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Dartmouth-Hitchcock Clinic Physician Group Practice Demonstration

Site Visit Final Report

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EXECUTIVE SUMMARY

The Centers for Medicare & Medicaid Services (CMS) initiated The Physician Group Practice (PGP) Demonstration in April 2005. This 3-year demonstration offers participating PGPs the opportunity to earn bonuses for improving the efficiency and quality of care delivered to Medicare fee-for-service (FFS) beneficiaries. Ten large PGPs are participating in the demonstration.

CMS contracted with RTI International, an independent, nonprofit research organization, to evaluate the PGP demonstration. As part of its evaluation, RTI is conducting site visits at each of the 10 PGPs participating in the demonstration in the winter of 2005–2006. The purpose of these site visits is to understand the decisions of the PGPs to participate in the demonstration and their early implementation and operational experience with the demonstration. This report contains findings for Dartmouth-Hitchcock Clinic (DHC).

DHC is a not-for-profit, multi-specialty group practice with clinics located throughout New Hampshire. DHC is a part of Dartmouth-Hitchcock Medical Center (DHMC), New Hampshire's only academic medical center. DHMC comprises DHC and Mary Hitchcock Memorial Hospital (MHMH). It is affiliated with over 20 area hospitals and other institutional providers. MHMH is a 396 inpatient bed facility serving as the area's major tertiary-care referral site. Because DHC is tightly integrated within DHMC, and because much of the information we obtained pertains to DHMC more broadly, we use "DHMC" to refer to the PGP Demonstration participant rather than DHC, unless the latter is necessary for specificity.

Demonstration Participation and Strategy. DHMC believes that participation in the PGP Demonstration will accelerate one of its goals, the development of population-based disease management programs or planned care models. The demonstration is a means to continue the care management infrastructure built up under managed care and apply it to Medicare FFS beneficiaries. DHMC is interested in moving away from the current volume driven environment to greater management of care under the demonstration. DHMC will also have the opportunity to get experience with pay for performance systems, which they believe will eventually be rolled out across other payers.

DHMC plans to improve quality and reduce costs through care management and more timely data availability. DHMC has defined a subset of high-risk Medicare patients who it manages more intensively. DHMC also plans to achieve cost savings under the demonstration through a reduction in hospital admissions, which will be achieved by 1) better managing patients with chronic disease (especially congestive heart failure patients); 2) reducing readmissions; and 2) providing better end of life care. Mary Hitchcock Memorial Hospital currently runs a high occupancy rate (85 percent) due to a high demand for services. Decreasing less acute Medicare beneficiary admissions would open up capacity to serve commercial patients who are more profitable.

DHMC believes the demonstration design could be improved by altering the patient assignment algorithm so that it considers only beneficiaries who received a plurality of their primary care at DHMC instead of a plurality of their evaluation and management care. Many of the patients assigned to DHMC under the demonstration do not have a primary care physician

(PCP) within the system. These patients were likely assigned to DHMC due to specialty care visits at the academic medical center. The management of patients with external PCPs is difficult. DHMC specialty care does not focus on primary care, such as measured by the demonstration quality indicators.

Patient Care Interventions. Under the PGP Demonstration, DHMC has refocused and increased the group's emphasis on disease and care management programs to improve patient care quality and achieve cost savings. DHMC has partnered with Health Dialog, a corporation that provides chronic condition management and decision support services, to provide care management and "health coaching" (education) to its patients. The Health Dialog programs are offered only for Medicare FFS beneficiaries, with Health Dialog receiving a fee contingent on DHMC bonus performance under the demonstration. DHMC's disease management programs include a focus for patients with diabetes, congestive heart failure, chronic obstructive pulmonary disease, asthma, coronary artery disease and oncology. These programs are targeted to patients who have high utilization rates and health care costs, determined through internal billing and health plan data, as well as via physician referrals. The disease management programs were originally implemented for non-Medicare patients when managed care insurers delegated care management to DHMC, but under the demonstration, they have been applied to Medicare fee-for-service beneficiaries at a greater rate than previously.

Provider Participation and Relations. The overall message sent to providers is that DHMC is trying to improve quality of care, apply evidence-based care models, and provide infrastructure that will allow physicians to improve care. The implicit understanding is that these actions will reduce costs. The primary strategy to improve provider performance is "data availability." DHMC provides feedback to providers through their intranet system. Providers receive "dashboards" summarizing their quality measures. DHMC has an "active" data strategy where physicians, practice managers, and front-line clinical teams review data, determine whether there are any barriers to improvement and strategize to remove these barriers. Practice managers and section leadership review data at section meetings and discuss improvement strategies with all providers.

Physician compensation at DHMC is currently heavily based on service (RVU) productivity. DHMC indicated that they will never provide financial incentives to providers based on cost savings; however, they are considering incentivizing providers for quality improvements. DHMC is currently discussing methods for incorporating quality measures into their physician compensation model.

Demonstration Quality Indicators. DHMC feels that the demonstration quality measures are fairly standard and reasonable. But CMS needs to make sure that all measures are evidence-based. Additional measures suggested by the group include mental health measures such as screening for depression. DHMC believes that the quality improvement targets for the demonstration are reasonable. They appreciate the use of multiple thresholds and that it is sufficient to satisfy either an absolute threshold or an improvement target. The problems with the demonstration patient assignment algorithm also apply to the quality indicators. DHMC feels that it should not be held accountable for quality indicator performance for assigned beneficiaries for whom it did not provide the patient's primary care.

Under the demonstration, DHMC will improve quality indicators by focusing on incorporating evidence based medicine initiatives into everyday care. Providers receive information and feedback about their performance on the demonstration quality indicators. DHMC is developing specific disease state management registries, as well as a complex patient registry for patients with multiple comorbidities. DHMC plans to concentrate initially on diabetes measures because they are the focus of the first year of the demonstration, and then on measures with the greatest room for improvement.

Information Technology. IT is seen as crucial for success under the demonstration and for care management in general. DHMC's major IT initiatives are to capture additional data in its administrative and clinical systems, including improving ICD9 diagnosis coding, patient registries and electronic medical records. Participation in the PGP Demonstration has given IT direction and has shown DHMC where data are currently lacking, for example for patients seen only for specialty care. DHMC systems do not interface well with non-DHMC systems; fragmentation is a major problem. DHMC has enhanced previously-existing reports and tracking of high-cost patients because of the demonstration.

SECTION 1
INTRODUCTION

1.1 Background

The Centers for Medicare & Medicaid Services (CMS) initiated The Physician Group Practice (PGP) Demonstration in April 2005. This 3-year demonstration offers participating PGPs the opportunity to earn bonuses for improving the efficiency and quality of care delivered to Medicare fee-for-service (FFS) beneficiaries. Ten large PGPs are participating in the demonstration.

CMS contracted with RTI International, an independent, nonprofit research organization, to evaluate the demonstration. As part of its evaluation, RTI conducted site visits at each of the 10 participating PGPs in the winter of 2005–2006. The purpose of these site visits was to understand the decisions of the PGPs to participate in the demonstration and their early implementation and operational experience with the demonstration. RTI is producing a site visit report for each of the 10 demonstration PGPs. Material from the site visit reports will be included in CMS' Report to Congress on the PGP Demonstration, due at the end of 2006.

This report includes findings for Dartmouth-Hitchcock Clinic (hereafter “DHC”). DHC is tightly integrated within Dartmouth-Hitchcock Medical Center (DHMC), which also includes Mary Hitchcock Memorial Hospital. Because much of the information we obtained pertains to DHMC more broadly, we use “DHMC” to refer to the PGP participant rather than DHC, unless the latter is necessary for specificity.

1.2 Sources and Methods

The primary source for the site visit reports is the 1-day, on-site interviews conducted by RTI staff. The DHMC site visit took place on February 15, 2006 at DHMC offices in Lebanon, New Hampshire. The interviews were divided into multiple sessions by the following topic areas:

1. Demonstration Participation and Strategy—The purpose of this session was to understand DHMC’s motivation for participating in the demonstration and to understand how the demonstration relates to the PGP’s overall strategy and operational goals.

2. Patient Care Interventions—The purpose of this session was to gather information on programs that have been implemented by DHMC due to the demonstration to improve disease management and coordination of care and to understand how these interventions have improved efficiency.

3. Provider Participation and Relations—The purpose of this session was to determine the extent of provider participation in demonstration activities and to understand the financial and non-financial incentives that may exist for providers due to the demonstration.

4. Quality Improvement and Measurement—The purpose of this session was to determine whether programs that specifically target quality of care have been implemented as part of the demonstration and also to gather information on how those interventions were implemented.

5. Information Technology—The purpose of this session was to gather information on how the demonstration may have changed health care reporting and data collection systems for any interventions such as patient care activities or quality interventions.

Some participants varied by session based on their area of expertise. The agenda for the site visit is attached as Appendix A. DHMC participants included its Senior Medical Director, Medical Directors from different departments and divisions, Division Director of Operations, Sr. Vice President, Director of Quality Measurement, Director of Performance Measurement, Director of Office of Care Management, Director of Clinical Performance Management, and other information technology, clinical and quality assurance personnel. Gregory Pope and John Kautter of RTI conducted the interviews according to a pre-defined, semi-structured interview protocol. Fred Thomas (in person) and John Pilotte (via telephone) of CMS participated in the interviews.

In addition to the interviews, this report draws on written materials provided by DHMC during or after the site visit, or as part of the demonstration project. These materials include DHMC's demonstration implementation protocol and its demonstration baseline and quarterly reports. During and after the interview, DHMC provided RTI with written information on its organizational structure and quality improvement and patient care initiatives. Also, DHMC's web site was consulted for background information. Finally, we drew some information on DHMC's Medicare assigned beneficiary population from RTI's analysis of Medicare claims and enrollment data for the demonstration.

Statistics cited in this report sometimes varied slightly among alternative sources. Generally these differences are not consequential, and could arise from different time frames, inclusion criteria, definitions, etc. In this report, we cited numbers from written demonstration reports or materials submitted by DHMC or published sources (e.g., DHMC's web site) rather than our site visit notes, where possible. We also preferred statistics that were reported consistently across multiple sources. If a statistic seemed anomalous, or we were unsure of it or could not verify a precise magnitude, we indicated a general order of magnitude in this report, but did not cite a precise number. However, even if some statistics are subject to slight variation or uncertainty, we felt it was important to cite some specific numbers to adequately characterize DHMC and its demonstration participation. We submitted this report to DHMC staff for their review of its factual accuracy.

1.3 Overview of the Report

The next section describes DHMC as an organization and the environment in which it operates. The third report section discusses why DHMC chose to participate in the PGP Demonstration and how doing so fits into its overall strategy. The fourth section describes patient care coordination initiatives, and the fifth section includes initiatives in provider

education, feedback and incentives. The sixth section discusses demonstration quality measures and reporting, and the seventh the role of information technology in the demonstration.

SECTION 2
ORGANIZATIONAL STRUCTURE, ENVIRONMENT AND STRATEGY

2.1 Organizational structure

Dartmouth-Hitchcock Medical Center (DHMC) comprises Dartmouth-Hitchcock Clinic (DHC) and Mary Hitchcock Memorial Hospital (MHMH). DHC and MHMH are two separate legal entities governed by separate Boards of Trustees. However, they have a joint operating agreement that integrates them and allows them to have a common bottom line and merged financials. Almost all MHMH patients are admitted by DHC physicians, but DHC physicians also admit to independent local community hospitals.

DHC is a not-for-profit, multi-specialty group practice with multi-specialty community clinics located throughout New Hampshire and an academic faculty group practice (for Dartmouth Medical School) located in Lebanon. DHC "divisions" (major clinics) are in Concord, Manchester, Nashua and Keene. Additional, smaller regional clinics are spread throughout New Hampshire and Vermont. The regional clinics focus on primary care, while the academic medical center in Lebanon is a specialty referral center. DHMC stated that about three-fourths of their physician visits occurred at the regional clinics, but that this was misleading for the demonstration because they thought that about half of their assigned beneficiaries would be based on physician visits at their academic faculty group practice. DHC employs 764 physicians within various specialties and is affiliated with over 20 area hospitals and institutional providers. The clinic has historical roots in the Mayo Clinic traditions, valuing physician leadership and a representative governance structure.

MHMH is a nonprofit, charitable hospital dedicated to providing high quality healthcare services to patients, families and communities. The hospital is a 396-inpatient bed facility that serves as the area's major tertiary-care referral site. It is the only academic hospital in New Hampshire.

Physician practices joined the DHC network throughout the 1980s and 1990s. DHMC acquired its first regional practice in 1984. It acquired the Matthew Thornton Health Plan, a staff model HMO, in 1989. The Matthew Thornton Health Plan was sold in 1997 to Anthem Blue Cross Blue Shield.

The Dartmouth Medical School, the Veterans Administration Medical and Regional Office Center in White River Junction Vermont, the Children's Hospital at Dartmouth, and the Norris Cotton Cancer Center are also part of DHMC.

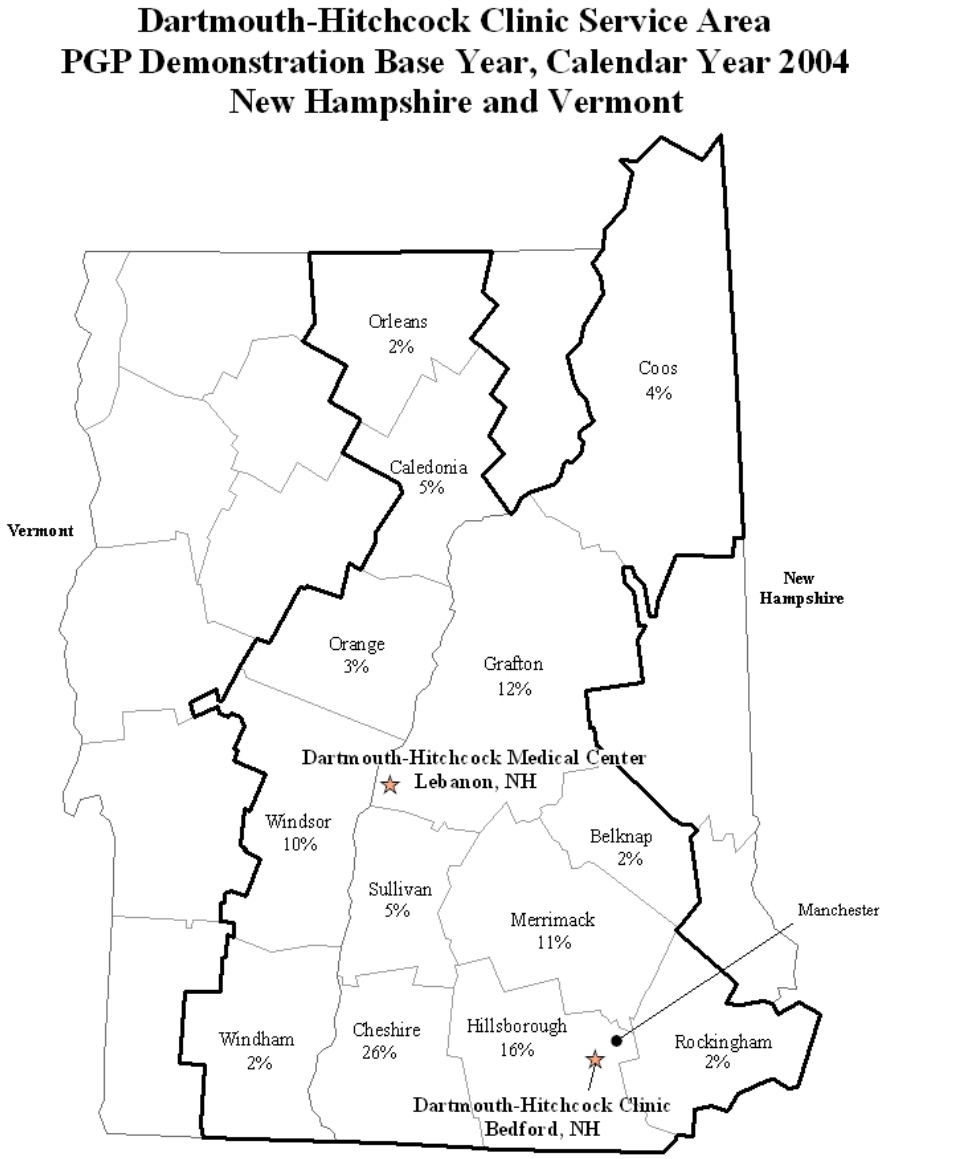
2.2 Environment

2.2.1 Service Area

The DHMC service area covers all of New Hampshire and parts of eastern Vermont. ***Figure 1*** shows the DHMC Medicare service area for 2004 based on patient residence data.

Counties where at least 1 percent of Medicare FFS beneficiaries assigned[1] to DHMC reside are included in this service area map.

Figure 1
DHMC Medicare Service Area for 2004



Notes:
1) Counties with at least 1% of assigned beneficiaries are in the service area.
2) Numbers in service area counties are percentages of service area assigned beneficiaries residing in the county. These percentages are used to weight comparison group county expenditure growth rates.
3) Due to rounding the percentage of assigned beneficiaries residing in the service area counties may not sum to 100%.

Source: RTI International

[1] A beneficiary was assigned to DHMC if the plurality of its office and other outpatient evaluation and management allowed charges were incurred at DHMC.

2.2.2 Patients

DHMC's perception is that patients are not very transient and often remain in the service area for their entire life. This provides DHMC with a real opportunity to take care of a population. However, DHMC was surprised by the amount of year-to-year turnover in assigned beneficiaries in the pre-demonstration data provided to them by CMS/RTI.

Table 1 shows selected characteristics of DHMC's assigned Medicare patients available from Medicare administrative files. DHMC provided an office or other outpatient evaluation and management visit to 48,080 Medicare patients. Of these, 28,107 (61 percent) received the plurality of their evaluation and management services from DHMC and so were assigned to DHMC for the PGP demonstration. Assigned beneficiaries received about six evaluation and management visits on average from all providers, with 87 percent of the associated Medicare allowed charges provided by DHMC on average.

Eighty-two percent of DHMC's assigned Medicare patients are eligible for Medicare by age, 17 percent by disability (under age 65) and less than 1 percent by end stage renal disease. Eleven percent had at least 1 month of Medicaid eligibility in 2004. Ninety-nine percent were white.

2.2.3 Payers

About 28 percent of DHMC's patients are insured by Medicare, almost all in the traditional FFS program. In total, 45 percent of patients have government payers. Approximately 55 percent of patients are insured commercially or are self-pay. Anthem accounts for 40 percent of DHMC's business, with Vermont Blue Cross/Blue Shield and Cigna having smaller shares. DHMC is also a safety net provider, providing a substantial amount of Medicaid and uncompensated care. About 85 percent of payment is FFS with no incentive, 10 percent is FFS with incentive, and 5 percent is capitation or full risk. This represents a major change from the mid-1990s, when 90 percent of payment in the southern New Hampshire region was professional capitation. Half of patients are enrolled in traditional indemnity insurance (including FFS Medicare), 31 percent in an HMO, 12 percent in a PPO, and 7 percent "other" (e.g., self pay, worker's compensation).

In 2004, DHMC was involved in quality bonus programs with one of their commercial carriers. The program was set up such that DHMC would receive bonus payments based on meeting HEDIS® measures for pediatric and adult populations. The reporting of measures involved the use of claims data and patient chart reviews. DHMC has been involved in few other pay for performance initiatives. But one insurer is planning to introduce "tiered" provider networks in 2006 in New Hampshire, in which patients will have to pay higher coinsurance and employers higher premiums to access DHMC providers. Also, Anthem has asked DHMC to be a pilot site for a hospital-focused pay for performance initiative in which institutions are eligible for "points" based on patient safety, satisfaction and clinical outcome measures.

Table 1
Selected characteristics of Medicare patients, DHMC, 2004

	No. of Beneficiaries	Percentage or Amount
Medicare Patients		
Total[1]	46,080	100%
Assigned Beneficiaries[2]	28,107	61.0%
Characteristics of Assigned Beneficiaries		
Average Number of Evaluation and Management Visits[3]	28,107	5.46
Average Percentage of Evaluation and Management Care provided by DHMC[4]	28,107	87%
Distribution of Assigned Beneficiaries		
Total	**28,107**	**100%**
Medicare Eligibility		
Aged	23,111	82.2
ESRD	157	0.6
Disabled	4,839	17.2
Medicaid Eligibility		
Not Medicaid Eligible for any months in 2004	25,096	89.3
Medicaid Eligible at least 1 month in 2004	3,011	10.7
Age		
Age < 65	4,968	17.7
Age 65 – 74	11,398	40.6
Age 75 – 84	8,953	31.9
Age 85 +	2,788	9.9
Race		
White	27,738	98.7
Black	96	0.3
Unknown	30	0.1
Asian	66	0.2
Hispanic	32	0.1
North American Natives	9	0.0
Other	136	0.5

NOTES:
[1] Beneficiaries provided at least one office or other outpatient evaluation and management visit by DHMC.
[2] Beneficiaries who received the plurality of their office or other outpatient evaluation and management allowed charges at DHMC.
[3] Percentage of all office and other outpatient evaluation and management Medicare allowed charges provided to the beneficiary that were provided by DHMC.
[4] Office or other outpatient evaluation and management visits.

SOURCE: RTI Analysis of Calendar Year 2004, 100% Medicare Claims Files and Enrollment Datasets

2.2.4 Competitors

DHMC is the only academic medical center in New Hampshire and is New Hampshire's dominant provider. It has no major competitors in much of its service area, instead it has strong collaborative relationships with other providers. There is greater competition in southern New Hampshire with Boston teaching hospitals, especially for tertiary referrals. Outside of the more urbanized southern New Hampshire, the main issue is not competition, but how to provide care to a widely scattered rural population.

2.3 Major Strategic Initiatives

Participation in the PGP Demonstration is one of DHMC's major strategic initiatives. Additional initiatives at DHMC include quality improvement, translating research into practice, and coding improvement. DHMC's quality improvement initiative began well before the start of the PGP Demonstration, e.g., the diabetes quality improvement initiative began 2–3 years ago. The translating research into practice initiative focuses on moving findings from the science of clinical medicine into clinical practice.

DHMC introduced a coding improvement initiative within their system nine months ago. Its genesis was data fed back by commercial payers showing that DHMC patients were not as sick as expected based on their coded diagnoses. In a preliminary analysis, DHMC found that coding for chronic care conditions at DHMC was poor. For severity adjustment, a better understanding of costs, and to receive deserved payment, DHMC found it necessary to better understand and document how sick their patients are. To do so, they needed to identify individual patient diagnoses. DHMC has therefore been providing ongoing coding education to physicians and staff through practice reviews by Coding Advisors and Compliance Coders as well as through group education sessions and email tips and reminders.

SECTION 3
DEMONSTRATION PARTICIPATION AND STRATEGY

3.1 Reasons for Participating

DHMC's mission is to provide high quality, cost-effective care to its patients. The PGP demonstration provided a means of getting reimbursement for doing so. They believe that participation in the PGP Demonstration will help the clinic achieve its goals by accelerating the development of population-based disease management programs or planned care models. DHMC built up a care management infrastructure when it was delegated outpatient disease management by Anthem and Vermont Blue Cross and Blue Shield. This infrastructure became "no longer relevant" with the waning of the managed care era and commercial health plans getting away from utilization management. The PGP Demonstration presented itself as a means to continue to maintain this infrastructure and apply it to Medicare FFS beneficiaries. DHMC is interested in moving away from the current volume driven environment to greater management of care under the demonstration, which to them makes clinical sense.

DHMC is also looking at the PGP Demonstration as a learning opportunity. They believe that through participation in the demonstration they will be able to better understand the support systems needed to implement planned care models. DHMC will also have the opportunity to get experience with pay for performance systems, which they believe will eventually be rolled out across other payers. DHMC believes that high-quality care is less expensive. They want to get reimbursement for improving quality and managing chronic care, which requires upfront investments. They want to apply care models supported by evidence-based best practices, such as those developed by Dartmouth College's Center for Evaluative Clinical Sciences.

Finally, the demonstration provides DHMC with the opportunity to earn funds to support new initiatives that were otherwise too expensive. The lack of any downside financial risk under the demonstration was also critical for DHMC's ultimate decision to participate in the demonstration.

There was some opposition to the demonstration at DHMC. One issue was the feasibility of managing care without real-time data on assigned patients and also not knowing the comparison group. There was some concern about investment costs (added costs for managing care), and about whether the patient assignment method under the demonstration was appropriate for DHMC. However, DHMC thought that the advantages of participation in the demonstration outweighed the disadvantages, and that the opportunity to "do the right thing" that the demonstration provided was very important.

3.2 Demonstration Strategy

DHMC plans to focus on quality improvements through care management and work to improve the quality and timeliness of data available for care management. It believes that higher quality care is less expensive. DHMC has defined subsets of Medicare patients who would benefit most from their focused care management activities. It manages these high-risk patients more intensively. DHMC believes that improvements in diabetes control and care management can significantly reduce costs in 3–5 years.

DHMC also plans to achieve cost savings under the demonstration through a reduction in hospital admissions. Reductions in admissions will be achieved by the following:

- Managing chronic diseases better;
- Reducing readmissions, especially at the academic medical center;
- Better end of life care, which will avoid "crisis" hospitalizations; and
- Better management of congestive heart failure patients.

MHMH is currently running a high occupancy rate (85 percent) due to a high demand for services. Introducing initiatives to decrease less acute Medicare beneficiary admissions would open up capacity to serve commercial patients who are more profitable for DHMC. DHMC would consider the demonstration successful if it improves quality and earns a bonus.

One full-time analyst and one additional care manager have been hired because of the demonstration. Other staff or parts of their time have been reassigned, or their roles redefined, to work on the demonstration. Management approval of DHMC's participation in the demonstration was contingent on it being managed largely within existing resources.

3.3 Relationship to Group Practice Strategy

DMHC has learned that payers will judge their performance based on administrative claims, but their claims coding practices need considerable improvement. Also, DHMC's systems are set up to handle episodic care, not to manage chronic disease, and coordination of quality improvement activities needs to be better. In response to these concerns, DHMC has undertaken the following activities:

- Education/communication;
- Coding improvements, particularly in ICD9 diagnoses (need to ensure claims more comprehensively reflect the diagnoses);
- Improve ability to identify patients with chronic illness and document quality indicators;
- Train staff to become "health coaches" (partnering with Health Dialog, a disease management firm), instead of "triagers;"
- Build capacity to monitor, analyze and report on performance;
- Ensure better coordination of resources to achieve quality improvement goals.

The PGP Demonstration fits into these strategic activities well. These activities will be beneficial to DHMC under the PGP Demonstration and also under initiatives of private payers. For example, DHMC's goal under the demonstration to improve the quality of care provided to diabetes patients is in line with outpatient disease management initiatives undertaken by

commercial plans (e.g., Anthem, Vermont Blue Cross/Blue Shield). DHMC expects to expand the lessons learned in the commercial environment to FFS Medicare under the demonstration. Similarly, 4–5 years ago, DHMC introduced an inpatient utilization management program for their managed care populations. They expect to expand this program to the Medicare FFS beneficiaries as well.

3.4 Leadership and Implementation Team

Both DHC and the rest of DHMC participate in the PGP Demonstration. DHC is the legal contracting entity with CMS for the demonstration. The Dartmouth-Hitchcock Board of Trustees and Executive Council are ultimately responsible for the demonstration. A Central Steering Committee of 10 members including Medical Directors from the Dartmouth-Hitchcock Community Practices and DHMC lead the demonstration effort. Medical Directors of each Division (geographic area) together with an Administrative Partner, are responsible for implementing the demonstration in the regional offices.

DHMC has appointed three staff members to assist with the development, oversight, and facilitation of the PGP Demonstration within the system: (1) a project coordinator, (2) project manager, and (3) research analyst. The Clinic has also established four committees for assistance with the development and implementation of the project. These include: (1) Advisory Committee, (2) Clinical Care Committee, (3) Measurement and Reporting Committee and (4) Management Committee. Participation in the PGP Demonstration has provided DHMC with the impetus for more teamwork across the multiple DHMC divisions. Committee members represent different units throughout the system. The responsibilities for each of these committees are described below.

The Advisory Committee is responsible for assessing progress under the demonstration, recommending resources and processes for achieving demonstration goals, and evaluating the effectiveness of strategies and implementation efforts throughout the system.

The Clinical Care Committee is responsible for developing and implementing clinical interventions and targets for appropriate populations. They are expected to introduce best practices throughout the system to decrease the variation in processes that currently exist across operational units. They are the clinical champions for the initiatives that are implemented under the project.

The Measurement and Reporting Committee works together to understand the CMS data and measurements and reconcile CMS data with internal data. The committee is charged with responsibility for developing metrics within the system to monitor progress under the demonstration. Committee members often collaborate with the clinical team to determine where to focus DHMC efforts to result in the greatest clinical and cost effect.

Finally, the Management Committee determines overall project strategy and helps define metrics and quality measures that should be monitored as part of the project. The Management Committee serves as the internal leadership and champions of the project. The members are responsible for facilitating communication about the project, as well as eliciting feedback at all levels of the organization.

3.5 Implementation and Operational Challenges

Ensuring access to quality health care for rural beneficiaries has been a challenge under the demonstration. Beneficiaries in mountainous regions are particularly difficult to monitor due to access barriers such as lack of transportation. To improve care provided in rural areas, DHMC has developed strong collaborative relationships with other providers in these areas. DHMC also has programs that extend into rural southern New Hampshire areas such as Cancer and Children's disease management programs. In general, the geographic extent and diversity of the DHMC system makes it a challenge to manage and coordinate.

Many of the patients assigned to DHMC under the demonstration may not have a primary care physician (PCP) within the system. These patients were likely assigned to DHMC due to specialty care visits at the academic medical center. DHMC considers only 50 percent of beneficiaries assigned to the medical center to be their patients, while it considers 90 percent of beneficiaries assigned to the regional community practices to be their patients. DHMC has found that among their assigned beneficiaries, the beneficiaries with a DHMC PCP showed higher diabetes quality measure results than those with a non-DHMC PCP. The management of patients with external PCPs is difficult. DHMC is trying to deal with this situation by sending out letters to diabetic patients identified through internal billing data and providing them with information regarding their disease and evidence-based best practices. Also, DHMC specialty care does not focus on primary care, such as measured by the demonstration quality indicators. DHMC believes that the demonstration design could be improved by altering the assignment algorithm so that it considers only beneficiaries who received a plurality of their primary care at DHMC instead of a plurality of their evaluation and management care.

Additional challenges with the demonstration have included the need for substantial upfront investment and some issues with data. DHMC is currently in a difficult financial environment and the need for substantial upfront investment for the PGP Demonstration represents high opportunity costs for the center. DHMC has found that data lags under the demonstration inhibit good management and do not allow for proper course correction. They also question whether the data collected under the demonstration adequately reflects the group's true performance. DHMC faces an internal challenge in coordinating its three separate electronic medical records. Finally, the 2 percent demonstration cost savings threshold is not viewed favorably.

DHMC offered suggestions for improvements to the demonstration. They felt that the current comparison group for DHMC was fair for beneficiaries assigned through community-based primary care, but not for tertiary care referral patients. A better comparison group would have included patients treated at Boston teaching hospitals. DHMC would also have extended the model beyond DHMC physicians—for example, to the community hospitals DHC physicians admit to—to introduce greater incentives for the coordination of care and engage hospitals that may lose volume. DHMC felt that some refinements could be made in the quality measure specifications as well. They believed that patients should be removed from the denominator if a test was believed to be medically unnecessary. Finally, if the demonstration is successful, DHMC would like to see it continue beyond 3 years.

SECTION 4
PATIENT CARE INTERVENTIONS

At demonstration baseline, DHMC had disease and care management programs in place; the demonstration project added focus and increased the group's emphasis on these programs. The programs are described in this section and any expansions of these programs as well as any new programs implemented under the PGP Demonstration are also described.

DHMC had existing care management staff (in Southern region sites) that formerly conducted care management activities delegated from managed care insurance plans that did not enroll Medicare beneficiaries. The managed care plans ended the delegation of care management to DHMC this year; therefore DHMC redefined the roles of these staff for the PGP Demonstration. It wanted to test a new "health coaching" model that was implemented specifically for the PGP Demonstration (described below). DHMC has partnered with Health Dialog, a corporation that provides chronic condition management and decision support services, to provide care management and "health coaching" (education) to its patients. The Health Dialog programs are offered only for Medicare FFS beneficiaries, with Health Dialog receiving a fee contingent on DHMC bonus performance under the demonstration.

Prior to the demonstration, DHMC had defined subsets of patients who would benefit most from their focused care management activities. These "Gold Star" patients were defined as individuals who (1) had three or more identified comorbid conditions; (2) had seven or more PGP-"identified" evaluation and management visits; (3) were hospitalized in the past year with charges of at least $10,000 (only with MHMH billing data); or (4) received Medicare services but was less than 65 years of age. In 2004, DHMC estimated their "Gold Star" population to consist of 7,750 patients.

4.1 Health Coaching

DHMC has introduced health coaching programs to its patients under the PGP Demonstration. They have worked collaboratively with Health Dialog to pilot a program in Manchester in March 2005. The health coaching program has since been implemented at several additional sites and is tailored to each of these sites. At the time of the site visit, the health coaching program had not been implemented at the Lebanon site, partly because of investment cost concerns.

Health coaching programs are designed to motivate behavior change in patients by providing them with materials, training information, videos and other education materials, which are provided by Health Dialog. DHMC personnel are available to accept and make calls during the day and Health Dialog personnel are available to accept and make calls after working hours. Working with DHMC significantly improves the product developed by Health Dialog, since the personnel making calls during the day have access to patient medical records and call directly from the patient's physician's office. DHMC believes that combining the Health Dialog care models with the DHMC care models improves patient care much better than if only one of the models were utilized. Providers are initially concerned about the added work for them involved with health coaching, but now like the fact that patients are better informed.

Health Dialog trains DHMC professionals (e.g., nurses) to become coaches through their Shared Decision-Making program. Health Dialog provides algorithms for engaging patients at various points of care. Their work is very helpful upfront as they have experience in setting up and organizing care management and health education programs. However, after the program is running, DHMC feels that they would be able to support it on their own. They believe that they can better identify patients, improve quality, and follow-up with patients since they have patient clinical information and a relationship with the patient. Physicians strongly prefer internal disease management; however, the one major advantage to external organizations is that these organizations have a better understanding of the care provided outside the system. DHMC expects health coaching programs to improve quality of care, patient satisfaction and to generate cost savings.

4.2 Disease Management Programs

DHMC offers disease management programs to manage patients with diabetes, congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), asthma, coronary artery disease and oncology. These programs are targeted to patients who have high utilization rates and health care costs, determined through internal billing and health plan data. Once patients are enrolled in these programs a care plan is developed by a care manager at the clinic. The care plans are reviewed by medical staff and incorporated into the electronic medical record (EMR).

Care and disease management programs at DHMC are staffed by DHMC employees (e.g., registered nurses, social workers, physicians, nurse practitioners, physician assistants, clerical staff). The majority of the work for disease and care management programs is completed by nurses. Clinical Resource Coordinators and Continuing Care Managers are often master's level registered nurses who are responsible for caring for patients during their hospital stay and for coordinating transitional care post-discharge. Social workers assist patients and their families with financial and legal issues, counseling and by referring patients to useful resources.

Disease management and care management programs are offered to all patients, regardless of payer, seen at DHMC. Patients enter into these programs through physician, support staff, family and home health plan referrals. In 2004, the demonstration baseline year, participation in these programs by Medicare FFS beneficiaries was limited.

4.2.1 Diabetes Care Management

The Inpatient Diabetes Program has existed for 10–20 years at the DHMC Lebanon campus. The program is intended to help diabetes patients improve their blood glucose management while in the hospital. Inpatient care managers identify a patient's PCP, connect patients to resources in the community or home care, provide patients with general education regarding their disease and refer patients to outpatient care managers. The general goal of inpatient care management staff is to improve patient transitions post-discharge. The PGP Demonstration has helped DHMC improve the organization of inpatient diabetes management by improving patient contact and communication with and post-discharge follow-up by PCPs.

Diabetes care management is also available in an outpatient setting. The program developed by DHMC (at specific locations) is accredited by the American Diabetes Association

(ADA) and has existed for over 15 years. The program involves the creation of a patient flowchart that ensures a patient has received all recommended care for their diabetes. This leads to better control of their disease. Outpatient programs also include an education component that is led by Diabetes educators. The educators inform the patients about their disease and educate them regarding strategies for disease self-management. The PGP demonstration increased DHMC's focus on care management programs and has resulted in the expansion of outpatient programs to additional DHMC divisions (e.g., Keene).

4.2.2 Congestive Heart Failure

Under the PGP Demonstration, DHMC has identified congestive heart failure (CHF) as a disease where substantial cost savings are possible. For example, at baseline there was a 20 percent readmission rate for CHF patients. DHMC is currently standardizing care for CHF patients across units by introducing best practice, evidence-based care protocols and improving patient, nurse and other staff education. They believe that this will result in reduced hospital length of stay and will move patients out of intensive care settings.

Although CHF management began prior to the demonstration, the demonstration has provided DHMC with the additional resources necessary to implement care management programs specific to CHF. Similar to their diabetes management program, DHMC expects to improve transition care of CHF patients post-discharge and create flowcharts to monitor patient progress. An outpatient CHF clinic has also been established to monitor high-risk patients. Telemedicine is used to monitor vital patient signs at home and avoid emergency room visits.

SECTION 5
PROVIDER PARTICIPATION AND RELATIONS

5.1 Provider Education

DHMC has developed an internal communication plan that includes communication to providers and staff regarding the demonstration. Materials about the demonstration have been incorporated into DHMC's New Employee Orientation. The DHMC intranet site has also been used to publicize the demonstration and related initiatives at DHMC. The overall message sent to providers is that DHMC is trying to improve quality of care, apply evidence-based care models, and provide infrastructure that will allow physicians to improve care. The implicit understanding is that these actions will achieve savings and reduce costs. Changes will occur primarily at the office level, not at the individual provider level. Providers have reacted favorably to these goals and believe that participation in the demonstration was the right thing to do.

The demonstration communication plan begins with the Board of Governors and the PGP Demonstration implementation leaders, which include practice managers, section chiefs, department chairs and medical staff. These leaders have communicated to individual providers and have highlighted the necessary paradigm shifts for success under the demonstration. First, providers are informed of their individual responsibility to improve quality measures and document care provided to patients. Providers are made aware of the bonuses available to DHMC and that these will not be distributed at the individual provider level. Educating providers about the demonstration is a continuous process; currently 80 percent of providers have heard the presentation about the demonstration. DHMC plans to continue outreach communication to providers and staff throughout the demonstration period.

5.2 Provider Performance Support and Feedback

Providers are enthusiastic about improving care, but are less interested in the demonstration in the abstract. Physicians want to deliver high quality care. Their professional ethic is to do the right thing for the patient. Providing physicians with information so they can see how they are performing and where they can improve is important for achieving demonstration goals. The primary strategy is "data availability." DHMC tells physicians that their performance data will eventually be posted publicly, so they had better start improving now.

DHMC provides feedback to providers through their intranet system. Providers receive "dashboards" summarizing their quality measures. DHMC has an "active" data strategy where office managers review data, determine whether there are any barriers to improvement, and strategize to remove these barriers. Managers review data at departmental meetings and discuss improvement strategies with all providers. It is difficult to change systems, physicians have a lot of pressure on their time and it is difficult to get their attention. They do not like change.

DHMC has an annual provider evaluation process that focuses on productivity, clinical practice patterns, cost and utilization measures, quality measures and beneficiary satisfaction. Data collected for the PGP Demonstration on provider performance is being incorporated into this annual evaluation process.

5.3 Provider Compensation and Incentives

Provider compensation models at DHMC vary by specialty and setting. In the community practices, the base salary for PCPs is determined prospectively from the physicians' clinical productivity over the preceding 12 months. Productivity is measured through comparisons of relative value units (RVUs), patient encounters and patient panel sizes to benchmarks. The three productivity measures are weighted as follows: 40 percent for RVUs, 40 percent for patient encounters, and 20 percent for patient panel size. Actual productivity measures are compared to benchmarks and the weights are used to determine a composite productivity factor, which is multiplied by the benchmark salary for each specialty to determine base salary. Compensation for specialists is similar, however, RVUs are the only productivity measure and therefore the weight for this measure is 100 percent. In the academic medical center, physician payment is salaried plus factors for "section" performance against benchmarks and budgets, including RVU productivity.

Some rules apply to the compensation model. For example, a physician's base salary can not increase by more than 10 percent or decrease by more than 5 percent in a given year unless the physician has made changes to his/her full-time equivalent status. Second, physicians performing administrative duties will have higher base salary amounts. The additional base salary amount is based on the time required to complete duties. The administrative payments rarely exceed 10 percent of total base salary. Medical Directors may also recommend different salaries for individual providers based on patient mix, impact of medical leave, and any other factors deemed appropriate.

DHMC indicated that they will never provide financial incentives to providers based on cost savings; however, they are considering incentivizing providers for quality improvements. DHMC is currently discussing methods for incorporating quality measures into their physician compensation model.

SECTION 6
DEMONSTRATION QUALITY INDICATORS

6.1 Appropriateness

DHMC felt that the demonstration quality measures are fairly standard and reasonable and are under DHMC's control. But CMS needs to make sure that all measures are evidence-based. Additional measures suggested by the group include mental health measures such as screening for depression, and, if it is found, whether it is treated. DHMC questioned the urine protein measure—once it is detected, the patient should be started on an ACE inhibitor and there is no need to measure again. Also, DMHC mentioned the need for flexibility, such as not judging physicians on flu vaccination the year that flu vaccine was in short supply. DHMC felt that as many quality indicators as there are evidence to support should be employed; a large number of indicators is not necessarily bad, although it may be burdensome to collect a large number. DHMC also pointed out that if providers are judged on quality indicators or outcomes, they will avoid patients who will measure poorly on the indicators or outcomes.

DHMC believes that the quality improvement targets for the demonstration are reasonable. They appreciate the use of multiple thresholds and that it is sufficient to satisfy either an absolute threshold or an improvement target. DHMC cited one negative aspect of the quality improvement design; they believe that the improvement targets for each year should be relative to the previous year, rather than the baseline year. Also, the problems with the demonstration assignment algorithm also apply to the quality indicators. DHMC feels that it should not be held accountable for quality indicator performance for assigned beneficiaries for whom it did not provide the patient's primary care. For example, if a beneficiary is assigned to DHMC based on visits to a plastic surgeon, that plastic surgeon should not be responsible for providing diabetes or heart care.

6.2 Improvement Strategy

Under the demonstration, DHMC will improve quality indicators by focusing on incorporating evidence based medicine initiatives into everyday care. Providers receive information and feedback about their performance on the demonstration quality indicators (see Section 5.1). DHMC will also develop specific disease state management registries with the support of care managers. DHMC plans to concentrate initially on diabetes measures because they are the focus of the first year of the demonstration, and then on measures with the greatest room for improvement.

DHMC believes that quality measures can also be improved by involving patients in the quality measure education process. If patients understand what care they should be receiving, it is possible that they will be more likely to receive it and thus quality measures will improve for the system.

6.3 Collection and Reporting

DHMC has found that chart abstraction for the demonstration can be very burdensome. They spent approximately 40 minutes per record for the chart review. DHMC had particular

difficulty capturing the diabetic foot exam measure. The data collection process could also be simplified if quality measures were aligned more closely across payers and other organizations. The patient assignment algorithm also creates difficulties with quality measure reporting. In most cases, DHMC will not know if the beneficiary received appropriate care if they only provided specialty care for that patient. DHMC's three different electronic medical records increased its burden of quality indicator data collection.

SECTION 7
INFORMATION TECHNOLOGY

7.1 Strategy

IT is crucial for success under the demonstration and care management in general according to DHMC. Improving IT is a strategic goal for DHMC. Approximately 2.2 percent of its budget is spent on information technology (IT). DHM's major IT initiatives are to capture additional data in its administrative and clinical systems. Although IT did not hire any new staff for the demonstration, one to two full-time equivalents (FTE) were diverted to support all clinical quality initiatives including the PGP Demonstration.

Participation in the PGP Demonstration has given IT some direction and has shown DHMC where data are currently lacking, for example for patients seen only for specialty care. DHMC prefers purchasing externally developed software compared to developing software internally. It uses software from a variety of vendors, including IDX and Cerner. DHMC systems do not interface well with non-DHMC systems; fragmentation is a major problem. DHMC leased "grouper" software for the demonstration to measure patient severity of illness and predicted costliness. It has enhanced previously-existing reports and tracking of high-cost patients because of the demonstration.

7.2 Systems and Initiatives

7.2.1 Disease Registry

A disease registry exists for diabetes patients (begun 2 years ago) and is under development for CHF patients. The registry shows patient demographic information, clinical information and most importantly which tests and procedures have been conducted for the patient. The registry is updated monthly and is made available to providers treating patients found in the registry. Practices assign someone to manage the list of patients in the registry.

Reports generated from the registry show individual providers how their patients are progressing and whether the patient has any outstanding or overdue tests. The registries have allowed providers and practice managers to track improvements in quality measures. The diabetes registry is being replicated for other high-cost diseases for the demonstration so that providers can improve documentation and provision of patient care.

7.2.2 Electronic Medical Record

DHMC medical records are almost completely electronic. The system has three electronic medical records (EMR) because of the different geographic locations of individual clinics. For example, the entire community in Concord, including the local hospital, switched to a certain system. D-H Concord decided to make the same switch so that the local practice could have the same EMR as other health care institutions in the same area. Similarly, the Keene community decided to use a different system.

APPENDIX A
AGENDA FOR DARTMOUTH-HITCHCOCK MEDICAL CENTER SITE VISIT

Site Visit Agenda for Dartmouth-Hitchcock Medical Center
PGP Demonstration Evaluation by RTI

February 15, 2006

8:00–8:45 a.m.	Welcome, Introductions, and Evaluation and Site Visit Background
8:45–9:45 a.m.	PGP History, Organizational Structure, Demonstration Participation, and Strategy
9:45–10:00 a.m.	Break
10:00–12:00 p.m.	Patient Care Activities/Interventions to Improve Efficiency
12:00–1:30 p.m.	Provider Participation and Relations & Lunch
1:30–2:30 p.m.	Quality Improvement
2:30–2:45 p.m.	Break
2:45–3:45 p.m.	Information Technology
3:45–4:15 p.m.	End of Day Wrap-up