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Billings Clinic Physician Group Practice Demonstration

Site Visit Final Report

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*RTI International is a trade name of Research Triangle Institute.

CONTENTS

List of Figures

List of Tables

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 ten 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 Billings Clinic.

Billings Clinic is a not-for profit health care institution that is community owned and governed. It consists of a multi-specialty group practice of about 200 physicians and 50 physician assistants/nurse practitioners offering 29 major specialties. Billings Clinic has clinics in three locations in Billings, Montana and throughout the region in Colstrip, Columbus, Forsyth, Miles City, Bozeman, and Red Lodge, Montana and Cody, Wyoming. The clinic also consists of a 272-bed hospital that provides inpatient and outpatient care serving patients in a three-state region, and has regional affiliate hospitals in seven communities.

Demonstration Participation and Strategy. Billings Clinic believes that participating in the PGP demonstration is the right thing to do for its patients. It provides the clinic with an opportunity to influence, have a major impact on, and become a national leader in clinical quality, patient safety, and service. In addition, participation in the demonstration will help the clinic reach its goal of being recognized as the best in the nation in clinical quality, patient safety, and service by 2010. Billings Clinic believes that participation in the demonstration will provide the stimulus needed to implement practice and process changes for the improvement of patient quality of care.

To achieve cost savings under the demonstration, Billings Clinic is focusing on reducing Medicare expenditures through the avoidance of inpatient admissions and emergency management of chronically ill Medicare fee-for-service patients through the use of information technology, coordination of medical care, and development and dissemination of system-wide disease management protocols and practices.

One of the major challenges with implementation at Billings Clinic was thought to be the distance between Billings Clinic and its satellite clinics. It is challenging to implement all patient care interventions across all practices due to the distance and barriers in communication.

Patient Care Interventions. Billings Clinic expects that improved efficiencies and cost savings generated through their PGP demonstration patient care interventions will primarily be the direct result of improved quality of care. At demonstration baseline, Billings Clinic had limited disease management programs for diabetes, heart failure, pulmonary disease, and coronary artery disease. Case management existed for medication assistance, anti-coagulation

programs and cancer treatment. Billings Clinic also offered a senior assessment and frail elderly clinic, patient education programs, and end of life/palliative care programs. Several of these programs have been expanded as a result of participation in the PGP demonstration.

The heart failure (HF) disease management program represents the largest investment by Billing Clinic for the PGP demonstration. Billings Clinic has expanded their HF services under the PGP demonstration. They have increased their staff for the HF program from two to six full-time equivalent staff, and have also increased non-labor resources (e.g., office space) devoted to the HF program. In addition, the clinic has implemented a new interactive voice recognition (IVR) system, the *Tel-Assurance*™, program, developed by Pharos Innovations. As of September 2005, the number of Medicare enrollees in the HF program was 279, which accounted for about 85 percent of the total enrollees in the program. Included in the 329 total enrollees were 90 Medicare patients out of the 106 total enrolled in the HF program telephonic care management program (Tel-Assurance) initiated in July 2005. Over the course of the 3-year demonstration, Billings Clinic estimates the HF program will generate $4.7 million in savings to Medicare.

Provider Participation and Relations. The following forums and methods are being used in aggregate to create an ongoing mechanism of education to all staff within Billings Clinic related to the PGP demonstration and associated programs: (1) Quarterly staff forums conducted by the CEO, (2) Weekly staff publication called the Corridor, (3) Presentations to the Board of Directors, Operating Council, Practice and Quality Council, Billings Clinic leadership, Department Chairs, etc., (4) Monthly physician/leadership publication—Administrative Update, (5) Communications for staff meetings, partnership councils, and clinical practice councils, (6) Organizational offerings by physician and administrative leadership regarding new program developments and quality opportunities, (7) Intranet E-mail, and (8) Friday physician lunch and learn (weekly lecture series).

Billings Clinic is looking to demonstrate a significant reduction in Medicare expenditures through its patient care interventions. It is likely that any bonus payments resulting from these quality improvements will be allocated to the support of additional disease management protocols and infrastructure in support of ongoing initiatives for improvement. The clinic does not currently engage in any physician or provider incentive arrangements within the context of the project, but is investigating some modest proposals for primary care providers in supporting quality measures. Physicians will not know which patients are participating in the PGP demonstration project. Billings Clinic's goal is to provide the right care for every patient—the first time and every time.

Demonstration Quality Indicators. Billings Clinic thought that the quality measures being used in the demonstration are appropriate and are nationally recognized, proven in the literature and evidence based. They mentioned that the HbA1c and the blood pressure measurements are not as informative since they do not reflect current treatment guidelines. The clinic thought that the number of quality measures being used in the demonstration, 32, was about right. Billings Clinic also found that the quality measure targets were fair. They did think however that the quality improvement targets were somewhat lax for the second and third performance years, and had a preference for the improvement target being a 10 percent improvement on the previous year's quality measure results rather than on the base year's.

Billings Clinic thought that their care coordination programs provide synergies with quality measures. They believe that the key to success in improving quality measures is in enrolling more patients to their care and disease management programs.

Information Technology. Participation in the PGP demonstration required a reallocation of resources allotted to the IT department. There was a need for a nurse informaticist, a pharmacy informaticist as well as laboratory and radiology employee support systems. Additionally, as a part of the PGP demonstration, the IT staff was responsible for developing the diabetes disease module template and for developing forms to capture information and data for reporting purposes. IT was also responsible for generating reports to patients and physicians. Online documentation, forms development, templates for physicians and the second phase of Cerner implementation were all delayed to work on the PGP 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 is conducting site visits at each of the 10 participating PGPs 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. 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 at the end of 2006. This report is for Billings Clinic.

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 Billings Clinic site visit took place on January 18 at Billings Clinic offices in Billings, Montana. 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 Billings Clinics' 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 Billings Clinic 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 extend 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. Billings Clinic participants included its Chief Executive Officer, Chief of Staff, Chief of Clinical Operations, Director of Quality Resources, Medical Director of Center on Aging, Chief Financial Officer, Vice President, Chief Nursing Officer, data analysts, disease and case management staff, and clinical and quality assurance personnel. John Kautter and Lori Kaler of RTI conducted the interviews according to a pre-defined, semi-structured interview protocol. John Pilotte of CMS also participated in the interviews.

In addition to the interviews, this report draws on written materials provided by Billings Clinic during or after the site visit, or as part of the demonstration project. These materials include Billing Clinic's demonstration implementation protocol and its demonstration baseline and quarterly reports. During and after the interview, Billings Clinic provided RTI with written information on its organizational structure and quality improvement and patient care initiatives. Also, Billings Clinic's web site was consulted for background information. Finally, we drew some information on Billings Clinic'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. For example, the reported number of physicians employed by Billings Clinic might differ slightly among the Billings Clinic web site, demonstration reports, and RTI's site visit interview notes. 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 Billings Clinic or published sources (e.g., Billings Clinic'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 thought it was important to cite some specific numbers to adequately characterize Billings Clinic and its demonstration participation. We submitted this report to Billings Clinic staff for their review of its factual accuracy.

1.3 Overview of the Report

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

Billings Clinic was formed in 1993 by the integration of a multi-specialty group practice partnership (Billings Clinic) and a community hospital (Deaconess Hospital). Billings Clinic is a not-for profit health care institution that is community owned and governed. It consists of a multi-specialty group practice of about 200 physicians and 50 physician assistants/nurse practitioners offering 29 major specialties. Billings Clinic has clinics in three locations in Billings, Montana and throughout the region in Colstrip, Columbus, Forsyth, Miles City, Bozeman, and Red Lodge, Montana and Cody, Wyoming. The clinic also consists of a 272-bed level II trauma tertiary hospital that provides inpatient and outpatient care serving patients in a three-state region and has regional affiliate hospitals in seven communities.

Billings Clinic has developed a comprehensive organizational structure that features sufficient human resources and appropriate leadership at all levels. A thirteen-member volunteer Board of Directors from the community is accountable and responsible for the organization's financial viability, patient safety and quality of service. This authority is delegated to the CEO, Operating Council, medical staff and administrative leaders. The Operating Council is the body in which all major decisions—financial, strategic, clinical and operating—are considered prior to final decisions by the Chief Executive Officer.

Billings Clinic has a research division that was founded in the 1990s and moved to a new research center in 2002. The Billings Clinic Research Center allows for the newest medical research to be used by Billing's area patients and their physicians. The center's medical research focus is both clinical- and laboratory-based.

2.2 Environment

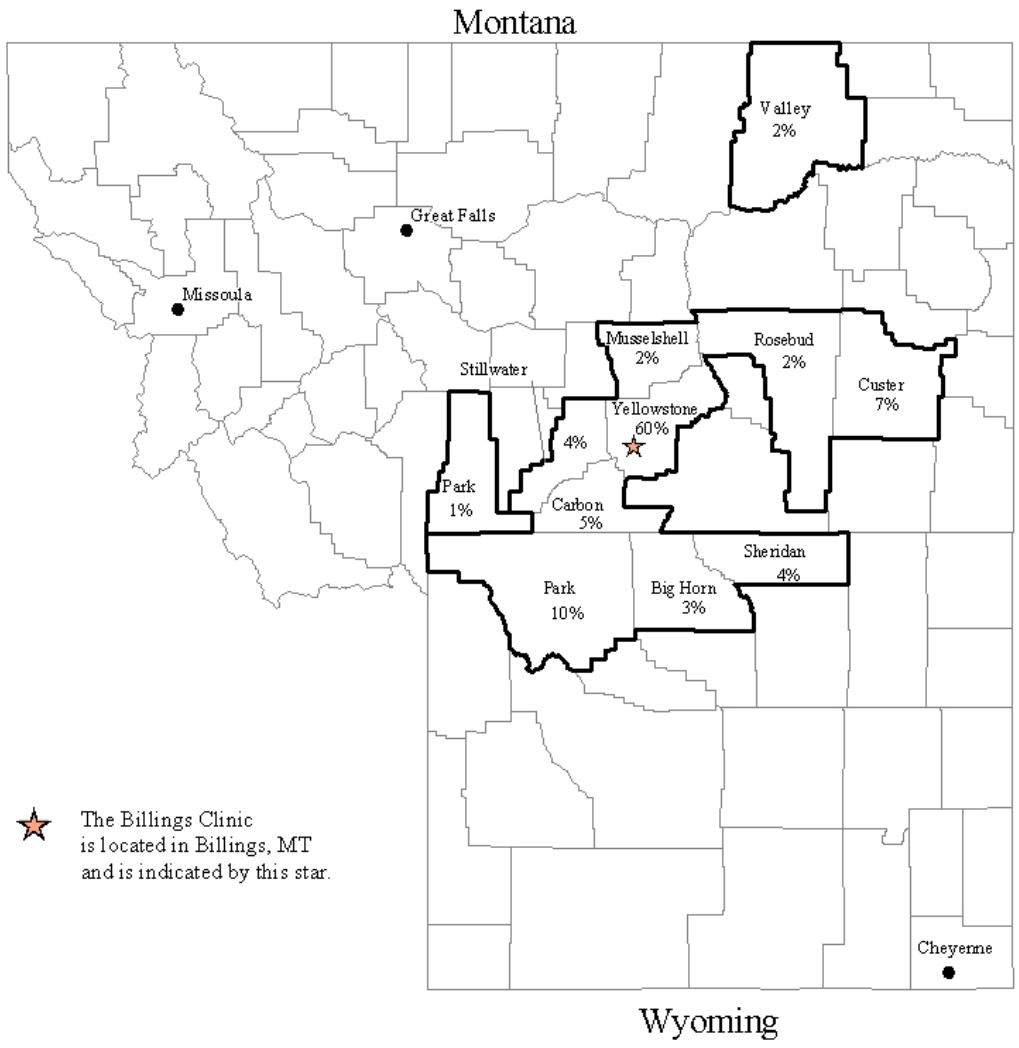
2.2.1 Service Area

Billings Clinic serves the people of central and eastern Montana, northern Wyoming and the western Dakotas. In addition to its location in Billings, the clinic serves multiple communities in the service region through outreach clinics. It also operates satellite dialysis units in Montana and Wyoming.

Figure 1 shows the Billings Clinic Medicare service area for 2004 based on patient residence data. Counties where at least one percent of Medicare FFS beneficiaries assigned[1] to Billings Clinic reside are included in this service area map.

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

Figure 1
Billings Clinic 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 Billings Clinic's assigned Medicare patients available from Medicare administrative files. Billings Clinic provided an office or other outpatient evaluation and management visit to 21,079 Medicare patients. Of these, 14,347, or 68 percent received the plurality of their evaluation and management services from Billings Clinic and so were assigned to Billings Clinic for the PGP demonstration. Assigned beneficiaries received 5.21 evaluation and management visits on average from all providers, with 87 percent of the associated Medicare allowed charges provided by Billings Clinic on average. The mean annualized Medicare per capita expenditures for Billings Clinic's assigned beneficiaries was $6,641 in 2004.

Eighty seven percent of Billings Clinic's assigned Medicare patients are eligible for Medicare by age, 13 percent by disability (under age 65) and less than one percent by end stage renal disease (ESRD). Ten percent had at least one month of Medicaid eligibility in 2004. Ninety-eight percent were white.

2.2.3 Payers

In fiscal year 2005 Billings Clinic's gross revenue was $573 million dollars ($327 million net revenue). The payer mix included Medicare, which comprised 38.8 percent of Billing Clinic's gross revenues, Medicaid (6.5 percent), Blue Cross (16.1 percent), Commercial Insurance (22.1 percent), HMO (4.4 percent), Other Government (4.6 percent), Charity (2.3 percent), and Self-Pay (5.2 percent). Up to 50 percent of the clinic's inpatient revenues are from Medicare. The clinic describes their in-patient payer mix as 50 percent Medicare, 20 percent uninsured, 18 percent private insurers and 12 percent medical assistance. The clinic's payers' reimbursement methods are primarily Fee-for-Service with no incentive or performance payments and no risk sharing.

2.2.4 Competitors

Billings Clinic is the region's largest multi-specialty group practice. There is one major competitor in the area, St. Vincent Healthcare. St. Vincent Healthcare is one of Montana's largest comprehensive hospitals and serves over 400,000 people in a four state area.

2.3 Major Strategic Initiatives

In 2000, the Billings Clinic CEO outlined a strategic plan that was since adopted by the Board of Directors. The plan places quality as the number one strategic goal for Billings Clinic. Billings Clinic's goal is to be recognized as the best in the nation for clinical quality, patient safety and service by the year 2010. Billings Clinic's strategic goals are to provide outstanding quality, service excellence, develop improved information systems and to help to strengthen their physicians.

Billings Clinic focuses its quality efforts around national priorities. Guidelines provided from CMS (Medicare) and the Joint Commission on Hospital Accreditation (JCAHO) form the backbone of the clinic's quality strategy. Treatment of acute myocardial infarction, heart failure,

Table 1
Selected characteristics of Medicare patients, Billings Clinic, 2004

	No. of Beneficiaries	Percentage or Amount
Medicare Patients		
Total[1]	21,079	100%
Assigned Beneficiaries[2]	14,347	68.1%
Characteristics of Assigned Beneficiaries		
Average Number of Evaluation and Management Visits[3]	14,347	5.21
Average Percentage of Evaluation and Management Care provided by Billings Clinic[4]	14,347	87%
Per Capita Annualized Medicare Expenditures[5,6]	14,347	$6,641
Distribution of Assigned Beneficiaries		
Total	**14,347**	**100%**
Medicare Eligibility		
Aged	12,424	86.6
ESRD	94	0.7
Disabled	1,829	12.7
Medicaid Eligibility		
Not Medicaid Eligible for any months in 2004	12,917	90.0
Medicaid Eligible at least 1 month in 2004	1,430	10.0
Age		
Age < 65	1,910	13.3
Age 65 – 74	6,082	42.4
Age 75 – 84	4,787	33.4
Age 85 +	1,568	10.9
Race		
White	14,021	97.7
Black	20	0.1
Unknown	15	0.1
Asian	24	0.2
Hispanic	55	0.4
North American Natives	161	1.1
Other	51	0.4

NOTES:

[1] Beneficiaries provided at least one office or other outpatient evaluation and management visit by Billings Clinic.

[2] Beneficiaries who received the plurality of their office or other outpatient evaluation and management allowed charges at Billings Clinic.

[3] Percentage of all office and other outpatient evaluation and management Medicare allowed charges provided to the beneficiary that were provided by Billings Clinic.

[4] Office or other outpatient evaluation and management visits.

[5] Annualized Medicare expenditures per beneficiary are calculated by dividing actual expenditures by the fraction of the year the beneficiary is alive and eligible for Medicare (eligibility fraction), and are capped at $100,000.

[6] Weighted by the eligibility fraction.

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

and community-acquired pneumonia are in the top 10 percent of hospitals nationwide that report their data to CMS. In addition to these measures, the clinic is also at benchmark nationwide for providing vaccination to its patients to prevent influenza and pneumonia.

There are multiple other quality initiatives ongoing at Billings Clinic including the VHA collaboratives: *Stroke Sense*, *Women's Heart Advantage*, *Transformation of Care in the Intensive Care Unit*, and *Target: Diabetes*. Billings Clinic is also a Joint Commission Primary Stroke Certification site. Patient safety has also become both a national focus as well as a major initiative at Billings Clinic. JCAHO and the National Quality Forum have developed national guidelines around patient safety. In Billings Clinic's last JCAHO survey, they achieved 100 percent on the JCAHO patient safety indicators. The clinic has recently begun a hospital-wide initiative to take patient safety to the highest level possible including "time outs" before surgical procedures, steps to ensure correct site surgery, and reduction of medication errors to name a few. The clinic's new electronic medical record will further improve patient safety by checking for drug interactions, using "order sets" based on "best practices."

SECTION 3
DEMONSTRATION PARTICIPATION AND STRATEGY

3.1 Reasons for Participating

Billings Clinic believes that participating in the PGP demonstration is the right thing to do for its patients. The demonstration provides the clinic with an opportunity to influence, have a major impact on, and become a national leader in clinical quality, patient safety and service. In addition, participation in the demonstration will help the clinic reach its goal of being recognized as the best in the nation in clinical quality, patient safety, and service by 2010. Billings Clinic believes that participation in the demonstration will provide the stimulus needed to implement practice and process changes for the improvement of patient quality of care.

The demonstration also affords Billings Clinic the opportunity to learn from the experiences of other demonstration participants, particularly when it comes to population management. Billings Clinic currently has limited experience with managed care populations. Finally, the demonstration allows them to be pro-active about a movement towards pay-for-performance reimbursement methods. Billings Clinic believes that it is important to align incentives in FFS towards provision of chronic disease management and that the demonstration pays for investment in care coordination that Medicare FFS currently discourages.

Although Billings Clinic thinks that the advantages of participation in the demonstration significantly outweigh the disadvantages, they do believe there are disadvantages to their participation, including: (1) lack of upfront investment and the resulting need for changing resource allocation, (2) costs associated with data development and extraction and (3) the risk of lost revenue from decreased inpatient hospital admissions.

3.2 Demonstration Strategy

To achieve cost savings under the demonstration, Billings Clinic is focusing on reducing Medicare expenditures through the avoidance of inpatient admissions and emergency management of chronically ill Medicare fee-for-service patients. This will be done through the use of information technology, coordination of medical care, and development and dissemination of system-wide disease management protocols and practices focusing on patients with metabolic diseases (diabetes, hypertension), cardiology conditions (heart failure, coronary artery disease), preventive care (colorectal and breast cancer screenings, immunizations), and needless admissions (5 Wishes, nursing home, psychiatry, medical reconciliation).

Practice efficiency is being enhanced through a computerized physician order entry system that complements existing electronic medical record systems and integrates laboratory, pharmacy and clinical information, to reduce the number of adverse drug events in both inpatient and ambulatory settings. The electronic medical record (EMR) is an integrated system that allows access to inpatient, outpatient, and office records. The EMR allows real time alerts to potential risks, medical errors, drug-drug interactions, protocol variances, aggregated disease management findings, and current status of preventive screenings. The ability to query the records retrospectively provides critical information to identify, measure, and evaluate improvement action plans throughout the demonstration project.

Billings Clinic has decided not to stratify patients into case management or disease management programs based on risk. They believed that additional sophistication and experience would be required for this form of case management. Additionally they found that the 3-year demonstration duration was too short to implement a risk assessment process. Billings Clinic proposed that the return on investment for risk assessment would come 5-10 years down the road. Billings Clinic's strategy is to focus on large populations of heart failure and diabetes patients. Concentrating on the entire population is likely to generate greater cost savings than concentrating only on 5-10 percent of the high acuity patients.

3.3 Relationship to Group Practice Strategy

Billings Clinic summarizes their general strategies and goals as: (1) Outstanding Quality; (2) Personal Service Excellence; (3) Innovation; (4) Operational Improvement; (5) Physician Leadership; (6) Organizational Culture; (7) Information Systems Solutions; (8) Our People; (9) Financial Strength and Community Stewardship; and, (10) Net Revenue Growth. The clinic believes that the PGP demonstration is synergistic with meetings its general goals.

Billings Clinic is targeting its patient care interventions under the demonstration to all patients, regardless of payer, because it is the right thing to do. However, the clinic believes that standardizing their approach of providing care to patients with specific chronic diseases is of critical importance, and that the demonstration is a catalyst in achieving this goal.

Billings Clinic desires to be a leader in quality of care initiatives and expects that the demonstration will allow them to gain further national recognition. They thought that the movement from 8 quality measures to 32 quality measures in the PGP demonstration supported their goal of delivering high quality care and that it was more in tune with their group strategy.

3.4 Leadership and Implementation Team

Billings Clinic strongly values their physician leadership structure. They believe that physician leadership in health care is particularly important to enhance quality of care, to emphasize a patient-centered approach to decision making and for employee retention and financial growth opportunities. Billings Clinic encourages physician champions to effectively implement new programs and strategies.

Promotion of the PGP demonstration initially came from the Board of Directors, the operation council and the senior leadership team. These groups produce quarterly reports that are distributed to the practice and quality committees within the system. The Medical Director works with individual teams to help fine tune modules for implementation. Billings Clinic values this decentralized structure, which allows for individual practice or committee teams to take ownership of their implementation strategy. Billings Clinic also has subgroup meetings on priority areas and numerous education forums for physician groups and other providers to learn about best practices.

3.5 Implementation and Operational Challenges

Billings Clinic expects decreased hospital revenues from the decreased number of Medicare admissions as a result of the demonstration. Approximately 50 percent of their

admissions are for Medicare beneficiaries. The clinic hopes these beds will be filled with other payer sources. Billings Clinic projects $9,000,000 in Medicare savings under the demonstration. However, they do not expect that bonus payments from these savings will be sufficient to cover their demonstration-related expenses.

Billings Clinic believes the demonstration is too short to see real effects in improved efficiency and cost savings. They believed that it will take longer than 3 years to really see the effect of the interventions implemented as part of the demonstration. This is particularly true of their diabetes patients.

One of the major challenges with implementation was thought to be the distance between Billings Clinic and its satellite clinics. It is challenging to implement all patient care interventions across all practices due to the distance and barriers in communication. For example, some information for the diabetes registry had to be entered by hand.

There are ongoing challenges with the clinic's electronic medical record system, its capabilities, and limited Information System staff to help develop additional clinical tools and quality performance reports. Another ongoing challenge is adequate resources needed to implement and sustain activities to support process enhancements and quality measures, including data extraction and input into Q-Net exchange system

In addition, given Billings Clinic is an integrated health care system, evaluating quality measures, readmissions, and financials considerations inclusive of their anticipated panel of beneficiaries is a challenge.

SECTION 4
PATIENT CARE INTERVENTIONS

Billings Clinic expects that improved efficiencies and cost savings generated through their PGP demonstration patient care interventions will primarily be the direct result of improved quality of care. At demonstration baseline, Billings Clinic had disease management programs for diabetes, heart failure, pulmonary disease, and coronary artery disease. Case management existed for medication assistance, anti-coagulation programs, and cancer treatment. Billings Clinic also offered a senior assessment and frail elderly clinic, patient education programs, and end of life/palliative care programs. Several of these programs have been expanded as a result of participation in the PGP demonstration. We describe these interventions below, highlighting patient care interventions that have been especially impacted by the clinic's participation in the PGP demonstration.

4.1 Heart Failure Program

The goal of the Billings Clinic heart failure (HF) disease management program is to help patients with HF maintain a rich and productive life. The program helps to create a system-wide approach to quality medical care for patients living with HF. The program objectives include the following: (1) improving patient quality of life and clinical outcomes, (2) maximizing use of preventive and maintenance services and (3) engaging providers and the community in education, prevention and treatment.

The heart failure (HF) disease management program represents the largest investment by Billing Clinic for the PGP demonstration. Billings Clinic has expanded their HF services under the PGP demonstration. They have increased their staff for the HF program from two to six full-time equivalent staff, and have also increased non-labor resources (e.g., office space) devoted to the HF program.

In addition, the clinic has implemented a new interactive voice recognition (IVR) system, the *Tel-Assurance*™, program, developed by Pharos Innovations. Pharos Innovations charges a "list price" of $50 PMPM. Through enrollment in the *Tel-Assurance*™ program, patients can learn about, be screened for, and better track their HF condition on a daily basis; this is done with the use of an IVR telecommunications platform. By delivering daily information back to the provider, physicians and care providers act proactively to intervene when their patient's HF condition begins to deteriorate. The new IVR system will allow the clinic to monitor additional HF patients at different disease stages, including patients at early disease stages. Billings Clinic expects the telephonic system to decrease "all cause" hospital admissions in patients with HF by 50-60 percent. The clinic's goal for the HF disease management program is to have 500 patients enrolled by April 2006 and eventually they would like to have 1,000 members. To increase enrollment, letters are sent to HF patients from their physicians, with telephone follow-up by Pharos Innovations staff.

Billings Clinic has also developed protocols or best practice models so that HF patients may receive the proper treatment of their symptoms at earlier stages of HF; this is important for the reduction of complications and hospitalizations. Billings Clinic expects to develop and implement a HF registry similar to the one currently available for diabetes patients.

As of September 2005, the number of Medicare enrollees in the HF program was 279, which accounted for about 85 percent of the total enrollees in the program. Included in the 329 total enrollees were 90 Medicare patients out of the 106 total enrolled in the HF program telephonic care management program (Tel-Assurance) initiated in July 2005. Over the course of the 3-year demonstration, Billings Clinic estimates the HF program will generate $4.7 million in savings to Medicare.

4.2 Diabetes Program

The Billings Clinic diabetes disease management program consists of a Diabetes Registry and Diabetes Module. The registry contains all pertinent information for a single patient or a group of patients and was developed for the demonstration. The registry is well-integrated with the daily operations of the clinic departments and allows providers to see what tests should be conducted for a patient. The data contained within the registry will be utilized in the near future to assist with scheduling and reminders particularly for non-compliant patients. All patients with a diabetes diagnosis are enrolled in the registry along with their diabetes care physician. The physician is provided with progress reports for his or her panel of patients. These reports pull current laboratory results, foot and eye exam dates, patient educational needs, as well as other pertinent diabetes information. The diabetes disease management program educates patients using a modular approach. Areas delivering diabetes care focus on one aspect of diabetes per quarter. For example, in July 2004, signage was posted and information was distributed regarding foot care. There are also educational sessions for providers to improve their understanding of best practices in diabetes care and to promote the diabetes registry and diabetes education programs.

Billings Clinic had initiated some diabetes patient interventions prior to the demonstration; however, participation in the demonstration has allowed them to increase resource allocation to this task. They have designated a Diabetes Center, increased Certified Diabetes RN's from two to three to service inpatient and outpatient populations, and added a Nurse Practitioner specifically to drive the diabetes program. In addition, they have recruited an Endocrinologist and Podiatrist to advance the Diabetes Center.

The diabetes disease management program services are available to all patients with a diagnosis of diabetes. As of September 2005, there were approximately 1,800 Medicare patients in the registry, which accounted for approximately 60 percent of the total enrollees. Information on the program's impact on efficiencies or cost savings is not yet available; however, Billings Clinic is encouraged by what they have seen and believes that it is a successful program. Over the course of the 3-year demonstration, Billings Clinic estimates that the Diabetes program will generate $3.4 million in savings to Medicare.

Billings Clinic hopes to develop a similar disease management module for heart failure and coronary artery disease patients to measure quality of care and optimize levels of treatment.

4.3 End of Life/Palliative Care Program

Billings Clinic believes that managing advanced illness and end-of-life events supports opportunities to align patient quality of care and organizational and consumer costs. According to the clinic, when physical or cognitive declines result in significant frailty, the efforts should be

made to minimize further loss and maximize function and independence. Also at this stage, it is important to have informed directives by patient or surrogate family members (i.e., advanced directives or a living will). Patients may wish to withhold or withdraw treatments or interventions because in the patient's own judgment the quality of his/her life as he/she values it is no longer worth preserving. When frail elderly patients perceive loss of quality of life, medical management generally shifts to one of maintaining dignity and comfort in recognition of patient's wishes. Developing on organized system-wide approach to the management of the frail elderly and End of Life care should improve quality of care for these individuals, minimize use of undesired or unnecessary health care resources, and avoid unnecessary hospital admissions/procedures.

The Palliative Care Inpatient Consult Team was initiated in February 2004 with the goal of relieving suffering and supporting the best quality of life for patients with advanced chronic and life-threatening illnesses. Under the PGP demonstration, Billings Clinic has developed an advanced directives education program, Five Wishes, to educate nursing home staff, the emergency room and patients and their families. Billings Clinic expects that this type of training/education for providers will be successful in expanding the use of outpatient services and decreasing admissions and the delivery of unwanted services to end of life patients. The anticipated growth potential the first year of the demonstration includes 150 new Palliative Care consults and *90* avoidable admissions. Over the course of the 3-year demonstration, Billings Clinic estimates that the End of Life/Palliative Care program will generate $628,874 in savings to Medicare.

4.4 Other Patient Care Interventions

Chronic Obstructive Pulmonary Disease Program. The objectives of the chronic obstructive pulmonary disease (COPD) disease management programs include the following: (1) avoiding a functional decline in COPD patients, (2) maximizing the use of preventive services including influenza and pneumococcal immunizations and (3) early detection and treatment of disease related complications to minimize morbidity, hospital admissions, and the need for emergency procedures.

The disease management program includes a Pulmonary Rehabilitation Program (PRP), which is provided on an outpatient level. The rehabilitation program includes both an acute rehabilitation and maintenance component. As of September 2005, the PRP was managing 190 patients, 56 percent of which are Medicare beneficiaries.

Senior Assessment and Frail Elderly Clinic. The Senior Assessment and Frail Elderly Clinic focuses on evaluating the unique problems and needs of older adults. The clinic consists of a multi-disciplinary team that conducts comprehensive evaluations of seniors and their situation to ensure proper diagnosis and treatment plans. The team includes a Board Certified Geriatrician, Internist, social worker, registered nurse, psychologist, and psychiatrist.

The clinic's functions are the following: (1) evaluate and assess cognitive and emotional health as well as functional capabilities, (2) develop a comprehensive plan of care to help maintain the highest possible level of physical and mental function, (3) collaborate with primary

care physician for improved coordination of care, (4) connect patients and their families to community support services and (5) provide help with caregiver issues.

Patients can be referred to the clinic by themselves, a primary care physician or a family member. The referrer contacts a social worker who assesses the appropriateness of the patient for enrollment. As of September 2005 the program's enrollment was 191 Medicare beneficiaries, which comprised 99 percent of the total enrollment.

Medication Assistance Program. The Medication Assistance Program (MAP) is a partnership between Billings Clinic, a neighboring hospital and several community organizations. The program assists individuals with limited incomes in obtaining necessary medications. Approximately 53 percent of the patients receiving assistance through MAP are Medicare beneficiaries. This program has shown a significant impact on avoiding hospitalizations.

Anticoagulation Clinic. The Anticoagulation Clinic is an outpatient program developed to monitor therapeutic ranges of International Normalized Ratios (INRs) for patients receiving anticoagulants. Additional services provided by the clinic include the following: cardiac rehabilitation, drug information classes, Lovenox administration education, warfarin education and anticoagulation consultations. The clinic is staffed by skilled registered pharmacists.

Patients are registered for the program through physician referral and appointments are made for blood draws resulting in immediate results so medication dosages can be adjusted during the visit. Billings Clinic has estimated a significant impact on avoidable admissions by 8 percent over the national average. As of September 2005, the Anticoagulation Clinic sustained 1,122 Medicare patients, which was 80 percent of the total enrollees.

Cancer Treatment Center. The Cancer Treatment Center at Billings Clinic began providing services in January, 2004. Services include an outpatient infusion center, comprehensive prevention, screening and education, treatment coordination, rapid intake and plan of care, supportive care, and complimentary services.

Outpatient treatment programs offered through the Cancer Treatment Center decreases a patients' risk for nosocomial infections or other potentially harmful exposures and has decreased the number and length of hospital stays for cancer patients. About 54 percent of the patients treated for cancer at Billings Clinic are Medicare age. The keys to success for this type of program include multi-disciplinary care with a common medical record, access to complimentary medicine and supportive care, better clinical research, quality focus with accurate tracking, and a multi-disciplinary approach by disease.

Community Screenings. Billings Clinic offers clinical education programs and assessment screenings to the general public but targeted at the Medicare population. The focus has been on cardiovascular risk, diabetes, cancer, neurology, orthopedics, senior health issues and health prevention.

Hospitalist Program. As part of the PGP demonstration project, Billings Clinic has initiated a hospitalist program. Three hospitalists have been hired to work with the two internists and one family practitioner that are assigned daily to provide inpatient care at the Billings Clinic

hospital. The goal of this program is to improve the care provided to inpatients and to improve communication and care coordination upon patient discharge. The hospitalists work on ten different quality measures involving patient safety and medication reconciliation. Currently, the patients that are cared for most frequently by the hospitalists include unassigned patients from the emergency room. These patients are most frequently Medicaid enrollees or they are uninsured. Billings Clinic is working on increasing the number of patients involved in the program through physician referrals.

Physician Assistant Staff at Nursing Homes. Billings Clinic has improved their physician assistant coverage for their nursing homes under the demonstration. They now have two physician assistants covering their nursing homes at all times. Physician assistants and other nursing home providers are improving communications with emergency department providers. Billings Clinic expects that this intervention will decrease hospital admissions as well as emergency department visits, which will result in improved efficiency and decreased costs for Medicare. Billings Clinic currently has about nine–ten admissions per month from nursing homes, 40–50 percent of which are thought to be avoidable. Additional physician assistant staff as well as the addition of one geriatrician was thought to be crucial in the coordination of care for nursing home patients.

SECTION 5
PROVIDER PARTICIPATION AND RELATIONS

5.1 Provider Education

The following forums and methods are being utilized in aggregate to create an ongoing mechanism of education to all staff within Billings Clinic related to the PGP demonstration and associated programs: (1) Quarterly staff forums conducted by the CEO; 2) Weekly staff publication called the Corridor; (3) Presentations to the Board of Directors, Operating Council, Practice and Quality Council, Billings Clinic leadership, Department Chairs, etc.; (4) Monthly physician/leadership publication—Administrative Update; (5) Communications for staff meetings, partnership councils, and clinical practice councils; (6) Organizational offerings by physician and administrative leadership regarding new program developments and quality opportunities; (7) Intranet E-mail; and (8) Friday physician lunch and learn (weekly lecture series).

5.2 Provider Performance Support and Feedback

For the Diabetes disease management program, Billings Clinic has developed a report within the framework of the electronic medical record for the healthcare provider to summarize the patient's response to their care. This is used at the time of the office visit by organizing data from all available sources. The report includes the most current lab values, blood pressure, physical exam and medications for that month. It shows 12 months worth of information to allow the care provider to see trends in the patient's response to care.

Report cards are being developed for providers showing their performance in terms of quality measures. The report cards also provide peer-to-peer comparisons of performance. Report cards provide an incentive for physicians to improve their performance by identifying where they are not meeting specific quality measures with their patients.

5.3 Provider Compensation and Incentives

The majority of the providers at Billings Clinic are compensated based on their clinical productivity, measured through relative value units (RVUs), and the market rate for physicians, measured by a specialty-specific market conversion factor. In addition to the productivity based compensation structure, physicians may receive a stipend for medical supervision or administrative services.

Financial incentives for the provision of quality care and service varies by physician specialty. FFS plans are not presently set up to reimburse and incentivize primary care providers for quality performance. Approximately 50 percent of Billings Clinic providers are primary care physicians. Compensation for hospitalists in the new hospitalist program as well as physician assistants in nursing homes is based on their quality results. In general Billings Clinic is moving towards compensation structures that include payments tied to quality of care, performance and participation.

Billings Clinic is looking to demonstrate a significant reduction in Medicare expenditures through its patient care interventions. It is likely that any bonus payments resulting from these

quality improvements will be allocated to the support of additional disease management protocols and infrastructure in support of ongoing initiatives for improvement. Billings Clinic does not currently engage in any physician or provider incentive arrangements within the context of the project, but is investigating some modest proposals for primary care providers in supporting quality measures. Physicians will not know which patients are participating in the PGP demonstration project. Billings Clinic's goal is to provide the right care for every patient, the first time and every time.

SECTION 6
DEMONSTRATION QUALITY INDICATORS

6.1 Appropriateness

Billings Clinic thought that the quality measures being used in the demonstration were appropriate and were nationally recognized, proven in the literature, and evidence based. They mentioned that the HbA1c and the blood pressure measurements may be less informative. The clinic thought that the number of quality measures being used in the demonstration, 32, was about right. Billings Clinic also found that the quality measure targets were fair. They did think however that the quality improvement targets were somewhat lax for the second and third performance years, and had a preference for the improvement target being a 10 percent improvement on the previous year's quality measure results rather than on the base year's.

Billings Clinic suggested additional quality measures that could have been included in the demonstration. These were mental health measures including depression screening and measures relating to osteoporosis, screening and treatment. They would also like to see specialty measures such as hospital based measures and end-stage renal disease measures.

Billings Clinic had a few concerns with the quality measures. One comment Billings Clinic made regarding the quality measures was that they thought there should be an ability to adjust the measures according to patient need and necessity. They thought that requiring tests for patients who may not medically require the measurement would result in physician resistance. For example, an extreme elderly patient with dementia should not be required to have urine protein testing if it was thought to be unnecessary by the clinician. Billings Clinic suggested that if valid reasons for not performing a test were documented, the patient should be removed from the denominator.

A second concern with the quality measures was related to the beneficiary assignment algorithm, which is based on plurality care. Billings Clinic mentioned that several of their patients, particularly those in outlying centers, may not have a primary care physician within the system. Thus, Billings Clinic would not have complete control over several quality measures. They have currently identified 16 Medicare beneficiaries in the initial 411 charts extracted for diabetes quality measures fit this type of scenario.

6.2 Improvement Strategy

Billings Clinic thought that their care coordination programs provide synergies with quality measures. They believe that the key to success in improving quality measures is in enrolling more patients to their care and disease management programs. They are working on developing heart failure and coronary artery disease quality measure modules.

Strategies to improve the quality performance of providers include changing the behavior of providers in terms of technology use (e.g., clinical information systems) and the implementation of an electronic medical record. Billings Clinic thought that participation in the PGP demonstration accelerates their mission to improve on the quality of patient care provided at the clinic.

6.3 Collection and Reporting

There have been several challenges with data extraction including the time involved in extracting data from paper records and the resources necessary to involve satellite clinics in the collection and reporting of quality data. Billings Clinic has involved approximately 18 staff members in quality measure collection and reporting. Two full-time equivalents were used for 2 to 3 months to extract the diabetes measures alone. The upcoming disease modules are expected to be equally as or even more resource intensive. As a result, IT is working on creating an integrated system to facilitate the extraction and distribution of quality measure related information.

SECTION 7
INFORMATION TECHNOLOGY

7.1 Strategy

The Department of Information Services at Billings Clinic provides information system and technology support to all departments of the integrated health care organization as well as affiliate organizations. Information Services balances a mixture of technically skilled personnel with personnel with strong clinical and financial expertise. The primary purpose of Information Services is to provide business solutions and technical expertise in system implementation. This goal is accomplished through many different and varying approaches, including workflow redesign to improve work processes, providing information management, consulting and educating regarding application use, and monitoring systems.

The information technology (IT) operating budget at Billings Clinic is $12 million annually. The hospital uses Siemens Medical Series for patient accounting and billing. The ambulatory clinic uses Mysis for scheduling and billing. Billings Clinic has also used Cerner, an external vendor of health care information technology systems. There is very little internal IT software development at Billings Clinic. The IT staff consists of 50 employees who generally modify the external systems to suit the Billings Clinic environment.

Participation in the PGP demonstration required a reallocation of resources allotted to the IT department. There was a need for a nurse informaticist, a pharmacy informaticist as well as laboratory and radiology employee support systems. Additionally, as a part of the PGP demonstration, the IT staff was responsible for developing the diabetes disease module template and for developing forms to capture information and data for reporting purposes. IT was also responsible for generating reports to patients and physicians. Online documentation, forms development, templates for physicians and the second phase of Cerner implementation were all delayed so staff could work on the PGP demonstration.

7.2 Systems and Initiatives

7.2.1 Data Warehouse

Billings Clinic has developed a data warehouse that integrates their three main systems for off-line reporting and decision support.

7.2.2 Clinical Information System

Clinical information systems (CIS) are computerized systems that organize, store and verify medical information. The system has safety features that reduce the chance of errors. When entering information, health care providers are required to enter accurate information to avoid any conflicts. The providers must also supply all of the information required of the diagnosis before being able to close out of the interface. CIS helps providers with improving patient care by ensuring access to complete patient medical histories, assisting with scheduling and the ordering of tests, facilitating access to test results, and allowing for online prescriptions that may be sent directly to the clinic pharmacy. Billings Clinic was implementing CIS prior to

the demonstration, but as discussed above, there was a reallocation of resources with the clinic to meet the goals of the demonstration.

7.2.3 Electronic Medical Record

Billings Clinic began the implementation of a new electronic medical record (EMR) in July 2004. Billings Clinic uses Power Chart, developed by Cerner. Billings Clinic believes that their EMR optimizes documentation. Paper documents, including advanced directives are scanned into the medical chart and diagnosis codes are recorded on problem lists.

Billings Clinic has undergone a significant transformation since the development of the EMR. There are currently computers in all exam rooms and charts are updated at the time of visit. One of Billings Clinic's goals is to have 100 percent of medication prescribing completed online; they have currently reached about 75 percent. Although they still have paper charts for the inpatient medical records they are working towards a physician order entry system, which would use order sets, improve consistency of care, coordinate discharge orders and help with documentation.

Billings Clinic has experienced some challenges with the implementation of the EMR, particularly when using external software to calculate quality measure. The new methodologies required changing provider behavior, which is often difficult. Participation in the PGP demonstration accelerated the need for changing provider behavior relating to EMR use.

APPENDIX A
AGENDA FOR BILLINGS CLINIC SITE VISIT

Site Visit Agenda for Billings Clinic
PGP Demonstration Evaluation by RTI

January 18, 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