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# **Marshfield Clinic Physician Group Practice Demonstration**

## **Site Visit Final Report**

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

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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 support and evaluate the PGP demonstration. As part of its evaluation, RTI is conducting site visits at each of the 10 PGPs participating in the demonstration in the winter of 2005-2006. The purpose of these site visits is to understand the decisions of the PGPs to participate in the demonstration, and their early implementation and operational experience with the demonstration. This report contains findings for Marshfield Clinic.

Marshfield Clinic is a multi-specialty not-for-profit group medical practice providing services primarily to the residents of Wisconsin. Marshfield Clinic operates as a charitable corporation with its assets held in a charitable trust. The group consists of 41 regional centers/sites with main facilities located in Marshfield, Wisconsin and employs 740 physicians covering over 80 specialties and over 6,000 support staff. Marshfield Clinic partly owns one hospital, but most of its admissions are to hospitals that it does not own or control. The Clinic owns an HMO, Security Health Plan, with 115,000 members, including 9,500 Medicare Advantage enrollees.

**Demonstration Participation and Strategy.** Marshfield Clinic is interested in the use of medical informatics to improve care management and population health. The Clinic's strategy is to standardize best practices, apply best practice models of cost-effective high quality care to all its patient populations and to generate a paradigm shift to disease prevention. The Clinic's prior experience with its Security Health Plan HMO has helped foster this perspective. The PGP demonstration fits very well with these goals. Additionally, the PGP demonstration aligns incentives for Marshfield Clinic and allows for the reimbursement of previously non-reimbursed initiatives that reduce Medicare costs (e.g., anticoagulation management program). The demonstration also aligns with Marshfield's strategic initiatives around improving access and becoming a fully electronic group practice.

**Patient Care Interventions.** Marshfield Clinic's main efficiency focus for the PGP demonstration is on reducing hospital admissions through better management of chronic conditions. The two patient care interventions that occurred specifically in response to the demonstration were the telephonic heart failure program and the development and implementation of Best Practice Models (BPMs). The Clinic is working to reduce admissions for congestive heart failure and hypertension complications through care management and best practice models. Also, the Clinic is expanding its anticoagulation drug therapy management program, which aims to reduce costly complications of warfarin therapy. The fact that Marshfield Clinic is a freestanding group practice has created some challenges in developing inpatient-oriented patient care interventions. The Clinic reports that hospitals have no motivation to help it with care management of the beneficiaries assigned to it under the demonstration.

Marshfield has had difficulty in identifying hospitalized patients in real time, gaining access to inpatient financial data, and in developing interventions such as end of life care, discharge instructions, and discharge medication review.

**Provider Participation and Relations.** The Marshfield Clinic PGP demonstration implementation team began working with various divisions and department directors in October 2004 to inform providers about the demonstration. Regional Medical Directors and clinical nurse specialists have been visiting all departments periodically to meet with providers and discuss quality improvement. Providers are educated about the shared savings model under the demonstration and the need to attain quality indicator threshold targets for receiving the full bonus. All providers and ancillary staff are also educated about the BPMs, which have been developed as part of the demonstration.

Marshfield Clinic leadership periodically meets with providers with outlying performance measurements to encourage improvement in provider performance. The approach is confidential feedback with no financial or non-financial incentives. Provider feedback data on quality measures are updated quarterly on the Clinic's intranet system. The demonstration has been an impetus to give physicians more feedback on their patients, and therefore has focused physician attention on managing chronic care. Providers are currently paid based on patient care productivity.

**Demonstration Quality Indicators.** Marshfield Clinic indicated that demonstration quality measures are reasonable. However, Marshfield raised concern about the alignment of measures across payers and stressed that inconsistent measures drive up costs substantially. The PGP demonstration measures are just different enough from HEDIS<sup>®</sup>, National Committee for Quality Assurance, and state accreditation measures that they require additional data collection. Several of the PGP demonstration quality measures require manual chart abstraction (e.g., diabetic eye exams to verify a dilated eye exam), which is expensive.

Marshfield Clinic has prioritized improving quality measures that would provide the greatest enhancement in patient care. Marshfield Clinic's strategy for quality improvement is based on a six-sigma process improvement framework: define, measure, analyze, improve and control. Quality performance reports and BPMs to standardize care have been developed or are being developed to define the situation. Data is being collected to measure baseline quality and for analysis to determine any root causes of poor performance. Marshfield Clinic then improves performance through the development of practice tools and point-of-care decision support. Control is established through the development of a Storyboard for each BPM and through response plans.

**Information Technology.** Marshfield Clinic has historically had strong, unwavering commitment from its leaders to use computers for improving healthcare. Participation in the PGP demonstration has served as a catalyst in the implementation and acceleration of Marshfield Clinic's information technology (IT) strategic plan. In general, benefits from IT investment do not accrue under fee-for-service Medicare, but there is the potential for some return under the demonstration. Marshfield Clinic stresses developing IT systems in-house. In-house development lends flexibility to the systems and allows them to be tailored to the Clinic's needs.

Clinic IT initiatives include an electronic medical record, tablet computers, a data warehouse, a real-time, point-of-care physician reminder system, enhanced charting and code data acquisition, patient registries, and care management software. None of these systems have been initiated specifically for the PGP demonstration, but they have supported its implementation.





## **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, nonprofit research organization, to support and 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 10 demonstration PGPs. Material from the site visit reports will be included in CMS' Report to Congress on the PGP demonstration, due at the end of 2006. This report presents findings for Marshfield 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 Marshfield Clinic site visit took place on December 5, 2005 at Marshfield Clinic offices in Marshfield, Wisconsin. 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 Marshfield Clinic's motivation for participating in the demonstration and to understand how the demonstration relates to the PGP's overall strategy and operational goals.
2. Patient Care Interventions—The purpose of this session was to gather information on programs that have been implemented by Marshfield 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 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 depending on their area of expertise. The site visit agenda is attached as Appendix A. Marshfield Clinic participants included its President, Executive Director, Chief Financial Officer, Chief Medical Officer, Chief Operations Officer, Chief Information Officer, Treasurer, Medical Directors, and other financial, information technology, clinical, care management, and quality improvement personnel. Gregory Pope and Musetta Leung (in person) and Roberta Constantine (by phone) of RTI conducted the interviews according to a pre-defined, semi-structured interview protocol. John Pilotte of CMS also participated in-person in the interviews.

In addition to the interviews, this report draws on written materials provided by Marshfield Clinic during the site visit, or as part of the demonstration project. These materials include Marshfield Clinic's demonstration implementation protocol, and its demonstration baseline and quarterly reports. During the interview, Marshfield Clinic provided RTI with written information on its organizational structure, best practice models and patient educational materials. Also, Marshfield Clinic's web site was consulted for background information. Finally, we drew some information on Marshfield 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. 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 Marshfield Clinic or published sources (e.g., Marshfield 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 felt it was important to cite some specific numbers to adequately characterize Marshfield Clinic and its demonstration participation. We submitted this report to Marshfield Clinic staff for their review of its factual accuracy.

### **1.3 Overview of the Report**

The next section describes Marshfield Clinic as an organization, and the environment in which it operates. The third report section discusses why Marshfield Clinic chose to participate in the PGP demonstration and its demonstration strategy. The fourth section describes patient care coordination initiatives, and the fifth initiatives in provider education, feedback, and incentives. The sixth section discusses demonstration quality measures and reporting, and the seventh the role of information technology at Marshfield Clinic and in the demonstration.

## **SECTION 2**

### **ORGANIZATIONAL STRUCTURE, ENVIRONMENT, AND STRATEGY**

#### **2.1 Organizational Structure**

Marshfield Clinic is a multi-specialty not-for-profit group medical practice providing services primarily to the residents of Wisconsin. Marshfield Clinic operates as a charitable corporation with its assets held in a charitable trust. The group consists of 41 regional centers/sites with main facilities located in Marshfield, Wisconsin and employs 740 physicians covering over 80 specialties<sup>1</sup> and over 6,000 support staff.

Marshfield Clinic's culture has not been strongly "bottom-line" oriented. The Clinic's philosophy is that a certain level of profitability is necessary for reinvestment, but otherwise, the goal is to "do the right thing." Approximately one-third of the Clinic's costs are for physicians, one-third for non-physician staff, and one-third for plant and equipment. The Clinic accesses capital through debt financing; there is no equity financing.

Marshfield Clinic is structured so that each physician with 2 years of experience at the Clinic is eligible for the Board of Directors, the unit that is ultimately responsible for the business affairs of the Clinic. Thus, Marshfield physicians have a "vote," but not an ownership interest in the Clinic. Board members annually elect a nine-member Executive Committee to serve 2-year staggered terms. The Executive Committee meets weekly and exercises the powers of the Board with the exception of specific reserved powers. The Board meets less frequently to review actions made by the Executive Committee and to make any major decisions regarding the Clinic. Marshfield Clinic has four officers, a President, Vice President, Corporate Secretary, and Treasurer, and an administrative staff headed by an Executive Director. A Director may be elected President for up to three successive 2-year terms.

Marshfield Clinic also has a Systems Operations Group (SOG), a management structure that implements decisions promptly and allows for integration across the seven Divisions in the system: four Central Divisions, the Northern Division, the Eastern Division and the Western Division. The SOG is lead by the Chief Medical Officer and Chief Operating Officer and consists of Division directors and administrators. Specialty coordinators exist to lead physicians for a given specialty across the Marshfield Clinic system. These coordinators report to Division Medical directors.

The Marshfield Clinic National Advisory Council is another leadership group. The Council advises the group on matters such as future growth, fund-raising, research priorities and business community relationships.

Marshfield Clinic is affiliated with several local hospitals. St. Joseph's Hospital is physically adjacent to the Marshfield Clinic in Marshfield, Wisconsin, but is owned by Ministry Health Care, a Catholic healthcare network based in Milwaukee. St. Joseph's is a 500+ bed tertiary care teaching institution that is the only major rural referral medical center in Wisconsin. Flambeau Hospital is a Critical Access Hospital located in Park Falls that is sponsored and

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<sup>1</sup> All specialties are represented except solid organ transplant and burns.

operated jointly by Marshfield Clinic and Ministry Health Care. This hospital is licensed for 42 beds. Additionally, Marshfield Clinic employs several hospitalists in hospitals located in Minocqua, Marshfield and Wausau. Marshfield Clinic is one of two "members" in the Diagnostic & Treatment Center, LLC, with a local hospital being the other member.

Marshfield Clinic owns Security Health Plan of Wisconsin, Inc., a nonprofit HMO with 115,000 members as of September 30, 2004. Established in 1972, Security Health Plan provides health care coverage in a 29-county service area in northern, western, and central Wisconsin, and offers a network of 26 affiliated hospitals and over 2,750 affiliated physicians and other providers. Security Health Plan offers Medicare Advantage HMO plans under the name "Advocare," which have 9,500 members, and Medicare Select supplemental coverage under the name "Senior Security Medicare Select."

Marshfield Clinic also includes the Marshfield Clinic Research Foundation, which is a private not-for-profit medical research facility. Projects are conducted by the clinic's physicians and the Research Foundation's scientists. The Research Foundation's focus areas include: clinical research, rural health and safety, epidemiology, human genetics, personalized medicine and health services research.

The Marshfield Clinic Education Foundation is another division of the organization. It offers graduate residency programs in internal medicine, pediatrics, general surgery, medicine/pediatrics, dermatology, and a transitional program. The Clinic serves as a clinical campus for the University of Wisconsin Medical School. A substantial portion of the third- and fourth-year University medical students rotate through the Marshfield system.

Marshfield Laboratories performs more than 20 million tests annually for clients across the nation and employs more than 450 people. Its business lines include forensic toxicology, food safety, and veterinary medicine. The for-profit Laboratories are an important source of revenue for the Marshfield Clinic.

## **2.2 Environment**

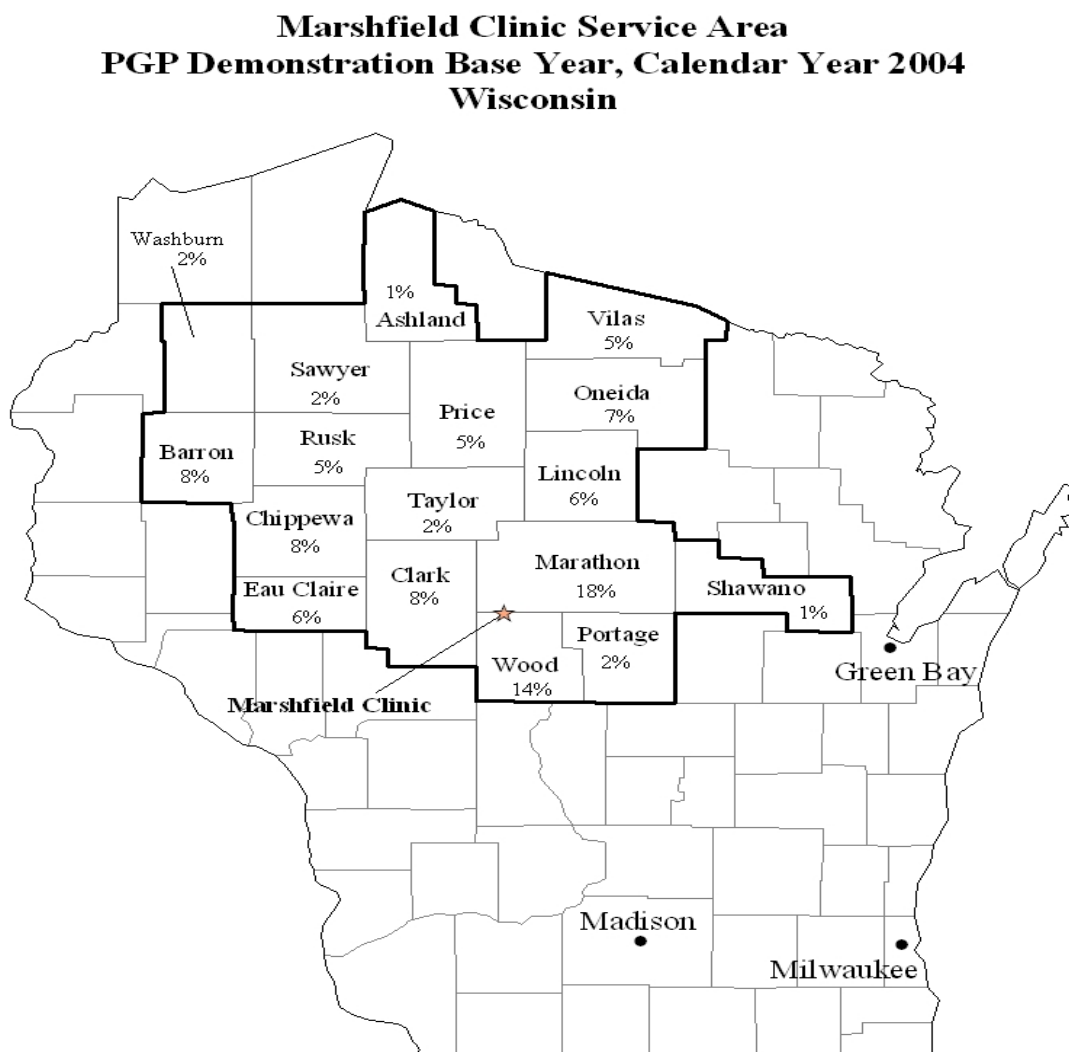
### **2.2.1 Service Area**

Marshfield Clinic's service area extends to almost all of the state of Wisconsin as well as Michigan's Upper Peninsula. Marshfield Clinic's primary service area, defined as counties of residency from which over 1,000 unique patients were seen in the Clinic System, consists of 28 counties in the state of Wisconsin and one county in the state of Michigan.

The population served in Marshfield Clinic's primary service area is over one million. Marshfield Clinic's secondary service area, defined as the remaining state of Wisconsin and Michigan's Upper Peninsula, spans 44 counties in Wisconsin and eleven counties in Michigan, comprising a population of over 4.5 million. Marshfield Clinic's total base service area population is approximately 5.6 million.

**Figure 1** shows the Marshfield Clinic Medicare service area for 2004 based on patient residence data. Counties where at least 1 percent of Medicare FFS beneficiaries assigned<sup>2</sup> to Marshfield Clinic reside are included in this service area map.

**Figure 1**  
**Marshfield 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

<sup>2</sup> A beneficiary was assigned to Marshfield Clinic if the plurality of its office and other outpatient evaluation and management allowed charges were incurred at Marshfield Clinic.

### **2.2.2 Patients**

The Marshfield Clinic is located in a largely rural, agricultural, dairy farming region of Wisconsin, interspersed with small cities such as Wausau and Eau Claire. Patients are described as “self-reliant,” which contributes to a comparatively parsimonious medical practice style in the region. Also, the Clinic’s patient population is not wealthy, so the Clinic needs to keep care affordable.

*Table 1* shows selected characteristics of Marshfield Clinic's 2004 Medicare patients available from Medicare administrative files. The Clinic provided an office or other outpatient evaluation and management visit to 59,273 Medicare beneficiaries. Of these, 44,609, or 75 percent, received the plurality of their evaluation and management services from Marshfield Clinic and so were assigned to the Clinic for the PGP demonstration. Assigned beneficiaries received 5.43 evaluation and management visits on average from all providers, with 90 percent of the associated Medicare allowed charges provided by Marshfield Clinic on average. The Clinic feels that the PGP demonstration beneficiary assignment algorithm is appropriate and valid.

Eighty-six percent of Marshfield Clinic's assigned Medicare patients are eligible for Medicare by age, 14 percent by disability (under age 65), and less than 1 percent by end stage renal disease (ESRD). Thirteen percent had at least 1 month of Medicaid eligibility in 2004. Ninety-nine percent were white.

### **2.2.3 Payers**

Marshfield Clinic’s patients are mostly enrolled in commercial insurance plans (65 percent). Twenty-one percent of patients seen at Marshfield Clinic at baseline were Medicare beneficiaries (including dual eligibles and Medicare risk contracts), and 14 percent were on Medicaid. The most common reimbursement method for Marshfield Clinic was fee-for-service with no incentive or performance payments, and no risk sharing (approximately 88 percent). Capitation or full risk through Security Health Plan was 8 percent, with an additional 4 percent comprised of Marshfield Clinic employees, who are covered by Security Health Plan. Medicare managed care has a low penetration in the area.

Marshfield Clinic’s net revenues have been increasing steadily since 1978. Total net revenues in fiscal year 2004 were over \$687 million, 14.6 percent of which was from Medicare FFS. Direct contracts accounted for the largest portion of fiscal year 2004 revenues, 43.2 percent. Approximately 23 percent of Marshfield Clinic’s revenues are from the Security Health Plan HMO.

### **2.2.4 Competitors**

Ministry Health Care, a Catholic network based in Milwaukee, operates several hospitals and physician practices in Marshfield Clinic's service area. The Ministry Medical Group consists of more than 150 affiliated physicians and medical providers in several locations. As mentioned

**Table 1**  
**Selected Characteristics of Medicare patients, Marshfield Clinic, 2004**

|  | No. of<br>beneficiaries | Percentage or<br>amount |
|--|-------------------------|-------------------------|
| <b>Medicare Patients</b>   |                         |                         |
| Total <sup>1</sup>   | 59,273                  | 100%                    |
| Assigned Beneficiaries <sup>2</sup>  | 44,609                  | 75.3%                   |
| <b>Characteristics of Assigned Beneficiaries</b>                                 |                         |                         |
| Average Number of Evaluation and Management Visits <sup>3</sup>                  | 44,609                  | 5.43                    |
| Average Percentage of Evaluation and Management Care provided by MC <sup>4</sup> | 44,609                  | 90%                     |
| Per Capita Annualized Medicare Expenditures <sup>5,6</sup>                       | 44,607                  | \$6,612                 |
| <b>Distribution of Assigned Beneficiaries</b>                                    |                         |                         |
| <b>Total</b>   | 44,609                  | <b>100%</b>             |
| <b>Medicare Eligibility</b>  |                         |                         |
| Aged   | 38,154                  | 85.5%                   |
| ESRD   | 193                     | 0.4                     |
| Disabled   | 6,262                   | 14.0                    |
| <b>Medicaid Eligibility</b>  |                         |                         |
| Not Medicaid Eligible for any months in 2004                                     | 38,715                  | 86.8                    |
| Medicaid Eligible at least 1 month in 2004                                       | 5,894                   | 13.2                    |
| <b>Age</b>   |                         |                         |
| Age < 65   | 6,416                   | 14.4                    |
| Age 65 – 74  | 18,799                  | 42.1                    |
| Age 75 – 84  | 14,273                  | 32.0                    |
| Age 85 +   | 5,121                   | 11.5                    |
| <b>Race</b>  |                         |                         |
| White  | 44,094                  | 98.8                    |
| Black  | 45                      | 0.1                     |
| Unknown  | 59                      | 0.1                     |
| Asian  | 102                     | 0.2                     |
| Hispanic   | 23                      | 0.1                     |
| North American Natives   | 172                     | 0.4                     |
| Other  | 114                     | 0.3                     |

NOTES:

<sup>1</sup> Beneficiaries provided at least one office or other outpatient evaluation and management visit by Marshfield Clinic.

<sup>2</sup> Beneficiaries who received the plurality of their office or other outpatient evaluation and management allowed charges at Marshfield Clinic.

<sup>3</sup> Office or other outpatient evaluation and management visits.

<sup>4</sup> Percentage of all office and other outpatient evaluation and management Medicare allowed charges provided to the beneficiary that were provided by Marshfield Clinic (MC).

<sup>5</sup> 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.

<sup>6</sup> Weighted by the eligibility fraction.

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

Computer Output: TP7T2Y4

above, St. Joseph Hospital in Marshfield, Wisconsin is adjacent to the Marshfield Clinic but is owned and operated by Ministry. Marshfield both competes and cooperates with the Ministry healthcare network.

Marshfield Clinic holds a significant share of the market in the center of its service area, (i.e., around Marshfield), however it is facing growing competition from the Aspirus health system. Aspirus is located in Wausau, Wisconsin. They own a hospital in Wausau and have clinics in 14 locations that overlap Marshfield Clinic's service area. They aggressively compete with Marshfield for cardiac services, oncology services and ambulatory surgery. At the periphery of its service area, Marshfield faces competition from the Mayo Clinic (e.g., in Eau Claire). Medicare beneficiaries at the periphery are more likely to make up the Marshfield Clinic Comparison Group.

### **2.3 Major Strategic Initiatives**

In July 2003, Marshfield Clinic's Board of Directors approved a strategic plan through 2008 based on the Institute of Medicine's six aims for improving the 21st century health care system, namely that health care should be safe, effective, patient-centered, timely, efficient, and equitable. Marshfield feels that one of the key tactics used to accomplish these aims is care management, which is defining and implementing principles of process improvement to facilitate optimal performance with respect to clinical quality, practice performance, and cost of care.

The PGP demonstration is one of Marshfield Clinic's four current major initiatives. The others are as follows:

- **Advanced Access**—a goal that all patients seeking care at the Marshfield Clinic should be seen by the provider of their choice in an acceptable timeframe based on their needs. The goal for primary care is to see patients within one day and for specialty care to see patients within five days.
- **Referral Service**—a goal to have referring physicians rate Marshfield Clinic as the preferred system for their consultations. Develop systems and processes to improve access, communication, and efficiency.
- **Cost Management**—a goal that as a result of standardizing operational and patient care process, overall cost of care is decreased.



## **SECTION 3**

### **DEMONSTRATION PARTICIPATION AND STRATEGY**

#### **3.1 Reason(s) for Participation**

Marshfield Clinic is interested in the use of medical informatics to improve care management and population health. The Clinic's strategy is to standardize best practices, apply best practice models of cost-effective high quality care to all its patient populations and to generate a paradigm shift to disease prevention. The Clinic's prior experience with its Security Health Plan HMO has helped foster this perspective. The PGP demonstration fits very well with these goals. Additionally, the PGP demonstration aligns incentives for Marshfield Clinic and allows for the reimbursement of previously non-reimbursed initiatives that reduce Medicare costs (e.g., anticoagulation program). The Clinic also thought that participating in the demonstration would buttress its reputation for being on the leading edge of medical care innovation, and maintain its long history of public health service.

Marshfield Clinic also recognized that the share of Medicare beneficiaries in its service area was growing. Medicare payments are a big discount on charges. With Medicare accounting for 20 percent of its revenue stream it was clear to Marshfield Clinic that they needed to "wring costs out" of Medicare so that discounts were not shifted to private payers. Keeping costs under control and cutting edge services affordable to its patient population is of particular importance to Marshfield Clinic. It is viewed as "not inexpensive" in its service area, so cost reduction is a priority.

The PGP demonstration is one of the most significant projects currently being undertaken by Marshfield Clinic. Although it has been projected that Marshfield Clinic will break even financially under the demonstration, a considerable amount of uncertainty persists and participation remains an "article of faith." Marshfield Clinic does not expect any savings due to improvements in quality measures under the PGP demonstration. This is mainly due to the short time-frame of the demonstration.

Although the Clinic ultimately decided to participate in the demonstration, decisions made in the pre-demonstration period establishing the 2 percent threshold for earning a bonus and the 5 percent cap on bonuses almost derailed the demonstration at Marshfield Clinic.

#### **3.2 Demonstration Strategy**

To accomplish the goals of the PGP demonstration Marshfield Clinic has developed and followed the following basic strategies. First, Marshfield Clinic has used informatics to improve the delivery of healthcare by introducing patient dashboards that summarize a patient's health status and provide prevention reminders (e.g., vaccinations, cancer screenings). Second, Marshfield Clinic has begun educating providers on process improvement by introducing the Process Improvement (PI) Charter and by developing Best Practice Models (BPMs). The BPMs are used to level the playing field for providers, they are developed to fill any gaps and they provide specifications on how to manage clinical practice. Third, Marshfield Clinic has improved and expanded care management programs for Medicare FFS beneficiaries. Care management programs assist in the standardization of best practices, patient education, expert systems (e.g.,

provider support and education, decision support, consult service agreements) and information (e.g., reminders, process and control measures, reporting, care audits and care planning). Care management is possible through nurse telephone lines, BPMs, case management and the development of automated systems. Marshfield Clinic is also focused on aligning incentives and providing value. Provider compensation under the Clinic's existing, traditional system is based on relative value units and the market. This type of system is aligned with FFS. Marshfield Clinic is discussing introducing three domains that would help establish a new system aligned with value: (1) clinical quality, (2) practice management and (3) cost-of-care. Finally, Marshfield Clinic believes that success under the PGP demonstration will involve an organizational transformation that will require the support of the Marshfield Clinic leadership and staff.

Marshfield Clinic's main efficiency focus for the PGP demonstration is on chronic conditions that provide the greatest potential for cost savings due to reduced hospital admissions. The two patient care interventions that occurred specifically in response to the demonstration were the telephonic heart failure program and the development and implementation of BPMs, or Best Practice Models. The Clinic is actively working to reduce congestive heart failure hospital admissions and hypertension complications. Also, the Clinic is working with local hospitals to increase the use of observation status versus hospital admission where clinically appropriate. In other areas, Marshfield Clinic views the PGP demonstration as a catalyst for interventions that the clinic would have otherwise provided. The demonstration caused some Marshfield Clinic projects to be reprioritized, accelerated, or expanded, but did not result in any entirely new interventions other than the heart failure program and Best Practice models.

The Clinic has prioritized improving quality measures that would provide the greatest enhancement in patient care.

### **3.3 Relationship to Group Practice Strategy**

The overall plan at Marshfield is to implement evidence-based medicine. In doing so, the Clinic hopes to acquire real-time data. Marshfield's leaders also see the benefit of automating their care processes. If the PGP demonstration pays dividend, then they may be able to convince others payers (e.g., commercial) that quality improvement initiatives should be pursued. Moreover, Marshfield Clinic plans to use knowledge gained from its Health Plan experience for the PGP demonstration. Simultaneously, PGP demonstration interventions are being applied to commercial populations. In fact, a number of personnel repeated that Marshfield Clinic does not manage care differently for the different payor populations. Thus, spillovers from the demonstration and care processes for other populations occur both ways.

### **3.4 Leadership and Implementation Team**

Marshfield Clinic's senior leadership team is involved in and supportive of the PGP demonstration as it is one of the four key priority projects for the Clinic. The demonstration is being run out of the Clinic's Quality Improvement and Care Management Department. The Clinic's Project Directors are the Medical Director and Administrator of this department. Regional Medical Directors are devoting 20 percent of their time to the demonstration. Three Clinical Nurse Specialists have been assigned to the demonstration, comprising two new full-time-equivalent (FTE) positions. The Division Medical Directors are responsible for the

operationalization of the demonstration in each of the Clinic's Divisions. Financially, a new 'costing center' has been set up to account for costs incurred through the PGP demonstration.

### **3.5 Implementation and Operational Challenges**

Marshfield Clinic staff who were interviewed cited certain downsides to participating in the PGP demonstration. First, the demonstration is a lot of work, including the need to take responsibility for reducing avoidable Medicare Part A costs, and it competes with other projects for organizational resources. Second, the demonstration must be launched in a short period of time, and it is uncertain if it will last long enough to determine if it is successful. Third, the PGP demonstration requires a substantial upfront investment with no immediate or guaranteed return. There is no upfront money from CMS to assist in developing infrastructure. The Clinic is concerned about what will follow the 2-year demonstration period. If the demonstration is not extended the Clinic will have to dismantle programs and eliminate staff.

The fact that Marshfield Clinic is a freestanding group practice has created some challenges in developing inpatient-oriented patient care interventions. The Clinic reports that hospitals have no motivation to help it with care management of the beneficiaries assigned to it under the demonstration. Marshfield has had difficulty in identifying hospitalized patients in real time, gaining access to inpatient financial data, and in developing interventions such as end of life care, discharge instructions, and discharge medication review. The Clinic is in the process of exploring how the transition period between hospitalization and home could be bridged for their high risk beneficiaries. Initially there were HIPAA concerns. With the help of its Legal Department, the Clinic was able to resolve those concerns.

Marshfield has not met with local hospitals to discuss the demonstration per se, but they are aware of it through Marshfield's publicity releases and general administrative communication. Local hospitals are aware that the Clinic is trying to reduce Medicare admissions under the demonstration and they are concerned about loss of business. None of the hospitals that Marshfield providers admit to are supportive of reducing admissions under the demonstration in order to free up beds for other uses. There is not a hospital bed shortage in Marshfield's service area. A new hospital has opened during the time the demonstration project has been occurring. In fact, hospital census is down in the Clinic's service area.



## SECTION 4

### PATIENT CARE INTERVENTIONS

At demonstration baseline, Marshfield Clinic had three major care management interventions in place. The largest of these programs among Medicare FFS beneficiaries is the Anticoagulation Care Management Program. The two other major programs are the Heart Failure Care Management Program and the Diabetes Self-Management Education Program. In the sections below, we describe each of the care management programs in place. Then we describe more generally Marshfield Clinic's care management systems, home monitoring, other patient care interventions, and informing patients about the demonstration.

#### 4.1 Anticoagulation Care Management Program

The goal of this program is to reduce complications and improve outcomes for patients on the anti-clotting drug therapy warfarin (Coumadin). Optimizing the dosage of anticoagulation drugs involves balancing the risk of potentially fatal blood clots from under-dosing with the risk of potentially fatal bleeding from overdosing. Warfarin is widely prescribed, but has a high rate of adverse reactions. Proper dosing requires that physicians monitor patients closely. Marshfield Clinic established its anticoagulation program several years prior to the PGP demonstration and does not charge patients for it. Marshfield has begun to expand enrollment in the program because of the PGP demonstration.

Patients are introduced to the program by their physicians or are referred immediately upon hospital discharge. Patient information is entered into a special tracking database, the Anticoagulation Database, which is interfaced with the Clinic's other information systems. Registered nurses (RNs) case-manage patients through guidelines developed by Marshfield Clinic. They adjust the patient's warfarin doses according to written protocol. Patients are reminded to have regular blood tests. Nurses educate and coach the patients to recognize the many influences on anticoagulation, including diet, activity, other medications, and other illnesses. The RN case managers have access to the Medical Director of the program and the patient's personal physician for the 5–10 percent of the time when the protocols do not cover a patient's situation. All of the interactions are documented in both the anticoagulation database and in the Clinic's electronic medical record (EMR). In addition to the RN case manager, patients have access to the always-available Marshfield Clinic Nurse Line for acute symptom-based advice.

Both Medicare and non-Medicare patients are enrolled in this program, but most are Medicare beneficiaries. As of the end of 2004, the age distribution of enrollees is as follows:

| <u>Age</u> |       |
|------------|-------|
| 25–44      | 21    |
| 45–64      | 107   |
| 65–74      | 629   |
| 75+        | 1,050 |

In a 2000 study for the Agency for Healthcare Research and Quality (AHRQ), Marshfield Clinic demonstrated that its anticoagulation program resulted in a large and statistically significant reduction in hospitalizations per 100-person years compared to standard care. The

implied avoided Medicare hospitalization-related costs were \$271,014 per 100-person years. If the anticoagulation program were extended to all 12,477 Marshfield patients on warfarin therapy, estimated cost savings are \$28 million. Such an extension would cost Marshfield Clinic \$3 million, none of which is reimbursed under standard Medicare payments. The AHRQ study also showed that the risk of hospitalization or death among patients enrolled in the anticoagulation care management program was less than 2 percent per year compared to 7–10 percent per year under standard care.

#### **4.2 Heart Failure Care Management Program**

Marshfield targeted heart failure patients as the best way under the PGP demonstration to reduce admissions and save money quickly. Care management for heart failure patients has been centered on the idea of reducing hospital admissions by improving patient and family education, coordination of care and self-management. Marshfield Clinic began a telephonic Heart Failure Care Management program as a pilot on December 1, 2004 specifically because of the PGP demonstration. The goal is to reduce admissions and readmissions for heart failure. By September 2005, enrollment in the program was 202. Because of limited resources, the program is restricted to Medicare FFS beneficiaries.

The initial step for care management is the identification of patients who could benefit from care management. Patients are referred by primary care physicians, hospitalists, and cardiologists. Patients are also identified through provider electronic coding of encounters captured in the Clinic's data warehouse, and through discharge data. Patients' New York Heart Failure category is being newly collected for the PGP demonstration. All New York Heart Classification Category 2, 3, and 4 patients (disabling symptoms) are screened for eligibility for the program. Once a patient is determined to be eligible for the program, a registered nurse mails an introductory letter and sets up a phone call. If the patient agrees to enroll, patient education material is supplied. After the patients have been identified, the care management system relies on the InformaCare<sup>®</sup> decision support software.

Marshfield Clinic staff: assess patient knowledge about heart failure disease process and self-care behavior; identify and help patient overcome issues related to medication and life style compliance (especially diet, fluids, and exercise); identify signs and symptoms that should prompt the patient to call for immediate help; provide and document protocol-based symptom advice, communicating with the care team when the patient requires immediate attention; facilitate appointments/referrals with providers, services, or community resources; and provide provider-directed or protocol-based telephonic follow-up and monitoring between scheduled office visits or tests.

#### **4.3 Diabetes Self-Management Education Program**

Marshfield Clinic offers a Diabetes Self-Management Education Program for patients and their families. The goal is to provide patients with a comprehensive program encompassing diabetes education, collaborative team networking, and community resources. Patients learn the following:

- Skills to self-manage their disease, including understand diabetes and treatment options, living day-to-day, acute and chronic complications; nutrition and activity; diabetes and pregnancy.
- Regular health care maintenance to help offset complications of diabetes.
- Coping with psychosocial issues surrounding a chronic condition.
- Community resources available, ranging from financial aspects, patient assistance programs, support groups, and counseling services.

Instruction is offered to children and adults with type 1, type 2, or gestational diabetes. Participants may choose to attend three group classes offered once a month. If classroom education is not convenient or appropriate for a patient, individual instruction is provided in the clinician's office.

A physician referral is needed to participate in the program. Both Medicare and non-Medicare patients are enrolled. The program is taught by diabetes educators, and nurse educators, dietitians, pharmacists, behavioral specialists, and physical therapists also provide instruction. Approximately 1,200 patients are enrolled in the program, of whom roughly one-third are Medicare beneficiaries. Based on patient satisfaction and pre/post reductions in HbA1c results, the program has been judged a success.

#### **4.4 Care Management Systems**

Marshfield Clinic believes that care management makes end delivery more efficient, allows for the stratification of care by patient risk, and will be more crucial to reducing hospitalizations than blood pressure control, for example. Care management offers evidence-based, planned care and provides a means for best practice standardization, patient education and the dissemination of other information (e.g., patient reminders, new programs, medication compliance).

Marshfield Clinic believes that a whole provider team is needed for care management. For care provided outside the system to patients, non-Marshfield providers are asked to send over information on the patients, and this information is scanned into the electronic medical record (EMR) system. Moreover, the Clinic is 'aggressive' in assigning patients to a primary care provider.

Marshfield Clinic sees care management as an extension of the doctor/patient relationship. The Clinic wants to build on this relationship, not interfere with it. It sees an advantage to doing care management internally—as opposed to hiring an external disease management vendor—because of the close relationship it has with patients as the provider of care. The Clinic also feels that care management programs must be internal if they are to obtain “buy in” from providers and be sustainable for the long term. There is a strong opinion that outsourcing disease management is not enough: Disease management companies only treat a specific disease whereas many elderly patients have multiple chronic conditions.

Marshfield Clinic has gained confidence in its ability to provide care management from its very successful Anti-Coagulation Program (described above). For all future care management systems, Marshfield intends to apply the principles learned from the anti-coagulation program. It also intends to apply lessons learned from its Security Health plan to care management in the FFS environment. Marshfield provides care management through ProActive Health, an internal population health nursing department employing 40 full-time equivalent (FTE) registered nurses and 5 FTE health service coordinators. A major function of ProActive Health is to staff an always-available nurse call-in line.

For example, use of the PreServ application has allowed Marshfield Clinic to improve patients' pneumovax/flu vaccination rates dramatically. Although care management is an important system, it is costly and requires significant staff. Marshfield Clinic recently needed to hire new staff.

#### **4.5 Other Patient Care Interventions**

Advanced Access is an initiative at Marshfield Clinic that encourages patients to see physicians in a more timely manner by reminding patients of office visits and freeing up physician schedules to accommodate same day visits. It is applied to all Marshfield Clinic patients and is not considered an intervention resulting from the PGP demonstration.

#### **4.6 Informing Patients about the Demonstration**

The demonstration coordination team is working with the Department of Corporate Communication to inform patients regarding Marshfield's participation in the demonstration. A call-in line has been set up to respond to beneficiary inquiries. Marshfield has placed signage in facility common areas and disseminated information through the Marshfield Clinic's web page, patient newsletter and other media (e.g., newspapers, speakers, health events, radio talk shows, television health spots). Posters include information on Marshfield Clinic's participation in the demonstration, the overall goals of the demonstration ("provide better care while reducing health care costs"), an explanation that there is no extra cost to the beneficiary or need to change providers, and on the importance of keeping patient information confidential. Based on their patient notification and targeting procedures, Marshfield Clinic has received several calls from patients asking how they can be involved.







## **SECTION 5**

### **PROVIDER PARTICIPATION AND RELATIONS**

#### **5.1 Provider Education**

The PGP demonstration implementation team began working with various Divisions and department Directors in October 2004 to inform providers about the demonstration. Four regional Medical Directors and three clinical nurse specialists have been visiting all departments periodically to meet with providers and discuss quality improvement. Primary care departments have been visited three or four times, non-primary-care departments one or two times. One of the most important factors for the success of the PGP demonstration is physician buy-in, thus educating providers regarding the demonstration has been of particular importance to Marshfield Clinic.

Providers are educated about the shared savings model under the demonstration and the need to attain quality indicator threshold targets for receiving the full bonus. All providers and ancillary staff are also educated about the Best Practice Models, some of which have been developed as part of the demonstration. Providers are skeptical about savings--for example, can they be generated in the short 3-year demonstration cycle--but want to do well on the demonstration quality indicators. Primary care physicians are more enthusiastic about the demonstration than are specialists.

#### **5.2 Provider Performance Support and Feedback**

Marshfield Clinic has had Clinical Practice Guidelines (CPG) for years that offer clinical practice guidelines, practical office tools and patient education. The goal of the CPGs is to standardize treatment patterns to best practice as established by evidence-based studies. If the evidence base is lacking in an area, then Marshfield intends to test and continually improve a reasonable practice model to determine its effectiveness. Marshfield Clinic has developed some Best Practice Models (BPM). Development of the BPM begins with the clinical nurse specialists determining what staff is currently doing for patient care.

Marshfield Clinic is developing and implementing BPMs because of the PGP demonstration. The Clinic has finalized BPMs for hypertension and diabetes, and has begun discussing and drafting BPMs for heart failure, depression, atrial fibrillation, diabetes, asthma, hyperlipidemia, and frailty. The Clinic also began drafting an end of life process improvement charter and a system-wide protocol for pneumococcal vaccinations. Before the PGP demonstration, compliance with BPMs was voluntary—now, there is more monitoring of providers, and more emphasis is being put by Clinic management on following BPMs. The Clinic admits that they need to work on how to integrate information on care processes, and intend to look at certain ‘star performers/models’ in their system to learn from them, and see how to apply to other practices.

An example of a BPM is the Hypertension BPM. It is an amalgamation of clinical practice guidelines (evidence-based standards of clinical care), coordinated practice support tools (e.g., documentation macros, forms, patient education materials), and recommended care strategies and resources for areas where no reliable evidence exists. Each BPM includes measurement, analytic, improvement, and control strategies that test the model's effectiveness

and efficiency. The Clinic expects reduced admissions of hypertensive patients because of care management interventions, not so much direct blood pressure control. If the Clinic can delay a few patients going on dialysis for a few months, there can be a big cost savings.

After BPMs have been developed Marshfield Clinic relies on clinical nurse specialists to take the BPMs out to individual providers. An example of what a clinical nurse specialist might do, if they were focusing on improving hypertension control, is to show staff how to measure blood pressure properly and how to enter measurements into the system so that information can be easily retrieved. Also, computer-based training programs are developed and distributed to providers.

Marshfield Clinic leadership periodically meets with providers with outlying performance measurements to encourage improvement in provider performance. The approach is confidential feedback with no financial or non-financial incentives. Often the approach is “please help us understand/improve the data on your patients.” All providers have access to their performance indicators via the Storyboards. The Storyboard provides individual providers with an assessment of their performance through graphs and charts. Provider feedback has been shown to improve health outcomes. Physicians will respond to data. For example after Marshfield Clinic started providing feedback to providers on hypertension control, they witnessed a 9 percent improvement in 3 months.

Provider feedback data on quality measures are updated quarterly on the clinic’s intranet system. The Physician Clinical Performance Reports Web Page provides reports to physicians, particularly with respect to management of patients with chronic conditions. The reports contain departmental and national comparisons. The demonstration has been an impetus to give physicians more feedback on their population of patients, and therefore has focused physician attention on managing chronic care.

### **5.3 Provider Compensation and Incentives**

Physician compensation at Marshfield Clinic is based on relative value unit (RVU) productivity measurements. The RVUs are based on patient interactions; therefore physicians have incentives to see more patients, but extra payment is not made for laboratory and radiology tests. Marshfield Clinic is concerned that the current physician compensation plan provides disincentives for preventive care and is aligned only with FFS reimbursement methods. The Clinic is therefore thinking of revising their compensation methods, basing them more on three specific domains: clinical quality, practice management, and cost-of-care. The new compensation model would essentially shift the old one to a pay for performance model to align incentives with “value.” This type of system may need to be introduced incrementally. Marshfield Clinic has talked about tying 10-15 percent of compensation to pay for performance to start, however nothing has been implemented yet.

Marshfield Clinic does not provide any financial incentives under the PGP demonstration to individual providers. Incentives currently exist only at the organization level. Marshfield Clinic remarked that pay for performance may not be successful until individual providers are provided with financial incentives. Although professional motivation to improve quality of care does exist, some physicians would gain additional motivation from financial incentives.

## **SECTION 6**

### **DEMONSTRATION QUALITY INDICATORS**

#### **6.1 Appropriateness**

Marshfield Clinic indicated that demonstration quality measures are reasonable. However, Marshfield raised concern about the alignment of measures across payers and stressed that inconsistent measures drive up costs substantially. The PGP demonstration measures are just different enough from HEDIS<sup>®</sup> measures, NCQA measures and state accreditation measures that they require additional data collection.

Additional quality measures of interest to Marshfield Clinic, data permitting, would include reduced complications from controlling blood pressure, such as hospital admissions for stroke, heart attack, etc., as well as medication-related measures. However, they noted it is more difficult to obtain hospital data if you are not part of a hospital system and you only have access to Part B insurance data.

The PGP demonstration quality indicator thresholds were thought to be reasonable. It is clear that a 100 percent threshold for the quality measures is not appropriate for all patients. Care needs to be tailored to individual patients. For example, getting screening tests for cholesterol levels may not improve quality of life for terminally or critically ill patients. Sometimes a process quality measure will not be met for patients because of lack of resources, for example, a lack of ophthalmologists in an area to perform a diabetic eye exam is not under a physician's control. Other times, financial barriers (patient cost sharing, deductibles, co-pays) and lack of insurance coverage (i.e., Medicaid will not reimburse for telemedicine) are barriers to getting a test done.

Marshfield Clinic raised some concern over the quality improvement targets because this can reward groups that were performing poorly at baseline. However, on further reflection, physicians performing poorly in the first place have more work to catch up with other providers and thus the targets seem reasonable. Also, evaluating individual providers based on process measures may create selection bias. Providers will avoid patients who will not get a test done. There is a point at which the resources consumed are not worth the small gains in quality improvement and patients also share some of the responsibility. We were informed by Clinic staff that physicians are not trained to change patient behavior, physicians are trained in acute, not pro-active care.

#### **6.2 Improvement Strategy**

Marshfield Clinic's strategy for quality improvement is based on a six-sigma process improvement framework: define, measure, analyze, improve and control. Quality performance reports and BPMs to standardize care have been developed or are being developed to define the situation. Data is being collected to measure baseline quality and for analysis to determine any root causes of poor performance. Marshfield Clinic then improves performance through the development of practice tools and point-of-care decision support. Control is established through the development of the Storyboard for each BPM and through response plans. Marshfield Clinic

is working with MetaStar to develop strategies for quality measure improvement, specifically for those measures relating to adult immunization rates, mammogram rates, and A1C testing.

Marshfield Clinic has prioritized improving quality measures that would provide the greatest enhancement in patient care. Improvements to quality measures are incrementally more difficult to achieve as the performance rate gets higher.

### **6.3 Collection and Reporting**

Several of the PGP demonstration quality measures require manual chart abstraction (e.g., diabetic eye exams to verify a dilated eye exam), which is burdensome. Barriers to reaching the targets may exist due to patient factors such as non-compliance with treatment or system factors, such as lack of specialists or insurance barriers, as well as physician factors. Since the quality indicators are ambulatory-oriented, Marshfield Clinic has not asked or worked with local hospitals in reporting them.

## **SECTION 7 INFORMATION TECHNOLOGY**

### **7.1 Strategy**

Marshfield Clinic has historically had strong, unwavering commitment from its leaders to use computers for improving healthcare. The Clinic has been advanced in this area for many years and is thought to be “a step ahead of the industry” in information technology (IT). Approximately 3.5 percent of Marshfield Clinic’s budget is spent on IT, supporting 220 IT staff. Marshfield Clinic has recently added six FTEs for quality improvement and IT efforts, two of whom were added for the PGP demonstration.

Increased investments in IT have been of particular interest to the Security Health Plan and the Third Party Administrators of self-insured employers. Participation in the PGP demonstration has served as a catalyst in the implementation and acceleration of Marshfield Clinic’s IT strategic plan. In general, benefits from IT investment do not accrue under FFS Medicare. The PGP demonstration has aligned incentives so that there is now some return on investment in IT, making increased investment more favorable to the clinic.

Marshfield Clinic places an importance on developing IT systems in-house: “Built by physicians for physicians.” IT is strategic. The national leaders in healthcare IT use—e.g., Partners in Boston, Intermountain Health, Stanford—tend to develop in-house or control external vendors. The Clinic often develops core systems in-house and purchases ancillary systems from software vendors whenever necessary. In-house development lends flexibility to the systems and allows them to be tailored to Marshfield Clinic’s needs. In-house development also allows for the incorporation of physician input from over 700 physicians and increases physician buy-in and “ownership.” The disadvantage of an in-house system is that with input from over 700 individuals, there are sometimes conflicting opinions/directions. However, the lack of ability to modify external software can be frustrating.

The Clinic works closely on IT with St. Joseph’s hospital. Marshfield physicians may use their wireless tablets in the hospital.

Marshfield Clinic has sold some IT services externally, but most sales have been within its service area. Even with these sales, the Clinic believes that its IT efforts will differentiate its performance from its PGP comparison group.

### **7.2 Systems and Initiatives**

#### **7.2.1 Electronic Medical Record and Tablet Computers**

Marshfield Clinic has implemented an electronic medical record (EMR). The EMR’s first module was developed in 1985 and by 1994 all physicians were expected to use a computer for each patient encounter. The goal is that by 2007 there will be no paper medical records at Marshfield Clinic. The Clinic has included certain lab tests and other observations in a PreServ application within the EMR specifically due to the PGP demonstration requirement for these data elements. Tablet computers are the main tool to facilitate the use of the EMR. The tablet computer can be carried by physicians into every encounter and have been provided to over 550 physicians already. The EMR can be accessed by providers through their tablet PCs via a wireless link.

IT is able to submit reports from their EMR to several different organizations/agencies. Aside from the PGP demonstration, IT is currently involved in 10–15 projects requiring external reporting of quality measures. Some examples include the following:

- State of Wisconsin Initiatives (e.g., mammogram reporting)
- Security Health Plan (e.g., HEDIS<sup>®</sup>)
- State and national registries (e.g., birth defects, surgery, etc.)
- Provider initiatives (internal)
- Surveillance with CDC (e.g., immunization, WCHQ, 10 other projects)

The existence of an EMR has facilitated data collection for chart-based quality measures under the PGP demonstration. Marshfield Clinic is able to push data from their EMR into the abstraction tools developed by CMS' demonstration contractors. This avoids a lot of manual data entry from paper-based medical records. Some of the measures however, still require manual abstraction. Marshfield Clinic believes that the IT systems in place prior to the demonstration have eliminated some of the work that would otherwise be required under the demonstration, thus facilitating the completion of PGP demonstration requirements.

### **7.2.2 PreServ**

PreServ is a real-time, point-of-care physician reminder system developed by Marshfield Clinic. The system reminds providers of service due dates so that the proper service can be provided to patients at the right time. It also reminds providers of quality measures from HEDIS<sup>®</sup>, the PGP demonstration, and “homegrown” best practice models. The system captures services through the CPT billing data collected internally. Non-Marshfield Clinic services can be entered manually. The cost of developing the system was \$500,000.

### **7.2.3 Data Warehouse**

Marshfield Clinic's Data Warehouse (DW), established in 1998, is a data repository that is used for data analyses and reporting. All reports generated from the DW are updated nightly or weekly. The application therefore allows for timely pattern analyses of health outcomes including diagnoses, procedures and costs. Marshfield Clinic added lab values and other data to the DW due to their participation in the PGP demonstration. It can still be hard to get data on hospitalizations.

### **7.2.4 Other IT Systems and Initiatives**

Marshfield Clinic's IT group also supports patient registries for cancer and heart disease, decision support software and tracking systems. For example the Marshfield Enhanced Charting and Code Acquisition (MECCA) software allows for the tracking of patient drug interactions, medical histories, and allergies. With MECCA, providers are required to document and review data for each patient encounter.

Marshfield Clinic's care management team uses InformaCare<sup>®</sup>, decision support software that assists with the management of patient care. At this point, Marshfield Clinic has focused the software on heart failure patients; however, there are plans to expand the use of decision support software.



**APPENDIX A**  
**AGENDA FOR MARSHFIELD CLINIC SITE VISIT**

RTI Site Visit  
PGP Demonstration Evaluation by RTI

December 5, 2005

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|                  |   |
|------------------|---|
| 7:30–8:00 a.m.   | Evaluation and Site Visit Background  |
| 8:00–9:30 a.m.   | PGP History and Organizational Structure, Demonstration Participation, and Strategy |
| 9:30–11:00 a.m.  | Information Technology  |
| 11:00–12:00 p.m. | Provider Participation and Relations  |
| 12:00–1:00 p.m.  | Lunch   |
| 1:00–2:00 p.m.   | Quality Improvement   |
| 2:00–3:00 p.m.   | Patient Care Activities/Interventions to Improve Efficiency                         |
| 3:00–4:00 p.m.   | End of Day Wrap-up  |