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University of Michigan Faculty Group Practice 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 quality and efficiency 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 conducted site visits at each of the ten PGPs participating in the demonstration 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, as well as their early implementation and operational experience with the demonstration. This report contains findings for University of Michigan Faculty Group Practice (hereafter "UMFGP").

UMFGP is part of the University of Michigan Health System (UMHS), an academic medical center which consists of the University of Michigan Medical School and its Faculty Group Practice, three University of Michigan hospitals, 30 community health centers, and over 120 outpatient clinics. Approximately 1,400 physicians are employed by UMHS. UMHS is based in Ann Arbor and its locations are concentrated in southeastern Michigan. Because UMFGP is tightly integrated within the UMHS, and because much of the information we obtained pertains to the UMHS more broadly, we use "UMHS" to refer to the PGP demonstration participant rather than UMFGP, unless the latter is necessary for specificity.

Demonstration Participation and Strategy. Ten years ago, Ford Motor Company and, later, General Motors asked UMHS for population health management services for care coordination of chronic diseases. UMHS established a Medical Management Group and developed provider-based disease management initiatives in response. UMHS also previously owned a Medicare HMO and developed managed care systems and initiatives. UMHS considers the PGP demonstration as a means to continue development and improvement of these programs, and potentially receive reimbursement for care coordination that is lacking in the current system. UMHS believes that the PGP demonstration is a means to demonstrate the virtues of provider-based disease management.

UMHS attracts complex, unhealthy patients. UMHS feels it will never do well under capitation because it attracts sicker patients, and risk adjustment is not good enough to capture this fully. The PGP demonstration's provider-specific base per capita rate accounts for the adverse selection that UMHS incurs. They believe that the demonstration is a good model for integrated systems such as UMHS, as it helps align incentives within the system.

The three UMHS hospitals have very high occupancy rates and beds are in high demand. Through programs aligned with PGP demonstration goals, UMHS believes it can reduce admissions of less complex medical patients to make more beds available for surgical patients, who are typically more financially remunerative. There is a similar business case for reducing readmissions—referrals are higher margin than readmission. And UMHS can potentially get revenue back from lowering admissions through the PGP demonstration bonus.

Because it is an academic referral center, many of the Medicare patients provided care at UMHS are receiving specialty referral care, not primary care, and are highly clinically complex. Approximately half of UMHS's Medicare beneficiaries are not assigned to UMHS in the demonstration, and as many as half the beneficiaries who are assigned to UMHS do not receive primary care within the system. Also, many assigned beneficiaries live outside of UMHS's service area. UMHS believes the demonstration patient assignment algorithm may need to be refined for systems with a large referral business such as itself.

Patient Care Interventions. The main cost-savings goals for UMHS are to reduce non-surgical admissions, particularly readmissions, and improve transitional care—patient movements among care settings, particularly from inpatient to outpatient settings—throughout the health system. Improving transitional care was identified as a priority because UMHS is a large and complex institution dealing with complex patients who require transitions among the many different types of services they are receiving.

UMHS care coordination programs include a complex care coordination program, post-discharge transitional care coordination, pharmacy follow-up care pilot, five disease management programs, and a primary stroke care center,. Most of these programs existed prior to the PGP demonstration, but the demonstration resulted in their greater application to the Medicare fee-for-service population and greater resources, focus on, and priority for the programs. The disease management programs are gradually "ramping up" to accommodate Medicare patients but so far only heart failure and depression have a significant proportion of Medicare patients.

Provider Participation and Relations. Physicians and staff have been made aware of the goals and financial incentives of the demonstration through meetings, e-mail, postings in care facilities, and special projects/focused communications.

UMFGP physicians are paid using a mix of salary and their service productivity (RVU output per physician). There are no financial incentives for providers tied to their PGP demonstration performance. UMHS feels that potential demonstration bonuses divided among physicians would be too small to be meaningful. Also, it is the entire system (team) that improves care, not just the individual doctor. UMHS will plow bonuses back into improving the system (e.g., improved care coordination systems). With regard to the demonstration quality indicators, their sample size at the individual physician level is too small to justify monetary incentives (too much random variation in the measures for individual physicians), and financial rewards would give physicians an incentive to avoid patients who test badly on the quality indicators. Also, UMFGP believed that paying physicians bonuses tied directly to any PGP demonstration bonuses could jeopardize their tax exempt not-for-profit status.

Demonstration Quality Indicators. UMHS feels that only quality indicators that have been validated in the Medicare population should be used in the PGP demonstration, and that many of the demonstration indicators have not been validated for the frail elderly. Also, UMHS feels that the patient sample size of the quality measures is too small to detect real improvements in quality of care. Relative to other demonstration participants, UMHS has a much greater focus on specialty care and therefore considers many of the demonstration quality measures, which

focus on primary care, to be inapplicable for the care it is responsible for. UMHS also felt that the costliness of collecting data is high.

UMHS's strategy for improving the quality indicators revolves around documenting quality of care and informing physicians of the care their patients have received. UMHS is focusing on diabetes in the first demonstration performance year because of the previous efforts in this area and because diabetes is the focus on the first year demonstration quality indicators. UMHS is now beginning to focus on Congestive Heart Failure (CHF) because of the high costs and volume associated with the disease.

Information Technology. A mixture of in-house IT systems and contracted vendors are used in UMHS's IT strategy. UMHS did not create any major information technology initiatives specifically in response to participation in the PGP demonstration. UMHS has developed disease registries for diabetes, CHF, and CAD to help support the disease management programs, and registries for asthma and depression are being developed. UMHS informs its transition management staff and utilization management teams' personnel of readmissions via a daily readmission report and a monthly e-mail, which notifies each physician of patient readmissions. UMHS is "most of the way" to implementing an electronic medical record. UMHS faces challenges in integrating IT systems because of the size and complexity of its health system.

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 quality and efficiency 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, not-for-profit research organization, to evaluate the demonstration. As part of its evaluation, RTI conducted site visits at each of the ten 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 ten demonstration PGPs. Material from the site visit reports will be included in CMS' Report to Congress on the PGP demonstration, due in 2006. This report includes findings for University of Michigan Faculty Group Practice (hereafter "UMFGP"). This demonstration participant is a collaboration of the UMFGP and rest of the University of Michigan Health System (UMHS), including its hospitals and health centers. Because UMFGP is tightly integrated within the UMHS, and because much of the information we obtained pertains to the UMHS more broadly, we use "UMHS" to refer to the PGP participant rather than UMFGP, unless the latter is necessary for specificity.

1.2 Sources and Methods

The primary source for the site visit reports is the one-day, on-site interviews conducted by RTI staff. The UMHS site visit took place on February 7, 2006 at UMHS offices in Ann Arbor, Michigan. 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 UMHS' 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 UMHS 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, including UMHS participants for the site visit, is attached as Appendix A. UMHS participants included its CMS PGP demonstration Project Lead, Program Coordinator, and Lead Analyst; Associate Dean for Clinical Affairs; Executive Medical Director, Faculty Group Practice; Associate Chief of Staff, UMHS; Director, Clinical Information and Decision Support Systems; Manager, Disease management Programs; Interim Chief Financial Officer; and other clinical, management, and quality assurance personnel. Gregory Pope and Edward Drozd of RTI conducted the interviews in person according to a pre-defined, semi-structured interview protocol organized according to the above five topic areas. John Pilotte of CMS also participated in the interviews, via telephone.

In addition to the interviews, this report draws on written materials provided by UMHS during or after the site visit, or as part of the demonstration project. These materials include UMHS's demonstration implementation protocol, and its demonstration baseline and quarterly reports. Also, UMHS's web site was consulted for background information. Finally, we drew some information on UMHS'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 UMHS or published sources (e.g., UMHS'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 UMHS and its demonstration participation. We submitted this report to UMHS staff for their review of its factual accuracy.

1.3 Overview of the Report

The next section describes UMHS as an organization and the environment in which it operates. The third report section discusses why UMHS 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

UMFGP is the faculty practice of the University of Michigan Medical School, through which the faculty provide clinical services to patients in the University of Michigan Health System (UMHS). UMHS is an academic medical center which consists of the University of Michigan Medical School and its Faculty Group Practice and research facilities, three University of Michigan hospitals, 30 community health centers, and over 120 outpatient clinics. UMHS is based in Ann Arbor and its locations are concentrated in southeastern Michigan, but it has some locations in other parts of the state. UMHS also includes the M-CARE managed care organization, which offers commercial and Medicaid health plans. Formerly M-CARE offered a small Medicare HMO (1997-2003), but it had difficulty managing care on the periphery of its service area, lost money, and went out of business. The Michigan Health Corp. is the legal entity that allows UMHS to enter into partnerships, affiliations, joint ventures, and other business arrangements. Through the Michigan Health Corp., UMHS owns a home health provider service (Michigan Visiting Nurses). UMHS has very visible and active geriatrics primary care providers. It includes the Turner Geriatrics Center, a very large geriatric outpatient practice providing primary care to 5,000 Medicare beneficiaries and 20,000 visits per year. UMHS does not own skilled nursing facilities. UMHS has approximately 17,000 employees.

UMHS is governed by the University of Michigan Board of Regents, the President of the University, the Executive Vice President for Medical Affairs, the Chief Executive Officer of University of Michigan Hospitals and Health Centers, the Dean of the University of Michigan Medical School, and the Executive Director of M-CARE. The Faculty Group Practice is administered by an Executive Medical Director, who is also a Senior Associate Dean for Clinical Affairs.

University Hospital, C.S. Mott Children's Hospitals, and Women's Hospital/Holden Neonatal Intensive Care Unit are the three UMHS hospitals. The Health System has 865 beds and had over 42,000 admissions during Fiscal Year 2004. University Hospital is a tertiary care referral center: 70 percent of its patients are admitted from communities or regional hospitals outside the Ann Arbor area. Health System personnel include approximately 1,400 physicians and over 3,000 nurses.

2.2 Environment

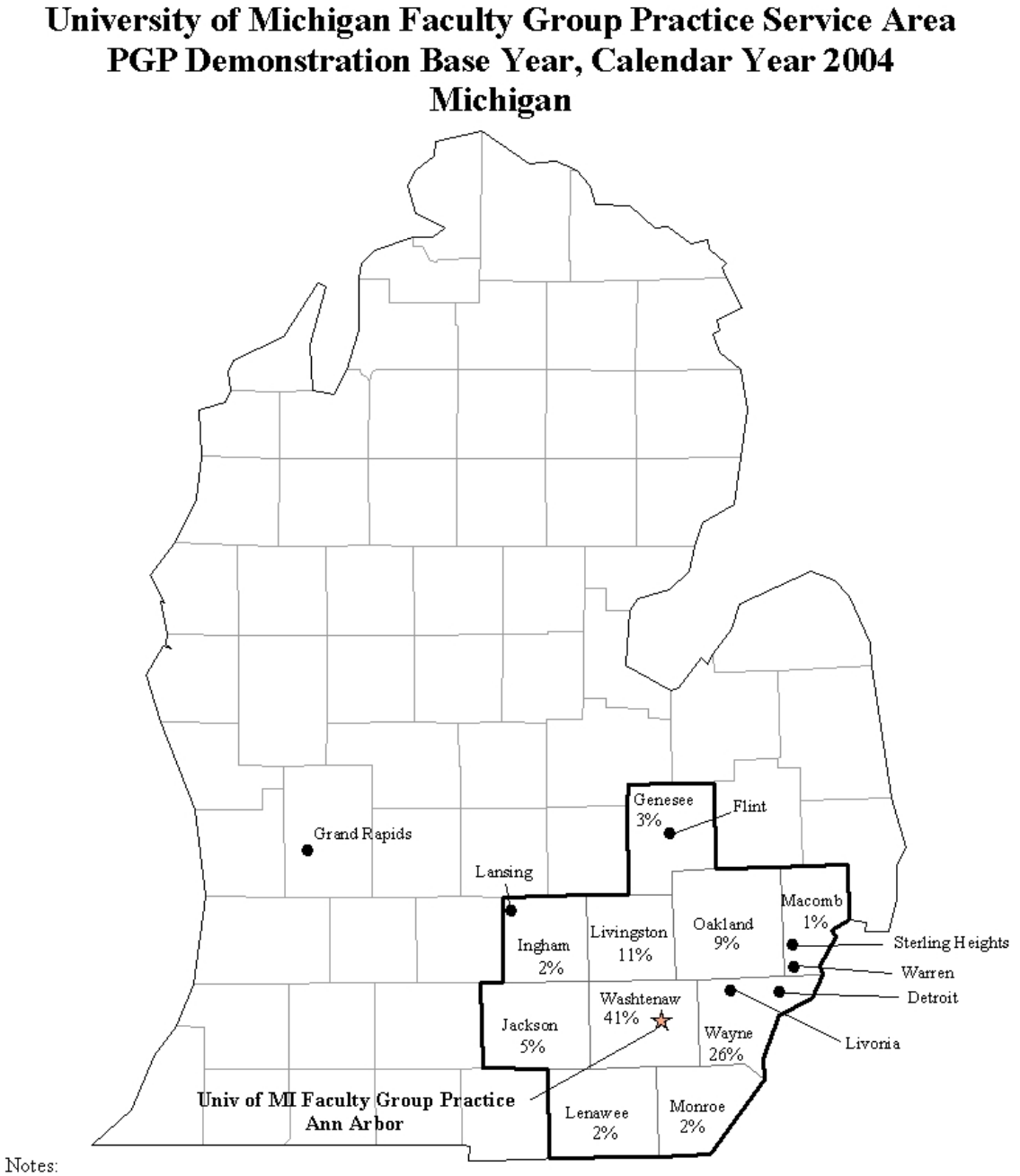
2.2.1 Service Area

The UMHS Medicare service area is comprised of Ann Arbor and its surrounding communities in southeastern Michigan. ***Figure 1*** shows the UMHS Medicare service area for 2004 based on patient residence data. Counties where at least 1 percent of Medicare FFS beneficiaries assigned[1] to UMHS reside are included in its service area. UMHS draws 41 percent

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

of its Medicare patients from Washtenaw County, which includes Ann Arbor, and 26 percent from Wayne County, which includes Detroit.

Figure 1
University of Michigan Health System 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

2.2.2 Patients

Table 1 shows selected characteristics of UMHS's 2004 Medicare patients available from Medicare administrative files. UMHS provided an office or other outpatient evaluation and management visit to 42,143 Medicare patients. Of these, 19,484 or 46 percent received the plurality of their evaluation and management services from UMHS and so were assigned to UMHS for the PGP demonstration. This is the lowest assignment ratio among the 10 PGPs participating in the PGP demonstration, a reflection of the referral care provided by UMHS. Assigned beneficiaries received 5.29 evaluation and management visits on average from all providers, with 82 percent of the associated Medicare allowed charges provided by UMHS on average. Seventy five percent of UMHS's assigned Medicare patients are eligible for Medicare by age, 22 percent by disability (under age 65), and 3 percent by end-stage renal disease. Thirteen percent had at least 1 month of Medicaid eligibility in 2004. Eighty-eight percent were white.

In analysis of 2002/2003 Medicare assigned beneficiary data to date provided by CMS and RTI, UMHS has been struck by the turnover in the assigned population and the degree of care received outside the UMHS. High turnover could be related to the withdrawal of UMHS's Medicare HMO in 2003, moving these patients into Medicare fee-for-service. The high out-of-network care is a reflection of UMHS's referral care business, particularly for cancer care. UMHS has been unable to predict which Medicare patients will be assigned to them and thus feels it is "working blind." UMHS is working on identifying high-cost beneficiaries using these data, but has not completed this analysis yet. It has not used the quarterly feeds of Medicare claims provided by CMS and RTI.

2.2.3 Payers

About 17 percent of UMHS's patients are insured by Medicare, and most of these are enrolled in the traditional FFS program. There are few Medicare managed care patients. Three percent of UMHS's patients are uninsured. The rest are insured by Blue Cross, UMHS's own M-CARE health plan, commercial insurers, or state Medicaid. Substantial shares of UMHS patients are enrolled in traditional indemnity fee-for-service insurance and in capitated managed care plans.

UMHS participates in several financial incentive programs. Michigan Blue Cross Blue Shield has developed many incentive programs, several of which UMHS participates in. These include quality improvement programs in angiography, bypass surgery, breast cancer, and surgical safety. The Faculty Group Practice at the Medical School participates in the Michigan Blue Cross Blue Shield Physician Group Incentive Programs. These programs offer financial incentives (upfront reimbursement) for infrastructure enhancements in the management of chronic disease, such as patient/disease registries, disease management programs, and staff. If UMHS outperforms community medical groups in pharmacy cost trends, it can receive a bonus.

An employer coalition, the Greater Detroit Health Council, is active in UMHS's market area. They are attempting to incentivize high quality care and establish public reporting of quality indicators. There is considerable overlap and synergy with the PGP demonstration.

Table 1
Selected characteristics of Medicare patients, University of Michigan, 2004

	No. of Beneficiaries	Percentage or Amount
Medicare Patients		
Total[1]	42,143	100.0%
Assigned Beneficiaries[2]	19,484	46.2%
Characteristics of Assigned Beneficiaries		
Average Number of Evaluation and Management Visits[3]	19,484	5.29
Average Percentage of Evaluation and Management Care Provided by UMHS[4]	19,484	82%
Distribution of Assigned Beneficiaries		
Total	**19,484**	**100%**
Medicare Eligibility		
Aged	14,600	74.9%
End Stage Renal Disease	636	3.3%
Disabled	4,248	21.8%
Medicaid Eligibility		
Not Medicaid Eligible for any months in 2004	16,878	86.6%
Medicaid Eligible at least 1 month in 2004	2,606	13.4%
Age		
Age < 65	4,818	24.7%
Age 65 - 74	7,829	40.2%
Age 75 - 84	5,291	27.2%
Age 85 +	1,546	7.9%
Race		
White	17,160	88.1%
Black	1,702	8.7%
Unknown	19	0.1%
Asian	230	1.2%
Hispanic	70	0.4%
North American Natives	28	0.1%
Other	275	1.4%

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

UMHS competes locally in southeastern Michigan with two other health systems: St. Joseph's Mercy Health System (a three-hospital system) and Beaumont Hospitals (a two-hospital system). To some degree UMHS also competes with the Henry Ford Health System, which is located in the Detroit area, especially for high end care, such as transplants. However, for most care, UMHS does not compete much in the Detroit market.

2.3 Major Strategic Initiatives

UMHS is beginning to roll out the Michigan Quality System, an initiative based on the "lean thinking" approach to quality improvement first developed by Toyota Motor Corporation and now widely used in industry—the goal is to identify and focus on aspects of care that "add value" to patients. It is also promulgating an extensive and continually expanding set of "Clinical Care Guidelines" via an internal web site. Its Medical Management Center continues to grow, and its Stroke Program was recently JCAHO-certified. Implementing a completely electronic patient care record before 2010 is a goal. As an academic medical center, UMHS also intends to improve its performance in clinician education and research. Other goals include increasing patient care activity by 3 percent per year, holding cost per adjusted case to health care inflation or less, and receiving recognition as the safest hospital in the United States.

In 2005, UMHS began a coding initiative pilot project in four clinics to ensure the accurate coding of patients on claims reimbursement forms; this particularly pertains to patients with multiple conditions and co-morbidities. Accurate coding of these patients' chronic conditions will reflect a truer picture of UMHS's patients' healthcare needs. UMHS's IDX system is limited to tracking three patient diagnoses. UMHS would like to capture more diagnoses.

SECTION 3
DEMONSTRATION PARTICIPATION AND STRATEGY

3.1 Reasons for Participating

UMHS sees the PGP demonstration as a way to continue involvement in pay for performance which UMHS considers an important method of improving health care. By participating in the PGP demonstration, UMHS can improve the quality and efficiency of care throughout the entire health system by focusing everyone's attention on the need for quality improvement. While the PGP demo focuses on Medicare beneficiaries, UMHS believes the PGP model can be extended to fit an all-payer model. UMHS views participation in the PGP demonstration as an opportunity to learn how to better allocate resources for care coordination. One goal of UMHS is to learn how to improve care coordination for patients with multiple diseases, many of whom are bouncing from provider to provider and among care systems. UMHS has strong interest in geriatric care, chronic care coordination, and patient support, activities that current reimbursement does not support, but the demonstration may.

Ten years ago, Ford Motor Company and, later, General Motors asked UMHS for population health management services for care coordination of chronic diseases, to avoid inappropriate hospitalizations and emergency department services. UMHS established a Medical Management Group and developed provider-based disease management initiatives in response. UMHS considers the PGP demonstration as a means to continue development and improvement of these programs, and potentially receive reimbursement for care coordination, payments for which are lacking in the current system. UMHS feels that disease management provided by independent companies is inefficient. For example, using contracted disease management programs means one physician will have to deal with several disease management companies for different patients. According to UMHS, the national disease management companies tend to provide generalized advice that is not tailored to individual patients. UMHS believes it is more efficient for disease management to be an extension of the provider, and that the PGP demonstration is a means to demonstrate the virtues of provider-based disease management.

UMHS attracts complex, unhealthy patients. UMHS feels it will never do well under capitation because it attracts sicker patients and risk adjustment is not good enough to capture this fully. The PGP demonstration does not require patients to enroll in capitated Medicare managed care (Medicare Advantage). The PGP demonstration is a better model than capitation for UMHS. The demonstration's provider-specific base per capita rate accounts for the adverse selection that UMHS incurs. The demonstration is a good model for integrated systems such as UMHS because it helps align incentives and focuses attention on quality improvements throughout the system.

UMFGP has had little internal opposition to participating in the PGP demonstration. However, there was some resistance to the demonstration due to CMS keeping the first 2 percent of savings. It was also noted that other payers implementing pay-for-performance programs have typically provided up-front money for infrastructure improvements, unlike the PGP demonstration. Also, UMHS feels that a lot of factors unrelated to the demonstration can affect Medicare expenditures and quality. For example, increases in Graduate Medical Education, Indirect Medicare Education, or Disproportionate Share payments can cause teaching hospitals to

look more expensive independent of patient care. It is an open question whether the demonstration can adequately reward UMHS's cost and quality efforts. Finally, UMHS feels that it receives no credit for its care management efforts prior to the demonstration, and that it has already taken out the "low-hanging fruit."

3.2 Demonstration Strategy

UMHS intends to improve both its quality and efficiency of care through enhanced provider-based programs and initiatives. UMHS is transferring the care coordination model it developed for Ford Motor Company to the Medicare fee-for-service population. The PGP demonstration has tipped UMHS past the pilot programs initiated for Ford Motor Company and other payers. Medicare's high patient and financial volume has lent more resources and focus.

The main cost-savings goals for UMHS are to reduce admissions, particularly readmissions, and improve transitional care—patient movements among care settings, particularly from inpatient to outpatient settings—throughout the health system. For example, UMHS aims to prevent "social" admissions, and readmissions for the same DRG within 14 days. Improving transitional care was identified as a priority because UMHS is a large and complex institution dealing with complex patients who require transitions among the many different types of services they are receiving. The initiative to improve transitional care would not have happened without the PGP demonstration. Palliative and end of life care is a focus. The demonstration has also been a catalyst for tighter affiliation with area nursing homes, transitions to and from which UMHS has traditionally had the least control over. UMHS does not expect cost savings in the short run from improvements in the demonstration quality indicators.

UMHS has invested between $2 million and $3 million in the demonstration to date. However, UMHS does not view the demonstration as a chance to earn a large bonus; rather, UMHS hopes to break even during the demonstration. A cost-neutral demonstration will be considered a "big win" for UMHS. If UMHS loses money on the demonstration, it will be hard for it to sustain future investments in care coordination. If UMFGP does receive a bonus, it will be shared across the UMHS.

The three UMHS hospitals have very high occupancy rates and beds are in high demand. Through programs aligned with PGP demonstration goals, UMHS believes it can reduce admissions of less complex medical patients to make more beds available for surgical patients, who are typically more financially remunerative. For example, beds freed up by keeping simple congestive heart failure patients out of the hospital through disease management can be filled with more lucrative commercially-insured surgical patients. There is a similar business case for reducing readmissions—referrals are higher margin than readmissions. And UMHS can potentially get revenue back from lowering admissions through the PGP demonstration bonus.

3.3 Relationship to Group Practice Strategy

The PGP demonstration goals of improving the quality of care received by Medicare beneficiaries are consistent with UMHS's own vision and strategic direction of managing and integrating care. UMHS envisions a single system of patient care for all payers. One way to achieve this single system is by implementing provider-based disease management systems rather than through different disease management companies for each payer. UMHS strives to

improve coordination of care to better suit the complex, sicker patients it attracts. The PGP demonstration will provide an opportunity for UMHS to develop programs to better care for these patients, such as those with multiple chronic diseases.

3.4 Leadership and Implementation Team

The PGP demonstration is a collaboration of the UMFGP and rest of the UMHS, including its hospitals and health centers. UMFGP is the legal contracting entity with CMS for the demonstration, and physicians from UMFGP lead the demonstration effort for UMHS. UMFPG's Project Lead is an associate professor of internal medicine and geriatrics, who is affiliated with the University of Michigan's Turner Geriatrics Clinic and was the Medical Director of M-CARE's Medicare HMO. She is assisted by a Program Coordinator and a Lead Analyst assigned to the demonstration effort. UMHS's care management programs are housed in its Center for Chronic Illness Programs, and the PGP care management efforts are coordinated through this organizational structure. A CMS Physician Group Practice Demonstration Steering Committee meets monthly. UMFGP and UMHS top management—including the Executive Vice President for Medical Affairs of the University of Michigan, the Executive Medical Director of the Faculty Group Practice, the Interim Chief Executive Officer of the University of Michigan Hospitals and Health Centers, the Associate Vice President for Medical Affairs, and the Associate Chief of Staff—are all aware of and supportive of the demonstration and receive regular updates on the demonstration initiatives and progress.

3.5 Implementation and Operational Challenges

UMHS has faced several challenges in rolling out its implementation plan and identified the following:

First, UMHS received no upfront implementation funding for the demonstration, which requires great effort and many resources. This could decrease support for and interest in the demonstration since the there is such a strain on the organization's resources. Ford Motor Company and Blue Cross Blue Shield of Michigan pay upfront for infrastructure. UMHS suggests consideration of a hybrid funding model combining partial upfront payments for infrastructure projects and partial shared savings payments based on retrospectively-measured performance.

Second, patient attribution for a tertiary care referral center such as UMHS is a significant issue. Many of the Medicare patients provided care at UMHS are receiving only specialty referral care (such as oncology treatment), not primary care, and are highly complex clinically. Approximately half of the Medicare beneficiaries treated by UMHS physicians are not assigned to it in the demonstration, and as many as half the beneficiaries who are assigned to UMHS do not receive primary care within the system. Also, many assigned beneficiaries live outside of UMHS's service area. UMHS believes that patients seeing multiple providers and those living outside the immediate service area are often the patients who most need care coordination interventions. UMHS does not necessarily propose eliminating assignment of patients lacking in-system primary care, but they think the assignment algorithm could potentially be refined. Internally, UMHS's assignment algorithm of patients to individual physicians, which is used for physician feedback for clinical quality improvement indicators for diabetes and heart failure, is based on the preponderance of visits. If there is a tie, the patient is

assigned to the physician who saw him/her last. Patient lists are validated with physicians. Two visits are necessary for assignment, e.g., if there is only one referral visit, a patient should not be assigned to a physician.

Third, it takes time to ramp up for the demonstration; there is a learning curve. The demonstration only lasts 3 years.

Fourth, it is difficult to do pay for performance on a single payer basis. It needs to be a common model across all payers. Differences across payers create added complexity and costs for providers.

Fifth, UMHS has a significant number of outlying healthcare centers, some of which treat many Medicare patients. To date there has not been much outreach to these centers, but this is on the agenda for next year.

SECTION 4
PATIENT CARE INTERVENTIONS

The UMHS Michigan Center for Chronic Illness Programs (MCCIP), formerly the Medical Management Center, has been responsible for many disease-specific management initiatives. The MCCIP was created to offer a "multi-disciplinary approach" to providing care to UMHS patients through five disease management programs, a primary stroke center, and a complex care coordination program. These programs began when Ford Motor Company, General Motors, and UMHS asked the MCCIP to enhance management services, coordinate care, and enhance patient education to better serve their populations. Therefore, although the disease management and care coordination programs all existed prior to the PGP demonstration, they served virtually no Medicare patients. The demonstration has led to greater scrutiny of their activity and emphasis on the provision of care coordination and disease management services to the Medicare population. To date only heart failure and depression disease management programs have a significant number of Medicare patients. Through the MCCIP, the transitional care program and the complex care coordination program were specifically designed to serve Medicare patients and do so almost exclusively.

To date physicians, nurses, administrators and others have built high cost, high risk patient registries, disease registries, conducted case reviews, and have tried to implement systems to assure that patients receive the right care at the appropriate time. All programs have in common patient evaluations, custom treatment plans, patient and caregiver education, and intervention services when needed. The results of UMHS's patient interventions are designed to help bring about decreases in unnecessary hospitalizations and emergency department services, and decreases in readmissions. Through similar interventions for Partnership Health, a joint project with the Ford Motor Company, the UMHS achieved savings of $54 per member per month in a financial analysis of the care coordination services. UMHS believes in the virtues of internal, provider-based disease management because provider-based management has more control and has relationships with both the patients and the providers.

Future aspects of the patient care interventions include further development of disease registries and predictive modeling. UMHS will also continue development of a web-based database to increase efficiency and coordination of these programs. The demonstration has been an important catalyst for mobilizing and focusing staff around a common goal. Knowledge gained will be disseminated to UMHS specialty and primary clinics to be applied to larger patient populations.

4.1 Post-Discharge Transitional Care Coordination and Pharmacy Follow-up

The PGP demonstration has been a catalyst for UMHS's desire to improve post-discharge transition and coordination. Prior to the demonstration, post-discharge planning was very physician-specific, not coordinated across providers. Now, there is a post-discharge short-term care coordination team, that contacts Medicare patients who are likely to be assigned to UMHS post-discharge. Patients receive education, medication counseling, and guidance with post-acute care treatment, and assistance with making and getting to, post-discharge appointments. The goal is that every patient's primary care physician will be informed of the patient's discharge

destination, and every patient will have a follow-up appointment as soon as is necessary. This program is staffed by 2 nurse assistants and one full-time registered nurse.

The role of the hospital pharmacist has also changed because of the PGP demonstration for one-quarter of the General Medicine services. On these services, the pharmacist does more patient education, both pre- and post-discharge, as part of the Pharmacy Follow-Up at Discharge program, which was implemented in October 2005. This program provides patients with education pertaining to their medications, with the goal of preventing medication errors. This program is being internally evaluated and will be expanded pending improvement in patient safety and quality measures.

4.2 Complex Care Coordination

UMHS's complex care coordination program identifies patients who are in need of complex care management due to multiple chronic diseases, significant psychosocial problems, or high risks or high utilization. The program seeks to manage patients' admissions and advance patient self-management while providing the appropriate and efficient amount of care. Patients are referred by physicians, the transition team, or the Emergency Department; they are also found through high cost, high utilization lists. The highest cost 200 Medicare patients likely to be assigned to UMHS, for example, have been referred for consideration for complex care coordination. This program is staffed by one FTE registered nurse and one FTE social worker.

4.3 The Disease Management Programs

Each disease management program is led by a disease-expert physician and an advanced-practice nurse or certified educator. Eligibility for one of the many disease specific management programs is dependent on two or more admissions or emergency department services, or other vital indicators that show a need for a patient to be in the program (diagnoses, complexity, referrals). All payer populations can be enrolled, but emphasis has been given to patients who were covered under contracts for disease management services. At demonstration baseline (2004), very few Medicare fee-for-service patients were enrolled in these programs. The programs are gradually increasing their Medicare beneficiary enrollment. The goal of the disease management programs is to increase quality of care and to decrease admissions and readmission rates. At the same time the programs hope to increase patient satisfaction. The clinical leadership of each program receives continuing education and training as mandated by UMHS. All disease management programs are reviewed by the Joint Commission on Accreditation of Healthcare Organizations.

4.4 Diabetes Disease Management Program

UMHS's diabetes registry contains about 8,000 patients. The primary patients of the UMHS diabetes disease management program are diabetics with an HbAlc at or above 9.5, variable blood glucoses, frequent hypoglycemia, and/or those who have a co-morbid condition or specific problem requiring intervention to stabilize and improve disease self-management skills. UMHS is especially concerned with its sickest diabetes patient. This includes those with high HbAlc levels, frequent hospitalizations, and co-morbid conditions. UMHS helps these patients achieve necessary self-management skills through patient education, monitoring, and

coordination of care. To date, few Medicare patients are part of this program: most patients served have type 1 diabetes.

4.5 Congestive Heart Failure Disease Management Program

The Congestive Heart Failure (CHF) disease management program at UMHS is an intensive program that concentrates on patients recently admitted with a primary diagnosis of heart failure. The program offers care management and treatment focused on individual needs for each patient. Patients in this CHF program have clinic visits to physicians specializing in heart failure. The intervention protocol calls for visits within two weeks on the initial hospitalization, once a month later, and then monthly or quarterly as needed by the patient. Patients receive education pertaining to medication, dietary issues, and exercise programs. Patients' symptoms, weight, medications, serum electrolytes, and renal function are intensively monitored to ensure correct treatment. Each patient receives report cards to track their progress. At the time of our site visit, about 30 patients were enrolled, three-quarters of whom were Medicare beneficiaries. Although this is a small program, the knowledge gained from the CHF disease management program is transferred to the UMHS CHF clinic, which manages about 1,200 CHF patients. Nearly 50 percent of these CHF clinic patients are Medicare beneficiaries. Plans are actively in place to apply some of the more intensive disease management interventions to this large CHF clinic population, based on severity of CHF. The CHF clinic already offers a Heart Failure Telephone Management Program that helps patients with self-management, and communicates with primary care physicians and home care as needed.

4.6 Asthma Disease Management Program

Adult patients with persistent asthma, who have no underlying pulmonary disease, are not pregnant, and are not being seen by another disease care program are eligible for UMHS's asthma disease management program. Asthma inpatients enrolled in the program get individualized education from an asthma educator from the respiratory therapy department and outpatients receive an educational intervention and telephone follow up. UMHS educates patients to self-manage aspects of their disease such as the use of inhalers. All patients receive an assessment by a pulmonary physician. Patients with the help of staff members develop individualized care management plans that are reviewed and adjusted as the patient's needs change. Monitoring of patients is conducting through a 1-year post-intervention. Very few Medicare patients are part of this program.

4.7 Coronary Artery Disease Management Program

UMHS's coronary artery disease management program is a 12-week program to provide care management as well as behavioral and lifestyle changes to patients who have received a recent discharge diagnosis of acute myocardial infarction, unstable angina or percutaneous coronary intervention, or have multiple risk factors for coronary artery disease (CAD). Patients receive exhaustive cardiovascular and psychosocial assessments and must also complete several questionnaires regarding their disease. Patients are educated regarding CAD risk factors, stress management, nutrition, and exercise and are expected to keep an angina diary and food journal. Physicians use these evaluations to review each patient and develop treatment plans. Clinical visits to review progress take place either bi-weekly or monthly until patient completion of the

program. This is a very intensive program with only 43 Medicare patients receiving these services in the last year.

4.8 Depression Disease Management Program

The depression disease management program at UMHS monitors and creates treatment plans for patients who have been diagnosed with a primary mood disorder. This includes both patients with on-going cases and those who are only suffering from an acute episode. An emphasis is placed on care continuity especially for patients with co-morbid conditions, histories of psychiatric admission, treatment resistance, and suicide risk. After evaluation of a patient's case the patient is given an appropriate treatment plan. This treatment plan includes visits to therapists and physicians as needed, a review of self-management techniques, family interventions if needed, and patient education. Patients are monitored to ensure medications are working properly and periodic assessments take place. This assists in re-evaluating patients if changes to the treatment plan are needed. At the time of our visit, about 2,000 patients were enrolled, about half of whom were Medicare beneficiaries.

4.6 Primary Stroke Center

UMHS Primary Stroke Center was created to provide stroke care and services to patients who have experienced a stroke and require rapid acute care for clinical treatment. This program brings together experts from the departments of neurology, radiology, emergency medicine, nursing, and other critical service areas. Patients are given acute care hospitalization and treatment for stabilization of vital functions, initial diagnostics, and use of medication. All patients are assured of receiving necessary laboratory services in a timely fashion. Tracking of patients and treatment is conducted to assure patients progress in recovery. Stroke patients also receive education regarding any adjustments they will have to make in the short and long term.

SECTION 5
PROVIDER PARTICIPATION AND RELATIONS

5.1 Provider Education

At UMHS there is a general knowledge of the PGP demonstration. The departments that see more Medicare beneficiaries—such as geriatrics, heart failure, and palliative care—are most aware of the demonstration. Physicians and staff have been made aware of the goals and financial incentives of the demonstration through meetings, e-mails, postings in care facilities, and special projects/focused communications. Communication between providers is a key design component to ensure physicians and staff members are aware of the goals of the demonstration. This is because most of UMHS's strategy centers on transitional care. By focusing on transitional care different departments at UMHS have found a common ground where they must work together. For example, geriatricians have improved care coordination with post-acute care providers.

5.2 Provider Performance Support and Feedback

UMHS strives to keep physicians aware of the quality of care their patients receive. This is accomplished through meetings, letters, e-mails, and other reports. The staff has developed a daily admissions report, allowing CMS demonstration care coordinators, utilization review personnel, and physicians in leadership positions to target patients with readmissions in an attempt to improve the efficiency of their care. So-called "dashboards" have been constructed for some conditions and can be displayed in the acute care setting when physicians access the medical record electronically. When available, these dashboards give physicians information on inpatient drug use, length of stay, transfusions, etc. These dashboards are only available to selected physicians on certain acute care services. Physicians in leadership positions receive monthly e-mails detailing which patients had admissions and what services they used. A web-based electronic medical record, CareWeb, developed at UMHS, can display diagnoses, medications and all UMHS physicians who have seen the patient to UMHS physicians as long as the patient has been seen in the UMHS system. UMHS believes these tools increase communication between physicians and staff and this helps mobilize all of UMHS around a common goal. On some services, UMHS monitors physicians who are "outliers" in terms of utilization and attempts to bring their patterns into UMHS norms.

5.3 Provider Compensation and Incentives

At UMFGP, considerable variation exists in how physicians are compensated. Some physicians are mostly salaried and are given the opportunity to receive small financial incentives. Other physicians' compensation is mostly based on relative-value-unit (RVU) productivity. The percentage of a physician's compensation that is at risk for RVU productivity varies. UMFGP is attempting to develop quality reports on an individual physician level to use in performance reviews. While there will be some weight attached to quality performance, the greatest emphasis is placed on RVU productivity.

There are no financial incentives for providers tied to the PGP demonstration. UMHS believes that potential demonstration bonuses divided among physicians would be too small to be meaningful. Also, it is the entire system (team) that improves care, not just the individual

doctor. UMHS feels it is unfair and against their philosophy to give bonuses to specific physicians. Rather, UMHS will plow bonuses back into improving the system (e.g., improved care coordination systems). With regard to the demonstration quality indicators, their sample size at the individual physician level is too small, and attaching a financial incentive would not be appropriate (too much random variation in the measures for individual physicians). Also, financial rewards would give physicians an incentive to avoid patients who are not very treatment compliant, in very poor health, or would otherwise detract from measured performance on the quality indicators. Finally, physician salary determination must be in accordance with Michigan law provisions related to private inurnment applicable to not-for-profit corporations. UMFGP believed that paying physicians bonuses tied directly to any PGP demonstration bonuses could jeopardize their tax exempt not-for-profit status.

SECTION 6
DEMONSTRATION QUALITY INDICATORS

6.1 Appropriateness

UMHS feels that many of the quality indicators used in the PGP demonstration have not been validated for use in a Medicare population. UMHS feels that the quality measures used in the demonstration have not been sufficiently tested (if at all) in a geriatric population and many do not apply to the frail elderly. UMHS thinks the quality indicators should have been tested for validity on these populations before the implementation of the demonstration and that only measures that have been tested and validated for a Medicare population should be used in the PGP demonstration. For example, assessing for risk of falls or dementia may be more important in a frail elderly population than some of the measures that are used. Patient safety and efficiency of care indicators could be added to the demonstration list, as could some inpatient measures. Outcome measures are problematic because risk adjustment is imperfect and UMHS attracts a sicker population. For example, UMHS has a heart transplant program and attracts a sicker CHF population that needs to be hospitalized.

The patient sample size of the quality measures is also an issue for UMHS. They believe that it is too small to detect real improvements in quality of care. Therefore, the demonstration quality improvement target, while conceptually appropriate, may be achieved due to random statistical variation in the measures. Also, the indicators measure whether a service was provided, but do not measure whether a provider recommended a service, that is, they do not account for beneficiary non-compliance.

Many UMHS physicians focus primarily on specialty care, and therefore UMHS considers many of the quality measures to be inappropriate for the care many of its physicians provide and can reasonably be held responsible for. Many of the quality measures should be addressed by primary care physicians and many UMHS patients see non-UMHS primary care physicians. It can be difficult to obtain the results of quality measure tests from other providers, and it can also be difficult to encourage those physicians (who are the physicians most appropriate to administer the associated tests, etc.) to provide those services.

6.2 Improvement Strategy

UMHS's strategy for improving the quality indicators revolves around documenting quality of care and informing primary care physicians of the care their patients have received. Quarterly feedback reports are given to primary care physicians (general internal medicine, family medicine, geriatrics) detailing care for their individual diabetes patients (on an all payer basis). Soon UMHS will send relevant quality indicators to endocrinologists (diabetes) and cardiologists (HF and CAD). Physicians and staff involved with the CMS project quality measurement meet monthly to discuss quality of care for diabetes, CAD, CHF, and other patients. UMHS provides physicians with a point of care "Actionable Clinical Report" for diabetics at 3 health sites (soon to be expanded). These reports detail diabetes quality related test results, appointments, medications. Patients at these three sites receive automated letters to ensure that they know of any test that they require, and what self-management and follow-up is needed. The UMHS leadership has been instrumental in funding these programs and receives

regular leadership level reports. Improving quality is very costly as case managers, nurse managers, care assistants, and programmer/analysts have all been employed in this effort.

In 2003, before the implementation of the PGP demonstration, UMHS initiated improvements in the care of diabetes. UMHS is continuing to focus on diabetes in the first demonstration performance year because of the previous efforts in this area and because diabetes is the focus on the first year demonstration quality indicators. UMHS engaged in work on CHF, CAD and asthma as part of the Blue Cross/Blue Shield of Michigan (BCBSM) Physician Group Incentive Program (PGIP) which began January 1, 2005. The BCBSM PGIP quality program is complementary to the PGP demonstration project and encourages all payer registries for diabetes, CHF, CAD and asthma, and measurement and improvement of clinical performance indicators for these conditions. The development of all payer registries for all these conditions has been proceeding. Diabetes is the most advanced due to the time it has been worked on.

6.3 Collection and Reporting

The costliness of collecting the quality indicator data is very high for UMHS. For assessing and reporting on quality there are four analysts and two programmers (this, of course, is for patients of all payers) and 0.5 FTE faculty time. UMHS believes some measures are burdensome because they must be collected at every visit. For example, weight and blood pressure must be collected at every visit for heart failure patients. UMHS feels this measurement frequency is unnecessary.

To reduce the costliness of collecting these measures, UMHS collects many measures through electronic means. However, even with electronic capture of several measures the collection process has been very time consuming Another challenge for UMHS is obtaining information from other providers on whether tests indicated by demonstration quality measures were performed on UMHS-assigned beneficiaries. For example, 15 percent of the sample of diabetics assigned for abstraction were not seen at UMHS for diabetes care, and an additional 10 percent had no record of diabetes. The fact that there are inconsistencies in the definitions of quality indicators across payers increases burden.

SECTION 7
INFORMATION TECHNOLOGY

7.1 Strategy

Information technology (IT) is seen as a key strategic area at UMHS. A mixture of in-house IT systems and contracted vendors are used in UMHS's IT strategy. UMHS uses IT systems to track both inpatients and outpatients in an attempt to reduce admissions and readmissions and to support the development of provider based disease management programs to help ensure efficient transitional care processes. At UMHS, IT improvements have facilitated enhancements in the coordination of care across the entire system by linking different departments. UMHS's IT budget is approximately $35 million per year, representing about 3 percent of the system's overall budget.

IUMHS did not create any *major* information technology initiatives specifically in response to participation in the PGP demonstration; rather, existing systems have been adapted and expanded. UMHS has used IT systems to support the goals of the demonstration by targeting efficiency and quality improvements to beneficiaries present in disease registries and other IT systems, and by using them to better understand the Medicare fee for service population. A new daily readmissions report was developed for the demonstration.

7.2 Systems and Initiatives

IT systems at UMHS attempt to make clinical data available for physicians at all necessary times including the initial point of care. UMHS created CareWeb, a front-end view for physicians to access clinical data on their patients. This allows physicians to have up to date information about patients. In addition, UMHS has created disease registries for diabetes, CHF, and CAD to help support the disease management programs, and registries for asthma and depression are being developed. UMHS informs its CMS project staff, utilization staff and some leadership physicians of readmission via a daily readmission report and a monthly e-mail, which notifies them of patient readmissions and aggregate services. UMHS is "most of the way" toward implementing an electronic medical record. These initiatives have helped to make about 60 percent of UMHS's clinics paper-free. UMHS does not yet have computerized physician order entry, the major hole in their partially-implemented electronic medical record system; this is planned to be implemented in late 2006 for the hospitals but not the out-patient clinics.

By incorporating these tools, UMHS feels staff can analyze patients and modify their treatment as necessary. For example, UMHS can use their IT systems to detect outliers and try to bring them back into line with other patients. UMHS hopes that these initiatives will enhance the coordination of care at UMHS, reduce readmissions, and ensure quality transitional care for many patients.

UMHS has used their IT capability to analyze data for the PGP demonstration. UMHS hired a data analyst from their HMO (M-CARE) to analyze data for the demonstration and try to understand the Medicare population. By incorporating their in-house data with RTI-supplied data, UMHS hopes to find new opportunities to make

positive quality of care changes. As noted in Section 6, several quality indicators for the demonstration project have been collected and reported through UMHS's IT initiatives.

7.3 Challenges

UMHS faces numerous challenges in implementing IT interventions. The large size of UMHS creates obstacles of coordination and integration. It is a challenge to ask every department to change their processes to create a universal system throughout the entire health system. Busy physicians are also worried that potential problems or glitches in the IT systems could reduce their productivity. Also, UMHS struggles to integrate care with other providers. For example, many patients do not use UMHS for primary care and it can be difficult to obtain all of their information. Finally, UMHS faces challenges with IT vendors—many vendors are not able to supply UMHS with the exact system they need, and several vendors' IT systems cannot handle the large size of UMHS's databases.

APPENDIX A
AGENDA FOR UNIVERSITY OF MICHIGAN FACULTY GROUP PRACTICE SITE VISIT

Site Visit Agenda for University of Michigan Faculty Group Practice
PGP Demonstration Evaluation by RTI

February 7, 2006

9:00–9:30 a.m.	Evaluation and Site Visit Background
9:30–10:30 a.m.	PGP Demonstration Participation and Strategy
10:45–11:45 a.m.	Patient Care Interventions .
11:45 a.m.–1:00 p.m.	Lunch
1:00–2:00 p.m.	Provider Participation and Relations
2:00–3:00 p.m.	Quality Improvement and Measurement
3:15–4:15 p.m.	Information Technology
4:15–4:45 p.m.	End of Day Wrap-up