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Four Models Bring Specialty Services to the Safety Net: Enhancing Scope of Practice and Referral Efficiency

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by

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About the Foundation

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I. Introduction

Consistent access to outpatient specialty care services other than emergency care remains a problem.

DURING THE PAST 40 YEARS, SIGNIFICANT PROGRESS HAS been made in providing primary care for underserved populations through the establishment and expansion of federally qualified health centers (FQHCs). This has been achieved through local, regional, and state government-sponsored programs. Consistent access to outpatient specialty care services other than emergency care, however, remains a problem. Up to 25 percent of patients who present for care at community health centers need specialty and diagnostic services that are not available at these facilities.¹

A 2004 survey of FQHC directors in California found that access to specialty care for their patients was frequently problematic. Of the 77 respondents, 85 percent acknowledged that their uninsured patients “often” or “always” had difficulty obtaining needed specialty care.² In inner cities, where there is a concentration of low-income and uninsured people, access to specialty medical care is a particularly severe problem.³⁻⁷ According to a recent national survey of FQHC directors, uninsured patients are significantly more likely to experience difficulty accessing specialty medical services, compared with privately insured patients.⁸ These findings are echoed in other reports by organizations that work with underserved patients,^{9,10} and are consistent with those of a 2003 Institute of Medicine report, *Hidden Costs, Value Lost*, which found that lack of access to specialty care contributes to continuing health disparities among low-income and minority patients served by community health centers.¹¹

II. Why Is Access to Specialty Care a Challenge?

Primary care physicians must increasingly depend on their specialty colleagues for advice and support.

Payment Is a Problem

Nearly all underserved patients either rely on government-sponsored insurance (Medicaid or Medicare) or pay out of pocket. Low Medicaid reimbursement rates,¹² delays in payment and other bureaucratic challenges,¹³ and the rise in penetration of Medicaid managed care arrangements¹⁴ all contribute to limits on the number of physicians who accept Medicaid patients. Many specialists require uninsured patients to pay out of pocket, and some demand payment in full before any services are provided.¹⁵

The safety-net system of FQHCs effectively addresses these primary care payment issues. In return for enhanced Medicaid and Medicare reimbursement and grant funding, this network of over 1,000 health centers located in medically underserved areas of the country provides care to approximately 18 million patients in the greatest need.¹⁶ In addition to Medicaid patients, FQHCs must accept uninsured patients whose incomes conform to poverty line guidelines. These individuals are provided care on a flat-fee, sliding-scale arrangement that covers all services rendered during a particular encounter, including physician, lab, preventive, and vaccination services.¹⁷ Although FQHCs often arrange for their patients to obtain specialty services, there is no parallel specialty care safety net for the underserved per se.

Limitations to Certain Types of Specialty Care

As the U.S. population ages, the demand for specialty care will continue to rise.¹⁸ Access to certain types of specialty care is problematic regardless of payer status. A 2005 report by the Council on Graduate Medical Education predicts a shortage of between 85,000 and 96,000 physicians across all specialties by 2020.¹⁹ In a 2003 survey, the National Cancer Institute found insufficient endoscopist capacity to meet the colon cancer screening requirements of the U.S. population.²⁰ Also, the current demand for pediatric dermatologists exceeds the number of available practitioners.²¹ Today, as a result of a shortage of qualified providers, a number of specialty practices, ranging from cardiology to nephrology to pulmonary/

critical care, are experiencing physician recruitment difficulties.^{22,23}

One consequence of this shortage of providers is an increase in wait times for care. As of 2002, wait times for adult dermatologic care for Medicare and privately insured patients were in excess of one month; for Medicaid patients, it was approximately 50 days.²⁴ As appointment wait times increase, the likelihood that a patient will receive necessary care diminishes.²⁵

Underserved Patients Find Access More Challenging

Patients who depend on safety-net systems face additional barriers to accessing specialty care. For example, Medicaid patients wait, on average, two weeks longer for an appointment with an adult dermatologist, compared with those with Medicare or private insurance. In addition, only 32 percent of physicians are accepting new patients with Medicaid, compared with 87 percent of new patients with Medicare or private insurance.²⁶

Even if specialty care for underserved patients can be arranged, other barriers often prevent them from receiving needed care. Factors such as a lack of reliable transportation, cost, failure to receive notification of an appointment, language support, insurance, and trust have been cited as reasons for not attending specialty visits.^{27,28}

Variability of Current Referral and Specialty Care Systems

There is marked variation in the rate of specialty care referral rates across physician practices.^{29,30} Patient-related factors, such as health status and diagnosis, account for much of this variation.^{31,32} Individual physicians are more likely to make a referral when: 1) they care for a small number of patients who have a particular problem;³³ 2) when they lack the

technical skills to provide a necessary diagnostic or therapeutic procedure;³⁴ 3) when diagnostic uncertainty exists;³⁵ and 4) when the physician's practice style favors referral.³⁶

Health system factors—such as specialist supply, practice size, and area penetration of managed care—also influence referral rates.³⁷ In addition, a number of nonmedical factors generate referrals. These include direct patient requests, time pressures, and the need for medical education for both practicing physicians and trainees.³⁸

The shortage of specialists in the U.S. health care system is further amplified by an inefficient use of existing resources. The appropriateness and avoidability of referrals is a topic of debate among primary care and specialty physicians.³⁹ Few evidence-based guidelines exist to guide primary care physicians and specialists to the optimal referral point for a given condition or diagnosis.⁴⁰

The roles of specialists in treating certain clinical conditions are not well delineated. It is unclear, for example, whether the best outcome for a patient with intractable low back pain comes from a referral to a neurologist, neurosurgeon, orthopedist, pain specialist, or physiatrist.⁴¹ Many patients who currently use specialty health care services could be safely cared for by their primary care physician if effective referral guidelines were in place along with better lines of communication between primary care physicians and specialists.⁴²

Physician consultations and referral practices are not skills that are deliberately or well taught in most training programs.⁴³ As a result, upon entering practice, physicians are likely to employ ad hoc strategies for developing referral criteria and networks.

Narrowed Scope of Practice of Primary Care Physicians

The scope of practice of primary care physicians has grown more limited over the last century. In 1900, the ratio of generalist physicians to the population was about 150 per 100,000. This ratio has declined to approximately 30 per 100,000 today.⁴⁴ Few physicians practice the idealized “country doctor” type of medicine in which the practitioner sees patients in the office, hospital, and home, and even performs surgeries and deliveries when necessary.

The scope of practice was first limited by the rise of specialty boards in the early 20th century. The first specialty board was created for surgery in 1913; this was followed by boards for internal medicine in 1915 and pediatrics in 1930. Then came the rise of subspecialties by organ system and sub-subspecialties that focused on specific parts of organ systems.

A more recent development is the formation of specialties by site of care. Emergency medicine was introduced as a specialty in 1968 and critical care in 1970. Hospital medicine is another specialty that will soon receive board certification.

In a recent review, Canin and colleagues cite a number of other factors that have contributed to the decline of the scope of primary care practice. These include lifestyle factors, training, hospital credentialing, patient expectations, and malpractice coverage.⁴⁵

As a result of the contraction in the scope of practice for generalist physicians, a greater need for referral and consultation has emerged. In addition, rapidly developing knowledge and technology make it impossible for a single physician to maintain competence in every aspect of patient care. Primary care physicians must increasingly depend on their specialty colleagues for advice and support.

III. Four Models

Although these strategies were designed for the underserved, they also can be applied to improving access to specialty care for all populations.

APPROACHES TO IMPROVING ACCESS TO SPECIALTY CARE and overcoming the obstacles described above fall into three categories:

- Expand the procedural, diagnostic, and management skills of primary care physicians.
- Improve the efficiency of the consultation and referral process.
- Increase the supply of specialists willing to care for the underserved by addressing reimbursement and other logistical issues.

The first two approaches are considered in this research, which identified representative programs through: searches of databases of academic literature as well as the Internet; networking through email, LISTSERV communications, and word of mouth; and input from other experts in the field. The selected programs can be categorized into four models:

1. The “mini-fellowship” model of training and mentorship for individual physicians;
2. The “registrar” model where primary care doctors work together with specialists to expand service;
3. Innovative continuing medical education (CME) that provides opportunities to expand skills; and
4. Models that encourage the use of guidelines to streamline the referral process.

Selected examples of these models are described below. The first three represent different approaches to training physicians to expand their scope of practice, and the fourth offers an example of decision support for improving the efficiency of referrals. Although these strategies were designed for the underserved, they also can be applied to improving access to specialty care for all populations.

Mini-Fellowships

A mini-fellowship can be defined as a training program for physicians who have completed a residency to learn procedural skills or knowledge beyond what is usually expected of primary care physicians. Mini-fellowships⁴⁶ usually consist of didactics combined with hands-on skills training, usually for a brief time compared with formal fellowships (days or weeks rather than months). They often involve an extended preceptorship to support the physicians as they integrate these new skills into regular clinical practice. To qualify as a mini-fellowship, the program should have the following attributes:

- Training in a new skill not previously mastered by the physician;
- Brief time required away from usual clinical duties for the intensive part of the didactic training; and
- A hands-on component under the supervision of a teaching physician that is followed by post-training support for varying amounts of time.

This model originated in surgery and radiology, where advances in technology, such as laparoscopy and advanced imaging, made it imperative for physicians to learn new techniques in order to deliver the emerging standards of care. Excluded from this research were traditional lecture-based CME programs, retooling programs for physicians re-entering practice after an absence, and programs with no follow-up component. Also excluded were formal fellowships that typically last six months to two years. Most formal fellowships for primary care physicians focus on advanced procedural skills training in orthopedics, sports medicine, geriatrics, obstetrics, and hospital care.

The REACH Institute

EVIDENCE-BASED INTERVENTIONS IN CHILD AND ADOLESCENT MENTAL HEALTH

The REACH Institute, located in New York City, offers a mini-fellowship in primary pediatric psychopharmacology, focusing on evidence-based interventions in child and adolescent mental health. It consists of a 16-hour workshop followed by six months of live interactive distance learning. Founded in 2005, the Institute is currently headed by Peter Jensen, M.D., a child psychiatrist who was formerly with the National Institutes of Mental Health and Columbia University.

There is a nationwide shortage of qualified child and adolescent mental health professionals to treat the estimated 12 to 14 million young people with mental health problems.⁴⁷ There are only about 7,000 child and adolescent psychiatrists,⁴⁸ which would allow an average of only two hours consultation per year for each child in need of care.⁴⁹ However, because many of these children and adolescents have some contact with a primary care physician, Dr. Jensen and his staff developed the primary pediatric pharmacology training program to expand the expertise of these physicians in treating common mental health conditions.

Participants attend a three-day workshop offered at various locations around the country. In addition to pharmacology, the training also covers diagnosis, symptom monitoring, counseling, and family involvement in the care of the patient. Also addressed is the building of a treatment team consisting of family members, school personnel, and other professional caregivers, as well as coding and billing issues to ensure appropriate reimbursement for services.

After completing the workshop, the physicians take part in twice-monthly case discussion conference calls. During each hour-long call, two physicians

present a case from their current practice that is then discussed by other primary care practitioners and psychiatrists. Each primary care physician can present three cases over six months.

Some 300 physicians have completed the training as of December 2008, and the program has been positively received. According to Dr. Jensen's evaluations, about 60 percent of the physicians have begun using formal rating scales to monitor their patients' symptoms. They report an increase in competence and confidence in addressing the mental health needs of their pediatric patients. Not only are many physicians interested in additional training, but also many now serve as community mental health champions in communities where access to psychiatric care is otherwise limited.

Using a similar combination of initial face-to-face training and distance learning methods, the REACH Institute also offers year-long fellowships in psychotherapy training for practitioners who are interested in expanding their psychotherapeutic skills. This program is generally pursued by psychologists and social workers, but is open to physicians as well.

Los Angeles County-University of Southern California Medical Center, COPE Health Solutions, and the Camino de Salud Network

PHYSICIAN CHAMPIONS FACILITATE RHEUMATOLOGY AND CARDIOLOGY REFERRALS

To find out why patients were overutilizing emergency department services, Los Angeles County-University of Southern California Medical Center (LAC+USC) and the Camino de Salud network of community health centers hired COPE Health Solutions, a nonprofit health consulting firm.

Finding that access to specialty care was a major obstacle for patients, COPE designed pilot programs in rheumatology and cardiology, two specialty areas

that had particularly high wait times. The firm's staff worked with community health centers to identify primary care physicians who were willing to undergo additional training to act as physician champions for their clinics' patients. COPE also identified the rheumatology and cardiology specialists at LAC+USC who were open to developing an ongoing relationship with these primary care doctors in order to shift some specialty care to the community health centers.

As part of their training, the physician champions spent several days in the specialty clinics in the county hospital to shadow specialists. The focus was on expanding skills in the diagnosis and management of common conditions in cardiology and rheumatology that are typically referred but could be handled by a primary care physician.

Today, any rheumatology or cardiology referral within the Camino de Salud network must first pass through the physician champion, who provides feedback and recommendations to the referring doctor about next steps. The physician champion also meets weekly with the specialists to review cases. Once a month, the entire group of physician champions and consulting specialists meets to discuss progress and participate in continuing education.

The impact of this arrangement is currently under evaluation as part of a separate California HealthCare Foundation project. Preliminary findings suggest that it is difficult to measure the number of referrals that were averted as a result of the program. One of the recognized benefits, however, is the personal access that primary care physician champions now have to specialists for consultation. The program is being examined to see how it can be made financially sustainable for primary care physicians and specialists alike, and how it can offer CME credit and other benefits to participants.

Salud Family Health Centers

RETINOPATHY SCREENING PROGRAM AND COLONOSCOPY PROGRAM

Salud Family Health Centers (SFHC) is a network of federally qualified community health centers in Colorado that employs about 70 clinicians, including family physicians, physician assistants, and nurse practitioners. No specialist physicians are employed. Ninety percent of SFHC patients fall below 200 percent of the federal poverty level. Beginning in 2004, SFHC undertook initiatives to help patients in need of two types of specialty services that were difficult to access—colonoscopy and retinal screening. Both programs were supported with grant funding.

To provide colonoscopies, SFHC requested that two family physicians receive training from a local gastroenterologist. The family physicians had prior experience in the procedure, but their training was insufficient for independent practice. SFHC built colonoscopy suites at two of their clinics. More than 200 colonoscopies are performed each year at these sites and an additional 600 are done at local hospitals.

A retinal screening program for patients with diabetes began with SFHC Medical Director Tillman Farley, M.D., acquiring training in the use and interpretation of retinal photographs using a retinal camera; he went on to train other primary care physicians in the health centers. For the first three years of the program, 100 percent of the retinal photos were over-read by an ophthalmologist. After that, the interpretations were so consistent that the ophthalmologist's involvement was no longer needed.

Registrar System

A second model for expanding access to specialty care services is based on the British registrar system, which parallels the U.S. residency training system. In Britain, the registrars provide the bulk of medical training of all hospital and surgical specialties. Primary care physicians examine patients in specialty clinics under the supervision of a specialist. The primary care physician gains experience and competence in taking care of common conditions within a specialty and has ready access to the specialist for support. The supervising physician, in turn, gains additional time for treating patients with more complex or less common conditions. In time, this on-the-job training enables the primary care physician to expand access to care in a given specialty. Frequently, he or she assumes the role of first-line consultant physician for a hospital or clinic.

These primary care physicians, known as registrars, can then go on to train other general physicians. The following two examples interpret the British model in U.S. settings.

Contra Costa County Health System

PRIMARY CARE PHYSICIANS TRAIN FOR BROAD RANGE OF PROCEDURES

This public county health system, located in the San Francisco Bay Area, serves an urban/suburban, primarily underserved patient population and is home to a family medicine training program. Lack of access to specialty care had been a longstanding issue. In the early 1950s, the county developed a creative approach to this problem under the leadership of a military general surgeon, Dr. George Degnan. He had learned about the registrar system while stationed in England after World War II.

Dr. Degnan established a two-year generalist residency program at the county hospital, in which he trained his generalist residents to become registrars

after graduation. They provided nearly all the specialty care throughout the entire health system in what was a rural county at that time. During his tenure with the hospital from 1950 to 1981, Dr. Degnan acted as an on-call physician backup to the generalist physicians who provided the majority of medical and surgical care. By 1991, former Degnan registrars were performing a wide range of procedures, including nephrectomies, major orthopedic procedures, and general surgery. “[It was] unusual only in that what was once a rural county had clearly become an urban/suburban one by the time I got here,” one Contra Costa County physician recalled.

The Contra Costa County registrar system remains vibrant today. Family medicine physicians provide a variety of specialty services within the hospital and its outpatient clinics, including noninvasive cardiology testing, dermatology, orthopedics and sports medicine, perioperative evaluation, urology with cystoscopy, colonoscopy, outpatient surgeries, gynecologic and reproductive health procedures, and pre- and postoperative care for neurosurgical patients. In addition, these physicians provide a full range of hospital care that includes ED staffing and treating ICU patients. They also perform a number of surgical procedures such as cesarean sections and hysterectomies.

Family physicians are full voting members of all major teaching departments: medicine, surgery, obstetrics and gynecology, pediatrics, emergency medicine, and family medicine. Family physicians chair the departments of emergency medicine and obstetrics and gynecology. Becoming a junior member of these registrar groups usually requires the completion of an informal fellowship of one to two years, during which senior members of the department or one of the limited number of specialists on staff provide backup.

University of Michigan

COLLABORATION BETWEEN PRIMARY CARE AND UROLOGY

The department of urology at the University of Michigan (UM) was experiencing significant difficulty in providing timely appointments for the evaluation of non-emergent, medical-based urologic conditions. The solution to the problem, which was widespread across southeast Michigan, grew out of a collaborative arrangement between the departments of urology and family medicine. As a result, three physicians in the department of family medicine now hold joint appointments in the department of urology.

Dr. Joel Heidelbaugh, a clinical assistant professor of family medicine, led the initiative. He learned that many referrals evaluated by the urologists were for medical issues that were non-emergent, nonsurgical, and did not require a urologist’s technical skills. Furthermore, specialists who practice in academic medical centers are usually subspecialized in narrower fields, such as prostate disease or incontinence. It may not be evident to referring primary care providers which urologist a patient should see.

Dr. Heidelbaugh worked closely with the urology faculty to develop dedicated teaching sessions and clinic shadowing under supervision by UM faculty urologists for family medicine practitioners. In 2008, he and two other family physicians began seeing one patient per week, on a referral basis, in designated primary care urology clinics. In this capacity, they serve the function of general urologists, fully trained to evaluate and treat a wide variety of common conditions. By serving as the first point of contact, these physicians have been able to expand the urology clinic’s patient capacity. Patients who require non-emergent procedural or surgical evaluation are fast-tracked to a urologist and receive the necessary intervention within one to two weeks.

The clinics also provide an opportunity for interval follow-up of urologic conditions. Many patients who self-refer to the primary care urology clinics did not initially have primary care providers. This venture has allowed for improved access to a designated patient-centered medical home for them.

The UM family physicians have also developed a teaching curriculum to augment the often-minimal training in urologic conditions encountered in medical school and family medicine residencies. Dr. Heidelbaugh is creating a teaching tool based on interactive multimedia to help students and residents understand the appropriateness of specialty referral from primary care.

Innovative CME

A third model is a program that resembles traditional CME but is more thorough, offers hands-on training, and often provides follow-up mentorship.

The National Procedures Institute

HANDS-ON TRAINING IN OFFICE-BASED PROCEDURES

Started by Dr. Jack Pfenninger, a Michigan family physician, the [National Procedures Institute \(NPI\)](#) has grown from its local roots to become a national program. The for-profit institute holds approximately 100 courses in cities throughout the U.S. that are attended by 3,000 to 4,000 clinicians each year.

Dr. Pfenninger began the program 18 years ago as a way to offer his patients a wide variety of services at a relatively low cost. Generalists receive hands-on training during the one-to-three-day workshops in office-based procedures, such as skin biopsy, laceration repair, colposcopy, stress testing, fracture care and casting, and office ultrasound. The most frequently attended courses are in dermatology procedures, endoscopy, and hospital-based procedures training.

Although the NPI does not offer formal mentoring after the courses, instructors regularly answer phone calls and emails from attendees. Dr. Pfenninger also has frequently mentored physicians. He believes that patient satisfaction improves when more services are offered locally. Many family physicians similarly wish to perform specialized procedures but are hampered by a lack of sufficient role models to train them. Dr. Pfenninger cites as barriers to training the resistance of certain specialists and the restrictions that insurance companies place on generalists despite their demonstrated competence.

The American Society of Colposcopy and Cervical Pathology

IN-DEPTH FOCUS ON COLPOSCOPY

The American Society of Colposcopy and Cervical Pathology offers a structured series of seminars and credentialing processes aimed at building competency in colposcopy for primary care physicians, nurse practitioners, and physician assistants. Colposcopy is a technique for identifying cervical abnormalities and performing biopsies upon evaluating an abnormal Pap smear.

After attending a four-day training session and completing a pre- and post-test, clinicians are assigned to a local mentor colposcopist. The colposcopist will supervise them as they perform 25 colposcopies, including three with findings of advanced cervical pathology. After clinicians complete the monitored cases satisfactorily, they are eligible to sit for the Colposcopy Mentorship Program examination, which is also available to physicians who complete an equivalent training in residency. Also offered is an advanced level of training and corresponding exam. This CME is organized around a structured curriculum with an experiential component to reinforce skills and a standardized

assessment of competency. More information is available at the society's Web site (www.asccp.org).

Interactive Referral Guidelines

A fourth model employs the use of interactive referral guidelines to assist the decisionmaking of both primary care physicians and specialists in improving the efficiency of the referral process. Guidelines are established by group consensus to guide the primary care physician in initial diagnosis, management, and appropriate pre-referral workup and to provide criteria for discharge from the specialty clinic and return to primary care.

Madigan Army Medical Center

PUBLICLY AVAILABLE REFERRAL GUIDELINES

The referral guidelines for the Madigan Army Medical Center (MAMC) in Tacoma, Washington, were developed in the late 1990s in response to growing concern over access to care in certain specialties. A referral guidelines committee was developed as an offshoot of existing committees for drafting and disseminating clinical and treatment guidelines. Specialist physicians were asked to develop specialty- and condition-specific guidelines. Primary care physicians were involved in drafting the criteria for return of patients to primary care.

These guidelines are available for public use through the MAMC Web site. The intention is that, by accessing and reviewing these guidelines online, patients can save themselves unnecessary visits to the medical center's ED. Currently, the site features more than 200 guidelines covering 36 specialties, and more are under development. Many include links to evidence-based guidelines for clinical care and treatment developed within MAMC or from the U.S. departments of Veterans Affairs and Defense. Patient education information is often embedded in the guidelines, which are available as simple text-based

documents that can be printed for review. They can be accessed at www.mamc.amedd.army.mil/referral/guidelines/index_rgsp.htm.

MAMC intends to revise the guidelines as necessary at least every three years. Guideline use is voluntary and there is no penalty for failing to follow recommendations. There has not been a formal assessment of the impact of the guidelines on changing referral patterns or decreasing wait times for specialty care. However, the guidelines have been useful in the education of residents and medical students, according to Col. Diane Flynn, M.D., chair of the guidelines committee.

Cook County Health and Hospitals System

INTERACTIVE DECISION TREES FOR EACH SPECIALTY

In the late 1990s, the Cook County Health and Hospitals System (CCHHS) in Illinois developed the first Internet-based specialty and diagnostic services referral system in response to increasing wait times and backlogs in specialty care. The prior paper-based system was highly inefficient: Patients often waited months for appointments with specialists. There were no data on the demand for services or the capacity within the specialty clinics, and physicians were often unaware of the range of services available. Misdirected referrals caused additional problems.

The Internet Referral Information System (IRIS) was developed to streamline the referral process for the CCHHS, which includes three hospitals, a network of ambulatory health centers, health services at the county jail, and the CORE Center that offers outpatient care for infectious disease. In addition, some FQHCs have access to the system. IRIS is designed to be used by a physician, physician assistant, or nurse practitioner. For each specialty, the clinician is led through an interactive decision tree that asks questions about the desired services, diagnostic workup already completed, and response

of the patient to initial management suggestions. The process of working through the decision tree also serves as an educational tool.

IRIS has three main functions:

- It ensures that the referring clinician consults the appropriate specialist by automatically shifting to the proper clinic based on the algorithm being accessed.
- It ensures that the appropriate preliminary workup for a particular condition has been completed (or is in process) so that the results are available to the specialist.
- It can guide the physician in the proper initial evaluation and management of certain conditions. For example, if a referring physician has diagnosed an enlarged prostate, the system will only allow the referral to proceed if the patient is experiencing symptoms (based on a widely used scale) that are not relieved by initial medical management. When a referral is rejected, the physician has the option of advocating why a particular patient's case should be reconsidered. Patients are notified of appointments using an automated phone messaging system.

With IRIS the referral network capacity has expanded by about 20 to 25 percent. Wait times, on average, are now two to three weeks rather than months. Referring physicians are informed when their patients have been granted appointments and when the patient could not be reached or declined the appointment. Data regarding backlogs is available on the Web site and can be accessed by the specialty and primary care clinics. This information has been used to support grant requests to hire additional staff to meet such areas of high need as mammography and the evaluation of abnormal cervical cancer screening tests.

IV. Discussion

MAKING ACCESS TO SPECIALTY CARE MORE effective and efficient is an important part of ameliorating the nation's health care problems, including growth in the uninsured population (nearly 46 million),⁵⁰ and rising per capita spending in percent of GDP.⁵¹ A low ratio of primary to specialty care physicians and inappropriate and ineffective use of care are cited as factors driving this increase in expenditure.⁵²

Each of the four models presented in this report offers a potential solution that is consistent with the goals of the patient-centered medical home, which has been proposed as a model for improving the delivery of health care services through the creation of a strong base of primary care across the nation.⁵³ The primary care physician has the unique ability to coordinate care through an integrated knowledge of patients' individual needs and preferences, the resources available in the community for both specialty and ancillary medical services, and population-based issues such as preventive care.⁵⁴ It is this role of the primary care physician—to provide care within the medical home and to refer as appropriate—that might ultimately expand access to specialty care through a more rational use of health services.⁵⁵

Although the models differ in structure, four themes emerge as key in the development projects to expand access to specialty care: local responsiveness, direct availability of diagnostic and imaging services in primary care, relationship building with specialists, and use of management and referral guidelines.

Locally Responsive Solutions

Most of the models were developed as a unique response to local conditions and to meet the needs of a specific patient population; they are not top-down state or national initiatives. Improving specialty care access in a particular locale must take into account payer mix, specialist supply, distance to specialty care (geographic distance and travel time), local primary care scope of practice, and patient factors, such as the availability of transportation, primary language, health literacy, and health status.

Relationship Building

It is important that primary care physicians develop a positive personal relationship with a network of specialists on whom they can depend for quick and informal consultation and advice. With such a network in place, a practitioner can avoid wasting a valuable clinic visit slot on an issue that might be easily resolved with a brief phone or email conversation. For many rural physicians, these networks are built out of necessity, as specialty care is often located hundreds of miles away.⁵⁶ For urban and suburban physicians, the availability of phone consultation is likely dependent on the nature of each individual physician's referral network and personal relationships with consulting physicians.

Primary care physicians who work within a large health organization or academic medical center are likely to benefit from informal access to specialists. According to a large national study, a community health center's affiliation with a medical school or hospital improves a patient's access to specialty care.⁵⁷

However, some physicians who practice in stand-alone community health centers have expressed

feeling isolated with few on-call resources available to answer questions regarding diagnosis and management outside of a formal referral.⁵⁸

Direct Access to Diagnostic and Imaging Services

The availability of diagnostic testing and imaging services is a separate but related issue that is equally important to a primary care physician's ability to care for patients.⁵⁹ Having direct access to these services provides primary care physicians with tools to provide better patient care and reduce the need for some specialty referrals.

In some systems of care, for example, a primary care physician may order a colonoscopy, cardiac echocardiography, or stress testing directly and interpret and manage the results in the same way he or she might address the results of an x-ray or CT scan. The physician then can make referrals for specialty care only in those cases where an abnormal test result requires a higher level of intervention. In other systems, obtaining access to these types of diagnostic testing requires the patient to have two potentially unnecessary visits with a specialist (one to order the test; one to interpret normal test results), in addition to the appointment for the actual test. This represents an inefficient use of scarce specialty resources.

Referral and Management Guidelines

In the proper context, a system that incorporates guidelines for pre-appointment management and diagnosis has the potential to improve access to specialty care for patients, while it empowers primary care physicians to appropriately manage patients in their home clinic. A study of a guideline implementation for a low back pain program showed that referrals to specialty care were more accurate,

patients expressed a high level of satisfaction, and an estimated \$400,000 per year was saved.⁶⁰

The success of IRIS in Cook County relies almost entirely on patient care guidelines embedded in the system. These have led to reduced waitlists and backlogs for care in most specialties, while improving the rate of appropriate referrals (right level, right specialty, sufficient pre-visit workup).⁶¹ The process of developing guidelines jointly by primary care and specialty physicians is important because it builds relationships and improves communications while allowing primary care physicians to extend the scope of their evaluations and treatments.

An issue to consider in the use of referral guidelines is whether they are applied equally to all patients. Experience has shown that uninsured patients may be referred to specialists based on one set of criteria and patients with insurance—for whom there are more readily available options—may be referred based on different criteria. It is unclear whether the use of different referral criteria results in different health outcomes for uninsured patients. This is an area deserving of evaluation.

V. Barriers to Implementation

Many of the physicians who have implemented these programs described barriers to improving access to specialty care.

MANY OF THE PHYSICIANS WHO HAVE implemented these programs described barriers to improving access to specialty care.

First, the strong tradition of solo practice in the United States is a potential barrier to implementing these models. Even within group practices, patients are rarely cared for by a team of physicians. Rather, each patient “belongs to” an individual physician who has his own referral network, level of experience, and decision framework for determining at what point to make a referral. Implementation of the models requires a team-oriented approach in which the group agrees to certain referral and consultation guidelines, and some physicians are willing to act as champion experts in a certain content area, while others are expert in other conditions.

Second, not all primary care physicians are interested in expanding their scope of practice. Researchers who interviewed community health center physicians in Chicago found that some physicians consider themselves to be “done with training” and prefer to maintain their current scope of practice and referral patterns rather than take on new challenges. Other clinicians said time and productivity pressures lessen their interest in performing additional procedures.⁶² Some physicians feel that the existing scope of practice demanded of them is already too broad and would rather limit than expand it.⁶³

Furthermore, there are few national or regional certifications available as a mark of competence for primary care physicians who expand their skills. Primary care physicians who want to perform procedures in hospitals often experience difficulty gaining permission from hospital staff and administration. Although the American Academy of Family Physicians has issued a position statement⁶⁴ that advocates for credentialing to be based on competency and experience, hospitals often require completion of specific types of residency or fellowship training as a prerequisite for permission to practice certain procedures.

This same tradition often dictates community standards of care, which could increase the risk of successful malpractice challenges to a primary care provider who attempts to expand his or her scope of care. Many of the interviewed physicians recognized malpractice

as a potential risk, but were more concerned with improving their patients' access to needed care.

The current U.S. reimbursement model inhibits expanding the scope of primary care practice. In order to reconfigure interactions between primary care and specialty physicians in a way that is sustainable beyond pilot projects, it will be necessary to appropriately compensate primary care and specialist physicians and their organizations for their time and resources. For example, while it might be less resource intensive to employ a specialist to oversee the care provided by multiple primary care physicians via case conference or other means, the specialist must be adequately compensated for his or her time.

Finally, the solutions proposed in this report are targeted to an underserved setting where the supply of patients in need of a particular type of specialty care significantly exceeds the availability of specialists willing and able to meet that demand. The solutions discussed above hinge on maintaining care in the primary setting with specialist support for a number of conditions that might effectively reduce referrals to specialists. It is uncertain whether the proposed solutions would be appealing in a more general private-practice setting, where a reduction in referrals to specialists might adversely affect practice income.

VI. Conclusion

ACCESS TO SPECIALTY CARE, ESPECIALLY for the poor and underserved, is an issue of critical national importance. As health care dollars tighten and more Americans become uninsured, expanding and improving primary care resources and reserving expensive specialty resources for patients with complex or rare disorders will grow increasingly important. Change requires recalibrating the roles of primary care and specialty physicians and determining the boundaries of care. Innovative solutions such as telemedicine are already meeting patient needs outside of the traditional model of a face-to-face visit with a specialist. Some of what is currently being accomplished in initial specialist visits might be achieved more efficiently within the primary care home through the use of referral guidelines; consultation with specialists via case meetings, phone calls, and emails; and the expanded training of primary care physicians to provide more procedural services.

At the individual community level, solutions may require health centers that care for the poor to examine how they build referral networks to meet patient needs. Rather than simply identifying specialty physicians willing to see patients for office visits, it may be more efficient to seek out specialists who are willing to serve in a more consultative capacity. By creating close and collegial relationships with specialty physicians, community health centers might work out referral protocols, hold case management sessions, and establish information-sharing agreements to enable communication of pre-referral workups as well as recommendations by the specialist for further diagnosis and management.

The interface between primary care and specialty care is an area ripe for research. Topics in need of exploration include:

- Evaluation and dissemination of model programs;
- Patient perspectives;
- Defining appropriate consultations through joint efforts among primary and specialty care physicians and explicitly teaching these in medical school and residency; and
- Quality measures.

All of the models for expanding the scope of primary care physicians and improving the efficiency of the specialty referral process have the potential for improving patients' access to specialty care. But further work and evaluation is necessary to develop programs that deliver specialty care appropriately and effectively.

Endnotes

1. Cook, N.L., L.S. Hicks, A.J. O'Malley, and others. "Access to specialty care and medical services in community health centers." *Health Affairs* 2007;26(5): 1459–1468.
2. Felt-Lisk, S. and M. McHugh. The Uninsured: Examining Access to Specialty Care for California's Uninsured. California HealthCare Foundation: May 2004. (www.chcf.org/documents/insurance/AccessToSpecialtyCareForCalifUninsuredReport.pdf).
3. *Medicine in the Neighborhoods*. San Francisco Medicine. January/February 2007; 80(1): entire issue (www.sfms.org/source/members/magazine_archive_list.cfm?theme=January/February%202007%20Neighborhood%20Medicine§ion=Article_Archives).
4. National Association of Community Health Centers. August 2007. *Access Granted: The Primary Care Payoff* (www.nachc.org/client/documents/issues-advocacy/policy-library/research-data/research-reports/Access_Granted_FULL_REPORT.pdf).
5. South Side Health Collaborative. June 1, 2006. *Specialty Care Survey Report*. (unpublished data).
6. Dorsey, C.A. August 17, 2007. "Access to Specialty Care Services: An Exploration of Physician Perspectives on the South Side of Chicago." (unpublished manuscript)
7. Reschovsky, J.D. and A.S. O'Malley. "Do primary care physicians treating minority patients report problems delivering high-quality care?" *Health Affairs* 2007;26(3): w222–w231 (published online April 22, 2008; 10.1377/hlthaff.26.3.w22).
8. See note 2.
9. See note 3.
10. See note 4.
11. Institute of Medicine Committee on the Consequences of Uninsurance. *Hidden Costs, Value Lost*. Washington, DC: National Academies Press, 2003.
12. Cunningham, P.J. and L.M. Nichols. "The effect of Medicaid reimbursement on the access to care of Medicaid enrollees: a community perspective." *Medical Care* 2005; *Research and Review* 62(6): 676–696.
13. Cunningham, P.J. and A.S. O'Malley. "Do reimbursement delays discourage Medicaid participation by physicians?" *Health Affairs* 2009;28(1):w17–w28.
14. Backus, L., D. Osmond, K. Grumbach, and others. *Journal of General Internal Medicine* 2001;16:815–821.
15. See note 1.
16. U.S. Health Center Fact Sheet. National Association of Community Health Centers: 2008 (www.nachc.com/client/documents/U.S._Fact_Sheet_2008.pdf).
17. U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Primary Health Care. 2006. Dual Status—Health Centers that are both FQHC Look-alikes and Section 330 Grantees (Program Assistance Letter, Document Number 2006-1, bphc.hrsa.gov/policy/pal0601.htm).
18. Health Resources and Services Administration (HRSA), Department of Health and Human Services. October 2006. *Physician Supply and Demand: Projections to 2020* (bhpr.hrsa.gov/healthworkforce/reports/physiciansupplydemand/default.htm).
19. *Physician Workforce Policy Guidelines for the United States, 2000–2020*. Council on Graduate Medical Education: January 2005 (www.cogme.gov/16.pdf).
20. Brown, M.L., C.N. Klabunde, and P. Mysliwiec. "Current capacity for endoscopic colorectal cancer screening in the United States: data from the National Cancer Institute survey of colorectal cancer screening practices." *American Journal of Medicine* 2003;115:129–133.
21. Fieleke, D.R., K. Edison, and J.A. Dyer. "Pediatric telermatology: a survey of current use." *Pediatric Dermatology* 2008;25(2):158–162.
22. Cooper, R. "There's a shortage of specialists. Is anyone listening?" *Academic Medicine* 2002;77:761–766.

23. *Recent Studies and Reports on Physician Shortages in the U.S.* Association of American Medical Colleges, Center for Workforce Studies: August 2007 (www.aamc.org/workforce/recentworkforcestudies.pdf).
24. Resnick, J., M.J. Pletcher, and N. Lozano. "Medicare, Medicaid and access to dermatologists: The effect of patient insurance on appointment access and wait times." *Journal of the American Academy of Dermatology* 2004;50:85–92.
25. Forrest, C.B, E. Shadmi, P.A. Nutting, and others. "Specialty referral completion among primary care patients: results from the ASPN referral study." *Annals of Family Medicine* 2007;5:361–367.
26. See note 24.
27. Mojtabei, R. "Compliance with mental health and other specialty care referrals among Medicare/Medicaid dual enrollees." *Community Mental Health Journal* 2005;41:339–344.
28. See note 6.
29. Starfield, B., C.B. Forrest, P.A. Nutting, and others. "Variability in physician referral decisions." *Journal of the American Board of Family Practice* 2002;15:473–480.
30. Franks, P, J. Zwanziger, C. Mooney, and others. "Variations in primary care physician referral rates." *Health Services Research* 1999;34(1):323–329.
31. Forrest, C.B., P.A. Nutting, S. von Schrader, and others. "Primary care physician specialty referral decision making: patient, physician, and health care system determinants." *Medical Decision Making* 2006;26:76–85.
32. Bertakis, B.D., E.J. Callahan, R. Azari, and others. "Predictors of patient referrals by primary care residents to specialty care clinics." *Family Medicine* 2001;33(3): 203–209.
33. Forrest, C.B. and R.J. Reid. "Prevalence of health problems and primary care physicians' specialty referral decisions." *Journal of Family Practice* 2001;50:427–432.
34. Ibid.
35. See note 31.
36. See note 32.
37. See note 31.
38. Donohoe, M.T., R.L. Kravitz, D.B. Wheeler, and others. "Reasons for outpatient referrals to specialists." *Journal of General Archives of Internal Medicine* 1999;14:281–286.
39. Ibid.
40. Dianne M. Flynn, COL, MC, Chief, Department of Family Medicine, Madigan Army Medical Center, Tacoma, WA. Personal communication. October 2008.
41. Forrest, C.B. October 30, 2007. "Transforming the Primary-Specialty Care Interface by Clarifying the Roles and Responsibilities of Specialist Physicians: Implications for Innovations in the Referral Process." (unpublished manuscript)
42. Valderas, J.M., B. Starfield, C.B. Forrest, and others. "Ambulatory care provided by office-based specialists in the United States." *Annals of Family Medicine* 2009;7:104–111.
43. Joel Heidelberg, M.D., personal communication, January 2009.
44. Colwell, J.M. "Primary Care Medicine and the Education of Generalist Physicians." In: *Generalist Medicine and the US Health Care System*. Isaacs, S.L., Knickman, J.R. (Eds). The Robert Wood Johnson Foundation: 2004.
45. Canin, L. and B. Wunsch. 2008. *Fuller Scope of Practice for Primary Care Providers: A Strategy to Improve Access to Specialty Care in the Safety Net*. Prepared for the Specialty Care Access Initiative—A Partnership of Kaiser Permanente Community Benefits, California Association of Public Hospitals and Health Systems and California Primary Care Association (www.pachealth.org/docs/DiscPaperExpandedScope.pdf).
46. Cottam, D., S. Holover, S.G. Mattar, and others. "The mini-fellowship concept: a six-week focused training program for minimally invasive bariatric surgery." *Surgical Endoscopy* 2007;21:2237–2239.
47. American Academy of Child and Adolescent Psychiatry. January 8, 2009. AACAP Workforce Fact Sheet (aacap.org/cs/root/legislative_action/aacap_workforce_fact_sheet).
48. Ibid.

49. Peter Jensen, M.D., president and CEO, The REACH Institute. Personal communication. November 2008.
50. U.S. Census Bureau. Income, Poverty and Health Insurance Coverage in the United States: 2007. US Department of Commerce, August 2008.
51. Anderson, G.F. and B.K. Frogner. "Health spending in OECD countries: obtaining value per dollar." *Health Affairs* 2008;27(6):1718–1727.
52. Davis, K., C. Schoen, S. Guterman, T. Shih, S.C. Schoenbaum, and I. Weinbaum. 2007. Slowing the Growth of U.S. Health Care Expenditures: What are the Options? Prepared for the Commonwealth Fund/Alliance for Health Reform, 2007 Bipartisan Congressional Health Policy Conference. Commonwealth Fund pub. No. 989. (www.commonwealthfund.org/Content/Publications/Fund-Reports/2007/Jan/Slowing-the-Growth-of-U-S--Health-Care-Expenditures--What-Are-the-Options.aspx).
53. Robert Graham Center for Policy Studies in Family Medicine and Primary Care. November 2007. The Patient Centered Medical Home: History, Seven Core Features, Evidence and Transformational Change (www.aafp.org/online/etc/medialib/aafp_org/documents/about/pcmh.Par.0001.File.dat/PCMH.pdf).
54. Ferrer, R.L., S.J. Hambidge, and R.C. Maly. "The essential role of generalists in health care systems." *Annals of Internal Medicine* 2005;142:691–699.
55. Starfield, B. "Primary and specialty care interfaces: the imperative of disease continuity." *British Journal of General Practice* 2003;53:723–729.
56. McGaha, Amy. Personal communication, October 2008.
57. See note 1.
58. See note 6.
59. Cosineau, Michael. Personal communication. March 2009.
60. Harrington, J.T., C.A. Dopf, and C.S. Chalgren. "Implementing guidelines for interdisciplinary care of low-back pain: a critical role for pre-appointment management of specialty referrals." *Joint Commission Journal on Quality Improvement* 2001;27(12): 651–663.
61. Martinez E. Cook County Health and Hospitals System Outpatient Referral System. Presentation to the Michael Reese Health Trust Policy Roundtable. September 12, 2008.
62. See note 6.
63. St. Peter, R.F., M.C. Reed, P. Kemper, and others. "Changes in the scope of care provided by primary care physicians." *NEJM* 1999;341(26):1980–1985.
64. American Academy of Family Physicians. Policy Manual. Updated October 2008 (www.aafp.org/online/etc/medialib/aafp_org/documents/policy/policy/policies.Par.0001.File.dat/AAFP-Policies.pdf).

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