The goal of the Safety Net Medical Home Initiative (SNMHI) is to help practices redesign their clinical and administrative systems to improve patient health by supporting effective and continuous relationships between patients and their care teams. In addition, SNMHI seeks to sustain practice transformation by helping practices coordinate community resources and build capacity to advocate for improved reimbursement. The SNMHI is sponsored by The Commonwealth Fund and is administered by Qualis Health and the MacColl Center for Health Care Innovation at the Group Health Research Institute.

Care coordination is especially challenging in safety net practices because of:

- The complexity of many patients’ medical, social, and financial situations;
- The diversity of languages and cultures and the challenge of matching patients with providers that can meet their needs; and,
- The difficulties of obtaining specialty services for uninsured or Medicaid patients in many communities.

The complexity of modern medicine demands specialization, and high quality healthcare must assure that patients receive care from those people and institutions best trained and equipped to provide a service, whether it be a surgical procedure, a medical evaluation, support for lifestyle change, or financial advice. As a consequence, care often involves referrals from provider to provider and transitions from one facility to another. This complex “system” of care delivery can be dangerous, frustrating, and expensive if not managed well. Reducing the potentially deleterious effects of fragmentation is a central objective of the Patient-centered Medical Home (PCMH) Model of care. Care coordination begins with the thoughtful identification of key service providers in the community followed by the “the deliberate organization of patient care activities between two or more participants involved in a patient’s care to facilitate the appropriate delivery of health care services.”

Care coordination is especially challenging in safety net practices because of:

- The complexity of many patients’ medical, social, and financial situations;
- The diversity of languages and cultures and the challenge of matching patients with providers that can meet their needs; and,
- The difficulties of obtaining specialty services for uninsured or Medicaid patients in many communities.
Many safety net practices have valuable assets that if organized well can potentially assure effective care coordination. For example, safety net practices have a rich knowledge of their community’s assets and resources, and often have staff and outreach workers that can support patients outside of the practice.

There is stronger evidence about the problems that occur when care isn’t well coordinated than about the changes practices can make to prevent those problems. However, innovative practice systems, including some safety net practices, have begun to identify key changes practices can make to provide effective, efficient, and satisfying referrals and transitions. This emerging evidence and experience show that effective care coordination programs, regardless of patient population, share four common elements: assuming accountability for care coordination, providing patient support, developing relationships and agreements with key outside providers, and establishing connectivity that assures appropriate information transfer.

This implementation guide summarizes identified and studied best-practices and provides tangible and practical tools to help practices design and implement effective care coordination programs.

Change Concepts

The following eight Change Concepts for Practice Transformation (Change Concepts) comprise the operational definition of a Patient-centered Medical Home for the “Transforming Safety Net Clinics into Patient-Centered Medical Homes” Initiative. They were derived from reviews of the literature and also from discussions with leaders in primary care and quality improvement. Over the course of the “Transforming Safety Net Clinics into Patient-Centered Medical Homes” Initiative, we will cover each of these change concepts in turn. An implementation guide will be prepared and made available for each concept. This implementation guide is focused on the Change Concept Care Coordination.

1. Empanelment
2. Continuous and Team-based Healing Relationships
3. Patient-centered Interactions
4. Engaged Leadership
5. Quality Improvement (QI) Strategy
6. Enhanced Access
7. Care Coordination
8. Organized, Evidence-based Care

Elements of Care Coordination

The following key changes define Care Coordination for the Safety Net Medical Home Initiative (SNMHI). An effective PCMH:

- Links patients with community resources to facilitate referrals and respond to social service needs.
- Provides care management services for high risk patients.
- Integrates behavioral health and specialty care into care delivery through co-location or referral protocols.
- Tracks and supports patients when they obtain services outside the practice.
- Follows-up with patients within a few days of an emergency room visit or hospital discharge.
- Communicates test results and care plans to patients/families.
Message to Readers
SNMHI implementation guides are living documents. Updates will be issued as additional tools, resources, and best-practices are identified. This implementation guide provides an introduction to the following elements of the Change Concept “Care Coordination”:
- Links patients with community resources to facilitate referrals and respond to social service needs.
- Provides care management services for high-risk patients.
- Tracks and supports patients when they obtain services outside the practice.
- Follows-up with patients within a few days of an emergency room visit or hospital discharge.

Transformative change relies upon knowledge sharing and transfer. The partner clinics and Regional Coordinating Centers participating in the SNMHI are members of a learning community working towards the shared goal of PCMH transformation. This learning community produces and tests ideas and actions for change. The Initiative celebrates the contributions and accomplishments of all its partner clinics and Regional Coordinating Centers and, in the spirit of collaborative learning, implementation guides often highlight their work. This guide includes resources from Squirrel Hill Health Center (Pittsburgh). Editorial support was also provided by the Multnomah County Health Department (Oregon) and the Colorado Community Health Network (Colorado).

Care Management and Care Coordination: Understanding the Overlap and the Differences

In this guide, we make an important distinction between care coordination and care management. On the one hand, we use care coordination interchangeably with referral or transition management, limiting its use to describe the essentially non-clinical but important functions such as providing information and logistical help to referred patients, assuring timely and effective transfer of patient information, and tracking referrals and transitions to identify and potentially remedy glitches. But many patients are more severely ill, and require more intensive clinical management in addition to logistical and informational support.

Effective care coordination programs, regardless of patient population, share four common elements: assuming accountability for care coordination, providing patient support, developing relationships and agreements with key outside providers, and establishing connectivity that assures appropriate information transfer.

Care management refers to the more intensive care provided by nurses or other health workers to high-risk patients. It encompasses both referral/transition management and clinical services such as monitoring, self-management support and medication review and adjustment. Whereas in most practice panels, a large percentage of the patients will at some point be referred or hospitalized and need care coordination services, only a small subset of the most acutely or chronically ill patients will benefit from care management services. We chose to discuss the clinical aspects of care management in detail in the Organized, Evidence-based Care Implementation Guide. The line between care coordination and care management is indistinct, but every PCMH needs to consider how it can most effectively and efficiently provide both kinds of services. A referral/transition manager or coordinator could be a receptionist or clerical person with good communication skills, while a care manager must have a clinical background.
Community Linkages

Effective care coordination starts within the primary care practice. Yet data about patient care from outside sources is critical, and access to that information requires input with other practices (primary care and specialty care), facilities, and related agencies. Our PCMH care coordination changes explicitly indicate that a PCMH should follow-up with patients seen recently in an Emergency Department (ED) or admitted to a hospital. This recommendation derives from evidence that individuals who are readmitted shortly after hospital discharge or who frequent EDs often haven’t seen a PCP in the interim.\textsuperscript{2,3} To implement this change, practices first need to find a way to be reliably notified when one of their patients is seen in an ED or admitted and discharged from a hospital. Practices embarking on PCMH transformation should note that gaining access to this information typically requires community partnerships and that building these partnerships may require senior management, board, or stakeholder leadership.

Behavioral Health Integration and Care Coordination: Challenges and Opportunities

For safety net providers, behavioral health services are among the most needed and sought after care, and a significant proportion of CHCs have psychiatrists or other mental health workers on staff. Co-location of critical services like behavioral health is often the ideal solution to care fragmentation, but is often unrealistic for smaller practices. This implementation guide does not discuss the challenges and opportunities associated with various approaches to integrating behavioral health expertise, but it does discuss the use of referral protocols in general, and the negotiations required between PCMH and specialist to make the relationship work for patients.

Driving Improvement: Care Coordination Tools

All primary care practices make referrals and manage them to varying degrees. Many clinics have back rooms with piles of charts of patients at various points in the referral process – waiting for an appointment or insurance authorization, waiting for records to be copied and sent to the consultant, waiting to file the consultation report, etc. Effective care coordination begins with clarifying the staff accountability for the various steps in the referral and transition process. Next the practice should attempt to identify and clarify expectations with key outside service providers. Finally, the practice needs to consider an information technology infrastructure that streamlines information transfer and monitors the referral/transition process. Web-based e-referral systems may offer a valuable alternative to shared electronic health records (EHRs) or community health information exchanges, which are unavailable for most primary care practices.

The information and tools provided in the following sections (the “toolkit”) provide tangible and practical resources that practices can use to improve care coordination. For example, the toolkit provides example job descriptions and staff training curricula. It provides examples of practices that have forged community linkages to address ED use and hospital discharge protocols. It also includes descriptions of proven e-referral systems and guidance on their selection. The “toolkit” is organized into five sections:

1. **Introduction** – describes the problems associated with fragmented care and illustrates them in a case study, and discusses the goals of care coordination.
2. **The Care Coordination Model** – depicts and discusses the critical service providers involved in referrals and transitions, and the four critical elements of an effective care coordination program. It also includes a case study of a complex patient receiving excellent care coordination.
3. **Change Package** – summarizes and then discusses in more detail, the key changes and specific actions that a practice should make to implement effective care coordination.
4. **Case Studies** – describes effective care coordination programs and their results.
5. **Tools** – a compilation of specific tools or resources referenced throughout the toolkit.
Case Study: Squirrel Hill Health Center Takes Care Coordination into the Community

Squirrel Hill Health Center in Pittsburgh, Pennsylvania is a Safety Net Medical Home Initiative (SNMHI) participating health center with strong community ties that enable the staff to manage care coordination and community connections for their patients. The clinic is growing, averaging 80 new patients each month, and treats about 600 unique patients in total per month. Squirrel Hill handles several different special populations, including about 25% of patients who have limited English proficiency. Squirrel Hill partners with the organization to provide healthcare. There is also a larger-than-average older adult population: 18% of patients are over the age of 65.

Staff members prioritize making connections in the community for their patients, says Lindsay Losasso, MPH, Program and Grants Manager for the health center. There is a full-time case worker on staff working closely with care teams to get patients needed services. This year they've added a second case manager through the national AmeriCorps program dedicated to working with the large refugee population in the health center. “Having someone who has the time to connect with other community agencies and knowing the resources is important,” says Losasso. “We have strong connections with international communities,” says Losasso. “There is a wonderful social service network in Pittsburgh that we're a part of; providing services for international populations where there is often a lack of insurance and English proficiency.” Since one third of all patients seen at the practice are uninsured, the health center uses community connections to reach specialists to fit patient needs. “We're looking for practitioners that provide services we cannot provide on-site.”

The health center started a using mobile medical van in 2010 to help the many patients who had trouble getting to the center. The mobile clinic provides all the same services as the office and is staffed by a physician, a medical assistant, and a case worker. “We have several community partners that we pre-identified as a site for the mobile unit,” says Losasso. Among them a family support center for refugees, a residential facility for women in substance abuse recovery, an agency providing mental health services for hearing impaired adults, and a YMCA with a food bank. “We've been having terrific outcomes, and connecting with people who haven't had healthcare in a really long time,” Losasso says. “The very first patient seen on our mobile unit was an older, hearing impaired individual with some chronic medical conditions who hadn't had a regular doctor since he was a teen, who had been using the Emergency Department for medical care. He had been taking a medication for a year that was making him chronically sick, which we were able to remedy,” she recounts. “He experienced anxiety around entering a doctor's office, and he finally made a connection with a primary care physician that hadn't been made for decades, because we had a relationship with the mental health facility, it gave him a degree of confidence and comfort. This place was a place he trusted.”

Related Change Concepts

Before an effective care coordination program can be implemented, patient-provider panels (Empanelment) must be in place so that proactive preventive and chronic illness care is possible. Organized, Evidence-based Care is also essential for effective care coordination. For more information on these and other Change Concepts for Practice Transformation, click here.
References


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Safety Net Medical Home Initiative

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The objective of the Safety Net Medical Home Initiative is to develop and demonstrate a replicable and sustainable implementation model to transform primary care safety net practices into patient-centered medical homes with benchmark performance in quality, efficiency, and patient experience. The Initiative is administered by Qualis Health and conducted in partnership with the MacColl Center for Health Care Innovation at the Group Health Research Institute. Five regions were selected for participation (Colorado, Idaho, Massachusetts, Oregon and Pittsburgh), representing 65 safety net practices across the U.S. For more information about the Safety Net Medical Home Initiative, refer to: [www.safetynetmedicalhome.org](http://www.safetynetmedicalhome.org).

All publications are available at: [www.safetynetmedicalhome.org/practice-transformation](http://www.safetynetmedicalhome.org/practice-transformation)

New publications are released frequently, so please check this site often.
Reducing Care Fragmentation: A Toolkit for Coordinating Care

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Introduction

Ms. G: A Case Study in Fragmented Care

Ms. G is a 58-year-old grandmother with a 15-year history of Type 2 diabetes complicated by elevated blood pressure and recurrent episodes of major depression. Ms. G has a BMI of 37 and has struggled with weight control since young adulthood. On a recent visit to her primary care doctor for progressive fatigue and other depressive symptoms, she was found to have an HbA1c of 9.7%, a blood pressure of 190/106 and PHQ-9 score suggesting major depression despite taking an SSRI. Her PCP postponed adjusting her hypoglycemic and anti-hypertensive drug doses until her depression was under better control, and referred her to the mental health center to review and update her depression treatment. Ms. G had difficulty getting an appointment at the center, and finally saw a psychiatrist she had never seen before. At the mental health center, her blood pressure was 220/124 and Ms. G complained of headache as well as fatigue. The psychiatrist, who had received no information about Ms. G before seeing her, became alarmed about her blood pressure and headache, and sent her to the ER. The ER physician told Ms. G that her BP medicine was inadequate and that she needed new, more powerful medications. She was given prescriptions for two new anti-hypertensive medications, but it wasn't clear to her what she was supposed to do with her current BP drugs or which doctor she should call. So she took them all.

One week later, she had a syncopal episode on arising from the commode. 911 was called and she was taken to the nearest hospital where she was found to have neurological deficits and admitted with a possible stroke. With adjustment of her medications in the hospital, her BP stabilized and the neurological deficits cleared, and she was sent home with an appointment at the mental health center to have her worsening depression managed. Once home, she became increasingly depressed, forgetful, and dysfunctional. She didn't have the energy to get herself to the mental health center. She became increasingly non-compliant with her medications and was found bedridden and hemi-paretic three weeks later by her daughter who became concerned when her phone calls went unanswered. She was re-admitted to the hospital with a completed stroke.

Her PCP was dismayed to hear about Ms. G's course from her daughter. He was unaware of any of the events that followed her last visit with him, and Ms. G's daughter was stunned and angered by his ignorance.

Care coordination, a core function of the patient-centered medical home (PCMH), has been defined as “the deliberate organization of patient care activities between two or more participants involved in a patient’s care to facilitate the appropriate delivery of health care services.” Though medical care is error-prone even when care is delivered by a single provider, the opportunities for serious mishaps escalate when multiple providers are involved. The case of Ms. G illustrates the perils of fragmented care involving multiple clinicians who are not effectively communicating and sharing information. Care coordination is a set of activities that is needed to minimize the dangers of fragmentation. Those activities include assuring that all providers involved in a patient’s care share important clinical information and have clear, shared expectations about their roles in care. They also include efforts to keep patients and families informed, and to optimize their experience through transitions.
American health care has many features that contribute to fragmentation of care: independent practices, limited use of electronic records, and physician payment that doesn’t reward efforts to coordinate care. More recent developments, such as health plan physician networks and the separation of primary care from hospital care, have tended to erode personal relationships between primary care physicians (PCPs) and their specialist consultants and the institutions where patients get care. As a consequence, consultants frequently complain about the poor quality of information sent by referring clinicians and the appropriateness of many referrals, while primary care physicians often receive no information back from consultants, and are not notified when their patients are seen in an emergency room (ER) or admitted to the hospital. These failures in communication and care coordination—typically referred to as fragmentation—can have devastating consequences for patients, as with Ms. G.

Why is care coordination so difficult?
1. Accountability for the process is shared, which contributes to ambiguity as to who is responsible for making it work well.
2. Many PCPs no longer have the personal relationships with consultants and hospitals that make communication easier.
3. The added time and effort required to achieve an effective referral/consultation or transition is generally not reimbursed.
4. Most primary care practices do not have the dedicated personnel or information infrastructure to coordinate care effectively.

A slowly growing body of literature and reports from innovative practices and care systems are beginning to clarify the elements associated with more effective care coordination and more successful referrals and transitions.

One of the many goals of care coordination efforts is a high-quality referral or transition. A referral occurs when a patient requires additional, specialized care by a medical consultant or community agency, and a transition is when a patient’s overall care is being transferred between institutions, such as from the hospital back to primary care.

The IOM aims appropriately define high-quality health care from a patient’s perspective. But, transitions and referrals should also meet the needs and expectations of the involved providers to be fully successful. A patient may have a very satisfying encounter with a specialist, but if the PCP fails to send relevant information or the specialist fails to communicate with the referring provider, care for that patient or others with similar problems may well suffer.
The Care Coordination Model

Unlike other aspects of medical care, there has been relatively little rigorous research to direct efforts to improve care coordination. However, many innovative health care organizations have recognized the dangers of poorly coordinated care and have implemented interventions to improve it. The recommendations in this Toolkit derive from both the scientific literature, when available, and the best ideas from the field. We have assembled the best evidence in a Care Coordination Model (Figure 1). The goal of care coordination is high-quality referrals and transitions that meet the six IOM aims for high-quality health care, and assure that all involved providers, institutions and patients have the information and resources they need to optimize a patient’s care. The Model looks at care coordination from the perspective of a PCMH. It considers the major external providers and organizations with which a PCMH must interact—medical specialists, community service agencies, and hospital and emergency facilities—and summarizes the elements that appear to contribute to successful referrals and transitions. Those elements include:

- Assuming accountability
- Providing patient support
- Building relationships and agreements among providers (including community agencies) that lead to shared expectations for communication and care
- Developing connectivity via electronic or other information pathways that encourage timely and effective information flow between providers (including community agencies)

Figure 1: The Care Coordination Model
Ms. H illustrates what care would look like if it were coordinated in accord with the Care Coordination Model.

Ms. H: A Case Study in Coordinated Care

Ms. H, Ms. G’s sister, is a 55-year-old grandmother with a 12-year history of Type 2 diabetes complicated by elevated blood pressure and recurrent episodes of major depression. Ms. H has a BMI of 36 and has struggled with weight control since young adulthood. At a check-back visit, she was found to have an HbA1c of 8.9%, a blood pressure of 148/88 and PHQ-9 score suggesting minor depression. Her PCP postponed adjusting her hypoglycemic and anti-hypertensive drug doses until her depression was under better control, and referred her to the mental health center to review and update her depression treatment. Her doctor had previously met with the clinical director of the mental health center. The director suggested that one particular psychiatrist, Dr. P, work with referrals from her practice, so Dr. P was shown how to log in to and use the practice’s Web-based e-referral system. Her doctor recommended that Ms. H not leave her office without making an appointment with Dr. P. The receptionist/referral coordinator worked with Ms. H and the appointment clerk at the mental health center to set up an appointment that week. Ms. H missed her appointment because one of her grandchildren was ill. The e-referral system noted her missed appointment, and the referral coordinator called Ms. H to set up another appointment. When Ms. H saw Dr. P, he had her clinical information in front of him. He adjusted her depression medication, but also found that her blood pressure was elevated. Ms. H also complained of headache and fatigue. Dr. P became alarmed about her blood pressure and headache, and arranged for her to be seen that afternoon by her PCP, who adjusted her anti-hypertensive medications. The receptionist/referral coordinator suggested that Ms. H have her BP checked by the EMTs at the neighborhood fire station every other day, which she did. Ms. H slowly began to feel less depressed and her BP slowly came down to target levels with one more medication adjustment.

Accountability

Since care coordination, by definition, involves multiple providers and sources of services, who among those providers is accountable for assuring that “the deliberate organization of patient care activities” takes place? Obviously, all providers must collaborate, but establishing the conditions and infrastructure for assuring quality referrals and transitions is a core responsibility of the PCMH. All primary care offices currently devote some time and energy to managing referrals. Back offices often contain stacks of charts with “yellow sticky notes” indicating the need for a referral or additional information requested by a consultant or health insurance company. In contrast, practices that assume responsibility and make an effort to coordinate care try to develop the relationships, infrastructure and processes that support successful referrals and transitions. Referrals are more likely to be successful if referring providers and consultants understand each other’s expectations and preferences, and referring practices have the staff and information infrastructure to help patients and their information get where they need to go.

The accountability for assuring quality transitions rests primarily with the discharging institution and providers (e.g., hospitals and hospitalists, ERs and emergency physicians). But, transitions may also go in the opposite direction as when the PCMH arranges a hospitalization, or one of their patients needs nursing home care. Because of the critical importance of reducing ER and hospital care, PCMHs must try to work with area hospitals and ERs to increase the likelihood that they will receive timely, useful information when their patients are admitted and discharged. Hospitals vary considerably in their efforts to identify and contact PCPs, but many have responded positively when asked to share admission and discharge information.

An important component of assuming accountability is having the ability to track referrals and transitions to assure their successful completion. Referral tracking is made easier if there is an information system that records important landmarks in the referral process (e.g., referral appointment made, patient information received, appointment completed, consultation note returned). Tracking referrals means developing a paper or electronic database that records all referrals made and key landmarks toward their successful completion. E-referral systems generally facilitate referral tracking. To track transitions, the PCMH will have to regularly receive timely information about its patients’ admissions and discharges from hospitals and other institutions.
Patient Support

Referrals and transitions challenge patients and families. They raise questions that need to be answered, generate appointments that need to be made, and produce logistical challenges and anxiety that need to be addressed. Practices that dedicate staff time to meeting these patient needs are more likely to have successful referrals and transitions. These care coordination patient support functions are sometimes confused or conflated with clinical functions such as care management, because in some practices a nurse or other care manager provides support functions in addition to her clinical care management responsibilities (i.e., clinical assessment and follow-up, self-management support, or medication management). While care managers generally focus on a small, very sick subset of a practice population, almost, if not all, referrals and transitions within the PCMH would benefit from some degree of active coordination. We urge that patient support for care coordination be considered separately from clinical care management, although care managers do and should provide care coordination support for their high-risk patient panels. In many practices, patient support is provided by a referral coordinator who identifies and attempts to resolve any logistical or financial barriers to completing a referral, helps get timely appointments, assures the transfer of clinical information, tracks progress and assists patients encountering difficulties.

A critical element of effective care coordination is making certain that referring and consulting providers agree on the purpose and importance of the referral, and the roles that each will play in providing care.

Relationships and Agreements

A critical element of effective care coordination is making certain that referring and consulting providers agree on the purpose and importance of the referral, and the roles that each will play in providing care. As close, personal relationships between PCPs and specialists or hospital staff have become less and less common,6 PCMHs would be wise to initiate conversations with their key specialist consultants or hospitals to discuss each other’s preferences and expectations. The sorts of issues and expectations that might be considered in such conversations include:

• Types of patients referred—many specialists have developed criteria for the patients they prefer to see
• Information provided at time of referral
• Notification of the PCMH of ER visits and hospitalizations
• Testing to be completed prior to referral—if PCP’s complete a specialist’s preferred laboratory testing prior to the referral, it increases the value of the consultation and reduces possible duplicate testing
• Availability for “curbside consults”
• Consultation report content and timeliness
• Post-consultation care expectations—need discussion to prevent unhappiness among providers because expectations weren’t met (e.g., specialist assumes care when PCP only wanted advice, or specialist returns patient and advice when PCP wanted to transfer care)
• Post-ER or hospitalization care expectations
• Specialist-to-specialist referrals—many PCP’s do not want specialists to refer their patients to other specialists without first consulting with the PCP.

These conversations can result in agreements that can be codified in writing or programmed into electronic referral systems. Such agreements seem to be critical to reducing unnecessary referrals, avoiding duplicated assessments, and assuring optimal post-referral or post-hospital care.
Connectivity
A critical predictor of a successful referral or transition is assuring that the involved providers have the information they need to optimize care. On the one hand, PCPs need to be sure that consultants know the reason for a referral, and have the necessary information to provide optimal service. On the other hand, consultants must provide information back to the PCP that addresses her questions and concerns. And providers should keep patients informed and confident that all the providers involved are communicating with each other. The presence of an electronic referral (e-referral) system can help assure that this critical information flow occurs in a timely way. E-referral systems can incorporate agreed upon guidelines for referrals and transitions that prevent unnecessary ones and assure that consultants and PCPs get the information they need. But, these goals can also be accomplished with pencil and paper approaches to structuring and standardizing referral requests and consultation notes.

References


Change Package

Practices wanting to improve the coordination of their care should consider making changes to practice systems and processes consistent with the four elements described above—accountability, patient support, relationships and agreements, and connectivity. These four represent high-level “change concepts,” which the Institute for Healthcare Improvement defines as “general ideas…that can be adapted to make specific changes that lead to improvement in many processes and clinical areas” and in aggregate, make up the “change package” for better care coordination. The following table identifies the key changes under each change concept, the specific activities involved in making the key change, and related tools and resources that might be of help, which are included as pdf’s or links in this toolkit. These are described more fully in the text that follows the table. (Maternal and Child Health Bureau Department of Health and Human Services, March 2006)

Figure 2: Key Changes Tables

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<th>Concept</th>
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<th>Activities</th>
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<tr>
<td>Accountability</td>
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<td>Develop a quality improvement (QI) plan to implement changes and measure progress.</td>
<td>National Committee for Quality Assurance (NCQA)</td>
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<td>Care Coordination Questions from Validated Instruments</td>
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<td>2. Develop a tracking system.</td>
<td>Design the clinic’s information infrastructure to internally track and manage referrals/ transitions including specialist consults, hospitalizations, ER visits and community agency referrals.</td>
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<td>Patient Support</td>
<td>3. Organize a practice team to support patients and families.</td>
<td>Delegate/hire and train staff to coordinate referrals and transitions of care, and train them in patient-centered communication, such as motivational interviewing or problem solving.</td>
<td>Referral Coordinator job description</td>
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<td>Assess patient’s clinical, insurance and logistical needs.</td>
<td>Referral Coordinator Curriculum</td>
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<td>Identify patients with barriers to referrals/transitions and help patients address them.</td>
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<td>Provide follow-up post referral or transition.</td>
<td>Patient Activation Assessment Form</td>
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<td>Relationships &amp; Agreements</td>
<td>4. Identify, develop and maintain relationships with key specialist groups, hospitals and community agencies.</td>
<td>Complete internal needs assessment to identify key specialist groups and community agencies with which to partner.</td>
<td>Referral Coordinator job descriptions</td>
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<td>5. Develop agreements with these key groups, hospitals and agencies.</td>
<td>Initiate conversations with key consultants and community resources.</td>
<td>Case Study of Family Care Network</td>
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Accountability

Key Change: Decide as a primary care clinic to improve care coordination.

This decision is not one that many primary care practices have chosen to make. Improving care coordination involves effort and expense—redeploying and training staff in new roles, reaching out to other key providers and service agencies, and improving information flow between the practice and other providers. This effort is of course not currently rewarded by most payment schemes. Also, isn’t care coordination every provider’s responsibility—PCP, specialist, ER, hospital? Why should the onus for assuring smooth patient transitions fall on primary care? There are a number of reasons.

1. Fragmented care can be dangerous when associated with delays and other mishaps in care.
2. Fragmented care is a major irritant to patients and families.
3. Fragmented care is a major source of duplicated and unnecessary service.
4. Fragmented care is a major headache for primary care practitioners having to deal with angry patients and family members who can’t understand why their doctor didn’t know they were in the hospital, or didn’t know what the specialist said.
5. High-quality care coordination is an expectation of all PCMH models and related payment reforms, and may play a crucial role in reducing unnecessary emergency room and hospital use.

Once the decision is made to try to improve care coordination, the next step is to develop a QI plan. The plan should begin with clear goals, (e.g., assure 100 percent return of consultation reports following specialist referral, or contact all patients discharged from the hospital within three days following discharge) and consider measures that will signal progress toward meeting the goals. To help practices choose measures that have a track record, we include in the Tools and Resources section: #1 The NCQA Measures which are proposed care coordination indicators for medical home certification, and #2 Care Coordination Questions from Validated Instruments—a selection of questions from major patient experience questionnaires.
Key Change: Develop a referral/transition tracking system.

Since care coordination concerns activities outside the practice, the practice's capacity to improve coordination depends upon its awareness of those activities. Did Ms. G keep her appointment with the psychiatrist? Has the practice received the psychiatrist’s report? Which patients were seen in the ER last week? Have they been contacted by the practice nurse? Information of this sort enables the practice to identify potential problems and remedy them. A tracking system begins by recording basic information about each referral or transition, and then developing strategies for assessing and recording whether key milestones (e.g., appointment made, consultant received information, consultant appointment kept, report received by primary care,) were reached. Similarly, practices should make efforts to routinely receive information about patients admitted to the hospital or seen in the ER. Many practices, rather than relying on hospitalists or ER physicians to contact them, have the hospital regularly send them daily admission/discharge reports. Hospitals and ERs complain that patients can't tell them their PCP’s name when asked. To remedy this, some practices have given all their patients cards with provider and practice information to carry in their wallets. The tracking system helps the practice follow these patients, collaborate with hospital-based care managers, and coordinate management with the hospital or ER. An effective referral/transition tracking system can be pencil and paper, a function of an e-referral system or EMRs, or developed on readily available software such as Excel or Access. The American College of Physicians Center for Practice Improvement & Innovation has a practical guide to tracking referrals on its website: #3 Referral Tracking Guide.

Patient Support

In the PCMH, the aim of care coordination is to keep the patient at the center of care during the referral or transition. The referral coordinator has several important roles: supporting patients and their families in understanding the need for the referral, assuring seamless referral and transition processes from the patient’s perspective, and systematically following up to assure that the referral or transition is completed and achieves its goals. This section is meant to describe the patient support functions of care coordination within patient-centered primary care homes. We focus on referral and transition management tasks and distinguish them from clinical roles, including clinical follow up and case management, while appreciating that referral management may be conducted by staff that is also performing these more clinical roles.

Key Change: Organize the practice team to support patients and families during referrals and transitions.

The care coordination patient support tasks vary with the needs of the patients served, and those providing patient support need skills and training to meet the needs of those patient populations. The percentage of patients in a practice needing logistical support for referrals or transitions will be considerably larger than those requiring clinical care management. The stepped patient support model below describes the different roles that include care coordination responsibilities. However, most clinical follow-up or care management programs focus on a small, higher risk subset of a practice’s panel; having a care management program doesn't address the coordination needs of less ill patients.
Although some primary care practices can successfully distribute the tasks of care coordination among team members, most benefit from designating a specific person to handle the patient support, logistical and information management issues associated with referrals and care transitions. A sample job description for that role is included in the Tools and Resources Section: #4 Referral Coordinator Job Description. Training for the referral coordinator should address the competencies described in a proposed curriculum included in the Tools and Resources Section: #5 Referral Coordinator Curriculum. In practices using an e-referral system, the referral coordinator generally uses the system for many of the functions described below—transmitting patient information, making appointments and tracking the referral process. Once a referral is initiated by the PCP, the referral coordinator helps assemble the necessary information, including the patient’s clinical, demographic and insurance details, in accord with recommendations or protocols from specialists. This may include assuring the availability of lab results recommended for a specific referral. She will also help obtain prior authorization if necessary.

The referral coordinator can help patients make appointments and identifies patient barriers such as language or lack of transportation, and either handles these logistical needs herself or connects patients with other staff or local services. By tracking all referrals and care transitions, referral coordinators can identify problems and intervene with patients who failed to show up for a specialist appointment or with specialists' offices if a consultative report hasn't yet been received. Transitions such as being discharged from the hospital can be dangerous if patients are not adequately prepared, supported and clinically managed. The Care Transitions Program™ website includes valuable information about the support and management of patients following hospital discharge, including a useful brief assessment that is available in the Tools and Resources section: #6 Patient Activation Assessment.
Relationships and Agreements

Key Change: Identify, develop, and maintain relationships with key specialist groups, hospitals and community agencies.

Identify key outside service providers by focusing on the providers and organizations referred to most frequently. Begin by building or enhancing relationships with these providers. Described in the case study section, The Family Care Network completed their first service agreement with their local cardiology specialty group not only because their patients were often referred there, but also because they had experienced miscommunications in the past. In addition to key medical specialist groups, hospitals and emergency departments, PCMHs should also consider building relationships with other providers of key services such as:

- Behavioral health and substance abuse specialists.
- Ancillary services—social work, nutrition, physical and occupational therapy, etc.
- Behavior change support services—self-management programs, smoking cessation, exercise programs, weight loss, etc.
- Peer support opportunities for patients.

Organizations such as Genesys Health System employ health navigators as members of the primary care team to support patients and develop these community service relationships. The identification of community resources may be aided by asking patient focus groups or consumer advisors the names of agencies and organizations valued by the community.

Key Change: Develop agreements with these key groups and agencies.

It may take time and several conversations to build relationships and develop a service agreement. For this reason, primary care practices should consider focusing on one or two relationships at a time. The process begins with a conversation initiated by the PCMH. Since the goal of the initial discussion and those that follow is to find common ground, the following principles should guide the interchange:

- Find common goals and work on them.
- Assume all providers have the best intent for the patient’s care.
- Avoid confrontation.
- Focus on the system and not the people.

The final bullet is particularly important since changes to the system (e.g., the structure and flow of clinical information) are generally more effective than urging a colleague to behave better.

The discussion might begin by considering important categories of patients, such as patients who need an urgent referral, need follow-up care after hospitalization, need a procedure or need a consultation for an ongoing problem. For each patient type, both PCP and specialist should state and discuss their expectations. These expectations should cover:

- Which patients are appropriate to refer.
- Information the consultant needs before the referral (e.g., records and test results that should be available prior to the consultation visit).
- Information the PCP wants following the consultation.
- Roles for both the PCP and specialist post-consultation.
- Other processes, including the PCP not wanting the specialist to refer the patient to another specialist.
- If applicable, the use of an e-referral system.
Some organizations have found it useful to put in writing the shared expectations that result from such discussions, but the conversations and resulting personal relationship are ultimately what is critical. The Tools and Resources section contains examples of primary care/specialty care agreements: #7 Colorado Primary Care–Specialty Care Compact developed for the Colorado Patient Centered Primary Care Collaborative, and #8 “Promising Approaches for Strengthening the Interface between Primary and Specialty Pediatric Care,” a report developed by the Federal Expert Workgroup on Pediatric Subspecialty Capacity. A second way in which shared expectations can be systematized is through an electronic referral system. Good e-referral systems embed referral guidelines and structure the information transmitted to assure consistency with prior agreements.

For the PCMH to play a significant role in the transition of its patients from the hospital or ER back into the community, it needs to have analogous discussions with leaders of key hospitals and other emergency facilities in its community. At the very least, the PCMH should make clear its interest in coordinating care and preventing readmissions, and the importance of being notified when patients are admitted and discharged.

### Connectivity

**Key Change: Develop and implement an information transfer system.**

High-quality referrals and transitions depend upon every provider in the chain having the information they need when they need it. The requisite information of course includes essential data about the patient and their treatment plan. The essential information should also include the test results needed by the consulting specialist to complete their consultation. Referring patients without test results considered to be necessary for an adequate consultation is a common reason that referrals are refused, duplicate testing is done or consultations take multiple visits. Which tests are necessary may well vary among physicians in a given specialty, so they need to be discussed as part of the agreement process.

In addition to access to critical patient information, each provider needs to know what others in the chain expect of them. What is my role? What question(s) or issue(s) am I to address? What roles are others playing? Many problems in care coordination stem from failure to address these issues. General expectations can be discussed while reaching agreements, but expectations often need to be revisited for each patient. For example, specialists need to know the PCP’s wishes for post-referral care arrangements to avoid serious misunderstandings that may confuse or even harm patients.

There are four key elements of an effective information transfer system, whether electronic (e-referral system, shared EMRs or health information exchange) or pencil and paper:

- Established agreements about information needs and expectations are integrated in the system.
- The system helps assure that requisite information is transmitted to the correct destination(s).
- Key milestones in the referral/consultation process can be tracked.
- Referring providers and consultants can efficiently communicate with each other.
Structured referral requests and consultation notes increase the likelihood that the desired information will be there. Tools #9-11 in the Tools and Resources section comprise three articles that illustrate the changes to referral requests and consultation notes that increase the quality and utility of a referral. While many of these key elements can be met with paper forms, e-referral systems offer many advantages because both referrers and consultants use it. Most can be programmed to include referral criteria for various clinical problems and specialties. Some organizations use these criteria to prevent unnecessary referrals as well as to assure that the necessary information is available at the time of the referral. Some e-referral systems won’t transmit a referral request until the information is complete and properly formatted. Because primary care and specialists share the same software, e-referral systems are being used to increase communication among them, including efforts to implement electronic or virtual consultations. See case studies for Humboldt County and San Francisco General e-Referral systems (pages 26 and 28, respectively), and Oklahoma e-Consultation system (page 31) in the Case Studies section. The California Health Care Foundation has produced a valuable report examining the functioning of eight available e-referral systems: #12 in the Tools and Resources section, “Bridging the Gap: Using Web Technology for Patient Referrals.”

Many policymakers seem to assume that greater diffusion of EMR systems will improve care coordination. O’Malley and colleagues compared these expectations with the real experience of practitioners with EMR systems in place. Their paper in the Tools and Resources Section #13: Are electronic medical records helpful for care coordination? Experiences of physician practices highlights the capabilities of EMRs to improve care coordination as well as their limitations. At best, EMRs should make it easy to assemble key information for a referral, help practices track and follow up on referral recommendation, and coordinate care within the practice. However, their impact on care coordination will be modest until data standardization and health information exchanges facilitate inter-practice data exchange. O’Malley and colleagues also note that most EMRs don’t support multi-provider clinical decision support even among providers sharing the same EMR, and underscores the need to develop infrastructure and reimbursement that encourages the development and maintenance of shared care plans.

Case Studies

Family Care Network: Developing Agreements between Primary Care and Specialty Groups

Accountability

The Family Care Network (http://www.familycarenetwork.com/) is a family practice in Northwestern Washington state with approximately 75 providers including physicians, nurse practitioners and physician assistants. With 12 clinics throughout the county, their providers aim to understand their patients’ lives and develop trusting provider-patient relationships.

A few years ago, the practice held a series of focus groups with their patients. They were surprised to learn that their patients’ primary concern was being unable to navigate across the silos of their medical care. Specifically, patients expressed difficulty coordinating care when they were referred out to a specialist. Each physician they saw would change medications and when the patient experienced problems, they didn’t know which doctor to contact. With this finding, Dr. Berdi Safford, the Network’s Medical Director, decided to improve their patients’ care coordination.

Agreements

After brainstorming solutions, Dr. Safford decided to try to establish service agreements with the key specialty groups they worked with frequently. According to Dr. Safford, the goals of these service agreements were to:

• Improve communication between the provider groups, and
• Develop “seamless handoffs” for patients.

Dr. Safford champions service agreements, not because they formalize a process but because through her experience, they create a vehicle for critical conversations between primary and specialty care to occur. For example, a common complaint from specialists is that patients are referred to them without a clear understanding of the clinical question. Likewise, primary care providers often state that a consultation report does not
meet their needs. To counter this finger pointing, Dr. Safford has learned to start conversations about agreements by discussing the best care for a typical patient case. In addition, she keeps the following in mind while negotiating service agreements:

- Find common goals and work on them.
- Assume all providers have the best intent for the patient’s care.
- Avoid confrontation.
- Focus on the system and not the people.

The practice’s first effort in developing service agreements was with their local cardiology group. The agreement took about one year to develop, which is not an uncommon timeframe. The group of 12 cardiologists was often referring patients to additional specialists and not keeping the primary care provider in the loop. The situation was further complicated because the cardiology group was setting up a heart failure center, which many PCPs opposed because it blurred the lines between specialist and primary care responsibilities. Under Dr. Safford’s leadership, the service agreement was developed and a cooperative relationship between the two groups has formed.

The agreement with the cardiologist group focuses primarily on how to access a cardiologist for curbside consultations and how to co-manage and return patients to primary care. Here are the specific elements of their service agreement:

3. Routine Consultation
   a. What patient information will Primary Care Group submit with referral?
   b. How will appointments be booked?
   c. Referral will indicate if Cardiology Group is to:
      i. Consult only (two visits)
      ii. Assume care of cardiac disease
      iii. Assume management of care until patient is stable
   d. Expectation that Cardiology Group will not refer patient for tests or services outside the scope of cardiovascular health
   e. Who will fill out insurance information about referral?
   f. Who will follow-up with patients about tests ordered by Cardiology Group?
   g. How will information be sent back to Primary Care Group?

4. Follow-up Care:
   a. When patient is referred to Cardiology Group to:
      i. Have consult only
         1. How will appointments be booked back with Primary Care Group?
         2. Who is responsible for ongoing prescription refills?
      ii. Assume care of cardiac disease
         1. Who is responsible for testing and follow-up?
         2. How will Primary Care Group be kept abreast of patient care?
      iii. Assume management of cardiac care until patient is stable
         1. Who is responsible for primary cardiology care and for how long?

5. Re-Referral
   a. Who is responsible for ongoing medications?
   b. How is the patient’s cardiac care managed once transferred back to the Primary Care Group?
6. Inpatient Care
   a. How will Cardiology Group alert Primary Care Group of hospital admission?
   b. What will be included in discharge summary (including follow-up) and how will that information be transferred to Primary Care Group?

7. Ongoing Relationship and Education
   a. How regularly will Primary Care Group and Cardiology Group meet to review service agreement?
   b. How will Cardiology Group provide education to Primary Care Group?

8. Insurance Referral Requests
   a. How will insurance logistics be handled by both groups?

It was important for the process that the service agreements focus on types of patients and lay out who (Primary Care or Cardiology Group) is responsible for specific details such as ordering procedures, booking appointments and filling out insurance information. Time expectations for consultative reports were also included.

Dr. Safford and the Cardiology Group continue to meet every three months to maintain their dialogue. This ongoing relationship has been able to quell problems that would have lingered and potentially created further problems without communication. For example, there was a recent technical glitch that occurred when an insurance company changed their referral paperwork. After it was communicated, the problem was quickly resolved with a data entry process. This new process was written into their service agreement. The collaboration has also led to continuing medical education courses provided by the Cardiology Group.

Although insurance does not pay for the effort and time to develop and maintain this service agreement, Dr. Safford believes it has improved her patients’ care. She believes that developing linkages with her specialist counterparts has broken down the silos of care her patients used to experience.

Genesys Health System: Developing Linkages with Community Resources

Accountability
Genesys Health System, a member of Ascension Health, is a regionally integrated health care delivery system providing a full continuum of care. It partners with approximately 140 primary care physicians in central Michigan. Genesys HealthWorks (http://www.genesyshealthworks.org) is a strategic initiative within Genesys Health System to create a new model of care that is focused on health, not just disease. The program focuses on coordinating care for patients utilizing community resources. The initiative is led by Dr. Trissa Torres who is a physician focusing on preventive medicine and public health.

Patient Support
HealthWorks employs Health Navigators who are members of the primary care practice team who support patients and develop community service linkages. The Health Navigator’s primary focus is to support patients in self care, particularly health behavior changes such as eating healthier, increasing physical activity or quitting smoking. As patients identify barriers to engaging in their own self care and adopting healthy behaviors, Health Navigators often suggest community resources to enhance support for patient self management. Their effort to develop partnerships with community resources is analogous to efforts to identify and develop relationships with key medical specialists.
HealthWorks Health Navigators emphasize the distinction between simply making a referral and making an effective referral that results in access to services. “Behavior change takes place in the context of a relationship,” explains Dr. Torres. A community referral is most effective when, as Dr. Torres describes, you “transfer the relationship between the Health Navigator and the patient to the community resource.” The Health Navigator is knowledgeable about key community resources and knows how to prepare the patient for the referral. For example, the Health Navigator can share details with the patient about what their initial experience will be, such as whether the patients should bring a towel and a change of clothes to the swim class, or telling the patient that they’ll meet with Lynda who is very friendly. Effective referrals go above and beyond handing the patient a brochure or referral slip. By sharing specific details about what the patient should expect and who to go to for help, the patient is more likely to follow through on the referral. In 2009, Health Navigators made the following types of linkages:

### Figure 4: Community Referrals and Linkages

- **Smoking Cessation:** 13%
- **Primary Care Providers:** 27%
- **Mental Health Services:** 11%
- **Prescription Assistance:** 10%
- **Diabetes Education and Services:** 13%
- **Exercise/Nutrition Services:** 19%
- **Other (housing, transportation, legal):** 7%

Health Navigators follow-up with patients after the referral visit. They inform the patient that they will contact them after the scheduled referral. During this follow-up contact, the Health Navigator identifies and addresses problems. If the patient did not complete the referral, the Health Navigator works with the patient to identify and overcome the barriers to accessing the community resource.

The Genesys HealthWorks Health Navigator program conducted a telephone survey with almost 2,000 patients to evaluate their program. Patients were interviewed at initiation and six months after they began the program. The following self-reported improvements in health behaviors and health outcomes were found:

- 17% (120/713) of smokers quit smoking
- 45% (217/481) who had never received formal diabetes education attended Diabetes Self Management Education
- 42% (260/620) of patients screening positive for depression reported improved symptoms

In addition, the interviews found high patient satisfaction with the program. Many patients expressed appreciation for the additional support they received. Dr. Torres and her team are dedicated to improving the health of the patients by building relationships and making effective referrals to community organizations.

**HUMBOLDT COUNTY:** Tracking Referrals through an Electronic Referral System

Dr. Alan Glaseroff is the Chief Medical Officer for the Humboldt Independent Practice Association (IPA) (http://www.hdnipa.com/) in Northern California. The IPA has a track record of implementing successful quality improvement initiatives.
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Humboldt County: Tracking Referrals through an Electronic Referral System

Dr. Alan Glaseroff is the Chief Medical Officer for the Humboldt Independent Practice Association (IPA) (http://www.hdnipa.com/) in Northern California. The IPA has a track record of implementing successful quality improvement initiatives including their Humboldt Diabetes Project, which has demonstrated improved health outcomes for their patients. The IPA utilizes technology solutions including a chronic disease registry that contains 93 percent of all patients with diabetes in Humboldt County. The registry is expanding to include several chronic conditions to track preventive screenings and report office-based metrics, including BMI and blood pressure. A few practices have also launched electronic prescribing via a stand-alone free product (eRx) although the majority of prescribing occurs via electronic health records (EHRs).

Dr. Glaseroff acknowledges that each platform (EHR, registry, eRx, etc.) introduces necessary reconfiguration in the clinic’s workflow; additionally, avoiding duplicate data entry (EHR, registry) proved of critical importance to maintain the willingness to use shared platforms not included in office-held solutions (exporting data from EHR to populate the community-wide applications).

Accountability, Connectivity

After reviewing e-referral vendor options, the IPA adopted the Internet Referral Information System (IRIS) that was first used in Cook County, Illinois. The technology’s design is often compared to how FedEx tracks its packages, because if a step within the process does not take place, the system sends an automatic alert. All of the referral steps, from beginning to end, are tracked by a referral coordinator.

The referral coordinator is a clerical position who in Dr. Glaseroff’s practice is the practice’s receptionist. Through her pro-active follow-through, the practice has been able to accomplish a 100 percent completion rate for mammography referrals. The following figure shows the workflow using the e-referral system:
The referral coordinator monitors reports generated by the e-referral system. Examples of these reports include referral appointments that have been missed by patients or consultative reports that have not yet been received. The referral coordinator follows up on these referral problems and takes action. The referral coordinator is also accountable for ensuring that information between the primary care practice and specialist’s office is exchanged.

The e-referral system incorporates rules analogous to referral guidelines often included in service agreements. The goals of the rules are to:
1. Increase the appropriateness of referrals.
2. Prompt preparatory work that should be completed prior to the specialist appointment.

IRIS produces a set of instructions for referrals to specialists and for procedures. For example, a referral for a CT scan with contrast automatically prompts an alert to the primary care clinic to have the patient complete a serum creatinine test within the month prior to the CT scan. Adherence to these referral guidelines are monitored by the referral coordinator via protocol. While there is significant variation in how individual clinicians use IRIS, Dr. Glaseroff believes that the optimal approach is to have the clinician start the process electronically with the patient in the room. The patient receives “patient instructions” that outline next steps. Within 24 hours, the referral coordinator enters the patient’s demographic and insurance information into the e-referral system along with key clinical information (including lab test results) from the patient’s chart.

To support the roll-out of e-referral across sites, the IPA hired a full-time coordinator who works with clinics to implement the system. The coordinator is able to troubleshoot problems and continually monitor the system. She was involved in training all of the referral coordinators at each of the clinics and developed their User Guide. She also maintains a Web page with the latest information: [http://www.hdnfmc.com/iris/](http://www.hdnfmc.com/iris/).

Dr. Glaseroff believes that this system currently improves patient care because it enables primary care practices to systematically track their patients’ referrals so that fewer patients slip through the cracks. With e-referral, information is not lost and the patient’s primary care provider is kept informed, promoting the “medical home” concept. Dr. Glaseroff believes that, “IRIS will serve as the platform to transform individual isolated medical homes into true medical neighborhoods.”
San Francisco General Hospital: Connectivity through Electronic Referral

San Francisco General Hospital & Trauma Center (SFGH) (http://medschool2.ucsf.edu/sfgh) is the city’s only public hospital and Level 1 Trauma Center for the residents of San Francisco and northern San Mateo counties. The hospital is owned and operated by the City and County of San Francisco’s Department of Public Health and serves as the hub of the county’s safety net delivery system, which includes 35 community health centers, clinics and affiliated partners. The hospital serves as a teaching hospital for the University of California, San Francisco, and this entire system benefits from shared access to patients’ SFGH electronic medical records.

Accountability, Connectivity

Until recently, the system was plagued with a severe backlog for medical sub-specialty appointments. For example, the wait time for a gastroenterology appointment was 11 months. Referrals were paper-based and faxed or hand-delivered; sometimes the referral was never received and the patient never scheduled. If a patient needed an expedited appointment, the primary care provider had to spend time trying to contact a specialist to advocate on the patient’s behalf.

In order to address the backlog, Dr. Hal Yee, chief of the Gastroenterology and Hepatology Division, developed an electronic referral management and consultation system (eReferral). The two primary goals of the system were to:
1. Track referrals so that there was accountability for referrals.
2. Reduce wait times.

The technology platform was developed by the hospital’s Information Systems Department, and improved with the support of grant funds that also initially paid for the specialist’s time to review the incoming queue of referrals.

Dr. Alice Chen is the medical director for San Francisco General’s Adult Medical Center, and together with Dr. Yee, successfully spread the eReferral system to more than 30 medical specialty clinics and services at SFGH, including radiology services, home care and diabetes support groups. The system’s key components include the following:

- There is a centralized, electronic queue for each participating specialty service.
- All referring clinics must use the eReferral system to refer to participating specialty services.
- Each participating specialty service has a designated specialist clinician reviewer with dedicated time to review and respond to referral requests. The reviewer can use the system to schedule appointments, triage patients, request clarification of the consultative question and provide guidance for pre-visit evaluation.
- The referring provider and specialist reviewer can communicate in an iterative fashion using the eReferral system until the patient’s clinical issue has been addressed, with or without an appointment.
- The eReferral system is tightly integrated with the hospital EMR so that all information exchange is documented in the patient’s chart in real time.
- The system is limited to initial referrals (rather than referral for follow-up care) because these were decided to be the best use of the reviewer’s time.

The following flow diagram depicts how the eReferral system works.
Drs. Yee and Chen believe that one of the primary values of the eReferral system is facilitation of communication between primary care and specialist providers. It is important to note that implementation of these consultations may be difficult because of legal, medical and logistical reasons. Nonetheless, primary care providers now receive guidance on evaluation and management in a timely fashion, while specialists who see patients in clinic receive clear consultative questions. This information connectivity not only reduces unnecessary specialist appointments, but gives PCPs more opportunity to learn and treat their own patients’ clinical issues. Local PCPs are satisfied with the eReferral system, especially clinics with good Internet access. Clinics that only have intermittent internet access are less able to fully benefit from the system. In these practices, referrals tend to be entered by clerical staff yielding a less informative clinical referral and less opportunity for back-and-forth communication between providers.

Their eReferral system recently received accolades and is promoted as a successful system. ([http://www.innovations.ahrq.gov/content.aspx?id=2759](http://www.innovations.ahrq.gov/content.aspx?id=2759); [http://content.healthaffairs.org/cgi/content/full/29/5/969](http://content.healthaffairs.org/cgi/content/full/29/5/969))

The following results demonstrate that the system’s goal of reducing wait times has been achieved. It is clear that SFGH’s eReferral system has achieved its goals of improving specialty access and reducing specialty visits.
GI CLINIC eREFERRAL: RESULTS

Next Available New Patient GI Clinic Appt
(eReferral Implemented July 2005)

MEDICAL SPECIALTIES: VISITS AVOIDED

Medicine Clinics Proportion of eReferrals Never Scheduled

Oklahoma School of Community Medicine: Developing and Implementing an Electronic Consultation Platform

Dr. David Kendrick is a practicing physician who has launched several technology platforms to improve the quality and efficiency of patient care. He has most recently established an electronic consultation system, which has evolved and grown to serve patients across three states. Dr. Kendrick is an associate professor of internal medicine and pediatrics and a Kaiser Chair of Community Medicine at the University of Oklahoma School of Community Medicine. He serves as the medical director for community medical informatics.

Connectivity

Dr. Kendrick wanted to develop an e-consultation system to simulate the doctor’s lounge culture where providers gathered, developed relationships and discussed patient cases together. He also wanted to provide a technological fix that would reduce the number of unnecessary referrals. From experience he knew that the time crunch faced by many PCPs led to providers initiating a ‘quick’ referral rather than taking the time to research and consult with colleagues about the case. Ultimately, Dr. Kendrick deduced that there were too many patients being referred for specialist visits that could be handled competently within primary care.

When Dr. Kendrick first built his e-consultation prototype, dubbed “Doc2Doc,” almost 120 PCPs who predominately practiced in rural settings signed up quickly. Specialists from the University of Oklahoma also agreed to review and respond to the incoming queue of consultation requests. The Web-based system’s work flow is as follows:

1. A sending provider decides that the patient needs specialist input.
2. Staff (who is usually a clerical referral coordinator) at the PCP’s office initiates the e-consultation.
3. The sending provider adds the clinical information and question.
4. The consulting provider responds to the e-consultation.
5. There may be back-and-forth communication between providers.
6. Useful clinical dialogue that is general in nature may be added to the system’s “knowledge base” for other providers to review.
7. If needed, the e-consultation is routed to the clerical staff for referral scheduling.

It’s important to note that the system does not link with the EMRs and thus, the clinical exchange is not captured in the patient’s chart. This inconvenience however was less important in uptake of the technology than the lack of incentives for specialists which as described by Dr. Kendrick, caused problems in the quality of information and timeliness of responses.” Dr. Kendrick in fact learned that a lack of incentives for specialists caused problems in the quality of information and timeliness of their replies. A new approach was deemed necessary.

The Oklahoma Department of Corrections (DOC) system used the University of Oklahoma’s Medical School faculty for its specialty referrals. The prison system bears the costs of these referrals and thus wanted to eliminate unnecessary referrals. Dr. Kendrick approached the Oklahoma prison system and, having learned about the necessity of reimbursing specialist time, told the prison system upfront that they would need to pay $50 to the specialist for every completed consultation. Prison e-consultation system was implemented and ultimately, led to an approximate 50 percent reduction in utilization of specialty care. Electronic consultations were a cost savings to the system. To date, almost 100,000 e-consultations have taken place and the system has spread to Louisiana and Kentucky.

In 2004, Dr. Kendrick was awarded an economic development grant to implement a randomized control trial (http://www.doc2docstudy.org/) of his e-consultation technology. This trial was implemented outside of the prison system. Its results are currently being prepared. Although this trial is no longer operating, many of the primary care practices continue to use the e-consultation platform. The roll-out of Medicaid’s reimbursement to both medical homes and specialists for care coordination activities have helped sustain the platform’s use. Dr. Kendrick is also currently working on a Health IT Beacon Community award and one of their major interventions is the spread of the Doc2Doc platform.
Tools and Resources

1. **NCQA Care Coordination Measures**
   This table provides quality measurement items from relevant standards from the NCQA measurement set.

2. **Care Coordination Questions from Validated Instruments**
   This table is an aggregation of patient survey items relevant to the key concepts for referral coordination excerpted from the major validated instruments currently used to monitor quality of care delivery.

3. **Referral Tracking Guide**
   This document on the American College of Physicians Practice Improvement & Innovation website lays out the goals and mechanics of referral tracking.

4. **Referral Coordinator Job Description**
   This job description is a generic document that was generated from many job descriptions from various delivery systems that were posted on the Internet or supplied by organizations interviewed. It contains skills, tasks and responsibilities that were present across the many descriptions. It also reflects the focus on basic referral coordination tasks, rather than the more clinical tasks included in some care coordination positions and case management positions.

5. **Referral Coordinator Curriculum**
   For practice teams or delivery systems that wish to train existing staff members to fill referral coordinator functions, referral coordinator functions, this curriculum outline provides a structure with training modules that mirror the elements of the Care Coordination Model.

6. **The Care Transitions ProgramSM**
   This program, under the direction of Dr. Eric Coleman, has done fundamental research in improving the care and outcome of patients discharged from hospital, and is now being disseminated. The Care Transitions website includes many tools for patients and families to ensure active and informed management activities to assure safety through care transitions. Please see the website for terms of use and attribution.

7. **Patient Activation Assessment Form**
   This Care Transitions Program™ tool, for use with patients in transition, measures progression of activation in transition related self care skills, assessing confidence in four critical areas of patient activity. It should not be converted into a provider-oriented checklist. The document is free to all. Please see the website for terms of use and attribution.

8. **Colorado Patient-Centered Primary Care Collaborative: Colorado Primary Care–Specialty Care Compact**
   This compact contains definitions, outlines types of care management transitions, provides points for mutual agreement, and provides expectations for primary and specialty care in terms of access, transitions, collaborative management and patient communication.

9. **Federal Expert Work Group on Pediatric Subspecialty Capacity, Promising Approaches for Strengthening the Interface between Primary and Specialty Pediatric Care**
   This guide outlines promising referral practices, consultation approaches and collaborative management approaches between pediatric subspecialties and primary care practices.

10. **Essential Components of a Referral Document**
    This journal article provides detailed information on required domains and data fields to include in referral documents and consultation reports.
11. Essential Components of Consultation Reports

12. Optimizing Referral & Consults
Reichman M. Optimizing referrals & consults with a standardized process. *Fam Pract Manag.* 2007;14(10):38-42. This e-journal article provides guidance about standard information and processes that lead to optimal communication between primary care practices and consulting physicians to ensure that referrals and consultations run smoothly for everyone involved. A sample referral and consultation form is included.

13. EMRs and Care Coordination

This journal article describes the role that EMRs play in efforts to coordinate care, and contrasts it with the potential that linked EMRs with standardized data could have.

14. Using Web Technology for Patient Referrals
*Community Health Centers of Lane County (Oregon)*

This 2008 report examines eight Web-based referral systems, including five that are commercially available. The report explores common functions of the new software applications, outlines considerations for those interested in adopting such systems, and highlights providers’ successes and challenges in using them. Four case studies are also included.