BEST PRACTICES

Managing Patients with Multiple Chronic Conditions

MERCY MEDICAL GROUP CASE STUDY

Organization Profile

Mercy Medical Group (MMG), a division of CHW Medical Foundation, is an integral part of the health care delivery system in the Sacramento, California, area. It is comprised of more than 250 primary care and specialty physicians who provide multispecialty care to patients at 13 clinic locations. MMG is a rapidly growing, high-quality group with strong physician leadership and a committed hospital partner in CHW. MMG operates under a fee-for-service and capitation model. The group implemented the Allscripts™ electronic health record (EHR) in 2006.

Project Summary

To improve the management of chronic disease in the primary care setting, MMG created Care Teams to support primary care physicians (PCPs) with complex patient panels. These teams leverage disease registries and other tools to proactively manage patients with multiple chronic conditions and improve their quality of life.

Program Goals and Measures of Success

In 2009, MMG decide to focus, in part, on the patient-centered medical home as the model for care delivery and on improving outcomes for patients with chronic diseases. The group has adopted the World Health Organization's definition of *health* in managing patients with multiple chronic illness: "a state of complete physical, mental, and social well-being, and not merely the absence of disease." To achieve this, the medical group created Care Teams to work with PCPs in managing the subset of patients with multiple chronic diseases within an overall population of 53,000. The 4 Care Teams, each serving a geographic region, are comprised of a case manager, a social worker, a diabetes nurse educator, and a pharmacist.

Using the Hierarchical Condition Coding (HCC) algorithm, MMG primary care practices were analyzed for their complexity and graded. The 7 PCP practices with the most complex panels of patients were invited to work with the Care Teams.

Goal of the Care Team model: To manage the continuum of care and be accountable for improving quality and reducing cost of care for patients with multiple chronic conditions.

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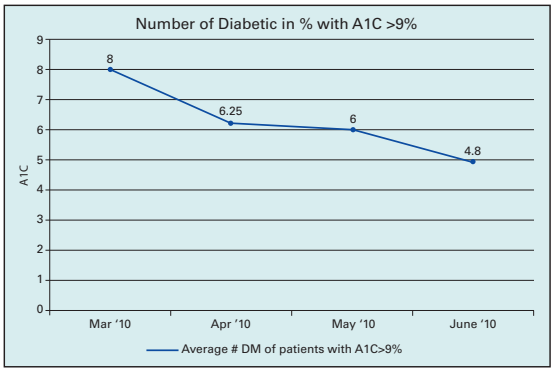
Objectives:

1. Reduce the total cost of care by decreasing medical admissions by first-risk stratifying patients using the HCC module and then focusing on reducing avoidable admissions by building a continuum-of-care program across the organization.
2. Reduce the 30-day readmission rate to less than 15% by building a team-based medical home model of care with a home visit program and collaboration with the hospitalist program.
3. Reduce emergency room (ER) visits by building a home-visit program and a team-based medical home model of care delivery at the outpatient clinic.
4. Improve performance in 20 clinical quality measures from a score of average to a score of above average by creating clinical disease registries, leveraging clinical decision support tools, and meaningfully using the EHR to report to the Centers for Medicare and Medicaid Services (CMS) using the Physical Quality Reporting System.

Patient outcomes

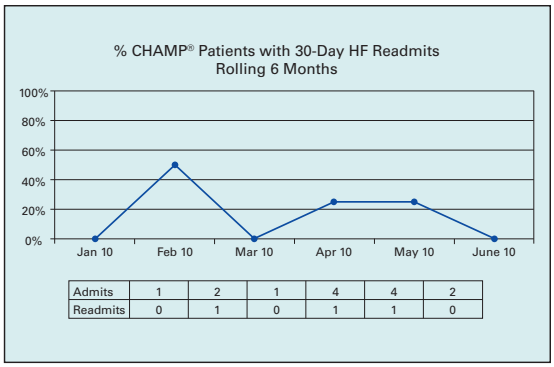
- The coordination of diabetes care has improved. Within the 7 pilot physician practices, only 3.2% of patients with diabetes had A1C > 9% (Fig. 1).

Figure 1



- The 30-day readmission rate for patients with congestive heart failure declined from 25% to 20% (Fig. 2).

Figure 2

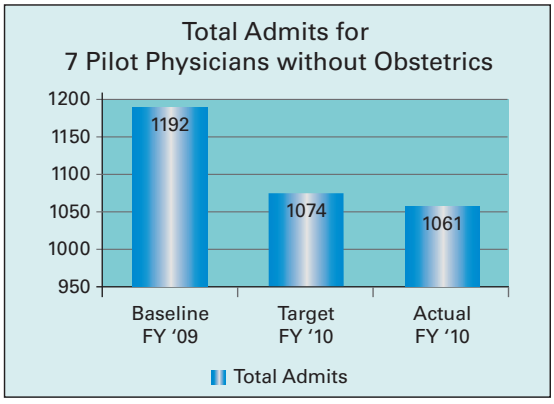


- Overall, a 10% reduction in the use of potentially inappropriate medications was achieved in a recently concluded Health Services Advisory Group (HSAG) QIO project for CMS.

Hospitalization and Readmission Rates

- The pilot program, encompassing a panel of 1,001 complex patients across 7 PCP practices, demonstrated an overall reduction of 1% in acute hospitalization (Fig. 3).

Figure 3



- The pilot also demonstrated an overall 30-day reduction in readmission rates. Rates decreased from a high of 22% to 15%. The California average is around 20%.

Other results

- The group was placed in the 90th percentile in California based on its performance in coordinated diabetes care measures from the Integrated Healthcare Association (IHA).
- Patient satisfaction scores have improved, moving from 4.36 to 4.45 on a 5-point scale over a 3-year period.
- The patient satisfaction score for the home visit program (described below) as measured by the Avatar survey has been as high as 100%.
- Overall satisfaction scores for all physicians, especially scores on economic and strategic development, vision, and leadership, improved by an average of 7% in just 1 year.

Population Identification

The Care Teams utilize an internal clinical decision support tool known as the Case Index Score. The Case Index Score risk-stratifies patients based on national standards. This tool extracts information from the EHR and compiles it using prior utilization patterns, national predictive models, the Charlson Comorbidity Index, and the Probability of Repeated Admission instrument. Based on the data from this tool, the top 20% of high-complexity patients with multiple chronic diseases are identified and distributed among the Care Teams.

The Care Teams also accept referrals from hospital-based case managers, hospitalists, and PCPs. Patients who are being discharged from the hospital receive an additional evaluation using the Naylor's Risk Score for Re-hospitalization tool. Patients scoring above 6 are considered at highest risk for rehospitalization. This group is managed in collaboration with the home health agency of MMG's hospital partner. The home health nurse performs a comprehensive assessment on each patient's needs using the Outcomes and Assessment Information Set (OASIS) tool.

Demographics

- Number of patients: n = 1,001
- Age range: 16–105 years, with average age of 77 years
- Number of comorbid conditions: 2 to 7 chronic conditions

Chronic Disease Registries

Registries for diabetes, hypertension, and preventive care are used to support care management efforts. These registries capture information from the EHR using an on-demand model. They provide point-of-care reports to communicate condition-specific information to the Care Team members and prompt them to deliver the recommended care as well as exception reports for patients overdue for care. For example, the diabetes registry provides the high-risk diabetes nurse with information on coordinated diabetes care measures.

The registry tracks performance on ER/urgent care usage, admissions to the hospital, and readmissions. The registry also creates reports on how well the individual and the organization are doing in delivering recommended care to specific populations for chronic diseases.

The Intervention

The Care Team members meet in a 45-minute, one-on-one session with individual PCPs at their office site every other week. The home health nurse, high-risk diabetes nurse, geriatrician, and geriatric nurse practitioner join these sessions via teleconference on an as-needed basis. The goal of these sessions is to manage patients' multiple chronic illnesses effectively and improve their quality of life.

Care Team member roles

- **Physician (14 PCPs)**

The PCP serves as the primary clinical provider. PCPs welcomed the Care Team to support their practices. Physicians led their individual site's transition from a fee-for-service model to a population-based approach to care. The Care Team model has expanded beyond the original 7 practices to currently support 13 practices.

The physicians have re-engineered their workflow to make time for Care Team conferences and increased their availability to the team members via e-mail and EHR messaging. Intake forms are designed to identify patients' concerns with their multiple chronic diseases. The Care Team has helped the physicians provide quality care for patients with chronic conditions.

- **Case Manager (4 Full-time equivalents [FTEs])**

The case manager is a registered nurse who serves as the Care Team lead. Using the Reduction in Acute Care Hospitalization (ReACH) form, modified from the Agency for Healthcare Research and Quality ReACH project, the case manager performs a telephonic comprehensive assessment of the physical, social, financial, pharmacologic, and environmental needs of assigned patients. The case manager collaborates with hospitals, skilled nursing facilities (SNFs), a home health program, hospice agencies, the social worker, pharmacists, and the diabetes nurse educator, as well as various disease management programs.

The case manager makes phone calls to patients following discharge to facilitate follow-up visits. Telephonic case management is provided based on the condition and needs of each patient. During the calls, patients can ask questions about their medications, report early changes in their condition, request appointments with PCPs, initiate a home visit, or alert the team to any living situation changes. The case manager engages the other Care Team members (social worker and pharmacist) when psychosocial or medication issues are identified.

The scheduled phone checks provide an avenue for patients to have their problems addressed in a timely manner, thus improving accessibility and early intervention. This has led to improvements in access and communication and coordination of care as well as reduction in fragmentation and wasteful care.

• Licensed Clinical Social Worker (4 FTEs)

The licensed clinical social worker (LCSW) takes a holistic view, broader than just medical issues, to help identify problems and find solutions for patients. The LCSW provides biopsychosocial assessments to help determine underlying factors, such as depression, dementia, or other mental illness, which can interfere with improving quality of life.

MMG's LCSWs are trained in cultural competency to provide appropriate interventions. Through their home visit program the LCSWs develop rapport and build trust with the patient and family members so that they feel comfortable in sharing problems. They provide educational resources and community information and guide patients through completing their Physician Order for Life-sustaining Treatment (POLST) and Advanced Health Care Directive forms. Advanced directives and clear documentation of a patient's wishes helps to avoid unnecessary diagnostic tests, confusion with treatment choices, hospitalizations, and conflict among family members during the management of multiple chronic illnesses.

The LCSWs serve as advocates for the patients and their families. Active listening, supportive feedback, and praise/encouragement for positive choices are key tools used by these clinicians.

• Geriatrician and Geriatric Nurse Practitioner

The Care Teams work closely with geriatricians and geriatric nurse practitioners who provide leadership through a "Seniorcare-without-Walls" model, which is a home visit approach to care outside the walls of the traditional clinic setting. The geriatrician shares knowledge and expertise with PCPs, educating and counseling them in the care of the elderly, complex patient, with the goal of enabling patients to live well within their communities.

The transition from hospital setting to home remains a precarious time for high-risk seniors and often results in readmissions. Therefore, a home visit by the geriatric nurse practitioner is offered to the frailest and highest-risk seniors. During this home visit, the nurse obtains valuable information and supplies to the PCP. This information reveals any gaps in care that often occur in the multiple transitions a patient makes after an acute event. A home visit also provides insight into biopsychosocial conflicts that may exacerbate or complicate a patient's medical conditions. The home visit includes medication reconciliation and evaluation of adherence by the geriatric nurse practitioner. This evaluation may lead to a more in-depth home visit by the pharmacist to evaluate the patient's medication behaviors and barriers to adherence. By adding these face-to-face interactions with the patient between outpatient visits with the physician, MMG has enhanced access and patient satisfaction. Ultimately, seeing the patient in his/her own environment allows the team to anticipate patient and or family needs.

In addition, the geriatricians provide close follow-up and comprehensive assessments at SNFs and clinics. Frequent rounding at these facilities uncovers acute problems and exacerbations of chronic diseases that can be addressed in a timely and proactive manner. A focus on comprehensive assessments and family conferences helps to prevent avoidable rehospitalizations.

The geriatricians serve as POLST champions and use this form as a care plan to provide palliative care for patients with terminal chronic illnesses.

• Pharmacist

The team pharmacist is responsible for comprehensive medication review and medication reconciliation for any patients discharged from the hospital or with recent ER or urgent care visits. The pharmacist also performs comprehensive medication reviews on any patient identified by the team as having potentially inappropriate medications, adherence problems, or access and affordability issues. Pharmacists perform these medication reviews telephonically, at in-home visits, or at face-to-face visits through the Pharmacist Review to Increase Cost Effectiveness (PRICE) Clinic. The in-home visits often focus on adherence and access issues and employ such measures as meds boxes or bubble packs. The PRICE Clinic is a medication therapy management clinic offered by each pharmacist in his or her geographic location on a weekly basis. During these visits, pharmacists see Care Team patients and any other patients with medication issues.

The Care Team pharmacists are also responsible for evaluating all office-administered medications for appropriateness and dosing. Further, in support of the Care Teams and all providers, dedicated clinical pharmacists manage all patients on anticoagulation therapy.

Shared Medical Visits

MMG has a multidisciplinary disease management program that provides specialized, extended care in a group setting to individuals diagnosed with a chronic illness. The goal is to teach patients about the disease process, symptoms, medications, the goals of treatment, and to be proactive with self-management. Shared medical visits are being conducted with obese patients with sleep apnea, diabetes patients with insulin pumps, and multiple sclerosis patients with complex problems. The expected outcomes with activated patients include improving access, minimizing avoidable ER visits and hospitalizations, and achieving good health outcomes.

Workflow and process changes

To support Care Team development initially, existing resources were redeployed. The geriatrician and geriatric nurse practitioner were recruited to provide support to the PCP practices and were further integrated with the Care Team model. Their panel of patients became Care Team patients as many geriatric care visits already involved patients with chronic illness.

The nurse case managers were previously doing episodic case management of capitated referrals only. The referrals were for episodic illness, such as trauma, or catastrophic cases, such as organ transplants. By creating chronic disease registries and shifting focus to managing patients with multiple chronic conditions, MMG identifed many more patients as potential Care Team patients. Therefore, the case managers focused their work on this group exclusively.

MMG's Geriatric Psychiatry program had recently lost state funding, allowing the social workers who were managing patients under the state program to be engaged with the Care Teams. The pharmacists were the last to join the Care Teams, but had been providing support as a group before individual pharmacists were identified. Because the pharmacy department was restructuring at the time, it was able to add dedicated resources for the Care Teams in the new organization.

Information Technology

Portable EHR: The ability of the team to access a patient's EHR remotely using laptop computers during home visits and team meetings has improved coordination of care and clinical decision-making in the field.

Leadership Involvement and Support

With support and participation from the board of directors, the chief medical officer, and physician leaders, patient-centric reforms and cultural improvements have paved the way for Care Teams to make their mark on chronic diseases.

The compensation model for the pilot physicians was altered to reflect the changes in Care Team responsibilities.

With the help of site leadership (clinical staff and site administration) the PCP practice workflow was re-engineered to focus on patients with multiple chronic illnesses. Continuous feedback is being collected to make it a self-sustaining model.

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Lessons Learned

Successfully taking care of patients with multiple chronic diseases requires a team. By improving communication, patient activation, and engagement of all community-based entities, MMG has made improvements in providing comprehensive care for patients with multiple chronic illnesses.

The key elements of success are:

1. Improving access
2. Bringing the system to the patient
3. Medication management
4. Advanced care planning
5. Electronic medical records and computerized clinical decision support tools
6. Team leadership

Managing Chronic Conditions—Mercy
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