Contract No.: 500-95-0047 (09)
MPR Reference No.: 8756

MATHEMATICA
Policy Research, Inc.

Coordinating Care for Medicare Beneficiaries: Early Experiences of 15 Demonstration Programs, Their Patients, and Providers—Appendix A

Report to Congress

May 2004

Randall Brown
Jennifer Schore
Nancy Archibald
Arnold Chen
Deborah Peikes
Karen Sautter
Sherry Aliotta
Todd Ensor

Editor: Laura Berenson

Submitted to:

Centers for Medicare & Medicaid Services
Office of Strategic Planning
C3-20-17
7500 Security Boulevard
Baltimore, MD 21244

Project Officer:
Carol Magee

Submitted by:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393
Telephone: (609) 799-3535
Facsimile:(609) 799-0005

Project Director:
Randall Brown

APPENDIX A

PROGRAM PROFILES

AVERA RESEARCH INSTITUTE

Avera Research Institute is a department in the Avera McKennan Hospital and University Health Center, a 429-bed regional medical facility located in Sioux Falls, South Dakota. Avera's Medicare Coordinated Care Demonstration (MCCD) program targets beneficiaries with congestive heart failure who live in South Dakota and parts of Iowa, Minnesota, and Nebraska. Avera did not have a prototype program for its MCCD intervention. It based the intervention on the American College of Cardiology/American Heart Association Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult. Avera has identified potential program patients primarily by reviewing Avera McKennan's information system. It began enrolling patients in June 2002.

Program Host Organization Type

Hospital

Target Population

Service area:

71 counties in South Dakota and parts of Iowa, Minnesota, and Nebraska

Rural

Diagnoses: Primary or secondary congestive heart failure (New York Heart Association class II, III, or IV), left ventricular dysfunction, cardiomyopathy

Other major inclusion criteria: Hospital admission during year preceding enrollment

Program's estimate of number of eligible beneficiaries: 2,400

Expected number of beneficiaries[a]:

After one year: 788

Over four years: 1,268

Enrollment After One Year of Operations

Primary method of identifying patients: Generates list, using Avera McKennan's intra-hospital information system

Number of beneficiaries enrolled[a]: 318 (as of June 8, 2003)

Primary reason for enrollment shortfall: Hospitalization requirement reduced pool of eligible patients plus high patient refusal rate

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b:] 6,800

Number of participants[a]: 116

Number of eligible participants[b]: 100

Participation rate[b:] 1.5 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution

Younger than 65: 0.0

65 to 74: 26.1

75 to 84: 51.4

85 or older: 22.5

Male: 45.1

Nonwhite: 1.8

Medicaid buy-in for Medicare: 7.2

Medical conditions treated during two years preceding enrollment:

Cancer: 24.3

Chronic obstructive pulmonary disease: 65.8

Congestive heart failure: 97.3

Coronary artery disease: 78.4

Diabetes: 46.9

Stroke: 27.9

Hospital discharge:

During month preceding enrollment: 32.4

During year preceding enrollment: 93.6

Mean monthly Medicare reimbursement during year preceding enrollment: $1,497

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.30

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 1.01

Program Approaches

Improve patients' adherence

Improve communication and coordination

Improve provider practice

Intervention Features

Care coordinators' background:

Must be registered nurse (bachelor's or master's degree)

Previous care coordination experience not required

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 4

Caseload: 1:75

Other staff used to extend care coordinators' resources: Research associates (provide clerical support)

Assessment tools: Medical and healthcare utilization history; CAGE alcohol screening instrument; nutritional patterns; bowel, bladder, and neuromuscular/skeletal function; physical activity; instrumental activities of daily living; skin integrity; pain; medication compliance; home safety; financial resources; emotional stability; sexual function; family/caregiver support (as measured by the Zarit Caregiver Burden Scale); and physical assessment

Time from enrollment to assessment:

Expected time: Within 10 business days

Actual time: Within 10 business days (on average)

Mode of patient contact:

Primarily by telephone

HomMed® Health Monitoring System technology (telephonic device) monitors blood pressure, heart rate, and weight

Frequency of monitoring:

Daily, by HomMed device.

HomMed determines frequency of care coordinators' calls needed for each patient

Degree of structure in patient education:

Curriculum developed by Glaxo-Smith Kline and modified by program

Assessment of education: Progress evaluated by pre-/post-testing

Content of contact based on patient's care plan and daily monitoring data

Program's expectations of physicians:

Review patients for program appropriateness

Refer patients directly to program

Participate in care planning by providing acceptable ranges for HomMed device and signing off on plans

Respond to care coordinators' requests

Program's approaches to engaging physicians:

Includes physicians' prior familiarity with program administrative staff and care coordinators

Developed a program physician advisory board

Sent endorsement letters from prominent area physicians

Sends reports on patients to physicians

Pays physicians for participation

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

Sends regular reports to physicians

Communicates informally with physicians by telephone and fax, when warranted

Care coordinators revise care plans with physicians after adverse events

Data Systems

Canopy Web-based case management software: Receives data from HomMed devices; Canopy informs care coordinators when to contact patients

Microsoft Access database: Documents assessments and care plans, tracks enrollment, and tracks patients' contacts and outcomes

Microsoft Excel database: Documents evaluation data

Unique Features

Home monitoring and contact primarily by telephone in a rural setting

Limited funds for medications

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

CARLE FOUNDATION

The Carle Foundation, part of a large integrated delivery system located in Urbana, Illinois, owns and operates a 295-bed teaching hospital and primary care clinics in rural east-central Illinois. The prototype for the Medicare Coordinated Care Demonstration (MCCD) program was Carle's Geriatric Team Care program, developed with funding from the Hartford Foundation for its Medicare+Choice plan and found to reduce expenditures for its high-risk patients by roughly 15 percent over two years. Carle's MCCD program targets beneficiaries with heart conditions, diabetes, and chronic lung disease who live in east-central Illinois and west-central Indiana. During its first year, Carle identified potential patients primarily by reviewing its own patient registration database. It began enrolling patients in April 2002.

Program Host Organization Type

Integrated delivery system

Target Population

Service area:

13 counties in east-central Illinois and west-central Indiana

Rural

Diagnoses: Atrial fibrillation, congestive heart failure, coronary artery disease, diabetes, chronic obstructive pulmonary disease, asthma

Other major inclusion criteria: 3 or more medical visits or 1 hospitalization (for a target condition) within year preceding enrollment

Program's estimate of number of eligible beneficiaries: 10,000

Expected number of beneficiaries[a]:

After one year: 2,256

Over four years: 3,036

Enrollment After One Year of Operations

Primary method of identifying patients: Generates lists of eligible patients from its own administrative information systems

Number of beneficiaries enrolled[a]: 2,283 (as of April 20, 2003)

Primary reasons for enrollment success: Ability to generate lists of eligible patients and willingness of physicians to cooperate with the demonstration

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 24,414

Number of participants[a]: 1,439

Number of eligible participants[b]: 1,122

Participation rate[b]: 4.6 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 0.8

65 to 74: 44.2

75 to 84: 42.4

85 or older: 12.6

Male: 47.8

Nonwhite: 2.

Medicaid buy-in for Medicare: 3.5

Medical conditions treated during two years preceding enrollment:

Cancer: 21.8

Chronic obstructive pulmonary disease: 35.5

Congestive heart failure: 28.1

Coronary artery disease: 55.5

Diabetes: 38.9

Stroke: 22.2

Hospital discharge:

During month preceding enrollment: 2.5

During year preceding enrollment: 26.

Mean monthly Medicare reimbursement during year preceding enrollment: $477

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 0.76

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.64

Program Approaches

Improve patients' adherence

Improve communication and coordination

Improve provider practice

Intervention Features

Care coordinators' background:

Must have bachelor's of science in nursing degree and 5 years of experience in medical, surgical, or home health nursing or associate's degree or diploma in nursing and 10 years of experience in medical, surgical, or home health nursing

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 10

Caseload: 1:100 to 1:120

Other staff used to extend care coordinators' resources: Case assistants (make follow-up calls, arrange for and follow up on services, and order laboratory tests) and nurse practitioners (provide clinical consultation)

Assessment tools: Omaha System Problem Classification Scheme customized for demonstration; assesses problems in four domains: (1) environmental, (2) psychosocial, (3) physiological, and (4) health-related behaviors

Carle (*continued*)

- Time from enrollment to assessment:
  - Expected: Within 2 weeks
  - Actual: Within 4 weeks
- Mode of patient contact:
  - Primarily by telephone, with in-person contacts during physician office visits, in the patient's home, or at other locations in the community
  - No technology-based devices used for monitoring
  - Frequency of contacts:
    - At least monthly
    - More frequently if necessary
- Degree of structure in patient education:
  - Curriculum: Formal curriculum developed by program; printed educational materials for each diagnosis, and materials linked to the problems identified by the Omaha System
  - Assessment of education: Patients are given health diaries to record health measures, health behaviors, and self-care activities. Care coordinators review reports on clinical indicators
- Programs' expectations of physicians:
  - Encourage patients to enroll
  - Work collaboratively with care coordinators by participating in collaborative case conferences and signing standing orders to allow care coordinators to order routine tests
  - Give care coordinators new information, such as laboratory test results or changes in medications
  - Participate in educational programs about practice guidelines
- Programs' approaches to engaging physicians:
  - Medical advisory board involved in design and implementation of demonstration
  - Well-respected, influential physicians act as opinion leaders
  - Physicians' familiarity with program staff
  - Physicians paid for attending initial meeting about use of clinical practice guidelines
  - Distributes clinical practice guidelines and provides continuing medical education credits to physicians for reviewing the guidelines
  - Pays physicians for attending formal meetings with care coordinators
  - Plans to send reports to physicians showing process-of-care data aggregated to the clinic level
- Programs' efforts to improve communication and coordination with physicians:
  - Primarily teaches patients to do this on their own
  - Care coordinators located in same clinics as physicians
  - All of a physician's patients assigned to the same care coordinator
  - Formal communication between physicians and care coordinators at least twice yearly
  - Care coordinators notify physicians if practice deviates from clinical practice guidelines

Carle (*continued*)

Data Systems
Care Management Information System: Contains initial assessment and care planning information
Health Systems Research Center database: Contains enrollment and outcomes data
Reports generated:
Productivity, management reports, and clinical laboratory reports: Generated for care coordinators
Clinic-level process indicators: Generated for physicians
Variance reports: Generated for program management
Report comparing patients' self-reported health status at enrollment with data from one-year follow-up report
Unique features
Program expects a high level of physician involvement and collaboration with care coordinators
Program generates variety of program and patient monitoring reports
Care coordinators receive email alerts whenever a patient has contact with the Carle health system

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

CENVANET

CenVaNet is a provider of care coordination services. The prototype for its Medicare Coordinated Care Demonstration (MCCD) program was a care management program developed under a Medicare+Choice risk contract with CIGNA for Seniors. That program provided care management services to patients with congestive heart failure, chronic obstructive pulmonary disease, and diabetes. Although it was never formally evaluated, it received positive responses from the managed care plan, providers, and patients. CenVaNet's MCCD program targets beneficiaries with heart conditions, cerebrovascular disease, diabetes, and chronic lung disease who live in Richmond, Virginia. CenVaNet has identified potential patients primarily by reviewing the medical records information systems of physicians in its affiliate, the Central Virginia Health Network, who have agreed to participate in the demonstration. CenVaNet began enrolling participants in April 2002.

Program Host Organization Type

Care coordination service vendor

Target Population

Service area:

Richmond, Virginia, metropolitan area

Urban

Diagnoses: Congestive heart failure; ischemic, hypertensive, or other heart disease; cerebrovascular disease; diabetes, chronic lung disease

Other major inclusion criteria: Physician visit for any of the target conditions during the year preceding enrollment and score on the PraPlus™ Screening Instrument indicating moderate to high risk

Program's estimate of number of eligible beneficiaries: 4,000

Expected number of beneficiaries[a]:

After one year: 1,048

Over four years: 1,228

Enrollment After One Year of Operations

Primary method of identifying patients: Generates lists of eligible patients from medical records information systems of Central Virginia Health Network physicians who have agreed to participate in the demonstration

Number of beneficiaries enrolled[a]: 1,074 (as of April 20, 2003)

Primary reason for enrollment success : Prior relationships with physicians and effort expended to market program to those physicians before the start of the demonstration

Participation Rate Enrolling During First Six Months of Operations

Number of eligible beneficiaries[b]: 39,453

Number of participants[a]: 784

Number of eligible participants[b]: 702

Participation rate[b]: 1.8 percent

CenVanNet (*continued*)

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 0.0

65 to 74: 37.4

75 to 84: 49.7

85 or older: 12.8

Male: 52.9

Nonwhite: 16.0

Medicaid buy-in for Medicare: 6.9

Medical conditions treated during two years preceding demonstration:

Cancer: 25.8

Chronic obstructive pulmonary disease: 48.2

Congestive heart failure: 64.5

Coronary artery disease: 74.5

Diabetes: 46.6

Stroke: 33.8

Hospital discharge:

During month preceding enrollment: 4.7

During year preceding enrollment: 48.6

Mean monthly Medicare reimbursement during year preceding enrollment: $1,120

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 2.21

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.90

Program Approaches

Improve patients' adherence

Improve communication and coordination

Intervention Features

Care coordinators' background:

Must be registered nurse (bachelor's in nursing preferred but not required) or have a master's degree in social work

Must have minimum of 2 years of case management experience

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 8

Caseload: 1:60

CenVanNet (*continued*)

Other staff used to extend care coordinators' resources: 2 temporary employees—a nurse and a social worker (help with recruitment and enrollment)

Assessment tools: PraPlus™ Screening Instrument and tool developed by the program and revised to include elements of the assessment provided by the program's InformaCare® disease management software

Time from enrollment to assessment:

Expected: Within two weeks

Mode of patient contact:

Primarily by telephone, with some in-person visits

Health Buddy telemonitoring devices given for 6 months to 74 patients with congestive heart failure or diabetes

Frequency of contacts:

Highest-acuity patients: Weekly or more frequently, as necessary

Moderate- to high-acuity patients: Weekly or biweekly

Moderate-acuity patients: Biweekly to monthly

Low-acuity patients: Monthly

Degree of structure in patient education:

Curriculum: No formal curriculum. Uses patient-specific teaching goals in conjunction with disease-specific education booklets developed by the program, materials available in InformaCare disease management software, and materials obtained from outside sources

Assessment of education: Care coordinators listen as patients talk about their conditions and their activities; patients are given pre-post quizzes; care coordinators examine clinical data, such as blood tests

Program's expectations of physicians:

Help the program to identify patients

Respond to care coordinators' requests for information and assistance

Program's approaches to engaging physicians:

Physicians' prior familiarity with program administrative staff and with some care coordinators

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

All of a physician's patients assigned to the same care coordinator

Sends physicians annual reports on their patients' progress

Data Systems

InformaCare disease management software: Contains data from assessments, care plans, and ongoing patient notes and data needed for program evaluation

Reports generated:

Productivity and management reports: Generated for care coordinators

Process-of-care and patient outcomes reports: Under development

Unique Features

Physician community very cooperative (program's demands on physicians are quite modest)

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

CHARLESTOWN RETIREMENT COMMUNITY

The Charlestown Retirement Community, part of Erickson Retirement Communities, is a continuing care retirement community in Baltimore, Maryland. The prototype for its Medicare Coordinated Care Demonstration (MCCD) program was a care coordination and utilization management program that it developed under a managed care risk contract with CareFirst Blue Cross/Blue Shield. During its two years of operations, that program reduced expenditures by 54 percent relative to expenditures for Medicare managed care plan enrollees in Baltimore. Charlestown's MCCD program targets beneficiaries living in three retirement communities owned by Erickson who have heart conditions, diabetes, or chronic lung disease. The program has identified potential patients primarily by reviewing the medical records information systems used by the on-campus medical centers associated with each community. Charlestown began enrolling patients in April 2002.

Program Host Organization Type

Continuing care retirement community

Target Population

Service area:

Baltimore, Maryland, metropolitan area

Urban

Diagnoses: Congestive heart failure, coronary artery disease, diabetes, chronic obstructive pulmonary disease

Other major inclusion criteria: Must reside in the Charlestown, Oak Crest, or Riderwood retirement community. Patients with diabetes or coronary artery disease must have had an inpatient admission during the 2 years preceding enrollment, but the admission need not have been for either of those conditions.

Program's estimate of number of eligible beneficiaries: Approximately 2,000

Expected number of beneficiaries[a]:

After one year: 684

Over four years: 792

Enrollment After One Year of Operations

Primary method of identifying patients: Generates lists of eligible patients from the retirement communities' administrative information systems

Number of beneficiaries enrolled[a]: 430 (as of May 4, 2003)

Primary reason for enrollment shortfall: Requirement for hospitalization during the 2 years preceding enrollment eliminated many potential patients

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 55,459[c]

Number of participants[a]: 229

Number of eligible participants[b]: 194

Participation rate[b]: 0.3 percent

Characteristics of Participants Enrolling During First Six Months of Operations

Age distribution:

Younger than 65: 0.0

65 to 74: 5.4

Charlestown (*continued*)

75 to 84: 45.1

85 or older: 49.6

Male: 39.3

Nonwhite: 0.9

Medicaid buy-in for Medicare: 0.0

Medical conditions treated during last two years preceding enrollment:

Cancer: 34.8

Chronic obstructive pulmonary disease: 38.8

Congestive heart failure: 61.2

Coronary artery disease: 70.1

Diabetes: 33.9

Stroke: 46.4

Hospital discharge:

During month preceding enrollment: 3.1

During year preceding enrollment: 51.8

Mean monthly Medicare reimbursement during year preceding enrollment: $1,208

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.09

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.81

Program Approaches

Improve patients' adherence

Improve communication and coordination

Intervention Features

Care coordinators' background:

Must be registered nurse (bachelor's degree in nursing preferred but not required)

Must have a minimum of 5 years of clinical experience (medical, surgical, community health, or home health) and/or 3 years of case management or utilization review experience

Must be certified case manager or working toward certification

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 6

Caseload: 1:60

Other staff used to extend care coordinators' resources: None

Assessment tools: Includes SF-12® Health Survey, PraPlus™ Screening Instrument, and Barthel Index, as well as tool developed for the program describing health, health behaviors/ self-management, medications, and home safety

Charlestown (*continued*)

Time from enrollment to assessment:

Expected: Within 2 weeks

Actual: 75 percent take longer than 2 weeks

Mode of patient contact:

Primarily by telephone, but many in-person visits either in patient's residence or during physician office visits

No technology-based devices used for monitoring

Frequency of monitoring:

Based on care coordinators' judgment

All patients monitored at least monthly

Degree of structure in patient education:

Curriculum: Core curriculum for each target condition developed by program

Assessment of education: Patients demonstrate they have learned material by repeating information or demonstrating a skill to care coordinators. Care coordinators review reports on clinical outcomes, such as hospital admissions and emergency room visits

Program's expectations of physicians:

Provide consent for their patients to enroll

Review and approve the care plans developed by care coordinators

Respond to care coordinators' requests for information and assistance

Program's approaches to engaging physicians:

Physicians' prior familiarity with program's administrative staff

Sends physicians reports on each of their patients' initial assessment, care plan, and medications

Program's efforts to improve communication and coordination with physicians:

Care coordinators intervene on behalf of patients

Care coordinators and physicians are co-located

Data Systems

Canopy Web-based case management software: Contains data from assessments, care plans, ongoing patient notes, and data needed for program evaluation

Reports generated:

To-do lists and patients' status reports, from Canopy: Generated to help care coordinators manage their caseloads

Reports on patients' service use outcomes, from Canopy: Includes hospital admissions, emergency room visits, and other service use outcomes

Other management, patient process-of-care, and other outcomes reports planned

Unique Features

Demonstration operates in a relatively closed, service-rich environment

All patients receive care from a small group of physicians who practice on the retirement communities' campuses

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

[c]The number of eligible beneficiaries includes all beneficiaries in the Baltimore areas who met the Charlestown diagnostic and service use criteria. As noted above, the Charlestown program only recruited from among three Erickson Retirement Communities in the Baltimore area. Program staff estimated that 2,000 community residents are eligible for the demonstration program.

CORSOLUTIONS

CorSolutions is a disease management company headquartered in Buffalo Grove, Illinois, with registered nurse service centers in Chicago, Illinois; Fort Lauderdale, Florida; Houston, Texas; Philadelphia, Pennsylvania; and Phoenix, Arizona. The prototype for its Medicare Coordinated Care Demonstration (MCCD) program is the CorSolutions heart failure disease management program, found to reduce the rate of hospital admissions and length of stays of participants relative to rates of other Medicare beneficiaries by 50 percent and 60 percent, respectively. Its MCCD program targets beneficiaries with congestive heart failure who live in Houston and offers a prescription drug benefit to a randomly assigned half of its evaluation treatment group, provided that they have incomes below a specified threshold. It has identified potential program patients primarily by recruiting physicians to participate and then using the participating physicians' billing systems to generate lists of potential program patients. The program began enrolling patients in June 2002.

Program Host organization Type

Disease management vendor

Target Population

Service area:

Houston, Texas

Urban

Diagnoses: Primary or secondary diagnosis of heart failure

Other major inclusion criteria: Hospital admission or emergency room visit during year preceding enrollment, with diagnosis of heart failure

Program's estimate of number of eligible beneficiaries: 3,500

Expected number of beneficiaries[a]

After one year: 1,750

Over four years: 2,392

Enrollment After One Year of Operations

Primary method of identifying patients: Recruits physicians to generate lists via office billing systems

Number of beneficiaries enrolled[a]: 671 (as of June 22, 2003)

Primary reason for enrollment shortfall: Lack of physician support

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 13,322

Number of participants[a]: 171

Number of eligible participants[b]: 101

Participation rate[b]: 0.8 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 17.9

65 to 74: 41.4

75 to 84: 32.1

CorSolutions (*continued*)

85 or older: 8.6

Male: 48.2

Nonwhite: 34.6

Medicaid buy-in for Medicare: 20.4

Medical conditions treated during two years preceding enrollment:

Cancer: 17.3

Chronic obstructive pulmonary disease: 65.4

Congestive heart failure: 98.2

Coronary artery disease: 91.4

Diabetes: 53.1

Stroke: 38.9

Hospital discharge:

During month preceding enrollment: 13.0

During year preceding enrollment: 85.3

Mean monthly Medicare reimbursement during year preceding enrollment: $2,687

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.35

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 1.29

Program Approaches

Improve patients' adherence

Improve communication and coordination

Improve provider practice

Intervention Features

Care coordinators' background:

Must be registered nurse licensed in Texas

Must have minimum of 5 years of clinical experience (preferably in critical care or coronary care)

Has social worker on staff

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 10

Caseload: 1:150 to 1:160

Other staff used to extend care coordinators' resources: Clerical assistants (help to prepare mailings)

Assessment tools: Medical history, including vital signs, review of systems (endocrine, neurological, integument, cardiovascular, respiratory, and musculoskeletal); assessment of psychosocial status, environment, and medications, all part of CorSolutions' CorConnect software

Time from enrollment to assessment:

Expected: Within 2 to 3 days

CorSolutions (*continued*)

Actual: Varies due to degree of difficulty in establishing contact with patients Mode of patient contact: Primarily by telephone Patients record vital signs (weight and blood pressure) and report them to care coordinators; a very small number of patients choose to report vitals via program's Web site Frequency of contact: Four calls within first 6 to 8 weeks, monthly thereafter until 9 months, then a minimum of every other month During each contact, CorConnect flags items for follow up Degree of structure in patient education: Uses established CorSolutions education curriculum Assessment of effectiveness: Checks knowledge via patients' self-reports, patients' feedback of information, increases in patients' confidence, and patients' response to scenarios Highly structured: CorConnect prompts care coordinators to use specific teaching modules as patients progress through the program Program's expectations of physicians: Refer patients and review them for program appropriateness Have regular contact with care coordinators Program's approaches to engaging physicians: Recently developed a local medical advisory board and opinion leader panel Physicians receive written reports on patients Program's efforts to improve communication and coordination with physicians: Primarily teaches patients to do this on their own Maintains regular contact with care coordinators Distributes educational materials about practice guidelines to physicians
Data Systems CorConnect: Documents and guides all project activities, including patients' contacts, assessments, care planning, and progress through educational modules Reports generated: Aggregate and individual patient data: Generated for physicians
Unique Features Prescription drug coverage for qualified members of randomly selected half of treatment group Highly structured, comprehensive program guided by software product

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

GEORGETOWN UNIVERSITY MEDICAL SCHOOL

Georgetown University Medical School in the District of Columbia, has partnered for the Medicare Coordinated Care Demonstration (MCCD) with MedStar Health, Inc., a large, nonprofit, community-based healthcare organization in the Baltimore–Washington, DC, area. MedStar owns Georgetown University Hospital and Washington Hospital Center. Georgetown developed its intervention based on promising case management strategies, effective clinical management pathways described in the literature, and its own experience with telemedicine. Georgetown's MCCD program targets beneficiaries with congestive heart failure who live in the Washington, DC, metropolitan area. It has identified potential program patients primarily by reviewing the discharge lists from Georgetown University Hospital and Washington Hospital Center. It began enrolling patients in June 2002.

Program Host Organization Type

Academic institution

Target Population

Service area:

Washington, DC, metropolitan area (includes some counties in Maryland and Virginia)

Urban

Diagnoses: Congestive heart failure (New York Heart Association [NYHA]class II, III, or IV)

Other major inclusion criteria: Hospitalization during year preceding enrollment; age 65 or older; physician's permission for patient to participate

Program's estimate of number of eligible beneficiaries: 87 annual admissions for congestive heart failure at Georgetown University Hospital, and 332 at Washington Hospital Center

Expected number of beneficiaries[a]:

After one year: 730

Over four years: 2,050

Enrollment After One Year of Operations

Primary method of identifying patients: Reviews hospital discharge lists

Number of beneficiaries enrolled[a]: 108 (as of June 8, 2003)

Primary reasons for enrollment shortfall: Lack of physician support and high patient refusal rate; underestimate of the proportion of heart failure patients who would be ineligible for other reasons

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 6,755

Number of participants[a]: 43

Number of eligible participants[b]: 29

Participation rate[b]: 0.4 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 0.0

65 to 74: 28.6

75 to 84: 54.8 85 or older: 16.7 Male: 64.3 Nonwhite: 38.1 Medicaid buy-in for Medicare: 14.3 Medical conditions treated during two years preceding enrollment: Cancer: 33.3 Chronic obstructive pulmonary disease: 47.6 Congestive heart failure: 97.6 Coronary artery disease: 95.2 Diabetes: 50.0 Stroke: 33.3 Hospital discharge: During month preceding enrollment: 26.2 During year preceding enrollment: 95.4 Mean monthly Medicare reimbursement during year preceding enrollment: $2,424 Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.24 Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.70
Program Goals Improve patients' adherence Improve communication and coordination Improve provider practice
Intervention Features Care coordinators' background: Registered nurse with bachelor's degree (minimum requirement) Prefers registered nurse with master's degree and experience in geriatric, cardiac, medical–surgical, or community nursing Expected number of care coordinators and caseload at full enrollment: Number of care coordinators: 10 to 15 Caseload: 1:50 to 1:75 Other staff used to extend care coordinators' resources: Care manager associate (provides administrative support and contacts support service providers) Assessment tools: Barthel Index, CAGE alcohol screening instrument, fall risk/ environment assessment, instrumental activities of daily living, learning assessment, Lubben Social Network Scale, Mini Mental State Examination for cognitive impairment, Minnesota Living With Heart Failure™ Questionnaire, nutrition screening, NYHA assessment, pain assessment, U.S. federal poverty guidelines, Yesavage Geriatric

Georgetown (*continued*)

Depression Scale, and Zarit Caregiver Burden Scale
Time from enrollment to assessment:
No information available at this time
Mode of patient contact:
Daily monitoring with HomMed Sentry telephonic home monitoring device
Initially primarily in person; then both in person and by telephone
Frequency and type of contact based on patients' acuity levels
Degree of structure in patient education:
Formal, standardized protocol for education on congestive heart failure
Program's expectations of physicians:
Review patients for program appropriateness
Refer patients directly to program
Have contact with care coordinator at a frequency determined by physician
Determine parameters for home monitoring device
Program's approaches to engaging physicians:
Pays for limited number of in-person meetings with care coordinators
Peer networking by principal investigator and medical director
Program's efforts to improve communication and coordination with physicians:
Reviews all patients in multi-disciplinary team meetings upon enrollment and annually as well as following adverse events
Allows physician to determine mode and frequency of communication
Data Systems
Canopy Web-based case management software: Tracks enrollment process, documents care coordination processes, and produces evaluation data
Web-based systems receives HomMed readings and contain information from data collection tools such as assessments
Reports generated: HomMed trend data provided to physicians in advance of patient visits
Unique Features
Use of home monitoring technology combined with a high level of in-person contact
Use of multidisciplinary team to review all patients
Limited funds for medications

Source: Telephone interviews with program staff conducted three months after the start of enrollment; Medicare data analysis.

In-person interviews had not been conducted with this program as of this writing due to low enrollment. Interviews scheduled for late October 2003.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

HEALTH QUALITY PARTNERS

Health Quality Partners is a nonprofit vendor of quality improvement services, including disease and care management, wellness programs, quality and process improvement consulting, and clinical performance monitoring. Its prototype for the Medicare Coordinated Care Demonstration (MCCD) was developed by PennCare, its former parent, under contract to Aetna U.S. Healthcare. A pre-post analysis showed that the prototype program was able to decrease participants' overall health care costs by nine percent. The Health Quality Partners MCCD program targets beneficiaries residing in eastern Pennsylvania who have chronic heart and lung conditions, diabetes, hyperlipidemia, or hypertension. The program has identified potential patients primarily by recruiting physicians to participate and helping physicians' office staff to review their medical records information systems for appropriate patients. Health Quality Partners began enrolling patients in April 2002.

Program Host Organization Type

Health quality services organization

Target Population

Service area:

Eastern Pennsylvania

Suburban

Diagnoses: Asthma, heart failure, coronary artery disease, diabetes, and moderate to severe hyperlipidemia or hypertension

Other major inclusion criteria: None

Program's estimate of number of eligible beneficiaries: No estimate available

Expected number of beneficiaries[a]:

After one year: 738

Over four years: 2,140

Enrollment After One Year of Operations

Primary method of identifying patients: Lists of eligible patients provided by participating physicians

Number of beneficiaries enrolled[a]: 498 (as of May 4, 2003)

Primary reasons for enrollment shortfall: Lack of staffing resources for patient recruitment and a high patient refusal rate

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 85,425

Number of participants[a]: 228

Number of eligible participants[b]: 142

Participation rate[b]: 0.2 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 0.0

65 to 74: 41.6

Health Quality Partners (*continued*)

75 to 84: 49.3

85 or older: 9.1

Male: 36.7

Nonwhite: 0.4

Medicaid buy-in for Medicare: 2.7

Medical conditions treated during two years preceding enrollment:

Cancer: 22.6

Chronic obstructive pulmonary disease: 19.9

Congestive heart failure: 11.3

Coronary artery disease: 37.6

Diabetes: 26.2

Stroke: 20.4

Hospital discharge:

During month preceding enrollment: 2.7

During year preceding enrollment: 18.6

Mean monthly Medicare reimbursement during year preceding enrollment: $465

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.30

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.72

Program Approaches

Improve patients' adherence

Improve communication and coordination

Intervention Features

Care coordinators' background:

Must be registered nurse with a minimum of 5 years of experience in a clinical specialty area, bachelor's or master's degree preferred but not required, advanced practice or specialty certification preferred but not required

Must have either medical or surgical nursing experience in addition to community nursing (such as home health or hospice) experience

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 5

Caseload: 1:70 to 1:75

Other staff used to extend care coordinators' resources: Project manager (is a social worker)

Assessment tools: Sutter Health Questionnaire stratifies participants into risk levels prior to randomization. High-risk patients receive comprehensive geriatric assessment, moderate-risk patients receive comprehensive disease-specific assessment, and low-risk patients receive basic disease specific assessment.

Health Quality Partners (*continued*)

Time from enrollment to assessment:

Target: Within 2 weeks

Actual: Within 2 weeks

Mode of patient contact:

Primarily by telephone, some in-person contacts during physician office visits

No technology-based devices used for patient monitoring

Frequency of contact:

At least once per month

Degree of structure in patient education:

Disease-specific curriculum for moderate- and high-risk patients, adapted to the needs of individual patients

Curriculum-based group education classes for low-risk patients with heart disease or diabetes

Assessment of effectiveness: Patients actively discuss educational messages

Program's expectations of physicians:

Provide lists of eligible patients

Respond to care coordinators' requests for information and for assistance with patients

Program's approaches to engaging physicians:

Physicians prior familiarity with program administrative staff from PennCare

Sends physicians reports on each patient's initial assessment, care plan, and recommendations for care. Each care coordinator contact with a patient generates a note sent to the physician

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

All of a physician's patients assigned to the same care coordinator

Care coordinators make care recommendations to physicians based on clinical practice guidelines

Reports on care coordinators' contacts with patients sent to physicians

Data Systems

Paper charts: Record patients' assessments, care plans, and notes on patient contacts

Microsoft Access database: Tracks recruitment and screening and records information on care coordination processes. Collection of clinical outcomes data from patients' medical records planned, to be stored in this database

Reports generated:

Management and productivity reports: Generated from Microsoft Access database

Manually compiled reports: Generated for physicians

Unique Features

Assesses level of a patient's readiness to make behavioral changes and targets its interventions to each level

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

HOSPICE OF THE VALLEY

Hospice of the Valley, a large provider of hospice services, is located in Phoenix, Arizona. Its prototype for the Medicare Coordinated Care Demonstration (MCCD) was the PhoenixCare project, which it developed with funding from The Robert Wood Johnson Foundation. The results of the PhoenixCare project are not yet available, but the project received strong community support and a positive response from participants. The MCCD program targets beneficiaries with heart failure, chronic lung disease, cancer, and neurological disease who reside in Maricopa County, Arizona. It has identified potential patients primarily by asking participating hospitals and physician practices to generate lists of eligible patients. The program began enrolling patients in August 2002.

Program Host Organization Type

Hospice

Target Population

Service area:

Maricopa County, Arizona (greater Phoenix)

Urban

Diagnoses: Congestive heart failure or other heart disease, chronic obstructive pulmonary disease or other chronic lung disease, metastatic cancer, neurological disease (including stroke, Alzheimer's disease, or other dementias, Parkinson's disease, amyotrophic lateral sclerosis)

Other major inclusion criteria Must have advanced form of the target condition and at least 1 hospital admission during the year preceding enrollment

Program's estimate of number of eligible beneficiaries[a]: No data available at this time

Expected number of beneficiaries[a]:

After one year: 624

Over four years: 2,184

Enrollment After One Year of Operations

Primary method of identifying patients: Participating hospitals and physician practices generate lists of eligible patients. Beginning to receive some direct referrals

Number of beneficiaries enrolled[a]: 460 (as of August 17, 2003)

Primary reasons for enrollment shortfall: Difficulty obtaining hospitals' support and high patient refusal rate

Participation Rate During First Six Months of Operations

No data available at this time

Characteristics of Participants Enrolling During First Six Months of Operations

No data available at this time.

Program Approaches

Improve communication and coordination

Improve patient adherence

Intervention Features

Care coordinators' background:

Must be registered nurse; bachelor's degree in nursing preferred but not required

Must have 2 years of medical, surgical, or cardiac nursing experience. Previous telemedicine or disease management experience preferred but not required. One year of home health or hospice experience preferred but not required

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 8

Caseload: 1:40

Other staff used to extend care coordinators' resources: Hospice telephone triage staff (answer patients' after-hours and weekend calls)

Assessment tools: Program's own assessment tools based on the Outcome and Assessment Information Set (OASIS)

Time from enrollment to assessment:

Expected: Within 1 week

Actual: Nearly 90 percent within 1 week

Mode of patient contact:

Primarily by telephone, but many in-person visits either in patient's residence or during physician office visits

No technology-based devices used for patient monitoring

Frequency of monitoring:

Biweekly

Degree of structure in patient education:

No formal curriculum. Had planned to use a formal curriculum but found it too cumbersome because of variations in patient needs

Assessment of effectiveness: Care coordinators ask patients to demonstrate what they have learned; use checklists to document patients have learned the material

Program's expectations of physicians:

Respond to care coordinators' requests for information and assistance

Program's approaches to engaging physicians:

Care coordinators accompany patients to some physician visits

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

Data Systems

HomeWorks for Hospice case management software: Stores assessments, care plans, follow-up monitoring data, patients' outcomes information, and process-of-care information

Reports generated:

Productivity and management reports: Generated for care coordinators

Process-of-care indicators: Generated for program management

Clinical outcomes measures: Generated for program management

Hospice of the Valley (*continued*)

Unique Features
Care coordinators attend physician office visits
Patient referrals by hospitalists

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

JEWISH HOME AND HOSPITAL LIFECARE SYSTEM

The Jewish Home and Hospital Lifecare System, a long-term care system located in New York City, provides skilled nursing, subacute care, short-stay rehabilitation services, and many different types of community-based long-term care. Its Medicare Coordinated Care Demonstration (MCCD) is operating in partnership with medical practices at St. Luke's and Mt. Sinai hospitals. Its MCCD prototype was the Geriatric Outreach program, developed by Jewish Home and Hospital's social work staff during the 1970s. Over a nine-month period, that program reduced hospital admissions by 68 percent, and skilled nursing facility admissions by 71 percent. Jewish Home and Hospital's MCCD demonstration program, Lifecare Plus, targets frail, elderly Medicare beneficiaries living in Manhattan and the Bronx who have a variety of chronic conditions. It has identified potential patients primarily by reviewing the medical records of the patients of two large geriatric practices. It began enrolling participants in June 2002.

Program Host Organization Type

Facility- and community-based long-term care provider

Target Population

Service area:

Manhattan and the Bronx, New York City

Urban

Diagnoses: Chronic heart disease (congestive heart failure or other heart disease), diabetes, liver disease, chronic lung disease (chronic obstructive pulmonary disease or other lung disease), stroke or other cerebrovascular disease, psychotic disorder, major depressive disorder, anxiety disorder, cancer, Alzheimer's disease, other cognitive impairment

Other major inclusion criteria: At least 1 inpatient hospitalization or at least 3 physicians' visits during the year preceding enrollment and age of 65 or older

Program's estimate of number of eligible beneficiaries: 2,500

Expected number of beneficiaries[a]:

After one year: 730

Over four years: 730

Enrollment After One Year of Operations

Primary method of identifying patients: Physician practice partners allow program staff to review the medical records of eligible patients

Number of beneficiaries enrolled[a]: 543

Primary reason for enrollment shortfall: Inconsistent enrollment effort (temporary staff helped to boost enrollment initially, but when they left, recruitment declined)

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 126,101

Number of participants[a]: 320

Number of eligible participants[b]: 280

Participation rate[b]: 0.2 percent

Jewish Home and Hospital Lifecare System (*continued*)

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution

Younger than 65: 0.3

65 to 74: 23.1

75 to 84: 42.4

85 or older: 34.2

Male: 22.5

Nonwhite: 53.8

Medicaid buy-in for Medicare: 38.8

Medical conditions treated during two years preceding enrollment:

Cancer: 24.1

Chronic obstructive pulmonary disease: 30.0

Congestive heart failure: 35.5

Coronary artery disease: 50.8

Diabetes: 38.8

Stroke: 26.7

Hospital discharge:

During month preceding enrollment: 6.5

During year preceding enrollment: 39.4

Mean monthly Medicare reimbursement during year preceding enrollment: $1,410

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.43

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.89

Program Approaches

Improve patients' adherence

Improve communication and coordination

Increase access to non-Medicare services

Intervention Features

Care coordinators' background:

Must be registered nurse with bachelor's degree or have master's degree in social work or related field

Must have home care, community, or geriatric experience

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 7

Caseload: 1:50

Jewish Home and Hospital Lifecare System (*continued*)

Other staff used to extend care coordinators' resources: Case aides (help to escort participants to physicians' appointments, perform light housework and shopping)

Assessment tools: Outcome and Assessment Information Set (OASIS), Mini Mental State Examination for cognitive impairment, and environmental assessment

Time from enrollment to assessment:

Expected: During year 1, within 1week

Actual: During year 1, most took longer than 2 weeks

Mode of patient contact:

Primarily by telephone, with occasional in-person visits

In-home monitoring device used for approximately 10 participants with diabetes

Frequency of contact:

No minimum frequency specified

Patients contacted as necessary

Degree of structure in patient education:

Provides general wellness education at weekly luncheons

No formal curriculum

Assessment of effectiveness: None

Program's expectations of physicians:

Refer patients

Respond to care coordinators' questions and requests for information

Program's approaches to engaging physicians:

Medical directors are faculty members of the two referring physicians' practices

Physicians receive a monthly payment for each patient

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

Asks physicians' office staff to report patients' adverse events

Care coordinators interact periodically with physician practices' social workers

Data Systems

Canopy case management software: Stores information on assessments, care plans, and monitoring; contains some evaluation data

Reports generated: None

Unique Features

Primarily social work intervention with very minor disease-specific focus

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

MEDICAL CARE DEVELOPMENT

Medical Care Development is a nonprofit health care research and service organization based in Augusta, Maine. Its Medicare Coordinated Care Demonstration (MCCD) program is based on its own experience implementing two cardiac disease management programs as part of ME Cares, a statewide initiative. Medical Care Development's MCCD program targets beneficiaries with congestive heart failure and coronary heart disease who live in Maine. It identifies patients primarily by searching inpatient census data at 17 participating hospitals. It began enrolling patients in April 2002. Each hospital was free to design its own care coordination intervention, although all 17 use the same care coordination software.

Program Host Organization Type

Nonprofit health care research and service organization

Target Population

Service area:

Maine

Rural and small urban areas

Diagnoses: Congestive heart failure; myocardial infarction; cardiac procedures, such as coronary artery bypass grafts

Other major inclusion criteria: Hospital discharge within 30 days preceding enrollment (changed in March 2003 to discharge within 60 days)

Program's estimate of number of eligible beneficiaries: No estimate available

Expected number of beneficiaries[a]:

After one year: 1,048

Over four years: 2,436

Enrollment After One Year of Operations

Primary method of identifying patients: Reviews daily inpatient census and hospital medical records

Number of beneficiaries enrolled[a]: 393 (as of April 20, 2003)

Primary reason for shortfall: Lack of physician support and lack of resources to recruit. (Care coordinators are nurses in the participating hospital. They are responsible for recruiting as well as patient care, in addition to having ongoing hospital responsibilities)

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 11,966

Number of participants[a]: 115

Number of eligible participants[b]: 86

Participation rate[b]: 0.7 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution

Younger than 65: 7.3

65 to 74: 44.6

75 to 84: 32.7

85 or older: 15.5

Male: 40.9

Nonwhite: 0.9

Medicaid buy-in for Medicare: 20.0

Medical conditions treated during two years preceding enrollment:

Cancer: 20.0

Chronic obstructive pulmonary disease: 55.5

Congestive heart failure: 77.3

Coronary artery disease: 82.7

Diabetes: 51.8

Stroke: 25.5

Hospital discharge:

During month preceding enrollment: 70.9

During year preceding enrollment: 93.6

Mean monthly Medicare reimbursement during year preceding enrollment: $1,454

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.22

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.61

Program Goals

Improve patients' adherence

Improve communication and coordination

Intervention Features

Care coordinators' background:

Registered nurse, nurse practitioner, or physician's assistant

Cardiac care or home care experience required

Experience with care management and comfort using computers desirable but not required

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: Varies by hospital

Caseload: Varies by hospital

Other staff used to extend care coordinators' resources: None

Assessment tools: Pfizer Health Solutions Clinical Management System (CMS®) software's standard assessment questions in five areas: (1) symptoms, functional status, quality of life, and use of health care services; (2) self-care, lifestyle, and knowledge; (3) prevention and screening; (4) vital signs, laboratory results, and test results; and (5) medications

Time from enrollment to assessment:

Expected: Within 5 business days

Actual: Within 30 days (average)

Medical Care Development (*continued*)

Mode of patient contact:

Primarily by telephone

No technology used for monitoring

Frequency of contact:

Varies by hospital

Degree of structure in patient education:

Curriculum developed by each care coordinator; CMS® software provides some materials

Assessment of effectiveness: Varies by hospital; some quiz patients

Program's expectations of physicians:

Review patients for program appropriateness

Communicate freely with care coordinators and respond to their requests

Program's approaches to engaging physicians:

Prior familiarity with ME Cares program and care coordinators

Local hospital medical directors act as "physician champions"

Outreach letters mailed to all primary care physicians on staff at each participating hospital

Workshops given by host organization at beginning of demonstration

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

Care coordinators are nurses in same hospitals in which physicians practice

Reports sent to physician at frequency and time preferred by physician. Contacts physician after every patient visit

Learns about adverse events via hospital census reports; contacts physicians within 4 hours of adverse events

Data Systems

CMS®: Generates assessments, care plans, and contact checklists; documents patients' contacts; monitors patients' progress toward reaching care planning goals; and contains education materials

Reports generated:

Aggregate and participant-level data: On such indicators as cholesterol levels, blood pressure, weight gain, and medication adherence

Program-level data: On process of care coordination, such as completion of scheduled contacts and checklists of completed care plan goals

Types of reports may vary by site

Unique Features

Decentralized statewide consortium of hospitals; each has its own care coordination program

All hospitals use CMS® software and collect standard data set

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

MERCY MEDICAL CENTER—NORTH IOWA

Mercy Medical Center—North Iowa, based in Mason City, Iowa, is a member of the Mercy Health Network. The Mercy Health Network consists of 7 primary hospitals, 23 affiliated hospitals, home health care agencies, outpatient rehabilitation providers, long-term care facilities, and many physician practices. Mercy's prototype for its Medicare Coordinated Care Demonstration (MCCD) is its traditional outpatient hospital case management program. That program is based on the Carondelet Nurse Practice Model. Mercy's MCCD program targets beneficiaries with congestive heart failure, chronic lung disease, liver disease, stroke, other vascular diseases, and renal failure who live in 17 counties in Iowa. It has identified potential program patients primarily by searching Mercy Health Network's patient registration system. It began enrolling patients in April 2002.

Program Host Organization Type

Hospital

Target Population

Service area:

17 counties in Iowa

Rural

Diagnoses: Congestive heart failure, chronic lung disease, liver disease, stroke, other vascular diseases, renal failure

Other major inclusion criteria: Inpatient or outpatient treatment at Mercy

Program's estimate of number of eligible beneficiaries: 2,450

Expected number of beneficiaries[a]:

After one year: 482

Over four years: 1,214

Enrollment After One Year of Operations

Primary method of identifying patients: Sunrise Decision Support Manager, used by Mercy Health Network

Number of beneficiaries enrolled: 627 (as of April 20, 2003)

Primary reason for enrollment success: Physician support based on previous work with program staff; access to comprehensive data system to identify patients

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 12,676

Number of participants[a]: 322

Number of eligible participants[b]: 291

Participation rate[b]: 2.3 rate

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 4.6

65 to 74: 31.4

75 to 84: 48.8

85 or older: 15.2

Mercy (*continued*)

Male: 56.4

Nonwhite: 0.3

Medicaid buy-in for Medicare: 12.5

Medical conditions treated during two years preceding enrollment:

- Cancer: 27.4
- Chronic obstructive pulmonary disease: 59.4
- Congestive heart failure: 66.3
- Coronary artery disease: 69.6
- Diabetes: 38
- Stroke: 30.7

Hospital discharge:

- During month preceding enrollment: 7.6
- During year preceding enrollment: 67.7

Mean monthly Medicare reimbursement during two years preceding enrollment: $1,261

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 2.02

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.98

Program Goals

Improve patients' adherence

Improve communication and coordination

Improve provider practice

Increase access to support services

Intervention Features

Care coordinators' background:

- Registered nurse; bachelor's of science degree in nursing preferred
- Mix of nurses with bachelor's degrees and advanced practice nurses
- Chaplain and social worker on staff

Number of care coordinators and caseload expected at full enrollment:

- Number of care coordinators: 9
- Caseload: 1:30

Other staff used to extend care coordinators' resources: Office manager (provides clerical and administrative support)

Assessment tools: Tools developed by program, including functional status, nutrition, medications, mental status, prognosis for goal achievement, services needed, emergency plan and contacts, and physical assessment

Mercy (*continued*)

Time from enrollment to assessment:

Expected: Within 10 business days

Actual: Within 10 business days (on average)

Mode of patient contact:

Primarily in person during the first year

Tel-Assurance Program technology used to monitor a limited number of patients with congestive heart failure

Frequency of contact:

At least monthly

Degree of structure in patient education:

Uses published curriculum

Assessment of effectiveness: Via self-reports of patients' ability to recognize changes in symptoms indicating need for care and increase in patients' use of preventive measures

Program's expectations of physicians:

Review patients for program appropriateness

Refer patients directly to program (not program's primary method of identifying patients)

Respond to care coordinators' requests for information about specific patients

Program's approaches to engaging physicians:

Prior familiarity with program's administrative staff and care coordinators

Sends care plans to physicians annually for review

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

Care coordinators work in same clinics as physicians

Regularly communicates with physicians in person (in clinics, during grand rounds, or by telephone)

Data Systems

Case Management Information System developed by program: Tracks all program data, including evaluation data

Reports generated:

Reports for all staff associated with care of individual patients

Service use and cost reports: Generated from hospitals' patient databases

Unique Features

Care coordinators work closely with physicians in the clinical setting

Rural program with substantial resources devoted to non-Medicare service arranging, although a secondary program focus

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment; Medicare data analysis.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

QMED

QMed, Inc. is a disease management company headquartered in Laurence Harbor, New Jersey, and with a service center in Stockton, California. QMed has used its On-Line Health Management System (OHMS) to manage coronary artery disease in more than 100,000 managed care plan members since 1995. Its Medicare Coordinated Care Demonstration (MCCD) program is based on that system and targets beneficiaries with coronary artery disease who live in two counties in northern California, where QMed has provided disease management services to managed care plans for some time. QMed has identified patients for the program by recruiting large physician practices to refer their patients. It began enrolling patients in July 2002.

Program Host Organization Type

Disease management vendor

Target Population

Service area:

San Joaquin and Stanislaus counties in northern California

Primarily urban and suburban

Diagnoses: Coronary artery disease

Other major inclusion criteria: None

Program's estimate of number of eligible beneficiaries: No estimate available

Expected number of beneficiaries[a]:

After one year: 782

After four years: 1,142

Enrollment After One Year of Operations

Primary method of identifying patients: Recruits physician groups to participate; participating physicians' staffs search their databases for appropriate patients to refer

Number of beneficiaries enrolled[a]: 1,404 (as of July 13, 2003; after receiving permission from the Centers for Medicare & Medicaid Services to increase enrollment

Participation Rate During First Six Months of Operations

No data available at this time

Characteristics of Participants Enrolling During First Six Months of Operations

No data available at this time

Program Goals

Improve patients' adherence

Improve communication and coordination

Improve provider practice

Intervention Features

Care coordinators' background:

Licensed practical nurse or medical assistant, trained in case management when hired. Responsibilities include 10-minute patient hook up to cardiac monitors and routine telephone monitoring of patients, using scripted protocols

Care coordinator supervisors are registered nurses with bachelor's degree and clinical cardiac care experience. Responsible for handling medical and social work issues; contact patients and physicians about medical issues and refer patients to social workers outside the program when necessary

Current number of care coordinators and caseload:

Number of care coordinators: 2

Number of care coordinator supervisors: 4

Caring for: 700 patients

Other staff used to extend care coordinators' resources: Administrative and clerical staff (process paperwork)

Assessment tools: Tool developed by QMed collects patients' demographic information, vital statistics, health status, health care utilization, medications, and educational needs

Time from enrollment to assessment:

Expected: Within 7 days

Actual: Within 7 days

Mode of patient contact:

By telephone; scripted protocols used

24-hour ambulatory monitor hooked up 2 months after random assignment and subsequently as necessary (for example, after an adverse event or if the physician requests it)

Frequency of contact:

Monthly

Degree of structure in patient education:

Provides written materials as necessary based on assessments and monitoring contacts

Assessment of effectiveness: Patients asked about adherence behaviors

Program's expectations of physicians:

Review patients for program appropriateness

Have regular contact with care coordinator supervisors

Follow practice guidelines sent by program

Program's approaches to engaging physicians:

Prior familiarity with program staff

Uses physician opinion leaders

Program's efforts to improve communication and coordination with physicians:

Care coordinator supervisors intervene with physicians on behalf of patients, if necessary

Program alerts physicians about adverse events

Program sends physicians patient reports, including reports based on monitoring results

Data Systems

Three databases, collectively called CMS/PIMS, track data on patients:

OHMS: Contains information about patients for physicians

QMed (*continued*)

PATS: Contains demographic information on patients PIMS: Contains patient assessment and monitoring information Reports generated: Enrollment, health service use, adherence, clinical information, evaluation data Reminders for laboratory tests and patients' self-reported health outcomes: Generated for physicians monthly or quarterly Reports for patients (planned): Generate every two years to update patients on the status of their coronary artery disease
Unique Features Monitoring device is the core of the intervention, which focuses on managing coronary artery disease Care coordinators are technicians rather than registered nurses Patient education consists primarily of dissemination of written materials Strong physician support based on previous work with QMed as managed care contractor Limited funds for medications

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

QUALITY ONCOLOGY

Quality Oncology, Inc. is a disease management vendor serving beneficiaries in south Florida who have cancer. Quality Oncology has provided its services under 14 contracts since 1996, including 3 with Medicare+Choice plans in Florida for which it has served 2,500 enrollees. Quality Oncology estimates that it saved these plans between 6 and 12 percent of patient cancer care costs. It was acquired by Matria Healthcare in September 2002, the same month during which its Medicare Coordinated Care Demonstration (MCCD) program began enrolling patients. Quality Oncology's MCCD program identifies patients by recruiting area oncologists; participating oncologists, in turn, refer patients they are actively treating for cancer whom they believe would benefit from additional education, support, and monitoring.

Program Host Organization Type

Disease management vendor

Target Population

Service area:

Broward County, Florida (Fort Lauderdale area)

Urban

Diagnoses: Cancer

Other major inclusion criteria: Current receipt of cancer treatment (surgery, chemotherapy, radiation therapy, or biologic therapy)

Program's estimate of number of eligible beneficiaries: 5,450

Expected number of beneficiaries[a]:

After one year: 2,132

Over four years: 2,852

Enrollment After One Year of Operations

Primary method of identifying patients: Recruits physicians to refer patients

Number of beneficiaries enrolled[a]: 63 (as of September 21, 2003)

Primary reason for enrollment shortfall: Physicians' opposition based on prior experience with vendor as managed care contractor

Participation Rate During First Six Months of Operations

No data available at this time

Characteristics of Participants Enrolling During First Six Months of Operations

No data available at this time

Program Goals

Improve patients' adherence

Improve communication and coordination

Improve provider practice

Intervention Features

Care coordinators' background:

Licensed registered nurse with minimum of 5 years of experience in oncology, utilization review, case management, home care, or hospice care

Quality Oncology (*continued*)

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 10

Caseload: 1:100

Other staff used to extend care coordinators' resources: No data available at this time

Assessment tools: Question sets and medical chart abstraction forms in Integrated Care Management System (ICMS), program's proprietary care management information system

Time from enrollment to assessment:

No data available at this time

Mode of patient contact:

Exclusively by telephone

No home monitoring device used

Frequency of contact:

Varies by cancer treatment stage (for example, immediately preceding chemotherapy and daily for first 2 days after chemotherapy)

Varies by acuity level (for example, at least weekly for highest-acuity patients, monthly for hospice patients)

Varies by patients' activity level

Degree of structure in patient education:

Uses educational materials from American Cancer Society, National Cancer Patient Survivor Program, and National Cancer Institute

Program's expectations of physicians:

Refer patients

Collaborate with care coordinators

Use Quality Oncology's treatment guidelines

Program's approaches to engaging physicians:

Prior familiarity with Quality Oncology as a service provider to managed care plans

Pays physicians for patient referrals and per patient per month after enrollment

Program's efforts to improve communication and coordination with physicians:

Teaches patients to do this on their own for issues related to prognosis, pain, side effects, and end-of-life care

Care coordinators intervene directly with physicians for issues related to treatment recommendations or urgent patient symptoms

Communication between care coordinators and physicians mostly by telephone

Care coordinators contact physicians to discuss deviations from treatment guidelines

Generates reports for physicians from ICMS, prepared at the discretion of care coordinators (recently added capability)

Program monitors patients for treatment side effects (for example, effect on white blood cell counts, dehydration) and notifies physicians early, in effort to prevent need for hospital admissions

Quality Oncology (*continued*)

Data Systems
ICMS, a proprietary, Web-based system: Includes program tools; serves as database for patient assessment data, care plans, notes on contacts with patients, and self-reported outcomes. Enables the program to track recruitment, track screening, and record information on care coordination
Reports generated:
No information available at this time
Unique Features
Targets beneficiaries with cancer
Makes recommendations concerning medical treatment

Source: Telephone interviews with program staff conducted three months after the start of enrollment

In person interview had not been conducted as of this writing due to low enrollment.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

UNIVERSITY OF MARYLAND

The University of Maryland Medical School, an academic medical center in Baltimore, Maryland, is part of the University of Maryland Medical System, which includes six hospitals and an associated physician practice organization. The University of Maryland's Medicare Coordinated Care Demonstration (MCCD) program targets beneficiaries with congestive heart failure who live in the Baltimore metropolitan area. It identifies potential patients by asking hospitals and physician practices that have agreed to participate in the demonstration to generate lists of eligible patients. The program began enrolling patients in June 2002.

Program Host Organization Type

Academic medical center

Target Population

Service area:

Baltimore, Maryland, metropolitan area

Urban

Diagnoses: Congestive heart failure

Other major inclusion criteria: Hospital admission during the year preceding enrollment. Must have a telephone

Program's estimate of number of eligible beneficiaries:

No data available at this time

Expected number of beneficiaries[a]:

After one year: 678

Over four years: 678

Enrollment After One Year of Operations

Primary method of identifying patients: Participating hospitals and physician practices generate lists of eligible patients

Number of beneficiaries enrolled[a]: 58 (as of June 29, 2003)

Primary reasons for enrollment shortfall: Difficulty gaining physicians' support and restrictive eligibility criterion (initially hospitalization within 90-day period preceding enrollment; changed in April 2003 to hospitalization within 1-year period preceding enrollment)

Participation Rate During First Six Months of Operations

Number of eligible beneficiaries[b]: 6,051

Number of participants[a]: 33

Number of eligible participants[b]: 14

Participation rate[b]: 0.2 percent

Characteristics of Participants Enrolling During First Six Months of Operations (Percentages, Unless Otherwise Noted)

Age distribution:

Younger than 65: 6.5

65 to 74: 41.9

75 to 84: 45.2

85 or older: 6.5

Male: 80.7

Nonwhite: 32.3

Medicaid buy-in for Medicare: 9.7

Medical conditions treated during two years preceding enrollment:

Cancer: 9.7

Chronic obstructive pulmonary disease: 64.5

Congestive heart failure: 93.6

Coronary artery disease: 87.1

Diabetes: 48.4

Stroke: 45.2

Hospital discharge:

During month preceding enrollment: 22.6

During year preceding enrollment: 83.9

Mean monthly Medicare reimbursement during year preceding enrollment: $2,731

Ratio of mean monthly Medicare reimbursement for participants to mean monthly Medicare reimbursement for eligible nonparticipants: 1.39

Ratio of mean monthly Medicare reimbursement for participants to monthly waiver application cost estimate: 0.92

Program Approach

Improve medical management of patients:

Care coordinators monitor symptoms

Care coordinators adjust medications to control symptoms

Intervention Features

Care coordinators' background:

Nurse practitioner

Current number of care coordinators and caseload at full enrollment:

Number of care coordinators: 1

Caseload: No estimate available

Other staff used to extend care coordinators' resources: None

Assessment tools: Tool developed by program, SF-36 Health Survey, Minnesota Living With Heart Failure™ Questionnaire, and brain natriuretic peptide levels

Time from enrollment to assessment:

Assessment completed at time of enrollment

Mode of patient contact:

By telephone

University of Maryland (*continued*)

All patients receive in-home telemonitoring device to be used daily to measure weight, blood pressure, and heart rate, and to transmit data back to program
Frequency of contact:
Telephone monitoring at least monthly
Degree of structure in patient education:
Patient education not part of the intervention
Program's expectations of physicians:
Respond to care coordinators' requests for information and assistance
Provide care coordinators with information on laboratory test results and changes in medications
Program's approaches to engaging physicians:
Pays a monthly fee for each enrolled patient
Some physicians familiar with program staff and share University of Maryland as their employer
All of a physician's patients assigned to the same care coordinator
Program's efforts to improve communication and coordination with physicians:
Sends results of patients' initial assessments and recommendations for changes in patients' medications
Data Systems
Microsoft Access database: Stores recruitment data, enrollment data, and results of initial assessments
Clinical review software component of telemonitoring device: Stores monitoring parameters for patients' clinical data; stores case notes
Reports generated:
Reports to help care coordinators monitor and manage patients
Unique Features
Focuses on a single disease and provides medical management of that disease, using a home monitoring device and care coordinators who are nurse practitioners

Source: Telephone interviews with program staff conducted three months after the start of enrollment; Medicare data analysis.

In-person interviews had not been conducted as of this writing due to low enrollment.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.

[b]"Eligible" beneficiaries are those whose reported Health Insurance Claim numbers are valid, who meet the Medicare coverage requirements of the Centers for Medicare & Medicaid Services during the reference month (month of intake for participants; third month after program startup for nonparticipants), and who fit our simulated eligibility criteria. This simulation was able to mimic only eligibility criteria reflected in Medicare enrollment and claims data (not, for example, reading level or severity of illness) and did not restrict the pool of eligibles to particular providers from which the programs recruited patients.

"Eligible participants" are also enrolled in the program during the first 6 months of enrollment.

The participation rate equals the number of eligible participants divided by the sum of eligible nonparticipants and eligible participants, multiplied by 100 to express as a percentage.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Washington University School of Medicine, located in St. Louis, Missouri, hosts this demonstration, which is run by its affiliate, Washington University Physicians Network (WUPN), a large, independent physician association, and by American Healthways, a health management company. The prototype for its Medicare Coordinated Care Demonstration (MCCD) was WUPN's case management program for high-risk patients, developed under a managed care risk contract with a local hospital. That program reduced hospitalizations by approximately 60 percent relative to patients' previous admission rates. Washington University's MCCD program targets beneficiaries at high risk for high future health care costs who live in the St. Louis metropolitan area. It uses an algorithm developed by American Healthways, applied to WUPN's administrative claims database, to identify potential patients. The program began enrolling patients in August 2002.

Program Host Organization Type

Academic institution

Target Population

Service area:

St. Louis, Missouri, metropolitan area

Urban

Diagnoses: No specific diagnoses targeted; uses American Healthways algorithm

Other major inclusion criteria: Uses American Healthways algorithm

Program's estimate of number of eligible beneficiaries: 11,000

Expected number of beneficiaries[a]:

After one year: 2,000

Over four years: 2,000

Enrollment After One Year of Operations

Primary method of identifying patients: Algorithm developed by American Healthways to identify high-risk patients applied to WUPN's administrative claims database

Number of beneficiaries enrolled[a]: 1,425 (as of August 17, 2003)

Primary reason for enrollment shortfall: High patient refusal rate

Participation Rate During First Six Months of Operations

No data available at this time

Characteristics of Participants Enrolling During First Six Months of Operations

No data available at this time

Program Approaches

Improve patients' adherence

Improve communication and coordination

Increase access to non-Medicare services

Intervention Features

Care coordinators' background:

Registered nurse with 3 to 5 years of experience caring for chronically ill patients

Two years of care coordination or utilization review experience preferred, but not required

Washington University (*continued*)

Uses local care coordinators for highest-risk patients and American Healthways telephonic care coordinators, located in LaJolla, California, for all others

Expected number of care coordinators and caseload at full enrollment:

Number of care coordinators: 20

Caseload: 1:100 (American Healthways coordinators) and 1:50 (local care coordinators)

Other staff used to extend care coordinators' resources: Case management assistants (help schedule appointments and complete paperwork)

Assessment tools: "Initial health screen" developed by American Healthways

Time from enrollment to assessment:

Expected: Within 3 days

Actual: No data available at this time

Mode of patient contact:

Primarily by telephone, with some in-person contact by local care coordinators

No technology-based devices used for patient monitoring

Frequency of contact:

Depends on assigned acuity level. Highest-acuity patients monitored at least every 2 weeks, next level at least every 3 weeks, next level at least every 4 weeks, and lowest-acuity patients at least every 6 weeks

Degree of structure in patient education:

No standardized curriculum

Assessment of effectiveness: Feedback from patients during care coordination contacts. Reviews of patients' clinical indicators, whether patients have been keeping their medical appointments, and emergency room or hospital admissions

Program's expectations of physicians:

Attend educational forums and grand rounds presentations about the program

Attend case conferences, as necessary

Provide advice to care coordinators about specific patients and schedule patients appointments with care coordinators quickly, if necessary

Review care plans

Program's approaches to engaging physicians:

Prior familiarity with programs' administrative staff

Developed a physician advisory board

Provides continuing medical education credit for participation in educational forums

Sends physicians lists of their enrolled patients; includes discharged patients and reasons for discharge

Plans to pay physicians a fee for participating in coordination

Program's efforts to improve communication and coordination with physicians:

Primarily teaches patients to do this on their own

Sends formal communications to physicians

Washington University (*continued*)

All of a physician's patients assigned to the same care coordinator
Sends physicians copies of patients' care plans for review
Data Systems
CareLink, case management information system developed by American Healthways: Contains assessments of patients, care plans, follow-up data, contains evaluation data, and process-of-care data
Reports generated:
Patient-level reports: Generated for care coordinators
Care plans: Generated for physicians
Process-of-care indicators: Generated for program management
Unique Features
Use of proprietary algorithm to identify patients
Combination of local and out-of-state care coordinators

Source: Telephone interviews with program staff conducted three months after the start of enrollment and in-person interviews conducted nine months after the start of enrollment.

[a]"Enrollment" and "number of participants" refer to the total number of study participants (that is, all beneficiaries who enrolled in the study including some who will be excluded from the research sample because they are living in the same household as a member of the research sample). Only one member of a household is included in the analysis). These individuals were automatically assigned to the same group (treatment or control) as the research sample member of their household. The number of beneficiaries in the treatment group—and therefore eligible for program services—is about half that total.