THE BUSINESS CASE FOR DROP-IN GROUP MEDICAL APPOINTMENTS: A CASE STUDY OF LUTHER MIDELFORT MAYO SYSTEM

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FIELD REPORT

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CONTENTS

About the Authors iv

Acknowledgments iv

Executive Summary v

The DIGMA Model: Background 1

Summary 6

Luther Midelfort Mayo System 6

The DIGMA Model at Luther Midelfort 9

Discussion 22

Notes 26

Appendix A Diffusion and Replication Process

Appendix B1 Financial Analyses of "Ideal" DIMSA

Appendix B2 Financial Analyses of Pilot DIMSA

Appendix B3 Projected Costs of Fully Operational DIMSA

Appendix C DIMSA Communications Materials

Appendix D DIMSA Training Program Agenda

LIST OF FIGURES AND TABLES

Figure 1 Luther Midelfort Clinic Sites 7

Figure 2 Luther Midelfort Mayo Systems Organizational Chart 8

Figure 3 Behavioral Health DIMSA Prototype: Effect on Third-Day Appointment Availability 11

Table 1 Summary of DIMSA Primary Diffusion Sites 21

Table 2 DIMSA Project Timeline 25

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EXECUTIVE SUMMARY

Group medical appointments can increase access to physicians, improve patient satisfaction, and increase physician productivity. But in the experience of one Wisconsin health system that experimented with group sessions, the model is unprofitable and unpopular with most patients.

Drop-in Group Medical Appointments (DIGMAs) are visits with a physician that take place in a supportive group setting. The model was designed in 1996 as a means of improving access to care by enabling doctors to see more patients in the same amount of time. The model aims to improve quality outcomes by giving patients an extended medical appointment with their doctor within a group setting, where their psychological, behavioral, and educational health needs can be addressed (Exhibit A).

Background

These group medical visits are led by the patients' physician, who is teamed with a behavioral specialist or other health care professional. The patients often are grouped by a diagnosis, such as diabetes, asthma, or hypertension. A DIGMA group typically consists of 10 to 20 patients, three to six family members or other caregivers, the physician, and the behaviorist, who leads the group and promotes interaction.

Research literature on DIGMAs describes one case study in which four doctors improved their productivity by 256 percent in six weeks, and patients reported feeling privileged to spend more time with their doctors. However, the literature has demonstrated that DIGMAs do not generate financial savings. Insurers do not reimburse for group visits in most cases, and so the model is only feasible in a capitated setting where billing codes are irrelevant.

Project Design

Despite their mixed success, DIGMAs have been introduced at eight health care organizations nationwide.

Among them is the Luther Midelfort Mayo System, based in Eau Claire, Wisconsin. The system's multispecialty clinic has 170 doctors, and in 2000 attracted 676,857 patient visits. It is a health system that is moving away from capitated payments to fee-for-service, and provides an opportunity to evaluate DIGMA costs in a mixed-payer environment.

The clinic initiated several DIGMAs over a two-year period but abandoned the program in its fourth year. Satisfaction was high among participating patients and doctors.

But the program faced two barriers to success: recruitment of patients was difficult, and with the exception of mental health treatment, standard reimbursement and coding did not cover group visits.

The DIGMA model at Luther began in 1999 as a 90-minute group gathering for chronically ill behavioral health patients. This group initially was fairly easy to recruit because a psychiatrist can prescribe group therapy, avoiding the need to rely on voluntary recruitment to a group session.

The group started with seven or eight patients. But in time, the healthier patients reverted to seeing the doctor individually, while the DIGMA was attended by four chronically impaired patients who shared a common need to discuss the stress in their lives. The physician leading this DIGMA felt it was successful: it decreased emergency visits during times of crisis, improved his access to patients, and operated at a marginal loss that was acceptable given that patient care had improved. Reimbursement was not an issue because a current procedural terminology code exists for behavioral health group therapy.

In 2000, Luther expanded the DIGMA model to medical patients. It initiated six weekly groups in family care, neurology, and women's health. However, billing was a key issue. There is no specified CPT code for medical group visits, which were billed to insurers using an evaluation and management code. The hospital formed a team to work with insurers and Medicare on a billing mechanism for group visits.

Health Benefits

After 19 weeks, Luther evaluated the DIGMAs. The most successful groups were family care and women's health, which attracted an average of six or seven patients a session. In general, doctors found it difficult to recruit patients to the groups, but patients who participated were highly satisfied with the experience. Doctors thought the groups were particularly helpful for medical patients who had unmet psychosocial needs that affected their medical outcomes. These emotional needs rarely were met at one-on-one visits with their doctor.

Potential Savings and Costs

Using one method of analysis, Luther calculated the groups would need 14 patients to break even, but in fact they were averaging between 1.8 and 6.6 patients per group. Another method of analysis found that the actual revenue generated by 6.6 DIGMA patients was 165 percent lower than the comparable gross revenue generated by traditional

office practice. Luther concluded that 12 to 14 patients were needed to break even, but the DIGMAs were unable to sustain that minimum group size.

Billing and coding problems also proved insurmountable. Medicare and Medicaid comprised 30.7 percent of the payer mix in the new DIGMAs, but Medicare does not reimburse for group medical visits. Luther's appeal to Medicare officials to create an appropriate billing code was denied. The hospital submitted Medicaid claims with a code that specified "evaluation and management," accompanied by a letter of explanation about DIGMAs.

Policy Recommendations

The group appointment model failed to demonstrate financial viability, attract sufficient patient volume, improve health providers' productivity, or increase clinic capacity. However, participants felt that patients' psychosocial needs were well met by DIGMAs. The case study underscores the difficulty of managing chronic illness in a fee-for-service environment, where physicians are paid according to rigid billing codes.

Exhibit A. Group Success Factors

- A group facilitator is a necessary part of the team.
- Patient demand needs to exceed physician capacity to improve access.
- A physician is required to be a strong communicator.
- Single-topic DIGMAs are more successful at recruitment than multi-topic ones.
- Multi-topic DIGMAs are critical for primary care, but it is difficult to maintain a census for such groups.
- DIGMAs have unique clinical value by meeting different patient needs. Groups provide a psychosocial element of care that is missing from one-on-one appointments.
- Leading groups requires a set of skills that some physicians may not have, but can learn.

THE BUSINESS CASE FOR DROP-IN GROUP MEDICAL APPOINTMENTS: A CASE STUDY OF LUTHER MIDELFORT MAYO SYSTEM

The DIGMA Model: Background

Origin and Need for the DIGMA Model

The Drop-In Group Medical Appointments (DIGMA) model was developed and implemented by health psychologist Edward B. Noffsinger, Ph.D., in 1996 at Kaiser Permanente San Jose Medical Center. The literature on DIGMAs has been contributed by Noffsinger and colleagues[1–14] or has been a secondary description of their work.[15–21]

DIGMAs are medical appointments that take place in a supportive, interactive group setting. They were designed to apply existing resources to improve access to care by enabling physicians to see more patients in their panels. Group medical visits are led physicians, who team with behavioral specialists and/or other health professionals. The group visit approach incorporates aspects of a traditional one-on-one office visit (e.g., monitoring of vital signs, ordering tests, brief examinations, prescribing medications, documenting with medical records). It also creates opportunities to address patients' psychological, behavioral, and educational health needs, which can have a favorable effect on quality outcomes. According to Noffsinger and Scott, these "behavioral, health, and psychosocial issues which are known to drive such a large percentage of all medical visits [are] needs that typically cannot be addressed during the brief time span of an individual office visit."[7]

DIGMAs differ from other types of specialty physician or team-led patient groups, where the strategy is focused on providing high-risk patient populations with health education, self management concepts, and peer support, often in the context of a disease management program strategy.[7–9, 22–24] In these cases, patients typically are recruited from several physicians' panels, with the selection criteria based on same diagnosis or utilization patterns, and patients are expected to attend the group on a regular basis. In contrast, DIGMAs include patients only from a single physician's panel and the emphasis is on managing patient care and improving quality outcomes by increasing access to care. By leveraging physician's time, group visits create opportunities for patients to have an extended medical appointment with their own physician.

Structure and Types of DIGMAs

The DIGMA group typically consists of 10 to 20 patients, three to six family members or other caregivers, a behaviorist, and a physician. Recruitment of patients to the DIGMA occurs in three ways: 1) by physician invitation to patients during routine office visits; 2) by a scheduler telephoning or mailing an invitation to appropriate patients each week from the physician's panel or waiting list and inviting them to attend; and 3) by patients attending the group on an unscheduled basis (i.e., drop-in), when they have a medical need or question.[1, 3–5, 7, 9, 14]

Three types of DIGMAs have been described.[1, 5, 10] In the homogeneous model, patients are grouped by diagnosis. One week's meeting might focus on hypertension, the next on asthma, the next on diabetes, with the cycle repeating. In the heterogeneous model, all patients are invited to attend and any patient with any diagnosis can drop in. In a mixed model, group visits are focused each week on one of four major groupings—cardiopulmonary, weight management/diabetes, chronic pain, and gastrointestinal problems. However, patients may drop in to the group visit at any time.

Reimbursement policies for DIGMAs are unclear and are not specifically addressed in the Current Procedural Terminology (CPT) manual. The DIGMA model was developed at Kaiser and expanded to capitated medical groups, for which compensation concerns were minimized. However, analysts at Sutter Medical Foundation, which serves both capitated and fee-for-service enrollees, studied the reimbursement issue and decided to treat DIGMAs as regular patient visits. They used the criteria and codes used for individual visits. For example, history, physical exam, assessment, medical decision-making, and treatment plans that occurred in the DIGMA were documented in each patient chart and coded according to Current Procedural Terminology criteria. Standard procedures were then used to bill payers.[12]

Critical Success Factors in Deployment

Noffsinger's experience has yielded a number of critical planning activities to insure successful start-up of DIGMAs.[2, 4, 5, 6, 8, 9, 12, 14] These include:

- secure early and adequate administrative support, with an administrative champion who assumes primary responsibility for the entire DIGMA program, including its development and implementation throughout the medical facility
- choose willing physicians with large enough panels (not part-time physicians) to initiate the model

- secure patient acceptance through professional marketing materials and physician invitation
- assign a scheduler and medical assistant with dedicated time to the DIGMA
- choose a behavioral health professional for the DIGMA
- promote the program by budgeting for and developing attractive promotional materials
- provide adequate preparation and training to physicians and staff
- provide adequate space
- set and maintain adequate and consistent census levels

Maintaining census is the most critical success factor and ongoing challenge for DIGMAs.[2, 4, 8, 10–13] Two census levels are recommended, based on current and desired productivity measures. A *minimum census* is the number of patients consistently needed to leverage physician productivity to three or four times the average volume of patients the physician would normally see during a 90-minute clinic period. For example, if a physician normally sees between four and five patients individually in 90 minutes of clinic time, between 12 and 15 patients would be the minimum census desired to leverage the physician's time by at least 300 percent for the DIGMA. The "minimum census level" is established prior to implementation and is based on organizational cost analyses.[10] A *target census* is the ideal number of patients a physician would like to attend each DIGMA session to optimize productivity without compromising ability to deliver care, often 13 to 16 patients.

Evaluation of the DIGMA Model

The literature has focused on DIGMA planning and implementation processes. Evaluative information is limited primarily to anecdotal comments[3, 4, 6] and to a single case study.[13, 14]

Productivity. DIGMAs are designed to decrease waiting times for new and return appointments and to increase physician productivity. Early anecdotal reports identified an increase in physician productivity with DIGMAs[3, 6] and there are descriptive data from one case study with four physicians.[13]

In this case study, at the Sutter Medical Foundation (a large multispecialty health care organization in California serving both capitated and fee-for-service patients), the percent increase in physician productivity ranged from 202 to 311 percent. Across six

weeks of study, there was an overall 256 percent average increase in physician productivity. Among the four physicians, an average of 42 patients per week were seen in the 90-minute DIGMAs (range 9.5 to 14 patients).

Financial Benefits. The literature has focused on implementing DIGMAs with existing resources within capitated health care organizations, and initial implementation efforts have been minimally concerned with compensation issues. Nevertheless, by increasing access and physician productivity, the major outcome expected is a decrease in organizational personnel costs. Because DIGMAs do not focus on high-utilizing, high-risk patients, it is not expected that they will contribute to cost reduction by reducing utilization of emergency room and hospital services. While there are no studies that examine the financial consequences of implementing the DIGMA model, Noffsinger and Atkins postulate that financial benefits to an organization may be realized in several ways:[14]

- improved productivity, efficiency, and access
- decrease in health care costs through closer patient monitoring and earlier medical intervention
- improved retention of patients
- training high-utilizers to use the system more appropriately
- increased physician professional satisfaction leading to reduction of staff turnover
- reduction of malpractice risk
- increase in positive public relations and larger market share

In attempting to quantify cost savings, Noffsinger and Atkins projected expected financial benefits of a DIGMA program. Their estimates are based on a number of assumptions including:

- establishing 18 new DIGMAs each year
- conducting one 90-minute DIGMA weekly per physician
- increasing primary physician productivity by 300 percent and specialty physician by 400 percent
- replacing office visits with DIGMA visits
- realizing a yearly average of 1.4 full time equivalents in total savings

In this scenario, there is a net loss of $133,000 in the first operational year with 18 weekly DIGMAs, but savings accrue in subsequent years. In Year 2 with 36 weekly DIGMAs, there is a net savings of $122,000. Savings increase to $632,000 in Year 4 with 72 weekly DIGMAs and to $1,397,000 in Year 7 with 126 weekly DIGMAs.

Physician and Patient Satisfaction. The literature has focused on describing the benefits of DIGMAs to physicians and patients. While no formal studies have been published on physician or patient satisfaction, there are several anecdotal reports available from patients and participating physicians[3, 4, 6, 13] and one survey on patient satisfaction.[13]

Physicians have been quoted as stating their professional satisfaction came from increased efficiency; improved patient–physician relationships; having more time with patients; being better able to meet patient's psychosocial needs, such as depression and stress; as well as their medical needs; noting observable changes in patient behavior and thinking; and having more compliant patients. They noted that with easier access there was less demand for "work-ins" (e.g., patients without appointments needing to be seen on any given day for acute care) and fewer urgent phone calls. One physician cautioned that group visits did not work well for acutely ill or "sicker" patients, who may require a thorough examination and an individual visit. Physicians also have reported personal satisfaction from trying something new and different; having more personal time, and feeling less pressured to meet productivity standards.

The Sutter Medical Foundation case study conducted a survey on patient satisfaction with DIGMAs.[13] The survey contained seven questions on satisfaction, which were scored on a five-point Likert scale. It was completed by 212 patients who attended DIGMAs led by one of four physicians. Results yielded an overall score of 4.67, indicating that the patients were highly satisfied. There were no comparison data from patients attending physicians' usual clinics. Anecdotally, patients reported feeling privileged to spend more time with their doctor and benefited from group support by sharing similar experiences.

Because of increased interactions between patients and their physicians, Noffsinger and Atkins postulated that DIGMAs would lead to increased physician and patient satisfaction and thus, in turn, to increased physician and patient retention.[12] There are no data to support this possible outcome.

Patient Outcomes. There are no quantitative data describing the effect of DIGMAs on patient outcomes. Expected patient benefits described in the literature include increased compliance and earlier detection and intervention with medical problems.[3, 6]

Summary

The literature on DIGMAs has described the concept and its implementation as well as the potential of the model to increase physician productivity and reduce costs. There has been no analysis of organizational financial data to identify the impact of the model on costs or on quality of care. In spite of the lack of demonstrated financial savings, DIGMAs have been introduced into a number of health care organizations, including Kaiser Permanente Clinics nationally, Sutter Medical Group in Sacramento, Fallon Clinic in Massachusetts, Henry Ford Health Care in Detroit, Geisinger Lake Scranton in Pennsylvania, Palo Alto Medical Clinic and Stanford Medical Center in California, and Luther Midelfort Mayo System in Wisconsin.

This case study describes the implementation of DIGMAs at Luther Midelfort. It explores the financial impact of group visits on the organization, compares possible financial impacts across types of group visits, and addresses the question of whether the strategy will create a sustainable financial advantage for Luther Midelfort. As the health care system moves away from capitation toward fee-for-service reimbursement, Luther Midelfort provides a specific opportunity to evaluate costs in a system that serves capitated, indemnity, and private paying patients.

Luther Midelfort Mayo System

The Organization

Luther Midelfort, in Eau Claire, Wisconsin, is a physician-led integrated health care system that merged with the Mayo Health System in 1992. It consists of Luther Hospital, a 310-bed acute care facility with approximately 9,200 yearly admissions, and Midelfort Clinic, with a network of community-based providers throughout west-central Wisconsin. Luther Midelfort entities also include Lehman Drug and Northwest Wisconsin HomeCare.

Luther Midelfort Clinic is a multispecialty clinic of 170 physicians and support staff who provide a full range of family care and more than 40 specialty and subspecialty health care services for patients in the Chippewa Valley. The three primary sites are in Eau Claire and Chippewa Falls, and there are nine affiliate clinics in surrounding rural communities that concentrate on primary care (Figure 1). In 2000, clinic visits numbered 676,857.

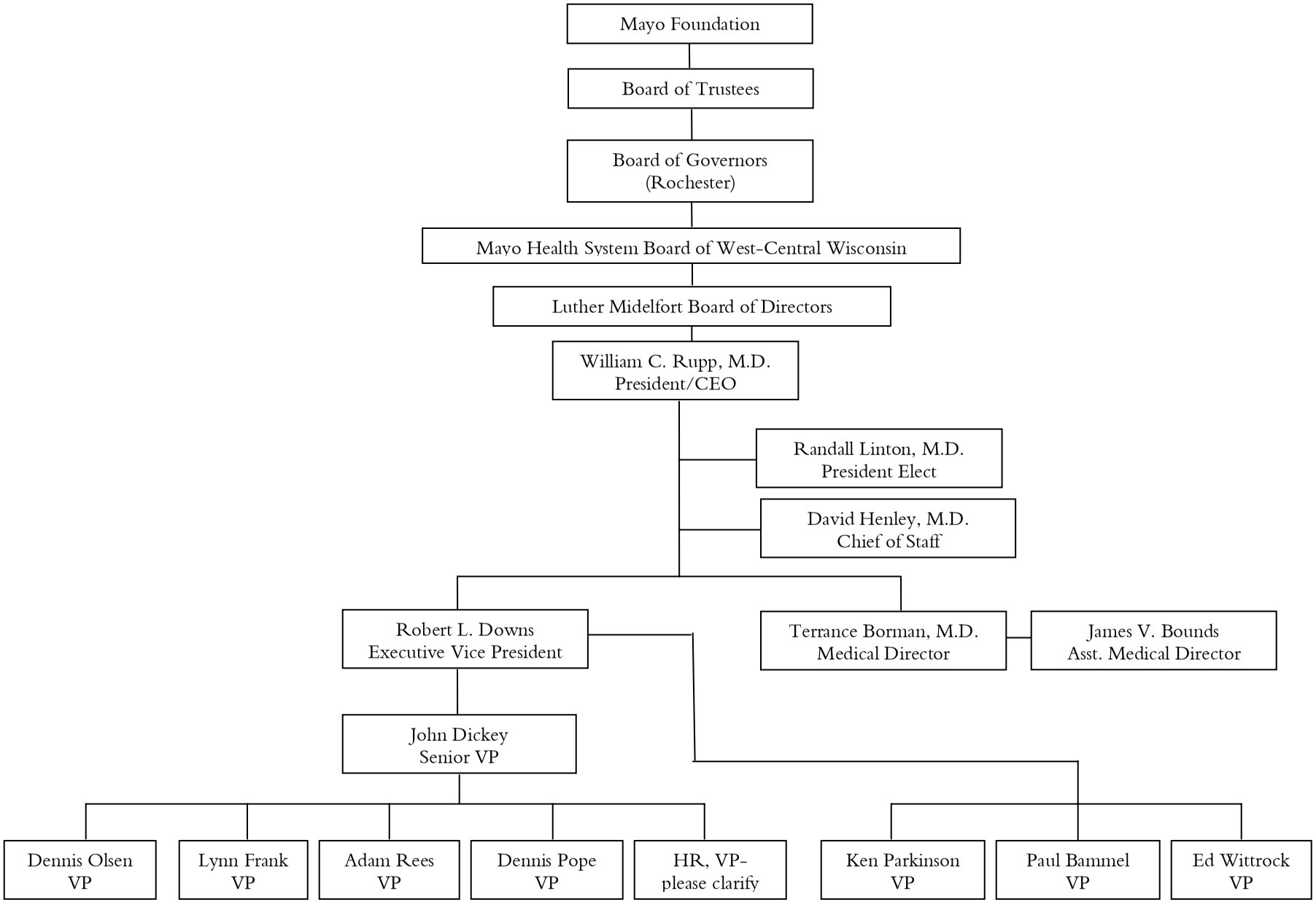
Figure 1. Luther Midelfort Clinic Sites

Source: Luther-Midelfort website, http://www.mayohealthsystem.org.

The market area covers approximately 3,300 square miles with a population of over 232,000. This population is predominantly white (97 percent) with a median 2.5 person household income of approximately $35,000.[25] More than two-thirds of families own their homes and approximately 11 percent of the population is below poverty.

There is a highly competitive health care marketplace in west-central Wisconsin, with increasing competition between Luther Midelfort and Marshfield Clinic/Marshfield Health Plan. The Marshfield Clinic–Eau Claire Center has grown substantially since 1994. This growth includes construction of a 90,000-square-foot state-of-the-art facility that opened in 1999, where care is provided in 27 specialty areas.[26]

Figure 2. Luther Midelfort Mayo Systems Organizational Chart



Source: Luther Midelfort.

Organizational Quality Improvement. Luther Midelfort has a strong commitment to quality improvement and the organization has both a designated change agent champion, Dr. Roger Resar, and a process specialist, Colleen Skold, who together lead process improvement activities under the direction of vice president for administration, Adam Rees. Resar and Skold describe the organization as "open to tests of change." Rees describes rapid cycle improvement, rather than administrative planning, as appropriate for smaller projects, such as the Drop-In Group Medical Appointments trial, that do not involve the entire system. This strategy requires permission of the "local" people, those closest to the process, but it does not require administrative approval or budget allocation. Communication and feedback to leadership occurs through weekly meetings of the change agent champion with the CEO and medical director. Reports are then forwarded to the Operations Committee on a periodic basis. The CEO uses the recommendations from the Operations Committee for decision-making.

Having had exposure to Noffsinger and Scott through a collaborative learning project sponsored by the Institute for Healthcare Improvement (IHI), in 1998, the behavioral health department chair, Dr. Robert Peck, decided to explore the DIGMA model as an alternative to one-to-one office visits. At the same time, the organization initiated other quality improvement prototype projects as part of an overall redesign of their care system. Open access, same-day appointment scheduling for managing patient flow, was undertaken initially at Chippewa Falls Primary Care Clinic and the Eau Claire Behavioral Health Department. Dr. Resar subsequently recruited individual physicians in the Eau Claire nephrology, internal medicine, pulmonary, and neurology clinics to work with open access. In evaluating the results of the DIGMA model, it is important to recognize that the system was driving two separate access initiatives simultaneously, open access and DIGMAs.

The DIGMA Model at Luther Midelfort

In the Luther Midelfort system, DIGMAs are known as DIMSAs, Drop-In Medical Shared Appointments. It was the DIMSA project that led the organization to identify and document a process for testing new health care models. The Diffusion and Replication Process is a seven-step process (Appendix A). It illustrates how a prototype site is replicated at selected "diffusion sites" within the organization, and how financial, clinical, and staff and patient satisfaction data are generated to build a business case. Leadership then reviews these data and makes a decision about continuing the project. If continued, the project prioritization is determined based on strategic goals and resources are allocated.

Interviews for this case study were conducted in September and October of 2001.

Finally, further replication becomes a leadership responsibility and secondary diffusion sites are selected.

Step 1: DIMSA Prototype Site

The chair of behavioral health, Dr. Peck, was first introduced to the group visit concept in 1998 at IHI, where it was presented as a model for chronic disease self management. Subsequently, Dr. Peck read the DIGMA articles published in *Group Practice Journal*. He immediately identified the value of DIGMA primarily as a solution to the long wait times for appointments in his practice. He also viewed DIGMAs as a natural match with his skill set as a psychiatrist and an extension of group therapy, a known successful treatment method that is different from a typical one-to-one visit. (See Table 2 for DIMSA Project Timeline.)

Dr. Peck set up the first DIMSA in July 1999, a 90-minute weekly group for a mixed group of patients with depression, anxiety, or bipolar disease, including patients who were seriously ill and those who were less impaired. The patients' physician and a co-leader conducted the DIMSA. As cited in the literature, two key (and related) success factors for DIMSAs are census and reimbursement.

The behavioral health DIMSA was initially successful at recruitment. Dr. Peck believed there was some interest by patients in experiencing a new method of treatment and in having more time with a physician. Behavioral health patients often view groups as a preferred way of interacting, and Dr. Peck estimated that about 20 percent of his patients were seeking a group experience. Recruitment in Behavioral Health is also straightforward because the psychiatrist can "prescribe" group therapy and not rely on clinic staff recruitment or patient willingness to attend.

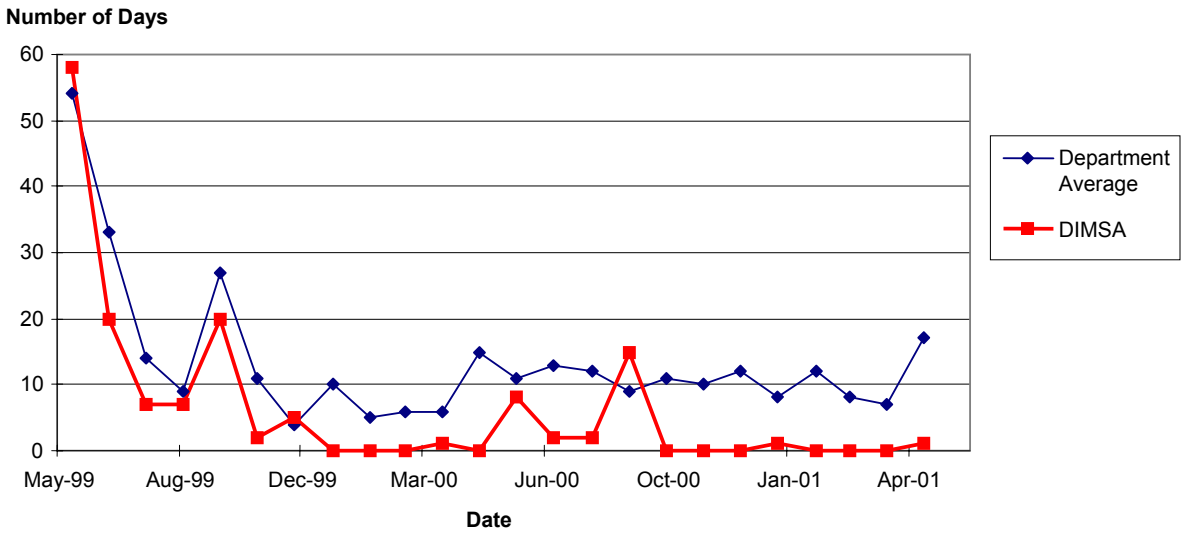
Initially, the behavioral health DIMSAs had a census of seven to eight patients, the target level for Dr. Peck. Over time, the census decreased to an average of four patients, and the constituency of the group changed. Patients who continued to attend the group were the more chronically impaired, who wanted to talk about the stress in their lives. The less-ill patients stated that the groups "were too intense for them" and returned to seeing their physicians individually. Eventually, the behavioral health DIMSA was conducted with Dr. Peck as the solo physician leader, became integrated into his practice, and primarily served a cluster of chronically ill behavioral patients. Dr. Peck believed that group visits were an important treatment for these patients and, in combination with individual visits, that they provided better patient care. Thus, he identified a quality improvement benefit associated with the DIMSAs.

Dr. Peck believed his practice benefited in three ways. First, overall success of the prototype behavioral health DIMSA was measured by improvement in appointment access for the DIMSA physician. When the DIMSA began in July 1999, Dr. Peck's third-available appointment was 20 to 58 days (Figure 3). Luther Midelfort had established a stretch target for the third-available appointment of 0 to 1 days. By January 2000, the third-available DIMSA appointment had decreased to the target level and remained in the target range, except when Dr. Peck was away for vacations or meetings. The third-available appointment in July 1999 for the department as a whole was 33 to 55 days. In January 2000, there was an initial drop in departmental third-available appointments to nine days, as the department focused on access issues. However, from February to May 2001, the department's third-available appointment remained stable, at 10.1 days on average.

Second, Dr. Peck believed both that both access and staff stress levels were improved by a decrease in emergency visits and crisis phone calls from seriously ill patients. The chronic behavioral patients were high-utilizers, and the DIMSA not only allowed better access for these patients in times of crises, but also better addressed their crises in the group setting, thus decreasing the need for individual visits.

Figure 3. Behavioral Health DIMSA Prototype: Effect on Third-Day Appointment Availability

Average Number of Days Until 3rd-Available Appointment



Source: R. Peck, Luther Midelfort Mayo System.

Finally, even with a census of four patients, there was minimal financial drain on the department. The literature suggests that a minimum of three times the average number of patients seen individually in 90 minutes by a physician is required for financial viability

of group visits. This is not the case in behavioral health, however, where group therapy is an accepted treatment modality and the Current Procedural Terminology code and billing mechanisms are in place for reimbursement. At Luther Midelfort, a behavioral health medical management visit was billed at $68 for 15 minutes and a group visit was billed at $59 for 60 minutes. Dr. Peck saw an average of 2.5 patients individually in 90 minutes with a billing of $408. In order to break even, the group census required was 4.6 patients. Dr. Peck believed that he was delivering better care to the chronically ill patients in the DIMSA and that the marginal loss was acceptable.

Step 2: Primary Diffusion Sites

Dr. Peck encouraged Dr. Resar and Colleen Skold to consider the DIMSA concept for medical patients. After reviewing Dr. Peck's experience and the DIGMA literature, these leaders identified the value of the DIMSA as meeting patients' medical and psychosocial needs at the same time. At this point, Resar and Skold became the organizational DIMSA champions and Dr. Peck, as the initiator of the prototype site, became an expert consultant to the diffusion site implementation. This was important not only to preserve physician time, but also to avoid having DIMSAs regarded as a behavioral health intervention.

Addressing patient's psychosocial needs was the primary driver for choosing the DIMSA model for medical patients. The champions believed that office visits were primarily designed for acute care, whereas group visits would be useful for the most time-consuming patients with the greatest psychosocial needs. Improving access was a secondary consideration for two reasons. First, access was not a major problem. Second, there was a parallel initiative in process for improving access by adopting the same-day appointment model.

The diffusion sites were chosen on the basis of physician willingness to participate. The concept was presented to 180 physicians. Of these, seven physicians attended an orientation and six agreed to participate. In November 1999, with Dr. Noffsinger (developer of the Kaiser DIGMA model) as a consultant, Luther Midelfort began to initiate a DIMSA program with six projects. DIMSA planning activities included selecting and training interested physicians and behaviorists, and developing and distributing promotional and recruiting materials. For additional training, Dr. Noffsinger returned in January 2000 to conduct groups with the physicians and facilitators. Six weekly DIMSA groups were initiated in January 2000—three in family care, two in neurology, and one in women's health. The groups met for 90 minutes, were led by a physician and behaviorist facilitator, and included a nurse, scheduler, and manager.

During the planning period, it was decided to use an evaluation and management code (99212) for billing purposes, as there was no specified code for medical group visits. While invoices to government funders were not submitted, invoices to other carriers were submitted as usual. A team was designated to begin working with insurers and the Mayo Foundation to identify appropriate billing procedures.

Step 3: Business Case Building

The initial four-week DIMSA process evaluation identified challenges to recruiting and maintaining census and to system routines. Difficulty in filling the groups, related to system barriers in recruiting as well as to snowstorms contributing to "no-shows," resulted in only a 15 percent increase in productivity. As stated by the process specialist, Colleen Skold, "Our system is more designed to protect individual styles of care than to promote a team approach. Our processes need to change significantly with this proactive approach to attracting patients to a new service requiring coordination and communication on an ongoing basis. . . . There were problems in communication regarding documentation and feelings of frustration with the amount of time and process change required [in] recruiting patients."

Nevertheless, documented remarks by physicians and facilitators reflected high satisfaction with DIMSAs. Physicians commented: "I get a chance to really know my patients," and "I finally get a chance to get some feedback on what I'm telling my patients." Facilitators said: "Patients help each other in ways we can never help" and "Biggest shot in the arm I've had in my practice recently."

During this four-week period, patients were surveyed on two measures of satisfaction. Patients were asked "How well were your medical needs met during the medical visit?" On a 5-point scale, where 1=very well and 5=not very well, 90 percent of patients rated the answer as 1 or 2. Patients were also asked "Would you recommend this group to a friend or family member?" On a 5-point scale, where 1=always and 5=never, 95 percent of patients rated the answer as 1 or 2.

After 19 weeks of experience with DIMSAs, Luther Midelfort conducted additional evaluation using productivity and financial modeling, eliciting physician and facilitator response, and identifying group success factors.

1. Volume, Revenue, and Billing

In May 2000, using 19 weeks of pilot data, the average group size ranged from 1.8 to 6.6 patients across the six DIMSAs. When examined by department, women's health and one

family practice DIMSA had the highest average of group patients (6.6 each) and neurology had the lowest (1.8). Financial analyses using the experience of the most successful pilot DIMSA were done in three ways. These analyses compare revenue production between usual visits and DIMSA visits. Underestimated costs do not include consultant start-up costs of $20,000 (training and other start-up costs are not available). This analysis assumed that all DIMSA patient services were reimbursed at the same rate, regardless of the payer.

In the first analysis, conducted in May 2000, an *ideal* DIMSA of 12 patients a session, billed at a service code yielding $59 per patient, was compared with the historical revenue production of the DIMSA physician and therapist for a two-hour period. In this scenario, the combined physician and therapist traditional practice revenue was 16.7 percent higher than DIMSA revenue (Appendix B1). The analysis suggested that 14 patients were needed to break even.

A second analysis, completed in June 2000, compared the *pilot* DIMSA results to the expected office revenue of the physician and therapist combined, using 2.5 hours, the actual time required to prepare for and conduct a DIMSA (Appendix B2). In this case, comparing the actual revenue of 6.6 DIMSA patients, billed at $59 for the CPT service code (99212), with the historical office physician and therapist revenue found that traditional office practice gross revenue was 165 percent higher than DIMSA gross revenue.

A third scenario, completed in July 2000 at the request of Dr. Resar, projected costs when the DIMSA program was fully operational and volume would support one behavioral therapist dedicated to facilitating DIMSAs throughout the clinic (Appendix B3). In this last analysis, the negative net impact is considerably less. It ranged from a loss of 15.7 percent with a group size of seven to less than one percent with a group size of 12, and a gain of 5.7 percent with a group size of 14 patients.

The organization did not attempt any further cost analysis "Because the numbers were so far off," according to Adam Rees. Factoring in other components such as collections, conference room space, and opportunity costs would only have magnified the negative results. It was clear to administrators that 12 to 14 patients were necessary to break even, and the low and inconsistent enrollment across all DIMSAs suggested that this was not obtainable.

During the pilot period, January through March 2000, the Business Office decided not to submit claims to Medicare and Medicaid regulatory carriers because CPT did not have an appropriate billing code that represented this new DIMSA service. Medicare and

Medicaid comprised 30.7 percent of the DIMSA payer mix in the pilot. The Business Office consulted with the American Medical Association (AMA) to determine what steps could be taken for DIMSA claims submission for Medicare and Medicaid. The AMA advised utilizing the unlisted evaluation and management code (99499); however, the Medicare carrier advised that this code was not appropriate. Subsequently, in August 2001, Medicare formally stated that it would only reimburse for a "face-to-face encounter between one patient and one physician."

In June 2000, the Luther Midelfort Business Office submitted all held Medicaid claims using the unlisted evaluation and management CPT (99499). These claims were reimbursed at a higher rate than the standard evaluation and management code. They continued to submit the Medicaid claims using CPT 99499, with an accompanying letter explaining the DIMSA service.

On June 21, 2000, Luther Midelfort submitted a Coding Request Change to the AMA for creating a new DIMSA CPT code. Assistance was provided by Mayo Foundation Government Relations in completing the application. In March 2001, the AMA notified Luther Midelfort that the request required further review and would be considered in the CPT cycle 2003. As part of their evaluation of the Luther Midelfort request, the AMA and Health Care Financing Administration CPT reviewers observed a "group diabetic medical meeting" at another institution, which was not using the DIMSA model. The reviewers of this meeting "expressed concern over the appropriateness of the use of staff's time and importance of each team member's role. [A HCFA representative] noted that during the group meeting a lecture was given to educate the group on diabetic foot care." The Luther Midelfort DIMSA champions did not believe that the diabetic group observed by the reviewers was representative of the DIMSA model.

2. Physician Experience

One physician who started a single-topic DIMSA for fibromyalgia patients became interested in the strategy. This physician was not experiencing a long wait for return appointments; nevertheless, he initially recruited a group of nine DIMSA patients. At the same time the DIMSA was started, the department was moving toward open access. Once open access was established, it became difficult to recruit patients for the DIMSA. As this physician said, "When you ask a patient if they want to see me with a group next Thursday or today, they will choose today."

This physician observed that the DIMSA is an excellent strategy to use in combination with open access to reduce the initial backlog of appointments, but once

open access is functional and patients can be seen in a timely manner, the value of the DIMSA decreases both for the provider organization and the patient. The physician also observed that, with his DIMSA, because of the chronic nature of the disease and the need for patients to share experiences, the same patients returned each time. While this DIMSA terminated because of difficult recruitment, it was viewed as an important contribution to the overall quality of care for these patients.

In women's health, the participation in the DIMSA project was consistent with the physician's year-long desire to begin an educational group for patients using hormone replacement therapy. In this case, there was no access problem with her panel, but the physician was repeating the same things to patients and believed time constraints of the individual visit prevented adequate discussion with patients. The women's health DIMSA was jointly led by the physician and a behavioral health provider and staffed with a registered nurse. The physician believed that the DIMSA functioned best with nine patients. In this DIMSA, physical examinations were not available, but prescriptions and tests were ordered. As this physician was a gynecology endocrine specialist receiving referrals from the community, the DIMSA was used to see patients for the first time while they awaited a new patient consultation visit. Response from the referring community primary care physicians indicated satisfaction with the education-focused DIMSA.

This DIMSA also experienced difficulty maintaining patient volume. There were four issues identified by the physician. First, the community was conservative and patients were reluctant to agree to the DIMSA and participate in a discussion of sexual matters. Once they attended, however, this became a non-issue for all patients. Second, there were not many referrals from the physician's partners, indicating an unwillingness to share patients. Finally, even with over-enrollment and a call to patients the day prior to DIMSA, no-shows remained a problem. It was not expected that the DIMSA would be financially viable because of the need to exclude Medicare patients and to cap the DIMSA census to nine or 10 patients. The number of patients attending ranged three to 10, with an average of five to six patients.

One challenge to conducting the DIMSA for physicians was the recording of medical information. In order to avoid constant "shuffling of charts" during the group, two physicians designed forms that could be used to record during the group and to dictate progress notes after the group. In women's health, the patient record was reviewed by the physician prior to the meeting. A form was started with pertinent information. At the DIMSA visit, the patient was asked the reason for the visit and their blood pressure

was recorded. When transcription occurred, the dictation contained both patient findings and a summary of all the topics discussed at the DIMSA.

3. Staff Impressions

In spite of the difficulty of sustaining volume, the DIMSAs were regarded by physicians and facilitators as successful, especially for medical patients with psychosocial issues. Both physicians and facilitators believed DIMSAs created a therapeutic milieu with good patient outcomes. They cited specific individual success cases where patients became aware of how psychosocial issues affected their medical outcomes. Both Dr. Resar and Colleen Skold believed the group format was effective for dealing with unmet patient psychosocial needs and suggested that group visits should be targeted at the "toughest patients—those [who are] most time consuming and have the greatest psychosocial needs."

Physicians and facilitators also believed that future medical visits would decrease as patients' psychosocial needs were uncovered and addressed in the groups. According to one physician, it was an "unburdening for physicians when patients unburdened their lives." Difficult patient life situations were often the reason for crisis phone calls to the physician, who often did not have the information to respond adequately to their patients. During the DIMSA, group leaders attempted to convey to patients the idea that there was no separation between physical and emotional care. Many who conducted the groups believed that initial psychosocial investment would enable patients to better care for themselves, medical outcomes would improve, and outpatient visits would be reduced. Whereas staff started out thinking that seeing more patients would generate greater revenue, they now believed that DIMSAs were a strategy for better care. They saw the only constraint as the reimbursement system.

While most participating physicians were hesitant to initiate DIMSAs, they expressed satisfaction with the outcome. The comfort of the physician in the new role was important. One respondent commented that the groups always went better than physicians expected, and the subsequent feelings of relief and accomplishment led to satisfaction. Dr. Resar and Colleen Skold believed that, if physicians carried the DIMSA beyond the first group, it would mean more to their practice than anything else they had done.

Overall, physicians were not experiencing the problems with appointment access for which the DIMSA strategy was designed. Nevertheless, they all agreed that the DIMSA process was personally rewarding and that some form of group care was important for meeting patient psychosocial and informational needs.

4. Group Success Factors

The DIMSA champions believed the partnership between the physician and facilitator was essential to creating successful groups. The "best" groups allowed the facilitator, mostly behavioral health staff, to lead the group with the physician acting as the resource. The behaviorist was needed to ask the right questions and promote group interaction.

While patients came initially to the DIMSA because of their relationship with their physician, an energetic process from the front office staff was required to maintain the DIMSA. It was necessary to identify patients who would benefit most from the DIMSA and proactively invite them to attend and remind them the day before the scheduled DIMSA. The physician would talk to patients about the DIMSA at their regular visits, set up their next appointments for a DIMSA, send home brochures, and describe to them how a group meeting could be helpful to other family members.

The two most successful groups in terms of attendance were family care, which covered many topics, and women's health, which covered only one topic—hormone replacement therapy. However, because it was easier to schedule and recruit for the single-topic DIMSA, Luther Midelfort administration encouraged the latter.

Step 4: Leadership Review

In October 1999, 10 months after primary diffusion DIMSAs were initiated, financial data and clinical impressions were reviewed by the DIMSA team. Their observations, conclusions, and recommendations were then forwarded to the Operations Committee by Adam Rees, vice president for administration. The team's observations included:

- A group facilitator is a necessary part of the team.
- Patient demand needs to exceed physician capacity to improve access.
- A physician is required to be a strong communicator.
- There must be synergy among physician, patient, and therapist.
- The physician is the conductor of the process.
- Single-topic DIMSAs are more successful at recruitment than multi-topic DIMSAs because they are more focused.
- Multi-topic DIMSAs are critical for primary care, but it is difficult to maintain census.

The conclusions reached by the group and forwarded to the Operations Committee were:

- DIMSAs have unique clinical value by meeting different patient needs. Groups provide a psychosocial element of care that is missing from one-on-one appointments.
- Leading groups requires a set of skills that some physicians may not have, but can learn.
- The therapist is an important element for a successful group.
- The two major hurdles were government payer issues and recruitment.
- Even if all players are reimbursed for group appointments, revenue would probably not be sufficient to support DIMSAs.
- The break-even point for the DIMSA is 12 to 14 patients for two hours, and that level of participation is difficult to achieve.
- Research suggested that patient satisfaction and related clinical data were positive for groups, but the likelihood of lowering health care costs to the organization was unlikely.

The team's three recommendations to the Operations Committee were:

- If a committed physician is willing to develop the necessary skills to manage group care, a DIMSA should be offered.
- Efforts should be made to develop groups with an average size of 12 patients. This will involve marketing.
- Single topic DIMSAs should be encouraged over multi-topic groups.

Step 5: Integration with Strategic Goals

The Operations Committee met in November 2000 and accepted these recommendations. The Committee responded that it would support the project insofar as it worked to improve efficiency, decreased cost per unit of service, and increased panel size. Committee members also requested that the DIMSA program focus on increasing process efficiencies, including increasing group size, and terminating non-efficient groups. They also supported additional physician training as well as a DIMSA marketing and communication plan. A six-month reevaluation was requested by the Operations Committee.

Step 6: Resources Assigned

During the subsequent six months, all recommendations of the Operations Committee were carried out. Standard materials including brochures, posters, and signs were developed to streamline the communication process and ensure consistent emphasis on key points and benefits (Appendix C). A four-hour training program was held to increase physician and facilitator DIMSA skills (Appendix D). A packet of reading materials was distributed to participants that included journal articles, an evaluation of the group visit trial, brochures, and recruitment guidelines.

In addition to the prototype DIMSA in behavioral health, DIMSAs continued in Eau Claire on family care, women's health, and neurology and in Chippewa Falls on family care. The behavioral health, Eau Claire family health, and the women's health DIMSAs met regularly, while the Chippewa Falls DIMSA and neurology DIMSAs met monthly or less often.

Step 7: Secondary Diffusion Sites

The DIMSA program was reviewed by administration again in July 2001, 18 months after start-up, and recommendations were made to the Operations Committee. At this time, there were four primary diffusion DIMSAs operational. The review found that the best-performing DIMSAs, family care and women's health, averaged six to seven patients per session. The neurology DIMSA averaged five patients and met five times in all, while a new neurology DIMSA met once with three patients attending. Across all groups, the revenue loss on Medicare DIMSA patients was $6,600 as of May 2001.

The data showed no increase in volume and suggested that the market could not support a sustainable group enrollment of the 12 to 14 patients required to break-even. Four options were forwarded to the president/CEO for consideration: 1) terminate the DIMSA program as volumes remained poor and there was no reimbursement for Medicare patients, 2) continue groups but exclude Medicare patients, 3) continue DIMSA for all patients and write off Medicare billings, 4) notify Medicare of intent and start billing; maintain DIMSA as a limited tool for a specific Robert Wood Johnson Foundation grant.

Final decisions for the DIMSA project by the Operations Committee in August 2001 included:

- post and write off Medicare patient services
- inform Medicare patients that they must pay out-of-pocket to attend DIMSAs

- terminate cost-inefficient groups
- bring viable groups to 12 patients per session in order to be cost efficient
- put a moratorium on new DIMSAs

Thus, the DIMSA project was stopped from implementing secondary diffusion sites in August 2001. Those DIMSAs continuing were no longer open to Medicare patients (Table 1).

Table 1. Summary of DIMSA Primary Diffusion Sites

Physician	Specialty	Topic	Start	Stop	Reason for Stopping
A	Behavioral Health	Chronic Patients	July 1999	Ongoing	
B	Women's Health	Hormone Replacement	January 2000	Ongoing	
C	Family Care*	Multi-Topic	January 2000	April 2000	Low Volume
D	Neurology	Fibromyalgia	January 2000	April 2000	Low Volume
E	Family Care	Multi-Topic	January 2000	May 2000	Low Volume
F	Neurology	Multi-Topic	January 2000	October 2000	Doctor moved
G	Family Care	Multi-Topic	January 2000	July 2001	Reimbursement
H	Family Care*	Menopause	August 2000	August 2001	Low Volume & Reimbursement
I	Neurology	Multi-Topic	April 2001	June 2001	Practice had no delays for appointments

* Chippewa Falls Clinic. Source: Authors' analysis.

Summary of DIMSA Implementation Issues. In spite of careful planning and implementation using a consultant as well as drawing on the experience of others described in the literature, the DIMSA model failed to demonstrate financial viability at Luther Midelfort. Regardless, the DIMSA champions believed the strategy provided better patient care because patients' psychosocial and informational needs were well met in the groups and patient outcomes were positively affected. In response, these practitioners continued to support the concept and to generate ideas for preserving the program. To increase volume it was suggested that the physician recommend (i.e., prescribe) that patients attend DIMSAs because they provide better care, rather than giving patients a choice to attend through an invitation. The team also proposed a redesign, with DIMSAs focused on a single topic, and suggested that the model could be adapted under different financial circumstances. One option suggested was for nurse-lead or nurse and facilitator co-lead self-management/support groups in specialty areas, such as congestive heart

failure, allergy, rheumatoid arthritis and other chronic diseases—a strategy similar to the Scott patient group model.[7–9, 22–24] In this model, disease-specific groups are convened from high-risk patients across physician panels on an as-needed basis, with the emphasis on a curriculum presentation.

In an attempt to redress coding and billing issues, the project team discussed coding medical patient visits under a psychiatric diagnosis (e.g., adjustment disorder) to enable billing for counseling. However, the acceptability of this diagnosis to patients was challenged by the project team. The DIMSA implementation team also stated it would continue to pursue the reimbursement issues with Medicare and resubmit the CPT code to the American Medical Association.

An argument put forward by the DIMSA proponents was that DIMSAs had the potential to increase primary care panel sizes, resulting in additional patients available to specialists and potentially generating profits for the organization. Based on the project's experience, as well as the predominant need to contain costs, Rees did not believe this was a practical argument. Starting with the initial four-week review through the extended pilot, Rees identified the critical financial issue as one of inadequate volume. He did not believe there was enough access pressure to drive patients to use a DIMSA over a one-to-one visit with their physician. Overall, he viewed the DIMSA pilot project as low cost, but high profile, because of the committed and energetic internal DIMSA champions.

From the vice president's perspective, the DIMSA pilot project did not support the CEO's goals of efficiency, decreased cost, and increased panel size. Although there was information and promotion about the Luther Midelfort DIMSA project in Mayo newsletters, the DIMSA concept did not migrate to other Mayo sites. A second Mayo clinic, independently considering DIMSAs, deferred the idea because of the Medicare reimbursement issues. Luther Midelfort administrators believed, however, that even if the Medicare reimbursement issues were resolved, there was not a business case for the group visits.

Discussion

Luther Midelfort systematically planned, implemented, and evaluated a DIGMA program, using the experience and guidance of experts. Although all clinicians agreed that the DIGMA program was beneficial for patients and enhanced quality of care, the project was not able to attain financial viability. DIGMA census volume, financial reimbursement, and system barriers were the key factors prompting Luther Midelfort to consider a redesign to the DIGMA model approach.

Initially, Dr. Peck's prototype DIGMA in behavioral health was initiated in a practice where the wait for an appointment with the physician was four to eight weeks. The DIGMA was successful in helping him reduce the backlog of patients. In the diffusion sites, however, the DIGMA was started in some physician practices where there was minimal or no problem with scheduling appointments. In other cases, the competing initiatives of DIGMA and open access were implemented at the same. In these practices, as patient demand for earlier access to their physicians abated, DIGMA volume decreased.

Lack of patient volume was the primary factor for stopping the DIGMA project. Billing issues were a secondary factor. Without volume and billing, the project was not financially viable. The prototype DIGMA in behavioral health did not force close examination of the volume and reimbursement factors. In the behavioral health setting, a lower patient census was sufficient to break even financially and group visits were an accepted service code for all insurance carriers. Once the DIGMA project was initiated among medical patients, where higher volume was required to break even, the issue of financial viability surfaced.

Volume for medical DIGMAs was also compromised by denial of reimbursement by Medicare. Its largely fee-for-service population is one of the key distinguishing characteristics of Luther Midelfort that sets it apart from other DIGMA sites described in the literature. Previous DIGMAs have been implemented primarily in capitated environments where reimbursement is less of an issue when designing systems to manage patient care. Even in this environment, it was necessary to have 36 DIGMAs per week to realize financial benefit to the organization.

When Medicare patients were constrained from participating in the Luther Midelfort DIMSA, it eliminated a pool of chronically ill patients whom clinicians believed would benefit most from the strategy. While Medicare accounts for 34 percent of Luther Midelfort's clinical volume, evidence from the case study demonstrated that the key constraint was low DIMSA census. Over an 18-month demonstration period where Medicare patients were included, no DIMSA achieved a sustainable census. Even with all payers reimbursing for DIGMAs at the current rate, revenue would not financially sustain the model without a census of 12 patients per group. This is consistent with previous discussions of the DIGMA model, where the key to financial success was adequate census volume.

This case study underscores the difficulty of managing chronic illness in a fee-for-service environment where physicians are paid for visits and initiating new health care strategies depends on reimbursement for visit-based services. Clinicians described

DIGMAs as an important approach for improving quality of care and advocated for its adoption in some form. All the DIGMA leaders expressed concern that payer reimbursement policies influenced the quality of care they could provide.

System and organizational barriers were viewed by clinicians and administrators as the least important constraints to overcome; clinicians and other staff were amenable to learning and positive experiences. Nevertheless, DIGMA operations require a sustained and committed recruiting effort on the part of the staff. DIGMAs can work for selected physicians willing to share group control and be trained in new techniques.

Staff and physician leaders were disappointed in the failure of the DIGMA model to demonstrate viability. They unanimously believed that group appointments were beneficial for patients and improved the quality of care. While they accept the decision to discontinue the model, they are exploring other group models, such as single-focus groups led by non-physicians and arranged on an "as needed" basis. Staff are continuing to pursue the reimbursement issue with the Health Care Financing Administration and the CPT coding issue with AMA. Interestingly, one physician who terminated her DIMSA due to low volume and the lack of reimbursement is now offering periodic evening talks in her clinic at no charge.

Table 2. DIMSA Project Timeline

Date	Activity
July 1999	DIMSA Prototype Site initiated in Behavioral Health Clinic by Dr. Peck
November 1999	Identify group of interested physicians and facilitators (psychotherapists, social workers, psychiatric nurses). Selection and training of six physician/facilitator teams by Dr. Noffsinger, developer of the DIGMA Model, and Dr. Peck, Dr. Resar, and Colleen Skold. Meeting with Billing Department to discuss billing options.
December 1999	Promotional materials (flyers, posters, invitation and follow-up letters, phone scripts) developed and distributed to six teams. Decided to use CPT 99212 at $59 for billing to commercial insurers. Medicare and Medicaid would not be billed because there was no appropriate CPT code. Identified team to work with Mayo and insurers to identify appropriate billing code.
January 2000	Additional training on DIGMA group techniques by Dr. Noffsinger.
January 2000	Six DIMSA Primary Diffusion Sites in the areas of Family Care, Neurology, and Women's Health.
February 2000	Initial review of medical DIMSA groups by DIMSA Spread Team. Main problem was filling groups.
February 2000	Luther Midelfort–Mayo president, William Rupp, MD, asked to explore opportunity of using DIMSAs as a Health Care Financing Administration (HCFA) Demonstration Project.
May/June 2000	Review by Adam Rees, vice president, and teams of 19-week pilot data found group census by physician ranged from 1.8 to 6.6 patients. Financial analysis demonstrated DIMSAs were not able to break even.
June 2000	Medicaid claims submitted under evaluation and management CPT code and reimbursement received. Assistance provided by Mayo Foundation Government Relations.
June 2000	Coding Request Change submitted to the AMA for creating a new DIMSA CPT code.
October 2000	Summary of DIMSA analyses and reimbursement issues sent by Adam Rees to Operations Committee. Enhancement to quality of care acknowledged, but issues of reimbursement and low group census suggested revenue would be inadequate to support DIMSAs.
November 2000	Operations Committee asks DIMSA project for increased efficiencies and a six-month reevaluation. They supported additional physician training as well as a DIMSA marketing and communication plan.
March 2001	Training for physicians and facilitators interested in holding DIMSAs.
March 2001	AMA notified Luther Midelfort that the request for new DIMSA CPT code required further review and would be considered in the CPT cycle 2003.
July 2001	Review by Adam Rees and forwarded to Operations Committee found medical DIMSA census below break-even level and revenue loss, and concluded DIMSAs were not sustainable.
August 2001	Operations Committee decided to write-off Medicare losses, require out-of-pocket DIMSA payment by Medicare patients, stop most groups, and to not start new ones.
August 2001	HCFA finds that DIGMAs are not covered by Medicare.
September 2001	Modified DIMSA (without facilitator) continued in Behavioral Health. DIMSAs stopped in all areas except Women's Health. Staff explores new group model alternatives.

Source: Authors' analysis.

NOTES

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#612 *The Business Case for a Corporate Wellness Program: A Case Study* (April 2003, Web publication). Elizabeth A. McGlynn, Timothy McDonald, Laura Champagne, Bruce Bradley, and Wesley Walker. In 1996, General Motors and the United Auto Workers Union launched a comprehensive preventive health program for employees, LifeSteps, which involves education, health appraisals, counseling, and other interventions. This case study looks at the business case for this type of corporate wellness program.

#610 *The Business Case for Diabetes Disease Management at Two Managed Care Organizations: A Case Study* (April 2003, Web publication). Nancy Dean Beaulieu, David M. Cutler, Katherine E. Ho, Dennis Horrigan, and George Isham. This case study looks at the business case for a diabetes disease management program at HealthPartners, an HMO in Minneapolis, Minnesota, and Independent Health Association, an HMO in Buffalo, New York. Both disease management programs emphasize patient and physician education, adherence to clinical guidelines, and nurse case management.

#609 *The Business Case for Clinical Pathways and Outcomes Management: A Case Study* (April 2003, Web publication). Artemis March, The Quantum Lens. This case study describes the implementation of an outcomes center and data-based decision-making at Children's Hospital and Health Center of San Diego during the mid-1990s. It examines the business case for the core initiative: the development of a computerized physician order entry system.

Hospital Disclosure Practices: Results of a National Survey (March/April 2003). Rae M. Lamb, David M. Studdert, Richard M. J. Bohmer, Donald M. Berwick, and Troyen A. Brennan. *Health Affairs,* vol. 22, no. 2. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

The Business Case for Quality: Case Studies and An Analysis (March/April 2003). Sheila Leatherman, Donald Berwick, Debra Iles, Lawrence S. Lewin, Frank Davidoff, Thomas Nolan, and Maureen Bisognano. *Health Affairs,* vol. 22, no. 2. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

#606 *Health Plan Quality Data: The Importance of Public Reporting* (January 2003). Joseph W. Thompson, Sathiska D. Pinidiya, Kevin W. Ryan, Elizabeth D. McKinley, Shannon Alston, James E. Bost, Jessica Briefer French, and Pippa Simpson. *American Journal of Preventive Medicine,* vol. 24, no. 1 (*In the Literature* summary). The authors present evidence that health plan performance is highly associated with whether a plan publicly releases its performance information. The finding makes a compelling argument for the support of policies that mandate reporting of quality-of-care measures.

#578 *Exploring Consumer Perspectives on Good Physician Care: A Summary of Focus Group Results* (January 2003, Web publication). Donna Pillittere, Mary Beth Bigley, Judith Hibbard, and Greg Pawlson. Part of a multifaceted Commonwealth Fund-supported study, "Developing Patient-Centered Measures of Physician Quality," the authors report that consumers can understand and will value information about effectiveness and patient safety (as well as patient-centeredness) if they are presented with information in a consumer-friendly framework.

#563 *Escape Fire: Lessons for the Future of Health Care* (November 2002). Donald M. Berwick. In this monograph, Dr. Berwick outlines the problems with the health care system—medical errors, confusing and inconsistent information, and a lack of personal attention and continuity in care—and then sketches an ambitious program for reform.

Achieving and Sustaining Improved Quality: Lessons from New York State and Cardiac Surgery (July/August 2002). Mark R. Chassin. *Health Affairs,* vol. 21, no. 4. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845. Available online at http://www.healthaffairs.org/readeragent.php?ID=/usr/local/apache/sites/healthaffairs.org/htdocs/Library/v21n4/s8.pdf.

Improving Quality Through Public Disclosure of Performance Information (July/August 2002). David Lansky. *Health Affairs,* vol. 21, no. 4. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845. Available online at http://www.healthaffairs.org/readeragent.php?ID=/usr/local/apache/sites/healthaffairs.org/htdocs/Library/v21n4/s9.pdf.

Factors Affecting Response Rates to the Consumer Assessment of Health Plans Study Survey (June 2002). Alan M. Zaslavsky, Lawrence B. Zaborski, and Paul D. Cleary. *Medical Care,* vol. 40, no. 6. Copies are available from Paul D. Cleary, Department of Health Care Policy, Harvard Medical School, 180 Longwood Avenue, Boston, Massachusetts 02115, E-mail: cleary@hcp.med.harvard.edu.

#539 *Improving Health Care Quality: Can Federal Efforts Lead the Way?* (April 2002). Juliette Cubanski and Janet Kline. This issue brief, prepared for the 2002 Commonwealth Fund/Harvard University Bipartisan Congressional Health Policy Conference, discusses the ways in which various federal agencies can work to improve health care quality for all Americans. Available online only at www.cmwf.org.

#535 *Assessing the Threat of Bioterrorism: Are We Ready?* (April 2002). Patricia Seliger Keenan and Janet Kline. This issue brief, prepared for the 2002 Commonwealth Fund/Harvard University Bipartisan Congressional Health Policy Conference, examines federal preparedness, state and local infrastructure, congressional actions to improve preparedness, and regulatory and legal policies regarding the threat of bioterrorism in the United States. Available online only at www.cmwf.org.

#534 *Room for Improvement: Patients Report on the Quality of Their Health Care* (April 2002). Karen Davis, Stephen C. Schoenbaum, Karen Scott Collins, Katie Tenney, Dora L. Hughes, and Anne-Marie J. Audet. Based on the Commonwealth Fund 2001 Health Care Quality Survey, this report finds that many Americans fail to get preventive health services at recommended intervals or receive substandard care for chronic conditions, which can translate into needless suffering, reduced quality of life, and higher long-term health care costs.

#520 *Quality of Health Care in the United States: A Chartbook* (April 2002). Sheila Leatherman and Douglas McCarthy. This first-of-its-kind portrait of the state of health care quality in the United States documents serious gaps in quality on many crucial dimensions of care: lack of preventive care, medical mistakes, substandard care for chronic conditions, and health care disparities. The chartbook is based on more than 150 published studies and reports about quality of care.

A 58-Year-Old Woman Dissatisfied with Her Care, Two Years Later (March 27, 2002). Anne-Marie Audet and Erin Hartman. *Journal of the American Medical Association,* vol. 287, no. 12. Copies are available from Anne-Marie Audet, M.D., The Commonwealth Fund, 1 East 75th Street, New York, NY 10021-2692, E-mail: ama@cmwf.org.

Delivering Quality Care: Adolescents' Discussion of Health Risks with Their Providers (March 2002). Jonathan D. Klein and Karen M. Wilson. *Journal of Adolescent Health,* vol. 30, no. 3. Copies are available from Jonathan D. Klein, Strong Children's Research Center, Division of Adolescent Medicine, Department of Pediatrics, University of Rochester School of Medicine and Dentistry, 601 Elmwood Avenue, RM 4-6234, Rochester, NY, Tel: 585-275-7660, E-mail: jonathan_klein@urmc.rochester.edu.

#503 *Accessing Physician Information on the Internet* (January 2002). Elliot M. Stone, Jerilyn W. Heinold, Lydia M. Ewing, and Stephen C. Schoenbaum. In this field report, the authors analyzed 40 websites that offer information about physicians. Finding many instances where websites had incomplete, missing, and possibly inaccurate or outdated data, the authors conclude that health care

accrediting organizations, health plans, hospitals, and local and national industry organizations and associations should make efforts to improve the information on the Internet, saying that it is a potential valuable tool for consumers.

#528 *The APHSA Medicaid HEDIS Database Project* (December 2001). Lee Partridge, American Public Human Services Association. This study (available on the Fund's website only) assesses how well managed care plans serve Medicaid beneficiaries, and finds that while these plans often provide good care to young children, their quality scores on most other measures lag behind plans serving the commercially insured.

For-Profit and Not-for-Profit Health Plans Participating in Medicaid (May/June 2001). Bruce E. Landon and Arnold M. Epstein. *Health Affairs,* vol. 20, no. 3. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

Improving Quality, Minimizing Error: Making It Happen (May/June 2001). Elise C. Becher and Mark R. Chassin. *Health Affairs,* vol. 20, no 3. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

#456 *A Statistical Analysis of the Impact of Nonprofit Hospital Conversions on Hospitals and Communities, 1985–1996* (May 2001). Jack Hadley, Bradford H. Gray, and Sara R. Collins. In this study, the authors analyze the effects of private, nonprofit hospital conversions that occurred between 1985 and 1993 by comparing converting hospitals to a control group of statistically similar private nonprofit hospitals that were estimated to have a high probability of conversion, but did not convert over the observation period. The report is available online only at www.cmwf.org.

#455 *The For-Profit Conversion of Nonprofit Hospitals in the U.S. Health Care System: Eight Case Studies* (May 2001). Sara R. Collins, Bradford H. Gray, and Jack Hadley. This report examines the 87 for-profit conversions of nonprofit hospitals in the years 1985–1994, more than one-third of which took place in three states, and nearly half of which were in the Southeast. The report is available online only at www.cmwf.org.

Measuring Patients' Expectations and Requests (May 1, 2001). Richard L. Kravitz. *Annals of Internal Medicine,* vol. 134, no. 9, part 2. Copies are available from Richard L. Kravitz, Center for Health Services Research in Primary Care, University of California, Davis, 4150 V Street, PSSB Suite 2500, Sacramento, CA 95817, E-mail: rlkravitz@ucdavis.edu.

Current Issues in Mental Health Policy (Spring 2001). Colleen Barry. *Harvard Health Policy Review,* vol. 2, no. 1. Adapted from an issue brief prepared for the John F. Kennedy School of Government/Commonwealth Fund Bipartisan Congressional Health Policy Conference in January 2001. Available online at http://hcs.harvard.edu/~epihc/currentissue/spring2001/barry.html.

Health Plan Characteristics and Consumers' Assessments of Quality (March/April 2001). Bruce E. Landon et al. *Health Affairs,* vol. 20, no. 2. Copies are available from *Health Affairs,* 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133, Tel: 301-656-7401 ext. 200, Fax: 301-654-2845, www.healthaffairs.org.

Patient Safety and Medical Errors: A Road Map for State Action (March 2001). Jill Rosenthal and Trish Riley. Copies are available from the National Academy for State Health Policy, 50 Monument Square, Suite 502, Portland, ME 04101, Tel: 207-874-6524, Fax: 207-874-6527. Available online at www.nashp.org/GNL37.pdf.

#446 *The Quality of American Health Care: Can We Do Better?* (January 2001). Karen Davis. In this essay—a reprint of the president's message from the Fund's *2000 Annual Report*—the author looks at health care quality: how to define it, how to measure it, and how to improve it.

Envisioning the National Health Care Quality Report (2001). Committee on the National Quality Report on Health Care Delivery, Institute of Medicine. Copies are available from the National Academy Press, 2101 Constitution Avenue, NW, Box 285, Washington, DC 20055, Tel: 800-624-6242, E-mail: www.nap.edu.