Care Coordination Case Study
Preliminary Findings

Prepared for:

1199SEIU League Training and Upgrading Fund

New York, New York

Prepared by:

The Center for Health Workforce Studies
Health Research, Inc.
School of Public Health, University at Albany
State University of New York
One University Place, Suite 220
Rensselaer, New York 12144-3445
(518) 402-0250
http://chws.albany.edu

Care Coordination Case Study
Preliminary Findings

Prepared for:
1199SEIU League Training and Upgrading Fund
New York, New York

The Center for Health Workforce Studies is a not-for-profit research organization whose mission is to provide timely, accurate data and conduct policy-relevant research about the health workforce. The Center's work assists health, professional, and education organizations; policy makers and planners; and other stakeholders to understand issues related to the supply, demand, distribution, and use of health workers.

Preface

Achieving the triple objective of providing high quality, cost-effective, accessible health services that improve population health is a goal of state and federal health reform initiatives that are driving innovation in health care. One such innovation is care coordination, which gives health care providers responsibility for managing the care of their patients, both within their practice as well as between the practice and other providers, including behavioral health providers and medical specialists. Care coordination entails linking all of a patient's service providers, ensuring effective communication, monitoring service delivery, preventing duplication of services, identifying gaps in care, and assuring better health outcomes, particularly for patients with complex medical or behavioral health needs.

With support from the 1199SEIU League Training and Upgrading Fund, the Center for Health Workforce Studies (the Center) at the School of Public Health, University at Albany is conducting a care coordination workforce study in the greater New York City (NYC) metropolitan region. The project involves case studies of a small number of organizations, including patient-centered medical homes (PCMHs), health homes (HHs), and accountable care organizations (ACOs) and focuses on their approaches to care coordination services for patients. This report presents a summary of the findings thus far from those case studies.

The 1199 SEIU Training Fund is committed to health workforce development for its members through training programs that improve patient care. The Training Fund offers a wide range of education and job-related certificate programs to prepare its members for effective participation in the health care workforce.

Established in 1996, the Center is a not-for-profit research organization whose mission is to provide timely, accurate data and conduct policy-relevant research about the health workforce. The Center's work assists health, professional, and education organizations; policy makers and planners; and other stakeholders to understand issues related to the supply, demand, distribution, and use of health workers. Today the Center is a national leader in the field of health workforce studies. The work of the Center supports and improves health workforce planning and access to quality health care through the collection, tracking, analysis, interpretation, and dissemination of information about health professionals at the national, state, and local levels. Additional information about the Center can be found at http://chws.albany.edu.

Table of Contents

Background

An important goal of state and federal health reform is to achieve the triple objective of providing high quality, cost-effective, accessible health services that improve population health. This goal is driving significant innovation in health care, including:

- strengthening of primary care delivery systems;
- new financial arrangements that move away from fee-for-service and move toward capitation and bundled payments;
- collaborations among providers to reduce fragmentation in health care delivery;
- integration of information technology and information exchange in care coordination models; and
- systems redesign to enhance the quality of care and improve health outcomes.

Several emerging models of care promote new and potentially more efficient approaches to health services delivery and offer payment strategies that reward cost-effective, high quality interventions. Examples of these programs include:

- the primary care medical home (PCMH) initiative of the National Council for Quality Assurance (NCQA);
- accountable care organization (ACO) demonstrations supported by the Centers for Medicare & Medicaid Services (CMS); and
- the health home (HH) initiative funded by CMS and the New York State Medicaid program.

Interoperable health information systems are key to configuring service delivery in these programs. The electronic health record (EHR) is an important tool to advance the quality of communication and information exchange across provider systems and to improve health outcomes of patients. Financial incentive programs, including the federal Health Information Technology for Economic and Clinical Health (HITECH) Act and the New York State Health Care Efficiency and Affordability Law (HEAL-NY) encourage adoption and meaningful use of interoperable EHRs. These programs have supported the development of the health information infrastructure necessary to improve health care service delivery systems.

A Study of Care Coordination

Many of the emerging models of care place increased emphasis on improving the coordination of care provided to patients. Care coordination is characterized by primary care providers and others assuming responsibility for managing the overall care of their patients, both within their practice and between the practice and other providers, including behavioral health providers and medical specialists. Care coordination entails linking all of a patient's service providers, ensuring effective communication, monitoring service delivery, preventing duplication of services, identifying gaps in care, and assuring better health outcomes, particularly for patients with complex medical or behavioral health needs.

In 2013, the Center for Health Workforce Studies (the Center) at the School of Public Health, University at Albany, with support from the 1199SEIU League Training and Upgrading Fund, began a care coordination workforce study in the greater New York City (NYC) metropolitan region.

The goals of the study are to better understand:
- the configuration of care coordination services in new and emerging models of health care;
- the functions of workers in care coordinator roles;
- variation in care coordination activities by program type, patient health status, and provider type;
- employer preferences for qualifications and prior experiences of care coordination workers;
- recruitment and retention issues for the care coordination workforce;
- training needs to enhance the skills of the care coordination workforce;
- the effectiveness of care coordination strategies in improving health outcomes; and
- the measures used to evaluate the efficiency and effectiveness of care coordination services.

Information gathered as part of this study will inform Training Fund efforts to proactively design and implement education and training initiatives to assure that care coordination skills for its members are relevant and responsive to the needs of employers.

Methods

The purpose of the study is to develop a care coordination monitoring system to understand the workforce strategies in place for care coordination in emerging models of care and to track changes in the workforce and care coordination functions over time. Six health care organizations in greater NYC, including two Level III PCMHs, two ACOs, (one Pioneer and one Medicare Shared Savings Program), and two HHs are being recruited into the study. To date, four programs have agreed to participate. Interviews with the four programs were conducted in face-to-face visits to the participating organizations or by telephone using a standard set of key questions (Appendix A). This report describes key themes drawn from the interviews of these case study organizations.

The monitoring aspect of this study focuses on changes in the care coordination workforce, such as qualifications, roles, functions, as well as outcomes of care coordination services over time. This monitoring will be accomplished through quarterly electronic surveys completed by the participating organizations.

The survey will ask about:
- changes in the minimum and preferred qualifications for workers in care coordinator roles;
- recruitment and retention issues;
- emerging training needs for the care coordinator workforce;
- changes in care coordination activities;
- changes in the frequency or intensity of care coordination services;

- measures of the efficiency and effectiveness of care coordination services; and
- whether the cost of providing care coordination services is covered by reimbursement from the different care delivery models.

The surveys will be fielded quarterly for two years beginning in January 2014. Periodic reports detailing findings of the surveys will be issued to stakeholders.

Emerging Themes

The following statements reflect emerging themes drawn from the initial case study interviews completed to date:

- While health care providers generally agree on broadly defined care coordination functions, the activities associated with care coordination are varied and are based on the needs of the patient population, the services to be provided, and the skills and competencies of the care coordination staff.

- In some models of health services delivery, care coordination is a function of the entire clinical care team, while in other models there is a specific role for a care coordination professional.

- Two titles generally associated with care coordination are patient navigator and care coordinator with some overlap in responsibilities between titles.

- The variation in qualifications for care coordination positions is based on the needs of the patient population served and on the services to be provided.

- In ACOs or HHs operating in larger organizations, team-based models of care coordination are common.

- Given the nature of the work, the recruitment and retention of the care coordination workforce can be difficult.

- Many challenges are associated with structuring care coordination services in ambulatory care settings.

- A capable health information technology system, including electronic communication tools and EHRs, is vital to effective care coordination.

- Core content of basic care coordination training is similar across providers with some variation attributable to differences in the patient populations.

- Resources to support care coordination are limited in some organizations but it is generally viewed as a value-added service. Care coordination is considered a worthwhile investment that can result in improvements in access to services, quality of care, and health outcomes for patients.

- The development of metrics to measure the effectiveness of care coordination strategies is a work in progress.

- Effective care coordination is facilitated by workers providing patient-centered care in team-based service delivery models.

Discussion

While health care providers generally agree on broadly defined care coordination functions, the activities associated with care coordination are varied and are based on the needs of the patient population, the services to be provide, and the skills and competencies of the care coordination staff.

Care coordination is generally recognized as a strategy to effect a "collective impact" (Kania & Kramer, 2011)[1] on individual and population health outcomes. At the same time, care coordination activities support the delivery system transformation vital to the success of federal and state health reform initiatives. Care coordination typically involves primary care providers and others actively managing the care of their patients, both within the practice as well as between the practice and other providers, including behavioral health providers and medical specialists. Care coordination involves linking all of a patient's service providers, ensuring effective communication, monitoring service delivery, preventing duplication of services, identifying gaps in care, and assuring better health outcomes, particularly for patients with complex medical or behavioral health needs.

Case study participants generally agree that care coordination is not an easily defined set of activities because effective care coordination must be responsive to individual patient needs. However, while care coordination activities may vary in intensity, content, and configuration across organizations and programs, case study participants identified a core set of activities that occurred in the majority of care coordination efforts:

- Communication among and between patients, care coordinators, and members of the care team, including primary care and specialty clinicians, mental health service providers, pharmacists, nurses, social service professionals and program personnel, therapists, nutritionists, health educators, community health workers, hospital staff, home health and long-term care providers, administrative and information technology workers, among others;
- Effective information exchange;
- Team-based decision making;
- Medical and social services tailored to individual patient need;
- Empowerment of patients to better manage their own health care and health behaviors; and
- Monitoring patients' health status over time.

Communication between providers within the same health care organization or between providers in two or more organizations or community-based agencies providing clinical care or psychosocial support services to a patient is essential to effective care coordination. Care coordination communication is iterative and occurs through verbal and written communications, via technology in the EHR or care plan, by email, through texting or telephone communication, or in face-to-face encounters.

---

[1] Kania J, Kramer M. Collective Impact. *Stanford Social Innovation Review*. Winter 2011. Available at: http://leveragingourstrengths.ca/reading/collective_impact.pdf

An important goal of care coordination is patient education and empowerment to improve patients' ability to manage their health conditions and the logistical, social, and environmental problems that can be barriers to positive health outcomes. While care coordination is a function typically attributed to providers and clinicians, a patient's commitment to the goals of care is considered an essential element in the success of care coordination programs. Case study participants commented on the necessity of motivating patients to participate in health care decisions, comply with clinical recommendations, and modify behaviors to improve their health and well-being. In most cases, this requires ongoing commitment from the patient and, at times, repeated interventions of the care management team. Goals of care coordination in provider organizations include increasing health literacy, improving social circumstances, removing logistical and social barriers that impede healthy living, and helping patients to engage in healthy behaviors.

The case studies revealed that for some organizations care coordination was embedded in their philosophy of care and was integrated into the delivery of routine health services across settings. For example, one large health care delivery system recognized the value of integrating care coordination activities into their home care and acute care services as a strategy to reduce avoidable hospital readmissions.

Case study participants observed that there are differences in the duration and intensity of services depending on the reasons for providing care coordination. For example, care coordination may occur episodically for patients hospitalized for an acute illness during transition from the hospital to the community or to a sub-acute care facility. In these instances, care coordination lasts for a specified period of time, i.e., until the patient has recuperated. Conversely, care coordination may occur longitudinally over an extended period of time particularly in ambulatory care settings and especially for patents in ACOs, HHs, and PCMHs. In these programs, the objective is to improve health outcomes for patients with chronic medical conditions by providing care coordination services over a longer period of time.

A patient in an ACO, HH, or PCMH may benefit from both episodic and extended care coordination. The content and intensity of care coordination services for a patient with chronic disease may change during an acute episode of illness. In one HH, care coordinators are required to visit an assigned patient within two days of any hospitalization to meet with clinicians and establish a post-discharge plan for care management related to the acute illness. The post-discharge acute care plan may require intensive care coordination services for a specific period after which the normal level of care coordination would resume.

Care coordination may include patient navigation or escort service and case finding efforts that occur "on the street," or care coordination may occur mainly in health care settings, through telephonic case management or in face-to-face encounters during patient visits.

In integrated delivery systems, care coordination may occur both locally and centrally. For example,

certified diabetes educators may work in local primary care practices in an ambulatory network to provide clinically focused care coordination services for patients with diabetes. At the same time, related care coordination services for the same patients, such as scheduling transportation to medical appointments, may be managed centrally.

Some case study participants indicated there were serious drawbacks to providing program-specific care coordination. Clearly, all patients with diabetes would benefit from care coordination services regardless of their eligibility for programs such as HHs or ACOs. However, it was challenging to provide needed care coordination services without the funding necessary to support those services. As a result, one patient with diabetes might be eligible to receive formal care coordination services while another patient with diabetes on the same health care provider panel, but with different insurance coverage, might not.

In some models of health services delivery, care coordination is a function of the entire clinical care team, while in other models, there is a specific role for a care coordination professional.

Care coordination services are not always provided by specific staff; in some instances care coordination is the responsibility of the clinical care team. In one of the case study organizations, each member of the primary care team performed different functions related to care coordination for the patient. While the physician monitored the clinical status of the patient, the LPN on the team helped the patient to obtain needed testing and appointments for specialty referrals.
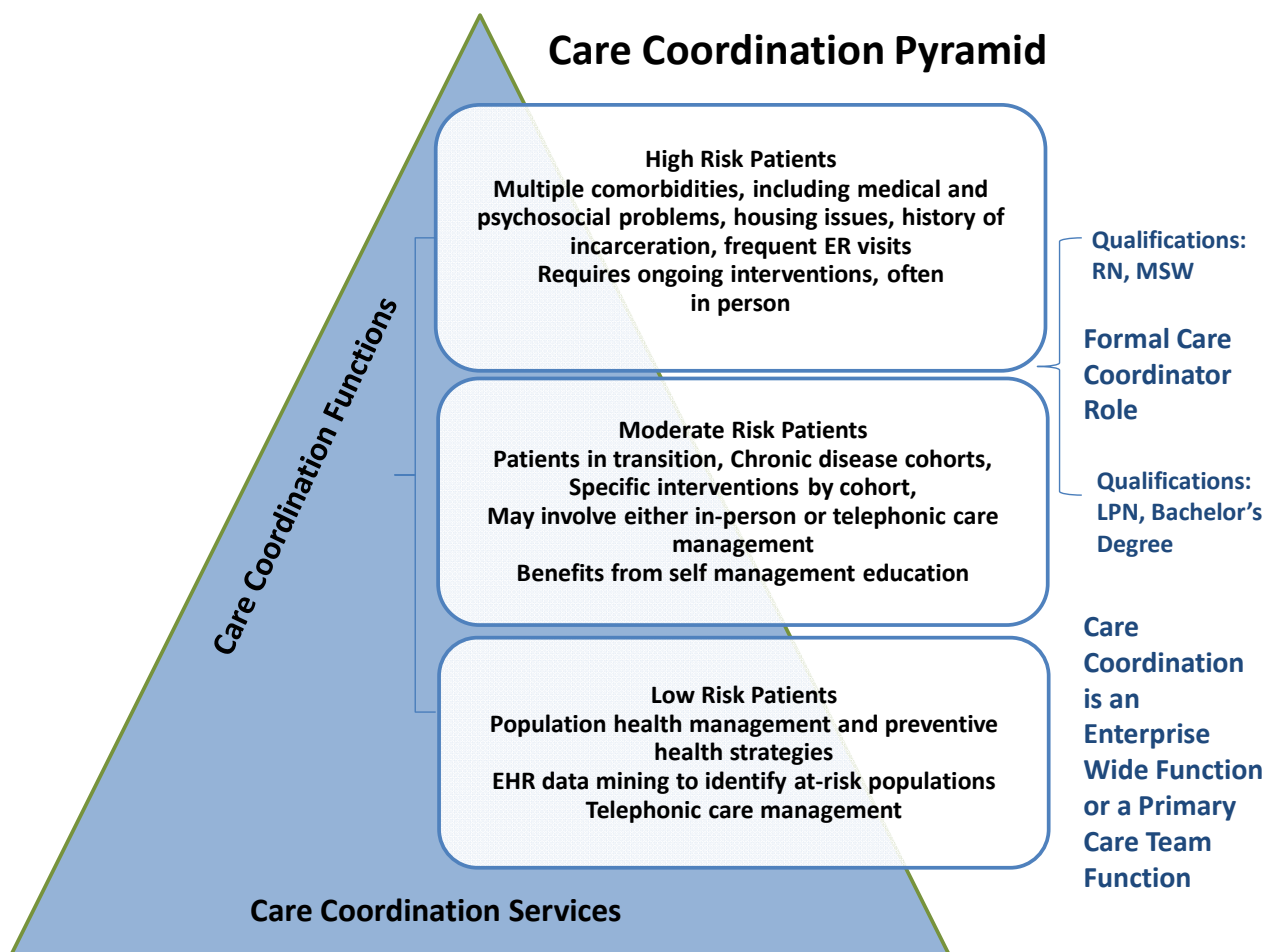
Since care coordination is minimally funded by only a few payers in PCMHs, coordination functions are often performed by various members of the clinical care team. In HHs, there is a clearly defined role for a care coordinator with dedicated funding available for the provision of care coordination services. In programs such as ACOs where risk is shared, there is no specific funding for care coordination. The care coordination configuration selected in an ACO is based on balanced measures of cost, quality, needed services, and regulations governing provision of those services, including program requirements and the competencies of care coordination professionals. The financial incentive for providing care coordination in ACOs is the savings realized from providing more appropriate and efficient health services, intervening early when acute problems arise, and improving health outcomes over the long term.

Consequently, a key driver of the variation in care coordination staffing is the availability of funding and other resources to support the provision of these services. PCMHs are most likely to report that the clinical care team is responsible for providing care coordination services, while ACOs and HHs are more likely to report using specific care coordination staff.

Case study participants described care coordination generally as a broad array of relationships and interactions focused on patient health and appropriate care delivery. Several of the case study organizations characterized care coordination as a basic responsibility of all health workers, with communication and information exchange among providers as ongoing activities. However, as the complexity of a patient's medical and psychosocial needs increased, the need for a defined and

formalized role for a care coordinator was apparent. One case study participant observed that some patients in the HH are at higher risk and in need of more intensive care coordination services, including the homeless, or those in jeopardy of being homeless; patients with a history of incarceration; and patients with a history of frequent emergency room (ER) use.

Figure 1. Care Coordination Pyramid

Care Coordination Pyramid

Care Coordination Functions

High Risk Patients
Multiple comorbidities, including medical and psychosocial problems, housing issues, history of incarceration, frequent ER visits
Requires ongoing interventions, often in person

Qualifications: RN, MSW

Formal Care Coordinator Role

Moderate Risk Patients
Patients in transition, Chronic disease cohorts, Specific interventions by cohort,
May involve either in-person or telephonic care management
Benefits from self management education

Qualifications: LPN, Bachelor's Degree

Low Risk Patients
Population health management and preventive health strategies
EHR data mining to identify at-risk populations
Telephonic care management

Care Coordination is an Enterprise Wide Function or a Primary Care Team Function

Care Coordination Services

Two titles generally associated with care coordination are patient navigator and care coordinator with some overlap in responsibilities between titles.

Case study participants described several titles used in care coordination. While there was some variation in functions across organizations, commonly used care coordination titles included patient navigator (also called care navigator, community health worker, or patient service representative) and care coordinator (also called case manager or care manager).

The Patient Navigator

While a patient navigator provides care coordination services, the responsibilities of a patient navigator are often more limited than those of a care coordinator and are generally performed in the community. A patient navigator often reports to a care coordinator/case manager or to a program director. A patient navigator's responsibilities typically include:

- case finding and patient engagement;
- health insurance enrollment;
- communication with and translation for non-English speaking patients;
- health education to improve health literacy;
- arranging appointments, transportation, and other logistical and social support services as needed; and
- accompanying patients to appointments.

While patient navigation often occurs "on the street," it might also occur within a health care setting. In one health clinic, patient service representatives performed navigation functions by helping patients schedule primary, specialty, and ancillary service appointments and following up with patients who missed appointments. The patient service representatives also conducted telephone interviews with clinic patients to collect updated demographic information and identify unmet needs. In another organization, the care coordinator/case manager worked mainly in the community while the patient navigator provided logistical and administrative support working at the offices of the sponsoring organization.

The Care Coordinator

While a care coordinator performs some or all of the same activities assigned to a patient navigator, the care coordinator also typically has more intensive case management activities, including:

- program intake, including recording demographic information and social history;
- assessing individual patient health needs using a comprehensive health survey tool;
- identifying and acquiring extensive community and health care supports for and with a patient (e.g., housing, mental health counseling, substance abuse services);
- encouraging and initiating interactions between a patient and clinical and social service providers;
- contributing to culturally appropriate care by helping providers understand the cultural perspectives of the patient;
- maintaining and monitoring the electronic patient care management plan; and
- establishing frequent communication and follow-up protocols with patients and providers through email, telephone, and face-to-face contact.

Care coordinators work in the community or in a health care setting such as a hospital, clinic, physician practice, or administrative office in an organization. In one large integrated delivery system, care coordinators worked in an office at the hospital in the morning and in the local community in the afternoon.

An organization might employ both patient navigators and care coordinators to work collaboratively. One organization explained that while a nurse care coordinator performs most care coordination activities, he/she benefits from the help of a patient navigator performing case finding and enrollment activities for high-need patients. Other case study participants said they use care coordinators rather than patient navigators in the community for case finding, patient engagement, and patient intake as well as case management functions.

According to some case study participants, the current care coordinator roles in community-based organizations (CBOs) more closely resemble those of a patient navigator in health care organizations at times. While care coordinators in CBOs help patients find appropriate services, it is not clear that these care coordinators generally have the same level of skills needed to coordinate clinical services as care coordinators working for health care organizations. Care coordinators working in CBOs may lack sufficient understanding of hospital systems to negotiate this aspect of care coordination for patients. Several case study participants indicated that CBOs are actively seeking educational opportunities from program partners in health care organizations to increase their care coordinators' expertise with particular disease processes and associated clinical problems. However, one case study participant reported that care coordinators coming from legacy intensive case management (ICM) programs in mental health in CBOs were an exception. These case managers generally had substantial experience with all aspects of care management including clinical care coordination for the consumers with whom they worked.

The variation in qualifications for care coordination positions is based on the needs of the patient population served and on the services to be provided.

The preferred qualifications for care coordination positions vary by program type and by patient diagnosis. While all organizations participating in the case study were health care providers, candidates selected to fill care coordination positions in the organizations included not only clinical professionals but also social service professionals. According to case study participants, the preferred qualifications for care coordination positions depended on the characteristics and needs of the patients in the program and the services to be provided.

Many of the CBOs participating in care management programs had a social services focus and care coordinators in these organizations were usually social service professionals. Health care organizations providing care coordination services to patients with a primary diagnosis of chronic mental illness expressed a preference for social service professionals to fill care coordination positions. One large integrated health care delivery system providing care coordination for a large number of Medicare patients with chronic medical illnesses predominately used LPNs and RNs as care coordinators. However, the organization acknowledged the important role of social service professionals in helping coordinate care especially for chronically mentally ill patients.

The Patient Navigator

Patient navigators interface with a variety of patients with low, moderate, or high needs, and in general, the services they provide are more episodic than those performed by care coordinators. A patient navigator's basic responsibility is effective patient engagement with the delivery system. When patients are identified as needing ongoing intensive case management, they are generally assigned to a care coordinator within the health care organization.

Case study participants indicated that the preferred qualifications for a patient navigator included:
- a high school education or its equivalent;
- preferably an associate degree or some college;
- experience working in the community in a social service, health educator, or patient navigator capacity;
- fluency in other languages (a priority qualification);
- cultural competence with the population being served (another priority qualification);
- personal attributes such as an interest in helping people, empathy, and patience;
- ability to communicate with and motivate others; and
- technology and computer skills.

The Care Coordinator

According to case study participants, the preferred qualifications for care coordinators depended on the complexity of need and the primary diagnosis of the patients in the care coordination program. Programs serving patients with mental illness as a primary diagnosis often sought social work professionals to fill care coordinator roles. Programs mainly serving patients with multiple medical comorbidities relied on nursing professionals.

Employers preferred the following professional qualifications for care coordinators.
    For patients with low to moderate care coordination needs:
- licensure as an LPN; or
- bachelor's degree in human services, health education, or social work; or
- significant experience (i.e., several years) working within the community as a community health worker or patient navigator.

    For patients with intensive care coordination needs:
- licensure as an RN; or
- licensure as an MSW.

Case study participants also indicated a strong preference for care coordinators who are bilingual or multilingual and for candidates who are culturally concordant with the patients they serve. Candidates with experience integrating behavioral health services and medical care were also highly valued since many of the patients in care coordination programs had multiple comorbidities, including mental illness.

In ACOs or HHs operating in larger organizations, team-based models of care coordination are common.

Care coordination in large integrated delivery systems is organized differently than care coordination in smaller, less differentiated organizations with less specialized care coordination infrastructure. Care coordinators in large organizations with sizeable caseloads often tap support networks of functional specialists within the organization to help manage patient care coordination needs. On the other hand, care coordinators in smaller organizations are typically required to directly manage more of these services for the patient.

Care coordinators with high volume caseloads often work in a hub and spoke model of care coordination that enables the delegation of some tasks to other clinical and support staff with specific functional specialties (e.g., a housing, transportation, or benefits specialist).

Figure 2. The Hub and Spoke Model of Care Coordination
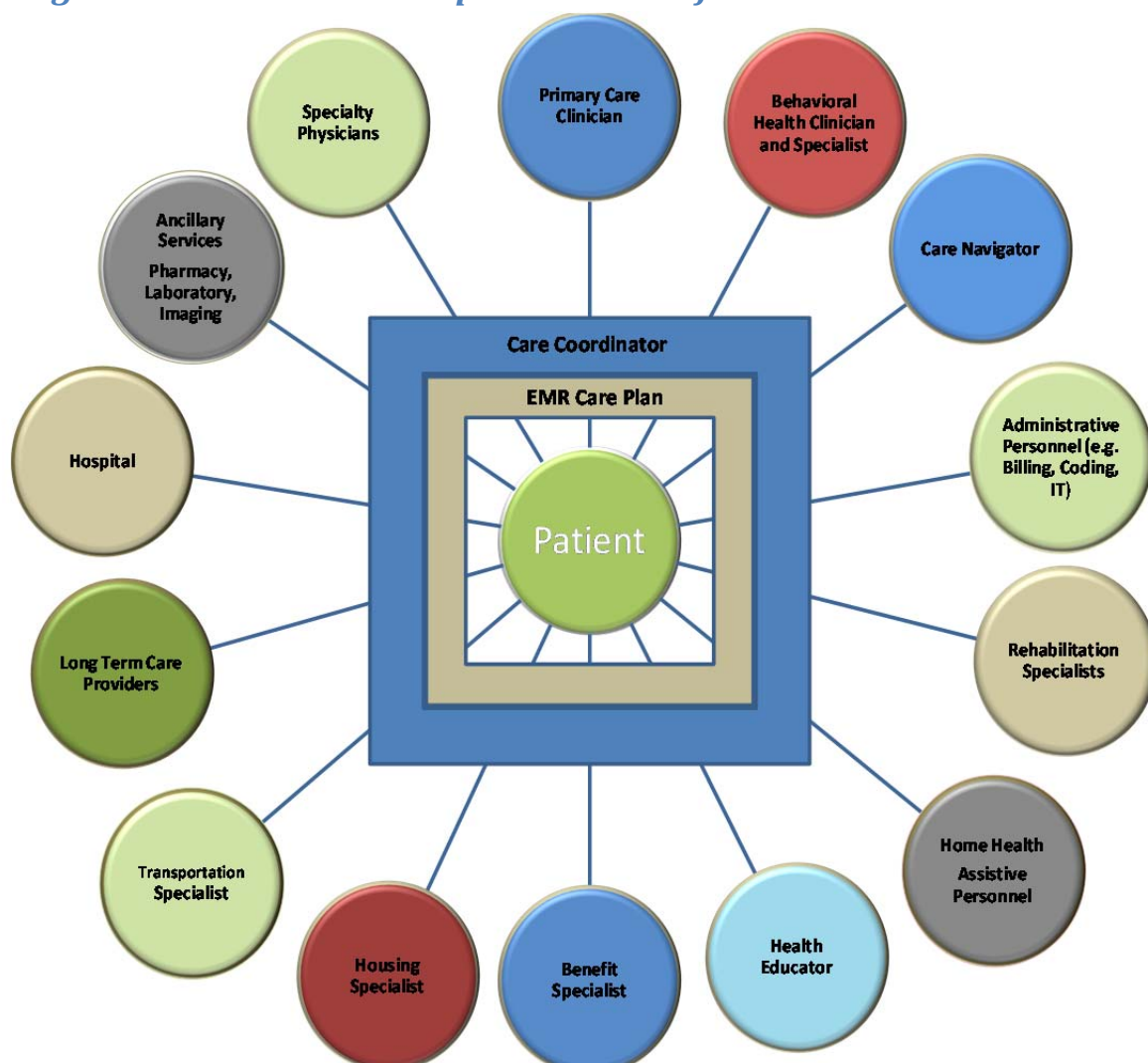
Given the nature of the work, the recruitment and retention of the care coordination workforce can be difficult.

Recruitment of new care coordinators was difficult at times, according to case study participants. Finding workers with the necessary qualifications, especially cultural competence and bilingual capability as well as an interest in the work, was challenging for many organizations despite the diversity of the population in greater NYC. Case study participants indicated that retention of care coordinators was also problematic because of the difficult nature of the job and the intense needs of the patients served. Care coordination programs typically work with historically non-compliant patients who must be persuaded to engage with and remain in the program over time. This is complicated by the social and economic issues impacting a patient's ability to fully and continuously participate in these health care initiatives.

One case study participant remarked that the organization was better able to retain workers recruited from within the organization for care coordinator roles. Workers hired from within were more familiar with the complex issues affecting the organization's patients so they were better prepared for the difficult nature of the work, had a better understanding of system functioning, and possessed greater familiarity with working with clinicians.

In some organizations, external recruitment yielded fewer care coordinators who remained in their positions. However, as previously discussed, those clinical organizations that were able to recruit care coordinators from legacy ICM programs benefitted because these professionals were highly experienced case managers. Many of these recruits originally came from CBOs with backgrounds in managing patient populations of special interest to the HH.

One case study participant indicated that new care coordinators or patient navigators were often provided with a subway MetroCard and map and sent out to find patients who were not engaged with the health care system. These patients were often chronically mentally ill and had difficulty with medication compliance and engaging in healthy behaviors. The work was demanding and not always immediately rewarding. For this reason, there was turnover among this organization's care coordinators and patient navigators.

For some, it was too early in the history of the HH to evaluate staff turnover. A more pressing issue for organizations was preventing staff burnout. One study participant observed that some of the patients enrolled in the HH had intense social and clinical needs that were not easily addressed. It was important not to assign a care coordinator to a caseload with too many high need patients. Consequently, caseloads were adjusted on an ongoing basis as patient needs changed. As a result, the number of high needs patients on a caseload at any point was manageable. Housing issues, especially homelessness or the threat of homelessness, were considered a key indicator of intense need because of the extensive interventions required on the part of the care coordinator to address the complex legal issues and the safety, health, and social consequences for the patient.

Many challenges are associated with structuring care coordination services in ambulatory care settings.

Case study participants indicated that organizing care coordination in ambulatory care networks was particularly difficult given the broad geographies among patients and providers. In one large organization, care coordinators were originally assigned a caseload of patients enrolled in the HH. These patients received care from widely dispersed primary care clinicians employed in the network of health clinics managed by the organization. Care coordinators were traveling throughout NYC to be with the patients, which limited the number of patients that could be served efficiently. It was quickly apparent that this organizational structure was not effective for the patients, the coordinators, or the clinicians. To be more efficient, the organization restructured patient assignments, placing a care coordinator in

each of the primary care clinics to work with any patient treated at the clinic who was enrolled in any care coordination program (e.g., PCMH, HH, etc.).

This organizational approach was complicated by variation in care coordination requirements for the different programs. While it proved to be more efficient for patients, it was more challenging for the primary care clinicians and the care coordinators because differentiating patients by program was difficult. Nonetheless, to assure that patients received program-mandated services, this approach was necessary to show that care was delivered in accordance with the program's parameters and appropriate indicators of health status were collected to enable program-specific measurement of outcomes.

Assigning a care coordinator to a single clinic generated important economies of scale, making the care coordinator position more financially sustainable, especially in clinics where only a few patients were enrolled in one or another program. By assigning patients from a variety of programs to one coordinator, the volume of the coordinator's caseload reached a critical mass. Structuring care coordination in this way also enabled the care coordinator to be immediately available and responsive and to allocate time appropriately as the needs of enrolled patients changed.

Another case study participant representing a large integrated delivery system discussed a different challenge of care coordination in ambulatory care—the difficulty of engaging primary care physicians from the community with the hospital's HH initiative. While patients in the HH commonly sought specialty, ancillary, and mental health services from the hospital managing the HH, primary care services were provided by numerous and often unaffiliated physicians in surrounding communities. The HH concept requires the primary care physician to actively participate in care planning and to monitor health care goals. A particular physician might treat only one or two patients enrolled in an HH, so engaging that physician with the program could be problematic. While care coordinators were encountering some initial reluctance from community physicians, they were gradually having success with physician engagement once physicians understood the goals of the HH and were educated about their specific responsibilities. In greater NYC, however, there are still large numbers of primary care physicians to educate and engage.

The size of care coordination caseloads varied between inpatient hospital care management programs (episodic and acute) and outpatient care management programs (ongoing and chronic). Care coordinator caseloads ranged from approximately 30 to as many as 70 patients among the case study organizations. This variation was attributed to a number of factors including the level of resources available and the goals of the care management program. One large health care system that provided care coordination in many programs used risk stratification to identify patients who would benefit from care management and determine the intensity of those services. High intensity patients required more frequent encounters and more sophisticated care managers. Lower intensity patients often benefitted from episodic telephonic care management services. Care coordinators who provided telephonic case management generally had higher caseloads than care managers working more directly with high need patients.

Several case study participants stressed the importance of balancing the care coordination case mix, which allows the care coordinator to carry a larger caseload. A patient's need for care coordination varies in intensity and fluctuates over time. A caseload that included a mix of low-, moderate-, and high-need patients (i.e., blended case management) allowed the care coordinator to manage a larger number of patients and adjust activity as needs changed. When all patients in a caseload had the same pressing needs, the number of patients a care coordinator could serve well was much lower than in blended caseloads. In addition, in the opinion of case study participants, the job satisfaction of the care coordinator often improved with a balanced caseload mix because successful outcomes for some patients counterbalanced the difficulties with others.

A capable health information technology system, including electronic communication tools and EHRs, is vital to effective care coordination.

According to case study participants, effective care coordination relied heavily on information exchange using capable interoperable EHRs and messaging systems. While verbal exchanges among providers, coordinators, and patients were essential to achieving desired health outcomes, communication of health information was facilitated by the EHR and anchored by the care plans within.

The HH initiative includes a formal requirement for an electronic care plan that is accessible to all affiliated providers. The ACO demonstration program requires that at least 50 percent of the primary care practices within the ACO are meaningful users of the EHR. PCMH programs do not require (but certainly encourage) EHR implementation and use. It is clear that the EHR is vital for optimal, efficient care coordination. The EHR is also a fundamental tool in program evaluation and for monitoring and measuring patient outcomes.

The EHR was fully functional in all of the case study organizations. The EHR was essential to care coordination efforts for the organizations because it:
- centralized records related to individual patient care;
- provided a feedback and monitoring system to alert providers to a patient's failure to arrive for scheduled services, problems with the care management plan, or gaps in care;
- assisted clinicians with monitoring patient health indicators and changes in health status over time;
- informed clinical providers about the patient's care from other clinicians and across delivery systems;
- enabled real-time communication among partners in care;
- permitted the organization to identify patients in need of particular interventions;
- facilitated proactive behavior by providers such as pre-visit planning; and
- allowed providers to respond quickly if an emergent or acute problem arose with a patient.

The electronic care plan is the locus for care coordination activities in an HH. Case study participants discussed management of high-volume patient information and the considerable effort devoted to the thoughtful structuring of the care plan to assure that it is robust but not unnecessarily detailed. The informants reported that the EHR was the repository for all medical information related to a patient while the care plan was deliberately limited in scope and content to enable specific program objectives. When more detailed information was required than that available in the care plan, it could be found in the EHR.

A care plan platform at one case study organization allowed clinicians and other providers to communicate on a dashboard about patients' medical care and social needs in real time through a common portal accessed through the Web. The care plan was designed to provide extensive patient information pertinent to care management, event notifications and alerts, a patient portal, and secure messaging capabilities. The care plan was both manually populated by the care coordinator and others and automatically populated when changes in patient information were entered into other areas of the EHR. Case study participants indicated that it was important that care plans be seamlessly and transparently integrated with the EHR to avoid duplicate documentation by providers.

Case study participants also discussed the utility of the EHR in identification of chronic disease cohorts, management of population health, and measurement of outcomes. The reporting requirements for HHs included transmittal of standardized electronic data about Medicaid patients receiving care management, which was enabled by the EHR. For ACOs, monitoring utilization of services through EHRs and cost of care through administrative data was critical to maintaining financial sustainability.

Evaluation of outcomes related to care coordination activities relied heavily on clinical and administrative records and analysis by workforce trained in informatics. Case study participants indicated there was a need for more training for clinicians and others with computer skills to understand and interpret data in the EHR to identify problems and populations that would benefit from care coordination and case management.

Core content of basic care coordination training is similar across providers with some variation attributable to differences in the patient populations.

Case study participants discussed past and present care coordination initiatives. Early programs that included financial support for patient navigation and care coordination services were disease specific (e.g., diabetes or asthma programs) and education for workers in those programs emphasized particular chronic disease management strategies. However, the skills now needed by care coordinators are more generic than in the past. Current care coordination programs incorporate patients with a wide variety of medical diagnoses and comorbidities.

Case study participants acknowledged that individual care coordinators had varying levels of competency with the skills needed for patient engagement and for understanding the health care and

social service system. These were identified as necessary competencies to work effectively in care coordination. Case study informants described essential skill sets for care coordinators and for others on care teams who would benefit from training in:

- motivational interviewing skills;
- effective communication skills;
- working successfully on teams;
- understanding mental illness, associated comorbidities, and related social issues;
- working with difficult patients, including learning skills to defuse escalating behaviors ;
- understanding and assessing risk;
- worker safety, especially in the field;
- proper use of technology in communicating with patients, providers, and others, such as texting and email;
- use of health information technology to enable care coordination, including understanding the content of and access to patient portals and care plans;
- understanding insurance eligibility and enrollment (e.g., Medicaid) and social benefit systems (e.g., social security, nutrition assistance, etc.) for patients;
- the structure and financing of the health care system and delivery of health care services; and
- regulatory requirements, compliance activities, and patient confidentiality as they relate to care coordination efforts involving multiple organizations and working on health care teams.

Given the emphasis on patient engagement in care coordination, skills in motivational interviewing, effective communication, and patient education were mentioned frequently by case study participants as top priorities for educational topics for members of care coordination teams.

One case study participant commented on the primary importance of the care coordinator's familiarity with social services and health care resources available in a local community. It was recognized that it would be extremely difficult for anyone to be fully knowledgeable about the vast array of clinical and social service providers in greater NYC. One of the case study organizations compiled a comprehensive resource manual for care coordinators that listed the names, addresses, areas of expertise, and a designated contact in local community organizations, social service agencies, and health care organizations. This tool has become an essential resource for care coordinators and others across the health system.

Case study participants also commented on the value of peer-to-peer learning about useful resources in the community. Each care coordinator had experience finding services for their clients that would be useful to others seeking similar services. In one organization, care coordinators met each morning at a central location to discuss difficult cases and to problem solve as a group before working in the community. In this way, care coordinators shared their knowledge and experience with others, which improved the efficiency of care coordination efforts system wide.

Resources to support care coordination are limited in some organizations but it is generally viewed as a value-added service. Care coordination is considered a worthwhile investment that can result in improvements in access to services, quality of care, and health outcomes for patients

According to case study participants, the existence of a formal role for a care coordinator was dependent on several factors including the ability to finance it. When funding was available, care coordination was a service valued by both patients and providers. The level of funding for care coordination also determined how care coordination activities were organized and delivered by the health care team. When funding was limited, care coordination tended to be decentralized. Care coordination functions were diffuse with discrete activities assigned to a variety of workers across the organizational spectrum. When funding for care coordination was more substantial, it allowed organizations to create a separate role in which care coordination functions were centralized.

Case study participants discussed the financial viability of current care coordination programs and indicated uncertainty about whether care coordination roles were sustainable. The HH was described by case study participants as a resource-intense initiative. In the early stages of HHs, for instance, it seemed doubtful that funding for care coordination services supported their actual cost. Informants offered several reasons for these concerns including the program requirement for dedicated information technology infrastructure to manage care. The cost associated with the design and implementation of the requisite interoperable care plans was higher than care management revenues thus far in some organizations.

Building and maintaining a care plan that enables care coordination by a network of community providers in the HH is expensive. According to case study participants, partners pay a small per member, per month fee to defray expenses related to use of the information portals, but it does not cover the cost of the IT infrastructure. Revenue in the HH depended on volume enrollment and in many organizations enrollment has been lower and slower than expected. The financial success of care coordination depends on achieving sufficient numbers in the program to make the cost of providing services sustainable.

In addition, creating legal partnerships to build the HH among previously unaffiliated clinical providers and CBOs has required the structuring of separate business entities (e.g., limited liability partnerships) in order to comply with both state and federal regulatory standards within health care. The costs associated with establishing and then administering these entities is high and not yet fully supported by revenues from sponsored programs.

Case study participants who were operating in a mature care management organization in an ACO discussed the economies of scale that developed over time as organizational structures and processes for care management were refined. Having an established care coordination infrastructure that interfaces with an integrated health care delivery system enabled the organization to extend care management services to a wider range and larger volume of patients than originally thought. Patients

were identified through risk assessment of medical data as likely benefiting from care coordination services with patients' needs defining the intensity and length of those efforts.

Case study participants raised concerns about the cost of meeting the needs of patients currently targeted for care coordination. The high intensity of required services was described by participants as difficult to sustain over the long term. One case study participant discussed an early care coordination demonstration project in the health system that employed a case manager working with a small number of patients with congestive heart failure. While the program succeeded in reducing hospitalizations for these chronically ill patients, the cost savings achieved benefitted the insurer and did not accrue to the health care organization providing the care coordination services.

Several organizations also commented on the difficulty of paying for case finding and enrollment activities that take longer than expected and may not be funded. Upfront investments were difficult to recover especially with high-need patients. This was identified mainly as an issue related to case finding for patients new to care coordination and was not a problem for patients converting from legacy ICM programs to HHs.

While case study participants supported the intent of care coordination programs, they also indicated that the financial incentives in many programs were not aligned to encourage full participation by all providers. Insurance companies benefitted financially when care was well managed. However, in fee-for-service payment arrangements, providers who coordinated care and fostered improved health outcomes did not generally reap the financial rewards of these efforts. Case study participants remarked, for instance, that hospitals were asked to reduce inpatient days resulting in lower revenues. This was considered a perverse outcome for hospital systems that wanted to participate in good faith efforts to improve population health. Several case study participants discussed the possible benefits of gain sharing or risk management contracts that would permit health systems to also benefit from the cost savings generated from care coordination programs.

The development of metrics to measure the effectiveness of care coordination strategies is a work in progress.

Case study participants reported anecdotally that they were seeing positive outcomes generally among low-need patients receiving care coordination services. These patients were commonly described as motivated to improve their health but in need of some assistance with navigating the health care system and engaging more fully in healthy behaviors. Once enrolled in care coordination programs, these patients were usually viewed as benefitting from program efforts. Informants indicated, however, that it was still too early to evaluate the success of care coordination with high-need patients who were often medically complex with substantial social and economic barriers affecting their health behaviors over the long term.

It was easier for case study participants from ACOs and PCMHs to report outcomes from care coordination efforts. The HH initiative is quite new so it was too early to report outcomes. Informants from HHs were waiting to receive data from the state to better understand the results of their care coordination efforts.

Participants discussed the evaluation requirements of the various programs which include numerous specific mandatory metrics. In some programs, the required evaluations focus mainly on quality measures while in others there is a focus on patient engagement. Thus, program administrators must collect and prepare a different set of deliverables for each funder. The data used in these evaluations are generally collected by the organization but may also include data from other providers or from insurers.

Participants in the study selected both process and outcomes metrics to monitor program outcomes. While some demonstration programs have compulsory metrics to evaluate outcomes, providers are also collecting more extensive patient health indicators, process measures, and patient and provider satisfaction variables for their program evaluations. Case study participants were thoughtful about achieving consistent, high quality measurement over the long term to evaluate the efficiency, effectiveness, and sustainability of these programs. In one HH, the lead organization was using over 20 indicators to evaluate the program, including patient service utilization, admissions and readmissions to the hospital, a variety of health indicators (e.g., A1C, blood pressure, etc.), employee retention and turnover data, and other variables. According to some case study participants, evaluation of care management is also informed by quality indicators, patient satisfaction surveys, number of patient encounters and patient retention in care coordination programs. Case study participants reported using many common metrics in their evaluations but each organization also selected measures of particular importance or interest to their organization to include in their evaluations.

Case study participants discussed the challenge of having primary care providers collect the required data to evaluate program outcomes while providing efficient patient care. A provider might not be focused on program metrics when treating a patient for an acute condition. In addition, neither the provider nor the patient has the time to collect health data beyond what is routinely collected during the visit. As care coordination efforts become systematized and as measures become more aligned across programs, the collection of evaluation metrics will likely become more routine.

Effective care coordination is facilitated by workers providing patient-centered care in team-based service delivery models.

Case study participants discussed the use of care teams that allow all members of the team to work to their full capability. New models of care delivery focus on value-based care to achieve the most cost-effective outcomes which sometimes requires reconfigurations in the roles and responsibilities of health workers to use them more efficiently. Case study participants acknowledged that patient-centered, team-based care coordination was important for new service delivery models to be effective over time.

Patient navigators and care coordinators must be given the responsibility and authority to be responsive to variation in patient need and program objectives. These workers must be able to exercise autonomy within their full level of competency to assist patients with complex health and psycho-social needs to improve health status.

One case study organization was restructuring patient navigation with a greater focus on patient empowerment to achieve personal health goals and improve patients' awareness of the importance of self-management. The organization recognized the fundamental importance of patients acting on the information they were provided in order for a health care intervention to be successful. In another organization, patient navigator functions were shifting to insurance enrollment activities to help patients understand their health insurance options in the Affordable Care Act and the New York State of Health, The Official Health Plan Marketplace .

Regulatory requirements were mentioned as being overly burdensome at times and interfering with efficient care. For instance, case study participants remarked on the requirement of some managed care companies to have physicians sign all patient records produced by nurse practitioners. This was viewed as unnecessary and a poor use of clinical resources. Informants also discussed issues with being unable to use social workers with master's degrees (MSWs) to the full extent of their training because of the requirements in New York to transition to a licensed clinical social worker (LCSW) in order to independently provide counseling services. This was a particularly salient issue with the development of HHs that mainly focus on a patient population with mental illness.

Conclusion

Case study participants believed that care coordination was an important strategy to improve health outcomes because it provided patients with appropriate access to health services and permitted them to participate in improving their health status and enjoy healthier lives. In addition, care coordination enabled more efficient use of limited health resources.

While case study participants recognized the value of care coordination for patients, they were uncertain if formal care coordinator roles were economically sustainable over the long term. This uncertainty was driven by concern about the intensity of services likely needed to achieve enduring improvement in health outcomes for the highly complex patients targeted in many of the current initiatives in health care.

Care coordination was viewed by case study participants as a valuable tool to improve both individual and population health. Its success will depend on a number of factors, including the realignment of financial incentives so care coordination providers can realize the benefits of effective care coordination services.

Appendix A

**Staffing Trends in Care Coordination
Emerging Models of Care in Greater NYC:**

Health care providers in New York City are adopting emerging models of care, including accountable care organizations (ACOs), patient centered medical homes (PCMHs), and health homes (HHs). These models are designed to provide a wide range of services to patients and emphasize care coordination. Clearly, there is much variation in staffing patterns for care coordination and little is known about the effectiveness of different approaches.

The Center for Health Workforce Studies (the Center) is developing a surveillance system to monitor workforce trends in emerging models of care. Working with the 1199 Training Fund, the Center is identifying at least six innovative organizations based in greater New York City to be part of the system, including two ACOs, two PCMHs, and two HHs. Participating organizations will be asked to describe their care coordination services. Baseline interview questions are attached.

On a quarterly basis, the Center will survey a point of contact within the participating organization to assess for any adjustments to the care coordination services provided or to the care coordination workforce including:

- Changes in numbers of staff in the titles of interest;
- Changes in qualifications for these titles;
- Recruitment or retention challenges;
- Emerging training needs;
- Findings from the metrics used to evaluate the effectiveness of the care coordination workforce; and
- Plans for service expansion and the additional staff expected to be hired.

Product: Results of the quarterly surveys will be synthesized and summarized in intelligence reports that will be shared with the Training Fund and the participating organizations.

**Surveillance of Staffing Trends in Emerging Models of Care in Greater NYC: Care Coordination
Baseline Interview Questions**

1. Describe your organization.

2. Which of your programs provide care coordination services? (e.g., ACO, PCMH, HH)
    a) Do any of these programs include risk-sharing arrangements?

3. Do you use a particular model of care coordination?
    a) What is the IT infrastructure that supports the implementation of the model?

4. Which patient populations receive care coordination under these programs? (e.g., HIV/AIDS, behavioral health, chronically ill)

5. How are you reimbursed for the provision of care coordination services?
    a) Is the reimbursement sufficient to cover the cost of providing care coordination?
    b) If not, what adjustments have you made to the program to accommodate inadequate funding?

6. Describe your care coordination workforce:
    a) Titles
    b) Qualifications – educational and experiential
    c) Preferred Qualifications
    d) Training
    e) Functions/roles
    f) Caseloads
    g) Supervisory structures
    h) Career ladders
    i) Recruitment and retention issues

7. How do you monitor the effectiveness of the care coordination services you provide?
    a) EHR data mining?
    b) Assessments of populations or patients or both?

8. Have you made any changes to your approach to care coordination or to the workforce providing that care based on your monitoring efforts?