COMPLEX CARE MANAGEMENT PROGRAM OVERVIEW

Aetna
Medicare Advantage Embedded Case Management Program

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This program overview is part of a series describing innovative approaches to caring for complex patients. Funded by the California HealthCare Foundation, these overviews are the result of a national scan highlighting programs active in the field that have demonstrated success.

Summary

Aetna has developed a Medicare Case Management Program for selected participating medical groups. This program enhances the effectiveness of case managers by managing multiple chronic illnesses, overcoming psychosocial barriers, and managing advanced illness by providing such services in close collaboration with participating physicians and their staffs. In most cases, the case manager is embedded in the physician office.

The program focuses on Medicare Advantage patients and currently includes more than 75 collaborative relationships nationwide. In 2012, each case manager served an average of 1,000 patients, and the company served more than 100,000 patients total.

Patient Identification

Inclusion Criteria

Members are prioritized based on risk and opportunity for care management. The program aims to identify members with advanced illness (for example, terminal illness) and chronic illness, as well as to identify opportunities to engage members in ways that will improve quality of care and reduce avoidable costs. Program inclusion criteria include:

- Multiple admissions, readmissions, and emergency department (ED) visits

- Depression diagnosis

- Presence of actionable gaps in care: drug interactions, and absence of a record of treatment or testing normally associated with a diagnosis

- Predictive modeling, which identifies opportunities through monitoring of claims and transactions, and involves analysis of numerous factors

The program seeks case referrals from participating physicians through collaborative arrangements and other forms of outreach.

Data Sources and Tools Used

High-risk patients are identified in several ways, including predictive modeling, monitoring of transactions and events, new-member health risk assessments, referrals from physicians, patient meetings, and hospital inpatient and ED reviews. For predictive modeling, an algorithm is run to identify patients with chronic or advanced illness.

The Medicare Advantage Embedded Case Management Program continuously monitors claims and transactions through several means:

- For collaboration groups, the program monitors and provides actionable data (that is, actionable gaps in care and inpatient census) and summary and benchmark data on quality and efficiency parameters.

- All data are regularly run through "care engines," a proprietary technology of Aetna's Active Health subsidiary that identifies actionable gaps in care.

- All data are regularly run through their predictive modeling algorithm — PULSE-AIM — to identify and prioritize risks and opportunities.

Other data that are regularly analyzed include readmissions, nonadherence, fragility fracture risk, and heart failure and diabetes program participation.

Ranking/Stratification Methodology

Patients are scored for risk and opportunity levels. Outreach is arranged for as many patients as possible, beginning with those with the highest scores. Also, the program aggressively seeks to administer health risk assessments to all new Aetna MA members. This assessment will classify the patient as high, medium, or low risk. High-risk patients receive an outreach call from a case manager and a supplementary comprehensive assessment.

Assessment

Tools

The main tool is a health risk assessment for new members.

Assessment Elements

Once selected for the program, members undergo a comprehensive evaluation that includes:

- Identification of chronic illnesses

- Identification of psychosocial barriers

- Support system evaluation

- Depression screening

Following the assessment, a clinical pathway is generated.

Timing and Location

The initial assessment is completed as soon as possible after the case is identified — within a few days for chronic illness, and within two days for transitional care. The assessment can be completed over the phone or at the medical office.

Care Management Team

Team Composition

The primary point of contact for the patient is the case manager. Although working at a physician office, the case manager is an Aetna employee. It is the intent of the program that the case managers function collaboratively with the physician's staff.

Aetna program teams are comprised of:

- Nurses

- Social workers

- Behavioral health specialists

Team Roles and Education

Care management team members are trained in case and change management, compassionate care, interviewing patients, cultural sensitivity, and advanced illness, and they are mentored by experienced supervisors.

PCP Involvement

Program case managers work closely with the patient's physician and the physician's staff. Case managers are placed in the offices of physicians in the Aetna collaborating medical group, or when the physician practices are geographically

disbursed, case managers are located in the central office. The case managers who work out of physician offices use a physician-collaborative approach and effectively serve as the medical group's case managers.

Shared Management

Currently, there are over 75 collaborative relationships nationwide. No two are identical. In all cases, Aetna case managers adapt to the processes in the medical practice. In some practices, this process involves providing the bulk of the case management in collaboration with physicians and medical office staff. In other practices, case management responsibility is shared with the practice's own care managers, with all personnel working together to each provide what they do best. For example, in offices with extant care management, Aetna might provide the Aetna Compassionate Care℠ program — Aetna's specialized program for management of advanced illness and partial management of particular chronic illnesses.

Ongoing Care

Caseload

One program case manager will manage approximately 1,000 Medicare Advantage patients, most of whom are not in case management. Aetna works with medical groups who care for at least 1,000 of their Medicare Advantage members, or who show the potential to grow to 1,000. Of these 1,000 patients, most of the case managers' efforts are focused on the 20% to 25% of the patients who have five or more chronic conditions or who have an advanced illness; most of these patients are in case management for a period of time.

Frequency of Outreach

Frequency of contact is generally determined by the case manager. In the case of transitional care, case managers contact patients through a home visit or phone call within two days of discharge.

Services

Most care management is provided over the phone. Home visits are conducted in the case of care transitions or fall assessments and in some areas, on a pilot basis for other

purposes. In special instances, dietitians and nutritionists visit home care patients to ensure that diet plans are followed.

Community resources. Case managers are engaged with the community and are familiar with relevant community resources for these members and their families. Once members are connected with a community resource, case managers work to create a bond with that resource, help these members overcome barriers to care access, and confirm that the member receives good medical care and care coordination.

Visit program. Aetna's home care management visit program works with contractors for transitional care and some other services in some regions. In addition, Aetna works with the Visiting Nurses Association to provide home visits for patients who have skilled needs, the Area Agency on Aging, and other social service agencies.

Advanced illness patients. Case managers guide advanced illness patients and their families through Aetna's specialized program, Aetna Compassionate Care. This program engages members and their loved ones facing end-of-life decisions, provides support and information for informed decisions, and facilitates pain relief and other services. Approximately 1% of the Medicare Advantage membership is engaged in Compassionate Care. Participation in this program has resulted in a hospice election rate of 82%, an 82% reduction in acute days, an 86% reduction in ICU days, and high patient satisfaction. For collaborating groups, the Compassionate Care program is provided by the embedded case manager working with the physicians and staff.

A case manager described a patient who was in the Compassionate Care program: "Wife stated member passed away with hospice. Much emotional support given to spouse. She talked about what a wonderful life they had together…. Also stated that hospice was wonderful, as well as everyone at the doctor's office, and everyone here at Aetna. She tells all of her friends that 'when you are part of Aetna, you have a lifeline.'"

Chronic illness care. These same specialized case managers also manage chronic illness with the goal of improving health outcomes.

Tools

ActiveHealth® reports on actionable gaps in care are provided regularly to physicians and members. Case management decision support is provided to members, particularly for advanced illness.

Outcomes

Results

When assessing costs, the Aetna care management program achieved overall:

- 31% fewer hospital acute days

- 34% fewer hospital/rehabilitation subacute days

- 24% fewer ED visits

- 39% fewer long hospital stays (greater than 15 days) than unmanaged Medicare, exclusive of denials

Collectively, groups in collaboration arrangements with embedded or dedicated case managers showed a 15% additional reduction in acute admissions (exclusive of denials).

Ongoing Measures for QI

The main measure for QI is avoidable admissions. Aetna compares their admission rates to several benchmarks, such as unmanaged Medicare rate for certain regions, corrected for risk level. They look at a series of quality process metrics, National Quality Forum–type measures. They also monitor ED and subacute visits and readmissions.

Evolution of Program

Initially, program outreach was conducted primarily over the phone. When the program practices collaborative care with case managers embedded in physician practices, the program sees better results. Aetna now has 75 arrangements of this care management program across the country, and intends for almost all of these collaborative arrangements to grow to incorporate embedded case managers.

Lessons Learned

Aetna conducted a telehealth trial, monitoring 165 Medicare heart failure patients with and without an Intel telemonitoring device. This "guided care device" monitors bio-signs and two-way communication. The telemonitoring was supported by a case manager, who would notify the physician when necessary. Both the monitored and unmonitored patients required nearly continuous case management. Increasing the frequency of case management to continuous had a dramatic impact on patient care — reducing acute days for heart failure by almost 40%. The addition of the telemonitoring device had no additional impact.

Costs

Overall, hospital use (measured in acute days) is 30% below the unmanaged Medicare population exclusive of denials. Medical costs were significantly impacted — principally through reduction in avoidable acute inpatient days (days that do not happen, not days denied).

For advanced illness patients, the decedent rate is about 4.8% in Medicare, and about 25% of the total cost of the last year of life. About 80% of that is acute inpatient care. The program engaged 1.1% of the Medicare Advantage members for management of their advanced illness. Of this group, in 2011, 82% elected to engage in hospice care, a tripling of the election rate from the previous year.

Technology/Innovation

Technology Enablers

The initial program participant stratification process was conducted with an Aetna-created, proprietary algorithm called PULSE-AIM, and a program from Active Health that identified actionable gaps in care, referred to as a Care Engine®.

Future Innovation/Direction

At this time, less than 10% of program participants are working with embedded case managers. Ideally, Aetna would like to spread this aspect of the program to as many communities as possible.

Author: Medimetrix

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Brigham and Women's Hospital
Care Management Program

INTERVIEWEE: Rebecca Cunningham, MD

Summary

Brigham and Women's Hospital (BWH) started enrolling patients in the Care Management Program (CMP) in February 2010. Over 1,200 patients with Brigham and Women's or Faulkner Hospital PCPs were identified by Medicare as eligible for the program and elected to enroll. The program is an expansion of the Care Management for High Cost Beneficiaries (CMHCB) Demonstration by Massachusetts General Hospital (MGH) and Massachusetts General Physicians Organization. In the Medicare demonstration, beneficiaries with HCC risk scores $\geq$ 2.0 and annual costs of at least $2,000 or HCC risk scores $\geq$ 3.0 and a minimum of $1,000 annual medical costs were eligible for inclusion.

The program was designed to provide longitudinal, coordinated care for complex patients by embedding an enhanced care team to support each patient and PCP within the primary care practices. Building on the medical home model, the program is primary care–based and supports care throughout the continuum. The CMP team works with patients and their caregivers — both personal and professional — to meet the patients' goals of care.

Patient Identification

Inclusion Criteria

In the Medicare demonstration, the patients eligible for inclusion met one of these criteria:

- HCC risk scores $\geq$ 2.0 and annual costs of at least $2,000

- HCC risk scores $\geq$ 3.0 and annual costs of at least $1,000

MGH originally enrolled 2,500 high-cost Medicare patients, who account for $68 million in annual Medicare spending (excluding pharmacy). An internal analysis of MGH's high-cost patients prior to the demonstration found that, on average, these patients take 12.6 medications, have 3.4 hospitalizations per year, and cost about $24,000 annually. It is believed that the patients included in the demonstration program were comparable.

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BWH enrolled 1,200 patients, who were also identified by Medicare using the same eligibility criteria, and whose clinical profile was similar to the patients in the MGH program.

Data Sources and Tools Used

The patients in the CMP demonstration project were identified using the algorithm described above. Once identified, eligible patients were flagged in the MGH and BWH electronic medical records with a CMP icon. Clicking on the icon allows providers to identify patients' RN care coordinators and contact them directly via page or email.

Ranking/Stratification Methodology

RN care coordinators reviewed their CMP patient lists with each PCP to confirm patient eligibility and clinical appropriateness for the program intervention. The PCPs were also asked to stratify patients as high, medium, or low risk for future reference.

Ongoing Data Collection Methods

The comprehensive care plans are documented in the patient's electronic medical record. The program also licensed Morrisey case management software, which is used not only to track care coordination tasks, but also to track patient eligibility and risk level, and to generate reports regarding frequency and type of patient contacts and referrals.

Assessment

Tools Used

The assessment focused on issues that were relevant to each patient, and evaluated medical and psychosocial/behavioral problems, the resources used to address these issues, and patient needs for additional support. The tool used to conduct these assessments was developed by MGH and includes several externally validated instruments, such as questions to evaluate challenges with activities of daily living (ADL).

Assessment Elements

Based on the initial assessment, the RNs determine the needs for social work intervention and community resources. The RNs set goals and develop specific care plans for coordinating the patients' care.

Timing and Location

A timeline was set to enroll patients within six months of their identification as eligible for the program. The RN care coordinator performs the initial assessment either by phone or in the PCP office.

Care Management Team

Team Composition

The patient's primary point of contact is the RN care coordinator/manager. The CMP team is comprised of the care manager/coordinator, PCP, and support from the program's mental health, pharmacy, and community resource components.

Team Roles and Education

The RN care coordinator refers patients to relevant team members for additional support, depending on the needs identified during the initial assessment, or during subsequent assessments after ED visits, inpatient hospitalizations, and other events. This could include referrals to the CMP social worker or community resource specialist, or external referrals to home care agencies or other community services. Since many members of the CMP population have complex medication regimens, both MGH and BWH enlisted the support of a pharmacist to review the appropriateness of medication regimens and to assist patients with access to medications. The pharmacist also identifies opportunities to reduce the number of medications and to suggest alternative therapies.

PCP Involvement

MGH and BWH primary care physicians are asked to conduct the following activities:

- Encourage beneficiaries to participate in the program and enroll them when possible

- Collaborate with care managers to review initial assessments and to develop a care plan for each patient

- Inform case managers about patient events and refinements to patient care plans during the demonstration period

- Discuss advance directives with enrolled patients

Shared Management

RN care coordinators collaborate with PCPs to prioritize patients based on risk level and to develop care plans for each patient. For patients with mental health needs, the RN care coordinator engages the CMP social worker to consult on or to comanage patients, depending on the level of needed support.

Tools

The program licensed Morrisey case management software and uses the included Continuum program for ambulatory care coordination. Patients' biographical information is loaded into the system, allowing for patient assessment information to be entered, along with communications, referrals, activities, and education. Follow-up work assignments are created for the next day, week, month, and beyond. Monthly reports are produced by the software that record quantity of assessments, face-to-face encounters, referrals, and communications by each user. The comprehensive care plans created in Morrisey are then documented in the patient's electronic medical record. These plans focus on care coordination and care management with patient-specific problems and goals and are reviewed with the patient and PCP.

RN care coordinators are alerted electronically when patients register in the emergency department (ED) or are admitted to the hospital. The RN care coordinators are paged during business hours, and emailed, to alert them to these events. RN care coordinators are also electronically notified of upcoming patient appointments, so they can help ensure attendance, assist in communication among providers, and meet with patients face-to-face during appointments when appropriate.

Ongoing Care

Caseload

BWH initially hired five RNs and two social workers, who were spread across 12 primary care practices. The goal was to integrate the RNs and social workers into the practices. Practices had between 25 and 400 patients, resulting in varied staffing, from RNs working part-time at multiple practices to some practices having two RNs assigned. Each RN had a caseload of approximately 200 patients. When an RN was assigned to several practices, program implementation and patient engagement was more challenging.

Frequency of Outreach

Morrisey case management software functions as a work, communication, and activity scheduler and as a reminder tool for the RNs and social workers. Users can set follow-up reminders ranging from one day to six months into the future, allowing the RNs and social workers to adhere to the care schedule required for each patient's needs. For example, post-episode assessments need to be completed within three business days after an inpatient discharge. When patients are in post-acute facilities, such as rehabilitation hospitals or skilled nursing facilities, or are receiving home care services, weekly updates are obtained to monitor the patient's progress. If patients have no activity in six months, an automatic re-evaluation appears on the RN's worklist as a reminder to reach out.

Care coordinators have contact with the majority of their patient panel monthly; for many patients, this includes multiple contacts each month. Some patients, while high-risk, are able to manage well with formal and/or informal supports in place. For these patients, the care management contact may be less frequent. The care coordinators review each patient's status with the PCP at least once every six months and adjust care plans and interventions as necessary.

Services

The RN care coordinators develop personal relationships with enrolled patients and work closely with physicians to help identify gaps in patient care, coordinate providers and services, facilitate communication especially during transitions, and help educate patients and providers.

The CMP team works with patients and their caregivers — both personal and professional — to meet patients' care goals.

RN care managers/coordinators also:

- Assess patient needs
- Identify barriers to good health outcomes
- Collaborate with physicians to develop treatment plans

- Educate patients about options for medical treatment and support services

- Facilitate patient access to services

- Supported patient self-management of medical conditions

RN care coordinators follow up through telephone calls and in-person interactions during physician office visits or at the hospital, if patients are admitted.

RNs also occasionally visit patients at home or in post–acute care facilities as needed. These contacts may include family-team meetings.

Patients who become stable may be removed from their RN's active caseload. The CMP does not "close the door" completely to these patients, but rather, when patients reach a certain range of criteria, they will not receive ongoing outreach from the RN. The RN will still be available if needed as these patients transition to a maintenance program.

Care Transitions Support

With the help of real-time alerts via paged messages, RN care coordinators can visit patients in the hospital and research the cause of the hospitalization to inform refinements to the patient's care plan that may prevent future inpatient stays. Program RNs contact patients following hospital discharges to make sure the patients understand and can comply with discharge plans. In addition, the RNs make sure that necessary follow-up appointments are scheduled, that patients have transportation, and that patients' medication plans are accurate. RNs also coordinate with home health care providers to stay informed of the patient's health status.

Outcomes

Results

The Centers for Medicare and Medicaid Services (CMS) commissioned an independent evaluator, Research Triangle Institute (RTI), to assess the performance of the original MGH demonstration program during its first three years of operation. RTI found MGH's program to be highly successful in targeting its interventions to the patients who offered the greatest opportunity to reduce costs and improve care. The second phase of the demonstration, which involved MGH and BWH, as well as a third partner hospital, North Shore Medical Center, is also being evaluated by RTI. This analysis has not yet been completed.

MGH results (2006 to 2009):

- Hospitalization rate among enrolled patients was 20% lower than comparison group.

- Emergency department visit rates were 13% lower for enrolled patients.

- Annual mortality was 16% for enrolled patients versus 20% for comparison group.

- Among eligible patients, 87% were enrolled.

- Communication between patients and health care team improved.

- Patients and physicians report high satisfaction.

Ongoing Measures for QI

In addition to the complete utilization data provided by Medicare on a quarterly basis, internal monitoring was performed throughout the demonstration program. Monthly reports were developed to monitor inpatient and ED use, diagnoses, and readmissions. These data allowed for more rapid program refinements, as they were not subject to the lag inherent in the Medicare reports. These internal data did not include utilization outside the BWH/MGH system, however.

Evolution of Program

Both the MGH and BWH programs refined their staffing and approach to care management over the course of the demonstration. In addition, lessons learned during the demonstration informed the later evolution of the program into a broader effort across the Partners HealthCare System.

During the first three years, MGH cycled through two care management software programs before settling on the Morrisey Continuum software. During the switch to Morrisey, the assessment process was reviewed by program leadership,

and major changes to the process were implemented. The single extensive assessment that was conducted initially was broken into six modules: functional assessment, mental health, advance care planning, transportation, pharmacy, and post–hospital episode. MGH changed its staff structure to better meet the program's needs:

- Addition of a designated case manager position to work specifically on post-discharge assessments to enhance transitional care monitoring

- Creation of a data analytics team to develop and strengthen the program's reporting capabilities

- Expansion of the role of the community resource specialist to provide patient support and referral for nonclinical services

- Expansion of the mental health component of the program by adding a mental health team director, clinical social worker, two psychiatric social workers, and a forensic clinical specialist (MD/JD), who follows highly complex patients with concerns such as legal issues, guardianship, and substance abuse

BWH also shifted its program staffing:

- Expansion of social work staffing from one FTE to two FTE

- Addition of a per diem RN care coordinator position to help cover vacations and absences, given multiple clinic sites and relatively high caseloads per RN care coordinator

Lessons Learned

During the first seven months of the demonstration period, MGH's CMP staff reported many lessons learned about the characteristics of the intervention population and the delivery of case management services for a patient population with complex medical and psychosocial needs. The staff expected that the program would have the greatest impact by preventing acute health care events among patients who were initially not having significant health issues; however, case managers found that they spent a lot of time dealing with urgent issues for patients who "spiraled out of control."

Although initially some patients were skeptical about the MGH CMP, overall, patients quickly formed relationships with case managers, including several who requested daily contact with their case managers to help them with their numerous issues.

MGH observed that the program model appeared to work better in larger practices, where the impact of the program was more easily observed among a larger panel of patients. Small physician practices were more likely to have procedures firmly in place, and therefore encountered more challenges in integrating case managers into their practices.

MGH encountered several challenges in implementing its CMP, including ramping up the program quickly, effectively supporting patients residing in skilled nursing facilities or other institutions, and balancing the breadth and depth of support provided to each participant.

BWH found that having a relatively low volume of high-risk patients per practice was challenging, as some RNs were assigned to three or four practices to achieve expected caseloads. This inconsistent presence of the CMP RN at smaller practices led to slower program "uptake" at some sites. In larger practices where the RN care coordinator had many patients and was more visible, integration within the primary care team was more rapid and more successful. BWH has also found that it is important for RNs to have adequate social worker support, which led to the decision to increase social worker staffing after the first year of the demonstration.

Costs

Under this demonstration project, CMS paid MGH a monthly fee per patient to coordinate their care. MGH was required to cover the costs of the program plus 5% for the first cohort of patients in the demonstration. For later cohorts of patients, the savings requirement was reduced to program costs plus 2.5%. If there are savings greater than 2.5% to 5% plus costs, MGH and CMS will share the remaining savings.

At least 200 physicians from the 19 MGH primary care medical practices that treat adult patients served as the primary care physician to at least 1 and as many as 59 patients eligible for MGH's CMP.

MGH achieved the following program savings:

- 12.1% in gross savings among enrolled patients

- 7% in annual net savings among enrolled patients after accounting for the management fee paid by CMS

- $2.65 in program savings for every dollar spent

Technology/Innovation

Technology Enablers

A comprehensive health IT system supports the entire program, which includes electronic health records, patient tracking, and in some cases, clinical monitoring from home (e.g., through arrangement of cardiac telemonitoring services). The program uses Morrisey case management software and its included Continuum program for ambulatory care coordination.

Future Innovation/Direction

The CMP model is being expanded across Partners HealthCare to include three commercial insurers, as well as the Medicare ACO; the insurers provide claims data to assist with high-risk patient identification and analysis. This expanded program, called the Integrated Care Management Program (iCMP), includes a broader patient population involving about 20,000 high-risk patients across the Partners system. This includes approximately 3,000 patients at BWH and about 6,000 patients at MGH. These high-risk patients are identified using an algorithm developed by Partners, which incorporates a risk-modeling tool to capture past use and high-risk conditions or indicators that may predict the future likelihood of health care complexity and cost.

Of the 3,500 BWH patients initially identified as high risk based on claims data analyzed with the Partners algorithm, 500 to 1,000 are expected to be excluded from the program by primary care physicians. For example, a patient's health needs may not reach the level of complexity that this intensive intervention was designed to support, or the patient may have

stabilized. Physicians will also be able to refer patients to the program, allowing the program to achieve a caseload of 200 patients per RN.

Larger practices will have between 200 and 800 patients, with smaller practices having about 100 patients. With this expanded program, RNs will be better integrated within the practices, and most will be assigned to one practice full-time.

The Brigham program is collaborating with primary care and social work leadership to integrate more social workers into the primary care practices. There are now nine social worker positions assigned to 14 practices, so there is greater access to mental health support for high-risk patients within their primary care medical home.

Additional community resource specialists have also been hired to provide more support to the iCMP team in arranging services for patients. The program is also now working with specialty physicians and teams to address patients requiring subspecialty support and care. In addition, iCMP plans to hire additional pharmacy staff to assist with medication reconciliation, which is proving to be a challenge for RNs.

Author: Medimetrix

Independent Health
Care Partners

INTERVIEWEES: Thomas J. Foels, MD, Chief Medical Officer; Kathleen Mylotte, MD, Associate Medical Director

Summary

Care Partners is a care coordination program targeting the frail, elderly population of Erie County. The majority of Care Partners patients have two or more chronic conditions. The most common diagnoses are congestive heart failure, chronic obstructive pulmonary disease (COPD), and dementia. The program's goal is to help Medicare and dual-eligible patients remain independent in their homes. Care Partners has been active for four years and has approximately 360 active members.

Patient Identification

Inclusion Criteria

The program serves only the frail, elderly population. Participation in the program is restricted to the Medicare population in Erie County whose chronic conditions impede functioning and increase the likelihood of preventable clinical compensation with hospitalization.

Data Sources and Tools Used

Claim-based software was initially used to identify patients, but this practice resulted in many false positives. Now patients are referred to the program by physicians, Independent Health Association (IHA) care managers, and practice coordinators, all of whom are familiar with the criteria and program details.

Ranking/Stratification Methodology

The initial use of claims-based, predictive-model risk scoring lacked specificity in identifying members appropriate for the interventions and in predicting use among members of the program. The Care Partners program is currently using and evaluating a frailty-based risk tool. All members are frail, have multiple comorbidities and medical psychosocial needs amenable to program interventions, and are likely to see improved outcomes. All active members are reassessed every six months. If there are no further interventions to be made or status quo has been reached, the member is discharged from the program.

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Ongoing Data Collection Methods

Data are collected through claims forms, electronic health records (EHRs), and physician and member satisfaction surveys. Additional metrics will be tracked in the program's information technology platform planned for 2014: fall risk, PHQ9 (Patient Health Questionnaire), and HEDIS measures.

Assessment

Tools

Nurses visit patient homes to perform the initial medical and social assessments. If social or behavioral health needs are identified as contributing to adverse medical outcomes, a social worker (SW) or a behavioral health social worker (BHSW) is assigned to the member.

Assessment Elements

The initial assessment of the patient includes:

- Medical history and current status
- ADL/IADL ability
- Cognitive assessment
- Psychosocial assessment
- Evaluation of needs and support systems
- Financial review to determine availability of community resources
- End-of-life planning evaluation

An individualized care plan is then developed with input from the member and/or family members. If it is determined at the initial assessment that there are no interventional needs appropriate to the Care Partners program, members are not enrolled but referred to other programs.

Timing and Location

Assessments are conducted within 7 to 10 days of the referral, unless the member requests otherwise. Assessments take place in the patient's home.

Care Management Team

Team Composition

The patient's primary point of contact is the IHA care manager.

Independent Health partnered with a vendor (Family Choice) to provide nurse and social worker services for the program. The interdisciplinary team includes:

- Assigned care management nurse
- PCP
- Member/family/health care proxy
- Assigned SW or BHSW and other providers as indicated

Team Roles and Education

The care management nurse visits patients in their homes to provide general medical education, education on disease processes, and information about care choices and direction of care. The nurse also identifies red flags to help prevent readmissions and ED visits.

The SW or BHSW works with the member to obtain and coordinate additional resources, initiate a Medicaid application if appropriate, and engage in advance planning discussions. The SW also assists in transitioning the member to a higher level of care if the interdisciplinary care team and the member determine the need.

PCP Involvement

The nurses work in coordination with the PCPs, keeping PCPs informed and engaged through copies of care team notes and care plans, as well as by phone when indicated.

Shared Management

Health coaches and practice coordinators communicate regularly with, and work with, the IHA care manager to meet any complex care needs.

The IHA care manager communicates with the PCP as well as other providers involved in the member's care to share information and work toward meeting the member's care goals.

The care plan is available electronically to internal Care Partners staff and is faxed to the PCP office on a regular basis. The member is also provided a copy upon request.

Ongoing Care

Caseload

- Medical director: approximately 4 to 6 hours per week depending on need

- Nurse care manager: 50 patients/1 FTE

- SW: 300 patients/1 FTE

- BHSW also provides support to the team

Frequency of Outreach

The nurse or SW visits each member at least monthly. Patients with high-risk diagnoses require more frequent visits. A patient-centered approach is used in providing care to all members such that a change in medical, functional, or psychosocial status may increase the frequency of visits regardless of underlying diagnosis. The nurse care manager follows the member through transitions of care to insure a smooth return home.

Services

Provided by nurses. The goal of the program is to help patients remain independent in their homes. The nurse works with patients to create a care plan as well as detailed advance directives. The nurses visit patients as needed and educate them on their diagnoses, disease processes, and early warning signs. Nurses are available to the patients around the clock and become a central and often first point of contact for patients and their families.

Based on the ADL/IADL assessment, the program assists the member in obtaining necessary community resources to enable the member to remain at home. As deterioration in the member's functional and/or cognitive ability indicates the need for a higher level of care, the program staff works with the member and family to coordinate the transition.

Provided by social workers. A majority of the patients do not have adequate caregiver support, transportation, or access to community services. The social workers provide patients with social support, arrange for transportation, and link patients to social services in the community. Due to economic demands, many caregivers and family members cannot offer the depth of support to their chronically ill family members that they often require. The social workers help fill these gaps in care.

Accessibility. The program nurse and social worker visit the patient at home regularly, are accessible by phone, and report medical issues to the physician to facilitate changes as needed. The care plan is sent to the PCP regularly to facilitate communication of member status and needs.

Care Transitions Support

Timely identification of discharges from the hospital has been challenging due to systems and overlap with hospital-based care transitions program. The program recently implemented an improved notification of discharge.

The in-home transition visit takes place within three business days of discharge to assess condition, coordinate follow-up appointments, provide disease-specific education, and initiate medication reconciliation.

The member is contacted by phone or visited weekly for one month, depending on identified need, with the goal of assessing the patient's status to reduce hospital readmission risk.

Care Partners is currently developing a similar approach for post–skilled nursing facility discharge.

When medically appropriate, the care team will work with the PCP and the member, the patient's family members, or the patient's health care proxy to directly admit the member to subacute rehab and avoid unnecessary hospitalization.

Tools

The program does not have an e-decision support system at present. This is, however, part of a current EHR upgrade planned for mid-2013. Currently, the team uses written assessments from the literature or that are developed internally. More-challenging decisions are discussed with

the program director or medical director, or through interdisciplinary case conference.

Outcomes

Results

The program achieved:

- 98% positive patient satisfaction rate
- 45% reduction in ED visits (compared to baseline)
- 58% reduction in admissions
- 43% reduction in 30-day readmissions

Results of Advance Planning Discussions, July to December 2012

FINDING	AT ENROLLMENT	AT DISCHARGE
Health Care Proxy in Place	64%	92%
Advanced Directives in Place	26%	54%
Discharges to Palliative Care Program		10%
Discharges to Hospice		3%

Evolution of Program

Initially, claims-based software was used to identify patients. This process resulted in an overreach as patients who did not require chronic support were identified. Independent Health then turned to their provider community, care coordinators, case managers, social workers, and others who were familiar with the patient population.

Duration of member enrollment in the program has gradually declined. Current program duration is six months.

Lessons Learned

These programs contribute to more than just financial savings; they generate goodwill within the community, which contributes to member satisfaction, retention, and enrollment.

Demonstrating the value of these programs is difficult due to the inability to define a control group (i.e., being selected for enrollment means the group is different from the general population). Likewise, a comparison of the enrolled group to itself over time (i.e., pre-, post-, and during enrollment) is challenging. Current thought is to develop an analytic strategy based on a subset of risk assessments with published risk rates, such as depression or fall risk, and demonstrate the impact program membership has on that risk.

Experience gained in learning to better manage care for frail, comorbid members is invaluable when bringing on managed long term care or dual special-needs programs.

Costs

Independent Health designed the Care Partners program to be available at no cost to its members and with minimal limitations on the frequency of nurse or SW visits and phone support.

The program has resulted in an 8.4% reduction in overall per member per month costs.

Technology/Innovation

Technology Enablers

- Properly configured care management software to enable reporting and tracking of HEDIS, NCQA, and other key metrics
- Built-in e-decision support to drive consistency and to guide the care team

Author: Medimetrix

To learn about other complex care management programs, visit www.chcf.org.

Intermountain Healthcare and Oregon Health and Science University
Care Management Plus

INTERVIEWEE: Cherie Brunker, MD, Coprincipal Investigator, Chief of Geriatrics, Intermountain Healthcare

Summary

Care Management Plus (CM+) is a primary care–based, interdisciplinary team model from Intermountain Healthcare and Oregon Health and Science University (OHSU) designed for older adults and people with chronic conditions. The program was developed and disseminated with support from the John A. Hartford Foundation and involves the use of specially trained care managers and information technology tools to help the primary care team address the complex needs of patients and their caregivers. The care managers are most often nurses or social workers who receive additional training on geriatrics, motivational interviewing, and chronic disease management.

Performed in the clinic, initial assessments may include the following elements: medications, activity, family support, mental health, psychosocial barriers, disease management history, and advance care planning.

The program has been disseminated nationally, covering more than 184,000 patients.

Patient Identification

Inclusion Criteria

At Intermountain, patients are included in medical home care management based primarily on identified conditions such as diabetes, hypertension, and depression, or they may be referred by their physicians. The program is flexible at OHSU, where patients for care management are identified by risk algorithm or by referral.

Data Sources and Tools Used

Monthly reports are generated from the electronic health record to provide updates on disease management, including the diabetes quality measure bundle.

Ranking/Stratification Methodology

Emergency department visits and hospitalizations also flag patients for care management and/or primary care intervention.

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Ongoing Data Collection Methods

Providers have the ability to generate panel reports based on medications or conditions, giving them many options for quality improvement initiatives, which are an expected part of the clinic culture and practice.

Assessment

Tools

The CM+ care manager assesses a patient's readiness to change, disease states, cognitive status, and safety level. The care manager develops a care plan in collaboration with the patient.

Assessment Elements

Assessments can cover the following:

- Medications
- Family support
- Psychosocial barriers
- Lifestyle factors
- Behavioral health
- Need for palliative care

For patients with acute or pressing issues, the assessment can be targeted to those specific needs.

Timing and Location

Assessment occurs during the initial visit with the care manager. The assessment takes place in the physician's office.

Care Management Team

Team Composition

The primary point of contact for the patient is the program care manager. The care manager, who is usually a nurse or a social worker, teams with primary care physicians, nurse practitioners, and physician assistants.

Team Roles and Education

Care managers follow disease management models. The care managers review patient history, complete initial patient assessments, and set goals with the patient. To prepare for their role, care managers train in the fundamentals of care management, special issues in geriatric syndromes and concepts, and chronic disease management, including diabetes, depression, asthma and COPD, heart failure, sleep disturbances, and palliative care, among others. For dissemination of CM+, the curriculum is offered in two-day in-person training sessions followed by a series of online learning modules. Motivational interviewing, patient coaching, and support of self-management are emphasized.

Care managers' main responsibilities are to facilitate communication among clinical personnel, conduct patient assessments and education, coordinate services, address barriers, and promote an optimal allocation of resources that balance clinical quality and costs.

PCP Involvement

CM+ care managers are embedded in primary care clinics. The care managers foster an ongoing, collaborative relationship with their primary care practice to help integrate special care management technology software and solutions into the clinic's workflow. CM+ tools include:

- A care manager tracking database
- A patient summary sheet
- Messaging systems to help clinicians access care plans, receive reminders about best practices, and facilitate communication among the care team

Shared Management

Multiple providers and health care teams can access care plans and share information, decreasing medication errors, reducing duplication in services, and allowing caregivers to provide more cohesive care.

Ongoing Care

Caseload

Care manager case load is typically 250 to 350 patients.

Frequency of Outreach

The amount of patient contact, including the initial assessment, varies by patient need but averages two times per month over three months.

Services

Follow-up by the care manager may occur at the clinic, by phone call, by electronic message or reminder, or on rare occasion, by home visit.

Care managers provide updates to the provider through the care plan chart or by secure messaging.

CM+ care managers provide the following services:

- Empower patients who have multiple chronic diseases to organize, prioritize, and implement suggested self-management strategies

- Identify barriers to care and intervene to overcome them when possible

- Coordinate resources to ensure that necessary services are provided at the most appropriate time and level of care

- Identify situations that may put the patient at risk for destabilization and intervene to eliminate the risk when possible

- Gather, interpret, and use data to identify problems and trends and to demonstrate clinical outcomes and cost-effectiveness

CM+ is a proactive approach that promotes patients' self-management skills. Using motivational interviewing and techniques, such as teach back, reminders, and referrals to community resources, fosters patient engagement.

Care Transitions Support

Notifications of emergency department visits and hospitalizations prompt a follow-up visit with the physician and additional care coordination or caregiver support by the care manager as needed.

Tools

The care managers and other members of the clinic team use a one- or two-page patient worksheet — a printed patient summary with a list of current problems and medications, disease management measures, recent nutritional information,

and vital signs — all data that are electronically gathered from the data warehouse. Built-in decision support generates recommendations for preventive services or labs due and patient alerts. The patient worksheet can also serve as an after-visit summary, a helpful take-home resource for patients with reminders and alerts.
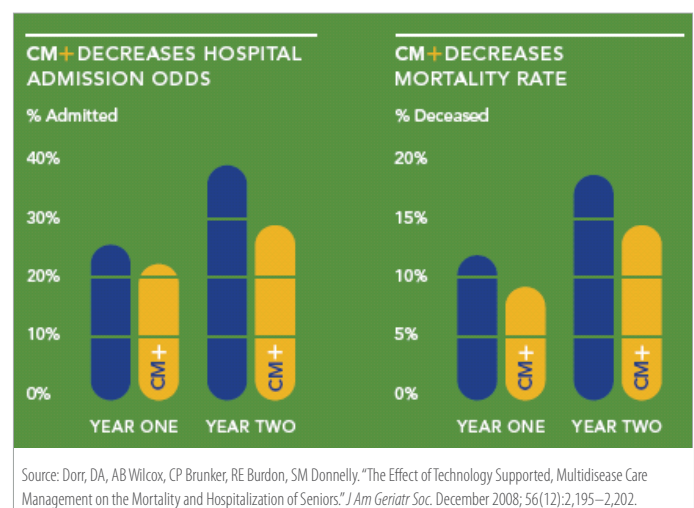
The health information technology system's tracking and documentation capabilities help maintain updated patient records and allow for health information exchange. Use of an integrated personal health record is also encouraged.

Outcomes

Results

For patients with diabetes, the program was very effective at improving process and outcome measures of diabetes control. The program resulted in an estimated 20% to 35% reduction in complications of diabetes.

In peer-reviewed studies, CM+ has demonstrated a wide range of benefits. For example, CM+ patients, particularly those with diabetes and depression, have shown improved adherence to disease care guidelines. Most dramatically, CM+ patients reduced their odds of hospital admission by 24% to 40% and their annual mortality rates by more than 20% compared to a control group.

Source: Dorr, DA, AB Wilcox, CP Brunker, RE Burdon, SM Donnelly. "The Effect of Technology Supported, Multidisease Care Management on the Mortality and Hospitalization of Seniors." *J Am Geriatr Soc.* December 2008; 56(12):2,195–2,202.

Outcome Trends

Physicians were generally satisfied with the care management program, as they felt that the program led to reduced patient turnover and a happier primary care team. A physician's rate of referral to care management was based on that physician's self-perceived ability to manage the patient. Time limitation was the primary reason for referral, but a strong secondary reason was the specialized knowledge and skills of the care manager.

Ongoing Measures for QI

Intermountain's longstanding electronic data warehouse is a repository of inpatient and outpatient clinical information used to generate patient summaries, clinical and cost dashboards, and reports for behavioral health and chronic disease management. Quality measure reports that interface with patient records give care teams an interactive, real-time view of clinic quality and areas for improvement.

Lessons Learned

Intermountain's work has shown that about 20% to 30% of people who benefit from CM+ are not identified by risk, so the program should be flexible for referrals from providers.

Additional research has also shown that physicians are able to create a more efficient practice through better use of documentation, a slight increase in patient visits, and a change in practice pattern. Physicians who referred to CM+ care managers were 8% to 12% more productive than peers in the same clinic.

Costs

The cost of the program per physician practice was estimated to be $92,077. The benefits for a seven-physician practice were $99,986, proving the program cost neutral and sustainable. Estimated savings to Medicare from decreased hospitalizations was $17,384 to $70,349 per clinic.

Technology/Innovation

Technology Enablers

The care management tracking system helps the care manager gather and follow up on key measures and information needed to effectively care for older adults and those with chronic conditions. The CM+ program developed unique software for primary care practices adopting the CM+ model. It is not necessary to use the software to conduct CM+, but most electronic health records do not include all of the critical functions needed to support care management.

The CM+ software enables the care manager to:

- Flexibly plan chronic care tasks, including lab work, referrals, and classes

- Schedule visits and phone calls

- Create reminder lists (tickler lists) based on patient criteria designed to promote adherence to the care plan

- Manage workflow and evaluate use of practice and community resources

The CM+ software enables the clinical staff at practices to run reports on:

- Number of patients referred by physician

- Diagnoses and payers

- Trends in outcomes for depression (PHQ-9) and diabetes (Hemoglobin A1C, patient goals)

- Work breakdown by encounter type, such as phone calls, face-to-face visits, clinic visits, administrative, and the time for each

The CM+ database also generates administrative reports that help clinic managers evaluate the program. This includes a variety of analyses that can track which clinicians are using CM+ and to what ends, practice trends in outcomes for conditions such as depression and diabetes, and measurements of care manager productivity.

Future Innovation/Direction

At Intermountain, new reports and tools are being developed for personalized primary care. The Integrated Care Coordination Information System (ICCIS) is a health information technology system developed at OHSU to specifically address the needs of a care manager.

ICCIS integrates a clinic's electronic health record data into a supplemental web application to provide comprehensive care planning, population management, and clinician reminders about best practices while reducing the need for dual documentation. ICCIS incorporates patients' goals and preferences and also plays a key role in the evaluation of new reimbursement models for primary care.

Author: Medimetrix

To learn about other complex care management programs, visit www.chcf.org.

Johns Hopkins University
Hospital at Home

INTERVIEWEE: Bruce Leff, MD

Summary

The Hospital at Home model was developed by the Johns Hopkins University Schools of Medicine and Public Health. The model has been adopted at a number of hospitals around the country, including Veterans Affairs and integrated delivery systems with Medicare Advantage plans.

The Hospital at Home model was designed to care for acutely ill patients within their homes. The primary target population is elderly patients with multiple chronic conditions and acute illness or those experiencing exacerbations of their chronic conditions and requiring acute hospital care. Treating patients in the home can save money, reduces the risk of health threats for the patients (especially for this at-risk population), and opens up hospitals beds for other patients.

In 2012, the Hospital at Home program treated more than 1,000 patients throughout the country.

Patient Identification

Inclusion Criteria

The primary target population is elderly patients with multiple chronic conditions who require acute hospital admission for selected illnesses. These patients are at low risk of clinical deterioration with proper care and are not likely to require highly technical, hospital-based procedures. Hopkins' initial research focused on frail, chronically ill, elderly patients who required acute hospital admission for one of the following reasons:

- Community-acquired pneumonia

- Heart failure exacerbation

- Chronic obstructive pulmonary disease (COPD) exacerbation

- Cellulitis

After their national demonstration study, Hopkins added several other conditions, including:[1]

- Deep vein thrombosis (DVT)

- Pulmonary embolism (PE)

- Dehydration/volume depletion

- Complicated UTI/urosepsis

The program does not include patients on dialysis. Patients do not have to have a caregiver.

Data Sources and Tools Used

The process of patient identification differs among the adoption sites. Patients can be identified using electronic health records, physician referrals, or other methods, such as emergency department (ED) referral.

Ranking/Stratification Methodology

Once patients are identified, there is no further patient stratification.

Ongoing Data Collection Methods

All sites implementing the program use different methods for data collection. There is not a required or standardized Hospital at Home method.

Assessment

Tools Used

Patient eligibility is assessed against previously developed and validated illness-specific medical eligibility protocols.

Assessment Elements

Patients are assessed for mental and physical stability, and for the safety and appropriateness of the home.

Timing and Location

Assessment takes place at intake in the ED, in the ambulatory clinic, or at the patient's home.

Care Management Team

Team Composition

The program nurse — the primary point of contact for the patient — works closely with a program physician.

Team Roles and Education

While the program physician visits patients daily, the RN serves as the coordinator of care, patient education, and ancillary services. RNs also visit patients at least daily, and sometimes more often depending on patient acuity and the details of the care plan.

The Hospital at Home team is available to train staff physicians and nurses on how to implement and operate the program. Training options vary and include in-person training, telephone consultation, and online support.

PCP Involvement

When the patient is discharged by the Hospital at Home physician, care reverts to the patient's primary care physician. The Hospital at Home team works to facilitate effective transitional care for the patient.

Shared Management

A program nurse accompanies patients to their homes upon their acceptance into the program. The nurse sets up the equipment and teaches the patient and caregivers how to use the devices. The nurse regularly visits patients in their homes.

The care team, which includes a physician, conducts home visits and implements appropriate diagnostic and therapeutic measures.

Ongoing Care

Caseload

One team can manage a daily census of 5 to 8 patients, depending on acuity and geography.

Frequency of Outreach

The care team conducts daily visits for all participating patients, and the program physician and nurse are available around the clock for any urgent or emergent situations.

Services

The patient receives the types of services they would have received in the hospital appropriate to their illness, such as:

- Blood tests

- Intravenous medications or fluids

- Oxygen and other respiratory therapies

- Pharmacy services

- Basic x-rays

- Echocardiograms and electrocardiograms

- Basic ultrasound

The clinicians use care pathways, including illness-specific care maps, clinical outcome evaluations, and specific discharge criteria.

Diagnostic studies and therapeutics that cannot be provided at home, such as computerized tomography, magnetic resonance imaging, or endoscopy, are available via brief visits to the acute hospital.

The nurse is also involved in educating patients about their conditions and warning signs, and providing access to social support services.

Care Transitions Support

The patient is treated until stable for discharge. When the patient is discharged by the Hospital at Home physician, care reverts to the patient's primary care physician. Management of the patient in the home allows for robust transition services including in-person physical medication reconciliation, direct phone calls to primary care physicians, and extensive patient education. Some adopters include telemedicine follow-up during the transition period.

Outcomes

Results

An adopting organization recently published data demonstrating a decrease of 19% in total cost, which was

primarily due to reduced average lengths of stay and a reduction in lab and diagnostic tests.

In studies comparing Hospital at Home to regular hospital care, Hospital at Home patients were less likely to experience complications such as delirium (acute confusion) and were much less likely to be prescribed sedative medications or chemical restraints. Also, family members of the Hospital at Home patients experienced less stress related to their loved one's care.[2]

A 2009 Cochrane meta-analysis of randomized studies found a 38% reduction in risk of death for participants in the Hospital at Home program at six months, but it does not differ from inpatient care for readmission.[3]

A 2012 meta-analysis of over 60 randomized controlled trials of Hospital at Home care demonstrated a 21% reduction in mortality (number needed to treat = 50) and a 24% reduction in readmission.[4]

Outcome Trends

The organizations implementing Hospital at Home individually study the impact of the program on cost, length of stay, readmissions, and clinical outcomes. The care model has been shown to lower costs by almost one-third and to reduce complications.

A 2012 *Health Affairs* study showed that patients at Presbyterian Healthcare Services' adaptation of Hospital at Home had comparable or better clinical outcomes compared with similar inpatients, and higher satisfaction levels. The Presbyterian Healthcare Services' program also achieved savings of 19% over costs for similar inpatients. Savings mostly resulted from lower average lengths of stay and use of fewer lab and diagnostic tests compared with similar patients.[5]

Researchers in 2009 compared differences in the functional outcomes experienced by Hospital at Home patients and traditional acute hospital patients who were part of the prospective nonrandomized clinical trial. Patients treated in the Hospital at Home program experienced modest improvements in performance (IADL and ADL) scores, while

those treated in the acute care hospital declined. A greater proportion of Hospital at Home patients improved in function and smaller proportions declined or had no change.[6]

A 2007 study, published in the *Journal of the American Geriatrics Society,* focused on the stress experienced by family members of patients cared for in a Hospital at Home institution. It found that Hospital at Home care was associated with lower levels of family member stress than traditional acute hospital care.[7]

A 2006 *Journal of the American Geriatrics Society* study found that Hospital at Home patients were more likely than acute hospital patients to be satisfied with their physician, comfort and convenience of care, admission processes, and the overall care experience. In addition, family members of patients treated in Hospital at Home were more likely to be satisfied with multiple aspects of care.[8]

Ongoing Measures for QI

In the 2005 national demonstration and evaluation study of Hospital at Home in three settings, illness-specific standards of care (e.g., administering antibiotics within eight hours of admission for pneumonia and cellulitis patients, use of corticosteroids for COPD patients, and use or considered use of beta blockers for CHF patients) were achieved in similar proportions for both study groups at the aggregate and site levels.[9]

In addition, there was a statistically significant lower rate of incident delirium in the Hospital at Home group (9%) compared to the observation group (24%).[10]

Evolution of Program

A team of geriatric physicians and nurses led by Dr. Bruce Leff developed the basic model of Hospital at Home, and an initial study of the concept was conducted at Johns Hopkins Bayview Medical Center in 1999. The initial concept of the program was to parallel care a patient would receive in acute care.

To further evaluate the concept, a national demonstration and evaluation study was conducted between 1999 and 2003 in three Medicare managed care organizations and one Veterans Administration health center.

Initially, the RN observed the patient in the home for the first 24 hours, but that level of care was unnecessary for some patients and is now adjusted based on individual patient need.

Lessons Learned

Johns Hopkins found that implementation of the program on a wide scale has been limited by the incorrect assumption that hospital care is safer and bypasses payment issues with Medicare. Currently, there are no payment codes for Hospital at Home care in fee-for-service Medicare. Thus, implementation of the Hospital at Home model has been limited to Medicare managed care, integrated delivery systems, and Veterans Affairs health systems.

A challenge of the model is the difficulty in serving patients across a broad geography. Successful implementations of this model have limited the geography to a 20- or 30-mile radius from the hospital.

Costs

The Hospital at Home business model will vary depending on a health system's reimbursement model: fee-for-service, managed care, or Veterans Administration.

In a 2005 national demonstration and evaluation study of Hospital at Home in three settings, the mean cost was lower for a Hospital-at-Home episode, $5,081, than for an acute hospital care stay, $7,480.[11]

Also, the study found no differences in the use of health services (ED visits, inpatient hospital readmissions, mean number of admissions to SNFs, and mean number of home health visits) in the observation and intervention (Hospital at Home) groups eight weeks after admission.[12]

Technology/Innovation

Technology Enablers

Once patients are home, they may be provided a variety of biometric and communication devices. The biometric readings are sent to a central location where the patients are monitored and evaluated. Newer versions of the program use a vendor (Clinically Home) and have virtual doctor "visits" and telemedicine-program nurse follow-up.

Future Innovation/Direction

The Hospital at Home team has developed a range of tools to support local adoption and implementation of Hospital at Home. The toolkit includes:

- An implementation manual

- Patient eligibility protocols

- Financial planning and evaluation tools

- Patient recruitment and education tools

- Measurement tools

- Patient-tracking mechanisms

Tools to support financial analysis and marketing communications are also under development. Johns Hopkins offers an online interactive business model spreadsheet that can help an organization explore certain dimensions of the financial implications of Hospital at Home (www. hospitalathome.org).

An organization is prompted to enter data on their rates of admissions and payment structure. This information can help to determine if Hospital at Home can be a successful business model for an organization.

Author: Medimetrix

Endnotes

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10. Ibid.

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Mount Sinai Medical Center–New York
Mount Sinai Visiting Doctors Program/
Chelsea-Village House Calls Programs

INTERVIEWEE: Theresa A. Soriano, MD, MPH, Associate Professor of Medicine and Geriatrics & Palliative Medicine, Executive Director, Mount Sinai Visiting Doctors & Chelsea-Village House Calls Programs and Linda V. DeCherrie, MD, Associate Professor of Medicine and Geriatrics & Palliative Medicine, Associate Director, Mount Sinai Visiting Doctors Program

Summary

The Mount Sinai Visiting Doctors (MSVD) Program is a joint effort of Mount Sinai Medical Center's Department of Medicine and Department of Geriatrics and Palliative Medicine. Started in 1995, MSVD is a multidisciplinary research, teaching, and clinical care initiative providing comprehensive primary and palliative care to homebound patients with complex chronic conditions in the Manhattan area.

The MSVD Program cares for over 1,100 patients annually, with program physicians making more than 6,000 routine and urgent visits each year, establishing it as the largest academic program of its kind in the country. The focus of the program is on improving the health and optimizing the quality of life of patients as well as their caregivers; matching treatment plans with patient goals; avoiding unnecessary emergency department (ED) visits, diagnostic testing, and hospitalizations; maintaining patients in the community; and when appropriate, providing comprehensive end-of-life care.

Program participants can be commercially insured, and dually eligible, under Medicare, Medicare Advantage, or Medicaid. An important aspect of the care provided by MSVD is the ability to offer resources beyond medical care. The MSVD team of social workers helps locate supportive services for patients and their loved ones that are available from New York City agencies, from securing medical benefits and setting up meal delivery to providing therapy and counseling.

Patient Identification

Inclusion Criteria

The primary program eligibility requirement is that the patient is unable to access regular medical care because of disease burden or functional or cognitive impairment.

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This program overview is part

of a series describing innovative

approaches to caring for complex

patients. Funded by the California

HealthCare Foundation, these

overviews are the result of

a national scan highlighting

programs active in the field that

have demonstrated success.

Most program patients share the following characteristics:

- Suffer from five to seven chronic conditions

- Take over 10 medications

- Are frail elderly

- Live alone or are cared for by an unpaid caregiver

Data Sources and Tools Used

The majority of program referrals come from Mount Sinai Medical Center; participants are also referred by specialists, providers, and staff members at the following institutions:

- Senior communities

- Community-based social service agencies

- Visiting Nurse Service of New York

- Home care agencies

- Adult Protective Services

- Emergency departments

- Outpatient medical clinics

- Inpatient wards

Initial Screening

Potential patients are referred to the program and are then triaged and assessed by the RN over the phone for appropriateness and potential clinical need.

Ranking/Stratification Methodology

A triage nurse assesses all referred patients and, based on the data gathered, ranks patients on condition severity through a clinical severity score. The waiting list to get into the program is long; there are often 100 patients waiting at any given time. The longer that patients wait, the higher they move up on the waiting list.

Assessment

Timing and Location

Once a program patient is identified and is ranked high enough to be moved off the waiting list, the patient receives a home visit, at which time the initial assessment is performed. A program physician completes the intake assessment at the patient's home.

Tools Used

After the patient is moved off the wait list, a home visit is scheduled. An MSVD physician completes the initial assessment, which includes a health history and physical exam; further explains the program; and confirms the patient's willingness to become part of MSVD.

Assessment Elements

The assessment includes a comprehensive medical history, physical and social assessment, health care proxy, code status, home safety assessment, and various screenings (e.g., nutrition, depression, symptom severity) to assist in the development of a care plan.

Because the target population experiences high rates of depression, social isolation, and poor living conditions, in addition to medical history and physical exams, patients are assessed for:

- Nutritional risk

- Functional and cognitive capacity

- Depression

- Home safety and elder abuse

Care Management Team

Team Composition

The program physician is the patient's primary point of contact. The MSVD program is staffed with 14 physicians (8 FTEs), two nurses, two nurse practitioners, four social workers, and seven administrative assistants. The downtown program, the Chelsea-Village House Calls Program, has two physicians, one nurse, 1.5 FTE social workers, and one administrative assistant.

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Team Roles and Education

All physicians are board certified in internal medicine or family medicine, and some are additionally certified in geriatrics or palliative medicine and complete a two-week program orientation before starting independent visits. Pharmacists are not part of the care team, but the program does have informal relationships with pharmacies that can deliver medications to patient homes.

All social work involvement is on a consultation basis. All members of the care team — nurses, NPs, and physicians — can consult the social workers in the program.

MSVD provides training to over 200 medical students, residents, and fellows every year, including visiting trainees from institutions around the United States and nations abroad. All residents in internal medicine at Mount Sinai spend one month with the program, and all medical students spend a week visiting patients in their homes. Geriatrics and palliative care fellows spend more than one month with the program.

PCP Involvement

The program physician becomes the patient's PCP.

Shared Management

Program physicians meet twice weekly to discuss patient cases. There are additional weekly team meetings with some subgroups of providers in the program.

Ongoing Care

Caseload

A full-time physician manages approximately 95 patients. Two physicians are also part of a pilot program where they are paired with:

- One nurse practitioner (0.5 NP per MD)

- One social worker (0.5 SW per MD)

- One administrative assistant (0.5 AA per MD)

This group cares for 135 patients per MD.

In the downtown program, there are no trainees; the MD caseload there is 150 patients.

Frequency of Outreach

Visit frequency is at the discretion of the program physician, based on clinical need. MSVD patients are visited routinely at home every 6 to 8 weeks; however, patients who are acutely ill or at the end of life may be seen more frequently. Physician phone coverage is also available 24 hours a day, 7 days a week.

Services

The care team discusses goals of care with the patients on home visits — each care plan is tailored to each patient's specific conditions, level of function, and goals of care.

As chronically ill patients are functionally unable to get to the doctor consistently, vaccinations, cholesterol screening, counseling on proper screening, nursing, home care, physical and occupational therapy, lab work, x-rays, and ECGs can also be performed in the home using outside agencies and companies.

In addition to coordinating care, the MSVD team of social workers help locate supportive services for patients and their loved ones that are available from many New York City agencies — from securing medical benefits and setting up meal delivery to providing therapy and counseling. Patients work with program social workers to evaluate the need for help with finances, employment, health insurance, transportation, home care, assessing medical information, working with medical staff, emotional problems, family problems, spiritual or religious concerns, housing concerns, and help with daily chores.

Discussions about advance directives and end-of-life care are also addressed during home visits.

Care Transitions Support

The MSVD physicians are not the physicians of record when patients are admitted to the hospital; however, the MSVD physicians are in close contact with the inpatient teams. On discharge, the physician or NP schedules a follow-up visit and

ensures that home care is in place. MSVD is initiating a new care transitions program in 2013.

Outcomes

Results

- Prior to admission in the program, around 75% of patients reported at least one admission or ED visit. After one year in the program, only 25% of program patients had been hospitalized.

- Annual flu vaccination rates and patient/caregiver satisfaction scores on annual surveys are higher in the MSVD program than in community-dwelling and nursing home populations.

- The program maintains high levels of verified documentation of health care proxy (95%).

- The program also prospectively demonstrated reduced caregiver burden and a reduction in unmet needs for patient caregivers after enrolling in MSVD.

Ongoing Measures for QI

The main aim of the program is to help patients maintain independent living and, in some cases, to help patients die at home.

The majority of patients (67%) who die while in the program do so at home. This rate is double the national average.

Less than 10% of program patients are sent to nursing homes, even though 80% of program participants are nursing home eligible.

Evolution of Program

The program started in 1995 with a handful of patients in East Harlem. Now the program sees patients in all of Manhattan, serving over 1,300 patients a year. Although the institution provides a small amount of social work support, the program has sought out grant and philanthropy support for its social work services.

Lessons Learned

Patients in this program require a substantial amount of care coordination. A full-time physician spends more than eight hours per week on non-face-to-face interactions with program patients, mostly on the phone. This amount of time is largely not reimbursed but is essential to good care for these patients.

MSVD has a large number of requests for trainees to rotate through their program. MSVD has found that having two trainees with one attending is the maximum number for an optimal training environment.

Costs

Costs are hard to measure as the program reduces hospital admissions but also brings more services to the patient home.

In 2008, the *Journal of American Geriatrics Society* published the results of a retrospective cohort analysis (n=692,565 patient years) of Medicare-eligible individuals enrolled in the MSVD Home-Based Primary Care (HBPC) program.[1] Revenues and associated costs for direct physician home care services, inpatient admissions, and outpatient clinic and ED visits for one calendar year were captured.

Sensitivity analyses varying efficiency and cost variables were performed. Total direct cost for HBPC for the patient cohort was $976,350.

Direct billing from home visits generated revenues that covered 24% of total direct care costs. Over a 12-month period, the cohort had 398 inpatient admissions and 1,100 non-HBPC outpatient visits, generating an overall contribution to margin of nearly $2.6 million.

The journal article states it is likely that this analysis underestimates the true contribution to margin, because it does not capture patient encounters at specialty clinics not in the Department of Medicine, unaffiliated medical centers, or private community-based practices.

Although direct billing for academic HBPC programs does not generate enough revenue to meet operating costs, these programs can be significant revenue generators for the wider health care system and thus are fiscally worthy of subsidization. Also, nonteaching HBPC programs can be financially independent by increasing the number of home visits/day, using fewer administrative staff and nonphysician providers (e.g., NPs, PAs), and/or requiring lower overhead (e.g., less or no office space).

Technology/Innovation

Technology Enablers
The program uses an advanced EMR. For home visits, it has a bladder scanner and home EKG and uses a mobile x-ray from an outside company.

The program is testing the use of iPads in the home to document visits and order tests, and is also piloting the use of home handheld ultrasounds.

Future Innovation/Direction
The program focuses on enlightening Mount Sinai residents, students, and fellows about the needs of the country for chronic, home-based care. Even if these trainees do not focus on home-based primary care as a career, they will have an understanding of the community resources available to their patients and can properly refer to the appropriate services.

The program is involved with advocacy work. It works closely with The American Academy of Home Care Physicians (AAHCP), and through the MSVD program, it is able to shape government policy and reimbursements based on the program research and work findings.

In addition, MSVD is working with institutional leadership in maximizing its role in the Accountable Care Organization, to better identify and serve Mount Sinai patients who would benefit from HBPC but may not yet be enrolled.

Author: Medimetrix

Endnote
1. Nihar R. Desai, Kristofer L. Smith, and Jeremy Boal, "The Positive Financial Contribution of Home-Based Primary Care Programs: The Case of the Mount Sinai Visiting Doctors," *Journal of the American Geriatric Society* 56, no. 4 (April 2008): 744–749.

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Partners in Care Foundation
HomeMeds Program

INTERVIEWEE: Sandy Atkins, MPA

Summary

The HomeMeds Program evolved from the Visiting Nurses Association (VNA) of Los Angeles. The program was developed in response to home health nurses' requests for additional support when dealing with the complex and ever-changing medication regimens of some patients. Vanderbilt University researched the home health program and the potential for pharmacist integration.

From the findings of the controlled trial, the HomeMeds Program was created. The HomeMeds medication management system is now being used in more than 45 sites in 19 states. Sites include post–acute care transitions programs, area agencies on aging, an Indian tribal community, assisted living centers, homecare organizations, meal-delivery programs, and Medicaid waiver programs that keep older adults out of nursing homes.

The HomeMeds Program cares for 2,500 patients nationally, of which most are Medicare or Medicare Advantage beneficiaries and dual eligibles (Medicaid plus Medicare).

Patient Identification

Inclusion Criteria

The entire population of frail older adults who have already qualified to receive an in-home visit, such as home-delivered meals or visits for Medicaid waiver care management services, are eligible for screening. Program research has shown that about 50% of older adults receiving services in the home also have potential medication-related problems.

Within the context of a transition in care, HomeMeds should be included as part of the discharge and in-home coaching or social work intervention. For example, HomeMeds should be a standard piece of the Community-Based Care Transitions Program.

Where there is no current home service program (e.g., within a primary care practice), target population characteristics include patients over age 65 who have been hospitalized or who have used the emergency department (ED) within the past six months, and who are taking warfarin,

antiplatelet therapy, insulin, oral hypoglycemic meds, or digoxin, or who have been treated for a fall or fracture.

Other criteria for program inclusion include patients who have two or more of the following characteristics:

- Age 80 and older
- Recent increased confusion
- Diagnosis of depression, bipolar, anxiety, psychoses with comorbidity
- Recent self-reported fall
- Taking antipsychotics
- Taking four or more medications and have cognitive impairment
- Taking five or more medications
- Have three or more prescribers related to chronic conditions (e.g., PCP, psychiatrist, and endocrinologist)

Data Sources and Tools Used

Normal practice is to apply HomeMeds to all clients receiving home-based services. When patients are targeted specifically for HomeMeds intervention, the typical source of information is a nurse or social work care manager. Electronic health records (EHRs) can be programmed to identify patients, but this has not yet occurred.

Assessment

Tools Used

Home health nurses and care managers collect health information from the patients. The care manager or nurse, who is sometimes supported by clerical staff, enters the client's clinical information and medication list into a computerized risk assessment screening system. The software alerts the user to potential medication problems based on criteria developed by an expert panel.

Based on the client's medication list and clinical indicators, the software identifies four types of medication problems common among frail, community-dwelling seniors:

1. Unnecessary duplication
2. Signs of possible cardiovascular medication problems
3. Inappropriate use of anxiolytics, antidepressants, sleep aids, or other psychotropic drugs
4. Inappropriate use of nonsteroidal anti-inflammatory drugs (NSAIDs)

Assessment Elements

The assessment includes vital signs (e.g., blood pressure, pulse rate), other clinical indicators (e.g., falls, dizziness, confusion), age, and medication use.

Timing and Location

An assessment takes place shortly after the patient is discharged from the hospital or when a senior is first assessed for home and community-based services. Assessments occur in the patient's home.

Care Management Team

Team Composition

A care manager, usually a social worker or nurse, is the primary point of contact for the patient. Each program develops a relationship with a pharmacist. Some programs hire a part-time pharmacist or contract with a consultant pharmacist (paid on retainer, per consultation, or per hour), while others build relationships with pharmacists who volunteer their time or use supervised pharmacy school interns. In some cases, a geriatric nurse practitioner can take the place of the pharmacist. Home health nurses and social work care managers participate in the program as part of their regular duties. In rare cases, a clerical staff person may transcribe a handwritten medication risk assessment completed in the home. Pharmacy technicians have been successful in this role.

Team Roles and Education

Partners in Care works with organizations to prepare for implementation of HomeMeds — training staff and assisting in software integration options. HomeMeds also includes detailed manuals, protocols, and handouts on medication management. There is a fixed setup and training fee, but sites are encouraged to share training so that each site incurs only

a small amount. There is a sliding-scale fee for sites to license to use the online medication risk assessment software. For an additional setup fee, the system can be integrated with other web-based information systems and EHRs. Clinical protocol training for nurses and pharmacists is done by a Partners' pharmacist.

PCP Involvement

When the HomeMeds software issues a patient alert, the care manager contacts a consultant pharmacist, asking for a review of the client's clinical information and medication list. After eliminating problems that can be addressed through patient education by the pharmacist or care manager, the pharmacist then notifies the prescriber and/or PCP by faxed letter, but sometimes by telephone in more critical situations. Included in this notice is a request that the physician confirm receipt of the information and notify the care manager about any follow-up actions. The physician reviews the patient's information and the pharmacist's recommendations, making changes to the medication regimen if appropriate.

Shared Management

In the context of post–hospital care transitions, HomeMeds initiates a conversation about medications and can serve as the basis for the personal health record. Output from the HomeMeds software is available in editable Microsoft Word format, which can be provided to the patient or family. Care managers determine whether sharing problem alerts with the patient is appropriate. If the patient might be upset by the information (e.g., has anxiety medications or diagnosis) or is deemed likely to discontinue medications before completion of the consultation with the pharmacist and/or prescriber, then the patient is given only the medication list and self-reported assessment information. If the patient indicates adherence challenges — from forgetting to not being able to afford medications — the care manager connects the patient with appropriate devices, educational resources, or services.

Ongoing Care

Caseload

Typical caseload for a care manager in California's waiver program is 40 clients. The caseload across the country varies by the patient population and focus of the program but is generally up to 60 clients per care manager. Pharmacist reviews average 30 minutes and range from 5 minutes to approve current medication use to one hour for complex cases that involve phone calls to patients, prescribers, and care managers.

Frequency of Outreach

After the initial screening and intervention, care managers are advised to check at their next visit or phone call to determine if the medications involved in alerts have been changed (e.g., discontinued, substituted, or changed in dose or frequency). Care managers are trained to ask clients in each contact if there have been any changes in medications and if clients have fallen or had other potential adverse drug effects.

Services

The HomeMeds evidence-based model contains the following core elements:

- Risk screening by protocols to identify potential errors and medication-related problems

- Assessment of the client's condition and adherence based on established guidelines

- Consultation with a pharmacist (or nurse practitioner) to develop a plan of action based on protocols

- Follow-up with physician and client to improve medication use

The nurse or care manager reviews the medication alerts with the patient in the home, follows up to verify the medication's dose and frequency as actually taken by the patient, and updates the medication list if necessary. The pharmacist can fax recommended regimen changes to the prescriber. If the prescriber does not respond directly, the nurse or care manager will ask the patient at the next visit or via phone if the prescriber has made any changes to the medication regimen, and if so, updates the information in the software as appropriate.

The care plan is developed from the pharmacist recommendations. This is documented in a report that can be

printed, saved, faxed, or emailed. In addition, the HomeMeds software contains a method for communication and recommendations to be documented and exchanged between the care manager and pharmacist.

If adherence issues are identified, staff will recommend or provide assistance to improve adherence (e.g., dispensers, reminder systems, financial support, or home health).

Care Transitions Support

In a care transition process, HomeMeds can serve as the basis for a medication reconciliation between hospital and home. If coaching is being used, the medication list and assessment information form the basis for a patient health record that can be updated whenever there is a change.

In its current form, the HomeMeds software is too complex for consumer use, but the report is available in editable Microsoft Word format and can be provided electronically to the patient or caregiver to support self-management in the future.

Tools

The evidence-based protocols and software both serve as decision support tools. Pharmacist education, experience, and judgment supplement these.

A patient orientation and motivational brochure is available. At some sites, specific consent for the computerized screening and/or pharmacist review is secured. When a patient has a very complex regimen, the pharmacist will work with the patient and prescribers to simplify that regimen.

Outcomes

Results

From 2004 to 2006, 615 clients were screened in three California Medicaid waiver programs for nursing home– eligible older adults, under US Administration on Aging (AoA) funding:[1,2]

- Forty-nine percent of all clients (n=299) had at least one potential medication problem.

- Twenty-nine percent of all clients had a medication problem serious enough for the pharmacist to recommend a change in medications, including re-evaluation by the physician; 60% had alerted medications changed within three months.

From 2007 to 2010, under a grant from the John A. Hartford Foundation, over 7,000 older adults were screened for potential medication risks. Of those screened, 46.7% were shown to have risk for medication-related injury — an average of two to three potential problems per patient.[3]

Health Resources and Services Administration Patient Safety and Clinical Pharmacy Services Collaborative participant AltaMed Health Services Corporation's Waiver Program screened 1,509 patients.[4] The consultant pharmacist reviewed 400 alerts and recommended changes for 67% of them. Of these, 25% were judged by the physician to be appropriate in light of the patient's history, and 62% were either changed or reviewed at the next patient visit.

Outcome Trends

In the original randomized, controlled trial conducted in 1993, nurses collaborated with a pharmacist to address medication problems among aged home health patients using criteria developed by an expert panel addressing four problem types:

1. Unnecessary therapeutic duplication (e.g., generic and brand name of the same drug)

2. Falls, dizziness, or confusion possibly caused by inappropriate psychotropic drugs

3. Cardiovascular medication problems related to dizziness, continued high blood pressure, low blood pressure, or low pulse

4. Inappropriate use of nonsteroidal anti-inflammatory drugs (NSAIDs) in those with risk factors for peptic ulcer and/or gastrointestinal bleeding

Medication safety was improved through the collaboration between pharmacists and members of the care team — such as nurses, social workers, agency care managers, and prescribers — by providing patient counseling, reassessment,

and adjustment of medication regimens. Positive patient outcomes have included discontinuation of potentially harmful medicines, decreased confusion and dizziness, better pain control, decreased risk of falls, and improved blood pressure control.

Ongoing Measures for QI

The software's reports and dashboard allow staff to monitor appropriate use of the system. In addition, HomeMeds staff members review system data to help sites identify care managers who are not entering data completely or following through adequately.

Evolution of Program Over Time

The original Medication Management Model program to improve medication use was designed for Medicare-certified home health agencies providing in-home nursing and rehabilitation services to patients over age 65. The model was then translated from the home health setting and tested in three Southern California Medicaid waiver sites as part of a national evidence-based prevention effort led by the

AoA. Currently, it is being tested as part of care transitions interventions and used as part of a community-wide fall prevention effort that includes targeting frequent fallers (per 911 calls) and provides them with "A Matter of Balance" classes, a program that addresses fall prevention for seniors, and HomeMeds. Sites are also using HomeMeds in a more consumer-oriented model by appending it to the Stanford Chronic Disease Self-Management Program in support of class #5 dealing with medication management.

Lessons Learned

Some of the main lessons learned relate to the perception among social workers that addressing medication issues is not in their scope of work. The cardiac protocols have been underused due to lack of vital sign measurement by social workers. With Consumer Reports' recent positive review of wrist blood pressure (BP) cuffs, HomeMeds staff is now being more forceful in recommending documentation of BP and pulse by providing the patient with the BP cuff and instructing them in its proper use.

Partners in Care Foundation Medication Management Improvement System
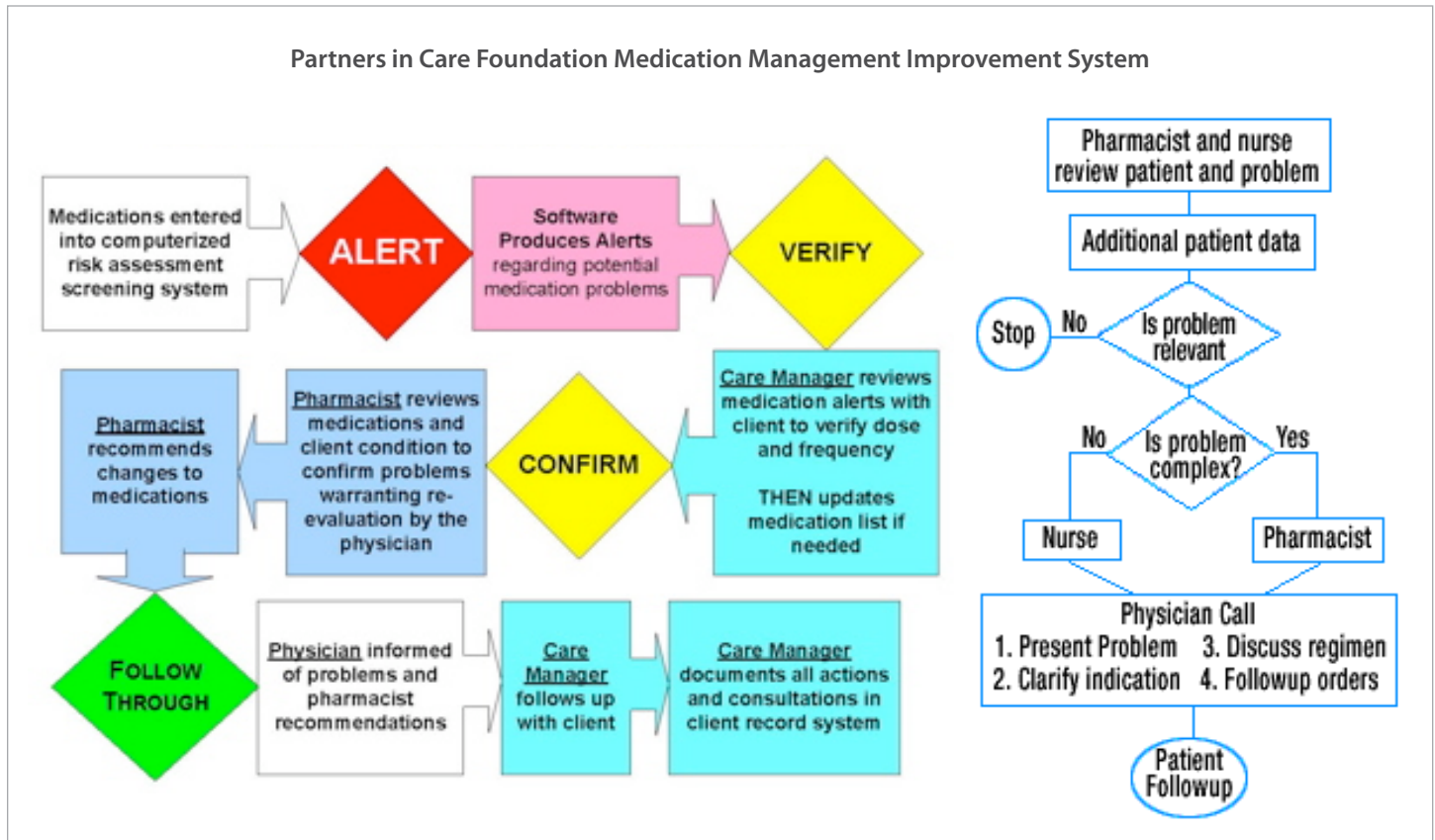
Some sites have experienced difficulty convincing patients to participate. In general, HomeMeds recommends making the intervention part of the normal package of services. Because the typical reason given for not participating is "I trust my doctor," the program has designed a patient brochure with the message "Your doctor will thank you."

Costs

Typically, pharmacists charge approximately $65 to $85 per hour, and can review two to four clients per hour, depending upon complexity and the amount of information available. Home health nurses and care managers participate in the program as part of their regular duties. Program costs include a one-time setup and training fee, along with a $200 per month subscription for the software that covers up to 10 users and up to 50 new clients entered into the system monthly.

Based on the targeted nature of the HomeMeds intervention, it is estimated that the four-year diffusion of the model has produced savings in excess of $1.2 million by preventing falls and other serious adverse drug events. This estimate is based on studies of the impact of medication therapy management services.[5]

Technology/Innovation

Technology Enablers

HomeMeds uses a computerized risk assessment screening and alert process that enables program staff to identify potential medication problems based on the medication list, vital signs, and clinical indicators such as falls, dizziness, and confusion.

Future Innovation/Direction

A number of innovations are being pursued, including:

- HomeMeds is being paired with other evidence-based programs typically used within area agencies on aging. For example, Kate Lorig, well-known expert in the field, has approved including HomeMeds as part of the Chronic Disease Self-Management program (in conjunction with the appropriate medication use session).[6] As another example, HomeMeds and "A Matter of Balance" make a powerful double intervention for elders who have experienced falls.

- To enable inclusion of HomeMeds within patient empowerment models such as care transitions coaching, a mobile app version of HomeMeds for consumers is planned.

- HomeMeds will be embedded in commonly used care management software to increase spread is also being pursued. Partners in Care is currently piloting this with Harmony, whose SAMS system is used by half of the area agencies on aging in the country.

- Partners in Care is working with large medical groups and primary care offices to institute a targeted home visit to assess patient safety — including HomeMeds, fall safety assessment, and general social and environmental issues identified in the home.

Author: Medimetrix

Endnotes

1. Gretchen E. Alkema, Kathleen W. Wilber, Susan M. Enguidanos, and Dennee Frey, "Prevalence of Potential Medication Problems in Dually-Eligible Older Adults in Medicaid Waiver Services," *The Annals of Pharmacotherapy,* December 2007, Vol. 41.

2. Gretchen E. Alkema, Susan Enguidanos, Kathleen Wilber, Mira Trufasiu, and Dennee Frey. "The Role of Consultant Pharmacists in Reducing Medication Problems Among Older Adults Receiving Medicaid Waiver Services." *The Consultant Pharmacist,* February 2009, Vol. 24, No. 2.

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5. Meredith S. et al., "Improving Medication Use in Home Health Care Patients: A Randomized Controlled Trial," *Journal of the American Geriatrics Society,* 50:1,481–1,491, 2002.

6. "Chronic Disease Self-Management Program," Stanford School of Medicine, patienteducation.stanford.edu.

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Princeton HealthCare System
Partnerships for PIECE

INTERVIEWEE: Kathleen H. Seneca, MSN, APN, PIECE Project Program Director

Summary

Princeton HealthCare System's Partnerships for PIECE (Patient-Centered, Integrated Elder Care and Empowerment) program was one of nine organizations to receive grant funding under the Robert Wood Johnson Foundation (RWJF) program New Jersey Health Initiatives 2011: Transitions in Care. The focus of the two-year grant is to help fragile, elderly patients through their journeys from the hospital to the next level of care, whether to their own home or to a skilled nursing facility (SNF). The program saw over 200 patients in 2012.

The Partnerships for PIECE approach is three-pronged:

- For all patients, it provides a data registry to streamline electronic communication.

- For at-risk patients transitioning to skilled nursing facilities, it supports training at nine SNFs to improve communication during transitions.

- For at-risk patients transitioning home, it provides a nurse practitioner to support patients in the community, ensuring a post–acute care follow-up by a specially trained coach.

Patient Identification

Inclusion Criteria

PIECE participants are:

- Recently hospitalized patients

- Age 70 and older

- Being discharged home or to an SNF with multiple chronic and acute diagnoses

- At high risk for readmission

The program excludes patients residing outside the hospital's primary service area, non-English speakers, hospice patients, and patients with dementia without a willing and participating caregiver.

CALIFORNIA HEALTHCARE FOUNDATION

Data Sources and Tools Used

The program reviews all patients admitted to the hospital who are age 70 and older.

Ranking/Stratification Methodology

Organizational needs are identified through ongoing metrics. If the program identifies a particular patient population that could be well-served through the PIECE program, that population will be ranked.

For example, when the acute myocardial infarction (MI) readmission rate was showing a consistent trend of higher than established thresholds rates, the program completed an in-depth retrospective analysis on the patients who were readmitted. This analysis showed that some patients were not touched by the program initially. The program was adjusted to ensure that it would capture the at-risk population by collaborating with members of the acute MI CORE Measures team to identify and screen these high-risk patients. After this effort, the program saw positive results.

Ongoing Data Collection Methods

The program collects data on:

- Overall hospital readmission rates, emergency department (ED) admissions, and readmission rates for populations in the Care Transitions Intervention (CTI) program who are 70 and older, and compares data from these subsets to the general population

- Patient demographics (age, gender, geographic location, race/ethnicity)

- Patients in the program, compared to those who declined or withdrew

- Health literacy data from those in the advanced practice, nurse-led transitional care program

- CTI program participation overall satisfaction using the Care Transitions Measure (CTM3) and program satisfaction (survey is repeated after program completion)

- Visits with community physician, to ensure post-hospitalization follow-up within 14 days of discharge

Assessment

Tools Used

Program participants are screened at the hospital using Mary Naylor's transitional care tool. The screening results are then reviewed by a program transition coach who determines the patient's program eligibility.

Assessment Elements

If two or more of the below findings are present, further review is needed, and transitional care planning should be initiated.

- Age 80 or older

- Moderate to severe functional deficits (e.g., HARP score > 2, KATZ < 4, Lawton < 5)[1]

- An active behavioral and/or psychiatric health issue (e.g., GDS > 5)[2]

- Four or more active coexisting health conditions

- Six or more prescribed medications

- Two or more hospitalizations within the past six months

- A hospitalization within the past 30 days

- Inadequate support system

- Low health literacy

- Documented history of nonadherence to a therapeutic regimen

- Cognitive impairment (e.g., Mini-Cog positive) — any suspected or diagnosed cognitive impairment with or without the above screening criteria would independently trigger post-discharge intervention to assure appropriate information transfer and follow-up after discharge to home or other care setting.[3]

Timing and Location

The bedside nurse conducts the initial program screening concurrent with the normal admission intake. The assessment is conducted at the patient's bedside.

Care Management Team

Team Composition

The patient's primary point of contact is the program transition coach, who is responsible for following up with all clinicians on the team regarding medical concerns and referrals. The PIECE team also includes:

- Nursing staff, who conducts the initial assessment, identifies possible program participants, and voices concern about patient condition

- Enrollment coach, who presents the program to patients and their caregivers and administers a brief health literacy screening and preparticipation satisfaction survey

- Data analyst and office support person, who does data analysis and follow-up on patient satisfaction surveys

- Clinical, ED, and geriatric pharmacists, who help identify possible program participants

- Care managers/case managers, who identify possible program participants

- Hospitalists and medical residents, who identify possible program participants and voice concern about patient condition

- Social workers, who identify possible program participants, especially those who decline post–acute care services, and serve as resources for transitional care coaches, providing information for patient linkage to community services and resources

- Home care nurses, who, when needed, participate in coordinated care with shared patients

Team Roles and Education

The partner education portion of the program works with three SNFs that receive the program patients so the SNFs can learn INTERACT II, a quality improvement program funded by the Commonwealth Fund that focuses on the management of acute change in resident condition. Through this tool, the PIECE program is able to improve communication strategies and disease management algorithms to try to catch residents earlier in their decline and to initiate interactive interventions to reduce acute care transfers. This portion of the program focuses on disease education and communication education with the SNF staff. The program reviews data to analyze readmission rates and use of the program tools.

For participants taking six or more medications, the transitions coach will ask a pharmacist to conduct a full pharmacy review and check the patient's medication list against the Beers Criteria medication list — evidence-based medication recommendations for seniors by the American Geriatric Society.[4] The geriatric clinical pharmacist then develops a full medication list and personally visits the patient to provide education on medication indications and side effects.

PCP Involvement

PCP involvement is not highly structured at this point. The transition coach can call or email the PCP on a HIPAA secure line regarding care concerns or for input on care goals.

Shared Management

The PIECE transition coach works with other health professionals:

- Pharmacists, hospitalists, medical residents, nurses, and clinic staff identify and set up care plans for possible participants. The transition coach listens to their concerns about patient condition (for current and past participants) and evaluates the patient based on their referral, remaining flexible on inclusion criteria and one-time home visits/wellness checks.

- Home care nurses coordinate professional contact and visits to ensure that the patient has a medical professional in the home when needed.

- An oncology nurse navigator helps comanage complex and active patients undergoing chemotherapy with frequent readmissions.

The program has a geriatric section committee comprised of program geriatricians. The program also works with nine SNF partners to train staff on how to improve communication during a transition.

Ongoing Care

Caseload

The program goal is 250 patients per transition coach. PIECE was shy of that goal the first year due to staff demands. The program completes a home visit for approximately 56% of patients enrolled, more than double the 25% rate seen in a randomized controlled study using the same transitional care model.

Frequency of Outreach

Transition coaches see CTI program patients within their first week at home, preferably on day three. The PCP follows up within 14 days of discharge. The transition coach helps patients activate needed post-acute care services themselves, such as home care or physical therapy that may have initially declined at hospital discharge. After the initial visit, the coach will call once a week for at least three weeks, with additional phone calls if needed.

At the three main partner SNFs who take PIECE patients, the program director visits the facility administrators and staff at least quarterly. The program physician visits all nine SNFs once a month, and provides education to all the staff, program participants, and families.

Services

The "navigation" portion of the PIECE program follows the Coleman model of empowering patients to manage their chronic illness through:

- Medication management systems

- Recognizing early symptoms of deterioration due to chronic conditions

- Developing a personal health record

- Timely follow-up with a community provider

Through agreements with pharmaceutical companies, the transition coach links patients who cannot afford their medications with hospital specialists to fill out the required paperwork so those patients get their medications for a reduced price or for free. This is a free service for the patient.

During the home visit, patients are given condition-specific (e.g., COPD, heart failure, pneumonia, stroke) handouts so that the patients and/or caregivers know what symptoms to look for and what actions to take.

Care Transitions Support

Partnerships for PIECE takes a three-pronged approach with care transitions:

- For all patients, it provides a data registry to streamline electronic communication.

- It supports training at nine SNF partners to improve communication during a transition.

- For at-risk patients transitioning home, it provides a nurse practitioner to support patients in the community, ensuring a post–acute care follow-up by a specially trained coach.

Tools

Each patient is given a personal health record prior to discharge. The 10-page booklet details the patient's health history and goals. Program patients are encouraged to bring their personal health record to all health care encounters and transitions. The record covers:

- Personal/caregiver/PCP contact information

- Medical history

- Red flags

- Medication record (list, reason, dosage, timing, expiration information, prescribing doctor, special instructions, allergies)

- Medication guidance checklist

- Discharge checklist

- Personal goals

- Recent hospitalization note section for PCP

- Question section for PCP

The program was integral in the development and use of the statewide POLST (Physician Orders for Life-Sustaining

Treatment) form, a portable document that travels with patients as they transition from one health care provider to another. The POLST form is used because it is not just an advance directive. Instead, it outlines patients' hopes and goals and aligns these goals with appropriate medical therapies. The POLST form launched statewide in New Jersey on February 22, 2013 (shown to the right and available at www.capolst.org).

Coaches also provide program patients with AskMe3, a Patient Safety Foundation tool that helps patients prepare meaningful questions before doctor visits and open the lines of communication (see flyer below).

Outcomes

Results

The program saw a 17.6% reduction in 30-day readmission rates in program participants (15.3% to 12.6%) when compared to those patients who either opted out of or withdrew from the program.
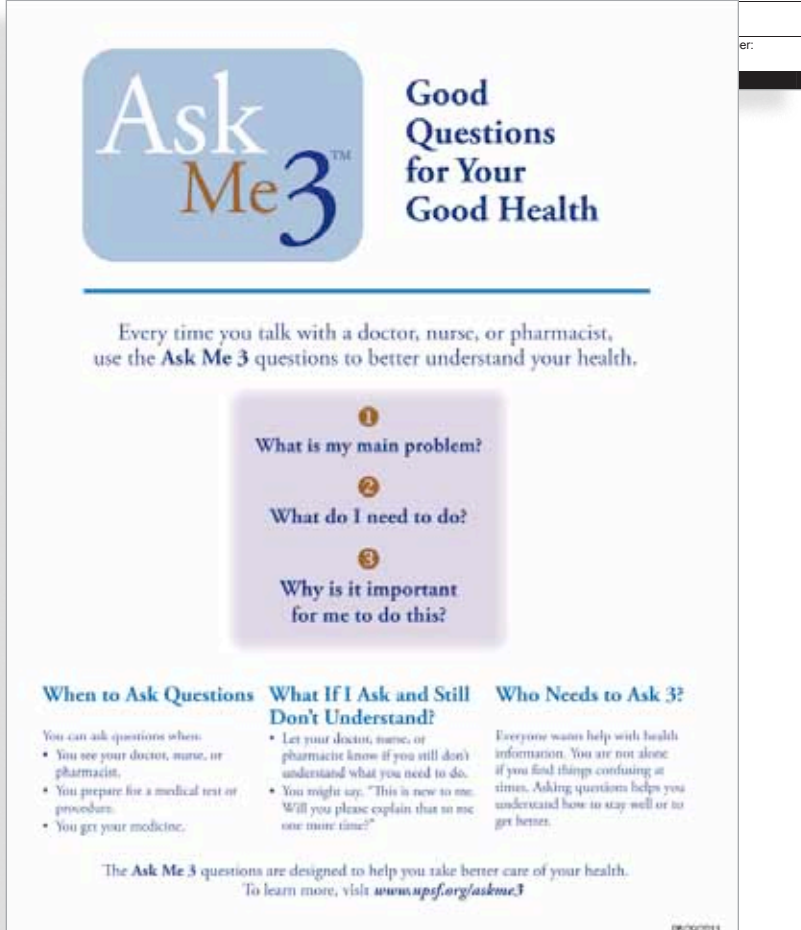
The program monitors the outcomes of program participants and compares them to the outcomes of those who declined participation in or withdrew from the program. For those diagnoses targeted by CMS' penalty program — heart failure, pneumonia, and most recently, acute MI — the program has seen quarterly reductions.

The program is also beginning to see an increase in participant enrollment.

Ongoing Measures for QI

The PIECE program is monitoring readmission, post-discharge follow-up appointments, and patient satisfaction scores. The program also examines participants' health literacy levels and their completion of POLST forms.

Evolution of Program

Initially, the program narrowed the list of diagnoses of patients accepted into the program to those most likely to cause a patient to return to the hospital. All patients were screened, but only those with the following diagnoses were accepted:

- COPD
- Heart failure
- Cerebral vascular accident (CVA)
- Pneumonia
- Bronchitis
- Pulmonary edema
- Atrial arrhythmia
- Taking Coumadin

In the second year of the grant, with the training of additional transitional coaches, the program was expanded to include patients with any diagnosis.

Lessons Learned

- Strength of internal stakeholder support, from boardroom to bedside, has been critical to organizational adoption of the program.

- Attrition of program participants has been higher than anticipated.

- The frail older population may need more than one home visit for education and activation once discharged.

- In additional to CTI training, transition coaches need to understand chronic illness management strategies and motivational interviewing techniques to facilitate patient and caregiver health care management.

- Program adoption is slower than anticipated in partner facilities due to the challenges in implementing change in clinical practices in several different microcultures and frequent turnover of key leadership in some of the organizations.

Costs

The Partnerships for PIECE program was one of nine to receive grant funding under RWJF's New Jersey Health Initiatives 2011: Transitions in Care program. RWJF awarded Princeton HealthCare System (PHCS) a two-year, $300,000 grant to support the PIECE initiative, and the Blanche and Irving Laurie Foundation awarded $15,000 to the program. The acute care hospital has supported the program with approximately $100,000 in salary, employee benefits, program and office supplies, and program marketing costs.

Technology/Innovation

Technology Enablers

An important aspect of the program is the health information exchange. The PIECE program uses HealthCare Connect through MobileMD, which provides a secure clinical and administrative data exchange between all of a patient's providers, regardless of their location or electronic medical record technology. Through HealthCare Connect, the PIECE program is sharing important information (e.g., admission/discharge records, lab and other diagnostic results) with participating community providers more quickly than before.

Future Innovation/Direction

Local medical residents are partnering with PIECE on a study that is using the database to increase and improve medical residents-in-training discharge communication and to reduce medication discrepancies.

The program recently entered into a partnership with the United Way of Mercer County. Patients enrolled in the CTI program and who are capable of participating in a 2.5-hour interactive educational session will be offered, at no cost to the patient, a six-week evidence-based chronic disease self-management program from Stanford University. This program has demonstrated positive outcomes in research studies. United Way will provide the education, and PIECE will provide the location and site facilitator.

The program is looking toward increasing disease management education for program transition coaches to meet the unique needs of patients as well as expanding the transition coach presence in the hospital to seven days a week from six.

Author: Medimetrix

Endnotes

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Quality Improvement for Complex Chronic Conditions
CarePartner Program

INTERVIEWEE: John Piette, PhD

Summary

Quality Improvement for Complex Chronic Conditions (QUICCC) is a group supported by the University of Michigan Health System (UMHS), the Department of Veterans Affairs (VA) Center for Clinical Management Research (VACCMR) and VA Ann Arbor Healthcare System (VAAAHS), and grants from federal agencies, private foundations, and individual donors. QUICCC's purpose is to develop and evaluate new interventions that improve care for chronically ill patients, with an emphasis on identifying services that support effective primary care and patient self-management.

The CarePartner (CP) program is a suite of services that uses automated monitoring and self-management support calls (Interactive Voice Response, or IVR) to identify patients with chronic diseases who have health and self-care problems and to provide ongoing assistance with behavior change.

The program is available to patients regardless of their insurance status. Patients are ineligible if they cannot use a phone, have comorbid schizophrenia, or are cognitively impaired. In 2012, the program worked with 600 patients.

Patient Identification

Inclusion Criteria

Patients are contacted by phone and screened for eligibility by QUICCC staff. In the VA, high-risk patients are identified from electronic records based on diagnoses, acute events, and laboratory test results. These include patients with the following characteristics:

- Poorly controlled diabetes

- Recently discharged from hospitals

- Heart failure

- Multiple admissions

- Poorly managed depression

- Uncontrolled blood pressure

- Chronic pain

- Decompensated cirrhosis

- Undergoing cancer chemotherapy

- Spanish-speaking patients with diabetes or hypertension

- Using oral chemotherapies for adrenal cancer

Patients are ineligible if they cannot use a phone, have comorbid schizophrenia, or are cognitively impaired.

Data Sources and Tools Used

Automated monitoring and self-management support calls (Interactive Voice Response, or IVR) are used to identify patients with chronic diseases who have health and self-care problems and to provide ongoing assistance with behavior change.

Ranking/Stratification Methodology

Some systems target patients based on information reported at program enrollment (e.g., if they have hypertension and are self-monitoring their blood pressure or if they have diabetes and are using insulin). Other programs automatically adjust the content and frequency of patients' monitoring and self-care support calls based on the patient's preferences and health status while in the program (e.g., depressed patients' depressive symptoms).

Ongoing Data Collection Methods

Systems automatically gather data on patients' reported symptoms and self-care support problems and record when fax alerts are sent to the clinical team. Additional data used to evaluate variable patient engagement across sociodemographic and clinical groups are collected at the time of recruitment. Depending on the program, follow-up patient satisfaction, usability, and impact data are collected.

Assessment

Tools

Nurse "navigators" call patients and conduct an initial assessment that includes a functional assessment, social network assessment, health status, and quality-of-life assessment. Based on the assessment, an individualized service plan is developed, including potential participation in CarePartner.

Assessment Elements

Specific elements include:

- Health literacy

- Physical and mental functioning

- Depressive symptoms

- Social support

- Recent health service use

- Educational attainment

- Demographics (age, gender, race)

- Comorbid chronic conditions

Timing and Location

Patients are initially identified from electronic databases identifying potentially eligible and interested persons. Calls are placed to patients' homes to conduct additional assessments that augment risk information identified from electronic records. Most programs do not require an in-person visit for enrollment. Assessments take place by phone.

Care Management Team

Team Composition

The primary point of contact for patients is a nurse navigator. A CP teamlet includes the PCP, nurse, social worker, and other clinic staff members.

The UMHS has implemented CarePartner for improving depression management in primary care throughout its 18 affiliates. Their program is managed by an MSW working in conjunction with the health system's mental health services

leadership. The first line of follow-up is done by health system BSWs who communicate with patients and the clinic based on urgent alerts.

Team Roles and Education

The content of the calls was developed by experts in relevant clinical areas (e.g., psychiatry, cardiology, and diabetology), mobile health, primary care, and behavior change.

PCP Involvement

Based on patients' automated assessments, disease managers and primary care teams receive alerts regarding urgent problems to focus their efforts between visits.

Shared Management

Structured fax alerts are sent automatically to care coordinators. The focus and thresholds for these alerts is developed through ongoing dialogues with experts in the clinical area and representatives of the clinics. Thresholds can be adjusted and alerts can be turned off if they are found to be too burdensome to the clinical team. Alerts can be sent to multiple providers. Additional patient-level reports regarding recent assessment results are available through a secure website. Some clinics may have alerts go to their PCP, or to their CP teamlet. Patients with depression who report suicidal ideation have the option of automatically transferring to a suicide hotline if needed.

Ongoing Care

Caseload

Caseload includes staff for patient enrollment in the program as well as for clinical follow-up on patient problems identified via automatic alerts. Recruitment for the depression rollout to 18 clinics with 20,000 depressed patients can be managed with 2.5 FTE staff. The program does not routinely track FTE for follow-up on clinical alerts since many patients are comanaged. However, in a recent analysis of data from the depression CarePartner rollout, the program examined the workload generated by alerts to the clinical team. The analysis found that the system generated a manageable amount of additional work, most of which could be handled by allied health professionals with minimal involvement of physician providers. Specifically, for every 1,000 patients with depression

enrolled, the program estimates that clinical teams will receive only 28 alerts per week regarding medication adherence problems, 22 alerts per week regarding concerning increases in depressive symptoms, and only 2 alerts per week regarding suicidal ideation. Analyses of clinician follow-up regarding suicide ideation reports showed that all were able to be managed via phone follow-up.

Frequency of Outreach

IVR calls are sent to patients usually once per week at times that patients indicate are convenient for them. Multiple call attempts are made automatically to maximize weekly contact. Calls range from 5 to 15 minutes depending on the number of problems the patient reports. Patients recently discharged from the hospital may receive calls daily for the first two weeks.

Services

The program is designed to have three mechanisms of action:

1. During automated calls, patients receive tailored feedback and advice to prompt appropriate self-management and use of primary care.

2. Based on patients' automated assessments, disease managers and primary care teams receive alerts regarding urgent problems to focus their efforts between visits.

3. Patients have the option of enrolling with an adult family member or friend (i.e., their "CarePartner") who automatically receives structured feedback by phone or email regarding the patient's status and how the caregiver can help.

Care Transitions Support

A CarePartner program has been developed specifically to assist with post-hospital care transitions for patients with a variety of complex chronic diseases. Patients are initially identified through daily searches of inpatients in medical units. Patients and their informal caregivers are screened and enrolled prior to discharge. Self-care support calls focus on identifying and preventing medication adherence problems, identifying and addressing "red flags" for urgent follow-up to prevent an acute event, patients' understanding of their care plan, and rapid follow-up in ambulatory care post discharge.

Tools

Enrollees receive a DVD describing the program and how it is designed to help them with automated phone advice, feedback to family members, feedback to their clinical team, and advice on how to communicate effectively with their family members and physicians. Patients and family members receive written materials as well.

Outcomes

Results

Patient satisfaction levels are high, and patients complete 70% to 90% of their attempted assessments. Assessment completion rates are similar across groups defined by educational attainment, race, and gender, and are higher among older adults.

IVR program engagement study results. The program compiled data on IVR program engagement for 1,173 patients with heart failure, depression, diabetes, or cancer.

The patients were followed for 28,962 person-weeks. Patients in programs for diabetes or depression (n=727) had the option of participating along with an informal caregiver who received electronic feedback based on the patient's IVR assessments. Analyses focused on factors associated with completing weekly IVR calls.

Patients were on average 61 years old, 37% had at most a high school education, and 48% reported incomes of ≤$30,000. Among patients given the option of participating with an informal caregiver, 65% chose to do so.

Patients completed 83% of attempted IVR assessments, with rates higher for heart failure (90%) and cancer programs (90%) than for diabetes (81%) or depression programs (71%, $p<0.001$). Among patients in diabetes or depression programs, those opting to have feedback provided to an informal caregiver were more likely to complete assessments (adjusted odds ratio, 1.37; 95% confidence interval, 1.07 to 1.77).

Older patients had higher call completion rates, even among patients age 75 years and older. Missed clinic appointments, prior hospitalizations, depression program participation, and

poorer mental health were associated with lower completion rates.

IVR monitoring and self-management support study. In an analysis of patient engagement and workload for the depression CarePartner program, data were examined for 387 depressed patient participants from 13 primary care practices.

After following patients for 12,042 person-weeks, the program found:

- More than half (59%) opted to participate with a CarePartner.

- Patients completed 68% of 7,912 attempted IVR assessments.

- Assessment completion was unrelated to patients' depressive symptoms and was higher among those who participated with a CarePartner, were married, had more comorbidities, and reported missing a prior appointment.

- Assessment completion was lower when patients received monthly versus weekly assessment attempts.

- Clinical alerts were generated during 4.9% of follow-up weeks, with most alerts representing medication adherence problems (2.8%). (The program found this to be a manageable number of alerts, most of which could be triaged by allied health professionals with limited physician oversight.)

- Alerts indicating suicidal ideation were rare (0.2% of patient-weeks).

Patient engagement in automated monitoring. Patient engagement in the automated monitoring and self-care support calls is high. Engagement among depressed patients is not affected by their level of depression. In multiple analyses, the program found that patients remain more actively engaged in the program when they enroll with an informal caregiver who receives regular, automated feedback about the patient's status. Single-group analyses have revealed improvements in physical and mental functioning,

depressive symptoms, and self-care across multiple programs. Randomized trials are ongoing.

Ongoing Measures for QI

The program regularly monitors patient satisfaction rates, patients' engagement in the automated calls, enrollment rates among potentially eligible patients, and the rate at which the program generates additional clinical workload in the form of fax alerts to the clinical team.

Some programs monitor changes in patients' physical and mental functioning, self-management behaviors, and depressive symptoms. Ongoing randomized trials funded by the National Institutes of Health, the Agency for Healthcare Research and Quality, and the VA are evaluating outcomes, including rehospitalization rates, caregiver burden, depressive symptoms, self-care, and physiologic functioning.

Evolution of Program

The program has had to increase the sophistication of its information technology infrastructure to accommodate increasingly strict data security guidelines and to manage an expanding program treating patients in clinical (rather than research) projects.

Lessons Learned

Complex, chronically-ill patients are highly motivated to participate in programs that include regular automated monitoring and self-management support calls. Patient engagement rates are not associated with patients' race or educational attainment.

Patient completion of automated monitoring and self-management support calls is higher among older adults (e.g., those over 70 years of age) and among patients who participate with an informal caregiver.

Additional workload generated for clinicians is minimal. Care managers are enthusiastic about the types of actionable information that the program can provide to help prevent acute episodes between outpatient visits. The biggest barrier to program dissemination is the initial workload required to identify and enroll patients in the program; this can conflict

with standard work flow in busy primary care clinics in which providers are seeking to improve system performance as part of multiple simultaneous initiatives.

Costs

Costs depend on many factors, including the size of the population, the availability of electronic records for patient identification, and patients' clinical characteristics. Types of costs include fixed costs for developing and modifying the current software, fixed costs for maintaining the IT infrastructure, and variable costs for patient recruitment, "connect time" with the automated calls, and follow-up by clinicians based on alerts generated by the system.

Technology/Innovation

Technology Enablers

The CarePartner program suite of services uses automated monitoring and self-management support calls — IVR.

Future Innovation/Direction

CarePartner programs have been incorporated into research projects and clinical programs in several Latin American countries. In Bolivia, the National Health Ministry is working to adopt the program as a feature of its efforts to address growing rates of chronic illnesses.

QUICCC is now testing short message service (SMS) text messaging in addition to IVR.

Extensions of the CarePartner program are being developed that use artificial intelligence to automatically personalize patient monitoring and self-management support.

Author: Medimetrix

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Senior Services
Project Enhance/EnhanceWellness

INTERVIEWEE: Susan Snyder, Senior Services, Project Enhance, Director

Summary

Developed by Senior Services in partnership with the University of Washington and Group Health, Project Enhance started as a small project in 1997 at four senior centers. The program was originally known as the Senior Wellness Project, with the physical activity program called the Lifetime Fitness Program and the health behavior change program called the Health Enhancement Program. Senior Services rebranded the programs, which are now known as Project Enhance; EnhanceFitness and EnhanceWellness are the programs they manage and disseminate nationally. They also provide other evidence-based programs in King County, including a chronic disease self-management program, Matter of Balance, PEARLS, and Powerful Tools for Caregivers.

The EnhanceWellness (EW) program serves seniors age 60 and older who are competent and who have multiple chronic conditions.

Currently, in Washington State, approximately 100 patients are enrolled in the EW program, and 600 patients participate in the national program. To date, more than 3,000 older adults with chronic conditions have participated in the EW program since its inception.

Patient Identification

Inclusion Criteria
The EW program focuses on adults, age 60 and older, who are competent and have multiple chronic conditions.

Data Sources and Tools Used
Participants are referred to the program by physicians, site staff, other health and service providers, and themselves. Among the most effective referral sources are letters signed by patients' physicians recommending the program and providing the EW staff member's phone number. Direct referral to the program by health care providers is also an effective referral mechanism.

Ranking/Stratification Methodology
Once admitted into the program, participants are not further stratified.

Ongoing Data Collection Methods

A web-based software program, WellWare, collects participant demographic information, health data, action plans, and case notes, and generates a variety of reports. An 11-page health questionnaire is completed upon enrollment in the program and six months after enrollment. Information is collected on forms, with these data being entered into WellWare by the clinician.

Assessment

Tools

The EW team uses WellWare, a web-based software application, to complete the assessment questionnaire.

Assessment Elements

The EW team begins by reviewing a comprehensive health questionnaire with the participant that addresses:

- Chronic conditions

- Socialization

- Physical activity level

- Demographics

- Patient goals focused on health behavior change

Timing and Location

The assessment is conducted once the patient is referred or identified. If the prospective participant does not contact the EW team, a team member reaches out to the patient to explain the program and gauge interest. The assessment takes place in the EW office.

Care Management Team

Team Composition

The EW clinician is the patient's primary point of contact. The EW team is comprised of a nurse and a social worker, but can also include a health educator or other health promotion professionals if necessary.

Team Roles and Education

EW team members are typically registered nurses (RNs) or social workers who have been trained in motivational interviewing and transtheoretical behavior change. The EW health professionals and/or volunteer health mentor offer ongoing encouragement, feedback, and monitoring to program participants. The team helps patients with problem solving, health education, and referral to support groups and additional services, including individual and family counseling, if indicated. Trained peer health mentors — typically other seniors facing similar health issues who have completed the program — provide ongoing support to participants.

PCP Involvement

The EW team sends a letter to the participant's PCP stating that the participant has enrolled in the program and inviting the physician to provide any information that might be relevant. Some physicians respond, although many do not. Once the health action plan is completed, the EW team will share the plan with the patient's PCP and solicit feedback, insights, and support.

Shared Management

If there is both a social worker and an RN in the program, the RN will collect health histories of the participants. The RN will provide educational sessions about managing chronic conditions such as diabetes. The social worker will hold support groups as needed. For example, if there are participants suffering from depression, the social worker may organize a support group for managing depression. Either member of the team can work with participants on their action planning.

Ongoing Care

Caseload

An EW team working eight hours a week could have a caseload of 50 to 55 participants a year.

Frequency of Outreach

Program services are provided for six months, or longer if requested by the participant.

Services

The health action plan is a self-management plan targeted specifically at reducing risk factors for disability, such as physical inactivity, smoking, alcohol misuse, grief, depression, and poor nutrition, and at improving the participants' abilities to manage their health. Using WellWare software to guide the process, the EW team and program participant work to create an action plan that sets specific goals related to two key issues — engaging in more physical and/or social activities and effectively managing chronic conditions. The health action plan outlines detailed patient goals, recommended support groups (e.g., smoking cessation, alcohol abuse, depression, and care giving), and workshops (e.g., on chronic disease management.)

As part of the participant's action plan, the EW team may encourage physical and/or social activities available at their senior center and/or within the community, such as:

- Walking
- Swimming
- Dancing
- Tai Chi
- Supervised endurance strength and flexibility training programs such as EnhanceFitness
- A Matter of Balance, a program developed to reduce the fear of falling

The EW team and program participants talk on the phone and/or meet in person during the six-month program. In these discussions, the EW team determines the participant's progress in reaching the goals laid out in the health action plan. For those participants having difficulties following their personalized plan, the EW team member may suggest an in-person meeting to address any challenges or barriers, such as arranging for transportation to a class or finding an alternative class or activity, or to modify the plan by, for example, changing a goal to a more achievable one. The frequency of contact varies according to the needs of the program participant.

The EW team will use WellWare to track participant data by entering notes for each encounter with a participant, including information on mentors, physicians, community resources, demographics, and test results.

Support and educational groups and workshops are held to address topics such as healthy eating, managing depression, and the chronic disease self-management program.

Care Transitions Support

At the end of the six-month program, participants take the health questionnaire again to assess their progress towards their Health Action Plan goals. The program participants graduate, unless they have other goals they want to reach.

Tools

In addition to the Health Action Plan and WellWare, a Service Process flowchart is used to determine actions to take whether the participant enrolls, whether the participant requests a mentor, and whether the participant wants to continue in the program after achieving their first goal.

Outcomes

Results

In June 1996, researchers completed a 16-month study of the EnhanceWellness Program (formerly the Health Enhancement Program). The study followed 201 disabled adults, age 70 and older, to track improvements in their performance of activities of daily life (ADL). The study revealed that the program led to improved ADL functioning in those who were disabled, offering a promising strategy for limiting or reversing

functional decline in disabled older adults. The results, published in the *Journal of the American Geriatrics Society,* showed:

- 72% decrease in hospital days

- 35% decrease in psychoactive drugs

- 11% decrease in depression

- 18% decrease in physical inactivity[1]

In 2002, the *Journal of American Geriatrics Society* published the results of a study funded by the Robert Wood Johnson Foundation that found that under real-world conditions, the Health Enhancement Program reached older people at risk of functional decline. Those enrolled for one year experience a reduction in disability risk factors, improvement in health status, no reduction in functional status, and no increase in self-reported health care use.

The study found:

- The percentage of participants found to be depressed decreased (28% at time of enrollment vs. 17% at one-year follow-up, p=0.005).

- The percentage of physically inactive participants decreased (56% vs. 38%, p=0.001).

- Physical activity level and exercise readiness improved (Physician-Based Assessment and Counseling for Exercise mean score 4.3 vs. 5.1, p=0.001).

- At follow-up, 83% rated their health the same as or better than a year earlier, compared with 73% at time of enrollment.

- The proportion with impaired functional status, as measured by bed days and restricted activity days, stayed the same.

- The proportion hospitalized remained stable (23% at enrollment and follow-up, p=1.0).

Ongoing independent study results show that participants realized a significant decrease in depression and increase in physical activity while enrolled.[2]

Ongoing Measures for QI

At the end of the program, participants are asked to rate their satisfaction.

Evolution of Program

Project Enhance started as a small project at four senior centers in Washington State, and today includes numerous sites across the country. To date, more than 3,000 seniors with chronic conditions have participated in the EW program.

The program initially lasted for 12 months, but has since been reduced to 6 months. The study team was initially comprised of a geriatric nurse practitioner and an MSW. Currently, program clinicians can be health educators, RNs, dietitians, or other health promotion personnel.

Lessons Learned

Those implementing the program should ensure that they have a strong partnership with health care providers and community-based organizations for referrals to the program.

There should be upfront planning to determine the population to be served, a community-based site that is accessible to the population being served, and sustainable funding sources.

Provider staff should be carefully selected so that they support a participant-centered approach and complement the work of health care providers.

Costs

Seniors can participate in the program at no cost. In Seattle, funding was received from the local Area Agency on Aging to help manage the program. At one time, the project received public health and managed care funding.

Technology/Innovation

Technology Enablers

The EW team uses WellWare, an internally developed, web-based software application, to track participants' enrollment, visits, and program progress.

Future Innovation/Direction

In mid-2012, the project received funding from the United Way of King County to provide the program in public housing. Under this phase of the project, eligible participants will be 18 and older and living in public housing.

WellWare is currently being transitioned from a web-based program to a cloud platform, SalesForce.

Author: Medimetrix

Endnotes

1. *Journal of the American Geriatrics Society* 46, no. 1 (January 1998): 1–9.

2. Elizabeth A. Phelan et al., "Outcomes of a Community-Based Dissemination of the Health Enhancement Program," *Journal of the American Geriatrics Society* 50, no. 9 (September 2002): 1,519–1,524.

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Senior Whole Health
Complex Care Management Program

INTERVIEWEE: John Charde, MD

Summary

The Senior Whole Health Complex Care Management Program takes care of patients over the age of 65 by providing care management services in patients' homes. All patients in the program are dual eligible (Medicaid and Medicare Advantage). This eight-year-old program currently serves more than 9,000 patients in the Boston and New York areas. The goal of the program is to maintain patients in their homes and decrease hospitalization and emergency department (ED) use.

Patient Identification

Inclusion Criteria

The program targets patients over 65. Program participants suffer from multiple chronic conditions, significant functional impairment, and progressive diseases. The average age of participants in the Boston area is 78, and in the New York City area, 80.

The programs seeks to serve "the sickest of the sick" who have complex chronic conditions. Of the 9,000 program patients in the Boston area, 40% are nursing home certifiable and living in the community, and 10% are living in nursing homes. In New York, 40 program patients are nursing home certifiable, and another 300+ are enrolled in managed long term care (MLTC) – long term Medicaid for duals.

All patients are dual eligible (for Medicaid and Medicare Advantage).

Data Sources and Tools Used

The program uses state and CMS demographic data to understand their target populations. The program primarily uses its own internal data from its electronic medical record (CER 2.0) to track and identify risk changes. The program also uses pharmacy data to track instances of underuse, polypharmacy, and/or change in drug regimens due to a worsening or new condition. Hierarchical condition categories scores and data are also collected and used.

Ranking/Stratification Methodology

Once patients are identified and full home evaluations are conducted, the program stratifies the nursing home certifiable group as to risk for deterioration, ED use, and hospitalization. The program also pays close attention to patients with significant polypharmacy and poor compliance, those who live alone or have an intermittent caregiver, and those who need new specialty care.

Assessment

Tools Used

The program nurse visits each patient at home and gives a full assessment, rating the patient's risk level and condition severity as required by each state. In Massachusetts, the Minimum Data Set tool was augmented by the program's clinical assessment tool.[1] In New York, a questionnaire called the Semi-Annual Assessment of Members, to be transitioned to the Uniform Assessment System, plus the clinical assessment, are used. The program's tool includes a clinical evaluation, depression screening, and a "get up and go" test to determine the patient's fall risk.[2,3]

Assessment Elements

The assessment includes activities of daily living / instrumental activities of daily living, diagnoses and chronic conditions, medications, cognitive evaluation, home environment and safety risks, fall risk, and support systems. There is no physical exam in the assessment.

Timing and Location

To enter the program, patients undergo an in-home assessment by an RN to determine their state of health. All patients are seen either before or within 30 days of enrollment. Program participants are required to receive a full assessment every six months or at any change in condition. Assessments take place in the patient's home.

Care Management Team

Team Composition

The patient's primary point of contact is the nurse care manager (NCM). The interdisciplinary care team also includes a community resource coordinator (CRC), who is in regular phone contact with members to stay aware of any problems, helps patients secure needed supplies, and supports other team members. The team also includes a geriatric support services coordinator (GSSC), who plays a social worker role; a pharmacist; the PCP; the patient; and any of the patient's other caregivers. Under the leadership of the NCM, the team develops a care plan for the patient. The care plan is implemented by the NCM with support from the other team members. A pharmacist is consulted regarding the medication regimen and may accompany the NCM during home visits for additional support. The staff also includes nutritionists and health educators, who are available for consultation when needed. Supporting the NCMs and care coordination team is a full-time CMO in Massachusetts and several part-time medical directors and one full-time medical director in New York. It is expected that one full-time physician could be responsible for the medical oversight of the nurses.

Team Roles and Education

The program is highly regulated by CMS and the states of Massachusetts and New York. The roles of each team member and the communication mechanisms between team members are clearly described in a model of care that is reviewed and approved by CMS. The NCM serves as the team leader and works with the other team members to assure that the care plan is implemented, and changed as needed. Team members decide when to bring in specialists such as health educators or nutritionists.

PCP Involvement

The patient's primary care physician works with the NCM to create a care plan. The PCP is kept involved as care proceeds. The PCP is contacted if the patient requires hospitalization or has need for other follow-up, and is provided with a list of the medications taken by the patient.

Shared Management

Patient needs and values are foremost in the patient's care plan; patients sign off on all care plans.

The program's goal is to enhance the self-sufficiency of the patient and caregiver so they have a better understanding of the patient's conditions, warning signs, what they can do, and who to call for help. Senior patients often differ with their care providers in what is important to them in their care; the care team aims to understand and respect these values by, for example, implementing an advance directive.

Ongoing Care

Caseload

For the 9,000 program patients in Massachusetts, there are 70 nurses (not all of whom are full-time). For the group of nursing home–certifiable patients, the average nurse's caseload is 150 patients. For the group of patients who are not nursing home certifiable, the caseload doubles to 300 patients.

Frequency

Nurses visit the nursing home–certifiable patients as often as needed and also if there are any changes in status, such as if a condition worsens or if the patient requires hospitalization. Patients are visited by the nurses as often as needed to achieve clinical and functional stability. For stable patients, the nurses visit once or twice per month, and the social worker visits once per month. Phone calls to the patient from the NCM and CRC supplement these visits.

Services

The NCM and the care team create a care plan for the patient with the goal to keep patients in their homes as long as possible. The care team does not do hands-on care but oversees and coordinates all in-home services, such as visiting nurses, coordinating medications, arranging for transportation, and managing care transitions. A full assessment is done every six months or with each change in condition.

The NCM develops a close, trusting relationship with patients and their family members. The NCM educates patients and provides them with tools to develop their self-sufficiency and competence in self-managing care.

Care Transitions Support

The care transition process is written out and includes a comprehensive checklist, which includes such variables as medications, safety issues, support systems, and PCP visits. The NCM administers the checklist over the phone or in person, depending on the medical issue and its severity. The care transition process is implemented primarily for patients who are transitioned to hospitals and skilled nursing facilities.

Outcomes

Results

The goal of the program is to maintain patients in their homes and to decrease hospital and ED use. The program has demonstrated the following results:

- 10% to 20% reduction in inpatient and ED admission rates
- 10% to 20% reduction in ED use
- 1.5-year delay in entrance to nursing homes

The program has evaluated patient satisfaction and has seen excellent results, with a less than 1% disenrollment rate.

Ongoing Measures for QI

The following measures are used for quality improvement: patient satisfaction scores, disenrollment rates, hospital and ED admission rates, HEDIS, and other quality of care metrics.

Lessons Learned

The most important service the program offers is the development of strong, trusting personal relationships between patient, family members, and care team members. These relationships cannot be built over the phone alone. For many patients, this personal contact is the most important aspect of the care they receive.

Costs

The program has resulted in financial savings through the prevention of hospitalizations and ED visits, and by delaying nursing home entrance.

Technology/Innovation

Technology Enablers

The program uses an EMR system for RNs to track and manage patient data. The RNs are provided with laptops that are easy to travel with. The program is evaluating the purchase of iPads and other tools for RNs to use in the field. Some patients have home monitoring devices, depending on their diagnoses and needs.

Future Innovation/Direction

The program continues to develop more streamlined processes, fine-tune the risk assessment methodology, and work to more quickly monitor and recognize changes in a patient's status. The program is also working to improve the EMR so it not only is a communication tool and source of data but so that it better guides patient care.

The program is revamping its claims system. It is also involved in MLTC in New York, with the goal of being part of the state's Fully-Integrated Dual Advantage demonstration project.

Author: Medimetrix

Endnotes

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Summa Health/Ohio Department of Aging
PASSPORT Medicaid Waiver Program

INTERVIEWEE: Kyle Allen; Sue Hazelett, RN; Susan Sigmon, VP Care Management, AAA[10b] (Akron/Canton Area)

Summary

Area Agencies on Aging (AAAs) are nonprofit corporations providing a variety of community-based long term care programs for older adults. They were established in 1974 to provide local execution of the federal Older Americans Act of 1965. Title III of the Act authorizes funding for an array of community services, such as the meals programs, transportation, home health care, homemaking assistance, adult day care, home repair, and legal assistance. These services were designed to enable older adults to remain in their homes and to avoid unnecessary and costly institutional care.

The scope of Ohio's AAAs expanded in 1986 with the launch of the state's Pre-Admission Screening and Services Providing Options and Resources Today (PASSPORT) program. This Medicaid-funded program seeks to prevent unnecessary nursing home placement of older adults through a managed care program that provides a specialized care plan designed around the specific needs of the Medicaid-eligible older adult client.

A multitude of community-based services (e.g., homemakers, personal care aides, visiting nurses, home delivered meals, emergency alarm systems) are designed to enable a frail older adult to remain safely in their home. The cost to Medicaid for this program is approximately one-third of the cost of nursing home care.

Patient Identification

Inclusion Criteria
Eligible PASSPORT participants are:

- Age 60 or older

- Financially eligible for Medicaid institutional care (in 2013, earning no more than $2,130 per month for one person and having no more than $1,500 in countable assets, though individuals above this limit may be eligible based on the extent of their medical and in-home needs.)

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- Requiring hands-on assistance with dressing, bathing, toileting, grooming, eating, or mobility

- Frail enough to require nursing home-level care

- Able to remain safely at home with the consent of their physician

Data Sources and Tools Used

PASSPORT referrals are accepted from:

- Hospitals

- Physicians

- Social service agencies

- Family members and friends

- Clergy or anyone else who is concerned about the well-being of an older adult

Ranking/Stratification Methodology

Once the patient is referred to the program, the patient's county Department of Job and Family Services will determine financial eligibility. After meeting eligibility criteria, the patient will be enrolled in the PASSPORT program, pending availability.

Ongoing Data Collection Methods

The program uses the PASSPORT Information Management System (PIMS) — a non-web-based repository held at the Ohio state offices that is used by case managers for care assessment, tracking outcomes, and billing. Providers use the system for ongoing care management. All 12 AAAs in Ohio use PIMS.

Initial Screening

The first step of the program is a pre-admission screening system (PASS) during which interested consumers are screened by telephone to determine preliminary Medicaid eligibility and care needs and to solicit basic demographic data. Consumers are also given information about the variety of long term care options available.

Even if the interested consumer is not eligible for the program, PASSPORT staff may be able to direct that individual to other community resources.

Since 1998, PASSPORT has used hospital registered nurse (RN) assessors, who are AAA employees, to carry out assessments. The RN assessors notify patients of their eligibility, introduce the program, and allow the patients to make informed choices of where they will receive their care.

Assessment

Tools Used

The program uses activities of daily living (ADL) and instrumental activities of daily living (IADL) scales. The comprehensive in-home assessment is completed by an RN.

Assessment Elements

The initial assessment includes the patient's condition, personal goals and preferences, functional limitations, health status, and other factors that are relevant to the authorization and provision of services.

Timing and Location

The assessment takes place after a phone screening and acceptance into program. The initial assessment occurs face-to-face at the patient's home or in a nursing facility. The program stresses the importance to see the patient in their home environment to identify care issues appropriately.

Care Management Team

Team Composition

The PASSPORT case manager serves as the patient's primary point of contact. The staff members who perform the clinical functions are professionally licensed personnel (i.e., RNs and social workers) who serve as screeners (performing pre-admission review responsibilities), assessors (assessing eligibility- both financial and functional), and case managers.

The 12 Ohio AAAs are the PASSPORT program administrators responsible for participant assessment, case management, and contract management with service providers statewide. The program case manager works directly with the patients to create a personalized care plan, arrange services, and coordinate care.

PCP Involvement

Building off of the patient screening and assessments, and together with the attending physician notes, case managers determine the level of functional and cognitive incapacity of the patient. The collected information and notes are used to create a care plan and to make decisions and recommendations about the need for home health care, an assisted living facility, or a skilled nursing facility.

Shared Management

Regularly scheduled teleconferences with staff from the PASSPORT Administrative Agencies (PAAs) about the Quality Management and Improvement System (QMIS) are a central strategy for disseminating and refining ODA's (Ohio Department of Aging) vision for quality management. The teleconferences focus on the discovery, remediation, and improvements processes that are central to the quality management framework. The conferences are a forum for PAAs to discuss their current quality management practices, to hear from ODA about the values and practices that are part of the emerging quality framework, and to provide feedback to ODA about the system.

Ongoing Care

Caseload

The AAA[10b] PASSPORT program currently has a patient to case manger ratio of 77:1.

Frequency of Outreach

The PAA conducts an annual reassessment of the patient's required level of care, and the county Job and Family Service Department reviews the patient's financial situation. Home visits are conducted quarterly, with the majority of case managers visiting patients more frequently.

Services

PASSPORT case managers offer:

- On-going assessment; coordination and monitoring of a patient's needs, strengths, and circumstances; and services to assure that services and interventions are appropriate

- Development of an individualized written care plan for each patient, which outlines the types and frequency of the long term care services that a consumer receives and may include treatment goals for the consumer for a specified time period

- Patient education to promote informed choice and an understanding of the risks and benefits of care options

- Patient advocacy, as needed, on behalf of the patient and/or caregiver

Through their community contracts with over 150 providers, the PAA identifies patient needs and organizes care services. They orchestrate the following services:

- Personal care

- Home-delivered meals

- Environmental accessibility adaptations

- Adult day care

- Homemaker assistance (such as laundry or housekeeping)

- Emergency response systems

- Medical equipment and supplies

- Chore assistance (such as home repairs, yard work, and heavy housecleaning.)

- Social work counseling

- Nutritional counseling

- Independent living assistance

- Medical transportation

The second part of the PASSPORT program is home care — Providing Options and Resources Today. Once patients are determined to be eligible for the program, a case manager works with them to develop a package of in-home services to be provided by local service providers. The case manager then monitors each patient's quality of care and changes the care plan as necessary. Individuals who do not meet the PASSPORT program's requirements will be offered information on other programs and services that may assist them.

The AAA[10b] program has a care management interdisciplinary team (CMIT), a geriatrician-lead group that meets weekly to discuss complex issues and cases. The CMIT is comprised of pharmacists, mental health representatives, care giver support system people, representatives from hospice, and attorneys, as needed, to handle complex cases. The cases do not have to be medically complex; these can be patients who use a large number of medications, have a history of repeated use of the ED, have been admitted to the hospital repeatedly, have behavioral issues, or have an unstable family environment. The program also has high-risk care managers — RNs who are assigned to high-risk individuals that come directly from the nursing home. These high-risk care managers provide more intensive intervention to ensure that patients can remain in the community.

Care Transitions Support

PASSPORT also uses the SummaCare Bridge to Home model at hospitals. The Bridge to Home program is designed to aid older adults during their transition from hospital to home to reduce their chance of readmission.

The majority of the Ohio AAA regions have been granted a CMS award to assist with transitions. AAA[10b] was of the first of seven to receive the award. The CMS award allows the program to offer health coaching and Coleman training in all of the hospital systems across AAA[10b]'s region (four counties).

The program also has a nursing "home-to-home" team, which focuses on patients who are currently residing in nursing homes and helps them make transition to the community. This team maintains good relationships with the staff at local nursing homes who help identify patients who want to return home. The team helps these patients find appropriate housing. Research has shown that when patients reside in a nursing home for more than three months, their opportunity for transition success lessens. The PASSPORT nursing home-to-home transitions team has demonstrated successful transitions past the three-month mark; 50 residents have moved to the community in the past three months in AAA[10b].

Outcomes

Results

PASSPORT provided home- and community-based services to more than 33,000 older Ohioans each month in FY 2012. Historically, the PASSPORT program has experienced high demand for its services. The program had a waiting list as recently as the spring of 2010, which was cleared through a special infusion of federal and state resources. Enrollment grew 6.2% in FY 2011. In FY 2012–2013, the administration committed to keeping the program open, but with tighter controls on PASSPORT spending. Enrollment did not grow in FY 2012, falling well short of the expected level of 7.5% growth.

The average length of time patients stay in the PASSPORT program is 38 months.

Ongoing Measures for QI

PASSPORT quality assurance processes include:

- Annual structural compliance reviews of service providers by the PASSPORT PAAs

- Monitoring of the PAAs by ODA, and of ODA by the Ohio Department of Job and Family Services

- Incident reporting and follow-up

- Interviews and surveys with program patients

- PAA-specific quality assurance/quality management strategies

All of these processes center on the health and well-being of participants.

ODA also initiated a performance incentive program that started in September 2011. Agencies' performance is judged on the following indicators:

- Consumer length of stay in program

- Net caseload gained per month

- Disenrollment from and transitions out of nursing homes

- Reassessments completed within 365 days

- Customer satisfaction survey (2011)

Change in Key Caseload Performance Indicators, Average per PAA FY 2011 vs. FY 2012 (September to June)

INDICATOR	FY 2011	FY 2012	DIFFERENCE	SIGNIFICANCE
Consumer Length of Stay (months)	35.6	37.8	2.2	Improved
Net Caseload Gain (consumers/mo.)	18.2	4.4	−13.8	Worsened
Disenrollments to Nursing Homes (consumers/mo.)	34.8	32.7	−4.1	Improved
Transitions from Nursing Homes to Community (consumers/mo.)	11.8	11.0	−0.8	Unchanged

Source: ODA/PAA Outcomes Management Report. Analysis by the author.

Evolution of Program

AAAs were established in 1974 to provide local execution of the federal Older Americans Act of 1965. Title III within the Act authorizes funding for an array of community services designed to enable older adults to remain in their homes, reducing unnecessary and costly institutional care.

PASSPORT expanded the AAAs' scope when it was founded in 1986. This Medicaid-funded program seeks to prevent unnecessary nursing home placement of older adults through a managed care program which provides a specialized care plan designed around the specific needs of the Medicaid-eligible older adult client.

The Akron-Canton Area Agency on Aging and the Summa Health System (SHS) have long histories of service to older adults. In the mid-1990s, each organization saw a lack of care continuity related to communication problems and fragmentation of care for their complex patient populations. The geriatric medicine leaders, most notably Dr. Kyle Allen, and the AAA leaders realized that the shared goal for their consumers could be better met through streamlined communication from the medical to the community setting.

These leaders began a strong collaborative relationship that translated into numerous joint efforts:

- RN Assessor Program

- High-risk care management model

- Care management inter-disciplinary team

- Formal research projects

With the passage of the Affordable Care Act, Ohio is scheduled to join a nationwide trend in using managed care organizations to control the costs of serving dually-eligible individuals (i.e., Medicare/Medicaid eligible). By March 2014, the Integrated Care Delivery System pilot will be introduced in Ohio. This three-year pilot will endeavor to provide integrated benefits to Ohio's dually-eligible population in targeted geographic areas. This initiative is testing innovative payment and service delivery methods to improve coordination of services, enhance quality of care, and reduce costs for both the state and the federal governments.

Lessons Learned

The need for information about provider quality was mentioned in many phases of the program. Case managers and assessors reported frustration about their inability to give patients information about providers. Providers were also interested in patients having valid information about quality, and they wanted to learn about best practices. Patients reported that they did not always feel fully informed as they were choosing their providers.

Challenges

The program is interested in identifying a risk-stratification model to be used in the PASSPORT program to help with predicting variables and trends.

Access to pertinent data elements and the ability to analyze them have been a challenge for the program. The program has the ability to analyze data in a retrospective manner. Looking toward the future, program leaders are interested in developing a predictive model to apply sound clinical protocols.

Costs

PASSPORT uses federal and state funds through a Medicaid waiver to pay for in-home alternatives to nursing home care for low-income, Medicaid-eligible seniors. Depending on income, participants may be required to pay a patient liability each month toward the cost of services.

Combined spending on PASSPORT and assisted living was $29.1 million, or 4.7%, below projected levels in FY 2012.

PASSPORT program participants also receive a Medicaid card that entitles them to Medicaid benefits including: physician care, hospitalization, and prescription drugs.

A program study released in 2007 by Miami University reported that the average yearly Medicaid expenditure for a nursing home resident was $55,751, compared to $23,702 for a PASSPORT client. The average per-person value of all non-Medicaid public assistance to PASSPORT consumers was $2,830, compared to $480 per year for nursing home residents. When Medicaid and other public costs are totaled, the cost of caring for a person in the community is slightly less than one-half the cost of caring for a person in a nursing home.

Technology/Innovation

Technology Enablers

PIMS is the program's centralized data-collection and decision-support tool. As an important part of the workflow of billing and payment, PIMS edits claims to ensure that the patient is enrolled, the services have been pre-authorized, the units billed match the service plan, and the provider is certified as a Medicaid provider. In addition, PIMS limits provider payments to the rates that have been identified for each type of service.

Future Innovation/Direction

AAAs are pushing to integrate advanced care planning and palliative care concepts into the PASSPORT program to focus more on symptom management and ensuring that patient goals are stated.

The state of Ohio is moving towards an integrated care delivery system focused on dual eligible patients. In March 2014, an integrated care delivery system pilot will be launched in seven regions in Ohio. This three-year pilot, under the direction of CMS, will focus on integrating care for dual-eligibles. Managed care organizations will be responsible for the entire spectrum of dual eligible population care services. Managed care organizations are mandated to contract with AAAs to provide care management. Starting in March 2014, 85% of the PASSPORT population will be under this integrated care pilot.

Author: Medimetrix

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Sutter Health
Sutter Care Coordination Program

INTERVIEWEE: Jan Van der Mei, RN, MS

Summary

Developed at Sutter Health, the Sutter Care Coordination Program was designed to address the medical and psychosocial needs of complex, chronically ill patients by combining chronic care and disease management services into a collaborative program. Case managers are embedded in the physician practice setting. The program works closely with patients PCPs. Every Sutter-aligned internal medicine and family practice doctor has an assigned case manager, and this case manager (nurse or social worker) manages patient follow-up.

All patients, irrespective of payer type, can participate in the program. However, the program proactively searches for Medicare Advantage patients.

In 1998, the program started in a centralized location focusing on managed care patients. In 2001, the case managers were moved to the physician's office to create a stronger relationship between case manager and primary care physician. The transition-of-care aspect of the program has been in place for three years.

The budget for the program is slightly more than $2 million. In 2012 the program worked with 7,649 patients with an average of 1,800 patients each month.

Patient Identification

Inclusion Criteria

Both elderly and nonelderly patients are eligible for the program. Criteria for referral to the program include:

- Seven or more medications

- Three or more chronic conditions

- Two or more ED visits and/or hospitalizations in the past year

- Discharge from an acute or skilled nursing setting

- Poor nutritional status

- Medication nonadherence or other related issues

- Lack of community and social support needed to maintain wellness

- Anticipated high use of medical services

All patients, irrespective of payer type, can participate in the program. However, the program proactively searches for Medicare Advantage patients.

Data Sources and Tools Used

Physician referral is the primary source of patient identification. Patients are also identified through:

- Caregiver request

- Health risk screening tool

- Daily inpatient report, which informs staff of any newly admitted Medicare Advantage patients who are eligible based on high-risk criteria

- Patients are referred not because they have a specific chronic disease but because they are struggling with chronic care management and coordination of needs.

Ranking/Stratification Methodology

The program's health risk screening tool is a validated risk-stratification tool that predicts increased use of health care services.

Ongoing Data Collection Methods

Utilization data continues to be based only on the managed care population. Staff productivity is monitored through reports collected from the electronic medical record. Completions of advance care planning discussions and advance directives are tracked and monitored using an EPIC documentation tool.

Assessment

Tools Used

Each patient begins by receiving a comprehensive phone screening by a care coach. The care coach schedules a follow-up meeting with the RN or LCSW care manager, who will complete an assessment and create a detailed care plan.

The care coach checks if the patient has a follow-up appointment and transportation there. The coach informs the patient that a specific nurse will call the next day to discuss medications and symptoms, the issue that brought the patient to the hospital, any issues that might cause the patient to return, and emergency contacts.

Assessment Elements

The key goal for the initial assessment phase is to work with the patient and/or caregiver to identify pertinent issues and problems that need to be addressed and then to develop a care plan that deals with those issues and problems.

Timing and Location

Assessments take place within 24 hours of discharge. They happen most often over the phone, but they can be conducted in a provider's office or at the patient's home if necessary. An RN case manager performs assessments for patients whose medical needs are dominant and who have complex and ongoing medical conditions, end-of-life issues, and/or a history of acute episodes. An LCSW will make the first visit if the patient is unstable and has complex psychosocial conditions or requires a home assessment, psychosocial evaluation, or crisis intervention.

Care Management Team

Team Composition

The program case manager serves as the patient's primary point of contact. Care team members include the following:

- Primary care physician (PCP)

- Registered nurse case manager and/or medical social worker

- Health care coordinator/care coach (HCC)

Team Roles and Education

Case managers are embedded in the physician practice setting. RNs or social workers may do the initial assessment. Care coaches work closely with the patients to offer education services and to match the patient's needs with available services.

For each patient, one team member serves as the primary case manager. RNs take complex patients who have dominant medical issues, and LCSWs take complex patients who have psychosocial issues.

PCP Involvement

While the PCP is not a formal part of the team, the program works closely with patients' PCPs. The care coordination team serves as an intermediary between the patient and physician to address any issues that arise. The PCP helps develop the care plan and is in frequent contact with the team. The team structure helps streamline communication, so the physician or specialist hears about a patient from one individual. To facilitate communication, LCSWs and RNs work in physician offices to support patients and to serve as the single point of contact, and coordinators work in a regional office to provide ongoing monitoring and support, as well as to assist the case managers with referrals to a wide variety of resources.

Every Sutter-aligned internal medicine and family practice doctor has an assigned case manager, and this case manager (nurse or social worker) manages patient follow-up. The program strives for patients to have a PCP follow-up appointment within seven days of discharge.

Shared Management

For stable patients. The HCC monitors the plan of care developed by the case manager and the patient, supporting the patient with identified goals and assisting with referrals to appropriate community resources. The coordinator performs ongoing phone monitoring of patients and refers them to the LCSW and/or RN when changes require additional assessment and intervention. The coordinator also communicates with the physician.

For patients with complex medical issues. During the initial contact, the nurse performs the medical assessment, identifies goals and priorities, provides individualized education and instruction, reviews medications, and performs mental health status and depression screens. The nurse will make appropriate referrals to community resources (e.g., financial support, senior care) and communicate the key points from the initial assessment to the physician. The RN continues to monitor the patient by phone as appropriate and to work with the physician in coordinating care.

For patients with complex psychosocial conditions. The social worker performs the home assessment and depression and daily living screens, reviews medications, and helps patients and their family members get needed support. The social worker provides ongoing phone monitoring for families in crisis, makes referrals to appropriate government and community programs, and communicates with the physician.

Cases are then transferred between team members as needed, with special emphasis placed on identifying and providing education and monitoring related to chronic conditions. Incidents such as falls, low body mass index, frequent hospital and/or ED visits, medication problems, and loss of daily living activity capacity can trigger transfers within the team. Relatively straightforward, nonclinical issues, such as with transportation, may be forwarded to a coordinator who has expertise in identifying resources in the community. A complex clinical issue, such as a medication noncompliance issue or a newly developed need for a medical assessment, would be directed to the RN.

Ongoing Care

Caseload

RNs and LCSWs each handle between 60 and 80 patients. As complex patients are stabilized, their ongoing monitoring is transferred to a coordinator, and new patients are added to the RN's or LCSW's caseload. HCCs handle between 200 and 250 patients and can refer cases back to the LCSW or RN, when necessary, because of changes in the patient's condition.

Frequency of Outreach

Follow-up contact is scheduled as follows:

- 24 hours post-discharge by the care coach

- 48 hours post-discharge by the program nurse

- One week post-discharge by case manager

- Then weekly

Following discharge, patients are assessed and provided with transition-of-care follow-up for one month. After one month, patients are kept in the program if ongoing needs are identified. Otherwise, if the patient is deemed stable without further care, the case is closed. The patient is followed for an additional 30 days to try to avoid readmission.

The program periodically monitors patients post-discharge to make sure they have the support and services they need and to check that they are following their doctors' instructions on taking medication. The program strives to ensure every aspect of the patient's well-being receives attention, including physical, mental, emotional, educational, and social support.

Services Provided

The care team works with patients and their families/caregivers to keep those with multiple chronic conditions as healthy as possible through:

- Coordination of care

- Patient education

- Referral to appropriate medical, psychosocial, and community services

- Ongoing monitoring and troubleshooting as needed

The team is supplemented, when appropriate, by specific disease management programs for those patients with heart disease, diabetes, and/or asthma, as well as those in need of anticoagulation management.

The program care coach teaches the patient about the disease process and helps match the patient with Sutter services.

Often, the RN case manager will work with frail, elderly patients who require the following support:

- Assistance with end-of-life issues and advance directives, including identification of patients who might benefit from hospice care and discussion of these services with the patient, family, and provider

- Referral to needed services both inside and outside of the Sutter system, such as a diabetes clinic or support services for patients with Alzheimer's or dementia

- Identifying and arranging community-based services, such as meal delivery, for patients with nutrition issues, since malnutrition has been shown to increase the risk of institutionalization, length of stay, and speed of injury healing

Advanced illness management. The care team provides the ongoing telemonitoring, care coordination, and linkages to the patient's physicians for patients in the advanced stages of illness.

The SCCP provides care management for patients with end-stage illnesses who are not yet ready for hospice. Patients receive high-touch care management intervention with a focus on advanced care planning, symptom management, and care coordination. Eligible patients are those with advanced or end-stage chronic illnesses whose life expectancy is 12 months or less (e.g., those with metastatic/recurrent cancer, cardiac disease or CHF, COPD/chronic lung disease, end-stage renal disease with comorbidity, liver disease, and neurological disease). This level of care is also provided to patients who wish to continue disease-modifying therapy and who could benefit from a palliative care approach, including patients who have not chosen, or are yet to be eligible for, hospice.

Disease management. Disease management activities are part of Sutter's regional care coordination program. The various disease management programs focus on a few specific medical issues, including congestive heart failure, asthma, ongoing oral anticoagulant treatment, and diabetes. These programs have teams of nurses and support staff who focus on the specific disease. When a psychosocial issue is identified, the care coordination team provides support. Although this

approach includes traditional disease management model methods — regular phone calls to patients for consultation, support, education, and medication adjustments — in the Sutter program, it is not a distant, third-party nurse who is making the call. Instead, it is a team of experts who specialize in that disease, work closely with the patient's PCP, and are part of the patient's coordinated care team.

The heart failure program follows a standardized nursing protocol. If a patient in the transition-of-care program is suffering from heart failure, the heart failure program team of nurses makes medication adjustments and orders appropriate labs. By actively treating these patients for heart failure, the team works to keep patients out of the hospital.

The disease management nurses have appointments available every 10 to 15 minutes. If a patient has equipment or financial issues, the nurses connect the patient with the patient's PCP's case manager.

Care Transitions Management Process

The initial transition of care call is made by the care coach within 24 hours of discharge. The coach asks if the patient has a follow-up appointment scheduled and transportation to it. Patients are also informed that a nurse will call the next day to discuss medications and general signs and symptoms. On that call (48 hours following discharge), the nurse reviews the medications with the patients, educates them on their illness, and tells them who to contact for additional questions or changes in health status. One week later, a social worker working with the patient's PCP makes a follow-up call.

When an enrolled patient is hospitalized, the care coordination team works to reduce the patient's length of stay, promote timely discharge, and decrease the risk of readmission through the following activities:

- Communicating premorbid functional status and prior history of hospital-related complications to hospital case managers

- Arranging for discharge support before scheduled admissions

- Communicating discharge needs to hospital case managers

- Assessing the adequacy of the discharge plan in meeting the patient's needs

- Providing ongoing monitoring of discharge plans after hospitalization

Transitions of care visits are initiated by the HCC, who makes the initial contact post-discharge for new patients to discuss medical care follow-up, discuss social support and equipment, and arrange for the next call with an RN with appropriate handoff. The case manager will focus on medication management and other potential red flags. Future calls are made by either the HCC or case manager based on the case manager's initial assessment. Follow-up is conducted at designated times.

Tools

The EPIC documentation tool used by the Sutter Care Coordination Program has a built-in care plan tool. It contains over 70 common conditions and issues, such as falls. The goal for each problem is stated, and all potential interventions are identified. As interventions are addressed, progress is noted in the care plan, which is available to all care team members, patients, and their family members.

Best practice guidelines are used to direct the care and decisionmaking process. Sutter Health also has an RFP out for a predictive modeling tool to proactively identify high-risk patients, but it is not in place yet.

Outcomes

Results

- Patients followed by the SCCP team had 27% fewer admissions and 37% fewer ED visits in 2012.

- The Heart Failure Telemanagement Program began in 2001 and also consistently has a positive return based on avoided costs and use.

- Patients in the heart failure program had 68% fewer admissions and 52% fewer ED visits in 2012.

- The Diabetes Program, which began in 2005, recently added an active insulin management component. The program's clinical outcome measures for diabetes have shown that each quarter, over 375 high-risk patients have moved closer to their goal.

Ongoing Measures for QI

The program assesses and measures:

- Utilization data

- Clinical outcomes

- Patient satisfaction through surveys

- Cost

Evolution of Program

In 1998, the program started in a centralized location focusing on managed care patients. The program initially identified patients through claims data but found that the time lag in receiving these data was problematic. The program began using a health risk tool to identify patients at risk of becoming frequent health care services users.

In 2001, Sutter moved its case managers to the physician's office to create a stronger relationship between the two parties. In the beginning stages of the program, follow-up with patients occurred at the case manager's discretion and did not occur with the frequent and set schedule as it now does.

Beginning in January 2009, the team began integrating a transitions-of-care process into its care coordination program, based on the model developed by the University of Colorado in 2002. This process ensures that transitions between providers and health care settings are respectful, coordinated, and efficient.

Lessons Learned

- It takes a team to provide care coordination.

- All disciplines bring a special skill set to the table.

- Focusing on the patient and the patient's goals, not the health care team's goals, must be front and center.

- Patients must learn to manage their chronic conditions, as they live with them every day.

Costs

The budget for this program is slightly over $2 million. The new CMS billing codes should help offset some of the costs.

Technology/Innovation

Technology Enablers

Sutter uses a health risk tool for patient identification and stratification. For heart failure and diabetes patients, the disease managers and care coaches use EPIC to provide unified care.

Future Innovation/Direction

Future program direction includes:

- Focusing attention on the highest-risk patients — following them wherever they are to ensure coordination of care, whether that is in the hospital, at a skilled nursing facility, or at home

- Increasing the number of health care coordinators (coaches) to allow the nurses and social workers to focus on high-risk members

- Implementing a daily review of shared rosters to use the HCC role in new ways

Author: Medimetrix

To learn about other complex care management programs, visit www.chcf.org.

University of Washington School of Medicine
TEAMcare

INTERVIEWEE: Wayne Katon, MD

Summary

The TEAMcare intervention targets patients with either diabetes or heart disease, and comorbid depression. The program involves integrated medically supervised nurses assisting PCPs in the care of these patients.

TEAMcare has implemented the program in other systems of care in the US and Canada. With a web-based tracking tool, TEAMcare is able to assess the performance of individual sites.

With current funding from the Centers for Medicare and Medicaid Services (CMS), the goal is to bring an adaptation of TEAMcare to eight organizations, with each organization serving 1,000 patients, for a total of 8,000 patients. This effort may require five to eight nurses per site, with each nurse handling 100 patients per year. Some sites, however, will use medical assistants, pharmacists, and social workers to handle some of the key tasks in the intervention, reducing nurse time. Patients in this CMS project will be insured by Medicare and Medicaid.

Patient Identification

Inclusion Criteria

TEAMcare patients must have:

- An ICD diagnosis of diabetes and/or coronary heart disease

- Clinically significant depression (i.e., PHQ ≥ 10)

- One or more parameters of poor diabetes and/or coronary heart disease control:
  - Blood pressure >140/90 mmHg
  - LDL cholesterol >130 mg/dl
  - HbA1c ≥ 8.5%

Patients must also be ambulatory and without psychiatric diagnoses of bipolar disorder, schizophrenia, or confusion suggestive of dementia or significant cognitive impairment.

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Data Sources and Tools Used

Potential patients were identified from electronic records.

Ranking/Stratification Methodology

Patients with at least one of these measures of poor disease control were screened with the PHQ-9. If they scored 10 or greater, they were offered enrollment in the TEAMcare trial. Patients were not stratified further.

Assessment

Tools Used

The initial assessment is completed by a nurse using a semi-structured interview.

Assessment Elements

The program nurse asks about the patient's history of medical problems including depression; use of disease-control medications; health-risk behaviors such as smoking and adherence to diet, exercise, and medications; current stressors; and support at home.

Timing and Location

Assessment usually occurred within two weeks of a positive screen for poor medical control and depression. The initial assessment is typically office-based.

Care Management Team

Team Composition

The TEAMcare program consists of:

- The TEAMcare nurse care manager (TCM)

- The patient's primary care physician (PCP)

- Supervising specialists (e.g., psychiatrist, internist, or family physician)

- Consultants as needed (e.g., diabetologist, cardiologist)

TEAMcare nurses serve as the patient's primary point of contact and are supervised weekly by both a psychiatrist and an internist or family physician.

Team Roles and Education

A program nurse works with each patient's primary care physician and provides guideline-based, collaborative care management to control multiple disease risk factors.

PCP Involvement

The nurse brings points from discussions with the psychiatrist and internist to the patient's primary care physician for review and approval. PCPs can order treatment changes throughout the TEAMcare intervention. Using "treat-to-target" protocols for some medicines such as insulin, PCPs authorize the program nurse and the patients to make incremental dose adjustments until the desired target is reached.

Shared Management

The psychiatrist and an internist meet with the nurse weekly. During the meeting, the group reviews the case registry, discusses patients' health and control of the four key parameters (depression, glycemic control, blood pressure, and lipid control), and recommends changes in medication and other regimens. The nurse manager creates an action list with patient directives from the two supervisor doctors. The following week, the nurse reports on the results of the previous action list. The program nurse manager keeps a copy of the personalized care plan and provides a paper copy to the patient and patient's primary care physician.

Ongoing Care

Caseload

Full-time nurses handle around 100 patients a year.

Frequency Schedules

In structured visits at the patient's primary care clinic every one to three weeks, nurses monitor patient progress in depression (PHQ-9), glucose control (HbA1c), blood pressure, LDL cholesterol levels, and self-care activities (including medication adherence).

Services

Program nurses work with patients to:

- Formulate an individualized health plan with specific and measurable targets

- Support patient self-management, such as taking medicines and engaging in a healthy lifestyle

- Carry out treat-to-target treatment intensification through frequent, incremental, and consistent medication treatment titration steps to achieve individualized goals

- Engage in weekly case review and medical supervision

- Monitor clinical progress proactively with appropriate and timely outreach

Nurses are the bridge between the supervising physicians and the patient's PCP. Nurses help coordinate referrals to specialists as well as coordinate return visits to primary care after an emergency department (ED) visit or hospitalization.

Follow-up assessments, also performed by the program nurse, are conducted over the phone and in the office.

Once a patient reaches set goals, that patient is transferred to phone care, with the nurse conducting follow-up over the phone for three to six months. Afterward, and after reconfirmation of the patient's stability, the TEAMcare nurse informs the patient and the patient's PCP that the patient has graduated from the TEAMcare program and will no longer be visited by a program nurse.

Care Transitions Support

Part of the role of nurse manager is to integrate any ED or hospital admission data into the PCP's care.

Tools

The program nurse manager aims to increase behaviors that enhance quality of life and decrease depressive symptoms. The nurse managers use the following educational tools to help:[1]

- Depression Helpbook

- Tools for Managing Your Chronic Diseases

- Starting Daytime Insulin and Carbohydrate Counting

- Starting Bedtime Insulin

- My Better Health Plan

An Access–based registry is used along with treat-to-target algorithms for glucose, blood pressure, and LDL cholesterol control developed by Group Health and Kaiser. The research team also developed treat-to-target guidelines for antidepressant medications.

Outcomes

Results

Compared with the usual care group, patients receiving the TEAMcare intervention had greater overall 12-month improvement in the following domains:

- HbA1c, LDL, SBP, and SCL-20 depression outcomes ($p > 0.001$)

- Significantly greater number of adjustments in insulin ($p > 0.01$); antihypertensives ($p > 0.01$); and statins, oral hypoglycemic, and antidepressant medications ($p > 0.01$)

- Greater overall medical improvement ($p > 0.024$), quality of life ($p > 0.001$), satisfaction with diabetes / coronary heart disease care ($p > 0.001$), depression care ($p > 0.001$), and improved functioning ($p > 0.001$)

Patients in the intervention group were more satisfied with their care and rated themselves as having enhanced functioning and a higher quality of life at one year compared to usual care patients.

Outcomes were evaluated based on a multivariate model that jointly analyzed the 12-month glycosylated hemoglobin (HbA1c), low-density lipoprotein cholesterol (LDL), systolic blood pressure (SBP), and Symptom Checklist-20 (SCL-20) depression outcomes.

Evolution of Program

Nurses became increasingly adept at skills such as motivational interviewing, problem solving, and behavioral activation. They also became increasingly comfortable with talking about depression diagnoses and treatment with aging patients.

Lessons Learned

It was recommended that the nurses commit to providing care solely for these patients for effective implementation of the TEAMcare program.

Costs

The intervention produced a total outpatient cost savings of approximately $600 per patient over a two-year period compared to usual care.

Technology/Innovation

Technology Enablers

With a web-based tracking tool and patient registry, TEAMcare is able to assess the performance of individual sites. During monthly phone support calls, TEAMcare is able to help teams develop key roles and skills to improve patient outcomes. TEAMcare also provides an annual one-day "booster" session at all contract sites.

Author: Medimetrix

Endnotes

1. "Resources," TEAMcare, www.teamcarehealth.org.

To learn about other complex care management programs, visit www.chcf.org.