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# Coordination of Care by Primary Care Practices: Strategies, Lessons and Implications

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*Despite calls from numerous organizations and payers to improve coordination of care, there are few published accounts of how care is coordinated in real-world primary care practices. This study by the Center for Studying Health System Change (HSC) documents strategies that a range of physician practices use to coordinate care for their patients. While there was no single recipe for coordination given the variety of patient, physician, practice and market factors, some cross-cutting lessons were identified, such as the value of a commitment to interpersonal continuity of care as a foundation for coordination. Respondents also identified the importance of system support for the standardization of office processes to foster care coordination. While larger practices may have more resources to invest, many of the innovations described could be scaled to smaller practices. Some coordination strategies resulted in improved efficiency over time for practices, but by and large, physician practices currently pursue these efforts at their own expense.*

*In addition to sharing information on effective strategies among practices, the findings also provide policy makers with a snapshot of the current care coordination landscape and implications for initiatives to improve coordination. Efforts to provide technical support to practices to improve coordination, for example, through medical-home initiatives, need to consider the baseline more typical practices may be starting from and tailor their support to practices ranging widely in size, resources and presence of standardized care processes. If aligned with payment incentives, some of these strategies have the potential to increase quality and satisfaction among patients and providers by helping to move the health care delivery system toward better coordinated care.*

## Little Information to Guide Better Care Coordination

Despite calls from numerous organizations, patients and payers about the need to improve and support care coordination, little information is available about how medical practitioners might better coordinate patient care, both within and across practices and settings. Coordination of care in the United States has often been characterized as "poor,"[1-4] with negative consequences for patient outcomes[5,6] and for provider satisfaction.[7] Yet, some physician practices provide better than average coordination.

In this study, the term *coordination of care* is used to describe the integration of care across all of a patient's conditions and health care needs, both within the primary care practice, as well as between the patient's primary care practice and other providers and settings. Importantly, this definition includes coordination with the patient, family or caregivers.[8-10]

This study involved in-depth interviews of physicians and national experts to identify current best practices in coordination, challenges and lessons learned (see Table 1 and Data Source). Particular emphasis was placed on identifying respondents in small to medium-sized medical groups because they have received less attention in the literature, even though they constitute the majority of outpatient medical practices and serve the bulk of the population.[11] Primary care prac-

tices were targeted primarily, since generalists' training and orientation emphasize well and illness care across a spectrum of acute and chronic conditions and because they often act as the central clinician in coordinating care.[8,9] Some specialists were also interviewed to gain their perspectives on coordinating care with primary care generalists; additionally, for a small group of patients with a particularly severe condition dominating their care needs, a specialist might serve as their *de facto* primary care provider.

The study's goals were to: 1) inject the experiences of on-the-ground outpatient clinicians and staff facing the reality of everyday practice into discussions of coordination of care, a topic that is receiving increased attention because of medical-home initiatives and other efforts to improve quality and contain costs; 2) share examples of approaches physician practices are using to coordinate care to help facilitate replication; and 3) draw implications for implementation and payment policy around coordination of care. This paper is not an exhaustive review of approaches to coordinating care but rather reflects strategies that real-world practices have implemented and found helpful.

## Challenges to Coordination

Respondents identified numerous challenges to coordination. Challenges from patient and physician behavior were largely believed to be a response to system-level factors.

**Patient Factors:** While patients should not be held responsible for system dysfunction, there are particular patient characteristics and behaviors that make coordination more challenging, including the tendency of some patients to self-refer to numerous specialists. Greater coordination required by high-need populations, including people with more economic and social needs and medically complex patients, is also a challenge given the lack of reimbursement for such efforts. Additional challenges include patient noncompliance, risky behaviors and misunderstanding of provider recommendations. The latter is often a result of unclear explanations from providers and, as one respondent noted, the provider failing to "close the loop,"[12] by ensuring the patient/family could repeat instructions back to the provider.

**Physician Factors:** An ongoing challenge to coordination noted by several national experts is the "culture of non-communication and non-ownership of coordination" among providers, described as a direct result of lack of incentives in the reimbursement system for coordination. In addition, some physicians are reluctant to be held accountable for coordinating the care of patients who visit the office infrequently or who disregard medical advice. An additional barrier cited by both primary care physicians and specialists was the quality of consultant notes and referral notes, respectively. Additional challenges at the physician level include lack of emphasis in medical schools and residency around coordination of care. A physician noted that some physicians simply are not aware of how to work within a team to accomplish the numerous coordination tasks required, and that this "requires a paradigm shift."

**System Factors:** Respondents were quick to note that existing fee-for-service payment does not reimburse care coordination efforts. Because there are no payments for such activities as following up on

## Data Source

A total of 62 respondents were interviewed for this study between December 2007 and May 2008. Most were from practices responding to announcements about this study posted on membership listservs for the American College of Physicians (ACP) and the American Academy of Family Practice (AAFP). The listserv announcements invited practices that "were doing innovative and/or effective things to coordinate patients' care." Additional references were obtained from the seven national experts interviewed in the first phase of the study, the American Board of Internal Medicine (ABIM), TransforMED and the Council of Accountable Physician Practices (CAPP).

A physician was interviewed from each practice. In cases where that physician believed a second respondent could provide additional insights and perspectives on care coordination efforts within the practice, a second respondent was interviewed, most often an R.N., referral coordinator or practice manager.

Each interview was conducted using a two-person team. The semi-structured interview protocols were informed by established primary care and care coordination conceptual frameworks.[8-10] Interview notes were transcribed, jointly reviewed, coded and then analyzed using Atlas.ti qualitative software.

After queries about practice and panel characteristics, respondents were asked about each of the following: 1) How does your practice coordinate care for patients, both within and across practices and settings? 2) What are the barriers to and facilitators of coordination, both within a primary care practice and across various providers and settings? 3) What are the lessons learned that might be applied in other settings that are not currently coordinating care well? and 4) How has the institution of these care processes affected the practice's financial bottom line?

**Table 1**
**Respondent and Practice Characteristics**

| | Frequency |
|---|---|
| Total Respondents | 62 |
| Respondent Type | |
| National Expert | 7 |
| Practicing Physician | 36 |
| Others in Practice (R.N., Referral Coordinator, etc.) | 19 |
| Total Practices | 36 |
| Specialty Type | |
| Primary Care | |
| Adult (General or Family Medicine/Geriatrics) | 29 |
| Pediatrics | 4 |
| Specialty (Endocrine/Pulmonology/Vascular Surgery) | 3 |
| Single vs. Multi-Specialty Group Practices | |
| Single-Specialty Practice | 31 |
| Multi-Specialty Practice | 5 |
| Practice Size (Number of Physicians) | |
| 1-2 | 8 |
| 3-10 | 19 |
| 11-20 | 3 |
| 21-50 | 3 |
| 50+ | 3 |
| Practice Ownership | |
| Physician Owned | 22 |
| Hospital Owned | 2 |
| Hospital Affiliation or Part of a Health System | 9 |
| Community Health Center | 2 |
| Employer-Based Primary Care Clinic | 1 |

referrals or communicating with patients outside of the office, physicians do so at the expense of other, billable activities. A primary care physician captured this common experience, "If you don't have face-to-face interaction you can't bill. We can talk to patients, and if you have to eat that cost, you have to eat that cost, but you also have to minimize the time it takes to do it." Another respondent said, "The more people you see the more money you make—the incentive is volume—so you see how care coordination falls out of the equation." Although coordinated care would likely lower overall costs to the patient and health care system over time, immediate costs are borne by physicians.

Health plan policies also pose coordination challenges. Plan specialist networks were a barrier to coordination when they were inconsistent with primary care physicians' referral base. Frequent changes in plan provider networks also pose a challenge—one physician cited an example of a patient whose surgeon was dropped from an insurance network while the patient still needed follow-up care. Similarly, sudden changes in health plan drug formularies

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can create a spurt of extra work for primary care physicians (PCPs) and disrupt patients' medication coordination when patients suddenly need to come in for revised prescriptions. Finally, administrative burdens around obtaining approval for referrals were a frequently mentioned challenge.

## Practice Strategies to Coordinate Care

In response to the numerous challenges providers face, many are pursuing strategies to better coordinate care. These coordination strategies are organized into four categories: 1) within-practice efforts, including with the patient/family/caregivers; 2) between-practice efforts; 3) between the primary care and hospital settings; and 4) with community-based services.

### Coordination Within the Practice

#### *Strategy*
#### Continuity of Care—the Starting Point

Almost every primary care practice interviewed links an individual PCP with each patient. The importance of continuity to coordination was summarized by a physician leader as follows: "It's the persistent focus on continuity that does more to coordinate care than anything else." To facilitate that interpersonal continuity, the respondent emphasized the importance of retention of physicians and staff, enhanced by a supportive work environment and an attractive benefits package.

#### *Strategy*
#### Care Coordinators

The most common strategy used by practices to help coordinate care involved identification of a person within the practice who acted as a referral or care coordinator and shared responsibility for coordination with the PCP. The formalization and responsibilities of that coordinator role varied, as did the clinical training required. Coordinators ranged from "referral specialists" who focused primarily on non-clinical activities, such as obtaining insurance preauthorization for tests, to "care coordinators" who were involved in clinical coordination tasks, patient education and counseling.

Respondent views varied about the level of training required for a coordinator, since behavioral health counseling or care management require advanced training and credentialing. Although some suggested that registered nurses (RNs) or nurse social workers have the ideal background for a care coordinator, the nursing shortage and expense of hiring RNs were a significant limitation for many primary care respondents. Smaller practices emphasized the importance of flexible roles for realizing the efficiencies of delegating coordination activities.

#### *Strategy*
#### Primary Care Teams, Pods and Teamlets

The concept of the primary care team was critical to some of the practices' coordination efforts. While most teams were somewhat informal, a few practices worked in distinct teamlets or pods. The teamlet strategy consists of a dyad of an independent clinician with a medical assistant(s) or RN.[13] Like the use of care coordinators and referral specialists, these structured units strive to maximize efficiency through delegation. A national expert on primary care and coordination noted that teams function optimally when the medical assistants are trained in expanded responsibilities for previsit, visit and post-visit functions.[14]

At Clinica Campesina, a community health center in Colorado, the large administrative and clinical staff is organized into pods—smaller groups with designated patient panels. Assigning patients to a pod increases continuity by keeping patients within a consistent set of care providers. An important element of the pod is the use of "color marking" so that both patients and providers are aware of their mutual relationship and accountability. One physician said, "The thing that made us move [to pods] is that it's clear to us in multiple ways—outcomes, patient satisfaction—that continuity is the key driver…patients get to know the pod team much better and feel more confident about their care."

#### *Strategy*
#### Restriction of Panel Size

Three practices believed they could coordinate care in part because of a deliberate restriction of their panel size and number of visits per day to "have more time to coordinate care." While these were not concierge practices—where patients pay the physician an annual fee or retainer for enhanced access—they did care predominantly for insured patients and provided numerous ancillary testing services within their practices.

#### *Strategy*
#### Use of Community Hospital-Based Support

For practices lacking the economies of scale to support designated care management staff or extensive patient education, there is a strategy of "renting" services they cannot provide in-house. In one example in Connecticut, these services were provided by a physician hospital organization (PHO), the Middlesex Health System, which provides clinical management services to independent physician practices in the community. Patients with particular conditions who are having problems with self-management are referred to this program by their primary care physician. The program works closely with the PCP, and care management is done primarily through face-to-face contact between patients and nurse care managers. Because patients' physicians refer them to the program, care management is seen "as an extension of care in the physician office

rather than an insurance company calling and bugging them." In the absence of such a resource, a few respondents in other markets leveraged the patient education resources of community hospitals.

### *Strategy*
### Specialized Outpatient Programs for Certain High-Risk Patients

Some practices had specialized programs for population-based management to enhance quality and coordination for particular patient groups. For example, a frail elder program in a geriatric practice in Colorado focused intensively on a group of patients with the highest resource needs, using team-based care with a synchronized care plan. The team, comprised of nurses and social workers co-located in and assigned to a primary care practice by the patients' health plan, makes home visits to reconcile medication and identify unmet needs. The team can access the doctor's schedule to make urgent appointments and participates in weekly meetings with physicians.

Another example is the use of cluster encounters, where specific days are set aside for patients with a particular condition, such as asthma or diabetes, to come in for maintenance care. Practices using this strategy explained that the structure helps them gain efficiency in tracking care. As one respondent explained, "It is helping us keep track of chronic management, and it helps the nurses focus and keep in the mindset."

### *Strategy*
### Phone Triage and Open Access System

Several practices emphasized the benefits of direct phone access to patients' personal physician or another familiar member of the primary care team. Respondents in practices emphasizing phone access to physicians noted that it allowed providers to screen problems and guide patients to the appropriate care setting, decreasing the likelihood they would go to the emergency department (ED) or urgent care center and complicate coordination efforts.

A physician whose practice had a designated call-in period described its use in combination with their open-access scheduling system: "We have a call time between 8 and 9 a.m. when patients can talk directly to their primary care physician. We encourage patients who want to come in that day to call during that period so we can set up our day." Illustrating how this call-in hour enhances coordination, the respondent said, "Patients constantly call us and say 'I saw Dr. X because the cardiologist sent me to him for my prostate. The cardiologist thought I should have a PSA and a digital exam and said my PSA is high and I should do something about it.' I'll say, 'You're 92 and I wouldn't worry about it.'"

### *Strategy*
### Encouraging Patient, Family or Caregiver Involvement

Encouraging patient, family and caregiver involvement was emphasized by respondents. A geriatrician explained that "making caregivers feel welcome and acknowledging their role," can turn caregivers into "invaluable team members" and help keep providers informed of the patient's needs.

Respondents described efforts to engage patients, their family or caregiver when appropriate, to be more proactive in the coordination of their own care. The three areas of focus for encouraging patient involvement in coordination were patient self-management, medication awareness and keeping one's PCP informed of care received from other providers.

**Self-management:** Efforts to encourage patient self-management centered on increasing patient awareness of preventive services and the monitoring of chronic

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conditions. To engage patients in the coordination of diabetes care, one physician said, "We put a flow sheet and targets for diabetic care into the patient's hands and say 'if your A1c isn't below 7, or you haven't had an ophthalmology referral lately, come back and ask for it.'" One internist adapted the commonly used pre-appointment questionnaire, adding the questions: "What are you hoping to accomplish today?" and "Is there anything else you would like to work on to improve your health?"

**Medication Coordination:** Keeping the list of medications and doses up to date, ensuring the patient understands them, and handling refills were time-consuming aspects of coordination mentioned frequently by respondents. For patients seeing multiple specialists or with a recent hospitalization this task increases exponentially. Efforts at medication coordination included printing up-to-date medication lists for patients, medication reconciliation at each visit, ensuring patient awareness of their medications before prescribing refills, and renewal of non-controlled medications at the time of the annual exam for the maximum period allowed when clinically appropriate.

**Identifying Self-referrals and Specialist Cross-referrals:** In an effort to improve coordination when patients self-refer or are given cross-referrals by one specialist to another, primary care physicians generally took three approaches. First, many discuss with the patient the PCP's role in coordinating care, encouraging patients to communicate back to them if they see a specialist or have an unexpected ED visit. Second, to encourage other specialists to communicate back to him, one internist said, "I give the patients my card and explain that if they go to any other physicians to have them send me a report and that my office will be the central repository of all information." Third, some routinely asked patients about care from outside providers and then contacted those specialists for reports.

### *Strategy*
### Home Visits

An internist in solo practice makes home visits to improve coordination: "I started this program to keep people out of the hospital. It's a comprehensive program across disciplines. I or an assistant visit patients at home when necessary, once or twice a month. We have a phlebotomist, we do echocardiograms, spirometry physical and occupational therapy through nurses, and watch when they are acutely ill. We've decreased hospitalization rates, and many patients can now live in their home instead of being transitioned to a skilled-nursing facility."

### Facilitators Across Strategies

Within-office coordination was facilitated by a variety of processes, including role definition and training of staff, daily huddles and team meetings, the use of information technology, and standardization of certain clinical processes.

Several respondents identified the standardization of particular processes as useful to "avoid things slipping through the cracks," especially at times of provider discontinuity. Standardized processes included achieving consensus among providers in a practice on how patients would be informed of lab results. Another practice implemented a chronic pain medication protocol to avoid narcotics abuse and disruption of patient care when covering physicians were asked to refill a patient's prescription. Another practice established a feature in its electronic medical record (EMR) to guide the provider through indications for diagnostic testing and referral for low back pain. System support was critical to standardizing processes, as one physician said, "Diabetes can be well managed in primary care as long as the system supports us."

Planned care visits were also noted to facilitate coordination: "It gets us out of focusing solely on acute-symptom management to also provide comprehensive planned care for chronic illness and prevention…. I'll plan the next appointment at the end of the current appointment." Pre-

### Synergy of Practice Strategies: An Example of Optimal Care Coordination

An internist at Medical Associates Clinic in Dubuque, Iowa, provided an example of how synergy of practice strategies and tools helps optimize care coordination in a large practice. "A patient of mine had a mammogram yesterday in anticipation of her annual comprehensive care visit next week. It was abnormal. The result came to my RN's worklist. Using the EMR and the electronic scheduling tool, the RN could identify what surgeon the patient had seen before [for her previous breast cancer occurrence 15 years ago] and that he could see her today, so she brought the patient in for her annual exam today and made an appointment for her to see the surgeon afterward. He was able to do her biopsy this morning. This is far better for the patient's sense of well being than waiting a week between each of these appointments. In addition, because the RN had called the surgeon's nurse to give them a personal heads-up, the surgeon had reviewed the case. I think it is reassuring to patients to know their physicians are talking with each other about their case. The patient and I spent the rest of our time discussing how she had handled her first breast cancer 15 years ago and how she was feeling about this new abnormality. If I had to spend my time arranging all of the logistics on the spot, I would not have been free to look her in the eye and just listen."

appointment testing was highlighted by a few respondents as particularly helpful, as physicians can then focus the visit on a dialogue with patients about their care rather than fact-finding during the visit and counseling the patient later by phone or mail. Use of a post-appointment order sheet was also felt to streamline subsequent care.

In the half of respondent practices with an EMR, respondents noted that it facilitated within-office coordination because of easy access to information. Given the lack of interoperability, EMRs, however, were described as less useful for between-office coordination, except among physicians in large multi-specialty systems where all providers shared an EMR. In some practices without an EMR, simpler information technology (IT) tools, such as stand-alone disease registries, enabled coordination around chronic disease, preventive services and generation of reminders.

E-mail with patients was cited by one internist as particularly helpful in non-visit communication about "dynamic problems like diabetes," noting that it "saves people a lot of office visits." E-mail was also used to help coordinate care for travelling patients, permitting them to attach a photo of a rash or test result for non-emergency problems, rather than having their care fragmented by seeing another provider where access to a trusted practitioner may be unavailable.

## Primary Care and Specialist Coordination

### *Strategy* Limiting Referral Networks

To make coordination more manageable and ensure a certain level of quality, several respondents said they limit the size of their referral networks. They believed this strengthened working relationships, particularly when physicians limit their referral base to those who reliably communicate back to the primary care office.

According to one physician, "Even the family doctors I know in big cities where there are literally 30 different cardiology groups, use one or two groups because that's just human nature—you need working relationships." Moreover, a limited referral base can increase the efficiency of coordination tasks. Another physician said, "Within the laws of Medicare, our social workers must give people choices about home health care, but most turn around to ask the social worker who they would choose. We try to partner with a relatively small amount of high-quality home care agencies because it gives us better ability to communicate…our social worker can communicate once or twice a week with an analogous person on their end and go through 10 patients together. When it's 'onesie, twosie' none of us make the commitment to go through it."

### *Strategy* E-Referral

Internists in two different integrated medical systems described their use of the EMR and secure e-mail for e-referrals. In some cases if the specialist is provided with sufficient information (attached photos, labs, diagnostic images), the patient does not need to actually have a visit with the specialist. Respondents noted that this helps keep care coordinated by the PCP, improves access to specialists, and improves efficiency of use of specialists' time.

### *Strategy* Co-Location of Primary Care and Key Specialties

While not novel or a guarantee that coordination will occur, the co-location of primary care and specialist physicians was noted to facilitate coordination and patient compliance. Among respondents, one PCP explained his approach to co-locating with those specialists to whom he most commonly referred: "Patients are more likely to see a gastroenterologist in a familiar place then going to a new office." A few large practices bring on-site select services, such as dieticians and audiologists, for their patients on a periodic basis. In rural areas, bringing the specialists to the local area on specific days was a strategy that improved coordination by the PCP, enhanced convenience and minimized patient travel.

### *Strategy* PCP-Specialist Service Agreements

Two respondents discussed the value of establishing PCP-specialist service agreements for care coordination. The goal of such agreements is to improve patient access to specialists, to identify when co-management of patients is necessary, to clearly outline expectations of each provider, and to ensure appropriate information flow between providers. As a PCP in Ferndale, Wash., described it, "We have to have those conversations and reach mutual agreements, or we're continually putting the patient in the middle."

Describing these agreements, the PCP said, "We have literally developed written, signed agreements with consultants around how we are going to coordinate care with the idea of creating warm handoffs, a seamless system. Generally the content has been partly about access…how to access the specialist quickly [for an urgent patient]. Then for routine visits, the second piece is information exchange, how can we be sure when you see the patient you know why they're there and what we're expecting of the consultation?"

The contents of the agreements differ by specialist type; but, "they all have the same components on how to communicate and refer back to the primary care physician," including for new problems or abnormal lab results a specialist might identify that are outside of the specialist's area of expertise. This helps avoid cross-referrals from one specialist to another for things that the

patient's PCP might be better positioned to address given their knowledge of the patient.

To initiate and establish these agreements, one model described involved a PCP representing her entire group in negotiations with a counterpart from a specialty group, with both practice managers present. Respondents noted that service agreements require consensus on the role of the PCP and frequent updates to ensure parties' needs are met. In areas with multiple small practices, the establishment of service agreements can be a particular challenge, as another physician noted, "The challenge is that you just can't have every group having a separate conversation with every other group, at some point it has to happen at the community level with medical staff aggregating."

### *Strategy*
### Referral Tracking System

Practices with referral tracking systems used simple electronic databases or paper tracking. Important components of the referral tracking noted by respondents included:

- Patient name and contact information;
- Insurance;
- Name of PCP;
- Name of specialist to whom patient is being referred;
- Primary diagnosis;
- Special needs of the patient;
- Indicator of whether primary care office will make the appointment for the patient or whether the patient prefers to make the appointment herself;
- If the primary care office makes the appointment, then an indicator that the patient was notified of the appointment date and specialist's office address;
- Initials of the person within the primary care office tracking the referral;
- Date of the specialist appointment;
- Date referral note was sent to specialist and by what means (fax, phone, mail, EMR, traveled with patient);
- List of information that was attached to the referral note (labs, medication list, X-rays, etc.);
- Whether the patient is being referred for consultation vs. multiple visits vs. ongoing co-management;
- Whether the patient saw the specialist;
- Whether the specialist communicated back to the PCP; and
- Recognition of specialists' recommendation by PCP.

### Facilitators Across Strategies

Regardless of strategies used, facilitators of between-office coordination included a well- constructed referral note, effective phone communication between providers, and enlisting patient assistance in information transfer. Whether transmitted electronically or by paper, key components of the referral note cited by respondents include:

- Reason for referral;
- Relevant history and physical data;
- Problem list;
- Medication list and allergies;
- Relevant prior labs or diagnostic tests;
- Specification of what the PCP is asking specialist to consult on;
- Whether patient is being sent for a one-time consultation vs. ongoing co-management vs. transfer of care; and
- Copy of the patient's care plan when relevant.

In some cases, physicians enlist the help of the patient in transferring information to a specialist. In an effort to keep a patient's other active specialists in the loop, some will send those specialists a copy of the patient's annual exam via the patient. As one physician said, "I encourage my patients to file their annual exam, which includes their medications and problem list, and I encourage them to take it to their visits with other doctors. I also routinely send a copy of their annual exam to the other important subspecialists [they see]."

## Coordination Between Inpatient and Outpatient Settings

Approaches to coordinating care between the hospital and the primary care practice ranged from primary care physicians admitting their own patients to programs that assist in coordination between settings.

### *Strategy*
### PCPs Provide Inpatient Care

Some of the primary care physicians interviewed provided inpatient care. "We try to provide seamless care for people. I am still one of the few physicians that sees patients in the clinic and the hospital, which makes it easier [to coordinate care] because when people go to the hospital, I control their whole hospitalization and who they and I refer to." One primary care physician described a committee to work with a hospital to overcome the assumption that hospitalists will care for all admitted patients: "We've had to work hard to overcome the hospitalist culture, that some of us still like to do our own admissions."

A shared interest around coordination from the hospital side is clearly helpful. A physician at a small family medicine practice in Muskegon, Mich., described how the consolidation of hospital ownership is helpful when his primary care practice needs to identify which of its patients are hospitalized. "There are three hospitals in town owned by the same corporation. Every day, the people in the medical records section in our office go into the hospital system and

query it for our patients. That will depend on how well the hospital tries to get the primary care physician entered into the system so the data gets back to the primary care doctors. They are really interested in coordination of care and having us know which patients are in the hospital," he said.

### Strategy
### *Advance Practice Nurses for Care Transitions*

The Middlesex PHO-like integrated system (described earlier) works closely with independent primary care practices in the community to provide transition care for patients prior to discharge. Describing their approach, an advance practice nurse said, "When a patient is discharged I'll see them and set up a plan for our work. We try to make an appointment with the patient before they're discharged, so if they're discharged today we try to see them within two days. At that time we'll send a note to the primary care provider and work with the patient and primary care provider after discharge." Care is resumed by the patient's primary care provider once transition is complete.

### *Strategy*
### Care Transitions Program

Three practices described their use of the Care Transitions Program developed by Eric Coleman[15] for patients discharged from hospital to home or to skilled-nursing facilities. The Care Transitions Program involves a personal health record (PHR), a discharge preparation checklist, a patient self-activation and management session with a transition coach (geriatric nurse practitioner) and follow-up visits after discharge with that coach. The program focuses on helping the patient with medication self-management, use of the PHR, scheduling and completing follow-up visits with the primary care and/or specialist physicians, and building patient awareness of "red-flag" symptoms that their condition is worsening.

### *Strategy*
### Primary Care Physicians Working Closely with Hospitalists

At Austin Regional Clinic, a joint program between ambulatory providers and a hospital involves large hospitalist and outpatient primary care groups that work together. A nurse coordinator and office manager located in the hospital under the hospitalists' group, as well as a portal providing the hospitalist group with access to the outpatient EMR, assists with coordination of care for patients between the two settings.

### Facilitators Across Strategies

A link with the hospital's EMR, the quality of the call system that notifies a physician when a patient presents to the hospital, and shared incentives around coordination created by integrated delivery systems, were cross-cutting facilitators of coordination between the inpatient and outpatient settings.

### Coordination Between Primary Care and Community Services

While less common, a handful of practices described efforts to coordinate with community-based services at local health departments, schools, pharmacies and hospices. Often these efforts involved state or grant funding or required the resources of larger or university-affiliated practices. A physician in a small practice in Oregon described a statewide Web-based immunization registry built with funding from the state. Describing its benefits when patients see multiple providers, the physician said, "I use the current database every day. If a patient is visiting our practice for the first time, and we're not sure they've had a hepatitis A vaccine, you can look it up." A nurse in a small New Hampshire pedi-

A link with the hospital's EMR, the quality of the call system that notifies a physician when a patient presents to the hospital, and shared incentives around coordination created by integrated delivery systems, were cross-cutting facilitators of coordination between the inpatient and outpatient settings.

Respondents emphasized the need to reimburse care differently to enhance value for patients and providers in ways not captured in the context of existing fee-for-service arrangements, such as reduced ED visits and hospitalizations resulting from better coordination.

atric practice described their work with the state to hold patient educational sessions in their community on "Paying the Bills" and "Meeting Your Needs in a Maze of Services."

A pediatrician in a community health center described a work in progress to share care plans across a community of providers via a Web-based tool with "a standard intake assessment…. It's not an EMR, but we could share care plans across the community." Another physician in a university-affiliated practice described an interdisciplinary effort to make community resources more available to diabetics in their practice: "We paired with a pharmacist at a community-based pharmacy, a nutritionist in our hospital, and a social worker through the area agency on aging. In addition, there was an emphasis placed on activating the full practice staff as part of the participating team." A respondent in a family practice network of 50 physicians described their efforts to improve coordination with hospice via the practice's EMR, "We have given hospice in the county direct access to our EMR so they can type notes and route them to the doctor. We have a nursing home doing that as part of a pilot and that's working well." Finally, respondents often commented that strategies used to improve coordination of care also enhanced other aspects of care delivery (see Table 2).

## Coordination and the Practice's Bottom Line

While most practices did not systematically track the costs of their coordination efforts, their choices of strategies were directed toward making the services paid under fee-for-service operate more efficiently. For example, several practices that invested in coordination processes, such as channeling non-clinical coordination tasks to non-physicians, planned care visits and referral protocols, saw a positive impact on their bottom line "in the long run." A physician described her practice's improved efficiency as a result of the referral coordinator, "Patient encounters went up, definitely. There is less time on the phone, it's easier to find referral information…that's been helpful—less paperwork for me."

One practice saw a 50 percent drop in patient call volume once they began automatically renewing non-narcotic prescriptions for the full year at the time of the patient's exam and thus avoided designating a full-time nurse to handle refill calls. Among practices that had adopted them, there was general consensus that at least one hour per day (in some cases two hours) of physician time were saved by moving to the team approach and doing planned care visits. This is consistent with a study that tracked office staff time spent in various activities.[16]

Office processes to improve care coordination can, nonetheless, require substantial investment of resources; for example, scheduling a call-in hour each morning for direct patient access to one's physician cost a 13-physician group practice $875,000 a year, although the physicians realized the benefit of less-interrupted work throughout the day and improved coordination.

## Future Reimbursement

Respondents emphasized the need to reimburse care differently to enhance value for patients and providers in ways not captured in the context of existing fee-for-service arrangements, such as reduced ED visits and hospitalizations resulting from better coordination. Providers were universally adamant that they need payment for coordination efforts; a respondent said, "…you can't talk about processes to improve coordination unless you value it."

In terms of how to reimburse providers for coordination activities, respondents were wary of creating "more little fee-for-service codes" since the burden of documentation

**Table 2**

**Coordination Strategies and Other Aspects of Care They Enhance**

| Coordination Strategies | Continuity | Access to Primary Care Physician | Access to Specialists | Comprehensiveness | Patient Self-Management | Medication Adherence | PCP Aware of Patient Self-Referrals |
|---|---|---|---|---|---|---|---|
| **Within the Primary Care (PC) Office** | | | | | | | |
| Ensure every patient has a personal PC clinician | ✓ | | | | | | ✓ |
| Care coordinators | | | ✓ | ✓ | ✓ | ✓ | |
| Primary care team, pods, teamlets | | | | ✓ | ✓ | ✓ | |
| Physician Does All Coordination | ✓ | ✓ | | | | | |
| Restricting panel size | ✓ | ✓ | | | | | |
| "Renting" community and hospital supports | | | ✓ | ✓ | ✓ | | |
| Home visit program | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| Specialized programs in PC office for high-risk patients | ✓ | | | ✓ | ✓ | ✓ | |
| Phone triage and access system | ✓ | ✓ | | | | | ✓ |
| Planned visits, comprehensive care visits | ✓ | | | ✓ | ✓ | ✓ | |
| Enlist patient/family in coordination effort | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| **Between Practices** | | | | | | | |
| Limiting one's referral network | | | ✓ | | | | |
| E-referrals | ✓ | | ✓ | ✓ | | | |
| Co-location of PC and commonly referred specialists | | | ✓ | ✓ | | | |
| PCP-specialist service agreements | ✓ | | ✓ | | | | |
| Referral tracking system | | | | ✓ | | | |
| Enlisting the patient in information transfer to specialists | | | | | ✓ | | ✓ |
| **Between PCP and Hospital** | | | | | | | |
| PCPs who see their own patients when admitted | ✓ | | | ✓ | | ✓ | |
| Advanced practice nurses help transition care | | | | ✓ | ✓ | ✓ | |
| Care transitions program | | | | ✓ | ✓ | ✓ | |
| Hospitalist-PCP work together on care transitions | ✓ | | ✓ | ✓ | | ✓ | |

Notes: Continuity refers to an ongoing relationship with a personal clinician at the primary care practice. Comprehensiveness refers to providing or arranging for the majority of a patient's health care needs, including prevention, chronic condition management and non-emergency symptoms.

While there is no single recipe for care coordination given the range of patient, physician, practice and local market factors, some cross-cutting lessons can be identified from respondents' experiences.

could be "overwhelming." One physician captured the sentiment of several respondents, "You can't pay for this by dividing it into 50 different functions to document." While some proposed a general incentive, such as a per-member, per-month payment, a few noted that failing to link payment to a specific goal or service would not necessarily create an incentive to perform time-intensive tasks needed to coordinate care.

As one national expert said, "I would do a fair amount of pay for performance based on patient scores of their care coordination." Citing the benefits of capitation for coordination, one physician said, "If we were employed by a single entity that made care coordination a higher priority it would facilitate buy-in and investment, but we're fragmented. If the payer recognized what we did to coordinate care outside the hospital as a valued service to be compensated, it would allow us to do a better job."

## Lessons Learned

Medical practices use a variety of strategies to coordinate care for patients both within the office and across providers and settings. Among respondents, coordination strategies were more focused on care within the office than across practices, most likely because of the lack of reimbursement for such activities.

While there is no single recipe for care coordination given the range of patient, physician, practice and local market factors, some cross-cutting lessons can be identified from respondents' experiences, such as the value of a commitment to interpersonal continuity of care as a precursor for coordination (see box on page 13). The importance of system support for the standardization of office processes also was identified by respondents as fostering coordination. A lead clinician's buy in was similarly identified as necessary to establishing standardized processes.

Even though larger practices may have more resources to invest, many of the innovations respondents described are possible for small practices and could be scaled to an individual practice's resources. In fact, respondents believed that such tools as previsit planning use less staff resources overall once the practice has established the pattern. Smaller practices also seemed to have less of a challenge with interpersonal continuity, given fewer staff with whom a patient must interact.

Respondents were nearly universal in noting that working relationships between the PCP and other specialists are a key to well-coordinated care. According to one PCP, "The gastroenterologist has trust that I will send him the right patient with the right indication, that there will be no surprises, [that he will receive from me the patient's] list of medications and allergies. It is cost and time saving for the patient and saves time for us." Like others, he noted that such working relationships help physicians of all specialties to maximize efficiency given time pressures.

Finally, building coordination structures and processes that work across providers requires extensive discussion among provider groups. For example, two respondents who believed they had made "enormous progress" with service agreements, nonetheless, described the dialogue as "ongoing work." The value, however, lies in the enhanced understanding of each provider's issues and the ability to communicate about patient care.

## Discussion of Findings

The clinical effectiveness of a few of the strategies respondents mentioned has been empirically tested. For example, the use of advance practice nurses to ease care transitions from inpatient to outpatient settings has been demonstrated to reduce re-admission rates for congestive heart fail-

## Lessons Learned: Efforts to Improve Coordination of Care

- Commitment to interpersonal continuity of care for patients with PCP and primary care team members:
  - Teams can present a challenge to coordination if there are multiple people who are in communication with the patient.
  - Ensure patient is familiar with key team members.
- Delegation, role definition and training of each team member is important for efficiency:
  - Delegation of tasks needs to be consistent with one's clinical training and skill set.
  - Training in the respective coordination roles.
  - Flexibility and cross-training of non-physician staff.
- One size may not fit all: strategies may vary by practice and patient characteristics.
- Physician leadership, culture and control of the practice can foster efforts to improve coordination and put resources directly back into the organization to improve care.
- System support for standardization of office processes is important.
- While larger practices may have more resources, many of the innovations described are feasible for small practices. Smaller practices also have an advantage around continuity of care because they have fewer providers with whom a patient needs to interact and less intra-office coordination between staff is required.
- Relationships between the PCP and other specialists are a key to well-coordinated care.
- Balancing patient access with continuity and coordination is possible, e.g., blend of open-access appointments and planned-care appointments.
- While EMRs are a helpful tool for coordination of care within the office, primarily because of information accessibility, at present they play less of a role in coordination of patient care between practices.
- Chart preparation, pre- and post-visit planning, and planned-care visits facilitate coordination.
- Building coordination structures and processes across providers and settings requires extensive discussion among the various provider groups, whether they are creating service agreements or a common transfer form across settings.
- Enlisting the patient and family as partners in coordination efforts is helpful, especially around medication coordination, self-management, and communicating about patient self-referrals and the role of the primary care medical home.
- Providers universally felt that financial support from payers for coordination is necessary.

Respondents were nearly universal in noting that working relationships between the PCP and other specialists are a key to well-coordinated care.

These findings have implications for physician payment, medical-home initiatives and technical support to practices, performance measurement, and practice referral networks.

ure patients.[17] The potential of primary care teams and planned visits have been identified by others as highly promising,[13,14,18,19] but their impact on outcomes has received less attention. Similarly, the strategy of "renting services" from outside the primary care office to work closely with the PCP has been described in a case study.[20] Early results from a randomized controlled trial of the Guided Care Model, in which a registered nurse, intensively trained in chronic care, works with physicians in primary care practices to provide coordinated and comprehensive chronic care, are also positive.[21]

This study's findings in small practices were consistent with some findings from large practices of more than 200 physicians in mostly integrated health systems participating in the Medicare Physician Group Practice Demonstration (PGP).[22] In particular, PGP participants identified delegation of some coordination tasks to non-physicians, standardization of particular care processes, the use of planned visits with pre-visit preparation and the importance of physician leadership in change processes as important to improve coordination of care. The PGP demonstration sites found teamwork helpful in improving quality and efficiency. Moreover, unlike respondents in this study, the PGP participants had additional financial incentives to pursue their practice redesign efforts, and since all were large, they had more resources at their disposal. Common findings between the PGP demonstration and this study in smaller practices highlight particular strategies with the most potential for sustainability.

Many of the strategies described are good candidates for more empiric examination. Practice-based research networks involving small to medium-sized practices could assess the impact of strategies on patient ratings of coordination, clinical outcomes and costs.

The limited number of examples of coordination between practices and community services was also notable. The few examples of such coordination with community services were either state funded or occurred in larger systems. Yet, collaboration between primary care and local community services is important, particularly for vulnerable patients.[23] However, resources for smaller practices to help establish such linkages are limited, especially given the numerous demands they already face.

## Policy Implications

These findings have implications for physician payment, medical-home initiatives and technical support to practices, performance measurement, and practice referral networks. Some respondents' coordination strategies resulted in improved efficiency over time for practices, but by and large, practices currently pursue these efforts at their own expense. One of the goals of current medical-home experiments is to begin to address the lack of reimbursement for coordination efforts.

The variation in practices' strategies has implications for medical-home initiatives in terms of measuring coordination capabilities. A medical home measurement tool used to qualify practices for additional payments will need to permit flexibility in how practices demonstrate that they coordinate care. At the same time, the tool needs to ensure that the various aspects of coordination, both within and across providers and settings, are measured.

Even if practices that participated in this study were potentially higher functioning than average practices, among these it is notable that there was a wide range of organizational and technical sophistication. Thus, efforts to provide technical support to practices to improve coordination need to consider the baseline from which more typical practices may be starting, and tailor their support to practices ranging widely in size, resources, and existence of standardized care processes. They will also

likely need to encourage less tangible factors, such as leadership, that respondents believed were critical to improving coordination processes.

In terms of performance measurement, a few respondents were motivated to adopt the coordination strategies they used after participating in American Board of Internal Medicine and National Committee on Quality Assurance quality improvement efforts focused on a single condition, such as diabetes care. The reverse may also be true, i.e., including in performance measurement assessments of whether primary care practices have coordination structures and processes in place is likely to improve clinical outcomes across a range of conditions. Public reporting also was cited as a motivator by physicians, thus incorporation of coordination measures reflecting patient satisfaction with coordination of care might help create incentives for coordination.

Patients often look to their PCP for referral recommendations.[24] And, PCPs clearly gravitate toward keeping their referral networks to a manageable size to foster familiarity, trust and working relationships. The reality however is that providers face many different health plan referral networks. Assisting PCPs by the provision of quality data on specialists (not just in terms of their adherence to process measures or costs, but in terms of their accessibility and communication with the PCP) might foster referrals in a way that enhances coordination.

Lessons learned from some of the approaches described may help facilitate coordination in other practices. If aligned with payment incentives, some of these strategies have potential to increase quality and satisfaction among patients and providers by helping to move the health care delivery system toward better coordinated care. ■

## Notes


1. Smith, Peter C., et al., "Missing Clinical Information During Primary Care Visits," *Journal of the American Medical Association*, Vol. 293, No. 5 (Feb. 2, 2005).
2. Kripalani, Sunil, et al., "Deficits in Communication and Information Transfer Between Hospital-Based and Primary Care Physicians: Implications for Patient Safety and Continuity of Care," *Journal of the American Medical Association*, Vol. 29, No. 8 (Feb. 28, 2007).
3. Schoen, Cathy, et al., "Toward Higher-Performance Health Systems: Adults' Health Care Experiences in Seven Countries," *Health Affairs*, Web exclusive (Oct. 31, 2007).
4. Cummins, Richard O., Robert W. Smith and Thomas S. Inui, "Communication Failure in Primary Care: Failure of Consultants to Provide Follow-Up Information," *Journal of the American Medical Association*, Vol. 243, No. 16 (April 25, 1980).
5. Moore, Carlton, et al., "Medical Errors Related to Discontinuity of Care from an Inpatient to an Outpatient Setting," *Journal of General Internal Medicine,* Vol. 18, No. 8 (August 2003).
6. Roy, Christopher L., et al., "Patient Safety Concerns Arising from Test Results that Return after Hospital Discharge," *Annals of Internal Medicine,* Vol. 143, No. 2, (July 19, 2005).
7. Forrest, Christopher B., et al., "Coordination of Specialty Referrals and Physician Satisfaction with Referral Care," *Archives of Pediatrics & Adolescent Medicine*, Vol. 154, No. 5 (May 2000).


If aligned with payment incentives, some of these strategies have potential to increase quality and satisfaction among patients and providers, by helping to move the health care delivery system toward better coordinated care.

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8. Starfield, Barbara, *Primary Care: Balancing Health Needs, Services and Technology.* New York: Oxford University Press (1998).

9. Institute of Medicine, *Primary Care: America's Health in a New Era*, Washington, D.C. (1996).

10. McDonald, Kathryn M., et al., *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies: Volume 7—Care Coordination*," AHRQ Publication No. 04(07)-0051-7, Agency for Healthcare Research and Quality, Rockville, Md. (June 2007).

11. Hing, Esther, and Catharine W. Burt, *Office-Based Medical Practices: Methods and Estimates from the National Ambulatory Medical Care Survey*, Advance Data from Vital and Health Statistics No. 383, National Center for Health Statistics (NCHS), Hyattsville, Md. (March 12, 2007).

12. Schillinger, Dean, et al., "Closing the Loop: Physician Communication with Diabetic Patients Who Have Low Health Literacy," *Archives of Internal Medicine*, Vol. 163, No. 1 (Jan. 13, 2003).

13. Bodenheimer, Thomas, and Brian Yoshio Lang, "The Teamlet Model of Primary Care," *Annals of Family Medicine*, Vol. 5, No. 5 (September/October 2007).

14. Institute for Healthcare Improvement, *Pursuing Perfection: Report from HealthPartners on Prepared Practice Teams,* Cambridge, Mass. (February 2005).

15. The Care Transitions Program, *Program Structure*, Denver, Colo. (accessed Feb. 17, 2009 at *http://www.caretransitions.org/structure.asp.*

16. Bodenheimer, Thomas, *Building Teams in Primary Care: 15 Case Studies*, California HealthCare Foundation, Oakland, Calif. (July 2007).

17. Naylor, Mary D., et al, "Transitional Care of Older Adults Hospitalized with Heart Failure: A Randomized, Controlled Trial," *Journal of the American Geriatrics Society*, Vol. 52, No. 5 (May 2004).

18. McAllister, Jeanne W., Elizabeth Presler and W. Carl Cooley, "Practice-Based Care Coordination: A Medical Home Essential" *Pediatrics*, Vol. 120, No. 3 (September 2007).

19. Sinsky, Christine A., "Improving Office Practice: Working Smarter Not Harder," *Family Practice Management* (November/December 2006).

20. Berenson, Robert A., *Challenging the Status Quo in Chronic Disease Care: Seven Case Studies*, California HealthCare Foundation, Oakland, Calif. (September 2006).

21. Boult, Chad, et al., "Early Effects of 'Guided Care' on the Quality of Health Care for Multimorbid Older Persons: A Cluster-Randomized Controlled Trial" *Journal of Gerontology: Medical Sciences*, Vol. 63A, No. 3 (March 1, 2008).

22. Trisolini, Michael, et al., *The Medicare Physician Group Practice Demonstration: Lessons Learned on Improving Quality and Efficiency in Health Care*, Vol. 84, Commonwealth Fund, New York, N.Y. (February 2008).

23. Callahan, Christopher M., and Malaz A. Boustani, "After the End of Free Fall: Geriatricizing Primary Care," *Journal of General Internal Medicine,* Vol. 23, No. 12 (Oct. 31, 2008).

24. Tu, Ha T., and Johanna Lauer, *Word of Mouth and Physician Referrals Still Drive Health Care Provider Choice*, Research Brief No. 9, Center for Studying Health System Change, Washington, D.C. (December 2008).