BEST PRACTICES

Managing Patients with Multiple Chronic Conditions

DARTMOUTH-HITCHCOCK PHYSICIANS CASE STUDY

Organization Profile

Headquartered in Bedford, New Hampshire, Dartmouth-Hitchcock is a large multi-specialty physician group practice with 5 major ambulatory service center clinics, an academic medical center, and a medical school. Dartmouth-Hitchcock has approximately 900 primary care and specialty physicians who perform 1.5 million outpatient visits in the ambulatory centers and care for 21,000 inpatients in the academic medical center each year. The practice serves a large geography with urban and rural areas; the largest city has 110,000 residents. The payment environment is fee-for-service (FFS).

Project Summary

Dartmouth-Hitchcock implemented a chronic care management and care coordination program whose goals were to identify patients with chronic disease and take targeted actions to improve quality and reduce cost.

Program Goals and Measures of Success

Dartmouth-Hitchcock had 2 strategic goals for the program:

1. Population health management—to achieve the vision of the healthiest population, the group must assume a proactive role in assessing and managing the overall health of patients and communities.
2. Leadership in quality—to impact the health of populations, the group must lead the way in discovering and closing the gap between the current situation and guideline recommended care.

Dartmouth-Hitchcock designed the chronic care program as a clinical model that would be applied first to Medicare FFS beneficiaries. This strategy allowed Dartmouth-Hitchcock to develop population-based disease management programs or planned care models. Once the program was in place for the Medicare FFS beneficiaries, the organization developed a relationship with a commercial plan to apply the clinical model to that population.

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Quality standards

Medicare patients

For Medicare FFS patients, Dartmouth-Hitchcock used 32 NQF-endorsed quality measures for diabetes mellitus, heart failure, coronary artery disease, hypertension, and breast cancer and colorectal cancer screening.

Targets were established for each measure—the lowest of (A) or (B) or (C):

(A) The higher of 75% compliance or the Medicare HEDIS mean for the measure, OR

(B) The 70th percentile Medicare HEDIS level for the measure or utilizing either the HEDIS mean OR

(C) A quality improvement target, which is defined as a 10% reduction in the gap between the base year level for the measure and 100% compliance.

Data for Medicare patients were gathered from Dartmouth-Hitchcock claims and billing information and focused on the following:

- Frequency of targeted chronic conditions (congestive heart failure, coronary artery disease, diabetes mellitus, chronic obstructive pulmonary disease [COPD], and hypertension)
- Physician/service center to which the patients belong
- Which patients are most likely to use Dartmouth-Hitchcock for the majority of their care
- Which patients required the most attention

Commercial plan patients

For commercial plan members, the group used 38 NQF-endorsed measures for asthma, breast cancer screening, coronary artery disease, heart failure, diabetes, hypertension, hyperlipidemia, respiratory, and epilepsy.

Targets require the group to meet or exceed the local market average for each measure.

Data for the commercial plan patients were obtained from the insurer, which had timelier claims information and used predictive modeling software to identify gaps in care, risk scores, and future high users of services.

Patient outcomes and cost reduction

Medicare patients

Quality measures—achieved or exceeded the target for 94% of the 32 measures

Expenditures—rate of cost growth was less than the comparison group.

Commercial plan patients

Quality Measures—performance met the target for all measures in comparison to the market cohort group

Expenditures—expenditures have remained flat in the first 2 years of the pilot

Risk-adjusted discharges have decreased by 8% over 4 years.

Expense reductions

Medicare: Each year, the risk-adjusted growth rate for Dartmouth-Hitchcock was less than that of the comparison group. As an example, in performance year 4, the risk-adjusted growth rate (base year to performance year) was 12.749% and the comparison group's rate was 15.204%.

Commercial gaps in care

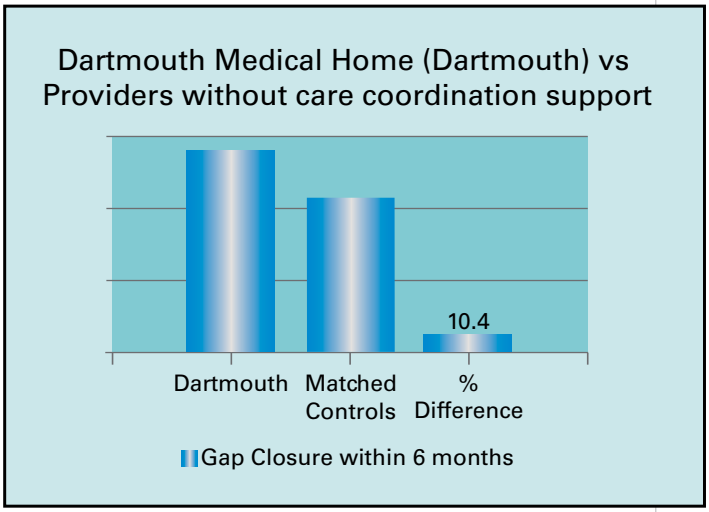
Methods brief

A matched case-control methodology[2] was used to determine whether Dartmouth Medical Home and its embedded care coordinators close gaps in care more effectively than competing providers without care coordination support.

Patients were matched on age band, gender, risk, gap presence, time of gap, and geography prior to the study period before knowing the results.

All patients were virtually aligned:
Dartmouth group = primary care providers (PCPs) aligned with Dartmouth Patient-Centered Medical Home (PCMH)
Control group = Non-Dartmouth, New Hampshire PCPs

Dartmouth Medical Home[1] Data Integration + Alignment of PCPs and Customers Drives Results



[1]Matched Case Control Evaluation of CIGNA's and Dartmouth's PCMH Gap Closures. CIGNA Informatics. August, 2010.

[2]Matching methods for causal inference: Designing observational studies. Stuart and Rubin, Best Practices in Quantitative Methods, 2007.

Results Brief

General

Dartmouth closed 34.1% vs. 30.9% (10.4% more; statistically significant; $p < 0.01$) within the 6-month period.

For high-priority rules (gap score > 50), Dartmouth closed 39.7% vs. 34.9% (13.8% more; statistically significant; $p < 0.001$).

Patients with higher gap scores are intelligently triaged in a priority queue.

Condition-Specific

Hypertension results were significant (39.8% vs. 34.3%, 16% more, $p < 0.01$)

Diabetes was the next highest; its results approached significance (38.6% vs. 35.7%, 8.1% more)

Organizational achievements

- Practice sites (n = 23) have received Level 3 NCQA recognition as a Physician Practice Connections PCMH.
- Nurses have shown increased satisfaction with their role of health care coordinators.

Population Identification

Medicare patients

A "Gold Star" methodology was developed and employed to identify high-acuity Medicare patients to focus on first. The Gold Star definition is a patient with:

- 3 or more identified co-morbidities of diabetes mellitus, heart failure, coronary artery disease, hypertension, cancer, psychiatric conditions, vascular disease, renal disease, or COPD, OR
- 7 or more evaluation and management visits in 12 months, OR
- Hospitalized* in past year with charges equal or greater than $10,000

*applies only to academic medical center within 1 ambulatory service center clinic

The Gold Star designation for the patient shows as a "flag" in the practice management system and the electronic health record. The flag gives all members of the health care team a mechanism to identify high-risk Medicare patients.

Total number of Gold Star patients = 78% of the assigned beneficiaries

Total number of Medicare chronic care patients: Gold Star patients are Dartmouth-Hitchcock's chronic care patients.

Dartmouth-Hitchcock developed chronic disease super registries to identify patients with a gap in evidence-based care. Registries for adult preventative services for breast cancer, and colorectal screening, and immunizations were developed as well.

Dartmouth-Hitchcock developed chronic disease super registries to identify patients with a gap in evidence-based care.

Commercial plan patients

The Gold Star definition did not fit the commercial population. Instead, the commercial plan has 2 sets of criteria to identify high-acuity patients.

Criteria 1 items are used in the absence of a predictive modeling score or key gaps. The commercial plan has a software program by which to assign predictive modeling scores and identify key gaps in evidence-based care.

- Criteria 1:
  - 3 or more "identified" comorbidities (diabetes, coronary artery disease, heart failure, hypertension, cancer, psychiatric disorders, COPD, vascular disease, or renal disease), OR
  - 7 or more evaluation and management visits in 12 months, OR
  - Under age 65 years and 3 or more co-morbidities above "identified" criteria, OR
  - More than 7 evaluation and management visits and at least 1 was with a specialist, OR
  - More than 3 emergency department visits in 12 months, OR
  - Patients over age 64 years and maternity patients were excluded
- Criteria 2:
  - More than 3 emergency department visits, OR
  - Hospital admission, OR
  - A predictive modeling score greater than 0.5 and it increased by 0.1, OR
  - Were diabetic with a key gap, OR
  - 3 or more comorbidities and more than one key gap

Total number of commercial patients in the program = 20,000

The Intervention

Physician champions

Physician content experts were chosen to serve as champions and leaders of the roll-out of clinical pathways for the patient populations with diabetes mellitus, congestive heart failure, coronary artery disease, and hypertension. The physician champions used their knowledge as experts in the field and best practice for each condition. They also provided education on the guideline and best practice methods for managing the patient to PCPs, associate providers, and nursing staff at each ambulatory service center clinic.

Nurse care coordinators/health coaches

The role of select nurses within ambulatory service center clinics was transformed from providing triage to providing care coordination in different forms. The nurses were embedded in the primary care practices. Three of the ambulatory service center clinics transformed the role to health coaches.

- Dartmouth-Hitchcock partnered with a health coaching vendor to train nurses to motivate patients to make behavior changes. Health coaches make proactive outreach calls to patients with diabetes mellitus, congestive heart failure, coronary artery disease, and hypertension.
- Data showed that patients are more receptive to calls made from their physician's office instead of from a vendor.
- Outcomes of health coaching have included patients seeing their PCP on a more regular basis, greater patient receptivity to care and self-management, and increased adherence to treatment plans.

When the program was expanded to commercial plan patients, the role of the ambulatory care nurse was further transformed to that of a health care coordinator. The role builds upon the health coach model that was employed with the Medicare population and encompasses a broader outreach to patients by utilizing the enriched data that the commercial plan provides. Health care coordinators are embedded in each primary care practice and are a member of the patient care team. RNs and LPNs fill the health care coordinator positions.

Education and training on disease management, motivational interviewing, care planning, and community resource availability were provided to the health care coordinator nurses. Physicians and associate providers are satisfied with the level of nursing care and patients are thrilled to know that they have a point person to work with.

Commercial plan case managers collaborate with Dartmouth-Hitchcock care coordinators to hand off care back and forth. The organization focuses primarily on primary care and the commercial case manager focuses on specialty care.

Follow-up by care coordinators is more consistently done, and handoffs between care teams and care coordinators have been enhanced.

Workflow and process changes

Process changes

Additional data in the form of registries and predictive modeling tools have allowed care coordinators to obtain the information to conduct effective outreach to patients. Care coordinators work hand in hand with physicians and care teams—in some practices, workflow has changed to include care coordinators in closing the visit. Follow-up by care coordinators is more consistently done, and handoffs between care teams and care coordinators have been enhanced.

Patient outreach changes

One of the ambulatory service center clinics chose to focus on post-hospital discharge calls to patients. The nurse contacts the patients to ascertain understanding of discharge instructions, ensure a follow-up appointment is made, review medications, coordinate services, and be sure patient has the knowledge, skills, and tools to self-manage their care. Post-discharge phone calls were instrumental in reducing readmissions and improving patient ability to manage care.

In another ambulatory service center clinic, health care coordinators visit patients when they are hospitalized and aid in care planning across continuum points. The clinic has seen a 35% decrease in hospital readmissions.

All centers perform post-hospital discharge calls and aim to make contact within 48 hours after discharge.

Clinical collaboration changes

For the health care coordinators, monthly council meetings that include sharing of wins, case review, best practices, and an educational component have proven to be vital for ongoing collaboration and development. Due to the large geographic divides between the nurses, the meetings are held via webcasts.

Also, the health coaches meet collaboratively.

Information Technology

The commercial plan and organization collaborated on how best to operationalize the various data within the practice sites. Workflow processes were agreed upon and implemented in the practices. The health care coordinators utilize the plan's reports of gaps in care, utilization and cost data, and risk scores to aid in identifying patients to focus on and to take action.

An electronic plan of care generated from the electronic health record has proven to be the vehicle to improve continuity of care across transition points. Health care coordinators give the patient/family a copy of the care plan and instructions on its use, and ask the patient/family to share the care plan at any touch point, including emergency departments, schools, and other care providers.

Leadership Involvement and Support

Physician and administrative leadership endorsed and led the implementation of the program at their respective service center. A team of nurses and physicians from across the organization were charged with designing the program and facilitating implementation through the service center clinic leadership.

Lessons Learned

- Collaboration between a government payer and a multispecialty group and between a commercial plan and a multispecialty group has proven to be a successful way to decrease duplication, improve patient and physician satisfaction, decrease costs, and improve quality. Data that helps with targeted interventions are critical.
- Embedding health coaches or health care coordinators in the primary care practice, and more effectively utilizing their expertise have made a positive impact on nurse, patient, and provider satisfaction and have made a difference in decreasing cost and improving quality.

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