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Policy Research, Inc.

**The Early Experience of
the Charlestown
Communities
Case Management
Program**

Final Report

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EXECUTIVE SUMMARY

In January 2001, the Centers for Medicare & Medicaid Services (CMS) selected Erickson Retirement Communities' Charlestown Community (Charlestown) to operate a demonstration care coordination program as part of CMS's Medicare Coordinated Care Demonstration. Mathematica Policy Research, Inc. is evaluating the 15 programs in the demonstration, as well as 1 program that is participating in CMS's Medicare Case Management Demonstration for Congestive Heart Failure and Diabetes Mellitus. The evaluation uses a randomized design to test the impact of care coordination on care quality, health service use, and costs. This case study documents Charlestown's early experiences in the demonstration; the documentation is based on telephone interviews with program staff conducted three months after the program began enrolling patients. A report containing preliminary program impacts and a detailed description of program implementation is planned for mid-2003.

Experience with Care Coordination. Erickson Retirement Communities currently operates eight continuing care retirement communities in five states. The communities offer independent-living, assisted-living, and nursing facility living arrangements and a broad continuum of on-campus services for middle-income seniors. The seniors pay for some services, such as transportation, security, and social services, as part of their monthly fee to their community. Other services, such as primary medical care and home health aides, are paid on a fee-for-service basis. Two Erickson communities in the Baltimore, Maryland, area are participating in the demonstration. The prototype intervention for the Charlestown demonstration was a care coordination/utilization management program developed under a Medicare managed care risk contract with CareFirst Blue Cross/Blue Shield. For the CMS demonstration, Charlestown made few changes to its prototype intervention other than dropping the utilization review component.

Goals and Eligibility Criteria. The Charlestown program's goals include (1) improving communication and coordination between patients and physicians, and (2) improving beneficiary education and adherence to treatment regimens. The program targets patients with congestive heart failure, coronary artery disease (CAD), or diabetes who reside in the independent-living settings of Erickson's Charlestown and Oak Crest communities. Participants must have both Medicare Part A and Medicare Part B, must have Medicare as their primary payer, and must not be enrolled in a managed care plan. Individuals with CAD or diabetes must have had an inpatient admission at some point during the two-year period preceding enrollment in the demonstration, although the principal diagnosis for the admission need not have been CAD or diabetes. The program's waiver cost calculation anticipates that the program will save Medicare \$542,468 over the four-year study period, assuming a 20 percent reduction in Medicare costs.

Outreach and Enrollment. To identify potential participants, the program relies primarily on the information systems of the communities' medical centers to generate lists of patients having any of the three target diagnoses. The communities' primary care physicians review the lists of patients meeting the diagnostic criteria, determine which patients are appropriate candidates for care coordination, and consent to allow the program to approach these patients. In addition, physicians may identify and refer patients directly to the program, and patients may

refer themselves and are considered for enrollment if their physicians provide consent. Patients determined to be appropriate for care coordination are invited to attend an informational group meeting, at which the care coordinator supervisor explains the program. Interested patients are asked to sign consent forms. The program began enrolling patients in April 2002. After three months of operations, it had enrolled 142 patients; by six months, it had enrolled 232. The requirement that patients with CAD or diabetes must have had a prior hospitalization, which was imposed to ensure that a 20 percent savings would cover the cost of the intervention, reduced the pool of eligible patients by approximately 67 percent. At this time, the program has exhausted the pool. It now is actively investigating strategies to identify additional eligible patients.

Key Program Staff. Key program staff members are the program director, care coordination supervisor, and care coordinators. The medical director, who is an internal medicine physician, provides consulting services, primarily on the program's eligibility criteria, but does not have any day-to-day program responsibilities. The program director has extensive management experience, and the care coordinator supervisor has significant nursing and care coordination experience. The three care coordinators are registered nurses with four to seven years of care coordination experience.

Care Coordination Components. The Charlestown demonstration program intervention includes assessment, care planning, monitoring, patient education, the arrangement of community-based services, and communication with providers. Enrolled patients remain in the program until the four-year study has ended. All patients receive a comprehensive in-home assessment covering their medical history, current health status, health habits, medications, limitations in activities of daily living, living arrangements, social supports, and symptoms. The care plan is based on the results of the assessment and on the patient's medical record. Because the care plan includes the care provided by all departments within the community (such as residential social services and home health), the care coordinator consults with these departments while developing the plan. Care coordinators use their clinical judgment to determine how frequently they will follow up with individual patients. All patients are monitored at least monthly. During monitoring contacts, the care coordinators check the patients' symptoms and adherence with the prescribed treatment regimen and provide information and education about the patients' condition and self-care skills.

Patient Education and Coordination Across Providers. During the initial assessment, care coordinators identify each patient's education needs. Patient education is included in the goals of the care plan. The program's education intervention focuses on improving patients' understanding of disease processes, disease etiology, self-care skills, adherence to recommended treatment regimens, and lifestyle changes. Care coordinators are responsible for communicating with the patients' providers (particularly with the primary care physicians) about the patients' care plans and about the patients' progress toward completing the care plans' goals. They also are responsible for tracking unexpected hospitalizations and trips to the emergency room. Care coordinators interface with the communities' acute care coordinators while patients are in the hospital, as well as with other members of the community care team. They also help to ensure that events (such as diagnostic testing) occur at the appropriate time and in the proper order, and that necessary information (such as test results) is available at the time of health care visits.

Arranging Services. Residents at Erickson communities pay a monthly fee in return for their apartment, one meal per day, transportation, campus security, resident services coordinators (social workers), and some recreational activities. Services available on campus on a fee-for-service basis include medical, dental, and podiatric care; home health care; housekeeping and home support; mental health care; ambulance service; a pharmacy; and restaurants. Care coordinators will help participants to access these services. As part of the intervention, they also will provide assistance in applying for pharmaceutical assistance programs and other public benefit programs. In addition, the program will provide participants with scales and medication cassettes and, if necessary, will arrange for a pharmacist to refill the cassettes.

Physicians' Expected Role. Physicians participating in the program are employed by Erickson and practice exclusively in Erickson's on-campus medical centers. Program staff expect that physicians will play two roles in the program. They will (1) provide consent for their patients to participate in the program, and (2) communicate frequently with care coordinators. The program does not depend on physicians to refer potential patients, although it expects physicians to begin to refer patients as they become familiar with the program. Instead, the program identifies potential patients from its information systems and requires all patients to obtain their physicians' consent to enter the program. Program staff appear to have given thought to the amount of physician involvement that they reasonably could expect. Concern about burdening physicians limits the amount of formal contact the program seeks with them, but program staff would like the physicians to view the care coordinators as extensions of themselves. Physicians are not involved in the development of care plans, but they review the plans that the care coordinators have developed. Similarly, although the care coordinators do not have formal meetings with the physicians, they see them frequently because of the proximity of their offices, and they communicate with them by e-mail.

Data Systems. The program uses Canopy System's Web-based Canopy CM™ case management software, which includes data from assessments, care plans, and follow-up monitoring. Care coordinators use Canopy to help to manage their time and workflow. Most data are stored in discrete fields, and, because there is minimal use of text-based narrative, it is easy to generate reports, track a patient's progress, and monitor care coordinator activities. With some additional programming, the Canopy system has been able to generate patient-level data required by the evaluation.

Early Implementation Experience. Health service delivery demonstration programs such as the ones in this evaluation typically encounter barriers to early implementation. These barriers can include lower-than-expected enrollment; opposition from physicians; difficulty hiring qualified staff or obtaining space and equipment (including higher-than-expected labor, rent, or equipment costs); and difficulty developing a data collection system that can monitor patients and program activities efficiently. Charlestown has not encountered physician opposition, nor has it had difficulty hiring staff or obtaining space or equipment. However, enrollment has been lower than anticipated, for reasons already noted. To increase enrollment, the program plans to add patients in another Erickson community (Riderwood Village) to its program; add patients with chronic obstructive pulmonary disease to its target pool; change the introductory letters sent to patients so that they come from the primary care physician; educate physicians about the goals of the program; and increase marketing directed at patients.

Problems Related to Evaluation Activities. Demonstration programs commonly encounter early problems related to their participation in an evaluation, such as inadvertent control group contamination or difficulty providing data for the evaluation. Charlestown has not had either type of problem. However, the richness of Charlestown's service environment may increase the difficulty of evaluating program impacts. All community residents pay a monthly fee that covers a number of non-health care services, and additional non-health care services are readily available on a fee-for-service basis. In this service-rich environment, the effects of Charlestown's demonstration program may be underestimated. However, the core interventions of care coordination and patient education are available only to treatment group members. Thus, the estimated program impacts will reflect the incremental effects of having care coordination in an environment already rich in support services.

Early Successes. The Charlestown demonstration program contains many features that have been found to be associated with successful care coordination interventions. The program intervention is being implemented largely as planned, patients who enrolled in the program have been positive about its benefits, and physicians have been supportive of the program's approach to patient enrollment. Charlestown has made a significant investment in its information systems, which should help it to provide effective care coordination services, and to manage staff time and workflow efficiently. However, during its first three months of operations, it encountered lower-than-anticipated enrollment. The program has the potential to be successful, if enough participants can be identified, and if the richness of Charlestown's usual service environment does not reduce impact estimates.

CHARLESTOWN CASE STUDY

Erickson Retirement Communities' Charlestown Community (Charlestown) is 1 of 15 care coordination programs participating in the Medicare Coordinated Care Demonstration. The demonstration, sponsored by the Centers for Medicare & Medicaid Services (CMS) and mandated by the Balanced Budget Act of 1997, tests a wide range of care coordination models for Medicare fee-for-service beneficiaries. Mathematica Policy Research, Inc. (MPR) is evaluating the 15 programs, as well as a program that is participating in CMS's Medicare Case Management Demonstration for Congestive Heart Failure and Diabetes Mellitus. The evaluation of these programs uses a randomized design to test the impact of care coordination on care quality, health service use, and costs. It includes an implementation analysis to assess which features appear to lead to the success or failure of each program.

This brief case study report describes the early experiences of the Charlestown demonstration, which calls its program the "Medicare Coordinated Care Demonstration Program." The Charlestown demonstration began enrolling patients for evaluation in April 2002. This report is based on telephone interviews, using semistructured interview protocols, conducted in July 2002 with Charlestown staff members (the program and medical directors, care coordination supervisor, and financial staff). The report describes the history of Charlestown's demonstration program, describes how it relates to the Erickson Retirement Communities as a whole, and provides an overview of the key features of the intervention. It concludes by highlighting some early program successes and potential areas of concern to the evaluation team.

Subsequent reports will describe program implementation in greater detail, using information collected during in-depth, in-person interviews and a second set of telephone

interviews with program staff. Ultimately, we will synthesize the findings from the implementation and the findings from the impact analysis to assess the strengths and weaknesses of each program, as well as to determine which features appear to be associated with each program's success or failure. This report does *not* make such an assessment, as it would be premature to do so.

Program Context

Erickson Retirement Communities, previously known as “Senior Campus Living,” was founded in 1983. The company currently operates eight continuing care retirement communities in five states that offer both independent-living and assisted-living arrangements for middle-income seniors. The communities also offer a broad continuum of on-campus services, including on-site physicians, resident social workers, home care, and nursing home care. Two Erickson communities in Maryland (Charlestown, in Catonsville, and Oak Crest Village, in Parkville) are participating in the demonstration.¹

Intervention History. The prototype intervention for the Charlestown demonstration was a care coordination/utilization management program developed under a Medicare managed care risk contract with CareFirst Blue Cross/Blue Shield (Table 1). That program began operating in 1999 and continued to do so until CareFirst withdrew from the Medicare market on December 31, 2000. It provided care coordination and utilization management services for 700 residents of the Charlestown and Oak Crest Village communities residing in independent- and assisted-living units and long-term care facilities. All residents covered by CareFirst were potentially eligible to

¹In July 2002, three months after the program began enrolling patients, the program had planned to begin enrollment at Riderwood Village, another Erickson community located in Silver Spring, Maryland. However, changes in the administration of this facility delayed the plan.

TABLE 1
PROGRAM HISTORY

Intervention Developer

- Charlestown Retirement Community

Where Original Intervention Was Used and Intervention's Target Population

- The care coordination intervention was developed under a Medicare risk contract with CareFirst Blue Cross/Blue Shield.
- It targeted Medicare+Choice patients having had a sentinel event (hospitalization, emergency room visit, or fall).
- It enrolled 700 patients between 1999 and 2000.

Original Intervention and Adaptations for Demonstration

- The program began as a care coordination program.
- Nurse care coordinators conducted patient assessments, developed care plans, provided patient education, and monitored patients' progress.
- The original intervention changed for the demonstration by dropping the utilization review component.

Effectiveness of Original Intervention

- On-campus physicians became familiar with the program.
- It tracked process-of-care measures, but not clinical outcomes.
- Medicare costs for enrolled patients were 54 percent lower than the average payment rate to Medicare managed care plans for enrollees residing in that county.

SOURCE: Telephone interviews with Charlestown program staff conducted in July 2002 and review of program documents.

participate. Residents could be referred to the program by their physicians or could be asked to participate after having had a sentinel event (for example, hospitalization, emergency room visit, or fall). Care coordinators assessed patients, developed plans of care, conducted patient education, and monitored the patients' progress.

The prototype intervention was never formally evaluated. The program monitored process of care measures, but few patient outcomes. It compared the cost of care for residents enrolled in the prototype with the average payment rate for Medicare managed care enrollees in the area and found that costs for the enrolled residents were 54 percent less than the average.

Charlestown made minimal changes to its prototype program for the CMS demonstration. It created disease-specific eligibility criteria and a mechanism for identifying eligible patients through its on-site medical centers. It also dropped the prototype's utilization review component. However, the nature of the intervention itself did not change.

Charlestown believes that its prototype intervention was highly successful in reducing hospitalizations. It worked hard to get the intervention running and was disappointed when CareFirst left the Medicare market. Its desire to see its program live on was the motivating factor behind its decision to participate in the demonstration.

Relationship Among Program, Host Organization, and Providers. Charlestown Retirement Community is the host for the demonstration. All demonstration participants live in the Charlestown or Oak Crest communities, and all of them see primary care physicians who are employed by Erickson and who practice exclusively in the communities' medical centers. Charlestown employs the care coordination supervisor, and the parent company, Erickson Retirement Communities, provides management services and employs the program director, medical director, and financial staff. Charlestown receives the demonstration payment from CMS and reimburses Erickson for these services. Charlestown hires all the care coordinators,

“loaning” them out to Oak Crest for the purpose of the demonstration. Both the Charlestown Community and the Erickson corporate offices are located on the same campus.

The care coordinators routinely contact physicians about their patients who participate in the demonstration. At the Charlestown community, the care coordinators’ offices are located one floor above the on-campus medical center in which the physicians practice. At the Oak Crest community, the care coordinators’ offices are in the medical center. Contacts are frequent but informal—either “hallway” conversations or e-mailed reports from the program’s care coordination information system. The care coordination supervisor estimated that the care coordinators meet with physicians two or three times per week, but e-mail them more frequently. The program prefers the use of e-mail because it believes that this method of communication is less intrusive for the physicians and because e-mails document the dates and times of contacts. The care coordinators’ proximity and ongoing relationship with the program physicians offers them the opportunity to communicate effectively about their patients.

Service Environment. The Charlestown program operates in an environment unlike that of any of the other programs in the demonstration. It is essentially a closed community. Its physicians treat only the residents of its communities. Although residents are not required to see the on-campus physicians, 85 percent of them do so. Because so many services, such as home health and personal care, are offered through the communities, the care coordinators should have little difficulty ensuring that needed services are available. The program staff mentioned that it was difficult to find nurses, but this was more of a problem for their home health and skilled nursing facilities than it was for the demonstration. The staff noted that the care coordinator position is appealing, especially to older nurses.

Two other demonstration sites for patients with heart failure, Georgetown and the University of Maryland, are close by. However, Charlestown program staff do not believe that any of their

patients are likely to enroll in those programs. They were not able to identify any other care coordination or disease management programs in the area.

Key Program Features

Program Goals and Expected Savings. The broad goals of the Charlestown demonstration program are (1) to improve communication and coordination among and between patients and physicians, and (2) to improve beneficiary education and adherence to care regimens (Table 2). Overall, the program would like to prove that care coordination for seniors is cost-effective, and that it reduces hospitalizations. In addition, specific desired outcomes for patients are to increase medication adherence, reduce social isolation, and improve quality of life. The program also would like physicians to view the care coordinators as extensions of themselves, and to better understand what is happening in their patients' lives. Ultimately, the program would like to enter into other risk-based contracts. It sees the demonstration as an opportunity for its physicians and other staff to obtain more experience operating in a coordinated care environment.

CMS pays the program \$218 per patient per month. It also pays physicians a care coordination oversight fee of \$26 per patient per month. Waiver cost calculations assume that all the demonstration programs will reduce Medicare costs by 20 percent. For Charlestown's program, savings would equal approximately \$48 per patient per month, or about \$542,468 over the four-year life of the demonstration, assuming that 396 beneficiaries will be randomly assigned to the treatment group. Savings are to the Medicare program and are net of the demonstration's costs (other than start-up and evaluation costs).

TABLE 2
PROGRAM GOALS AND DESIRED OUTCOMES

Program Goals

- Improve communication and coordination
- Improve beneficiary education and adherence

Outcomes for Patients

- Increase medication adherence
- Reduce social isolation
- Improve quality of life
- Reduce hospitalizations

Outcome for Health Service Delivery System

- Prove that care coordination for seniors is cost-effective

Outcomes for Providers

- Physicians view care coordinators as extensions of themselves.
- Physicians better understand what is happening in their patients' lives.

Expected Savings for Medicare and Their Sources

- Average net savings of \$48 per patient per month, or \$542,468 net savings to Medicare over the four-year life of the study, assuming a 20 percent reduction in Medicare costs
 - Program costs of \$218 per patient per month, and \$26 per patient per month fee paid to physicians
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SOURCE: Telephone interviews with Charlestown program staff conducted in July 2002 and review of program documents.

Target Population and Outreach. The Charlestown program targets patients with congestive heart failure (CHF), coronary artery disease (CAD), or diabetes who reside in the independent-living settings of Erickson Retirement Communities' Charlestown or Oak Crest communities. As with the other Medicare Coordinated Care Demonstration sites, participants must have both Medicare Parts A and B, must have Medicare as their primary payer, and must not be in managed care (Table 3). Individuals with CAD or diabetes must have had an inpatient admission within the two-year period preceding enrollment, although the principal diagnosis for the admission need not have been CAD or diabetes.² (Individuals with CHF are not required to have been hospitalized.) The program excludes individuals who are younger than 65 years of age, have end-stage renal disease, have fewer than six months to live, reside in a hospice, or have permanently moved to a skilled nursing setting or off campus. In addition, individuals are excluded if their primary care physician believes that they are not good candidates for the program.

Charlestown chose its target diagnoses because they represent the largest segment of its resident population. Charlestown has experience coordinating care for its residents under its previous managed care contract with CareFirst. Although the CareFirst program was open to residents with any diagnosis, many of the participants had CHF, CAD, or diabetes.

The primary method of identifying potential participants is to use the medical centers' information system to generate lists of patients with any of the three target diagnoses. The communities' primary care physicians review the lists, determine which patients are appropriate for care coordination, and consent for the patients to participate in the program. The program sends the patients a letter inviting them to an information meeting.

²The program added the inpatient-admission requirement at the request of CMS. The intent was to increase the likelihood that the program would be budget-neutral, as based on waiver cost calculations performed by MPR.

TABLE 3
TARGET POPULATION AND OUTREACH

Eligibility Inclusion Criteria	<p>Resides in Erickson’s Charlestown or Oak Crest communities’ independent-living facilities</p> <p>Has fee-for-service, primary payer Medicare (Parts A and B)</p> <p>Is under the care of a physician practicing in one of the communities’ on-site medical centers</p>
Disease-Specific Inclusion Criteria	<p>Has diagnosis of CHF, CAD, or diabetes</p> <p>If has CAD or diabetes, must have had an inpatient admission within two years of enrollment, but principal diagnosis for the admission does not have to be CAD or diabetes</p>
Eligibility Exclusion Criteria	<p>Has end-stage renal disease</p> <p>Is in hospice</p> <p>Has fewer than six months to live</p> <p>Primary care physician believes patient will not comply with program.</p> <p>Has permanently moved to skilled nursing facility setting or off campus</p>
Outreach Procedures	<p>On-site medical centers generate lists of patients with target diagnoses.</p> <p>Physicians review lists and provide consent to approach appropriate patients.</p> <p>Eligible patients are invited to informational meetings.</p> <p>Care coordination supervisor and medical director appear on the communities’ closed circuit television to explain the program.</p> <p>Development of poster to be placed in medical centers’ lobbies</p>
Referral Procedures	<p>Physicians can refer patients directly.</p> <p>Patients may self-refer.</p> <p>All patients must have physician consent to be eligible.</p>

TABLE 3 (continued)

Enrollment Goal	686 treatment and control group members enrolled within 12 months (by March 2003)
Number enrolled after three months	142 as of July 28, 2002
Enrollment Problems	<p>Requirement for hospitalization reduced pool of potential enrollees</p> <p>Fewer Oak Crest than Charlestown residents enrolled. Oak Crest's residents may be less familiar or feel less comfortable with the care coordination supervisor, who works from the Charlestown campus and is responsible for recruitment.</p>

SOURCE: Telephone interviews with Charlestown program staff conducted in July 2002 and review of program documents.

CAD = coronary artery disease; CHF = congestive heart failure.

At the meeting, the care coordination supervisor explains the program (including random assignment for the evaluation) and asks individuals who are interested in participating to sign demonstration enrollment and consent forms. If a patient consents, the care coordinators review the patient's medical record to determine whether he or she had an inpatient admission during the preceding two years (for patients with primary diagnoses of CAD or diabetes), and whether the patient meets any of the program's criteria for exclusion. MPR randomly assigns eligible patients who consent to participate to the treatment group, in which they receive care coordination services in addition to the usual Medicare-covered and Erickson-provided services, or to the control group, in which they continue receiving the usual Medicare-covered and Erickson-provided services.

In addition to the generated lists of patients, there are two other ways in which patients can be identified. First, physicians may refer patients directly to the program. Charlestown has developed a special referral form for this purpose and hopes that, as they become more familiar with the program, physicians increasingly will refer patients directly. Second, patients may refer themselves to the program, but they must obtain their physicians' consent to participate. The program has done some marketing to patients. For example, the care coordination supervisor and medical director have appeared on the communities' closed-circuit television channel to promote the program. The program is considering additional activities, including developing a poster to be placed in the medical centers' lobbies.

At the time of the case study interview, the program had enrolled 142 patients, or approximately 20 percent of the individuals it needed to meet its target enrollment of 686. Staff felt that the requirement that individuals with CAD and diabetes must have had an inpatient admission greatly limited their pool of potential participants because care provided in their communities has the goal of keeping residents out of the hospital. The care coordination

supervisor expressed some concern that the program had screened all the available residents at the Charlestown and Oak Crest communities. To try to increase enrollment, the program decided to add the Riderwood community to the demonstration. Riderwood is a new community that is expected to have a large resident population with a large number of eligible patients after it is fully rented. In addition, the program staff believes that, as the program becomes better known in the communities, residents who previously had declined to participate will change their minds.³

Key Program Staff Members and Their Responsibilities. The key program staff members are the project director, care coordination supervisor, and care coordinators.⁴ In particular:

- The program director has a background in hospital administration. She is responsible for ensuring that the program has the administrative support (such as for billing and information technology services) necessary to accomplish its objectives.
- The care coordination supervisor is a registered nurse with 10 years of nursing experience in case management, disease management, utilization review, and provider relations. She is responsible for supervising the care coordinators, conducting participant recruitment, and managing the project budget.
- All three care coordinators employed at the time of the interview are registered nurses. Two work part-time and the other works full-time. One of the three has a bachelor's of science degree in health care administration and seven years of care coordination experience; one has six years of care coordination experience; and the third has four years of care coordination experience. The care coordinators are responsible for implementing the program intervention, which is discussed in more detail below.

³As another strategy to increase enrollment, the program received permission from CMS to include patients with chronic obstructive pulmonary disease (COPD) in its demonstration. The program began enrolling patients with this diagnosis in December 2002.

⁴The medical director, who is an internal medicine physician, was involved in the preparation of the program's technical proposal but has a limited role in day-to-day program activities. Both the Charlestown and Oak Crest communities have their own medical directors who interact more directly with the care coordinators. We will explore the role of the communities' medical directors in our forthcoming in-person interviews.

The care coordination supervisor trained the care coordinators by providing an overview of the demonstration and the program's policies and procedures. Care coordinators received three days of training on how to use the program's computer software, including the Canopy system and Microsoft Outlook. They also spent one day meeting their community's medical staff and other providers. Care coordinators then shadowed more experienced staff to learn the care management process. The care coordination supervisor meets with the care coordinators monthly to discuss the program process, policies, and software issues. This meeting also is used to review selected clinical cases. In addition, the care coordination supervisor meets regularly with the medical directors of the three communities participating in the demonstration.

The program plans to have six care coordinators—a ratio of 1 care coordinator to 60 patients—when it reaches full enrollment (343 treatment group patients). It chose this ratio on the basis of previous experience providing care coordination. The program plans to continue hiring care coordinators as participant enrollment increases. With an enrollment of 71 treatment patients three months after its start and the equivalent of two full-time care coordinators, however, the ratio is 1 to 36—substantially fewer patients per care coordinator than the program believes would be most cost-effective.

Care Coordination Components. The Charlestown demonstration program intervention includes core case management functions (assessment, care planning, and monitoring); patient education; service arrangement; and communication with providers (Table 4). All these functions have been associated with effective care coordination efforts (see, for example, Chen et al. 2000). Because patients will remain in the program until the end of the four-year study, they potentially may receive care coordination for as many as 48 months, depending on when they enroll.

TABLE 4
MAJOR PROGRAM COMPONENTS

Component ^a	Provided?	Description
Assessment	Yes	<p>Conducted in person, in the participant’s apartment</p> <p>Results documented on paper and entered into Canopy CM™ software</p> <p>Covers:</p> <ul style="list-style-type: none"> Medical history Current medical status Health habits Medications Symptoms Living arrangements and social support Functional status Financial status Recent use of medical services (for example, hospitalizations, physician visits, and emergency room visits) End-of-life planning <p>Informal reassessment during each patient contact; documented in Canopy</p>
Care Planning	Yes	<p>The care plan is based on assessment results, medical record, and other available information.</p> <p>Physicians and other members of the patient’s health care team receive a copy of the care plan for review and comment.</p> <p>The care plan is documented electronically in Canopy.</p>
Ongoing Monitoring and Evaluation	Yes	<p>The frequency of ongoing monitoring is based on care coordinators’ clinical judgment.</p> <p>Care coordinators check patients’ symptoms and adherence to treatment regimens and provide patient education.</p>

TABLE 4 (continued)

Component ^a	Provided?	Description
		Technology (such as in-home response devices, recording scales, glucose meters, and electronic reminders) is not used for monitoring.
Patient Education	Yes	Care coordinators provide education during contacts with patients. MD Consult [®] is used as a source of patient education materials.
Provider Education	No	Informal discussions are related to particular patient needs.
Service and Resource Arrangement or Provision	Yes	The program arranges for a wide variety of services and resources. The program pays for scales, medication cassettes with pharmacist review, and assistance in applying for medication assistance or public programs. Services arranged for/referred to include: Covered by Medicare: - Home health - Durable medical equipment Campus-based (paid for by patient): - Housekeeping - Home support - Dental services - Mental health
Facilitating Communication Across Providers	Yes	Care coordinators communicate informally with all providers about the care plan. Communication with community and specialist physicians and other care providers, such as home health nurses or personal care assistants, is an important program component.

SOURCE: Telephone interviews with Charlestown program staff conducted in July 2002 and review of program documents.

^aBased on recommendations by Chen et al. (2000) for successful care coordination interventions.

Assessment. Each patient's case management begins with a comprehensive assessment to establish the patient's condition and to determine his or her needs. The assessment covers the areas listed in Table 4. The care coordinators conduct the assessment in person, in the patient's apartment. Additional information is gathered from the patient's medical record, family, primary care and other physicians, and other health care providers caring for the patient. The care coordinators use an assessment tool developed for the program that includes the SF-12, Pra Plus, and Barthel Index. The results of the assessment are documented on paper and are then entered into discrete data fields in Canopy, the program's case management software. Care coordinators reassess patients informally during follow-up contacts and document the results of the assessment in Canopy in a free-text note.

By the end of June 2002, care coordinators had assessed 25 of the 47 patients enrolled between April and June 2002 (Table 5). One-quarter of the assessments were conducted between one and two weeks after random assignment; the rest of the assessments were conducted more than two weeks after random assignment. These early numbers raise the possibility that recruitment efforts were preventing the care coordinators from initiating assessment quickly.

Care Planning. Care coordinators develop care plans for each patient that specify individual goals concerning improvement of function, quality of life, self-management skills, and resource needs. They base the care plans on the results of the assessment. Because the care plan will coordinate the care that all departments within the community will provide (for example, residential social services and home health), the care coordinator consults with any department providing services to a patient when developing the plan.

A copy of the completed care plan is forwarded to the primary care physician for review, and the care coordinator revises the care plan to incorporate any changes recommended by the

TABLE 5
 CARE COORDINATOR CONTACTS WITH PATIENTS
 BETWEEN APRIL AND JUNE 2002

Number of Patients Enrolled ^a	47
Number of Patients with at Least One Care Coordinator Contact	33
Total Number of Contacts for All Patients	83
Number of Care Coordinators Contacting Patients	3
Number of Patients in Contact with More than One Care Coordinator	0
Among Patients with at Least One Contact:	
Percentage of contacts care coordinator initiated	91.6
Percentage of contacts:	
At patient's residence	47.0
By telephone	50.6
In person, elsewhere	2.4
Of All Patients Enrolled, Percentage with Assessment Contact	53.2
Among Patients with an Assessment, Percentage Whose First Assessment Contact Was:	
Within one week of random assignment	0.0
Between one and two weeks of random assignment	24.0
More than two weeks after random assignment	76.0
Of All Patients Enrolled, Percentage with Contacts to:	
Identify need for non-Medicare service	8.5
Identify need for Medicare service	40.4
Provide disease-specific or self-care education	44.7
Explain tests or procedures	12.8
Explain medications	34.0
Perform routine patient monitoring	29.8
Monitor services	6.4
Monitor abnormal results	8.5
Provide emotional support	48.9
Average Number of Patients Contacted per Care Coordinator	11
Average Number of Patient Contacts per Care Coordinator	27

SOURCE: Charlestown program data received July 11, 2002, and covering services delivered through June 30, 2002.

^aNumber of patients enrolled in the treatment group as of June 30, 2002.

physician. The care coordinator then reviews the care plan with the patient and, if requested by the patient, with the patient's family. The care plan is documented in Canopy.

Monitoring. The care coordinators use their clinical judgment to determine the frequency with which they follow up with individual patients.⁵ For example, patients whose disease processes are unstable and who receive services, such as home health or rehabilitation, on a daily or weekly basis are considered to have the highest care coordination needs. Care coordinators would follow these patients daily or weekly. Patients whose disease processes are unstable, but who receive supportive services only intermittently, usually require less frequent followup. Care coordinators would follow these patients weekly or biweekly. Patients whose disease processes are stable and who are not currently receiving supportive services would be followed biweekly to monthly. All patients receive at least one follow-up contact per month. Patients who meet all the goals outlined in their care plans and patients who may not be physically or mentally able to tolerate more frequent contacts receive monthly followup. During monitoring contacts, the care coordinator assesses the patient's symptoms and compliance with the prescribed treatment regimen and provides information and education to address the patient's individual needs. The results of this brief assessment are documented in Canopy. The care coordinator notifies the patient's physician and other members of the health care team if new problems are identified.

The program knows about nearly all hospitalizations and trips to the emergency room because it is a gated community that operates its own ambulance service. The care coordinators also know about nearly all other events that require intervention by the communities' security or

⁵The program had planned to assign patients to risk levels based on the patients' scores on the SF-12, PraPlus, and Barthel Index, and to use these risk levels to set the minimum frequency of follow-up monitoring. However, this plan was not implemented because the program staff felt that risk scores did not capture patients' physical and psychological status with sufficient accuracy to determine the frequency with which they should be monitored.

emergency medical services (such as falls). All events are recorded in daily incident reports. The Charlestown community employs acute care coordinators in addition to the demonstration's community care coordinators. The acute care coordinators' offices are located on the community campuses, but these demonstration staff make rounds with the community physicians who have been assigned to local hospitals that week. If a patient is seen in the emergency room or admitted to the hospital, the acute care coordinator assumes responsibility for monitoring and discharge planning. The community care coordinator will track the progress of the patient while he or she is in the acute care setting and will incorporate this information into the patient's Canopy record. In response to sentinel events, the community care coordinator also will try to identify the cause of the event, and to work with the patient to modify any circumstances which could lead to a recurrence. The care coordinators track and trend sentinel events to try to determine their root cause. For example, one resident frequently called campus security in the evenings. After analyzing the reasons for the calls (which included requests to open a window or to provide a glass of water), the care coordinator was able to convince the resident that she needed to hire a personal care assistant to stay with her in the evenings.

Patient Education. During the initial assessment, care coordinators identify any need for patient education, which they then incorporate into the care plan's goals. The program's education intervention focuses on improving patients' understanding of disease processes, self-care skills, and adherence to recommended treatment regimens, as well as on disease etiology and lifestyle changes. All patients receive education on the disease for which they were enrolled or on other diseases that potentially could result in hospital admissions or functional decline. The program subscribes to MD Consult[®], a Web-based database of patient education materials. Care coordinators can download information on topics relevant to their patients. Materials are

available in both English and Spanish, as well as in a format suitable for use with elderly patients.

Provider Practice. The program believes that Erickson's physicians are following current practice guidelines. Recently, Erickson modified several clinical practice guidelines to focus on patients older than 80 years of age. The guidelines were distributed to every physician practicing in all Erickson communities. Thus, rather than attempt to change physicians' clinical practice, the program focuses on helping physicians to integrate care coordination into their practice, and to view the care coordinators as extensions of themselves. It also wants physicians to better understand what is happening in their patients' lives.

Erickson is investigating the idea of having all its medical centers use an electronic medical record that would incorporate practice guidelines. The program's medical director suggested that applicable recommendations could be displayed as a reminder on a physician's computer screen as the records of treatment group patients were being viewed. Currently, physicians do not have access to the Canopy system. Because only a small percentage of the physicians' patients are enrolled in the demonstration, the program staff did not believe that access to Canopy would be particularly useful to physicians. Any physician education provided by the program is informal. The care coordination supervisor provides information to physicians as it relates to an individual participant's needs.

Arranging Services. Residents at Erickson communities pay a monthly fee for the rental of their apartment; one meal per day; transportation on campus and within a five-mile radius of the campus; campus security (including a personal emergency response system, if necessary); resident services coordinators (social workers); and some recreational activities. Other services are available on campus on a fee-for-service basis, including medical, dental, and podiatric care; home health care; housekeeping/home support; mental health care; ambulance service; use of a

pharmacy; and restaurants. As part of the intervention, the program will help patients to apply for pharmaceutical assistance programs and other public benefit programs. It also will give patients scales and medication cassettes, with medication review by a pharmacist. The program teaches patients to refill their own medication cassettes and will pay for this service for patients who are unable to manage the task independently. These demonstration-related services are not available to control group patients. However, because so many types of services are available on campus, the communities' physicians and social workers probably are accustomed to arranging for them for all residents. Thus, control group patients may have access to services other than through the demonstration program's care coordinator.

Communication. Care coordinators are responsible for communicating with a patient's providers (particularly the primary care physician) about the care plan and about the patient's progress in achieving the goals specified in the plan. They also are responsible for tracking unexpected hospitalizations and emergency room visits. In addition, they help to ensure that services (such as diagnostic testing) are provided at the appropriate time and in the proper order, and that necessary information or documentation (such as test results) is available to the physician in time for scheduled office visits. The care coordinators follow up with patients to determine if needed appointments have been scheduled and needed care received. If the followup finds, for example, that a diabetic patient has not had an annual retinal eye examination, a care coordinator would contact the physician's office to have that test scheduled. The program prefers the care coordinators to interact directly with physicians so that they do not interfere with the physician-patient relationship. It does not want to undermine the patient's confidence in his or her physician.

Other Care Coordinator Responsibilities. Care coordinators interface with the community's acute care coordinators while a patient is in the hospital. They also communicate

with all members of the patient's care team, including the patient's physician, home health staff (if any), personal care assistant (if any), and any outside physician specialists. Although care coordinators do not provide direct, hands-on care, they do interact with patients in many settings, including the patient's apartment, assisted-living facility, and intermediate or skilled nursing facility (for short-term stays). They also may accompany patients during physician office visits. Patients who move from the community's independent-living facility to its assisted-living facility remain in the demonstration program. However, if they move permanently to the community's nursing home, they will be discharged from the program.

Early Implementation Data. According to program data generated for the evaluation between April and June 2002, 33 of the 47 patients enrolled through the end of June had had at least one contact with a care coordinator (Table 5). More than 90 percent of contacts were initiated by the care coordinators, rather than by patients. Half were telephone contacts (50.6 percent), and half (47.0 percent) were home visits that were made primarily as part of the program's initial patient assessment. Care coordinators had a variety of reasons for contacting patients. Among all enrolled patients, 40.4 percent had contacts that identified a need for Medicare services, 44.7 percent had contacts that provided disease-specific or self-care education, and 34.0 percent had contacts to explain medications.

Involvement of Physicians. Program staff expect that physicians will play two roles in the program. Physicians are expected to (1) provide consent for their patients to participate in the program, and (2) communicate frequently with the care coordinators (Table 6). Although the program contacts patients identified primarily from medical center patient lists, it has created a direct referral form that physicians may use to refer patients. The program expects physician referrals to increase as physicians become familiar with the program. When Charlestown offered care coordination under a managed care contract, physicians encouraged their patients to enroll.

TABLE 6
 PLANNED PHYSICIAN INVOLVEMENT

	Brief Description
Promotion of Program to Physicians	No formal mechanism to promote the program to physicians. The close physical proximity of the care coordinators to the physicians fosters a feeling of teamwork and should help the program to obtain physician support.
Physicians as Referral Sources	Physicians are encouraged to refer patients, although health system records review identifies most potential participants. Physicians must give consent for patients to participate.
Physicians' Role in Encouraging and Maintaining Patient Participation	Physicians are not expected to actively promote the program to their patients, but they may choose to do so as their familiarity with the program grows.
Physicians' Role in Care Coordination	Physicians review and approve the care plans that care coordinators develop. Physicians are expected to provide ongoing feedback to care coordinators.

SOURCE: Telephone interviews with Charlestown program staff conducted in July 2002 and review of program documents.

Program staff anticipate a similar response to this program, and they believe that it will be an even easier “sell.” As noted, the care coordinators communicate informally with physicians through e-mails generated by the care coordination software or in informal conversations. There are no regularly scheduled meetings with physicians. Physicians are not involved in the development of the care plan, but they do review the plans developed by the care coordinators. The program expects two-way communication between the care coordinators and physicians but has no formal mechanism to foster this interaction.

Data Systems. The program uses Canopy System’s Canopy CM™ Web-based case management software (Table 7). The software stores data from assessments, care plans, and follow-up monitoring and has a task-management feature that helps the care coordinators to manage their time and workflow. Most data are stored in discrete fields, and, because there is minimal use of text-based narrative, it is easy to generate reports, track a patient’s progress, and monitor activities relating to care coordination. Care coordinators also can use Canopy to e-mail patient assessments to physicians. With some additional programming, the Canopy system has been able to generate patient-level data for the evaluator, including the dates of program enrollment, dates of program disenrollment, and records of care coordinator contacts and services paid for by the program. In addition, care coordinators are able to access the Erickson Medical Manager system to track patient appointments with on campus primary care physicians. However, they are not able to enter any information into that system, and Canopy does not interface with it.

Financial Monitoring and Physician Payment. The program monitors overall spending for staff salaries relative to the budget, but it does not monitor the costs of specific tasks (for example, enrollment and patient education). Erickson provides and bills Charlestown for

TABLE 7
DATA SYSTEMS

Type of Data	Program Maintains Records?	Brief Description
Patient Level		
Enrollment/disenrollment	Yes	In Canopy CM™ software
Assessment	Yes	In Canopy CM software
Care planning	Yes	In Canopy CM software
Monitoring	Yes	In Canopy CM software
Non-Medicare services	Yes	In Canopy CM software
Medical appointments	Yes	In Medical Management software
Adverse events	Yes	In Canopy CM software
Grievances	No	
Care Coordinator Level		
Time log/productivity	Yes	In Canopy CM software
Other	Yes	In Canopy CM software ^a
Program Level		
Overall costs	Yes	Medicare cost reports

SOURCE: Telephone interviews with Charlestown program staff conducted in July 2002 and review of program documents.

^aCanopy includes a task list feature that allows care managers to organize and prioritize their work.

administrative support services, such as accounting, purchasing, human resources, information technology, communications equipment, and office space. Because of problems with the billing software, Charlestown had difficulty submitting its first request for payment.

According to the demonstration cost report for activities through June 30, 2002, the program had spent slightly more than \$56,000 but had not yet received any payments. CMS did provide the demonstration with \$45,100 in start-up funding, and, by the end of June 2002, the demonstration had spent slightly more than \$21,000 of that amount. The program does not use financial incentives to promote desired patient or program goals. However, physicians are allowed to bill \$26 per patient per month for oversight of care coordination.

Early Implementation Experience

Operations. Health service delivery demonstration programs, such as the ones in this evaluation, typically encounter some barriers to early implementation. Barriers may include lower-than-expected enrollment; opposition from physicians; difficulty hiring qualified staff or obtaining space and equipment (including higher-than-expected labor, rent, or equipment costs); and difficulty developing a data collection system that can efficiently monitor patients and program activities. Problems in these areas during the early months of implementation could lead to changes to a program's initial design.

Charlestown staff reported no serious problems in the implementation of their program. They had no difficulties with physician acceptance, and no problems finding staff or other resources. They also did not report any changes to the care coordination intervention (assessment, care planning, monitoring, patient education, coordinating with providers, and service arranging). The program did make one minor change subsequent to planning the intervention: use of Canopy was not part of the initial intervention plan, but Charlestown

decided to use the software because it offered such valuable features as patient- and program-level reporting capabilities, as well as customized assessments, patient problems, and interventions based on case management guidelines. It also is Web-based and complies with regulations of the Health Insurance Portability and Accountability Act of 1996. Program staff have made some modifications to their patient assessment tools to make better use of Canopy.

The biggest problem that the Charlestown program encountered during its first three months of operation was with enrollment. Staff expected to have a recruitment pool of approximately 2,100 patients. However, that expectation pre-dated the addition of the hospitalization criterion for program eligibility. The requirement had the effect of reducing the pool of eligible patients in the Charlestown and Oak Crest communities from 2,100 to 685 patients. Of these, 541 patients met all the inclusion criteria and 239 subsequently enrolled in the first six months. Among those who met the inclusion criteria but did not enroll, 55 percent were lost because they did not respond to the invitation to attend the information session, 24 percent attended the session but did not enroll, and the remaining 21 percent either were subsequently found to be ineligible or had not made a decision on whether or not they would participate. With enrollment at only 35 percent of the target number of 686 and an already-exhausted pool of eligible patients, the program must find a way to increase enrollment among eligible patients.

The program has identified five strategies to increase enrollment. First, it plans to add another Erickson community (Riderwood Village, in Silver Spring, Maryland) to the demonstration in March 2003. Second, in December 2002 it received permission from CMS to add patients with COPD to its target population. (Program staff have just begun compiling the list of COPD patients from the medical management information system, and they are not sure how many patients this change will add to their pool.) Third, the program revised the letter inviting patients to attend information sessions. Instead of coming from the medical directors of

each Erickson campus, it now comes from the patient's primary care physician. Fourth, the program has worked with physicians to help them to understand how the program could benefit their less severely ill patients. The program identifies most eligible beneficiaries from records, and physicians rarely refuse consent for their patients to enroll, but Charlestown still wants physicians to understand that the program can benefit a broad range of patients. Finally, the program has increased its marketing directed at patients: Staff have written articles for the patient newsletter, the care coordination supervisor has appeared on the communities' closed circuit television channels, and staff planned to have a visible presence at the flu immunization clinics scheduled for the fall of 2002. It is too soon to tell whether these efforts will increase enrollment to the program's target of 686 patients.

Problems Related to Evaluation Activities. Demonstration programs sometimes encounter other problems related to their participation in an evaluation, such as inadvertent contamination of the control group and difficulty providing program data required for the evaluation. Charlestown program staff did not report having difficulty providing data for the evaluation that described disenrollment, care coordinator's contacts with patients, or services paid for by the program. This information is easily generated from the Canopy system. Although program staff had to make some initial modifications to generate reports, data submission has operated smoothly.

Contamination of the control group or bias of program impacts can occur in several ways. For example, control group patients may participate in other care coordination programs; have contact with program staff before or after random assignment that leads them to ask for treatment they might not otherwise have sought; or receive different medical treatment because their physicians changed their practice style for all their patients as a result of the intervention (for

example, by adopting new protocols, becoming more aggressive about performing diagnostic tests, or changing prescribing behavior).

Charlestown's program is not at risk for significant control group contamination. Program staff reported that no other care coordination or disease management programs operate in their area. In addition, because approximately 85 percent of the residents are treated by campus-based physicians, there is little chance that patients would be exposed to other care coordination programs. The program does not collect patient information prior to enrollment, nor does it have contact with the control group after enrollment. The most significant contamination threat exists due to the fact that the campuses essentially are closed environments, so that a small group of about eight physicians will be treating all treatment and control group patients. However, the program is not trying to change physicians' practice patterns. It believes that most of its physicians already practice according to the clinical practice guidelines that Erickson developed.

Nonetheless, physicians might become more aggressive about asking all their patients about adherence to medication, dietary, or self-care regimens or might recommend different tests or self-care regimens for some patients as a result of exposure to the care plans that care coordinators developed for treatment group members. If changes in treatment patterns do occur for both groups, the evaluation will be comparing demonstration outcomes for treatment group patients with the outcomes of a control group that receives more-intensive care than it would have received in the absence of the demonstration. In this case, demonstration impacts are likely to be smaller than if no such contamination had occurred, and they are likely to underestimate the true program effects. However, given the relatively small number of treatment group patients that each physician is likely to see, we expect that changes to practice patterns will be minimal.

One aspect of Charlestown's program that may limit program effects on satisfaction and, to a lesser degree, on adherence to self-care regimens and use of Medicare services is that control

group patients have access to some Charlestown support services that most other Medicare beneficiaries do not. Specifically, relative to typical Medicare beneficiaries, the availability of recreational facilities, transportation to nearby areas, on-campus availability of physicians and pharmacists, and free access to a social worker could enable control group patients to adopt a healthier lifestyle, reach their physician's office for appointments more easily, and obtain help in arranging for other necessary services (such as home-delivered meals). To the extent that these benefits reduce barriers to accessing necessary care or supplies, they could affect a patient's need for hospitalization and for other Medicare-covered services. In addition, all Erickson physicians have access to the Erickson Medical Manager, which enables them to track patients' appointments with other Erickson physicians (but not with the non-Erickson specialist physicians who see patients in the medical centers' offices). In addition, Erickson's acute care managers monitor all patients admitted to the hospital or emergency room and perform discharge planning. These features also may affect control group patients' use of Medicare services. In this case, program impacts would be smaller than they would have been if the control group had not had these benefits.

Although these features of the Erickson system do mean that the total effects of a program such as Charlestown's may be underestimated, the core intervention features of care coordination and patient education are available only to the treatment group. The estimated program impacts will reflect the incremental effects of having a care coordinator in an environment already rich in support services. Our site visit to Charlestown will attempt to gather data on the acute care coordinators' activities, and on the manner in which the care coordination demonstration augments these services, as this service is likely to be the one with the greatest effect on Medicare outcomes for the control group.

Summary and Discussion

To provide an overview of the Charlestown program, we review three key features that we believe should form the basis for classifying care coordination/disease management programs: (1) the entity that implements the program, and the extent to which the program is integrated with services offered by other key providers; (2) the target audience for program implementation, and whether the program focuses on care for a particular disease or on overall health care; and (3) the program's major focus—improving patient education and adherence, improving provider practice, providing or arranging for services, or improving communication and coordination. We then discuss some areas of concern to the evaluation and early program successes.

The Charlestown intervention focuses primarily on improving communication and coordination with physicians and other providers and on improving patient education and adherence as ways to reduce hospital use and costs. Although the program does not attempt to change physicians' clinical practice patterns, it aims to help physicians to integrate care coordination into their practices. Care coordinators do not focus on arranging for the provision of Medicare-covered services, because most of these services already are readily available on the communities' campuses. Care coordinators also do not emphasize arranging for non-Medicare-covered services, because residents have access to a social worker, transportation, recreational facilities, and other such services.

The intervention targets patients with CHF, CAD, diabetes, or COPD, and the program uses standard case management procedures (assessment, care planning, and monitoring). Although the program provides some disease-specific patient education, education of this type is not a major focus. Program goals for patients include reducing social isolation and increasing communication across providers, rather than addressing condition-specific outcomes. Thus,

despite the target criteria, the intervention focuses on care coordination, as opposed to disease management.

It is too soon to assess the level of integration between the program and providers. Physicians and care coordinators work in the same buildings, and, as a result of the previous program, physicians are familiar with and support the concept of care coordination. Consequently, most of the structure is in place to achieve a high level of integration between care coordination and physicians. In addition, the fact that Erickson's campuses are relatively closed communities in which most residents see on-campus physicians increases the likelihood that integration will occur. The program has tried to not unduly burden its physicians. For example, program staff do not require physicians to participate in developing care plans (other than reviewing plans after they have been written), and care coordinators communicate with physicians informally and in an ad hoc way. This approach should not constitute a barrier to integration, but as program enrollment grows, more-structured contacts between care coordinators and physicians may be necessary to ensure that ongoing, meaningful communication occurs.

The Charlestown demonstration program contains many features associated with successful care coordination interventions (Chen et al. 2000). During its first three months of operation, the program has been implemented largely as planned. Our two primary concerns are Charlestown's enrollment difficulties and the effect of Charlestown's rich service environment on its ability to show demonstration impacts. The program has the potential to be successful, if enough participants can be enrolled and if the control group's greater-than-normal access to some types of care and services does not limit demonstration impacts.

REFERENCES

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