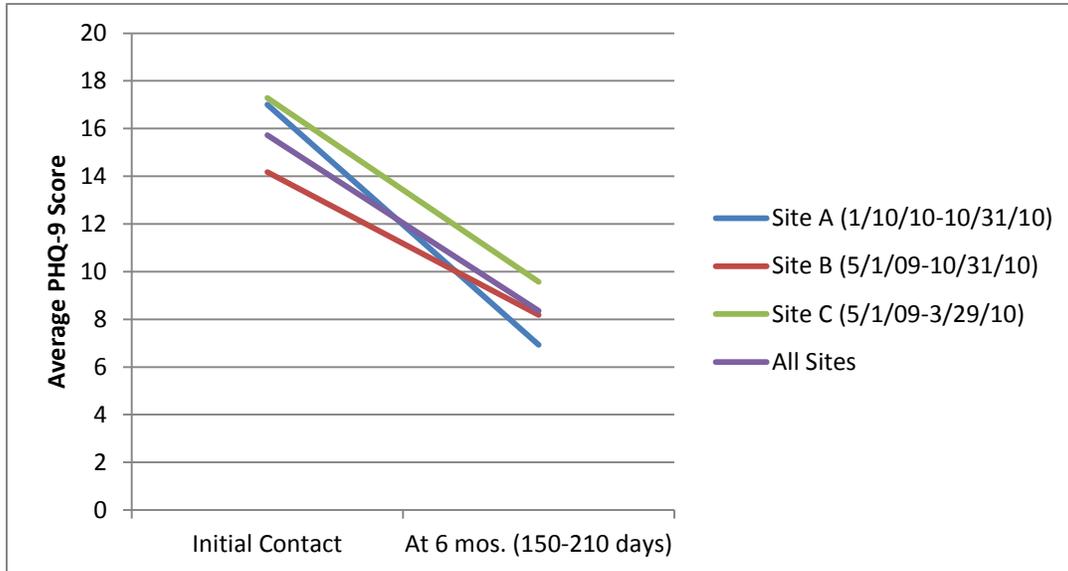
With funding from the Jewish Healthcare Foundation, Staunton Farm Foundation, and The Fine Foundation, PRHI tested a care delivery model in primary care settings for identifying and treating unhealthy alcohol and other drug use and depression. It is now being disseminated through multi-million dollar federal grants.

In 2008, PRHI partnered with the University of Washington’s IMPACT Implementation Center to create a model for collaborative depression care management and unhealthy substance screening and brief intervention. The model combines two evidence-based models: Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) and Screening, Brief Intervention, and Referral to Treatment (SBIRT). The IMPACT model builds on a care manager who works with the patient between primary care provider visits on goal-setting, tracking, and adherence; and a consulting psychiatrist who offers recommendations to the primary care provider on how to systematically adjust the patient’s treatment plan to reach a patient-specific target. The SBIRT model relies on screening patients for risky/hazardous alcohol and other drug use; and providing one to four 15-minute interventions that focus on sharing information, eliciting the patient’s internal motivations for behavior change, and creating an action plan around risk-reduction.

The combined model (IMPACT+SBIRT) was piloted in PRHI’s Integrating Treatment in Primary Care (ITPC) demonstration project in three community health centers in southwestern Pennsylvania. Results of the pilot showed that 49% of enrolled patients achieved greater than or equal to a 50% reduction in their symptoms of depression at six months. Figure 9 shows the average Patient Health Questionnaire (PHQ-9) score, which is a measure of depression severity, at baseline and six months after the start of the intervention. Regarding emergency room (ER) utilization, at baseline, 24% of patients enrolled through

at least six contacts reported one or more ER visits in the previous six months. Through their enrollment in ITPC, 18% reported one or more ER visits.

Figure 9: ITPC: Depression Severity at Baseline and Six Months



The ITPC demonstration, together with results from evaluations of similar initiatives in Minnesota (the Institute for Clinical Systems Improvement’s DIAMOND program) and Wisconsin (the Wisconsin Initiative to Promote Healthy Lifestyles), led to a \$3.5 million dissemination grant from the Agency for Healthcare Research and Quality (AHRQ) called Partners in Integrated Care (PIC). The PIC consortium includes PRHI, the Institute for Clinical Systems Improvement (ICSI), the Wisconsin Initiative to Promote Healthy Lifestyles (WIPHL), the Wisconsin Collaborative for Healthcare Quality (WCHQ), the Massachusetts Health Quality Partners (MHQP), and the Network for Regional Healthcare Improvement (NRHI). Members are disseminating the IMPACT/DIAMOND-SBIRT model to over 50 primary care sites in Pennsylvania, Wisconsin, Minnesota, and Massachusetts.

Care of Mental, Physical, and Substance Use Syndromes

A Center for Medicare & Medicaid Innovation (CMMI) Health Care Innovation Award was presented to ICSI for an initiative called Care of Mental, Physical, and Substance Use Syndromes (COMPASS) across seven states including Pennsylvania, Minnesota, California, Colorado, Washington, Michigan, and Massachusetts. The COMPASS project includes eight implementation partners, including Mayo Health System and Kaiser Permanente Southern California and Colorado. PRHI is leading the implementation in Pennsylvania.

COMPASS targets adult primary care patients with sub-optimally managed depression plus diabetes and/or cardiovascular disease who are insured by Medicare, Medicaid or both. The collaborative care team includes the primary care provider, care managers, consulting psychiatrists, medical consultants, and other members of the primary care team. The components of the model include an initial evaluation of the patient, an electronic care management tracking system, treatment intensification when there is a lack of improvement, prevention of avoidable hospital and emergency department utilization, prevention of relapse and exacerbation, and aggregation of data to drive quality

improvement. The program is expected to reduce healthcare costs by \$25 million over three years, based on the results from the randomized controlled trials that informed the COMPASS care model, including IMPACT.

Primary Care Resource Centers

PRHI was also awarded a \$10.4 million CMMI Health Care Innovation Award to implement Primary Care Resource Centers (PCRC) in seven hospitals in Pennsylvania and West Virginia. The PCRCs organize a coordinated bundle of services aimed at reducing 30-day hospital readmissions for patients with chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), or coronary artery disease (CAD) – three prevalent and overlapping conditions with high 30-day readmission rates, especially COPD and CHF.

In an effort to improve care and reduce readmissions, PRHI designed PCRCs, which are staffed by nurse care managers and located in hospitals. The PCRC bridges the inpatient-outpatient care continuum and centralizes and coordinates primary care ancillary services, including intensive disease management, care coordination, patient education, smoking cessation classes, pharmacist consultation, inhaler instruction, diagnostic spirometry, and home monitoring, among other services. The care managers also make at least one post-discharge home visit and establish patient connections to community services. By expanding the constellation of services available to patients, the model is specifically designed to create “virtual” medical homes for small, primary care practices that may not have the capacity/resources to meet the complex needs of hard-to-serve patient populations. Patients may be identified in the hospital or through a referral by their primary care practice.

A financial assessment of this intervention has been made possible through an additional grant from the Robert Wood Johnson Foundation to study the return-on-investment of the model. The findings will hopefully inform the development of a multi-payer model for diverting resources toward care management and provider incentives that would sustain the PCRC model. The PCRC project is expected to save Medicare \$41 million over three years.

CHAPTER THREE: Customized Care for Special Populations

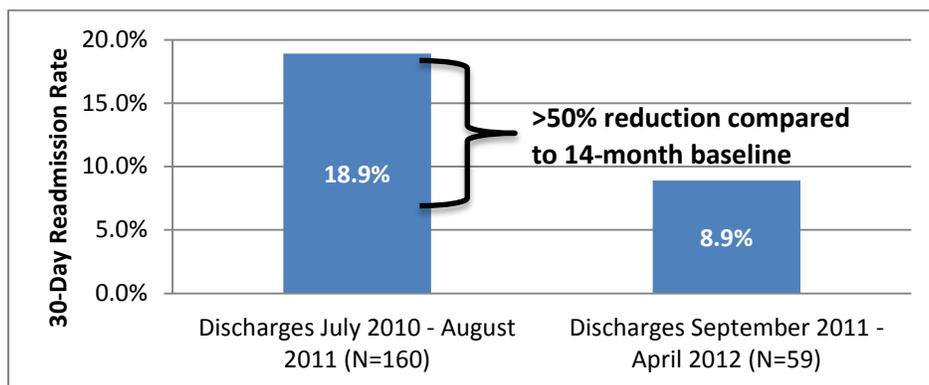
A number of interesting models, discussed below, target care to special populations. The architects of these models attempted to break from traditional practice in order to meet the unique needs of a certain client group or community. At a minimum, these efforts reflect a willingness to experiment with new delivery models and do some blank-slate thinking. They also yield new approaches that may be generalizable beyond their target populations. Some of these models take full advantage of newly available health information technology to manage chronic disease and address the needs of high users.

Individuals Living with HIV/AIDS

With funding from The Pittsburgh Foundation, JHF and PRHI worked with the Positive Health Clinic at Allegheny General Hospital (AGH), a local, federally-funded HIV/AIDS clinic, to implement a hospital readmission reduction program for HIV-positive patients. Despite the comprehensive services available at the Clinic, analysis of patient data in southwestern Pennsylvania found that 26% of all admitted HIV-positive patients were readmitted to the hospital within 30 days. This was significantly higher than the region's overall average readmission rate of 17%. In many cases, these patients were not going to the hospital for HIV-related needs, but rather for comorbid disorders such as drug use and viral hepatitis. An important contributor to the high readmission rate was the lack of coordination between the hospital and the HIV clinic, which disrupted treatment plans and led to missed opportunities to engage patients.

In response, coaches and staff from PRHI and JHF worked with the Clinic to develop new processes of care at AGH that included the hospital contacting the Clinic upon a patient's admission. This prompted the Clinic to send a clinical social worker to the hospital bedside to schedule a follow-up appointment and ensure that treatment plans were appropriately coordinated. This change, along with restructuring internal processes that freed up additional time for this new level of care, led to a preliminary 52% reduction in 30-day hospital readmissions among people living with HIV/AIDS (Figure 10). Further work will be done to determine whether this reduction is statistically significant and can be sustained over time.

Figure 10: 30-Day Readmission Rate among Those Living with HIV/AIDS at the HIV Clinic's Affiliated Hospital, Pre- and Post-Coordinated Care



Homeless

A number of models show how care can be provided to the homeless by changing where and how health care is delivered. One approach has come to be known as “street medicine.” One example, the Street Medicine Institute, is led by founding director Dr. Jim Withers, who also is founder and medical director, Pittsburgh Mercy Health System’s Operation Safety Net. The Street Medicine Institute operates by a simple philosophy: *Go to the people*. The healthcare team provides health services on the street, under bridges, or in abandoned buildings; and meets people in their own reality. The street team also uses an approach called *inreach*, which means they accompany the individual into the health system, where they then advocate for their needs.

Another model, the Boston Health Care for the Homeless Program, establishes clinical sites in the places where homeless individuals spend portions of their time, including homeless shelters and a racetrack that employs a large number of homeless migrant workers. The result is a healthcare system that spans the city, functioning like a comprehensive health home without walls. This is important not only from a logistical perspective, but also in terms of developing the trust of a very unique patient population. Also, by using an integrated electronic health record, the program is able to consistently and easily track individuals’ health needs, as well as the homeless population in the aggregate.

By understanding and working from the frame of reference of homeless individuals, street medicine programs have found a way to provide low-cost care to some of the most complex patients. Insights from this model can inform the design of broader health systems intended to better care for other patients with complex medical, behavioral, and social needs.

Seniors

Other models focus on seniors. These models provide additional, community-based services to help seniors maintain their independence at home and avoid preventable nursing home admissions. Several examples are described below. The North End Waterfront, an FQHC, tailors its comprehensive services to the needs of seniors. Cabin Creek Health Systems, another FQHC, trains medical assistants to conduct home visits and risk assessments for seniors. Commonwealth Care Alliance deploys a multidisciplinary care team for patients with complex physical, behavioral, and social issues. And Tri-County Rural Health Network deploys outreach workers to connect vulnerable seniors to appropriate services.

NORTH END WATERFRONT HEALTH

North End Waterfront Health in Boston, Massachusetts – an FQHC founded in 1971 and affiliated with Massachusetts General Hospital – focuses on providing comprehensive care to low-income seniors. Over 20% of the FQHC’s patients are 65 years of age or older. In comparison, in a typical FQHC, 7% of the patients are 65 years of age or older.

The center’s comprehensive services include primary care, dental, behavioral health, vision, podiatry, gynecology, obstetrics, neurology, elder services, medical social services, interpreter services, pharmacy, transportation, and education and outreach to patients and the community. To meet the needs of their elder population, the center also provides housekeeping and cleaning services; and assists with personal care, including bathing, dressing, and laundry. The center also provides transportation to and from grocery stores, the off-site Adult Care Center, the FQHC, and the hospital. The drivers maintain personal relationships with the patients, which is especially important for seniors who are socially isolated. In addition, the FQHC opened a long-term care nursing home in the community, which is currently being operated by Spaulding Rehabilitation Hospital.

CABIN CREEK HEALTH SYSTEMS

In 2006, Cabin Creek Health Systems, an FQHC in West Virginia, implemented multiple changes to more efficiently and effectively serve their patients. They evaluated all of the necessary processes for running their facilities – including workflow, physical layout, incentives, and more – and made improvements, including the reassignment of roles. The medical assistants received training in forming diabetes collaboratives, motivational interviewing, self-management, goal-setting, behavioral health issues, and communication. Armed with this on-the-job training, the medical assistants began to assist with clinical tasks, use standing orders to refill prescriptions, communicate with patients using motivational interviewing, and administer depression and substance misuse screenings.

Building upon this success, the FQHC began to implement a medical home for seniors. Over the course of 15 weeks, the medical assistants received training in understanding geriatric patients, evaluating the risk of non-prescription medications, and conducting in-home risk assessments; and on topics such as living wills and Medicare and Medicaid. Following this training, the medical assistants began to participate in identifying frail, at-risk elderly patients; scheduling home visits with the at-risk patients; and contacting the patients in their home and over the telephone. Home visits include medication reviews, risk assessment, goal-setting, and connecting the patients to additional resources, including social workers.

COMMONWEALTH CARE ALLIANCE

Commonwealth Care Alliance – a non-profit health plan and provider organization – operates several programs, including Senior Care Options, the Disability Care Program, and the Complex Care Needs Program. These programs target patients with complex medical, behavioral, and social needs. Commonwealth Care Alliance receives capitated payments from Medicare and Medicaid, and pays its provider facilities, including FQHCs, a full or modified capitation payment. Commonwealth Care also provides the primary care sites with supplemental clinical and support staff (“wrap around services”).

Patients who join Senior Care Options receive an assessment of medical, social, behavioral, and support needs. If they are homebound, the patients receive the assessment at their home. The care team is led by a nurse practitioner and includes geriatric social workers, community health workers, behavioral health clinicians, physical therapy clinicians, and palliative care clinicians. The services are allocated based on individualized care plans that promote the highest level of independence possible, given their health and capacity.

A survey found high patient satisfaction in the Senior Care Program (Meyer, 2011). Also, between 2005 and 2009, the rate of nursing home placements for eligible patients was 30% of the rate of a comparable population in Medicaid fee-for-service.

TRI-COUNTY RURAL HEALTH NETWORK

In the Tri-County Rural Health Network in the Mississippi Delta, community connectors – outreach workers who have strong ties to community residents – identify Medicaid-eligible individuals who are at risk of nursing home placement. The community connectors arrange for residents to receive home- and community-based care. Various techniques are used to identify these residents, including “foot patrols.” During the foot patrols, the community connectors walk through the community and talk with residents.

To facilitate referrals, Tri-County has partnerships with service providers in the targeted counties, including local physicians, public and private health agencies, churches, and the regional hospital. Over three years, no participants needed nursing home placement, and the increase in Medicaid spending was lower than the comparison group. This generated a return-on-investment of \$2.92 for each dollar invested in the program (AHRQ, 2012; Felix et al., 2011).

Native Alaskans

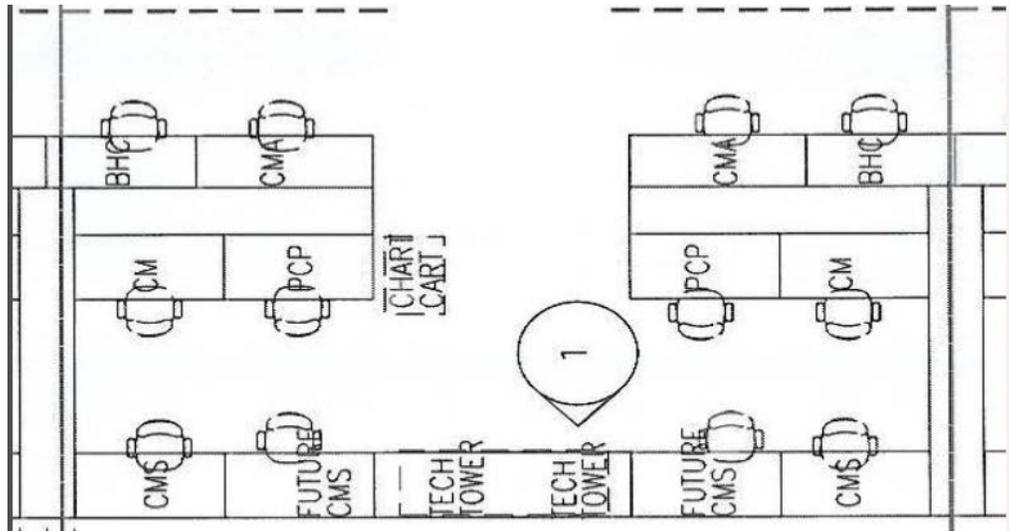
One of the more creative and often cited approaches comes from Southcentral Foundation in Anchorage, Alaska, an Alaskan-owned healthcare organization. Recognizing that the native Alaskan population experiences unique social, behavioral, and cultural realities, and that traditional approaches to primary care were not only producing weak outcomes but were not satisfying to their “customer-owners (i.e., patients),” Southcentral Foundation reinvented its approach to care. They listened to their community, involved the customer-owners in designing a new system, and used facility design to facilitate team-based care. The summary below focuses on how Southcentral Foundation reinvented its approach to primary care.

Southcentral Foundation designed an on-boarding process that involves mentoring and a career development pathway for all frontline staff. They also redesigned the roles of each member of the primary care team. In general, the registered nurses’ role shifted to chronic disease management, and the role of certified medical assistants’ role shifted to performing daily clinical tasks and building relationships with the customer-owners.

In this new model, the primary care provider is responsible for the initial assessment and diagnosis, adjusting treatment plans when the goals are not being met, and setting plans for follow-up. The registered nurse case manager provides preventive care and disease management to a panel of patients over the telephone. The case management support staff provides administrative support such as scheduling visits and documentation. Dietitians consult with providers and offer phone consultations for the customer-owners. Behavioral health consultants – master’s-level behavioral health practitioners – consult with primary care providers and specialists and provide psycho-educational materials, assessment, brief interventions, and monitoring. The certified medical assistants participate in quality improvement, set up rooms, provide immunizations, administer medications, draw blood, and perform preventive screening for health issues such as depression and alcohol, drug, and tobacco use. Certified medical assistants can move up the career ladder to become supervisors, managers, or improvement specialists.

The integrated primary care team is able to seamlessly collaborate, because the team members sit in a single office space (Figure 11). A clinical pharmacist has an office next to the front desk, the managers sit in the hallway of the clinic where they can direct the operations, and the senior executives share office space. As an example of Southcentral Foundation’s commitment to the values of the Alaskan community, traditional healers conduct consultations and weekly clinical rounds with the primary care team.

Figure 11: Floor Plan of the Primary Care Team's Office at Southcentral Foundation



Source: Taken from the presentation: Behavioral Health Integration: Nuka 201 Medical Track presented at the Southcentral Foundation 2011 Nuka Conference by Wendy Bradley, Melissa Merrick, and KJ Worbey.

Behavioral Health Consultant (BHC); Certified Medical Assistant (CMA); Primary Care Provider (PCP); Case Manager (CM); and Case Management Support (CMS).

Individuals with Serious Mental Illness

Individuals with serious mental illness face significant barriers in accessing health care. Additionally, behavioral health centers, instead of primary care medical offices, often function as their regular source of outpatient care. To combat the resulting disparities in both morbidity and mortality rates, there is a significant need to integrate physical health care as part of behavioral health care.

The Pittsburgh Mercy Health System is noted for its ability to serve people with serious and persistent mental illness. In 2011, the Pittsburgh Mercy Health System opened the Pittsburgh Mercy Family Health Center to provide care to individuals with behavioral and physical health needs. The Health Center assembled a team of family practice providers, care managers, consulting psychiatrists, behavioral health professionals, clinical support staff, and peer support specialists to identify, monitor, and provide care for their highest-risk patients.

The Center uses data stored in the electronic health record to stratify patients' risk based on factors that include chronic physical and behavioral health conditions, complexity of medication regimens, frequency of hospital and emergency department utilization, housing status, drug and alcohol use, and access to social supports and community resources. Once a week, the team gathers to review the highest risk patients and to develop action plans. High-risk patients are assigned a care manager who collaboratively develops comprehensive care plans that address physical, social, emotional, and health system needs. The team also creates collaborative partnerships with community organizations to support the health and wellness of their patients.

Recognizing that much of health happens outside of the Health Center, peer wellness coaches (also known as peer support specialists) at Pittsburgh Mercy Family Health Center help their peers grow in recovery and self-management. A peer wellness coach is someone who has received, or is receiving, treatment for a serious mental illness or chronic physical health condition, and who has been trained to help his or her peers. The coaches perform several activities, including patient outreach, home visits for high-risk or homebound patients, co-facilitation of wellness groups (e.g., nutrition, tobacco cessation, and exercise), connecting patients to community resources, and accompanying peers to health visits. The coach helps their peers to envision a satisfying and meaningful life, make informed and independent choices, set personal goals, and achieve meaningful roles in community life. As one peer wellness coach explains:

“Our role is to be a megaphone for the person receiving services. Our number one priority is to engage the person and validate their feelings and concerns. We perceive our primary purpose as peer support workers to be one in which we can share our experience, strength, and hope with persons served.”

Applying Information Technology and Newly Available Data to Care Delivery

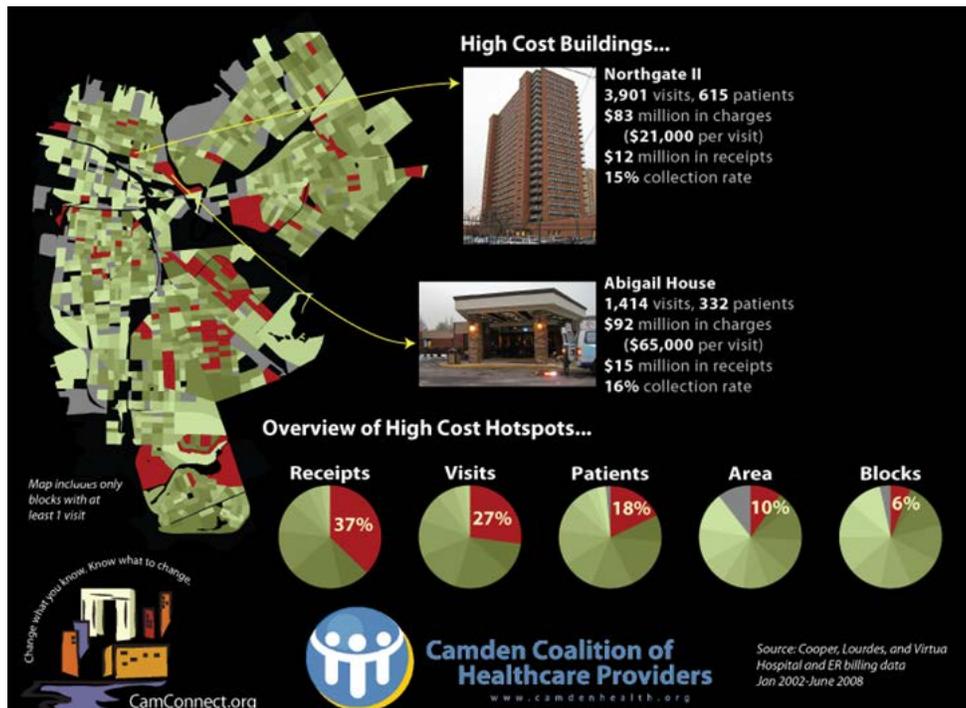
The HITECH Act recognized that accurate, real-time, and complete data on each patient is essential to delivering quality care and achieving excellent outcomes. The HITECH Act created the Office of the National Coordinator of Health Information Technology, which in turn developed special programs to spur wider adoption of health information technology nationally, such as the Beacon Communities and the Regional Extension Centers. To say that the widespread application of electronic health records (EHR) to quality improvement in clinical outcomes is a game changer is an understatement. Accordingly, new, updated versions of community health care (several of which are discussed below) employ registries, data management, analytics, and predictive modeling to identify and address the populations most at risk. In particular, “hot spotting” provides a powerful approach for proactively identifying and treating high-cost patients that the U.S. healthcare system is failing to effectively serve.

“HOT SPOTTING” FOR SUPER-UTILIZERS

Between 2002 and 2008, a model known as “hot spotting” was developed in Camden, New Jersey to identify high-cost patients and treat their complex physical, behavioral, and social needs. Dr. Jeffrey Brenner, a family physician, used billing data to map medical cost hot spots for a hospital and emergency room in Camden (Figure 12). He found that only 35 patients generated \$1.2 million in charges each month and that most lived in specific neighborhoods. The patient with the most expenses incurred \$3.5 million in charges between January 2002 and June 2008. As Dr. Brenner began visiting some of these patients, he learned that each was managing a complex web of interrelated health, behavioral, economic, and social problems. In response, Dr. Brenner formed a collaborative team of outpatient and inpatient providers and created linkages to community resources such as Alcoholics Anonymous and social service agencies to specifically target these highest-risk patients.

In this model, a team of physicians, social workers, nurses, case managers, and health educators identifies “super-utilizers” by analyzing healthcare utilization data. Following an assessment, the identified patients receive intensive case management services in the community and in outpatient settings, which reduces the utilization of hospitals and emergency rooms. For example, the social worker may help patients access disability insurance and better housing.

Figure 12: Healthcare Cost “Hot Spots” in Camden, NJ (Jan 2002-June 2008)



Source: Taken from: Jacobs, B., J., Warning, W., Sluck, S., & Watkins, S., M. Implementing Brenner’s Collaborative Super-Utilizer Model [PPT]. Presented at the 14th Collaborative Family Healthcare Association Conference on October 6, 2012.

To assess their performance, the multi-disciplinary healthcare team measures outcomes around utilization, cost, and satisfaction. For example, one patient had \$112,664 in emergency department and inpatient charges one year prior to enrollment and \$64,974 in the ten months after enrollment. Another patient had \$745,018 in charges one year prior to enrollment and \$0 in charges five months later (Camden Coalition of Healthcare Providers, 2013).

HEALTH IMPROVEMENT PARTNERSHIPS

Building on the success of the Healthy San Francisco program, which enrolled patients into PCMHs and coordinated comprehensive care for uninsured adults, San Francisco launched its Health Improvement Partnerships. Key partners include the local health department, FQHCs, and the University of California San Francisco Medical Center, as well as other partners from schools, medical organizations, and the mayor’s office. The Health Improvement Partnerships integrated 13 databases, including medical, substance abuse, mental health, criminal justice, and other data, to create a single data warehouse to study user patterns. The partnership discovered that the ten “top users” were costing about \$2 million per year in urgent care and emergency room services. The database is now being used to develop strategies for coordinating care between medical, community, and social services to address community health concerns.

CONNECTING AT-RISK INDIVIDUALS TO EVIDENCE-BASED PATHWAYS

The Community Health Access Project Pathways© Model identifies vulnerable residents and connects them to health and social services that are provided by community providers in a coordinated, collaborative fashion. AHRQ describes it as follows (AHRQ, 2008):

“ [The Pathways Model] employs community health workers who connect at-risk individuals to evidence-based care through the use of individualized care Pathways designed to produce healthy outcomes. This model promotes timely, efficient care coordination through incentives and prevents service duplication through use of a Community Hub, a regional point of patient registration and quality assurance supporting a network of agencies involved in providing care to the target population.”

The Pathways model includes several components:

- Establish a "Community Hub" that creates a network of related agencies, collects and analyzes data at the individual and community levels, tracks at-risk individuals, and holds providers and individuals accountable for outcomes
- Identify and register at-risk populations
 - Enroll new clients by reaching into the community (e.g., by conducting home visits)
- Develop, implement, and track individualized Pathways, which outline the key steps to achieve outcomes for a specific need or problem
 - Identify barriers and Pathways by using a standardized checklist
 - Develop, approve, and implement the Pathway
 - Document and complete the steps and services in each Pathway
- Link financial incentives to the completion of key steps in the Pathway

The model is typically led by organizations such as universities, health and human service organizations, community collaboratives, or provider networks. Organizations in approximately 16 communities in Ohio, New Mexico, Nebraska, Oregon, Indiana, California, Michigan, Oklahoma, Washington, Texas, and Massachusetts have implemented this framework.

The Community Health Access Project in Richland County, Ohio, for example, created a network of related agencies (the “Community Hub”) to serve as a central registry and prevent the duplication of services. They use neighborhood-specific health data to identify high-risk areas (geocoding). The community health workers, nurses, and social workers serve as care coordinators who connect at-risk individuals to the evidence-based Pathways. A supervisor, typically a nurse or social worker, reviews all demographic, health, and social service information before community health workers begin to implement a new Pathway. The community health worker and other coordinators facilitate the implementation of the action steps in the Pathways plan, eliminate barriers to receiving services, confirm whether the evidence-based interventions were received, and document the completion of the action steps.

DURHAM COMMUNITY HEALTH NETWORK AND DURHAM HEALTH INNOVATIONS

In Durham County, North Carolina, the Durham Community Health Network focuses on residents enrolled in Medicaid or the Children’s Health Insurance Program (CHIP). It leverages existing resources and coordinates care through community engagement, care management, and electronic data collection. The network is one of the 14 local-level service networks coordinated by Community Care of North Carolina. It is funded by capitated payments from Medicaid and built upon strategic partnerships

that include Duke University, Durham County's Health and Social Service Departments, FQHCs, the hospitals, and the local mental health organization.

A single information technology system ensures that patients' medical information is consistent and easily accessible throughout the system. Care managers are automatically prompted to call or visit patients after emergency department visits to coordinate follow-up care. The electronic data system also alerts the care managers about unfilled medication prescriptions or preventive screening.

The Durham Community Health Network led to other programs and initiatives, such as the Durham Health Innovations Project, which focuses on improving community health. The strategies in the project include integrating social, medical, and mental health services; mapping community resources and services; using information technology to improve quality and coordination of care; improving access to providers such as nurses, physician assistants, and mid-wives; and using "social hubs," such as community centers, places of worship, and barbershops, to help disseminate information about services.

CHAPTER FOUR: A New Workforce for New Models of Care

New models demand not only new kinds of providers, but also that traditional primary care professionals play new roles. It calls for changes in whom we educate and train and in how we develop curriculum, arrange supervision, and provide accreditations. This opens opportunities for experimentation, resource reallocations, and cost savings that could improve worker satisfaction and patient care outcomes. Recent innovative approaches have unleashed a multitude of new roles for primary care workers. And for those models funded by CMMI and the AHRQ, there are rigorous evaluations in place. Within three years, we will have more credible evidence with which to design our job specifications, curricula, and team compositions.

The number of recent articles calling for a bridge over the divide between medicine and public health also suggests that a reconsideration of the educational requirements for primary care physicians may be in order. If the physician is to serve as the leader of the clinical team, it is reasonable to suggest that more public health and population health content be incorporated in physician training. Opportunities to work with big data sets for the purposes of expanding community and neighborhood health analytical capabilities could include exposure to predictive and computational modeling. This would prepare physician leaders to expand their skills beyond extracting data from their electronic health records for clinical care improvement, to broad systems thinking about community health trends, gaps in service, trouble spots, and populations to target. Schools of medicine and public health should be thinking now about blending curricula and training opportunities.

Right now, a legion of new workers has been introduced into primary care sites. At some point, there may be a need to condense and standardize all these new roles and new players. They include community health workers, health educators, community connectors, patient facilitators and navigators, community development specialties, peer wellness coaches, palliative care aids, behavioral health consultants, public health specialists, and practice coaches. In addition, more traditional workers are being added to primary care teams such as clinical pharmacists, psychologists, palliative care specialists, exercise physiologists, nutritionists, relevant specialists, interpreters, and even planners and architects. Team-based models are multiplying, but the mix is wildly variable. Perhaps something beyond the current “mayhem” and a more standardized “dream team” may be in order in the future? Certainly, as the teams expand, the burden on physicians to be all things to all patients has to decrease, and we can maximize our current pool of primary care physicians. An example of a potential “dream team” is the Vermont Blueprint for Health’s community health team.

Vermont Blueprint for Health

Vermont Blueprint for Health offers primary care providers access to community health teams, financial incentives, preventive health expertise, and real-time electronic information. Dr. Dana Kraus, one of the participating providers, explains (Bielaszka-DuVernay et al., 2011):

“Having access to the community health team removes the fear of asking a patient the simple open-ended question, ‘So, how are things?’ If the patient breaks into tears or admits that things at home are chaotic, I do not feel that I need to solve all of their social woes then and there by myself. I have a whole team to help. I can have them see Betsy, our behavioral health provider,

within the week, or have Erica, our chronic care coordinator nurse, come right in and help sort out which resources they need. It truly expands my ability to care for patients by helping to tear, take, or break down social barriers that interfere with medical care.”

Each community health team typically includes a care coordinator (usually a nurse), a chronic care coordinator, and a behavioral health specialist. The team may also include a social worker, health educator, dietitian/nutritionist, and exercise physiologist, among others. The teams identify and assess at-risk patients, facilitate access to needed services, develop daily management and follow-up plans, and offer health and wellness coaching and behavioral health counseling. In addition, a preventive health specialist from the local Vermont Department of Health district office works with the team to assess public health risk factors and conditions, builds consensus on interventions to address the risk factors, and implements and evaluates the interventions.

Participating practices also have access to a central web-based clinical tracking system and registry, which interfaces with electronic health records. The web-based system produces “visit planners” to identify needed services before the patient’s visit and population-based reports to drive improvement in the practice. Additional data are available from multi-payer databases as well.

Analysis at one of the pilot sites showed that emergency department use declined 31%, and associated per-person-per-month costs fell 36%. Also, overall use and per-person-per-month costs dropped 8.9% and 11.6%, respectively (Bielaszka-DuVernay et al., 2011).

Expanding the Roles of the Primary Care Team

Reevaluation of the primary care team has been triggered somewhat by staff turnover, a push toward resource conservation, requirements for improving patient outcomes and avoiding preventable hospitalizations, the challenge of meeting quality targets with hard-to-serve populations, and the introduction of electronic health records and their application to disease management. EHRs themselves require a restructuring and expansion of tasks to meet the demands of information management within a practice site. At present, the Pittsburgh Regional Health Initiative serves as a Regional Extension Center for western Pennsylvania, providing support to practices to ease their transition to EHRs. To do this, PRHI employs 35 staff who support 830+ physicians in western Pennsylvania.

Nothing dramatizes the impact of EHRs better than the expanding role of medical assistants. As of now, they are the largest category of employees in primary care offices. With incomes substantially less, and availability significantly more, than nurses, medical assistants have come to fill critical administrative and clinical roles. They maintain patient records, complete insurance forms, answer phone calls, and schedule appointments. In the clinical realm, they set up rooms for patients, collect and document vital signs, conduct histories, perform screenings (including those for depression and substance use), provide some basic patient education, and administer immunizations. Some medical assistants also serve as patient advocates and make linkages with community resources (see Appendix).

Given their prevalence and essentiality, medical assistants have benefitted from upgraded on-the-job training, career ladders, promotions, role expansion, and status. For example, in Chapter Three we explained how medical assistants from Cabin Creek Health Systems played a critical role in enabling the FQHC to become a medical home for seniors after completing an on-the-job training program. Also, the Wisconsin Initiative to Promote Healthy Lifestyles has demonstrated how to successfully train and coach paraprofessionals to provide brief interventions for unhealthy substance use and other preventive

services in primary care clinics. Similarly, the Institute for Clinical Systems Improvement has demonstrated how to successfully train medical assistants to provide depression care management services through collaborative learning sessions and monthly networking calls. WIPHL is now adding collaborative care management for depression to their approach, and ICSI is adding brief interventions for unhealthy alcohol and other drug use through PRHI's AHRQ-funded Partners in Integrated Care initiative.

Community health workers, who are also called patient navigators or outreach workers, have been widely used in other countries (e.g., Afghanistan, Bolivia, Guatemala, and South Africa), and to some degree in the U.S., to connect residents in underserved communities to health and social services. They have been hired and deployed by community organizations to link at-risk populations to health and human services, improve neighborhood safety, reduce exposures to health risks in people's homes, help individuals access and navigate health services, and provide health education. For example, some of the examples discussed throughout this *ROOTS* – including Tri-County Rural Health Network, Vermont Blueprint for Health, and Pathways – use community health workers to provide these services. Regardless of their specific role, community health workers have a natural ability to develop approaches to health and well-being in a culturally-relevant manner because they are trusted members of the community and share a common language, culture, and socioeconomic status with the community they serve. However, even though community health workers have been providing crucial community services since the 1940s, their titles, roles, responsibilities, skills, supervision, and training are highly variable. The Affordable Care Act of 2010 (ACA) is providing an opportunity to standardize and spread the roles and training of community health workers. The ACA authorized the Secretary of Health and Human Services to create guidelines for assuring the quality of training programs that receive federal funding authorized by the ACA, and CMMI is funding several demonstrations that hinge on community health workers.

Finally, no discussion of new roles for health workers can ignore the growing need to accommodate the broad spectrum of patients who need to be engaged. At one end is the patient who has been “lost to care” and resists clinical interventions, as well as personal involvement in their own care management. As part of JHF's HRSA-funded Minority AIDS Initiative, for example, JHF is training and coaching outreach workers from 15 AIDS Service Organizations across Pennsylvania to connect people with HIV/AIDS who have been “lost to care” to appropriate services, using motivational interviewing and assertive outreach strategies.

At the other extreme is the highly motivated and informed patient who wishes to engage in a partnership with his/her primary care provider. This patient searches actively for information about their particular health condition, prevention and treatment options, qualified specialists, and high-value providers. Before visiting their provider, they may even have already identified interesting medication and clinical trial options, and they may have strong preferences about their care, including end-of-life care. All these inclinations suggest that they will require healthcare settings and providers to be able to accommodate their preferences and their engagement in all care decisions. At present, health professionals get little instruction in how to maximize the involvement of highly-engaged patients and how to capture more patients in a partnership role. Among other considerations, these patients may expect (and deserve) concrete information on the care site's prices, quality of care measures, outcomes, quality improvement practices, medication risks, and diagnostic and procedural risks and benefits. Engaged, informed, opinionated patients will expect care sites to be prepared with this information. Not only that, they may expect their primary care site to maintain related information about specialists and hospitals to whom the primary care site refers.

CHAPTER FIVE: Policy Requirements to Support Primary Care Redesign

In this chapter, we discuss the systems requirements that are needed to move towards community-focused interventions, linking medical models to the community. Traditionally, moving in this direction has been hindered by financing, medical education, the culture of the biomedical model of health care, and a lack of health information technology. However, advances in payment models, recent federal policies, health information technology, and training and coaching are creating the incentives for and the ability to move in this direction.

Payment Paradigms

Changing where care is provided (e.g., in a primary care setting or in the community), how it is provided, and by whom presents implications for billing and reimbursement. Thus, in this section, we discuss the different models of reimbursement and the benefits and limitations of each model in the context of community-based health care and strengthening the design of primary care.

FEE-FOR-SERVICE

In fee-for-service, the unit of payment is a visit or procedure. Thus, the provider has an incentive to provide more visits and procedures, and the insurer is at risk for losing money. In addition, fee-for-service reimbursement policies tend to restrict the ways primary care offices can deliver services to patients, because each billing code is intended for a discrete service, and only certain facilities and providers are authorized to bill. For example, even if new evidence suggests that depression care management and psychiatric consultation in primary care offices improve quality, lower costs, and improve the satisfaction of patients and providers, primary care offices cannot receive reimbursement for these services in a fee-for-service system, because primary care office billing codes do not exist for these innovative services.

PER EPISODE

Alternatively, physicians could be paid per episode of illness. Under this paradigm, the provider has a financial incentive to provide fewer services that are bundled with the episode of illness or care, because this paradigm shifts a portion of the financial risk to providers.

(Miller, 2012) defines episode-of-care payments as payment arrangements that pay a single price for all of the services needed during an “episode of care” (e.g., an exacerbation of a chronic condition or care needed around a medical procedure) and that adjust the price based on the severity of the illness. Adjusting for severity and other factors helps to avoid “cream skimming” – the practice of providers avoiding complex patients because their severity of illness and complex social and medical needs require more services per episode.

CAPITATION

In capitation, a third type of payment, the unit of payment is the patient. Providers have a financial incentive to limit the number of visits and procedures provided to each patient, and most of the risk is transferred from insurers to providers. Out of these three payment models, capitation provides primary

care offices with the greatest level of flexibility to decide how to efficiently and effectively deliver services to the enrolled patient population. However, similar to per-episode-of-illness payments, a criticism of capitation is that providers have an incentive to avoid complex patients that frequently utilize healthcare services unless the per-patient payments are appropriately adjusted for severity and risk factors.

GLOBAL PAYMENTS

Lastly, a single payment can cover all services delivered to all patients within a certain time period. For example, a medical group could receive a global budget, which shifts all of the risk to the medical group. This payment arrangement offers the greatest level of flexibility in terms of how the medical group can configure and provide care. However, the medical group is restricted by the total budget amount and any requirements or performance measures that may be included in the contract for the global budget.

Global budgets are currently being used in Vermont, Oregon, and Massachusetts. Part of the budget may be used for community prevention and public health efforts. Other developed countries have used global budgets at the level of the nation, region, or provider group to control costs, in addition to other cost control mechanisms. Global budgets at the national or regional level may offer the best design to help communities invest in community-focused interventions, since this model creates an incentive for the entire region to control costs.

ENHANCEMENTS TO PAYMENT PARADIGMS

Recently, these payment models have been augmented by pay-for-performance, shared savings, and disease care management fees to help control for their inherent limitations and potential consequences.

Pay-for-Performance

Pay-for-performance arrangements can be added to any of the payment models to pay providers bonuses for reaching quality targets. However, although pay-for-performance may create incentives for reaching quality targets, it does not control costs and may cause providers to avoid high-risk patients unless the bonuses are risk-adjusted.

Shared Savings

Shared savings programs are designed to hold providers accountable for quality and costs in a fee-for-service system by distributing a portion of the savings back to the network of providers if the network of providers meet quality goals and control costs for a defined population of patients – or by “distributing” a portion of the financial loss if the costs are greater than expected. Shared savings programs are a common component of Accountable Care Organizations – a group of providers who work together to control costs and improve quality for a defined population.

However, shared savings is just an adjunct to the traditional fee-for-service system; it does not change it. In addition, providers still face a risk when investing in innovative care delivery models that have been shown to reduce costs and improve quality due to the complexity of controlling costs. For example, when outpatient primary care offices invest in collaborative care management, the inpatient hospital typically experiences decreased utilization. In a fee-for-service system, this means increased expenses for the primary care office, financial losses for the hospital, and financial gains for the insurer. Or in the case of Accountable Care Organizations, one healthcare organization may reduce costs, while the other organizations in the group do not, resulting in an overall increase in cost for the defined

population. In other words, a primary care organization's initial investment in innovative models may or may not be fully recouped once the shared savings are determined at a later time.

In regard to community-focused interventions, the concept of shared savings could be used to financially support Accountable Care Communities such as the Accountable Care Community in Akron, Ohio. Accountable Care Communities include community organizations from multiple sectors that extend beyond the walls of medical offices. These community partners, including public health officials and providers, work to improve population health. Thus, if cost savings are achieved, the savings could be reinvested into the community to further support community-focused interventions.

Disease Care Management Fees

Disease care management fees are adjunct payment arrangements that are added to the existing payment method to account for the non-reimbursed expenses incurred by the primary care offices. They are typically paid on a per-member-per-month basis for each patient that is actively enrolled in the disease management program. For example, all major health plans in Minnesota provide a payment to primary care offices, which have been trained by the Institute for Clinical Systems Improvement, to provide collaborative depression care management services. This care management fee is intended to cover the core, evidence-based components of the care delivery model that do not fit the prescriptive fee-for-service billing codes. Per-member-per-month payment arrangements have been used to compensate for investments in obtaining PCMH status as well.

Recent Federal Policies

The Affordable Care Act of 2010 and the American Recovery and Reinvestment Act (ARRA) of 2009 include provisions to further reorient the healthcare system towards community prevention, primary care, and models of care for patients with complex medical, social, and behavioral needs (see Appendix).

INVESTMENTS IN COMMUNITY-BASED INTERVENTIONS

The ACA is encouraging community-based care and the integration of public health and medical care. It authorizes funding for several community-based programs, including interdisciplinary training, health teams to support medical homes, and collaborative care networks in medically underserved communities.

In addition, the ACA is providing Community Transformation Grants to improve health and activities at the community-level. These grants are allowing communities to form cross-sector partnerships to design interventions based on the needs of their community.

To train medical practitioners to provide preventive, community-based medicine, funds also are being used to support preventive medicine residency training programs and community-based Teaching Health Centers.

INVESTMENTS IN PRIMARY CARE

The ACA also is helping to reorient the U.S. healthcare system towards primary care. It provides \$11 billion to create new community health centers and expand their operations, capacity, and services. An additional \$1.5 billion has been allocated to the National Health Services Corps between 2011 and 2015, which provides loan repayments and scholarships to medical students who work as primary care providers in underserved areas. The ACA also expands primary care education and residency training programs.

Regarding reimbursement, the ACA requires Medicare, Medicaid, and new health plans to reimburse U.S. Preventive Services Task Force (USPSTF) Grade A and B services, including screening for depression and alcohol abuse, without cost sharing (deductibles, copays, or coinsurance). State Medicaid programs that cover immunizations recommended by the Advisory Committee on Immunization Practices and the USPSTF Grade A and B services can receive a one percent increase in their federal matching rate. The ACA also adds preventive services to the FQHC Medicare payment rate, increases Medicaid reimbursement levels for primary care providers to match Medicare levels for two years, and provides a 10% Medicare incentive payment for primary care services between 2011 and 2015 on a quarterly basis.

INVESTMENTS IN HEALTH INFORMATION TECHNOLOGY

The American Recovery and Reinvestment Act includes the HITECH Act, which provides financial incentives and technical assistance to providers to adopt electronic health records and to use them to improve medical care. The HITECH Act also provides funding to states to create health information exchanges to facilitate the exchange of information across healthcare settings. States are now building all-payer claims databases and modernizing their information systems.

Perhaps even more importantly, the HITECH Act requires expanded feature sets to be added to vendors' EHR products. These include enhanced structured data capture; interoperability through standardized Continuity of Care Documents; functioning interfaces between providers and public health agencies; user-configurable reminders, prompting and query systems; predesigned meaningful use and clinical quality measure audit reports; integrated e-prescribing; patient communication through after-visit reports; and patient portals.

INVESTMENTS IN HEALTH HOMES

The ACA includes numerous provisions to encourage primary care centers to adopt the principles of the PCMH. States have the option to implement "health homes" for Medicaid beneficiaries with chronic conditions. Importantly, the ACA's health homes place an emphasis on linking patients to community and social supports (e.g., housing and food assistance) and enhancing the coordination between medical and behavioral health care. As of August 2012, six states have been approved to implement these "health homes."

In addition, a PCMH for high-need individuals will be tested as part of the Independence at Home Demonstration. Under the Demonstration, primary care teams will provide in-home services to Medicare beneficiaries with multiple chronic illnesses.

Also, Primary Care Extension Centers will help primary care providers implement the PCMH principles, link patients to community health and social services, and provide chronic disease management and behavioral health services.

INVESTMENTS IN NEW MODELS OF CARE

As a result of the ACA, the Center for Medicare & Medicaid Innovation is investing billions of dollars to determine how to improve care and health, while lowering costs. One of CMMI's projects, the Health Care Innovation Awards, is awarding millions of dollars to rapidly catalyze demonstration projects across the nation to improve health and patient care, while lowering the costs of care. Importantly, CMMI's rapid-cycle evaluation group will rigorously evaluate the satisfaction, cost, and quality of these new models of care, and provide feedback to the grantees. At the conclusion of the CMMI Health Care Innovation Awards, the U.S. will be armed with data on new models of care that were tested in the

“real-world” by diverse provider groups in order to make informed decisions about which care delivery models to spread.

As discussed in Chapter Two, two examples of awards that focus on patients with complex health issues include PRHI’s Primary Care Resource Centers (PCRC) and ICSI’s Care of Mental Physical, and Substance Use Syndromes (COMPASS) projects. Several of the CMMI awards are also using community health workers to serve patients with complex needs, including homebound seniors in rural areas.

TESTING PAYMENT ARRANGEMENTS

The ACA is also moving the nation towards payment arrangements based on value (quality and cost) instead of quantity. Although most of these payment changes are being tested through demonstrations, they are enabling primary care offices, especially those that serve vulnerable populations, to redesign the way they provide care.

Medicare created the shared savings payment arrangement to support the creation of Accountable Care Organizations and per-member-per-month payments to support care management and PCMH transformation. The CMMI-funded FQHC Advanced Primary Care Practice demonstration, for example, is paying participating FQHCs a monthly care management fee per quarter to support their transformation to the PCMH model.

At the same time, changes to hospital payments are expected to create incentives for improved transitions between hospitals and primary care offices to reduce hospital readmissions. Up to two percent of hospital revenue will be withheld pending their grade on a balanced scorecard of measures in the Medicare Hospital Value-based Purchasing Program. Moreover, hospitals’ Medicare payment rates will be reduced by up to three percent for higher than expected 30-day readmissions for patients discharged with one of three conditions (heart failure, heart attack, and pneumonia), as part of the Medicare Readmission Reduction Program.

ADVANCES IN HEALTH INFORMATION TECHNOLOGY

As a result of the ACA and ARRA and the conceptual framework of the Chronic Care Model, health information technology is now being used to:

- share information across providers;
- monitor emergency room visits and hospitalizations;
- identify high-risk patients in the medical office’s panel of patients;
- prompt providers to follow-up with patients;
- support clinical decisions with guidelines;
- adjust treatment plans to reach targets;
- delegate tasks to other members of the primary care team; and
- drive quality improvement.

In addition, communities now have the ability to aggregate data from multiple sources, identify public health needs and “hot spots” (high concentrations of service utilization), and link patients to community resources.

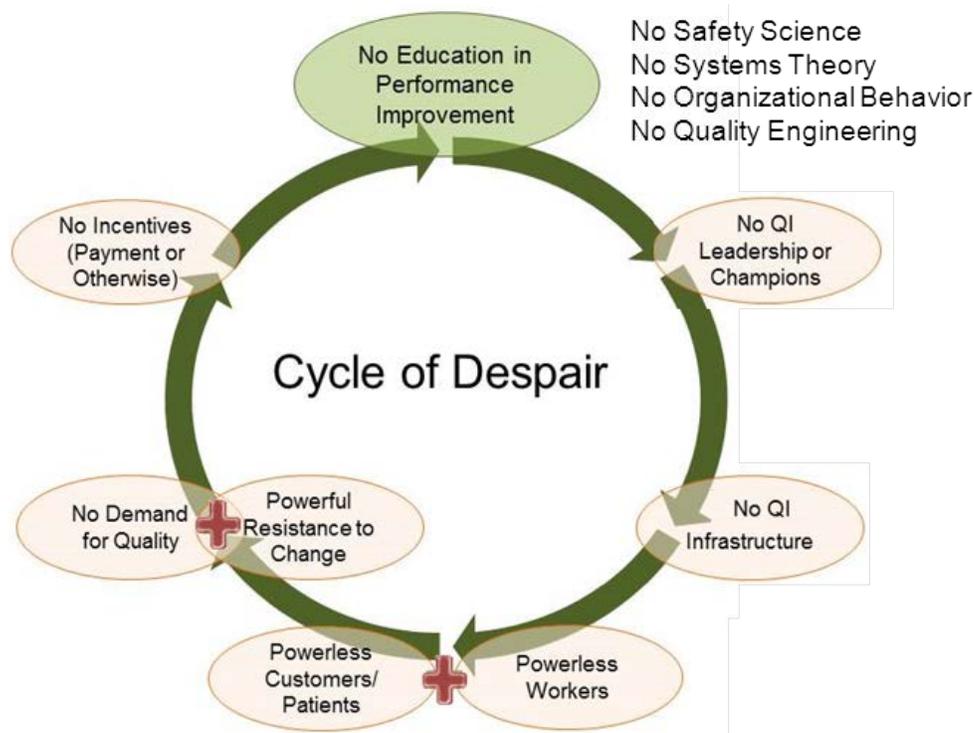
Quality Improvement Training and Coaching

Even if performance incentives and new technology are available, however, implementing new models of care still requires:

- strong provider and administrative leadership and champions;
- engaged staff;
- knowledge of best practice care models;
- clear messaging; and
- a robust quality improvement infrastructure.

Most primary care offices lack sufficient knowledge of and resources to establish high-performing organizations that are reliable, safe, and efficient for many reasons, including the lack of instruction in safety science, systems theory, organizational behavior, and quality engineering; and lack of funding to support a quality improvement framework (Figure 13). Without this infrastructure and adaptive reserve, practices struggle in their ability to continually strive for ideal care delivery and patient outcomes, especially in an ever-changing policy environment.

Figure 13: Health Professions Education Cycle of Despair



There is now consensus on the need to change medical education to address knowledge, skills, and values around patient safety and quality improvement. The Accreditation Council for Graduate Medical Education (ACGME) is phasing in their Next Accreditation System, which ties accreditation to educational outcomes that are based on their competencies, including systems-based practice and practice-based learning and improvement.

In addition, practice coaches – individuals skilled in quality improvement techniques and team facilitation – can add tremendous value to a practice’s efforts to build internal capacity for organizational adaptability and continuous quality improvement. They develop expertise *within* the organization to implement and sustain best practices by facilitating learning across sites and supporting practice teams in teamwork, problem-solving, communication, workflow redesign, change management, and using data to drive change. They support providers and staff at all levels of the organization, from frontline staff to senior leadership.

For example, PRHI practice coaches, who use PRHI’s Lean-based quality improvement methodology called Perfecting Patient CareSM, have facilitated the skills and expertise of staff at ten Pittsburgh area health centers in the PCMH model as part of the Safety Net Medical Home Initiative, a national demonstration led by The Commonwealth Fund and Qualis Health that supported community health centers’ transformations to PCMHs. In a variety of other initiatives, PRHI coaches have prepared leaders, providers, and staff in primary care settings, behavioral health settings, hospitals, and long-term care settings to build sustainable quality improvement infrastructures and organizational adaptability.

Efforts to expand the reach of pivotal coaching services and quality improvement training are also being made through innovations such as Tomorrow’s HealthCare™. PRHI’s Tomorrow’s HealthCare™ is a web-based quality improvement portal that includes online communities to share tools and hold discussions and online quality improvement trainings and tools to guide targeted, team-based improvement projects (Figure 14). Realizing that top leadership support is crucial, Tomorrow’s HealthCare™ provides real-time progress updates on quality improvement projects and staff participation. Specifically, Tomorrow’s HealthCare™ is designed to:

- train employees quickly in a standardized methodology and language;
- spread best practices and lessons learned;
- share tools for implementing new care delivery models; and
- automatically process, share, and graphically display quality improvement data to drive improvement and hit targets.

PRHI has integrated the online portal into its training and coaching services to help primary care offices implement the Patient-Centered Medical Home and evidence-based models of behavioral health care. It provides on-demand access to training, tools, and networks in between face-to-face coaching and training.

Figure 14: Tomorrow's HealthCare™

The screenshot shows the homepage of the Tomorrow's HealthCare website. At the top, there is a navigation bar with links for 'home', 'quality improvement', 'education', 'community', 'ePortfolio', and 'inbox'. A search bar is located in the top right corner. The main content area is divided into several sections:

- WELCOME TO TOMORROW'S HEALTHCARE!**: A introductory text block stating that the tool brings PRHI's proven process improvement methodology to the user's fingertips.
- Quality Improvement**: A section with an icon of a bar chart and an arrow, describing the development, implementation, and sustainment of successful projects.
- Education**: A section with an icon of a green apple and a laptop, describing access to interactive and accredited educational materials.
- Community**: A section with an icon of a group of people, describing the ability to join topic-specific communities for resources and discussion.
- ePortfolio**: A section with an icon of a laptop and a folder, describing the use of the ePortfolio to manage education and quality improvement achievements.

On the right side of the page, there is a **LOGIN** form with fields for 'Username' and 'Password', a 'Remember Me' checkbox, and a 'Login' button. Below the login form are two video thumbnails with 'Click to play' links. The first video is titled 'Your Portal to Organizational Transformation Through Quality Improvement'. The second video is titled 'Tour Tomorrow's HealthCare's features.' At the bottom right, there is a link to 'Contact PRHI for more information on Tomorrow's HealthCare.'

CONCLUSION

“We live forward but we understand backward.” Kierkegaard

This issue of *ROOTS* has now completed a romp through primary care’s past and present. Now, armed with some interesting innovations, we can help shape the future. The rebirth of attention to primary care has given JHF and its operating arms, the Pittsburgh Regional Health Initiative (PRHI) and Health Careers Futures (HCF), a jewel of an agenda. Whatever our hat of the moment is – health foundation, regional health improvement collaborative (focused on quality improvement), or workforce development consortium – we know that we are in an unexpected and welcome era of invention. As the demonstration projects launched by policies, such as the Affordable Care Act and the HITECH Act, play themselves out, we will have even more credible evidence on which to advance new models of care.

JHF will continue to explore the question of "what is health and how do we best promote it?" and, importantly, how to bring health to the most vulnerable populations. For the present, we have focused on the essentiality of disease prevention and management through new models of primary care and patient engagement. We work to reduce hospitalization and institutionalization and to maximize independent living. We recognize the centrality of good mental health and attempt to reduce the pernicious effects of depression and substance use on all aspects of healthy functioning – as parents, partners, students, employees, caregivers, providers, and patients. And we will continue to mine data to help uncover the characteristics of the five to ten percent of the population with the highest healthcare spending, so we may better design systems to meet their behavioral, medical, and social needs.

For this, JHF is focused on several areas. Demonstrations are in place that test new models for 1) supporting smaller primary care offices with “wrap around” services to advance their management of chronic disease and reduce hospitalizations; 2) preventing the vicious cycle of recurrent hospitalizations for patients already institutionalized in skilled nursing facilities; 3) integrating behavioral health screening and interventions, care managers, and clinical pharmacy into the routine care of patients with chronic diseases; and 4) developing customized interventions for special populations such as those living with HIV/AIDS. For all of these, rigorous evaluations are in place and, thanks to support from the Robert Wood Johnson Foundation, we have an opportunity to test new payment methods as well. In addition, changing attitudes and behaviors about optimal care at end-of-life is an ongoing activity.

JHF recognizes the call to help create more vital and assertive community health promoting primary care organizations that reach into communities to advance all aspects of health, and to develop funding mechanisms to support this.

New models of care that call for new roles and new workers for the primary care workforce are of great interest. The interest extends beyond identifying the workforce of the future and assuring that we have an adequate pipeline. We have forged a partnership with the National Association of Workforce Boards and our local Workforce Investment Board to bring the best minds together to weigh our options for developing some standardized curriculum, practice standards, licensure, and job descriptions for both new positions with new titles and traditional positions with new roles. Identifying the skills needed for

different positions to produce good outcomes is another related aspiration. In the policy arena, practice scope of work laws deserve focused attention and perhaps advocacy for changes that would allow new workers to contribute up to their full potential. And an exciting initiative by the Accreditation Council for Graduate Medical Education will help develop new curriculum and standards for medical residents under ACGME's new milestones for mastering competency in creating systems-based practice.

JHF recognized that the next frontier for improving the efficiency, reliability, and safety of health care lay where Quality Improvement meets Information Technology (QI²T). We have built out the top floor of our office tower to house our QI²T Training Center, and we launched a QI²T Graduate Student Fellowship to encourage entrepreneurship for quality improvement. Similarly, our activities as a Regional Extension Center, encouraging primary care practices to maximize their own use of health information technology, is amplified by our new designation as a "Qualified Entity" with the Centers for Medicare & Medicaid Services. This allows access to a wonderland of data that will help us use our research team for better "big data" explorations of what is right and what goes wrong at the community and neighborhood level. Our comprehensive, online organizational quality improvement tool Tomorrow's HealthCare™ was developed to complement our face-to-face training and coaching and to vastly expand our reach – both in terms of numbers of frontline workers in each practice engaged in quality improvement and in the breadth of training.

Finally, as our Lattice in Chapter Two suggests, we are, above all, working to make the transitions and connections among the different settings of care more seamless and synergistic – from primary care to specialty care; to rehab and skilled nursing; to hospital and hospice – and to ensure that essential services and system requirements are present wherever patients enter.

For the future, JHF will be looking at all the opportunities to integrate population health and medicine to ascertain where we can make the greatest impact on health, particularly for the most vulnerable, and on the cost of health care, and to maintain our constant commitment to neighborhood health centers offering comprehensive interventions for the most vulnerable.

The primary care models of the future need to be based on credible evidence of what reduces healthcare costs while improving health. We can't assume future investments in primary care will be infinite. We have to use the opportunity presented by the Affordable Care Act to reach the value proposition – achieving better outcomes at lower costs. With all the current demonstrations that are being rigorously evaluated and narrowing the divide between medicine and public health, future models that include nontraditional services for targeted populations most in need will be built on firmer ground.

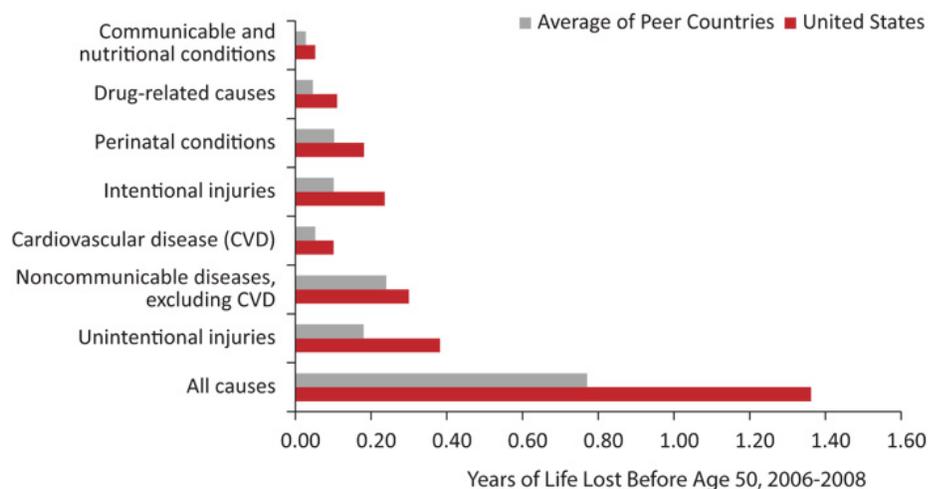


President & CEO
Jewish Healthcare Foundation

APPENDICES

Health Disadvantage

FIGURE: Causes of Death for U.S. Men Before Age 50, Compared with Average of Peer Countries, 2006-2008

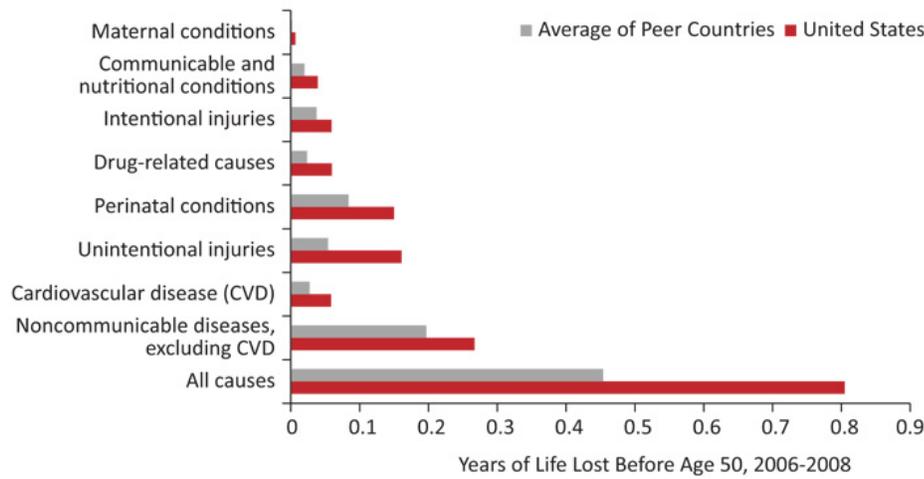


NOTE: CVD is cardiovascular disease

SOURCE: Data from the Human Mortality Database, the World Health Organization Mortality Database, and Statistics Canada, as reported in Ho, J. Y. and S.H. Preston (2011). *International Comparisons of U.S. Mortality*. Data analyses prepared for the National Academy of Sciences/Institute of Medicine Panel on Understanding Cross-National Health Differences Among High-Income Countries. Population Studies Center, University of Pennsylvania. *U.S. Health in International Perspective: Shorter Lives, Poorer Health*, January 2013

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FIGURE: Causes of Death for U.S. Women Before Age 50, Compared with Average of Peer Countries, 2006-2008



NOTE: CVD is cardiovascular disease

SOURCE: Data from the Human Mortality Database, the World Health Organization Mortality Database, and Statistics Canada, as reported in Ho, J. Y. and S.H. Preston (2011). *International Comparisons of U.S. Mortality*. Data analyses prepared for the National Academy of Sciences/Institute of Medicine Panel on Understanding Cross-National Health Differences Among High-Income Countries. Population Studies Center, University of Pennsylvania. *U.S. Health in International Perspective: Shorter Lives, Poorer Health*, January 2013

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JHF's Support for Community Health Centers

1991

- Funded community health centers in Homewood, McKeesport, and McKees Rocks for outreach to African American men, adolescents, pregnant women, and newborns
- Developed a directory of community health centers and other resources for the medically indigent

1992

- Launched an initiative with the Mon Valley Community Health Center for school-based health care; soon after expanded to Pittsburgh Public Schools

1993

- Published *Community Health Centers: Making a Difference* to expand community health centers
- Funded community health assessments in Wilkensburg, Duquesne, Homewood, and rural Greene County

1994

- Began the Healthy Jewish Community Project

1995

- Published a Community Health Action Plan for the Jewish community
- Launched a community health incentive grant program in cooperation with the Heinz Endowments and United Way of Allegheny County

1997

- Funded start-up of the Coordinated Care Network to form partnerships between community health centers and social service agencies
- Launched the Montefiore Project on Neighborhood Community Health Centers

2002

- Launched Perfecting Patient CareSM (PPC) in community-based organizations, including the Lawrenceville Family Health Center

2003

- Funded a demonstration for safety net organizations in the Coordinated Care Network to improve management of chronic diseases
- Helped to create a Federally Qualified Health Center in Squirrel Hill

2004

- Funded seven Federally Qualified Health Centers to participate in the U.S. Health Resources and Services Administration's Health Disparities Collaborative

2005

- Supported the East Liberty Family Health Center's implementation of the Wagner Model for Chronic Care using the Pittsburgh Regional Health Initiative's PPC quality improvement methodology

2006

- Secured federal funding and launched the Squirrel Hill Health Center

2008

- Published *JHF's Love Affair with Community Health Centers*

2009

- Launched the Integrating Treatment in Primary Care demonstration in three community health centers in southwestern Pennsylvania with funding from JHF, Staunton Farm Foundation, and The Fine Foundation to help the centers implement a model for identifying and treating depression and substance use as part of routine medical care

- Launched the Safety Net Medical Home Initiative in seven community health centers (10 locations) in southwestern Pennsylvania to help them implement the patient-centered medical home model with funding from The Commonwealth Foundation and JHF

2011

- Launched the Partners in Integrated Care initiative in six community health centers (11 locations) in Pennsylvania as part of a multi-state consortium with funding from the Agency for Healthcare Research and Quality to help centers implement evidence-based approaches for depression and unhealthy substance use (IMPACT and SBIRT)

2012

- Provided community health centers (and other types of primary care offices) with training and coaching to help implement electronic health records and achieve meaningful use with funding from the Centers for Medicare & Medicaid Services

General Skills

◆ **Communication**

- Recognize and respect cultural diversity
- Adapt communications to individual's understanding
- Employ professional telephone and interpersonal techniques
- Recognize and respond effectively to verbal, nonverbal, and written communications
- Utilize and apply medical terminology appropriately
- Receive, organize, prioritize, store, and maintain transmittable information utilizing electronic technology
- Serve as "communication liaison" between the physician and patient

- Serve as patient advocate professional and health coach in a team approach in health care
- Identify basics of office emergency preparedness

◆ **Legal Concepts**

- Perform within legal (including federal and state statutes, regulations, opinions, and rulings) and ethical boundaries
- Document patient communication and clinical treatments accurately and appropriately
- Maintain medical records
- Follow employer's established policies dealing with the healthcare contract
- Comply with established risk management and safety procedures

- Recognize professional credentialing criteria
- Identify and respond to issues of confidentiality

◆ **Instruction**

- Function as a healthcare advocate to meet individual's needs
- Educate individuals in office policies and procedures
- Educate the patient within the scope of practice and as directed by supervising physician in health maintenance, disease prevention, and compliance with patient's treatment plan
- Identify community resources for health maintenance and disease prevention to meet individual patient needs

- Maintain current list of community resources, including those for emergency preparedness and other patient care needs
- Collaborate with local community resources for emergency preparedness
- Educate patients in their responsibilities relating to third-party reimbursements

◆ **Operational Functions**

- Perform inventory of supplies and equipment
- Perform routine maintenance of administrative and clinical equipment
- Apply computer and other electronic equipment techniques to support office operations
- Perform methods of quality control

Clinical Skills

◆ **Fundamental Principles**

- Identify the roles and responsibilities of the medical assistant in the clinical setting
- Identify the roles and responsibilities of other team members in the medical office
- Apply principles of aseptic technique and infection control
- Practice Standard Precautions, including hand washing and disposal of bio-hazardous materials
- Perform sterilization techniques
- Comply with quality assurance practices

- Perform electrocardiography and respiratory testing
- Perform phlebotomy, including venipuncture and capillary puncture
- Utilize knowledge of principles of radiology

◆ **Patient Care**

- Perform initial-response screening following protocols approved by supervising physician
- Obtain, evaluate, and record patient history employing critical thinking skills
- Obtain vital signs
- Prepare and maintain examination and treatment areas

- Prepare patient for examinations, procedures, and treatments
- Assist with examinations, procedures, and treatments
- Maintain examination/treatment rooms, including inventory of supplies and equipment
- Prepare and administer oral and parenteral (excluding IV) medications and immunizations (*as directed by supervising physician and as permitted by state law*)
- Utilize knowledge of principles of IV therapy
- Maintain medication and immunization records
- Screen and follow up test results
- Recognize and respond to emergencies

Administrative Skills

◆ **Administrative Procedures**

- Schedule, coordinate, and monitor appointments
- Schedule inpatient/outpatient admissions and procedures
- Apply third-party and managed care policies, procedures, and guidelines
- Establish, organize, and maintain patient medical record
- File medical records appropriately

◆ **Practice Finances**

- Perform procedural and diagnostic coding for reimbursement
- Perform billing and collection procedures
- Perform administrative functions, including book-keeping and financial procedures
- Prepare submittable ("clean") insurance forms

Source: Taken from: American Association of Medical Assistants (AAMA). (November 2009). AAMA 2007-2008 Occupational Analysis of the CMA. Retrieved from <http://www.aama-ntl.org/resources/library/OA.pdf>

All skills require decision making based on critical thinking concepts

Selection of ACA Provisions Related to Community Care

Payment Changes

Section	Description
3403	Creates an independent Medicare Advisory Board to present Congress with proposals to reduce excess cost growth and improve quality of care for Medicare beneficiaries
3022	Establishes a shared savings program for Accountable Care Organizations that take responsibility for a defined population's cost and quality of care
3023	Establishes a voluntary pilot program to pay bundled payments for episodes of care to hospitals, doctors, and post-acute care providers
3704	Establishes a demonstration to study bundled payments for hospital and physician services under Medicaid
3025	Reduces Medicare payments for hospitals based on the dollar amount of each hospital's percentage of potentially preventable readmissions for specific conditions
3007	Directs the Secretary of Health and Human Services to implement a payment system that adjusts Medicare physician payments based on quality and cost of the care they provide
3602	Allows states to submit waivers for five-year demonstration projects around coordinating care for dual eligibles (those with Medicaid plus Medicare insurance)
3021	Creates the Center for Medicare & Medicaid Innovation to test new payment and delivery system models that reduce costs while maintaining or improving quality
3705	Establishes the Medicaid Global Payment System demonstration with the CMS Center for Medicare & Medicaid Innovation for safety net hospitals
3104 3105	Eliminates cost-sharing for Medicare-covered preventive services that are recommended by the U.S. Preventive Services Task Force with a grade A or B rating
3106	Provides a one percentage point increase in federal matching payments for preventive services in Medicaid for states that offer Medicaid coverage with no patient cost-sharing for services recommended by the U.S. Preventive Services Task Force with a grade A or B rating

Primary Care

Section	Description
3601	Provides \$11 billion for Health Center Program Expansion: \$9.5 billion to expand operational capacity and enhance medical, oral, and behavioral health services; and \$1.5 billion to expand and improve existing facilities and construct new sites
3207	Provides \$1.5 billion in additional funding for the National Health Service Corps (NHSC), and increases the amounts authorized for the NHSC loan repayment program under the regular appropriations process
3301	Authorizes and expands the primary care education and training programs, with a focus on the programs that include team-based approaches to care
3508	Authorizes and funds new Teaching Health Centers Development Grants to establish primary care, community-based residency programs
3501	Provides a 10% Medicare bonus payment for primary care in professional shortage areas
3405	Authorizes AHRQ to award grants to states to establish Primary Care Extension Programs to educate primary care providers about evidence-based therapies, preventive medicine, health promotion, chronic disease management, and mental health

Health Information Technology

Section	Description
3560	Requires the development of standards and protocols to promote the interoperability of health information technology

New Models of Care

Section	Description
3703 3502	Gives states the option to receive an enhanced federal matching rate for expanding or implementing “health home” programs for Medicaid beneficiaries with chronic conditions, including behavioral health conditions
3021	Creates the Center for Medicare & Medicaid Innovation to test new payment and delivery system models that reduce costs while maintaining or improving quality
3502	Creates community-based, interdisciplinary health teams to support primary care practices
3022	Authorizes the Secretary of Health and Human Services to execute agreements with Accountable Care Organizations to improve quality of care and health outcomes
3033	Authorizes HRSA grants to consortia of healthcare providers who provide comprehensive, coordinated and integrated health care for low-income populations
3126	Authorizes a demonstration for organizations to test new models of care in rural areas
3604	Authorizes grants for co-locating primary and specialty care in community mental health settings

Community-based Interventions

Section	Description
9007	Requires non-profit hospitals to conduct community needs assessments
3510	Reauthorizes demonstrations to provide patient navigator services in communities
3002	Appropriates \$5 billion for 2010 – 2014 and \$2 billion for each subsequent year to support prevention and public health programs
3026	Provides funding for the Community-based Care Transitions Program for Medicare beneficiaries at high risk for readmission
3002 3201	Authorizes and funds community transformation grants to improve community health activities and outcomes
3313	Requires CDC to award grants to entities to promote health behaviors and outcomes through the use of community health workers
3315	Directs the Surgeon General to establish a Public Health Sciences Track for physicians, dentists, nurses, physician assistants, mental and behavioral health specialists, and public health professions
3402 3401	Provides states with new options for offering home and community-based services to certain individuals through a Medicaid state plan amendment, and permits states to extend full Medicaid benefits to individuals receiving home and community-based services
3024	Creates the Independence at Home demonstration program to provide high-need Medicare beneficiaries with primary care services in their home

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Putting the Prime in Primary Care

Centre City Towers, Suite 2400
650 Smithfield Street, Pittsburgh, PA 15222
Phone: 412-594-2550
Fax: 412-232-6240
Email: info@jhf.org
www.jhf.org

