Family Care Independent Assessment: An Evaluation of Access, Quality and Cost Effectiveness for Calendar Year 2003 - 2004

Presented by
APS Healthcare, Inc.
October 7, 2005

Table of Contents

I. EXECUTIVE SUMMARY 5

EXTERNAL QUALITY REVIEW ORGANIZATION (EQRO) ACCESS FINDINGS 6
ENROLLMENT ISSUES 7
REASONS FOR NOT ENROLLING IN FAMILY CARE 7
ENROLLMENT CONSULTANTS 7
DISENROLLMENT PROCESS 7
INFORMAL SUPPORTS 8
PROVIDER NETWORKS 8
PRIMARY CARE PHYSICIAN VISITS 8
ACCESS CONCLUSIONS AND RECOMMENDATIONS 8
EXTERNAL QUALITY REVIEW ORGANIZATION (EQRO) QUALITY FINDINGS 9
APPEALS AND GRIEVANCES 10
PROGRAM CHANGES SINCE THE FIRST INDEPENDENT ASSESSMENT 10
OVERALL PROGRAM ISSUES 12
QUALITY CONCLUSIONS AND RECOMMENDATIONS 13
COST-EFFECTIVENESS EXECUTIVE SUMMARY 14
1. What is the impact of Family Care on 2003-2004 Total Medicaid costs for its members? 15
2. What are the differences between Family Care and the comparison group in terms of total long-term care costs at the beginning and at the end of the study period? 15
3. Where did Family Care members significantly differ from the comparison group on selected long-term care and primary and acute costs and utilization that contribute to cost-savings? 16
4. Where did Family Care members significantly differ from the comparison group on selected long-term care and primary and acute costs and utilization that hinder cost-savings? 17
COST-RESTRAINT MANAGEMENT PRACTICES 18

II. INTRODUCTION 20

III. ACCESS AND QUALITY 21

ACCESS 22
A. External Quality Review Organization (EQRO) Access Findings 22
B. Enrollment Issues 25
C. Enrollment Consultants 27
D. Disenrollment Process 27
E. Informal Supports 27
F. Provider Networks 29
G. Primary Care Physician Visits 33
H. Access Conclusions and Recommendations 34
QUALITY 35
A. External Quality Review Organization Quality Findings 35
B. Appeals and Grievances 36
C. Program Changes Since the First Independent Assessment 38
D. Overall Program Issues 41
E. Quality Conclusions and Recommendations 48

IV. COST EFFECTIVENESS 49

COST EFFECTIVENESS ANALYSES OF COSTS AND UTILIZATION 49
Study Groups 50
Comparison Sample Selection 50
Statistical Weights and Control Variables 52
METHODOLOGY 54
Path Analysis 54
Multilevel Models 55

The HLM Total Medicaid Costs Model 56
The HLM Rate-of-Change Models 56
Data 59
Control Variables 61
Assumptions and Limitations of Analysis 62
INTRODUCTION TO THE COST-EFFECTIVENESS ANALYSES 62
FINDINGS FROM PATH ANALYSES FOR FAMILY CARE 63
RESULTS FROM 2003-2004 TOTAL MEDICAID COSTS MULTILEVEL ANALYSES 66
Results from the Long-Term Care and Primary and Acute Rate-of-Change Analyses 67
Total Long-Term Care Costs 68
Nursing Home Costs 69
Community-Based Residential Facility Costs 69
Home Care Service Costs 70
Emergency Room (ER) Costs and Utilization 73
Hospital Admission Rate 74
Inpatient Hospital Costs and Utilization Rate 74
Outpatient Hospital Costs and Utilization Rate 75
Physician Office Visit Costs 76
Prescription Drugs Costs and Utilization Rate 77
Summary of Cost-Effectiveness Analyses 78
Limitations of Costs and Utilization Analysis 79
Limitations and Assumptions of Multilevel Analysis 80

V. COST-RESTRAINT MANAGEMENT PRACTICES 82

COST SAVING PRACTICES 83
ADMINISTRATIVE AND MANAGERIAL COST-RESTRAINT MEASURES 83
SERVICE COORDINATION AND PLANNING COST-RESTRAINT MEASURES 85

VI. CONCLUSIONS/LESSONS LEARNED 90

VII. APPENDIX 94

A. LIST OF ACRONYMS 94
B. CHOICE IN FAMILY CARE 97
C. LONG-TERM CARE AND PRIMARY AND ACUTE RATE-OF-CHANGE FINDINGS 100
Table I: Non-Milwaukee CMO Costs Per Member Per Month 100
Table II: Non-Milwaukee CMO Utilization Per Member Per Month 101
Table III: Family Care Elderly Costs Per Member Per Month 102
Table IV: Family Care Elderly Utilization Per Member Per Month 103
Table V: Family Care Developmentally Disabled Costs Per Member Per Month 104
Table VI: Family Care Developmentally Disabled Utilization Per Member Per Month 105
Table VII: Family Care Physically Disabled Costs Per Member Per Month 106
Table VIII: Family Care Physically Disabled Utilization Per Member Per Month 107
Table IX: Family Care Costs Per Member Per Month – Individuals with Prior Waiver Experience 108
Table X: Family Care Utilization Rate Per Member Per Month 109
Table XI: Family Care Costs Per Member Per Month – Individuals with No Prior Waiver Experience 110
Table XII: Family Care Utilization Rate Per Member Per Month 111
Table XIII: Total Medicaid Costs 112
D. REFERENCES 113
E. CMO COST SAVING INITIATIVES 115

LIST OF FIGURES

Figure 1: Family Care Effect on Total Medicaid Costs 64
Figure 2: Family Care Effect on Total Long-Term Care Costs 65

LIST OF TABLES

Table 1: 2003/2004 Overview Summary: EQRO Investigated Cases 10
Table 2: All Agency Screeners for Developmental Disability 23
Table 3: All Agency Screeners for Frail Elderly 23
Table 4: Mean Physician Office Visits per Individual by Service Category 33
Table 5: Mean Physician Office Visits per Individual by CMO 34
Table 6: 2004 Appeals and Grievances Filed by CMO 37
Table 7: 2003/2004 Overview Summary: EQRO Investigated Cases 38
Table 8: Comparison Group and Family Care Weighted Descriptive Statistics 54
Table 9. Cohorts Analyzed in the Family Care Independent Assessment Cost-Effectiveness Analysis 58
Table 10: Eligibility Status over the Duration of the Study Period 59
Table 11: Number of Counties in the HLM Analyses 60
Table 12: Methodological Approaches and Study Groups 62
Table 13: Total Medicaid Costs 66
Table 14: Total Long-Term Care Costs 68
Table 15: Nursing Home Costs 69
Table 16: CBRF Costs 70
Table 17: Home Health Care Costs 71
Table 18: Personal Care Costs 71
Table 19: Supportive Home Care Costs 73
Table 20: Emergency Room Costs 73
Table 21: Emergency Room Visits 74
Table 22: Hospital Admission Rate 74
Table 23: Inpatient Hospital Costs 75
Table 24: Inpatient Hospital Stay Rate 75
Table 25: Outpatient Hospital Costs 76
Table 26: Outpatient Hospital Visits 76
Table 27: Physician Office Visit Costs 77
Table 28: Prescription Drug Costs 77
Table 29: Prescription Drug Utilization Rates 78

I. Executive Summary

The 1999 Wisconsin Act 9 authorized the Department of Health and Family Services (DHFS)[1] to operate the Family Care program. DHFS is able to offer long-term care services utilizing a capitated payment system after applying for both 1915(b) and a 1915(c) waivers and receiving approval for the waivers from the Centers for Medicare and Medicaid Services (CMS). The two 1915(b) waivers (one for individuals age 60 and over in Milwaukee County and one for adults in the other four pilot counties), allow DHFS to limit the provision of long-term care services in those counties to individuals who enroll in a Care Management Organization (CMO) using a "central broker" (Resource Center). The two 1915(c) waivers (one for individuals with developmental disabilities and one for individuals with physical disabilities) allows DHFS to provide home and community based services, in lieu of institutional placement, for individuals with long-term care needs that would qualify for Medicaid funding in a nursing home. Through these waivers, the Department is able to pay a pre-paid capitation amount to the CMOs who are then responsible for providing the services in the Family Care benefit that are needed by the member. The five Family Care CMOs are Fond du Lac, La Crosse, Milwaukee, Portage and Richland Counties.

CMS requires that an IA of the Family Care program be conducted and the findings be submitted as part of the Department's waiver renewal request. In September 2004, DHFS contracted with Innovative Resource Group d/b/a APS Healthcare, Inc (APS) to fulfill this requirement. APS has been working with DHFS, as well as Metastar, the Family Care External Quality Review Organization (EQRO), to gather data for the IA. **The goal of the IA is to describe the impact the Family Care program has had on long-term care services in Wisconsin in terms of access to services, quality of services and cost effectiveness during calendar years 2003 and 2004.** The current IA separately addresses Family Care in Milwaukee County and in the rest of the program in order to meet federal requirements for each of the Family Care waivers. This IA report will accompany the Department's application for renewal of the Family Care waivers due to CMS in fall 2005.

The first IA (IA), completed by APS in September 2003, outlined in detail the existing structure of the Family Care access and quality protocols. The current independent assessment builds upon the findings of the initial IA, without duplicating those efforts. This IA focuses on specific access, quality and cost-restraint issues faced by the local care management organizations (CMOs), as well as solutions and creative practices used by the CMOs to address these issues. Information was gathered through review of EQRO findings[2], state reporting, and independent data collection and analysis. In June

[1] A complete list of acronyms can be found in Appendix A.

[2] The EQRO quality and access findings are summarized as part of the IA. Complete EQRO reports are available from the State of Wisconsin Department of Health and Family Services Family Care website at: http://dhs.wisconsin.gov/familycare/reports/index.htm, or by contacting Metastar, Inc., Madison, WI.

and July 2005, in-depth qualitative data regarding access, quality and cost-restraint issues and solutions were gathered through interviews with each CMO director and their key staff. The interviews covered a wide-range of topics regarding CMO operation, as well as the evolution of Family Care since 2000. These topics included:

- Balancing choice with cost-effectiveness;
- Managed care principles in Family Care;
- Best quality practices among the CMOs;
- Pay-for-performance;
- Cost-restraint philosophies and practices;
- Cost-effectiveness (as it relates to higher quality services and shorter waiting lists for services);
- Understanding and modeling of the rate setting formula;
- Use of the Resource Allocation Decision (RAD) process (as it relates to quality and cost-effectiveness); and
- Use of personal outcomes to ensure quality services.

The access and quality discussions are organized based on a final IA workplan established in conjunction with state Family Care staff. Selected findings are presented below.

External Quality Review Organization (EQRO) Access Findings

The EQRO compiled its most recent Family Care quality and access findings in the "Family Care 2004 Annual Report," presented to DHFS on July 5, 2005. For access, the EQRO focused on the LTCFS, which is used to determine functional eligibility for Family Care, Resource Center (RC) quality site reviews and CMO quality site reviews.

Long-Term Care Functional Screen

In 2004, two inter-rater reliability testing (IRRT) scenarios were used to test administration of the Long-Term Care Functional Screen (LTCFS). These scenarios were developed to address the developmentally disabled (DD) and frail elderly (FE) populations. Family Care screeners completed 180 IRRTs using the DD scenario and 229 using the frail elderly scenario, up from 323 in 2003. All-agency scores ranged from 84% to 95% across domains, with the exception of health-related services (72%-frail elderly and 75%-DD) and NAT (37%).[3]

Resource Center Quality Site Reviews

The 2004 resource center site reviews focused on access and eligibility in Family Care. These topics were chosen as a result of findings from an enrollment study conducted by DHFS and the external quality review organization (EQRO) in 2003. The Family Care established guideline for program enrollment is 30 days. The 2003 study found that the process for almost 75% of consumers took more than 30 days. In Milwaukee County, over half of the enrollments took more than 60 days. The 2004 RC site review showed that each RC currently has policies and procedures in place to meet the 30-day timeframe

[3] It is not clear from the EQRO summary report why NAT is so much lower than the other domains.

for enrollment. Each RC has strengthened and/or formalized their relationships with the local CMOs and Economic Support (ES) units in order to reduce the enrollment time.

CMO Site Reviews
In 2004, the EQRO interviewed CMO administrators, care managers, nurses, providers and members to learn more about the systems and processes in place that support consumer rights related to enrollment and disenrollment. Each CMO detailed a collaborative atmosphere between the interdisciplinary teams (IDTs), RCs and ES units as the foundation for their enrollment policies and procedures. Communication with the CMO network developer was also mentioned as a key component of the CMOs' enrollment procedures, which encourages sharing of information about provider availability.

Enrollment Issues

The CMOs have been working closely with the Aging and Disability Resource Centers (ADRCs or RCs) and the Economic Support (ES) offices to create the most efficient transfer of member information between the agencies. Some counties have been able to co-locate these agencies, while others have created tracking procedures to assure that eligibility records are always up-to-date. Currently, only one CMO still encounters eligibility and enrollment issues, and this county continues to improve coordination with the RC and ES offices.

Reasons for Not Enrolling in Family Care

The CMOs pointed out three reasons eligible individuals may choose not to enroll in Family Care: 1) estate recovery; 2) self-sufficiency; and 3) risk of spousal impoverishment.

Enrollment Consultants

The IA conducted in 2003 found value in using independent, third-party enrollment consultants to ensure that potential members and their representatives fully understand the eligibility requirements and benefits of Family Care. The current IA, specifically the in-person CMO interviews, provided no evidence that the role of enrollment consultants has diminished in value or need to be expanded.

Disenrollment Process

The most common reason for disenrollment from Family Care is death. This is true for the counties that serve the developmentally and physically disabled, as well as the frail elderly. Of the 4,936[4] cumulative Family Care disenrollments through March 31, 2005, 3,502 (71%) have been due to death.[5] It does not appear that many members disenroll voluntarily. Other reasons for disenrollment from Family Care include:

- Move out of the CMO county;

[4] Approximately 13,313 people have been enrolled in Family Care at some point since the inception of the program.
[5] *Quarterly Family Care Activity Report: For the quarter ending March 31, 2005*. June 2005. Department of Health and Family Services, Division of Disability and Elder Services.

- Loss of functional eligibility;
- Loss of financial eligibility;
- Voluntary disenrollment:
    - Choose not to pay a cost share;
    - Choose to remain in a nursing home when the CMO does not authorize that level of care; and
- Incarceration.

Informal Supports

Family Care policies and procedures do not appear to encourage payment for care that is provided by family members, friends, or other volunteers. Managers of each CMO stated that the CMO does not discourage payment for these informal caregivers, but each indicated that they *do not* promote paying for these services. The CMO managers that they encourage their IDTs to understand each member's reliance on informal caregivers during the assessment process so the CMO can help maintain and strengthen those supports.

Typically, the CMOs pay for care from family members only when the tasks they perform are above and beyond what a typical family member or housemate[6] would be expected to perform, or if the additional care creates a hardship for the caregiver.

Provider Networks

Managers of each CMO reported satisfaction with the size and variety of their existing provider networks. All reported that Family Care has allowed them to recruit new providers, increase provider competition, and expand their existing provider networks.

The CMOs have also been developing predictive tools to model future Family Care enrollment within their counties, and in turn, predict future provider needs.

Primary Care Physician Visits

Primary care physician visits are significantly more frequent among members of Family Care than among members of the non-Family Care comparison group. Visits to primary care physicians are often used as an indicator of program quality. It is thought that these visits increase opportunities for prevention and early intervention health care services, which help to reduce more acute and costly services in the future.

Access Conclusions and Recommendations

The access findings show continued improvement and efficiencies in access to long-term care services and supports in the Family Care counties. Provider networks have increased, functional assessments have improved, enrollment has been streamlined and disenrollment tracking is becoming more detailed. Further, the CMOs continue to look for ways to improve access to services and supports for Family Care members.

[6] If a friend provides caregiver services to a Family Care member, but does not live with the member, the CMO cannot withhold payment if the friend will no longer provide the services for free. In these cases, the friend becomes a consumer-directed support and is paid accordingly.

Highlighted below are areas where the CMOs, DHFS and the EQRO could focus their improvement efforts to further promote access to Family Care.

- Improve communication between RC, ES and CMO staffs, where necessary, to reduce the number of ineligible individuals who receive Family Care services. (RCs, CMOs and DHFS)
- Improve coordination between the LTCFS and the member's assessments. (DHFS and CMOs)
- Work with the RCs to provide more detailed disenrollment information, especially for voluntary disenrollments. (DHFS)
- Improve outreach to attract individuals before their health or functioning deteriorates to the point that they can no longer stay in the community. (RCs)
- Clarify expectations of RNs for coordination of non-covered services, such as primary and acute health care. (DHFS and CMOs)
- Work with the CMOs to devise alternatives for the care of very high cost developmentally disabled (DD) cases. (DHFS and CMOs)
- Clarify for the CMOs the available options for coordinating behavioral health services for their members. (DHFS)

External Quality Review Organization (EQRO) Quality Findings

In 2004, the EQRO's assessment of quality in Family Care focused heavily on member outcomes. An outcome workgroup was formed to identify system features necessary to support the IDTs in outcome-based planning. The workgroup also made recommendations to the CMO directors and DHFS on the content of outcomes training. The workgroup came to a consensus regarding the use of member outcomes to ensure quality in the following three areas:

- CMO IDTs need more support and skills development to identify personal outcomes and understand how outcomes and needs/deficits are woven into the care planning process.
- CMOs need more support to clarify the meaning of "choice" for members in FC. CMOs also need clarity on the distinction between outcomes and the desire for specific services. Defining choice has been an ongoing struggle for the CMOs and DHFS. A document defining "choice" in Family Care operations has recently been completed. A copy of this document can be found in Appendix B.
- Member outcome interviews could be more useful to IDTs. This includes collegial feedback following each interview; identification of supports, if any, that concern the interviewer and why; and having a clearer understanding of the interviewer's decision-making process.

The 2004 site reviews continued to utilize the Appreciative Inquiry[7] process to assess the implementation of quality standards at each RC and CMO. The site reviews covered the following focus areas:

- Prevention and Wellness

[7] Appreciative Inquiry (AI) is a positive approach to discovery that provides for constructive feedback and creative problem solving.

- Quality Assurance/Quality Improvement Plan, Program and Coordination
- Enrollee Information, Rights and Protections
- Enrollment and Disenrollment
- Subcontractual Relationships and Delegation

Appeals and Grievances

Based on findings from the EQRO, Family Care members file appeals and grievances for several reasons related to the following outcomes:

- Preferences of where to reside, including type of facility, or with whom they wish to live;
- Satisfaction with services including type, frequency and duration of certain services, as well as the relationship with their care team;
- Ability to participate in the life of the community, including employment and other options;
- Ability to choose their services, including the frequency and who provides the services; and
- Feeling of fair treatment, frequently overriding issue for appeals and grievances are filed.

The EQRO tracks appeals and grievances in the following categories:

- Eligibility-related issues;
- Requested Services issues;
- Service Plan issues;
- CMO Decisions; and
- General Grievances

The table below provides a summary of grievances and appeals for 2003 and 2004.

Table 1: 2003/2004 Overview Summary: EQRO Investigated Cases

2003/2004 Overview Summary: EQRO Investigated Cases				
	Eligibility Related (No EQRO Investigation)	***DHFS or Concurrent Review***	***Concurrent Review Requested by the State on Eligibility Related Issue***	***Total Investigation by the EQRO***
2003	63	28	1	29
2004	35	88	3	91

Program Changes Since the First Independent Assessment

Access Monitoring Activities

The first IA noted that the State had not been monitoring the 30-day enrollment requirement and it recommended that the EQRO work with the State to develop routine

reports monitoring access to Family Care on an individual county basis. In 2003, a study conducted by the State and EQRO found that it took longer than 30 days between the date the functional eligibility screen was submitted and the date the member was enrolled in Family Care for almost 75% of all consumers, and over 60 days to enroll 53% of consumers.

The Family Care program no longer struggles with the enrollment requirement. The expectation for determination of Medicaid eligibility, which may or may not begin immediately after the functional screen is administered, is 30 days. With intense DHFS involvement, one county improved from 0% compliance with Medicaid requirements for eligibility determinations/enrollment timeliness to 100% by May 2005.

Increase Provider Networks

The first IA noted that information gathered through site visits and meetings with the CMO directors and DHFS revealed an increase in the number of providers in the Family Care counties. The increase in providers within the Family Care counties was viewed as an indicator of increased choice and encouraged by the State.

The current IA has also found an increase in the number of providers available to Family Care members in the five CMO counties. More importantly, the CMOs have developed much better methods to predict their enrollment trends and the needs of new enrollees. These methods have helped the CMOs proactively manage their provider networks and develop new capacity to meet future needs.

Disenrollments

The first IA recommended development of a routine disenrollment survey to assess patterns that may occur for subgroups within the program. Though neither the State nor the CMOs have developed a disenrollment survey, the EQRO has focused more of its attention on analyzing disenrollments. Currently CMOs are better at recording the reasons for disenrollment, specifically voluntary disenrollment, with assistance from the RCs.

Grievances and Appeals

The first IA implied that Family Care grievance and appeal data did not fully reflect the total amount of complaints. The EQRO now receives all grievances and appeals from each CMO where the decision was adverse to the member, whether the complaint was filed with the CMO, DHFS or the Division of Hearing and Appeals. The EQRO is also revising the grievance and appeals database, that by 2006 the CMOs will be able to post their grievances and appeals directly to the EQRO web-based database.

Pay-for-Performance

A new cost-saving measure currently under development between the State and the CMOs is pay-for-performance (PFP)[8]. In an attempt to restrain costs, the State and CMOs determined that initial PFP efforts should focus on diabetes management. Family

[8] Pay-for-performance (PFP) is an incentive program intended to improve service delivery and achievement of participant outcomes, while also reducing costs. Achievement of the performance standards are generally rewarded in some way, while failure to achieve the standards can result in reduced payments.

Care participants have a higher rate of diabetes diagnoses than the general Medicaid population and diabetes-related complications can require costly services. The State is in the process of defining the diabetes measures that will be used to gauge performance within each CMO.

The CMOs are concerned about finding the necessary resources to properly develop a PFP system in 2006, but have committed themselves to working with the State to develop the initial diabetes measures.

Overall Program Issues

During the detailed in-person interviews with each CMO manager and their administrative staff, several issues surfaced that have been ongoing challenges for the counties and for the State. The following discussion summarizes many of the unresolved issues facing Family Care as expressed by the CMOs during the in-person interviews.

Capitated Rate

Each CMO feels that they have at least a basic understanding of the current capitated rate setting methodology; however, there is continued confusion over how to accurately predict future rates for budgeting purposes. The State hopes to work with the DHFS actuary, Price Waterhouse Coopers (PWC), to develop a method for the CMOs to estimate upcoming rates. State staff have recently worked with the CMOs to help extract rate-specific information from the functional screen reports.

Choice

Defining choice and establishing service provision guidelines have been a struggle for both CMO and state staff since the inception of Family Care. After extensive work among state staff and several detailed discussions with the CMO management teams, the State drafted “Choice in Family Care” (Please see Appendix B). This document clearly describes the state’s position on choice in Family Care, without identifying specific services or situations where choice should be restricted. More importantly, this document makes it clear that limiting choice is a viable option within Family Care and that the CMOs have the discretion to limit or substitute services within the benefit package if there are more cost-effective alternatives.

Contract Language

Ambiguity in the Family Care contract language has made it difficult for CMO management to assure compliance with the contract. To address these concerns, CMO and state staff have meticulously reviewed the Family Care contract and highlighted areas of concern. CMO and state staff worked collaboratively to re-work several sections of the contract, a process which is ongoing and will continue until the entire contract has been reviewed and modified.

Managed Care

There is some concern among CMO management that Family Care lacks some of the cost-restraint tools available to private managed care programs. Most notably, as an entitlement program, CMO managers have no control over the population entering the

program[9]. In addition, the CMOs do not control primary and acute medical care and therefore can only exert limited influence on utilization of these services. State staff are aware of these concerns and have discussed the existing risk-based managed care model with the CMO directors.

Member Outcome Interviews

Family Care utilizes the Council on Quality and Leadership member outcome tool to assess members' progress toward meeting their lifestyle, functional, health and safety goals. Some CMOs find the interview process slightly intrusive, particularly in cases where members have been selected multiple times to be interviewed. Others feel that the results of the interviews are not helpful in administering Family Care. Other CMOs find value in the objectivity offered by independent interviewers. The most common observation regarding the member outcomes is that it takes far too long to receive the results and the results are not detailed enough to be effective as a program management tool. Family Care is not using the Council's member outcome tool in 2006, but is working on developing an alternative method to measure member progress toward meeting their goals. The intent is to share pertinent results with the CMOs.

Best Practices

The CMOs would like more assistance from the State to aggregate and share best practices[10] among the Family Care counties. Although the CMOs have excellent working relationships and communicate regularly, the State is in a central position to collect and disseminate best practices more efficiently than the CMOs.

Quality Conclusions and Recommendations

Overall, the IA findings suggest that Family Care continues to improve the quality of long-term care services in its counties. Waiting lists for services have been eliminated for over three years, achievement of member outcomes remains high, and each CMO has continued to improve its cost-effectiveness through improving efficiencies and implementing innovative cost-saving measure. The CMOs, with assistance from DHFS and the EQRO, continue to look for areas in need of further quality improvement. The following list highlights some of these areas.

- Provide more support for clarification to members what "choice" means in Family Care, as well as the distinction between outcomes and desires for specific services. (CMOs)
- Provide care manager training that focuses on person-centeredness and cost management. (CMOs and DHFS)
- Establish monthly meetings where care managers can openly discuss their existing cases and discuss options for new cases. (CMOs)

[9] Case-mix is controlled for in the rate-setting formula; however, CMO staff were still concerned about its impact on their ability to control costs.

[10] Several examples of best practices are highlighted throughout this document, particularly as part of the cost-restraint section.

- Review in detail the cost share recovery guidelines, underlying logic and federal requirement. (DHFS)
- Continue to address the CMOs' concerns regarding specificity in the Family Care contract language. (DHFS)
- Work with the CMOs to develop a joint outcome-type tool for assessing member progress towards their individual long-term care goals. (DHFS)
- Revisit the rate setting methodology with each CMO and develop a data set or predictive tool that can be used to predict future capitated rates. (DHFS)
- Develop an approach for sharing best practices among the CMOs. It is recommended that the Sate assume the lead in this area, as all CMOs report to state staff. (DHFS and CMOs)

Cost-Effectiveness Executive Summary

The analyses of cost-effectiveness were performed by comparing the utilization and costs for Medicaid funded services for Family Care members and a matched comparison group of similar individuals who received Medicaid funded services outside Family Care. Considerable time was invested in the development of a statistically valid, risk-adjusted comparison group. In order to make the best possible comparison between Family Care members and comparison group individuals and account for any pre-existing differences, outcomes have been controlled for to enable the findings to identify and determine to what extent, differences between the two groups exist. Twelve individual-level control variables were used to ensure any remaining differences between the comparison group and Family Care study samples were thoroughly accounted for and accounted. These variables include illness burden, last year of life, and geographic type, among others.

The analyses of Family Care's effects on costs looked at different sub-groups in the Family Care population. These include:

- All Milwaukee County members (frail elders)
- All non-Milwaukee County members (including frail elders, adults with physical disabilities, and adults with developmental disabilities). Within this group, the analysis also looks at each target group separately:
  - Non-Milwaukee members who are frail elders
  - Non-Milwaukee members who have developmental disabilities
  - Non-Milwaukee members who have physical disabilities

In addition, within each of the larger groups noted above, the analysis examined at members who had previous experience with a Medicaid waiver program before enrolling in Family Care, and those who had no previous experience with a waiver program before Family Care enrollment.

In order to effectively determine whether and to what extent Wisconsin Family Care is cost-effective, a set of four overarching questions were developed in conjunction with DHFS staff.

1. What is the impact of Family Care on 2003-2004 Total Medicaid costs for its members?

Two methodological approaches were utilized to answer the question: a two-level multilevel model and a path analysis.

The multilevel analysis indicates that average individual monthly Medicaid costs for Family Care members in the four non-Milwaukee CMOs and each of the three target groups, and frail elders in the Milwaukee County CMO were lower than those for each matched comparison group. Specifically, average individual monthly Medicaid costs for members of the four non-Milwaukee FC counties were $452 lower than the comparison group and for frail elderly members of the Milwaukee County CMO were $55 lower than those for the comparison group over the two-year period of analysis.

The path analysis revealed that Family Care produces Medicaid savings both directly by controlling service costs and indirectly by favorably affecting Family Care members' health and abilities to function so that they have less need for services. This finding is an improvement from the path analysis conducted as part of the 2000-2002 Family Care IA[11]. The previous report noted that while Family Care's program effects indirectly improve health care and health outcomes, the savings were not sufficient to fully offset a direct increase in costs. The current analysis of Family Care reveals that participation in the Family Care program does, in fact, reduce health related costs both directly and indirectly.

2. What are the differences between Family Care and the comparison group in terms of total long-term care costs at the beginning and at the end of the study period?

This analysis looked at long-term care costs – that is, costs for those services included in the Family Care benefit package. We compared costs at the beginning (the "baseline") and at the end of the study period and examined the rate of change over that period. The analysis considers both individual and group changes that occur over the study period. For many Family Care members in the study (67.1 percent), their costs before the study period were already impacted because of prior Family Care enrollment.

For all but one of the Family Care groups, average individual monthly long-term care costs were lower than those of the matched comparison group, both at baseline and at the end of the study period.

Specifically, applying a multilevel rate-of-change analysis to total long-term care costs revealed that average Family Care individual monthly costs were significantly less than those of the comparison group at both baseline and the end of the study period. Family

[11] See APS Healthcare, Inc., Family Care Independent Assessment: An Evaluation of Access, Quality and Cost Effectiveness for Calendar Year 2002. September 2003. pp. 87-88. DHFS website: https://www.dhs.wisconsin.gov/familycare/reports/ia.pdf

Care groups for which costs were significantly lower than those of their comparison group include (expressed as average individual monthly costs):

- non-Milwaukee members, as a group (-$517);
- non-Milwaukee frail elder members (-$722);
- non-Milwaukee members with physical disabilities (-$503); and,
- Milwaukee County frail elder members (-$565).

Each of these findings substantiated what was found in the 2003 Family Care IA, with the exception of the Milwaukee County CMO. At that time, this group of frail elders was not significantly different from the comparison group. This is a notable improvement from analyses that covered calendar years 2000-2002.

The only Family Care group for which average individual monthly costs did not differ significantly from those for the comparison group were individuals with developmental disabilities in the non-Milwaukee CMO counties. This was true in their rate-of-change over the study period and in average individual monthly costs at the end of the study period.

3. Where did Family Care members significantly differ from the comparison group on selected long-term care and primary and acute costs and utilization that contribute to cost-savings?

Family Care is meeting its programmatic objective of moving members out of institutional settings and reintegrating them into the community as seen through nursing home and community-based residential facilities (CBRF) costs.

Nursing home costs were significantly less for all Family Care groups and subgroups relative to the comparison group, with the exception of those individuals in the Milwaukee County CMO without waiver participation before Family Care. In all cases where groups were significantly different from the comparison group, the differences had increased substantially by the end of the study period. For example, in the non-Milwaukee CMO counties, the baseline average individual monthly cost difference between this group and the comparison group was $1,803. This difference increased to $1,967 by the end of the study. This finding reinforces that of the path analysis, which found that Family Care reduced reliance on institutional care. (See Table 15)

CBRF costs among the non-Milwaukee counties remained lower than the comparison group both at baseline and at the end of the study. Although costs were rising at a faster rate for members in CBRFs, their actual average individual monthly costs continue to be less than their comparison group counterparts. (See Table 16)

Cost effects for home health care, personal care, and supportive home care are interrelated and need to be considered together. For Family Care study groups outside Milwaukee County, home health care costs during the study period increased at a rate slower than those of their control group counterparts. For personal care costs, average

individual monthly costs in the non-Milwaukee CMO counties were lower than those in the matched comparison group. Specifically, the four non-Milwaukee CMO counties were $296 less than those for the comparison group; personal-care costs for individuals with developmental disabilities were $770 less; and personal-care costs for individuals with waiver experience before Family Care enrollment were $262 less.

Average individual monthly supportive home care costs in the non-Milwaukee CMO counties for members with no waiver experience before Family Care enrollment were $92 lower than those for the comparison group at baseline and $624 less at the end of the study. (See Table 19)

During the study period, the Milwaukee County frail elder members' home health care costs increase 393 percent. Aside from this generally being a large increase over the study period, it remained the only increase over the study period among the various Family Care study groups in home health care costs. The initial average individual monthly cost difference for personal care services among Milwaukee County frail elder members relative to the comparison group rose from $62 at baseline to $416 by the end of the study. (See Table 17)

Outpatient hospital costs for Family Care members in the Milwaukee County elderly and non-Milwaukee County developmentally disability groups declined over the study period so that these Family Care groups ended the study with lower average individual monthly outpatient hospital costs ($10 and $17) than the comparison groups ($12 and $29). (See Table 25)

Inpatient hospital costs significantly decreased for the elderly in both the non-Milwaukee CMO counties and the Milwaukee County CMO. At baseline, these two study groups exceeded the comparison group by $5 and $98, respectively, in average individual monthly inpatient hospital costs, but significantly decreased over the study period and were $65 and $18 less than the comparison group by the end of the study. Inpatient hospital costs and utilization significantly decreased over the study period for the individuals in the non-Milwaukee CMO and by the end of the study were $59 less in average monthly inpatient hospital costs than the comparison group. (See Table 23)

4. Where did Family Care members significantly differ from the comparison group on selected long-term care and primary and acute costs and utilization that hinder cost-savings?

With the exception of the non-Milwaukee CMO counties as a whole, all other Family Care sub-groups who significantly differed from the comparison group on CBRF costs, began and ended the study time frame with higher average monthly costs for this service. Most notable among these groups are the non-Milwaukee CMO frail elderly, Milwaukee County CMO frail elders, and the non-Milwaukee CMO individuals with developmental disabilities whose monthly average individual costs were $383, $462, and $602 higher than their comparison group counterparts for this service. (See Table 16) When

examining average individual monthly costs, the analyses for CBRF costs identify this service as the least cost-effective among all services analyzed. However, given that Family Care is designed to support members in choosing where they live, and when residing in their own home is not an option, many members choose other residential settings such as CBRFs, the rising costs for this service is not necessarily a negative outcome.

All groups with significantly higher prescription drug costs than those of the comparison group were from the non-Milwaukee CMO counties. These groups ended the study period with higher average individual monthly costs: all four non-Milwaukee CMO counties (+$31), the non-Milwaukee CMO frail elderly (+$4), individuals with development disabilities (+$169), and individuals from these counties who had no waiver experience before enrolling in Family Care (+$44). (See Table 28) However, among all the groups that significantly differed from the comparison group, utilization rates for all but the individuals with developmental disabilities in the non-Milwaukee CMO counties experienced significantly lower utilization rates by the end of the study.

Supportive home care costs in the four non-Milwaukee CMO counties are significantly greater than the comparison group. This may be attributed to the triangulation among the three home care services (with similar types of services among the three varying in cost), although it is still significantly higher in these four counties on an individual monthly average basis. The four CMO counties viewed collectively cost +$313 more on average each month per individual by the end of the study period, as well the physically disabled (+$38), and individuals with prior waiver experience before enrolling in Family Care (+$69). (See Table 19)

Physician office visits in the non-Milwaukee County CMO members with physical disabilities and Milwaukee CMO individuals with waiver experience were costing significantly more than the comparison group at the beginning of the study. Milwaukee CMO frail elderly cost $11 more on average each month per individual, while those individuals with prior waiver experience were costing $37 PMPM more than the comparison group. (See Table 27)

Cost-Restraint Management Practices

The CMOs have adopted and employed a number of management practices to improve the efficiency of their service delivery and restrain costs. Some of these are described in this report, and they include:

Administrative and Managerial Cost-Restraint Measures

- Hiring a purchasing agent to purchase all durable medical equipment;
- Moving all business decisions and functions to business or financial staff and moving all administrative responsibilities to administrative staff so care workers can maintain focus on quality managed care; and
- Developing new information technology systems that eliminate duplicate billings, assure appropriate eligibility, and streamline access to member records.

Service Coordination and Planning Cost-Restraint Measures

- Reinforcing with all staff the appropriate use of the RAD;
- Training care managers on negotiating the most cost-effective service plan with members and their families;
- Emphasizing managed care principles with all staff;
- Discussing managed care principles with members and their families;
- Establishing preferred-provider arrangements;
- Undertaking different forms of utilization review, including standing committees where care managers can brainstorm collaboratively to find the most cost-effective solutions for each individual service plan (ISP);
- Maximizing Medicare and other payer coverage;
- Utilizing less costly residential arrangements, if appropriate, and maximizing the use of volunteers;
- Instituting sub-capitation arrangements with some providers;
- Capping expenses on some services, such as CBRFs; and
- Establishing guidelines and specific rates for CBRFs to eliminate paying different rates for each member within a CBRF.

II. Introduction

The 1999 Wisconsin Act 9 authorized the Department of Health and Family Services (DHFS) to operate the Family Care program. DHFS is able to offer long-term care services utilizing a capitated payment system after applying for both 1915(b) and a 1915(c) waivers and receiving approval for the waivers from the Center for Medicare and Medicaid Services (CMS). The two 1915(b) waivers (one for individuals age 60 and over in Milwaukee County and one for adults in the other four pilot counties), which allow DHFS to limit the provision of long-term care services in those counties to individuals who enroll in a Care Management Organization (CMO) using a "central broker" (Resource Center). The two 1915(c) waivers (one for individuals with developmental disabilities and one for individuals with physical disabilities) allows DHFS to provide home and community based services, in lieu of institutional placement, for individuals with long-term care needs that would qualify for Medicaid funding in a nursing home. Through these waivers, the Department is able to pay a pre-paid capitation amount to the CMOs who are then responsible for providing the services in the Family Care benefit that are needed by the member. The five Family Care CMOs are Fond du Lac, La Crosse, Milwaukee, Portage and Richland Counties.

CMS requires that an IA of the Family Care program be conducted and the findings be submitted as part of the Department's waiver renewal request. In September 2004, DHFS contracted with Innovative Resource Group d/b/a APS Healthcare, Inc (APS) to fulfill this requirement. APS has been working with DHFS, as well as Metastar, the Family Care External Quality Review Organization (EQRO), to gather data for the IA. **The goal of the IA is to describe the impact the Family Care program has had on long-term care services in Wisconsin in terms of access to services, quality of services and cost effectiveness during calendar years 2003 and 2004.** This IA report will accompany the Department's application for renewal of the Family Care waivers due to CMS in fall 2005.

In Fond du Lac, Portage, La Crosse and Milwaukee counties, CMO implementation of Family Care was completed during CY 2000. Richland began operations of its CMO in January 2001. Therefore, while CMOs began operating as early as February 2000, the program was not receiving federal funding under the federal waivers until January 1, 2002[12]. The pilot counties received start-up funding from various sources to plan, develop, and implement the Resource Centers (RCs) and Care Management Organizations (CMOs).

The current IA separately addresses Family Care in Milwaukee County and in the rest of the program in order to meet federal requirements for each of the Family Care waivers.

[12] See Lewin Group Family Care Implementation Process Evaluation Reports I, II and III (November 2000, 2001, and December 2002) for specific start-up funding tables.

III. Access and Quality

This initial IA outlined the existing structure of the Family Care access and quality protocols. For example, the IA discussed the development and utilization of the Long-Term Care Functional Screen (LTCFS) used to determine Family Care eligibility and the activities of the EQRO. The EQRO review included assessments of complaint and grievance reporting and provider network monitoring, among other activities.

The current independent assessment builds upon the findings of the initial IA. It focuses on specific access, quality and cost-restraint issues faced by the local CMOs, as well as solutions and creative practices used by the CMOs to address these issues. Information was gathered through review of EQRO findings[13], state reporting, and independent data collection and analysis. In June and July of 2005, in-depth qualitative data regarding access, quality and cost-restraint issues and solutions were gathered through interviews with each CMO director and their key staff. The interviews covered a wide range of topics regarding CMO operation, as well as the evolution of Family Care since 2000. These topics included:

- Balancing choice with cost-effectiveness;
- Managed care principles in Family Care;
- Best quality practices among the CMOs;
- Pay-for-performance;
- Cost-restraint philosophies and practices;
- Cost-effectiveness as it relates to higher quality services and shorter waiting lists for services;
- Understanding and modeling of the rate setting formula;
- Use of the Resource Allocation Decision (RAD) process as it relates to quality and cost-effectiveness; and
- Use of personal outcomes to ensure quality services.

These topics, among others, are discussed in detail below. The access and quality discussions are organized based on a final IA workplan established in conjunction with state Family Care staff. The final workplan was intended to address specific questions raised by state staff following the initial IA, as well as touch on more general access and quality concerns. Cost-restraint practices, as they relate to access and quality, are addressed in this section of the IA.[14]

[13] The EQRO quality and access findings are summarized as part of the IA. Complete EQRO reports are available from the State of Wisconsin Department of Health and Family Services Family Care website at: http://dhs.wisconsin.gov/familycare/reports/index.htm, or by contacting Metastar, Inc., Madison, WI.

[14] Cost-restraint issues and practices are also discussed in the cost-effectiveness section of this report.

Access

A. External Quality Review Organization (EQRO) Access Findings

The EQRO compiled its most recent Family Care quality and access findings in the "Family Care 2004 Annual Report," presented to DHFS on July 5, 2005. This report details the EQRO's findings regarding several aspects of Family Care, including access and quality issues between 2003 and 2004. For access, the EQRO focused on the LTCFS, which is used to determine functional eligibility for Family Care, Resource Center (RC) quality site reviews and CMO quality site reviews.

Long-Term Care Functional Screen

In 2004, Family Care RC and CMOs completed 4,322 initial screens, 8,655 recertification screens, and 1,518 change-of-condition screens. All initial screens are administered by the RCs, while the recertification and change-of-condition screens are completed by the CMOs in three of the five Family Care counties.

Assuring the reliability of the screens requires several steps. First, all screeners must meet a minimum level of education and years of professional experience working with Family Care target group populations. Second, each screener must pass a web-based training course before they administer their first screen. Third, each screening agency is required to develop LTCFS policies and procedures which are reviewed annually by DHFS and the EQRO. Last, since 2002 DHFS has required that inter-rater reliability testing (IRRT) for all screeners to be administered by the EQRO.

The IRRT requires that screeners review a "scenario" containing details about a fictional individual with disabilities and answer screening questions about that person. In 2004, two IRRT scenarios were used, one each for the frail elderly and developmentally disabled target groups. The scenario for the DD population covered nine screen domains: ADLs, IADLs, overnight care, employment items, health-related services, communication and cognition, behavior/mental health, risk, and no active treatment (NAT). The frail elderly scenario included ADLs, IADLs, Overnight Care, Health-Related Services, Communication and Cognition, and Behaviors/Mental Health. Any screener scoring below 70% in any of these domains is required to receive special training and mentoring provided by the CMO.

Family Care screeners completed 180 IRRTs using the DD scenario and 229 using the frail elderly scenario, up from 323 in 2003. All-agency scores ranged from 84% to 95% across domains, with the exception of health-related services (72%-frail elderly and 75%-DD) and NAT (37%).[15] The tables on the following page provide detailed IRRT results.

[15] It is not clear from the EQRO summary report why NAT is so much lower than the other domains.

Table 2: All Agency Screeners for Developmental Disability

ALL AGENCY SCREENERS Screener Reliability Testing Data for 2004 Agreement Report for all screening agencies with screeners taking the Developmental Disability scenario Number of screeners: 180 Number of Screening Agencies: 15	
Domain	**Agreement rate for all agencies**
1. Activities of Daily Living (ADL)	93.3%
2. Independent Activities of Daily Living (IADL)	95.4%
3. Overnight Care	91.8%
4. Employment Items	92.5%
5. Health-Related Services	75.2%
6. Communication and Cognition	88.5%
7. Behaviors/Mental Health	93.2%
8. Risk	94.2%
Domains 1 - 8	91.6%
9. No Active Treatment (NAT)	36.5%

Table 3: All Agency Screeners for Frail Elderly

ALL AGENCY SCREENERS Screener Reliability Testing Data for 2004 Agreement Report for all screening agencies with screeners taking the Frail Elder scenario Number of screeners: 229 Number of Screening Agencies: 30	
Domain	**Agreement rate for all agencies**
1. Activities of Daily Living (ADL)	89.8%
2. Independent Activities of Daily Living (IADL)	91.4%
3. Overnight Care	87.0%
4. Health-Related Services	71.8%
5. Communication and Cognition	87.6%
6. Behaviors/Mental Health	95.0%
Domains 1 - 6	89.1%

The IRRT results are shared with each CMO; however, there has been some difficulty sharing the information in a timely manner. In 2004, the EQRO developed an online data entry system to speed up the feedback cycle to the CMOs, but feedback time was still

lagging. The EQRO is currently revising the data entry system for 2005 to further reduce the time between data entry and sharing results with each CMO.

In 2003, the EQRO recommended an additional LTCFS reliability study be conducted during the member-centered assessment and plan (MCAP) reviews to look at discrepancies between the LTCFS results and the CMOs' comprehensive assessments. This study found that 47% of the records reviewed had discrepancies. Resource Center and CMO staff were asked to discuss the discrepancies and improve consistency between the screens and the assessments.

The 2004 site visits reviewed the progress that the RCs had made in reducing discrepancies between the screens and the CMOs' assessments. These activities included having screeners write extensive notes at the end of each screen section to provide more detailed information to the CMO staff regarding the consumer's conditions and developing efficient methods for verifying diagnoses and confirming health-related services. The EQRO found that at least one RC's processes for completing a screen did not include a step to verify diagnoses and health-related services, which is a requirement of their contract with DHFS.

Resource Center Quality Site Reviews

The 2004 resource center site reviews focused on access and eligibility in Family Care. These topics were chosen as a result of findings from an enrollment study conducted by DHFS and the EQRO in 2003. The Family Care-established guideline for program enrollment is 30 days. The 2003 study found that the process for almost 75% of consumers took more than 30 days. In Milwaukee County, over half of the enrollments took more than 60 days.

The 2004 RC site review showed that each RC currently has policies and procedures in place to meet the 30-day timeframe for enrollment. Each RC has strengthened and/or formalized their relationships with the local CMOs and Economic Support (ES) units in order to reduce the enrollment time. However in one RC, staff were found to be selecting enrollment dates that were convenient for the system, rather than for the consumer. Soon after the site visit, a new policy was put into effect to assure that RC staff support consumers in making informed choices, including choosing their enrollment dates.

The 2004 site review also gathered information on each resource center's process for handling CMO disenrollments, especially voluntary disenrollments. CMO members who express a desire to disenroll are referred to the local resource center for disenrollment counseling, which provides them an opportunity to receive options counseling and assistance with planning continuity of services. A 2003 DHFS study showed that disenrollment reporting was not consistent and that reasons for disenrollment were not consistently explored with the consumers. This study determined that the RCs may be able to provide more information on disenrollments, as they are the primary agencies responsible for disenrollment consultations.

The EQRO documented basic RC disenrollment policies and procedures. Policies include logging every disenrollment and the steps involved in each; assigning specific staff to complete all necessary disenrollment documentation and provide options counseling; and adding disenrollment categories such as "concerns about cost share."

CMO Site Reviews

In 2004, the EQRO interviewed CMO administrators, care managers, nurses, providers and members to learn more about the systems and processes in place that support consumer rights related to enrollment and disenrollment. Each CMO detailed a collaborative atmosphere between the interdisciplinary teams (IDTs), RCs and ES units as the foundation for their enrollment policies and procedures. Some CMOs also provide services to members that closely resemble options counseling, which is the responsibility of the RCs. Communication with the CMO network developer was also mentioned as a key component of the CMOs' enrollment procedures, which encourages sharing of information about provider availability.

B. Enrollment Issues

Communication between the CMOs and RCs is strong; however, breakdowns in communication do occur. These breakdowns have contributed to ineligible individuals receiving services that are not reimbursable by Wisconsin Medicaid. These uncompensated costs placed a significant financial burden on some of the CMOs during the first five years of Family Care and continue to negatively affect at least one CMO. Stronger communication between the RC, ES and CMO staff will help reduce the number of ineligible individuals that receive services.

Currently, three of the five CMOs have been able to leverage their proximity to their RCs, in these cases the RC and CMO are located in the same building, to streamline the eligibility and recertification process and reduce the time between a recertification of eligibility and notification to the CMO. One CMO now has a dedicated ES worker on location which eliminates any communications lag between economic support and the CMO. Relocating the CMO, RC and/or ES offices is not possible in the remaining counties and alternative processes have been put into place to address any lag between eligibility determinations and notifications to the CMO. These activities include electronic "flags" that notify care managers that their clients are nearing a recertification or paper processes that track enrollment and recertifications between the ES units, the RCs and the CMO.

One CMO's staff suggested that linking their internal information system with the state-operated Client Assistance for Re-employment and Economic Support (CARES)[16] eligibility system would significantly reduce the chances of ineligible individuals receiving services. However, linking these systems may overly burden the ES staff and put additional stress on an already complex CARES system. There was also concern among state staff that linking the eligibility determination process directly with the

[16] CARES is an electronic system used by local ES staff to determine Medicaid eligibility. If the RC finds an individual functionally eligible for Family Care through the use of the LTCFS, the individual's eligibility information must then be entered into the CARES system.

CMO's operations risked creating a potential conflict of interest. This level of sophistication is not necessarily required in the smaller Family Care counties, but may be a practical approach to dealing with much larger member populations if it can be done without burdening the ES workers and without any conflicts of interest.

Reasons for Not Enrolling in Family Care

Occasionally, when individuals receive a long-term care functional screen and are found eligible for Family Care, they choose not to enroll in the program. Some of the more commonly cited reasons to not enroll are: estate recovery; reluctance to accept public aid; or concern about spousal impoverishment.

The Wisconsin Medical Assistance (MA) Estate Recovery Plan (ERP) seeks repayment of certain home health and long-term care MA benefits provided to members. Recovery is made from the estates of recipients and, in limited situations, from liens placed on homes. CMO staff believe that the possibility of estate recovery is enough to dissuade eligible individuals from enrolling in Family Care, particularly if they feel that they can maintain their current living situation.

Other eligible individuals may choose not to enroll because they are averse to receiving public assistance. Based on discussions with CMO staff, this appears to be particularly important to many elderly applicants. A strong sense of pride and self-sufficiency appears to dissuade many eligible elderly from enrolling in Family Care until they can no longer maintain their current living situation. One CMO staff noted that some individuals apply to Family Care in order to prepare for future long-term care needs and find it comforting to know they are eligible, even if they do not currently access the benefits.

Lastly, individuals who are functionally eligible may not be financially eligible for Medicaid (Family Care) due to their income or the value of their assets. Spousal impoverishment occurs when an individual applies for Wisconsin Medicaid and they must spend-down their combined spousal assets in order to achieve financial eligibility. The amount of total combined assets at the first time of institutionalization determines the amount of assets the couple may keep. For example, if you have assets of $100,000 or less, the "community"[17] spouse can keep $50,000 and the institutionalized spouse can keep $2,000.[18] Depending on the couple's total assets, the community spouse may have to reduce his/her assets significantly. Applicants may seek other alternatives to Family Care enrollment due to spousal impoverishment or they may postpone enrollment while they consider their financial options.

[17] The state refers to the person in the nursing home or the community waiver program as the "institutionalized" spouse while the other spouse is referred to as the "community" spouse. In cases where both spouses require nursing home or community waiver program enrollment each spouse is treated as both an "institutionalized" and a "community" spouse for determining program eligibility for each other.
[18] Wisconsin Medicaid Fact Sheet: Spousal Impoverishment.

C. Enrollment Consultants

The independent assessment conducted in 2003 found value in using independent, third-party enrollment consultants to ensure that potential members and their representatives fully understand the eligibility requirements and benefits of Family Care. The enrollment consultants explain the intricacies of the program and review all other long-term care options available to potential members. The current independent assessment, specifically the in-person CMO interviews, supports the 2003 conclusion.

D. Disenrollment Process

Each CMO tracks disenrollments across target groups and by reason for disenrollment.[19] The most common reason for disenrollment from Family Care is death. This is true for the counties that serve the developmentally and physically disabled, as well as the frail elderly. Of the 4,936[20] cumulative Family Care disenrollments through March 31, 2005, 3,502 (71%) have been due to death.[21] Other reasons for disenrollment from Family Care include:

- Move out of the CMO county;
- Loss of functional eligibility;
- Loss of financial eligibility;
- Voluntary disenrollment:
    - Choose not to pay a cost share;
    - Choose to remain in a nursing home when the CMO does not authorize that level of care; and
- Incarceration.

Although each CMO tracks their disenrollments, little has been done to investigate voluntary disenrollments (1,140)[22]. The disenrollment process is mainly the responsibility of the RC, so few CMO resources have been devoted to examining or improving the process. As other quality issues are addressed, the CMOs may focus more on the disenrollment process, specifically why members voluntarily disenroll.

E. Informal Supports

Informal supports are unpaid services provided by family and friends that reduce the need for formal, paid supports. Informal supports can be beneficial for both the member and the CMO. In addition to minimizing the CMO's costs, members often prefer support from family and friends, particularly for personal supportive home care or home health care services. At the same time, friends and family are often unable to provide care, if they are not paid to do so. Medicaid allows for family members, other than spouses and parents of minors with disabilities, to receive payment for the caregiver services they provide.

---

[19] Tracking enrollment and disenrollment is generally the responsibility of the RCs. In some instances, a CMO may track disenrollments in conjunction with RC staff.

[20] Approximately 13,313 people have been enrolled in Family Care at some point since the inception of the program.

[21] *Quarterly Family Care Activity Report: For the quarter ending March 31, 2005*. June 2005. Department of Health and Family Services, Division of Disability and Elder Services.

[22] Cumulative voluntary disenrollments for all CMOs through March 31, 2005.

State staff were interested in examining the effect of Family Care on informal supports. In the formal interviews, CMO staff suggested that the introduction of Family Care has increased awareness among family and friends that they can be paid for providing some services to members. However, they did not think that Family Care, particularly any specific state or local policies, is deliberately encouraging a transition to paid supports. Rather, the CMO staffs felt that any perceived increase in paid supports among formerly unpaid supports is a matter of greater awareness among family and friends that they can be paid to provide these services.

CMO staff believe that the greater awareness regarding payment of family and friends who provide services occurs both informally in the community and formally through interaction with the RCs. CMO staff mentioned that during the introduction to Family Care provided by the RC, the list of available services can appear like a "shopping list" to many consumers. While RC staff do not appear to be promoting paying for informal supports, CMO staff believe that the RC staff are, in most cases, discussing the option. Receiving both informal and formal information regarding paying family and friends may be encouraging more caregivers to seek payment for services they are now providing for free.

The CMO staffs were clear that they do not actively seek to replace unpaid supports with paid family/friend supports, but they do not discourage paying family and friends if such a change would benefit the member and is allowable within the rules of Family Care. A typical guideline used by the CMOs to determine whether informal supports should be paid looks at the amount of care provided by the caregiver that could be reasonably assumed to be above and beyond what a typical family member or housemate[23] would be expected to provide, or if the additional care places a hardship on the caregiver.

CMO staff indicated that they encourage their inter-disciplinary teams (IDTs) to understand each member's reliance on informal supports during the assessment process so that the CMO can help strengthen these supports. The IDTs may provide services such as respite to help reduce stress among the members' family/friends. One CMO has an additional program called "Caring for Caregivers" that helps caregivers understand "burn out" and provides an opportunity to network and share experiences and concerns with one another.

The CMOs pointed to one additional factor that may be contributing to an increase in paid supports. Individuals in the community are generally not seeking enrollment in Family Care until they or their families have reached the point where they cannot continue their current living situation without assistance. In many cases, the only way to maintain the individual's current living situation is to pay their informal supports, which allows the family member or friend to devote more time and energy to providing care.

[23] If a friend provides caregiver services to a Family Care member, but does not live with the member, the CMO cannot withhold payment if the friend will no longer provide the services for free. In these cases, the friend becomes a consumer-directed support and is paid accordingly.

CMO staff believed that they would be getting a larger percentage of enrollees seeking services to keep themselves in the community. In reality, most individuals (or their family/guardians) are waiting until they have made the decision to go into a nursing home or some other aggregate setting before contacting Family Care. When these individuals contact the RC, they are often only looking for help with coordinating that transition. The CMOs feel strongly that if they had contact with many of these individuals sooner, they could provide services that would prolong their stay in the community. Staff from one CMO mentioned that there is a state-imposed freeze on new enrollments for people not eligible for Medicaid, which means that most new enrollees have exhausted their personal resources, become Medicaid eligible, and are now seeking assistance as a last resort.

If Family Care hopes to recruit members before their situations deteriorate and require comprehensive services, state staff should clarify this philosophy with the RCs and CMOs. State, CMO and RC staff could then develop a marketing campaign that clearly defines Family Care as a resource for maintaining individual independence in the community, even for individuals who are currently getting by on their own or with the help of family and friends. This change will be made more difficult, however, by a culture that places significant value on personal independence and self-sufficiency; a belief held particularly strongly among the elderly. This hurdle was discussed within multiple CMOs and remains a challenge.

F. Provider Networks

Each CMO manager who was interviewed is comfortable with the size and variety of their existing provider network. They agree that Family Care has helped to strengthen local provider networks; drawn new providers into their communities; and fostered greater competition among all providers in their counties. The CMOs use requests for information (RFIs) or requests for proposal (RFPs) to solicit additional providers at lower costs or encourage new providers to considering contracting with the CMO.

The establishment of flat rates for some services, such as residential services, has created a competitive environment in some Family Care counties. Old providers have dropped out of the network but have been immediately replaced by new providers looking to grow their business. The managed care structure of Family Care has also helped the CMOs negotiate better rates among existing providers, in part based on the volume of services purchased. Similarly, some of the smaller CMOs have limited additional providers from entering their networks in order to provide existing vendors with a larger volume of work, allowing them to maintain their low rates. Staff from one CMO voiced a concern over spreading out services among too many providers and fostering “too much” competition. Multiple providers in their county have gone out of business due to intense competition or limited referrals due to provider saturation.

Network developers are in place in each CMO and have been able to strengthen the CMO provider networks over the past few years. The network developers serve as a link between the IDTs, providers and members. The IDTs have close working relationships

with the network developers, which allows for sharing of information about provider availability and ensures that members are aware of changes in the provider network.

To ensure provider quality, the CMOs have developed detailed provider requirements that are used to screen and certify all providers. Examples of these criteria include:

- Organizational mission statements that complement the Family Care outcomes and CMO mission statement.
- Maintenance of all applicable licensing and certifications for the services they are proposing to provide (e.g., Bureau of Quality Assurance (BQA) certification, etc.).
- Demonstrated education and experience with the proposed service area and population.
- Policy and procedures that illustrate an understanding of statutory regulation.
- Physical settings/locations that exhibit sufficient capacity and safety to provide services.
- Staff training in the relevant areas of client rights, abuse and neglect, restraints and seclusion, and emergency and safety protocols.
- Criminal background checks for all employees.
- Reasonable business plans and demonstrated financial stability.
- Referrals that illustrate competency and quality services.
- Willingness to sign a contract with the CMO outlining the above requirements.

In addition to these basic provider requirements, CMOs have developed assessment techniques such as member surveys, which ask provider-specific questions regarding satisfaction with services and quality of care. The CMOs have terminated provider contracts for not complying with the requirements listed above, or for providing low-quality services as determined by member feedback, CMO staff observations or poor audit results.

Annually, DHFS assesses the capacity of each CMO's provider network to assure that it anticipates future enrollment; identifies the number of network providers not accepting new members; projects the future needs of membership; establishes standards for travel time and distance to providers; and has the capability to provide services 24-hours per day, seven days per week.[24] At least one CMO uses geographical access mapping to ensure that network providers are located near members to improve access to services.

Although the CMO staffs are comfortable with their overall provider networks, there are services that remain difficult to provide and populations that are difficult to serve. Some of these services are county specific, while others, such as dental care, are universal across CMOs.

One CMO is struggling to absorb the medically needy DD population in its county created by a lack of Intermediate Care Facilities for the Mentally Retarded (ICF-MRs). The CBRFs in this county are not prepared to deal with the medical needs of many of

[24] *Family Care 2004 Annual Report, July 5, 2005.*

these consumers and in turn, the CMO is left to find appropriate care for these members. Specialized DD providers are aware of the limited options available to the CMO and therefore charge a premium for their services. This CMO also has difficulty providing housing for members with behavioral health issues and providing behavioral health services to non-English speaking members. Currently, CMO staff provide all of the translating services for their private providers. This particular CMO has established DD and behavioral health workgroups to identify and address these service gaps.

Another CMO has had difficulty with their supportive home care and personal care provider network. In this county, only two agencies provide these services, one of which is the county human services department. To date, the CMO has been able to provide sufficient volume of services so that the private provider could maintain solvency. However, CMO management is fearful that if this provider were to run into financial difficulties it would be very difficult to meet the supportive home care and personal care needs of their members.

Other areas where the CMOs are having difficulties growing their provider networks include wheelchair-accessible transportation on nights and weekends and adequate nursing and equipment services for ventilator-dependent members and bariatric care. In general, transportation is difficult to provide in most counties, particularly transportation for non-medical or non-service related needs, such as grocery shopping or social activities. Because of federal funding cuts, even municipal transportation has been reduced in some Family Care counties. Staff from one CMO commented that, as with most Americans, the expectation among their members for readily accessible transportation is very high. This expectation affects the CMO's ability to assist some of its members with achieving their individual outcomes. Finding agencies that are both willing and capable of providing wheelchair accessible transportation is doubly difficult, particularly on nights and weekends. This difficulty can severely limit some members' participation in the community.

One county has addressed the issue of transportation county-wide. This county's long-term care council has established a transportation study committee that has begun surveying local transportation providers, including potential providers like car dealerships and local colleges, to find out what transportation services are currently available and how they might be expanded.

Contracting with nursing staff and durable medical equipment providers for specialized respiratory services and equipment, specifically for ventilator-dependent members, is another challenge. According to one CMO management team, a state-wide lack of registered nurses (RNs) and licensed nurse practitioners (LPNs) contributes to this challenge. For example, this CMO has now received a waiver from the State to pay RNs and LPNs above their union rates to provide competency evaluations and mental health services to their DD population, services that were originally purchased from a provider in another county. Currently, the CMOs are still struggling to provide adequate services to their ventilator-dependent members.

Multiple CMOs commented during their interviews that providing bariatric care is difficult because obesity is often associated with other behavioral health issues, such as depression or obsessive compulsive disorder (OCD). Providing services for these types of mental illnesses has been a challenge for the CMOs. One CMO is currently developing a bariatric program where an occupational therapist (OT) will go into a member's home and profile their condition. The occupational therapist will then work with the member and an independent provider to develop a plan for reaching certain "deliverables" or goals, such as increasing activity, weight loss, and less dependence on supports.

Lastly, each CMO is struggling to coordinate and provide behavioral and mental health services. Psychiatric services are not in the Family Care benefit package, but a large number of members suffer from depression, substance abuse and other personality disorders and require treatment in order to achieve their individual outcomes.

Management from one CMO is less concerned that psychiatric services are not included in the benefit package and more concerned by the relative lack of psychiatric services available in their county. Not only is outpatient counseling not readily available, especially for the long-term care population, but it is also expensive. The CMOs are struggling to find cost-effective ways to provide mental health services to their members in the community.

This same county has a Comprehensive Community Support (CCS)[25] program that can provide out-patient mental health services without requiring a severe, persistent mental health diagnosis like schizophrenia or bipolar disorder, which has resulted in a hospitalization, to be eligible. However, the CMO is struggling to determine how it will interact with this program. As only one CMO currently has a CCS program, it is still unclear to CMO management how they will address behavioral or mental health conditions, such as eating disorders, that do not meet the Community Support Program (CSP)[26] requirements for service. The CMOs are struggling to understand where the funding will come from to provide these services. The CMOs need guidance on how Family Care will interface with the CCS and CSP to provide adequate behavioral health services to their members. DHFS staff have been working on clarifying the role of CCS within Family Care and expect to make a recommendation to DHFS management in late 2005 or early 2006.

25 The services to be provided are individualized to each person's need for rehabilitation as identified through a comprehensive assessment. The services must fall within the federal definition of rehabilitative services under CFR 440.130 (d) in order for the services to reimbursed by Medicaid.
26 The purpose of the Community Support Programs (CSPs) is to provide individuals with chronic (e.g., long-term) mental illness with effective and easily accessible treatment, rehabilitation, and support services. CSPs do not cover organic mental disorders or a primary diagnosis of mental retardation or of alcohol or drug dependence [s.HSS 63.02(7), Wis. Dam. Code]. *Wisconsin Medical Assistance Provider Handbook*. Part H, Division V Community Support Program (CSP). Section I, General Information, June, 1992. Page 5H1-001.

G. Primary Care Physician Visits

Visits to primary care physicians[27] are often used as an indicator of program quality. It is thought that these visits can increase opportunities for prevention and early intervention health care services, which reduce more acute and costly services in the future.

Family Care members visit their primary care physician significantly more often than their comparison group counterparts. The table below shows the average number of primary care visits per Family Care member among each population in the analysis, compared to the average number of visits among their comparison group counterparts.

Across all counties and target groups, Family Care members meet with their primary care physicians more often than their comparison group counterparts. This pattern remains constant when the effects of other variables such as gender, functional status, geographic location, dual eligibility and last year of life are controlled, implying that the managed care design of Family Care, including RNs on the IDTs and requiring the CMO to coordinate acute and primary care services for their members, significantly increases the number of primary care physician visits over long-term care provided in the non-Family Care counties.[28]

Table 4: Mean Physician Office Visits per Individual by Service Category

Mean Physician Office Visits per Individual *by Service Category Composite 2003 and 2004*				
Population	**FC Subgroup 2003-04 Mean**	**2003-04 CG Counterpart Mean**	***Significant Mean Difference***	***Adjusted Significant Mean Difference***
Non Milwaukee County Family Care	20.6	14.7	***	***
Non Milwaukee County FC FE	13.5	12	***	***
Milwauke County FC FE	15	12	***	***
Non Milwaukee County FC DD	15.9	10.2	***	***
Non Milwaukee County PD	27.2	19.3	***	***
Level of Significance: * p<0.1, ** p<0.05, *** p<0.01				

From 2003 to 2004, the average number of primary care physician visits among members in each Family Care county has remained relatively stable. However, primary care physician visits did show a slight decrease in 2004 for all counties, except Fond du Lac.

[27] Primary care physician visits were defined using billing provider codes available through the Medicaid Evaluation and Decision Support (MEDS) databases. These codes included the following physician categories: general practice, family practice, internal medicine, obstetrics and gynecology, pediatrics, preventive medicine and clinic.
[28] Please see the "Control Variable" section of the report for a complete list of control variables.

Table 5: Mean Physician Office Visits per Individual by CMO

Mean Physician Office Visits per Individual *by CMO 2003 and 2004*		
CMO	2003	2004
Fond du Lac	7.4	7.4
LaCrosse	16.1	14.1
Milwaukee	9.4	8.8
Portage	10	9.1
Richland	12.6	9.1

Other cost-effectiveness findings presented in this report support the impact of increased primary care physician visits on reducing primary and acute medical costs among Family Care members. The cost-effectiveness analysis shows that Family Care has a significant impact on hospital inpatient costs, reducing costs over time, for all target populations, except DD members in the non-Milwaukee counties. Also, costs for non-primary care physician office visits decreased across all service categories, with the exception of Milwaukee County members with waiver experience before enrolling in Family Care. These findings supports the belief that primary care physician visits provide opportunities to increase prevention and early intervention health care services that in turn reduce the need for more acute and costly services among members of Family Care.

H. Access Conclusions and Recommendations

The access findings show continued improvement and efficiencies in access to long-term care services and supports in the Family Care counties. Provider networks have increased, functional assessments have improved, enrollment has been streamlined and disenrollment tracking is becoming more detailed. The CMOs continue to look for ways to improve access to services and supports for Family Care members. Highlighted below are areas where the CMOs, DHFS and the EQRO could focus their improvement efforts to further promote access to Family Care.

- Improve communication between the RC, ES and CMO staffs, where necessary, to help reduce the number of ineligible individuals receiving Family Care services. (RCs, CMOs and DHFS)
- Improve coordination between LTCFS and member assessments. (DHFS and CMOs)
- Work with the RCs to provide more detailed disenrollment information, particularly regarding voluntary disenrollments. (DHFS)
- Improve outreach to attract individuals before their health or functioning deteriorates to a point where they can no longer stay in the community. (RCs)
- Clarifying expectations of RNs in coordinating non-covered services, such as primary and acute health care. (DHFS and CMOs)
- Work with the CMOs to devise alternatives for care of very high cost DD cases. (DHFS and CMOs)
- Clarify the available options for coordinating behavioral health services for their members. (DHFS)

Quality

A. External Quality Review Organization Quality Findings

The EQRO's assessment of quality in Family Care focused heavily on member outcomes in 2004. In the 2004 Annual Report section entitled "Defining and Measuring Quality in Family Care," the EQRO states: "The concept of measuring quality by measuring member outcomes is central to the Family Care philosophy. All other EQR activities are linked directly and/or indirectly to member outcomes."

In 2004, an outcome workgroup was formed to identify system features necessary to support the IDTs in outcome-based planning and make recommendations to the CMO directors and DHFS about the content of outcomes training. The workgroup consisted of CMO care managers and nurses, a representative from The Council on Quality and Leadership (CQL) and DHFS/EQRO staff. The workgroup came to a consensus regarding the use of member outcomes to ensure quality in three areas:

1. CMO IDTs need more support and skills development for identifying personal outcomes and understanding how outcomes and needs/deficits are woven together into the care planning process.

2. CMOs need more support in clarifying for members what "choice" means in Family Care and in clarifying the distinction between outcomes and desires for specific services. Defining choice has been a struggle for the CMOs and DHFS. A document defining "choice" in Family Care operations has recently been completed. A copy of this document can be found in Appendix B.

3. Member outcome interviews could be more useful to IDTs in several ways, including collegial feedback following each interview; knowing which supports, if any, concern the interviewer and why; and having a better understanding of the interviewer's decision-making process.

As discussed in the Access section of this report, the EQRO conducted quality site reviews with the RCs and CMOs in 2004. The 2004 site reviews continued to utilize the Appreciative Inquiry[29] process to assess the implementation of quality standards at each RC and CMO. The site reviews covered the following focus areas:

- Prevention and Wellness;
- Quality Assurance/Quality Improvement Plan, Program and Coordination;
- Enrollee Information, Rights and Protections;
- Enrollment and Disenrollment; and
- Subcontractual Relationships and Delegation.

The EQRO has been tracking the CMOs' quality assurance and quality improvement planning since 2002. In 2002, the EQRO found that each CMO had a detailed workplan

[29] Appreciative Inquiry (AI) is a positive approach to discovery that provides for constructive feedback and creative problem solving.

for internal quality assurance and improvement but had not yet begun implementation of most aspects of their plans. By 2003, the CMOs had developed some data systems to collect and analyze information related to quality activities.
The 2004 site reviews found that the CMOs were still struggling to fully implement their quality assurance and improvement plans. Some CMOs were still working on IT system issues which hindered full implementation of their plans. For example, multiple CMOs were in the process of developing tracking mechanisms for quality-related data. However, the quality data that was collected was not always shared among CMO staff.

One CMO felt that their primary quality assurance role was continuous monitoring of members' needs. Although very important, this role does not assure the quality of the services provided. Another CMO completed a strategic planning process that resulted in quality improvement in specific areas within established timelines. This strategic plan also identified barriers to quality, including the limited availability of certain types of providers and the challenge of monitoring quality within provider facilities.

A third CMO delegated their quality monitoring activities to a subcontractor, which created a Best Practice Team (BPT) to conduct and monitor contracted activities. These activities included assisting with utilization review activities, fiscal and service monitoring, service authorization training and health promotion activities. The CMO management team meets weekly with the subcontractor and prioritizes quality activities for the BPT to focus on.

B. Appeals and Grievances

Based on findings from the EQRO, Family Care members file appeals and grievances for several reasons related to the following outcomes:

- Preferences of where to reside, including type of facility, or with whom they wish to live;
- Satisfaction with services which includes type, frequency and duration of certain services, as well as the relationship with their care team;
- Ability to participate in the life of the community, including employment and other services;
- Ability to choose their services, including the frequency and the providers of services; and
- Feeling of fair treatment, which is often the overriding issue when appeals and grievances are filed.

Family Care members or their representatives can file appeals and grievances at the local level, at the DHFS level and directly with the Wisconsin Department of Administration, Division of Hearings and Appeals (DHA), where decisions are made by an administrative law judge (ALJ). Often, the member works with their care team or a designated CMO representative to file an appeal or grievance. If a member wishes to file an appeal or grievance directly with DHFS, the EQRO is authorized to attempt a resolution on behalf of DHFS. The EQRO is authorized by DHFS to investigate appeals and grievances submitted to the Department, and also performs concurrent reviews of appeals submitted to the Division of Hearings and Appeals that are not eligibility related. Lastly, the EQRO

tracks and documents each local adverse decision that is submitted by the CMOs, per their contract requirements.

The EQRO tracks appeals and grievances in the following categories:

- Eligibility-related issues;
- Requested Services issues;
- Service Plan issues;
- CMO Decisions; and
- General Grievances.

The following table shows the breakdown of the number of appeals and grievances filed for each CMO by target group.[30]

Table 6: 2004 Appeals and Grievances Filed by CMO

2004 Appeals and Grievances Filed by CMO (All) N=150										
	Fond du Lac		***LaCrosse***		***Milwaukee***[31]		***Portage***		***Richland***	
	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total	Count	% of Total
DD	8	1%	0	0%	0	0%	1	<1%	0	0%
FE	6	1%	2	<1%	117	2.1%	1	<1%	1	<1%
PD	10	1%	3	<1%	0	0%	0	0%	1	<1%
Total	**24**	**2.5%**	**5**	**<1%**	**117**	**2.1%**	**2**	**<1%**	**2**	**<1%**

Members also have the right to request a hearing with the CMO board for all appeal and grievance issues. If the board rules against the member, the CMO is required to report those adverse decisions to DHFS within 20 days. The EQRO reviews and tracks the adverse decisions, but does not conduct further investigations at this time. In 2004, there were 31 adverse decisions, all of which were related to requested services.

The EQRO completes full investigations for all appeals and grievances not related to eligibility issues, including those submitted directly to DHA.[32] In 2004, the EQRO investigated 55 DHFS-level appeals or grievances. Twenty of these appeals and grievances were resolved to the member's satisfaction. The EQRO also conducted 56 concurrent reviews, or reviews of appeals or grievances filed directly with DHA. Twenty-five of these were resolved prior to the member attending a Fair Hearing. Because of appeals and grievances filed simultaneously with DHFS and DHA, the EQRO reviewed a total of 91 cases, with 36 resolutions. The "requested services" category had the largest percentage of grievances filed and the majority of the grievances and appeals were submitted by the frail elderly.

[30] *Family Care 2004 Annual Report, July 5, 2005.*
[31] Milwaukee County Family Care only serves the frail elderly and makes up 60% of the entire Family Care population.
[32] *Family Care 2004 Annual Report, July 5, 2005, Appendix D* provides a complete overview of the total number and type of appeals and grievance investigations conducted in 2004.

The high number of appeals and grievances in Milwaukee County was the result of a misinterpretation of the Paying Family Caregiver Guidelines as developed by the CMO Case Management workgroup in early 2004. The majority of the appeals and grievances were regarding requested services, particularly reductions and terminations of supportive home care hours provided by family members. From April 2004 through April 2005, state, county and EQRO staff committed significant time and resources to clarify this policy. Through intensive collaboration with DHFS and EQRO staff, and a retroactive review of 610 cases, supportive home care hours were restored for many members. The EQRO continues to review newly proposed reductions, terminations or denials for supportive home care and personal care provided by family members in Milwaukee County.

Overall, there were more Family Care appeals and grievances filed in 2004 (123) than in 2003 (91); however, the majority of appeals and grievances filed in 2004 were for "requested services" (72%), as opposed to only 31% in 2003. As a result, there were significantly more EQRO investigations of appeals and grievances in 2004 than in 2003. Not including appeals and grievances related to eligibility, which are not required to be investigated, the EQRO investigated 91 claims in 2004 and 29 claims in 2003. Overall, the EQRO was able to resolve 36 of 91 cases or 40% of all investigations. In 2003, 48% of investigated cases were resolved, possibly due to the much lower number of investigations in 2003.

Table 7: 2003/2004 Overview Summary: EQRO Investigated Cases

2003/2004 Overview Summary: EQRO Investigated Cases				
	Eligibility Related (No EQRO Investigation)	***DHFS or Concurrent Review***	***Concurrent Review Requested by the State on Eligibility Related Issue***	***Total Investigation by the EQRO***
2003	63	28	1	29
2004	35	88	3	91

C. Program Changes Since the First Independent Assessment

The first independent assessment recommended several changes to Family Care operations. These recommendations covered access to Family Care, quality of services and cost-effectiveness. In the nearly two years since the previous independent assessment, state and CMO staff have addressed many of these issues. Below are examples of program areas where Family Care has improved since the first independent assessment. Each area discussed was reviewed in more detail earlier in the report.

Access Monitoring Activities

The first independent assessment noted that the State had not been monitoring the 30-day eligibility determination requirement and recommended that the EQRO work with the State to develop routine reports to monitor access to Family Care on an individual county

basis. In 2003, a study conducted by the State and EQRO found that it took longer than 30 days between the date the functional eligibility screen was submitted and the date the member was enrolled in Family Care for almost 75% of all consumers, and over 60 days to enroll 53% of consumers.

Based on these findings and the recommendation from the independent assessment, the EQRO further investigated the issue of access during its 2004 site reviews and noted significant improvement among the CMOs. The EQRO noted that each CMO had strengthened their relationships with the local economic support offices and assigned staff to monitor the timeliness of eligibility determination and enrollment. The Family Care program no longer struggles with timeliness of eligibility determinations and enrollment.

The expectation for determination of Medicaid eligibility, which may or may not begin immediately after the functional screen is administered, is 30 days. At least one CMO has designated a single contact for all access issues. With intense DHFS involvement, one county improved from 0% compliance with Medicaid requirements for eligibility determinations/enrollment timeliness to 100% by May 2005. This CMO has also created a tracking system to monitor the flow of documents to all agencies.

Increase Provider Networks
The first independent assessment noted that information gathered through site visits and meetings with the CMO directors and DHFS revealed an increase in the number of providers in the Family Care counties. The increase in providers within the Family Care counties was viewed as an indicator of increased choice and encouraged by the State.[33] Exact numbers were difficult to determine as detailed provider records were not available at that time.

The current independent assessment has also found an increase in the number of providers available to Family Care members in the five CMO counties. Although the CMOs do not track their total number of providers, they do maintain complete lists of all contracted providers. These lists show an increase in the number of available providers and the diversity of providers since Family Care began. More importantly, the CMOs have developed much better methods to predict their enrollment trends and the needs of new enrollees. These methods have helped the CMOs proactively manage their provider networks and develop new capacity to meet future needs.

Disenrollments
The 2003 independent assessment suggested that the State develop better methods to track and understand reasons for disenrollments from Family Care. At issue were the reasons for disenrollments and trends in disenrollments. The independent assessment

[33] Earlier in the report it was noted that some CMOs prefer not to recruit additional providers in certain services areas so that they can provide enough volume to existing providers, which allows the existing providers to keep costs down. This further highlights the CMOs' efforts to balance member choice with cost-restraint.

recommended development of a routine disenrollment survey to assess patterns that may occur for subgroups within the program.

Neither the State nor the CMOs have developed a disenrollment survey; however, the EQRO has focused more of its attention on analyzing disenrollments. The CMOs have become much better at recording the reasons for disenrollments, specifically voluntary disenrollments, with assistance from the RCs. The RCs track and submit all voluntary disenrollments to the EQRO on a quarterly basis.

Grievances and Appeals
The first independent assessment implied that Family Care grievance and appeal data did not fully reflect the total amount of complaints. At the time of the assessment, the State was only reviewing grievances and appeals filed with the regional DHFS offices.

The EQRO now receives all grievances and appeals from each CMO where the decision was adverse to the member, whether the complaint was filed with the CMO, DHFS or the Division of Hearing and Appeals. The EQRO also categorizes the grievances and appeals into five categories for further tracking and analysis. The full log of CMO-level grievances and appeals comes in as part of the CMOs' quarterly reports to DHFS. The EQRO is revising the grievance and appeals database so that by 2006 the CMOs will be able to post their grievances and appeals directly to the EQRO web-based database.

Pay-for-Performance
An additional cost-saving measure currently under development between the State and the CMOs is pay-for-performance (PFP)[34]. The State began discussions of PFP with the CMOs in February 2005 as a potential cost-saving measure to be implemented in 2006. State and CMO staff determined that initial PFP efforts could focus on diabetes management in an attempt to restrain related costs. Family Care participants have a higher rate of diabetes diagnoses than the general Medicaid population and diabetes-related complications can require costly services. The State is in the process of defining the diabetes measures that will be used to gauge performance within each CMO.

The State has assured the CMOs that their participation in 2006 will result in a positive incentive. However, the State has not ruled out the possibility that as PFP matures, capitation rates could be reduced for not meeting the performance standards.

CMO staffs have expressed reluctance to undertake the development of PFP in 2006. They are not adverse to the idea and see the potential benefits of striving for more efficiency in their daily operations, yet are concerned about finding the necessary resources to properly develop PFP, including improving care management for members with diabetes. Current workloads in most CMOs are already taxing existing staff and

[34] Pay-for-performance (PFP) is an incentive program intended to improve service delivery and achievement of participant outcomes, while also reducing costs. Achievement of the performance standards are generally rewarded in some way, while failure to achieve the standards can result in reduced payments.

CMO managers are concerned about increasing workloads or finding additional resources to hire new staff.

The CMOs have not budgeted for PFP development in 2006 and it is possible that the positive incentive may not off-set the increase in workload. One CMO director stated that it seemed too early to be developing PFP because some of the CMOs are still struggling to maintain solvency and all of the CMOs are still trying to find and implement the best managed care practices to fit their county dynamics and meet the needs of their members, while remaining cost-effective.

The CMO directors also pointed out that constructing a successful PFP system has taken several years to establish in primary and acute medical care where performance measures are much better defined. The State recognizes these issues and others. They are working to use existing data sources to determine performance on the initial diabetes measures to relieve some of the administrative burden on the CMOs.

D. Overall Program Issues

During the detailed in-person interviews with each CMO manager and their administrative staff, several issues surfaced as ongoing challenges for the CMOs and for the State. Family Care, like all new programs, has experienced growing pains over its five years of existence. During that time, many programmatic and policy issues have been observed, investigated and remediated through a strong partnership between CMO and state staff, though many issues remain. A number of these remaining issues have been investigated by CMO and state staff, but have yet to be resolved, while others are have yet to be addressed. Some of the issues are county specific, while others cut across all five CMOs. The following discussion summarizes the unresolved issues facing Family Care, as expressed by the CMOs during the in-person interviews.

Capitated Rate

Staff from each CMO believe they have a basic understanding of the current capitated rate setting methodology; however, there is continued confusion over how to accurately predict future rates for budgeting purposes. None of the CMOs' staffs felt strongly that it could replicate the rate setting methodology for their county with the data they have available. The CMO staffs do not want a detailed statistical discussion of the rate setting methodology, rather a simple explanation or tool(s) to predict future rates based on the existing rate setting methodology, including access to the data necessary to predict their rates. The CMOs receive their final rates on November 1, which makes budgeting for the following year difficult. Providing the necessary training and data to accurately predict future rates would also assist with development of the three-year business plans required by the State. The State hopes to work with the DHFS actuary, Price Waterhouse Coopers (PWC) to develop a way for the CMOs to estimate their upcoming rates. State staff have recently worked with the CMOs to help them extract rate-specific information from the functional screen reports.

In addition, the CMO staff expressed a desire for more details on the rate setting methodology because of its dependence on acuity as measured by the LTCFS and the

absence of historical cost data in the formula. There is also some concern from one CMO regarding suspected "tweaking" of the LTCFS and the effects that those changes may have on the rates for each CMO.[35] The CMOs' staffs felt strongly that any changes to the LTCFS that could affect their future rates should be discussed well in advance of the development of new rates. The State has assured them that no changes will be made to the functional screen without a thorough discussion with the CMO directors.

Some concerns remain among CMO management staff regarding the state assumption that Family Care, as a managed care program, is cyclical, with CMOs losing money in some years and earning a profit in others. Staff from some CMOs are skeptical, as they have been operating at or near a deficit for several years. Other CMO staff question why the new rate setting methodology, with an increased emphasis on acuity, would not be relatively stable over time, following changes in acuity and allowing the CMOs to remain at or near budget-neutrality in most years. The State feels that as a managed care entity, each CMO needs to expect some loss years and some profit years, just as private managed care organizations experience.

There had been confusion over the introduction of the "county factor" into the rate setting methodology. The State attempted to explain to the CMOs what constitutes the county factor, but confusion remained among the CMOs' financial staffs. Recently, state staff provided the CMOs with additional details regarding the make-up of the county factor for the 2006 rates.

The CMOs still struggle with the impact on their rates of collecting cost shares. CARES calculates the cost shares for each CMO, and in turn their rates are retroactively adjusted to account for the collection of the cost shares. If the CMOs are unable to collect all the cost shares, they lose money in two ways. They lose money from the missing cost shares and their rates are reduced as though the cost shares had been collected. Most of the CMOs have improved their collection of cost shares and no longer have difficulty in most cases; however some cost shares become prohibitively expensive to collect and the CMOs lose funding through the retroactive rate adjustment. The State has explained that recovering funding previously covered by cost shares is a federal requirement that they cannot avoid. It may be helpful for the State to review this policy and provide the CMOs with suggestions on how they can maximize the collection of cost shares.

One Family Care county is struggling to reconcile the current capitated rate setting methodology with their historical costs and current service delivery system. CMO staff and state staff have been engaged in extensive and ongoing discussions to address the CMOs' staff concerns, but have yet to come to a consensus. This CMO has historically paid more PMPM to provide services to their members than the other CMOs. However, their PMPM costs have risen less than 4% over the first five years of Family Care, the lowest rate among all CMOs. Although this CMO has historically paid more for their members, they have seen a 3.5% net decrease in their capitated rates during the period

[35] At least one CMO was concerned that the potential for a conflict of interest may exist because the state designed, and continues to modify, the LTCFS logic, which feeds directly into the rate setting methodology.

2000-2006[36], while the other CMOs have realized net increases in their rates over this period.

At issue is the underlying cause of the historically greater PMPM costs in this county. The CMO staff believe that the rate setting methodology should recognize their initial high costs due to a DD system that is highly individualized in the areas of vocational and residential care. First, the CMO provides individualized residential care (including supportive home care and personal care) for their DD population in the members' own homes, typically in an apartment or duplex setting. This care is often provided twenty-four hours per day, seven days per week and is contracted at a daily rate. Other CMOs primarily provide residential services for their DD populations in CBRF or AFH settings, which are inherently less expensive, but may not provide as much community integration as the in-home model. Second, this CMO has recently learned that their DD residential providers are significantly more expensive than similar providers in other Family Care counties. The CMO is currently looking into the financial ramifications of this practice. Lastly, the CMO has historically provided DD members with supported employment rather than placing them in a sheltered workshop. Sheltered workshop participation is approximately one-third the cost of providing supported employment.

Within these historical practices, the CMO has continually tried to find more efficient means to provide DD services. For example, the CMO has worked to combine multiple members in one living arrangement, either as roommates or as neighbors in a duplex setting, in order to reduce staff time. However, placing two or more members together in one setting is not always an option. In some cases, one individual with significant behavioral issues may require two staff at all times, which becomes extremely costly.

The rate setting methodology appears to be drawing each CMO closer to the mean and focusing more heavily on the acuity of each CMOs' members. This methodology does not account for the historically higher costs of providing DD care within this highly individualized system and will ultimately force the CMO to drastically reduce costs for this population in order to remain solvent. Based on a projected increase of 1.2% in the CMO's 2006 capitated rate, they would face a deficit of approximately $1,000,000 in calendar year 2006.

To address this potential deficit, CMO management staff are currently meeting with their providers to discuss rate reductions and variations to service delivery that may reduce overall costs for their DD population.[37] In addition, the management staff has been in contact with the other CMOs to request a list of their DD providers. The CMO intends to conference with these providers and solicit interest in providing their DD services. The CMO also hopes to understand how the providers can provide similar services for significantly lower rates in other counties. The CMO has made repeated efforts to recruit new DD providers locally, but in each case the other providers have proven to be even more costly than existing providers.

---

[36] Preliminary 2006 rates were presented to the CMOs in August 2005.
[37] Existing lease agreements may be a barrier to modifying existing care plans.

State staff continue to investigate the differences between the DD system of care in this county and the other Family Care counties. They have recently completed an extensive investigation with available data to determine why this CMO's costs remain higher than other comparable CMOs in this service category. With currently available data, state staff have been unable to show why this CMO's costs should be significantly higher than the costs for similar members in other CMOs, but continue to work closely with this CMO to address the potential budget deficit in 2006.

Choice
Prior to Family Care in Wisconsin, alternatives to institutionalized long-term care were provided solely through other home- and community-based services (HCBS) waivers. The HCBS waivers provide comprehensive services to participants, but restrict access to services based on available funding, creating long waiting lists. As an entitlement program, Family Care eliminates waiting lists, but may restrict some services to members based on need and cost-restraint.

Care managers in Family Care design their member-centered care plans (MCPs) around a series of outcomes defined by each member. Within those MCPs the care managers have broad flexibility to provide services for their members. Family Care was designed to increase the choice of providers and services for consumers while at the same time eliminating the waiting lists experienced in the waiver counties.

Allowing this level of flexibility and mandating that the CMOs provide their members with some provider and service choices can affect the cost-effectiveness of the program. For example, a member may require extensive home modifications of $25,000 or more to remain in their own home, which is their preference, while moving to a residential setting would be less-costly; or a member may request that the CMO purchase a modified automobile so that the member can drive to and from work. In situations like these, where the expense may be the most efficient means to meet the member's needs, careful consideration needs to be given to both cost and effectiveness. Until recently, guidelines for those considerations were not available.

From its inception, Family Care has emphasized member choice; however, several CMOs perceived a gradual shift away from choice towards a greater emphasis on cost-restraint in recent years. Current budget issues have placed pressure on all state programs to reduce costs and become more efficient, and the CMO staffs believe that this pressure has influenced a recent shift in Family Care that emphasizes cost-restraint. State Family Care managers explain that incentives for cost-restraint have always been built into the design of Family Care, since the CMOs assume financial risk for provision of all needed health and long-term care services within the capitated rate, and because cost-effectiveness was a substantial contributing factor in the development of the program as managed care. CMO directors understands that Family Care is managed care and have emphasized efficient service delivery, yet some directors expressed concern over the perceived shift in importance from choice to cost-restraint.

Over the course of Family Care, the CMOs have struggled with providing very high-cost services to their members. In some cases, these high-cost services may be cost-effective in the long run, but in many cases they are prohibitive, particularly for smaller counties where the high-cost service may be a significant percentage of the entire program budget. However, there were very few guidelines clearly explaining the State's position on providing such services. In these instances, CMO management had to spend significant time communicating with state staff to clarify the DHFS position on providing these services and/or do their best to guide staff in making service authorization decisions within the context of the CMO's approved service authorization policy.

Defining choice and establishing guidelines for service provision has been a struggle for both CMO and state staff since the inception of Family Care. The CMOs wanted guidance from the State, but the State was reluctant to be overly prescriptive for fear of undermining the local control of the program. At a minimum, the CMOs wanted broad guidelines from the State that could be used as parameters when deciding whether to provide a high-cost service to a member. Although opinions varied, it did not appear that any CMO wanted detailed, written guidelines that allowed and disallowed specific services based on cost. As part of these minimum guidelines, the CMOs had also hoped to establish practices that the State would support during appeals and grievances. Meeting member requests for services is ultimately the CMO's responsibility as detailed in the Family Care contract signed with the State. Without explicit contract language describing what should and should not be provided to members, CMO staffs wanted reassurance that the State would support their decisions.

After extensive work among state staff and several detailed discussions with the CMO management teams, the State drafted "Choice in Family Care." (See Appendix B) This document clearly describes the State's position on choice in Family Care, without identifying specific services or situations where choice should be restricted. More importantly, this document makes it clear that placing some limits on choice is a viable option within Family Care and that the CMOs have the discretion to limit or substitute services within the benefit package if there are more cost-effective alternatives. In most cases, the CMOs have been operating under the principle that if an alternative service is determined to be equally effective, but is less costly than the member's original choice, than the CMO will contract for the most cost-effective service. This document provides the necessary state support for those CMO decisions, and assists CMO staff with making the "effectiveness" determination between alternative services. The CMO directors believe that this document meets their needs for addressing issues related to choice.

Contract Language

Over the first five years of the program, CMO management has found it difficult to interpret some of the Family Care contract language. Ambiguity in the language, intentional or unintentional, has made it difficult for the CMO management teams to assure compliance with the Family Care contract. State and CMO staff agree that each of the CMOs are in compliance with the intent of the contract, but some of the CMO managers are concerned that they may not be in compliance with the letter of the contract. The CMO managers have done their best to interpret and comply with the

existing contract language, but fear that ambiguity in the language leaves them vulnerable to member complaints and grievances, and possibly lawsuits over non-compliance.

To address these fears, CMO and state staff have meticulously reviewed the existing Family Care contract and highlighted areas of concern. They have worked collaboratively to re-work several sections of the Family Care contract, a process which is ongoing and will continue until the entire contract has been reviewed and modified.

Managed Care

There is some concern among CMO management that Family Care lacks some of the cost-restraint tools available to private managed care programs (as discussed earlier). Most notably, as an entitlement program, CMO managers have no control over the population entering the program[38]. In addition, the CMOs do not control primary and acute medical care and therefore can only exert limited influence on utilization of these services.

The CMO managers realize that they have some limited influence over primary and acute utilization by providing preventative long-term care services such as proper nutrition, safer living situations, better in-home care and closer supervision of members. This limited control has been shown in the cost-effectiveness findings discussed earlier to have a significant impact on restraining primary and acute medical utilization and costs, particularly among hospital inpatient visits. However, if their members do not receive proper medical care, which the CMOs can influence but not control, they are put at risk of higher costs associated with more complex, long-term care needs from these members.

Additionally, any cost savings realized in primary and acute medical care among Family Care members only benefit the fee-for-service Medicaid system, not the CMOs. The preventative services that they provide, which relate directly to primary and acute care savings, may in fact cost the CMOs more, raising their costs and reducing their perceived cost-effectiveness. The harder the CMO works to provide excellent preventative long-term care services, which reduce primary and acute costs, the more likely they will increase their own costs. Based on feedback from CMO staff, it is necessary to consider the link between the CMOs' long-term care management and the primary and acute utilization and costs in their counties when assessing the cost-effectiveness of Family Care.[39]

Member Outcome Interviews

Family Care utilizes the Council on Quality and Leadership (Council) member outcome tool to assess members' progress towards meeting their lifestyle, functional, health and safety goals. The member outcome tool measures 14 key outcomes in the areas of "foundations," "community integration," and "self-determination and choice." The member outcomes were developed by a group of consumers, providers, advocates and

[38] Case-mix is controlled for in the rate setting formula; however, CMO staff were still concerned about its impact on their ability to control costs.
[39] The cost-effectiveness analysis presented earlier in the report considers both long-term care and primary and acute care utilization and costs.

state staff, but are defined by each member for his or her own care plan. Achievement on each of the 14 member outcomes is determined through a series of interview questions and observations specific to each outcome. For example, to determine if a member is safe, the interviewer notes whether or not the member has working smoke detectors or fire alarms in their home and asks if they feel safe in their neighborhood. Taken together, these detailed questions determine whether or not the outcome is present. In addition, the outcome tool measures whether or not there is adequate support for the member to achieve his or her outcomes.

Support for the member outcome tool varies among the CMOs. Some CMOs find the interview process intrusive, particularly in cases where members have been selected to be interviewed multiple times. Some CMO staff believe the results of the interviews are not particularly helpful in administering Family Care, though other CMO staff find value in the objectivity offered by independent interviewers. The most common observation regarding the member outcomes is that it takes far too long to receive the results and they are not detailed enough to be effective as a program management tool.

It typically takes several months before the CMOs receive their outcome interview results. At that point, the outcome results may no longer be useful for discovery and in some cases the CMO has already discovered existing issues through other means. More frustrating for the CMOs, is that they only receive aggregate data detailing the percentage of interviewees who achieved their outcomes and the percentage of interviewees with adequate supports in place to meet their outcomes. That level of data is not sufficient for remediation and improvement. Without the ability to drill down into the data and determine why each outcome was not met, the CMOs cannot target areas in need of improvement.

Family Care is not using the Council's member outcome tool in 2006, but is working on developing an alternative method to measure member progress towards meeting their individual goals. Staffs from the CMOs would like to see more detailed results from the new method of discovery, specifically information that will allow them to pinpoint areas of need. Using the member outcome tool as an example, providing the responses to the specific questions within each outcome category would provide much more useful information than only providing the percent of outcomes that have been met. Understanding "why" the outcomes have not been met will allow the CMOs to address specific service delivery issues that may be limiting the achievement of individual outcomes among its members.

Lastly, some CMOs would like individual level data; however, they recognize that confidentiality concerns may limit the sharing of some information. They also note that having an outside, "objective" entity interacting with their members and assuring confidentiality provides for more open and honest feedback regarding Family Care. However, some de-identified individual level data organized by care manager may be helpful to both explain and remediate the member outcome findings.

Best Practices
CMO staffs would like more assistance from the State to aggregate and share best practices[40] among the Family Care counties. Although the CMOs have excellent working relationships and communicate regularly, the State is in a central position to collect and disseminate best practices more efficiently than the CMOs. The State collects a significant amount of CMO-specific information that is not necessarily shared directly with the CMOs. As part of their program administration, state staff may become aware of practices that could benefit each of CMOs in the areas of care planning, care management, provider recruiting, cost-restraint, and general program administration. If a formal process was developed where new and innovative practices could be shared on a regular basis with each of the CMOs, possibly through an electronic newsletter, it may add an additional level of efficiency to the overall operation of Family Care.

E. Quality Conclusions and Recommendations

Overall, the independent assessment findings suggest that Family Care continues to improve the quality of long-term care services in its counties. Waiting lists for services have been eliminated for over three years, achievement of member outcomes remains high, and each CMO has continued to improve its cost-effectiveness through improving efficiencies and implementing innovative cost-saving measure. The CMOs, with assistance from DHFS and the EQRO, continue to look for areas in need of further quality improvement. The following list highlights some of these areas.

- Provide more support for clarification to members what “choice” means in Family Care, as well as the distinction between outcomes and desires for specific services. (CMOs)
- Provide care manager training that focuses on person-centeredness and cost management. (CMOs and DHFS)
- Establish monthly meetings where care managers can openly discuss their existing cases and discuss options for new cases. (CMOs)
- Review in detail the cost share recovery guidelines, underlying logic and federal requirement. (DHFS)
- Continue to address the CMOs’ concerns regarding specificity in the Family Care contract language. (DHFS)
- Work with the CMOs to develop a joint outcome-type tool for assessing member progress towards their individual long-term care goals. (DHFS)
- Revisit the rate setting methodology with each CMO and develop a data set or predictive tool that can be used to predict future capitated rates. (DHFS)
- Develop an approach for sharing best practices among the CMOs. It is recommended that the Sate assume the lead in this area, as all CMOs report to state staff. (DHFS and CMOs)

[40] Several examples of best practices are highlighted throughout this document, particularly as part of the cost-restraint.

IV. Cost Effectiveness

Cost Effectiveness Analyses of Costs and Utilization

The purpose of the cost effectiveness component of the Family Care IA is to determine the impact of the Family Care program on the cost and utilization of health care services. This cost effectiveness evaluation measures the impact that Family Care has had on program participants' health care utilization and costs during calendar years 2003 and 2004. The analyses of cost-effectiveness were performed by comparing the utilization and costs for Medicaid-funded services.

Utilization and costs are measured using both Medicaid claims and long-term care data collected by the DHFS for individuals on Medicaid waivers, or data collected by the Family Care CMOs. Categories of service that include the majority of health care costs were selected for analysis[41]. Health care services measured by Medicaid fee-for-service claims include the following primary care and acute care services that are not covered by the Family Care benefit:

- Emergency Room Visits;
- Hospital Admissions;
- Hospital Inpatient Stays;
- Hospital Outpatient Visits;
- Physician Office Visits; and
- Prescription Drugs.

Data collected from the Human Services Reporting System (HSRS) (for Waivers) and the CMOs (for Family Care members) include all long-term care (LTC) services that are covered under the Family Care benefit. With these data, additional analyses were undertaken for the following specific services:

- Nursing Home Days;
- Community-Based Residential Care Facility Days;
- Supportive Home Care Days;
- Home Health Visits; and
- Personal Care Hours.

[41] ICF-MR and State Developmentally Disabled Centers were also examined as part of the cost-effectiveness analysis. However, neither had representative data (too few individuals utilizing these services) among Family Care members to yield meaningful results. Among the sample groups, 494 comparison group individuals utilized ICF-MR services and 4,849 individuals had reported claims for State DD Centers, compared to 36 and 12, respectively, within Family Care.

Study Groups

Given the complexity of making comparisons between Family Care and non-Family Care individuals, a quasi-experimental design approach was employed. This investigation has all the elements of an experiment, *except that individuals in the study are not randomly assigned to groups*.

The 9,547 Family Care members included in the study are those individuals who met the following criteria:

- Enrolled in the Family Care program for at least six months during calendar years (CY) 2003 or 2004 (therefore, no individuals with enrollment dates after July 1, 2004 would meet criteria for inclusion in the study sample).
- Had adequate data to pass quality control checks, such as cross-validation of ID numbers and enrollment dates between county functional status assessment records and Medicaid eligibility records.

A comparison group (CG) was constructed of Medicaid recipients who had health-related characteristics similar to Family Care beneficiaries, but who did not participate in the program. Matching involved identifying non-Family Care program participants comparable in essential characteristics to Family Care members. Both groups were matched on the basis of selected observed characteristics that are known or believed to influence program outcomes. There were 11,695 individuals in the CG who were eligible during CY 2003-2004.

Comparison Sample Selection

The CG was selected from those Medicaid recipients who most closely match the Family Care population. This selection process had seven stages:

1. From all Medicaid recipients eligible during the operation of Family Care, select those with birth dates (and death dates, for deceased recipients) and Medicaid Status Codes that fall within the range observed for Family Care members were selected. A total of 559,675 recipients met these conditions.

2. Eligibility data were extracted for the year before Family Care enrollment (for FC members) and for all Medicaid-eligible years between 2000 and 2004 (for CG members).

3. The two groups were matched on year of birth, year of death, sex, Medicare eligibility status (dual eligibility), and Medicaid eligibility group. A total of 344,428 matched recipients met these conditions.

4. Family Care members were partitioned into four annual cohorts depending on their Family Care enrollment dates. CG members were assigned the annual cohort of a matching Family Care member (according to the match criteria in Stage 3). Data for each recipient's cohort-year were extracted for diagnoses,

functional status screens (Long-Term Care Functional Screens or Medicare screens from the Minimum Date Set), and place of residence (zip code of most commonly used pharmacy) and was combined. Three new matching variables were constructed from these data: Chronic Illness and Disability Payment System (CDPS), Functional Status Impairment Scale (FSIS), and Rural-Urban Commuting Area (RUCA).

5. The three new variables were rounded to their single most significant digit and added to the five variables from Stage 3 and the cohort from Stage 4. The Family Care and CG groups were then matched on the nine matching variables. A total of 48,336 matched recipients met these conditions[42].

6. Propensity score matching was then conducted. Propensity score matching is a statistical technique used to reduce the impact of selection bias due to group differences resulting from non-random assignment to treatment and control groups in quasi-experimental study designs. The propensity score is the predicted probability value estimated from a logistic regression of Family Care membership on the nine matching variables. The predicted probability of Family Care membership was computed for each recipient. Recipients were then selected only if they were Family Care members or CG members with a propensity score greater than 50%. This latter group represents the CG members who are "probably most like" Family Care members. A total of 21,132 matched recipients met these conditions.

7. The final stage of matching was used to achieve greater similarity between the percentage distributions of the two groups across a number of descriptive measures: average age, gender, target group (developmentally disabled, physically disabled, frail elderly), institutional residents, residents of Milwaukee County, Medicaid LTC waiver status (before Family Care enrollment), Medicare eligibility, and average scores for CDPS, FSIS, and RUCA (see definitions in the next section). The distribution was compared between Family Care and CG groups, and individuals were selected from the pool of CG members that were rejected in Stage 6, so as to bring the population distributions into closer alignment. A total of 21,242 matched recipients met these conditions. There are 11,695 individuals in the CG who were eligible during CY 2003-2004.

While this procedure enabled the design of a comparison group similar to that of the Family Care study sample, the next section defines the final important step of statistical weights and controls to ensure all analyses comparing Family Care with the comparison group adjust for any remaining differences.

---

[42] Among the qualified Family Care participants, 234 individuals, by random chance, did not have comparison group individuals statistically assigned through the seven stage selection process of the comparison group, but this did not impact the validity of the analysis.

Statistical Weights and Control Variables

Because the Family Care and comparison group matching algorithm results in two groups that are very similar, but not identical, further control of individual variation and population composition heterogeneity was accomplished with two statistical adjustment techniques: (1) proportional weighting, and (2) multiple regression analysis. Proportional weighting brings the population distribution of the two study groups into closer alignment than can be achieved when each person carries equal weight. Multiple regression is a technique to isolate the effect of Family Care from the many other variables that may confound the relationship between program participation and health care utilization or costs.

Weights. The proportional weighting procedure was applied as follows:

1. All recipients were classified into mutually exclusive groups defined by the joint combinations of all nine matching variables (see previous section).
2. The number of Family Care members and CG members in each of these groups was counted.
3. The group-specific weight as the ratio of Family Care members to CG members was computed.

These weights are interpreted as the number of Family Care members that each recipient represents in the analysis. All Family Care members have a weight of 1.0 (each person represents one Family Care member) and all CG members have a weight that may be higher or lower than 1.0, depending on the number of Family Care members with the same combination of nine matching variables. All statistical procedures in this study use these weight adjustments. For example, when the group mean is calculated, the actual calculation produces a *weighted* mean. The effect of the weights is to make the Family Care and CG groups appear to be nearly identical in size and composition for purposes of statistical comparison. The application of the weights reduces the comparison group sample size from 11,695 to 9,547 individuals.

Control Variables. The multiple regression procedures used in this study make use of the following control variables:

CDPS: Diagnosis-Related Illness Burden **-** determined using the CDPS Version 2.0 software to group diagnoses from claims for successive three-month calendar periods. The diagnosis groups for each individual are combined into a weighted-average of expected health costs, with default Version 2.0 concurrent groups and weights. A scale value of 1 indicates "Medicaid disabled adult national average expected illness-related costs," 2 indicates "twice the average," and 0.5 indicates "half the average." Higher scores indicate greater illness burden.

FSIS: Functional Status Impairment Scale - derived from either the Long-Term Care Functional Screen measures during a three-month calendar period, or the weighted average of at least two Medicare Minimum Data Set (MDS) assessments of activities of daily living (ADL). The scale is normalized to run from zero ("no impairment") to ten

("total impairment"). Since not all comparison group individuals had functional screen data, the MDS was utilized for those individuals, where available, given similar equivalent measures that have been cross-walked.

Home Residence Geographical Designation **-** RUCA: Rural-Urban Commuting Area **-** a rural/urban continuum as measured by the RUCA scale of "rurality," ranging from one (most urban) to ten (most rural)[43]. Additionally, to control for any remaining effects or differences of residing in Milwaukee County, individuals residing in Milwaukee County in the three months before their enrollment date were coded as follows: MKE = 1 and non-MKE=0.

Health Care Financing Program Participation **-** including Medicare dual-eligibility, Medicaid LTC Waiver, or Institutional Residence. Analysis of CDPS as a predictor of health care resource consumption revealed that much greater variance in Medicaid claim payments could be accounted for when these factors are considered[44]. These three independent variables are coded as follows: Dual = 1 if an individual is dually-eligible for Medicare; Waiver = 1 if the individual participates in Medicaid under a LTC Waiver; Institution = 1 if residing in an institution during a three-month time period, or variables are coded "0" if a condition does not apply.

Disability Category - determined by evidence of developmental disability-related diagnoses (DD), otherwise frail elderly (FE) if age is greater than 65 years, otherwise qualifying disabled individuals are assumed to have physical disabilities (PD). These categories are not exactly the same measure as "target group," because this study's categories rely on diagnosis to re-classify DD.

Last Year of Life **-** with fairly complete eligibility data through mid-2005, it was possible to determine for most individuals alive during June 2004 and earlier whether or not they were within one year of the date of their death. Since health care spending is known to escalate near the end of life, this factor was identified and accounted for in the regression equations.

Family Care Enrollment Date - The date at which an individual enters Family Care may be related to health care resource consumption, especially in counties where those with the most urgent needs were the first to receive program benefits. The duration of exposure to Family Care program participation is another factor that could influence the level and rate-of change in spending. These "cohort" and "history" effects are controlled with a count of months between Family Care enrollment (or pseudo-enrollment) and the first observation period in our study (January 1, 2003).

Missing Data Imputation - Many people in the study group had no functional status measurement on record for screens conducted by counties or by nursing homes. To avoid

[43] See APS Healthcare, Inc., Family Care Independent Assessment: An Evaluation of Access, Quality and Cost Effectiveness for Calendar Year 2002. September 2003. DHFS website:

https://www.dhs.wisconsin.gov/familycare/reports/ia.pdf

[44] Ibid.

a large loss in study participants by excluding those with missing data on these variables, we substituted a mean value if the variable was missing. Any bias that might be introduced by this method is controlled for by a dummy variable to indicate that the FSIS scores are imputed, rather than measured.

Descriptive statistics for these health-related characteristics are shown in Table 8 below, for both Family Care and the CG, by Milwaukee County residence, during the three-month period before Family Care enrollment (or CG pseudo-enrollment). The descriptive statistics in the table reflects the application of the weights to the comparison group resulting in an equivalent sample size of 9,547 for both groups.

Table 8: Comparison Group and Family Care Weighted Descriptive Statistics

Comparison Group and Family Care Descriptive Statistics (weighted values for comparison group)						
	Comparison Group			Family Care		
Variables	All Members (Weighted n = 9,547)	Milwaukee County Members (Weighted n = 5,804)	Non-Milwaukee County Members (Weighted n = 3,743)	All Members (Weighted n = 9,547)	Milwaukee County Members (Weighted n = 5,804)	Non-Milwaukee Members (Weighted n = 3,743)
Average Age on Enrollment Date (Years)	70.8	83.7	64.1	68.9	82.2	62.0
% Male	28.8%	19.6%	33.6%	29.1%	20.0%	33.8%
% Developmentally Disabled	4.8%	0.9%	6.9%	5.1%	1.2%	7.2%
% Physically Disabled	27.1%	0.2%	41.2%	27.5%	0.8%	41.5%
% Frail Elderly	68.1%	98.9%	52.0%	67.4%	98.1%	51.3%
% Medicare Dual Eligibility in 3 months before Enrollment	83.6%	98.0%	76.1%	82.9%	97.4%	75.4%
% Institutionalized in 3 months before Enrollment	8.7%	10.1%	8.0%	9.5%	10.6%	8.9%
% Waiver Recipient in 3 months before Enrollment	48.8%	42.2%	54.4%	68.0%	42.0%	54.3%
Illness Burden Index in 3 months before Enrollment	1.3	1.4	1.2	1.8	2.2	1.6
Functional Status Impairment Score	3.5	3.5	3.5	3.5	3.5	3.4
Rural/Urban Score in 3 months before Enrollment (1 = most urban, 10 = most rural)	2.2	1.0	2.8	2.0	1.0	2.5

Methodology

Path Analysis

The initial step in assessing cost-effectiveness in Family Care was to conduct path analyses on Total Long-Term Care and Total Medicaid costs during CY 2003 and 2004. A path analysis is an extension of the regression model, used to test the fit of the correlation matrix against two or more causal models which are being compared by the researcher. The model is depicted in a figure in which single arrows indicate causation. A regression is done for each variable in the model as a dependent on others which the model indicates are causes. The regression weights predicted by the model are compared

with the observed correlation matrix for the variables, and a goodness-of-fit statistic is calculated. *Essentially, a path analysis is a straightforward extension of multiple regression. Its aim is to provide estimates of the magnitude and significance of hypothesized causal connections between sets of variables*.

A path analysis requires the usual assumptions of regression. It is particularly sensitive to model specification because failure to include relevant causal variables, or inclusion of extraneous variables often substantially affects the path coefficients which are used to assess the relative importance of various direct and indirect causal paths to the dependent variable. Such interpretations should be undertaken in the context of comparing to alternative models. In the context of the cost-effectiveness analyses of Family Care, the results of the path analyses can and should be viewed in comparison to the additional components of the cost-effectiveness analyses for Total Medicaid and Total Long-Term Care costs through the two-level multilevel and rate of change analyses using hierarchical linear modeling (HLM). Results yielding consistent findings would substantiate one another.

Multilevel Models

The methodology used to investigate the combined calendar years of 2003-2004 Total Medicaid Costs and changes in costs and utilization among Total Long-Term Care Services and selected long-term care and primary and acute services is multilevel modeling through HLM software (Raudenbush and Bryk, 2002; Raudenbush, Bryk, Cheong, and Congdon, 2001). HLM is increasingly being used in evaluating contextual-level effects, estimating the "value-added" aspect of programs or structures and disentangling cross-level effects of, for example, individuals and county contextual factors on costs and utilization of health related services. In fact, HLM appears to be generally replacing multiple linear regression and repeated measures techniques as the method of choice for research with nested structures (Mendro, et al, 1995; Meyer, 1997).

Human social organizations are often hierarchical, or nested, in nature. Individual units are grouped into larger groups; these groups of individuals are grouped into higher order organizations; the organizations may be grouped at still higher levels, etc. Traditionally, the most common example of a hierarchical data structure is in education. Individual students are grouped in classrooms, or within a teacher; classrooms are components of schools; schools belong to districts, which are part of the state educational system, etc. However, more and more multilevel analyses are being applied to health-related studies given the often nested structure of the data. These structures might include patients nested within physicians; individuals and/or physicians nested within hospitals; or in the case of this study, individuals nested within counties where counties vary in terms of programmatic structure, such as whether it is a Family Care managed care county. Because individuals in this study are nested within counties, each level can be described in terms of salient characteristics that affect the units in lower levels of the hierarchy. For example, county environment and programmatic experiences may affect both costs and utilization.

HLM provides an efficient and robust means of modeling change in individual costs and utilization. The HLM procedures are designed specifically to analyze data structures that are hierarchical, or nested, in nature. HLM accounts for the fact that people within the same hierarchies tend to be more similar to each other than people randomly sampled from the population. For example, individuals in a particular county are more similar to each other than to individuals randomly sampled from across several counties who all may have different experiences, so the model must account for the cross-level nature of the data. The most common single-level procedures for modeling or predicting changes in costs and utilization, such as ordinary least squares (OLS) regression, require independence of observations. Nested data structures violate this assumption and therefore merit analyses which utilize multilevel structures.

This study is primarily interested in the effect of the Family Care experience on an individual's costs and utilization compared to the experience of similar individuals in non-Family Care counties. This is the "cross-level" nature of the data. Individual outcomes and characteristics are measured at the individual level, while other variables are collected at the county, or higher, levels. Single-level models cannot handle differing levels in the unit of analysis (i.e., individuals *and* groups of individuals such as county). These methods either increase the likelihood of incorrectly concluding that there is a significant relationship when in fact, there is not, or mask most (80 – 90 percent) of the individual variability in the outcome variable, which can cause severe under-estimation or over-estimation of the effects on the outcome variable. In addition, average county cost is substantively different from individual costs, which is the outcome variable these analyses are trying to model.

In addition, such single-level analytical procedures prevent these analyses from disentangling individual and group effects on the outcome of interest. HLM, on the other hand, is designed to disentangle individual and group effects on the outcome of interest, unconfounded by other variables.

The HLM Total Medicaid Costs Model

The analysis of Total Medicaid Costs for CY 2003-2004 in this study involves two-level hierarchical linear models. Level 1 is the individual level. Level 1 analyses examine the effects of individual characteristics on the outcome of interest, Total Medicaid Costs among the Family Care study sample and the CG. Individual characteristics include functional status, illness burden, geographic area of residence, institutional residence, last year of life and background characteristics such as gender and target group membership. A complete listing of control variables is provided in the "Data" section below and a more detailed description in the "Control Variable" section of the report. Level 2 of the HLM model is the county level, representing the five Family Care CMO counties (non-Milwaukee and Milwaukee) and non-Family Care counties (Milwaukee and the remaining sixty-seven counties across Wisconsin) effects.

The HLM Rate-of-Change Models

In health-related evaluation research, many researchers have historically been primarily interested in the statistical significance of the change in health-related pre-post designs.

In combination with, the T-test approach, effects can be detected with an estimate of effect size (Leon et al. (1993), Pulver et al. (1988), Brewer (1978)). If a p-value is annotated as statistically significant, rejecting the null hypothesis does not imply an effect of important magnitude; likewise, a non-significant p-value does not indicate a trivial result, although some researchers implicitly deem more important those results with smaller p-values (Rosnow et al. (1989), Rosenthal (1995), Rosenthal and Rubin (1994), Bartko et al. (1988)).

In the last decade, however, a growing number of longitudinal evaluation and intervention studies are focused on questions like "If the change between baseline and outcome is statistically significant, what can we say about the magnitude (or amount) of change over time that has been detected? Can we interpret this difference in terms of an important difference or as a relevant (substantial) change?" To answer these questions the ability to model repeated measures to detect change over time has become accepted practice in the past decade. The thoroughness of this type of methodological estimation in many evaluation studies can give information on the importance of change due to intervention-related effects supplementary to the statistical significance of change over time (e.g. the impact of the intervention).

HLM is uniquely designed to model individual change over time, such as, the change in costs over the two years of measurement. Most other repeated measures procedures require that every individual utilize services at the same time and that no individual can be missing a measurement, this is a true longitudinal data set. On the other hand, the HLM procedures allow us to model change when the number and spacing of assessments vary across cases. Unlike more common applications of HLM, in which researchers look at individuals nested in settings (e.g., individuals within counties), these analyses examine repeated observations over time nested within people who are nested within counties. For this analysis, our data sets contain data for all individuals who were in specified durations of membership within Family Care at specified points in time, and not all individuals were present at every specified time point. Longitudinal designs that include three waves of data are preferable to designs that include only two time points because longitudinal studies that include three or more waves of data allow researchers to better assess each person's and group change trajectories and to separate true change from measurement error (Singer & Willett, 2003).

Due to the gradual enrollment of members in Family Care (and CG counterparts), costs and utilization were assessed in eight three-month time periods, where data were available. The number of individuals included within the analysis changed with each time period (or duration in the study). Data were obtained for the following cohorts of individuals, described in Table 9 (for a detailed breakdown for the number of study participants who were eligible at each of the eight periods of observation over the course of the study period, refer to Table 10 below):

Table 9. Cohorts Analyzed in the Family Care Independent Assessment Cost-Effectiveness Analysis

Sample Group Cohort Distributions (% by Group Each Year)				
Enrollment Year	Non-Milwaukee FC	Milwaukee FC	Comparison Group	Totals
2000	1,189 (31.8%)	385 (6.6%)	1,659 (14.2%)	3,233
2001	799 (21.3%)	1,324 (22.8%)	2,056 (17.6%)	4,179
2002	785 (21.0%)	1,858 (32.0%)	2,847(24.3%)	5,490
2003	673 (18.0%)	1,458 (25.1%)	3,680 (31.5%)	5,811
2004	297 (7.9%)	779 (13.4%)	1,453 (12.4%)	2,529
Totals	3,743 (100%)	5,804 (100%)	11,695 (100%)	21,242

Individuals are calibrated to their Family Care Enrollment Date (or pseudo enrollment date among CG individuals), and costs and utilization incurred during the two-year study period (calendar years 2003 and 2004) are broken into three-month time segments subsequent to the enrollment date. The baseline indicators for each individual are taken from the three-month period before his/her enrollment date. For those Family Care and CG individuals with enrollment dates before January 1, 2003, their begin date would be set to January 1, 2003. Further, individuals with dates later than January 1, 2003, would begin on that specified enrollment date. For example, if an individual enrolled on May 3, 2003, or January 7, 2004, these individuals would be aligned so their first period of observation covers the period of May 3, 2003, through August 3, 2003, and January 7, 2004, through April 7, 2004, respectively. Each subsequent time period covers a three-month period of observation until no further data exist.

In this study, the maximum number of observed periods an individual may have is eight. This applies to those individuals who had enrollment dates on or before January 1, 2003, and maintained eligibility through December 31, 2004. The minimum number of observed periods any individual may have and still be included in the study sample is two (six months). As Table 10 illustrates, every individual in the study sample has full eligibility in the first two periods of observation, but may have between one and three months of eligibility within subsequent time periods until their eligibility has been exhausted, data run out, end of life occurs, or the end of the study period is reached. Table 10 additionally shows that over 50 percent of each groups study sample has eligibility status for the entire duration of the observation period. The comparison group sample size reflects the full sample of 11,695 before the weighting of the data and therefore differs from the 9,547 value reflected after weighting illustrated in Table 8.

Table 10: Eligibility Status over the Duration of the Study Period

Unweighted Eligibility Status Over Study Period			
Eligible Duration Over Study Period	# of Non Milwaukee FC Members Eligible	# of Milwaukee FC Members Eligible	# of Comparison Group Individuals Eligible
Time Period 1 - Experience in Program 0-3 months post Baseline			
# with No Eligibility	0	0	0
# Eligible	3,743 (100%)	5,804 (100%)	11,695 (100%)
Time Period 2 - Experience in Program 4-6 months post Baseline			
# with No Eligibility	0	0	0
# Eligible	3,743 (100%)	5,804 (100%)	11,695 (100%)
Time Period 3 - Experience in Program 7-9 months post Baseline			
# with No Eligibility	33	98	103
# Eligible	3,710 (99.1%)	5,706 (98.3%)	11,592 (99.1%)
Time Period 4 - Experience in Program 10-12 months post Baseline			
# with No Eligibility	277	676	1,277
# Eligible	3,466 (92.6%)	5,128 (88.4%)	10,418 (89.1%)
Time Period 5 - Experience in Program 13-15 months post Baseline			
# with No Eligibility	505	1,199	2,600
# Eligible	3,238 (86.5%)	4,605 (79.3%)	9,095 (77.8%)
Time Period 6 - Experience in Program 16-18 months post Baseline			
# with No Eligibility	739	1,742	3,708
# Eligible	3,004 (80.3%)	4,062 (70.0%)	7,987 (68.3%)
Time Period 7 - Experience in Program 19-21 months post Baseline			
# with No Eligibility	951	2,163	4,693
# Eligible	2,792 (74.6%)	3,641 (62.7%)	7,002 (59.9%)
Time Period 8 - Experience in Program 22-24 months post Baseline			
# with No Eligibility	1,167	2,631	5,660
# Eligible	2,576 (68.8%)	3,173 (54.7%)	6,035 (51.6%)
Total Sample Size at Each Time Interval	3,743	5,804	11,695

Individual change in health-related costs and utilization can be formulated by 3-level hierarchical linear models. In an HLM rate of change model, the multiple outcome measurements over time are viewed as nested within a person. At level 1, each individual's average monthly costs or utilization is represented by an individual change trajectory that depends on his/her unique set of parameters. The first level simply contains the average monthly costs or utilization for each of the eight time periods, where data are available in each three-month segment. The costs and utilizations are the basis for the unique change trajectory for each individual, and are dependent on person-level characteristics (level 2). The effects of different counties (Family Care program effects) on the outcomes of study are represented in the third level of a 3-level hierarchical model.

Data

Individuals

Due to the nature of the studies and the requirements of HLM, several restrictions were placed on the cohort definitions. As discussed previously, the first requirement was that each individual must have six consecutive months of eligibility during calendar years 2003-2004; that is, they must have at least two periods of observation in order to measure

change. No individual in the study sample could have an enrollment date (or pseudo enrollment dates among the CG) after July 1, 2004, as they would not meet the minimum eligibility criteria of six consecutive months of eligibility. Because of this requirement, those individuals with enrollment dates (or pseudo enrollment dates) on or before January 1, 2003, are true longitudinal cohorts since all individuals, by definition, can have up to the full two years (eight time periods) of available data.

Counties

Individuals in the study sample are nested within counties. Across Wisconsin's 72 counties, five of them are Family Care Care Management Organizations (CMOs): Fond du Lac, La Crosse, Milwaukee, Portage, and Richland. The CG is comprised of individuals across 68 of Wisconsin's 72 counties. Because Milwaukee County operates under a different waiver than the other four Family Care CMO counties, Milwaukee County also has representation within the CG individuals who reside in Milwaukee County, are not elderly, and utilized Medicaid services during calendar years 2003 and 2004. Therefore, the study sample for the cost-effectiveness analyses provides representation from every county across Wisconsin.

Table 11 lists the number of counties for each of the three primary study groups evaluated in the Cost-Effectiveness Analyses.

Table 11: Number of Counties in the HLM Analyses

County Level	Number of Counties
Non-Milwaukee Family Care Counties	4
Milwaukee Family Care County	1
Comparison Group Counties (including Milwaukee County non-Family Care individuals)	68

Outcome Variables

The outcome (dependent) variables of interest are:

1. Total Per Member Per Eligible Month (PMPM) Medicaid Costs for calendar years 2003 and 2004.
2. Changes over time in costs and utilization during calendar years 2003 and 2004 for the following:
    a. Total Long-Term Care Costs
    b. Community Based Residential Facility (CBRF) Costs
    c. Home Health Care Costs
    d. Nursing Home Costs
    e. Personal Care Costs
    f. Supportive Home Care Costs
    g. Emergency Room Costs and Utilization
    h. Hospital Admissions
    i. Hospital Inpatient Costs and Utilization
    j. Hospital Outpatient Costs and Utilization

k. Physician Office Visit Costs and Utilization
l. Prescription Drug Costs and Utilization

Control Variables

Individual-Level

At the individual level, the effects of the following control variables are controlled for (see above section on "Statistical Weights and Control Variables" for details):

1. Target Group Membership (Frail Elderly, Developmental Disability, Physically Disability)
2. Gender
3. Health Care Financing Participation
4. Diagnosis Related Illness Burden
5. Functional Status Impairment Scale
6. Home Residence Geographical Designation
7. Last Year of Life
8. Cohort Enrollment

County-Level

At the county level, the HLM models examine differences between the non-Milwaukee CMO counties, Milwaukee County CMO, and CG counties. These analyses separately address Family Care in Milwaukee County from the rest of the program in order to meet federal requirements for independent assessment of each of the Family Care waivers.

The following table (Table 12) outlines the methodological approaches to be utilized in the cost-effectiveness analyses. Additionally, the table lists the outcomes and the study groups each analysis investigates.

Table 12: Methodological Approaches and Study Groups

Analytical Approach	Study Groups	Outcomes Studied	Time Period Analyzed
Path Analyses	• Family Care vs. CG	• Total Medicaid Costs • Total Long-Term Care Costs	Calendar Years 2003 and 2004
Total Medicaid Costs Multilevel/HLM Analyses	• Non-Milwaukee FC vs. CG • Non-Milwaukee FC FE vs. CG FE • Milwaukee FC FE vs. CG FE • Non-Milwaukee FC DD vs. CG DD • Non-Milwaukee FC PD vs. CG PD	• Total Medicaid Costs	Calendar Years 2003 and 2004
Long-Term Care and Primary and Acute Rate-of-Change Analyses	• Non-Milwaukee FC vs. CG • Non-Milwaukee FC FE vs. CG FE • Milwaukee FC FE vs. CG FE • Non-Milwaukee FC DD vs. CG DD • Non-Milwaukee FC PD vs. CG PD • Non-Milwaukee FC prior waiver experience vs. CG prior waiver experience • Non-Milwaukee FC no prior waiver experience vs. CG no prior waiver experience • Milwaukee FC prior waiver experience vs. CG prior waiver experience • Milwaukee FC no prior waiver experience vs. CG no prior waiver experience	• Total Long-Term Care $ • CBRF $ • Home Health Care $ • Nursing Home $ • Personal Care $ • Supportive Home Care $ • ER $ and Utilization • Hospital Admissions • Inpatient Hospital $ and Utilization • Outpatient Hospital $ and Utilization • Physician Office Visit $ • Prescription Drug $ and Utilization	Changes in rates of Costs and utilizations over 2003 and 2004

Assumptions and Limitations of Analysis

In reviewing the cost-effectiveness analysis and findings, it should be noted that the analysis was limited to selected long-term and primary and acute care services. The scope of the analysis was defined in cooperation with DHFS staff. Services that were included in the analysis were selected either due to levels of spending on the service (i.e. services that "cost a lot") or expectation in that the utilization of cost for the service would likely be impacted by the Family Care program.

Considerable time was invested in the development of a statistically valid, risk-adjusted comparison group. It is hoped that this effort can be leveraged by DHFS in the future to conduct additional analyses, including longitudinal trending of utilization and costs over time and analyses of services outside the scope of the IA.

Introduction to the Cost-Effectiveness Analyses

The intended purposes for doing quasi-experimental research is to capture longer time periods and a sufficient number of different events to control for various threats to validity and reliability. The hope is that the design will generate stable, reliable findings and reveal attributes of the effects of time itself. Therefore, in order to make the best possible comparison between Family Care participants and comparison group individuals

and account for any pre-existing differences, outcomes that have been controlled for are presented that enable the findings to articulate, whether and to what extent, differences between the two groups exist.

Very comprehensive and detailed results are included in the following section. These approaches employ various methodological tools to determine Family Care participants' costs and utilization relative to those of the state-wide comparison group. At the highest level, when examining total Medicaid PMPM spending in calendar years 2003 and 2004, analyses reveal the four non-Milwaukee CMO counties as a collective unit. Each of the three target groups in these counties, and the Milwaukee County CMO frail elderly all had significantly less PMPM costs than the comparison group. Additionally analyses examine Family Care's direct and indirect-impact on costs, as well as rate-of-change models to thoroughly assess total long-term care and selected long-term care and primary and acute service costs and utilization differences over-time. Through these analyses, results from the three different methodological approaches in the cost-effectiveness analyses validate one another in their findings that total Medicaid costs and total long-term care service costs cost less for the Family Care than the comparison group when observing the programmatic effects at the highest structural contexts.

Findings from Path Analyses for Family Care

As mentioned previously, path analysis techniques are used to provide plausible explanations from very apparent to subtle direct and indirect associations through the construction of Cause–and–Effect models.

The path analyses of Family Care costs contain two major components: 1) the path diagrams, (see Figures 1 and 2); and, 2) a decomposition of the observed correlations into a sum of path coefficients representing the path.

For Family Care to impact total Medicaid and long-term care costs over time, we would expect to see evidence of the program impacting cost-savings directly, as well as indirectly, by improving: cost-saving mechanisms; de-institutionalization; functional status; and illness burden.

Results shown in Figures 1 and 2 illustrate "the standardized regression coefficients" next to the arrows describing the standardized mean effect of the program on the change in three intervening variables: Illness burden, Functional Status, and Institutionalization. The mean effect of the change in the intervening variables to costs over time is also depicted.

The total effect of FC on costs is negative. Relative to the comparison group, FC participants have both significantly lower total costs and significantly lower long-term care costs. Much of the reductions for Total Medicaid and LTC costs can be attributed to the indirect effects of FC on the three intervening variables measured in this analysis, which show clear reductions in institutionalization, illness burden and functional impairment.

Figure 1: Family Care Effect on Total Medicaid Costs

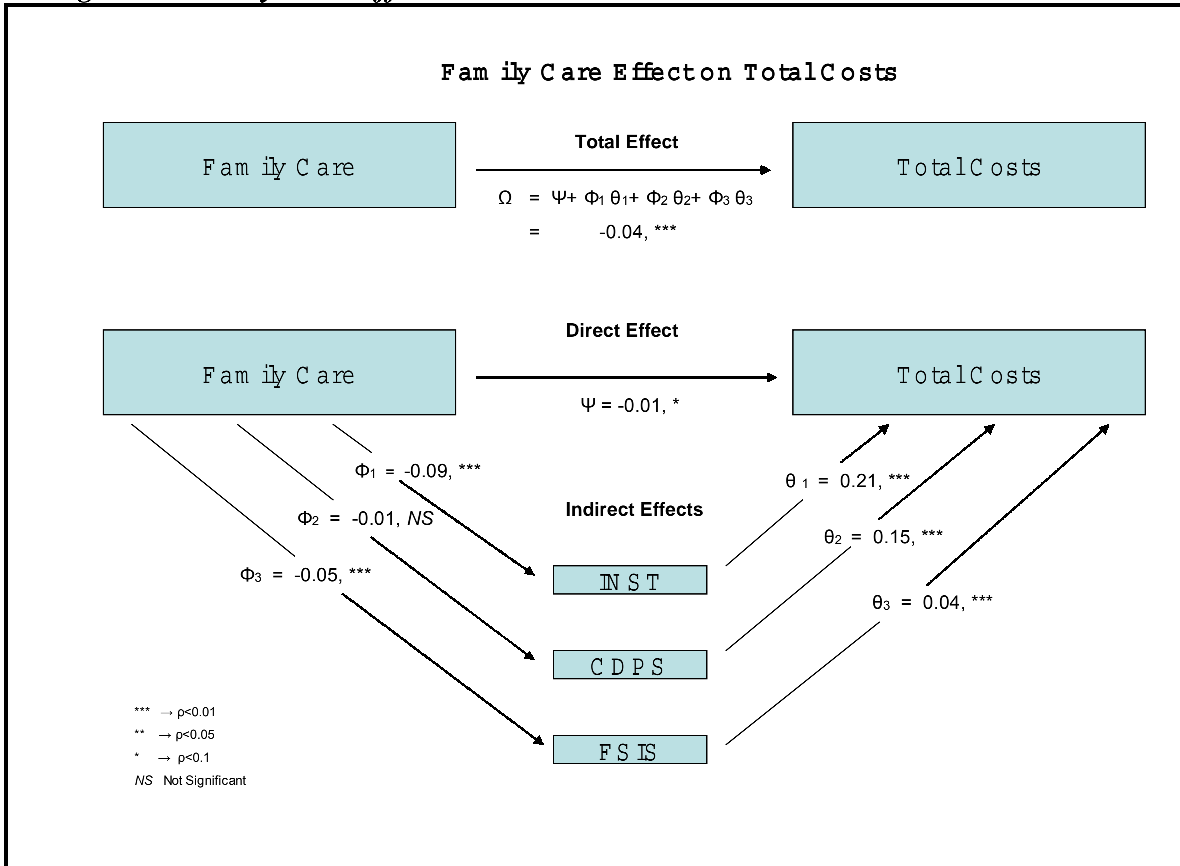
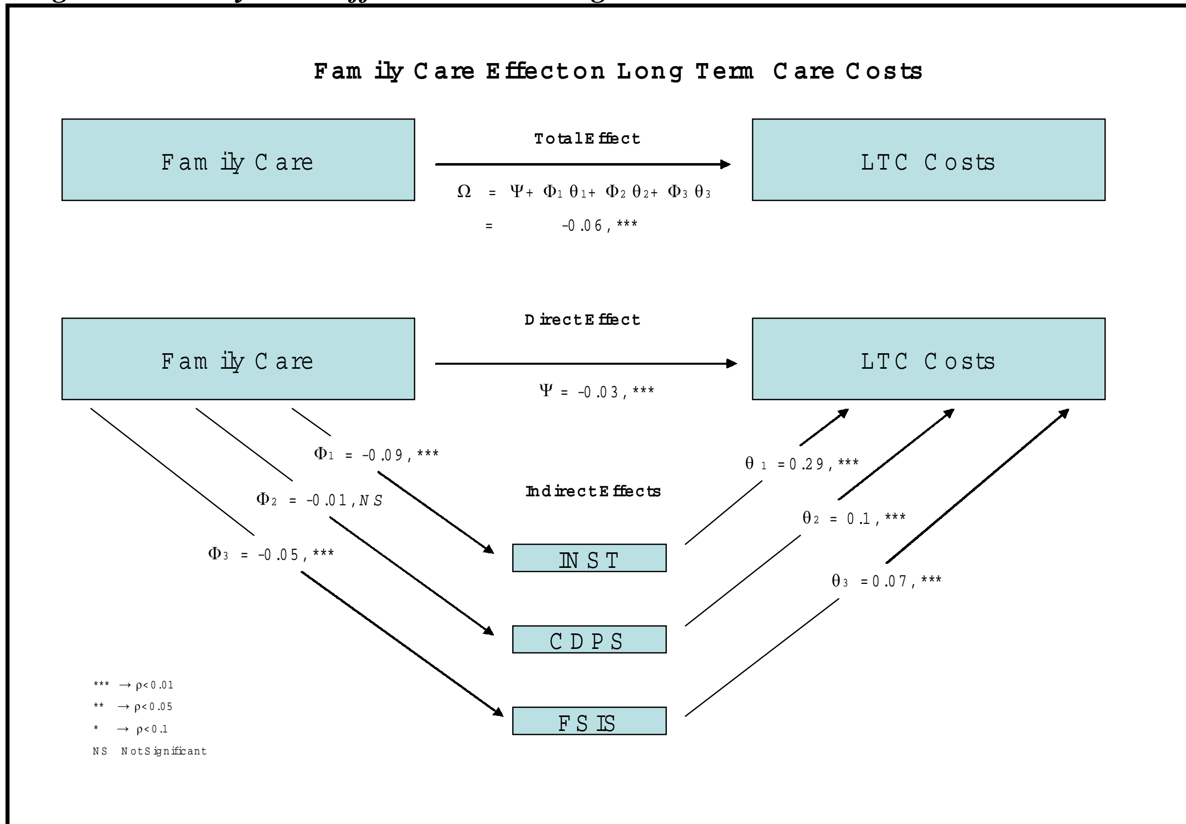


Figure 2: Family Care Effect on Total Long-Term Care Costs



These coefficients have the property where the product of the indirect effects plus the direct effect sums up to total effect. In the case of the total cost offset analysis, Total Effect [(**-0.04**)] is equal to Direct Effect [(-0.01)] plus the sum of Indirect Effects [(-0.09)*(0.21) + (-0.01)*(0.15) + (-0.05)*(0.04)]. Likewise the analysis of Long-Term Care Costs offset, Total Effect [(**-0.06**)] is equal to Direct Effect [(-0.03)] plus the sum of Indirect Effects [(-0.09)*(0.29) + (-0.01)*(0.1) + (-0.05)*(0.07)].

These findings strongly support that Family Care can and does affect cost savings for both Total Medicaid and Total LTC Costs through both direct and indirect pathways by sufficiently addressing health status and outcomes. Moreover, these results build upon the path analyses findings from the first Family Care IA[45]. The prior report's results yielded outcomes that demonstrated Family Care's program effects indirectly improve health care and health outcomes, but at that time, the savings were not sufficient to fully offset the direct increase in costs. Through maturation of the Family Care program and cost-restraint practices at the CMO level, analyses of calendar year 2003 and 2004 data now reveal that participation in the Family Care program does, in fact, significantly reduce health related costs both directly and indirectly.

[45] See APS Healthcare, Inc., Family Care Independent Assessment: An Evaluation of Access, Quality and Cost Effectiveness for Calendar Year 2002. December 2003. pp. 87-88.

Results from 2003-2004 Total Medicaid Costs Multilevel Analyses

Findings from the multilevel analyses result in significantly less PMPM month differences in 2003-2004 Total Medicaid Costs among all Family Care target groups relative to their comparison group counterparts after substantially controlling for individual level differences (see "Control Variables" sections for details on the individual differences being held equal). In other words, even after setting numerous individual characteristics equal, a considerable amount of observed variation can be attributed to differences between counties. (Please see Appendix C for detailed results of full HLM models). For example, the experiences of the four non-Milwaukee Family Care CMO counties clearly differ from those of the Milwaukee County CMO members and illustrate the importance of accounting for these differences between counties, even when statistically controlling for individual characteristics.

Table 13 depicts the differences in PMPM total Medicaid costs between each of the Family Care service categories and their comparison group counterparts. The non-Milwaukee Family Care CMO counties yielded a significant difference of $452 PMPM less than their comparison group counterpart. The Milwaukee County Frail Elderly also significantly outperformed their comparison group counterpart by $274 PMPM. The largest difference among groups with significant differences was between the individuals with developmental disabilities in the non-Milwaukee Family Care CMO. These Family Care members had $1,014 PMPM less than individuals with developmental disabilities in non-Family Care counties. The smallest, though still significant, difference was $55 between the Milwaukee County CMO Frail Elderly and the Frail Elderly in non-Family Care counties.

Table 13: Total Medicaid Costs

Total Medicaid Expenditures Per Member Per Month *CY 2003-2004*			
Service Category	*Family Care*	*Comparison Group Counterpart*	*Significant Difference*
Non Milwauke Family Care	$2,656	$3,108	***
Non Milwaukee Family Care FE	$2,227	$2,501	**
Milwaukee Family Care FE	$2,446	$2,501	*
Non Milwaukee Family Care DD	$3,534	$4,548	***
Non Milwaukee Family Care PD	$2,136	$2,404	**
Level of Significance: *p<.1, **p<.05, ***p<.01			

Although care was taken to make fair comparisons between groups, evaluations of a single point in time cannot specifically reveal how costs changed over time. Observed differences over a two-year period from a "point in time" perspective do not necessarily indicate that the variation between the groups is caused exclusively by Family Care program participation. An examination of changes in spending and utilization over time is called for in order to determine initial differences between groups and to what extent these differences change over time and how they differ relative to one another. This investigation must also attempt to identify what specific health-related services and

utilization patterns contribute to significant differences noted within this aggregated outcome.

Results from the Long-Term Care and Primary and Acute Rate-of-Change Analyses

In order to thoroughly assess the impact of Family Care participation relative to individuals not receiving the Family Care benefit, it is important to be able to assess changes that occur in health-related services over time to determine the sustainability of beneficial and cost-saving impacts of the program. The variability within and between individuals and how they respond to the Family Care experience is uniquely captured in measures that are collected on the same persons over time. More importantly, patterns of change over time can help identify significantly different trends between similar individuals throughout Wisconsin counties where Family Care does not operate.

In the context of the cost-effectiveness analyses of Family Care, rate-of-change modeling enables the analyses to conceptualize these changes as regressions on the particular outcome of interest. Assuming a linear trend, each person's change is then defined in terms of his or her "intercept" and "slope." The intercept represents the individual's estimate for baseline costs or utilization on enrollment date (January 1, 2003 for Family Care and their comparison group counterparts already enrolled in the program or the enrollment date for Family Care members and their comparison group counterparts who enrolled after January 1, 2003). The slope represents the linear rate-of-change over the study period for the given outcome of interest. Through this approach, we are able to properly adjust for pre-existing differences between groups of interest, observe outcomes over time, and apply the rates-of-change for given groups to establish group level mean trajectories. This allows the analyses to accurately assess where individuals are at the beginning of the study, what happens to them over the duration of it, and where there are by the end of the two year observation period.

These individual changes over time represent occasion-level, or Level 1 models. Level 2 of the model is then comprised of twelve individual characteristics (see "Control Variables" for details) that account for any preexisting differences between all individuals. Finally, to investigate group differences, Level 3 accounts for the different total long-term care and primary and acute costs and utilization. Through this methodological approach, we are able to determine where cost-restraint impacts are occurring for Family Care members as well as those services in need of cost-restraints.

When synthesizing the detailed information throughout the remainder of this section, it is important to consider the variation in patterns that begin to emerge across the subgroups: target groups (FE, PD, and DD), counties, and prior experiences between individuals in different counties. The ability to disentangle subgroups from the higher level aggregates provides a methodology to make distinctions of how Family Care is impacting various groups' health-related service utilization and costs in very different ways. Further, we also have the capacity to identify those specific trends that may remain consistent across higher level groups and/or subgroups.

Finally, it should be noted that the results for the following long-term care and primary and acute costs and utilizations only report those where the Family Care group significantly differed from its comparison group counterpart. The PMPM results for each analyzed service are calculated for those individuals who utilized the particular service of interest during a given time period divided by the number of eligible months in the given time period[46]. Detailed tables for both the statistically significant and non-statistically significant outcomes can be found in the "Appendix" section of this report.

Total Long-Term Care Costs

When assessing Total LTC costs among study groups with significant differences relative to their comparison group counterparts, all but two groups (individuals with physical disabilities and those members with no prior waiver experience before enrollment in Family Care in the four non-Milwaukee County CMOs), or seven of nine study groups analyzed, experienced rates of change less (i.e., their costs increases were less over time) than those in non-Family Care counties. It is notable that these two groups also experienced the largest percent changes among the Family Care groups in their rates of change. The most important finding among these significant changes is that at the end of the two-year study period, all but two of these Family Care groups had Total LTC costs less than their comparison group counterparts (individuals with physical disabilities and those members with no prior waiver experience before enrollment in Family Care in the four non-Milwaukee County CMOs).

Of notable change was the study period change among the Milwaukee CMO FC elders. These individuals began the study only $1 less than the CG, but their PMPM costs only increased at a rate of 12.0 percent (notably less than other Family Care groups), relative to a 47.2 rate-of-change increase for their comparison group counterparts, and ended the study period $565 less PMPM in total long-term care costs.

Table 14: Total Long-Term Care Costs

Total Long-Term Care Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Diff. in Rate-of-Change Between FC and CG*	*Diff. at Baseline Between FC and CG*	*Diff. At End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee	$1,522	$1,822	$300	19.7%	$1,875	$2,339	$464	24.7%	-$164	-$353	-$517	***
Non Milwaukee FE	$1,351	$1,635	$284	21.0%	$1,601	$2,357	$756	47.2%	-$472	-$250	-$722	***
Milwaukee FE	$1,600	$1,792	$192	12.0%	$1,601	$2,357	$756	47.2%	-$564	-$1	-$565	**
Non Milwaukee PD	$1,452	$1,796	$344	23.7%	$2,097	$2,299	$202	9.6%	$142	-$645	-$503	***
Non Milwaukee Prior Wvr Exp.	$1,709	$2,145	$436	25.5%	$2,481	$2,799	$318	12.8%	$118	-$772	-$654	***
Milwaukee Prior Wvr Exp.	$1,641	$1,825	$184	11.2%	$2,481	$2,799	$318	12.8%	-$134	-$840	-$974	***
Non Milwaukee w/ No Prior Wvr Exp.	$1,420	$1,712	$292	20.6%	$1,680	$2,388	$708	42.1%	-$416	-$260	-$676	**
Milwaukee w/ No Prior Wvr Exp.	$1,521	$1,727	$206	13.5%	$1,680	$2,388	$708	42.1%	-$502	-$159	-$661	**
Level of Significance: *p<.1, **p<.05, ***p<.01												

[46] One might expect baseline PMPM values to be equivalent for all services between the Family Care study groups and comparison group given the exhausted level of controlling for differences in between the two groups. As a result of the study design, 54.8 percent of the Family Care sample and 45.2 percent of the CG had enrollment dates before January 1, 2003. Therefore, over half of the Family Care sample had already been participating in the managed care practices of the program before the beginning of the study period so some program effect is probably reflected in the baseline.

Nursing Home Costs

As evidenced within the path analyses findings, Family Care members had significantly more savings from Nursing Home costs than their CG counterparts. With the exception of the individuals with developmental disabilities in the non-Milwaukee CMO counties, whose costs over the study period decreased (16.3%), all other Family Care study groups and comparison groups experienced increases during this same period. Although the costs for these groups did increase, costs for each of the Family Care study groups with significant results, with the exception of the non-Milwaukee CMO individuals with no waiver experience before FC enrollment increased at a lower percentage rate than their comparison group counterparts. Additionally, actual PMPM costs remained significantly lower than the CG individuals at the end of the observation period among these Family Care study groups. These findings are an indication of Family Care achieving program goals of de-institutionalization, as it works to reintegrate members into the community.

Table 15: Nursing Home Costs

Nursing Home Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee	$2,270	$2,570	$300	13.2%	$4,073	$4,537	$464	11.4%	-$164	-$1,803	-$1,967	***
Non Milwaukee FE	$2,483	$3,447	$964	38.8%	$4,048	$5,950	$1,902	47.0%	-$938	-$1,565	-$2,503	***
Milwaukee FE	$3,311	$4,587	$1,276	38.5%	$4,048	$5,950	$1,902	47.0%	-$626	-$737	-$1,363	*
Non Milwaukee DD	$3,872	$3,242	-$630	-16.3%	$4,674	$5,878	$1,204	25.8%	-$1,834	-$802	-$2,636	***
Non Milwaukee PD	$2,794	$3,158	$364	13.0%	$5,195	$6,231	$1,036	19.9%	-$672	-$2,401	-$3,073	***
Non Milwaukee Prior Wvr Exp.	$1,930	$2,696	$766	39.7%	$2,917	$5,067	$2,150	73.7%	-$1,384	-$987	-$2,371	***
Milwaukee Prior Wvr Exp.	$2,644	$3,918	$1,274	48.2%	$2,917	$5,067	$2,150	73.7%	-$876	-$273	-$1,149	***
Non Milwaukee w/ No Prior Wvr Exp.	$1,522	$2,264	$742	48.8%	$3,603	$5,167	$1,564	43.4%	-$822	-$2,081	-$2,903	***
Level of Significance: *p<.1, **p<.05, ***p<.01												

Community-Based Residential Facility Costs

Results from the analyses for CBRF costs identify this health-related service area as one that is not a source of savings for Family Care participants. However, given that Family Care is designed to support members in choosing where they live, and when residing in their own home is not an option, many members choose other residential settings such as CBRFs.

The four non-Milwaukee County CMOs, when analyzed collectively as one unit, showed initial starting PMPM costs lower than that of their CG counterparts (-$13). However, rate-of-change for this group proved to yield results comparable with the other Family Care groups in having a higher percentage rate-of-change over the study period than those in the comparison group (24.2% vs. 9.3%). By the end of the study, the non-Milwaukee CMO counties were $321 more PMPM than the CG. The only deviation from this trend was seen among the Milwaukee County CMO frail elders who had a 19.5 percent rate of change increase, compared to the 22.5 percent increase its CG counterparts experienced.

One caveat to further consider when assessing this particular service is that it is not available to individuals within the comparison group. It is available only to individuals who are eligible for Medicaid long-term care waiver services. This means that within

this study sample, just under fifty percent (48.8) are eligible for this service, and this presents an artificial cap in costs for this service among the comparison group.

Table 16: CBRF Costs

CBRF Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee	$2,257	$2,803	$546	24.2%	$2,270	$2,482	$212	9.3%	$334	-$13	$321	***
Non Milwaukee FE	$1,996	$2,450	$454	22.7%	$1,687	$2,067	$380	22.5%	$74	$309	$383	***
Milwaukee FE	$2,116	$2,529	$413	19.5%	$1,687	$2,067	$380	22.5%	$33	$429	$462	***
Non Milwaukee DD	$2,771	$3,207	$436	15.7%	$2,463	$2,605	$142	5.8%	$294	$308	$602	***
Non Milwaukee Prior Wvr Exp.	$2,006	$2,542	$536	26.7%	$1,920	$2,144	$224	11.7%	$312	$86	$398	*
Milwaukee Prior Wvr Exp.	$2,137	$2,483	$346	16.2%	$1,920	$2,144	$224	11.7%	$122	$217	$339	**
Non Milwaukee w/ No Prior Wvr Exp.	$2,113	$2,513	$400	18.9%	$1,442	$1,500	$58	4.0%	$342	$671	$1,013	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Home Care Service Costs

Historically, home health care, personal care and supportive home care have been poorly defined in discerning among the three for the purposes of reporting costs; these three services include many of the same specific tasks. Home health care is the most intensive and specialized type of care, requiring extensive Medicare certification and auditing; personal care services require only some Medicaid oversight; and supportive home care services are largely unregulated. Under Family Care, the CMOs have the flexibility to combine these services to meet the needs of their members effectively and efficiently. This level of flexibility does not exist in the non-Family Care counties because of fee-for-service and waiver mandates to maximize personal care services. To increase efficiencies, provide higher quality services and reduce costs, the CMOs have streamlined many of these related services by combining them within one provider, negotiating fixed rates for the entire group of services, or moving appropriate home health services to personal care and personal care service to supportive home care (a more detailed discussion of this can be found in the "Cost-Restraint" section of the report).

An additional limitation or confounding issue in analyzing supportive home care services is that this is not available to those comparison group individuals who do not have Medicaid long-term care waiver eligibility. Those who do have eligibility account for just under half of the entire comparison group study sample (48.8 percent). Therefore, truly assessing cost-restraints between these services proves difficult.

Home Health Care Costs

Although the Milwaukee County CMO Frail Elderly individuals demonstrated a 393.3 percent increase in rate of change, all other study groups with significant differences experienced decreasing percentages in their respective rates of change in home health care costs during the study period compared to their CG counterparts – that is, their costs increased at a slower rate than the comparison groups' costs. Further, when looking at the end of the observation period for each group, all study groups ended with home health care PMPM costs substantially lower than their CG counterparts. While these are notable

findings among Family Care members, they must be considered in context with the other home care-related services of Personal Care and Supportive Home Care.

Table 17: Home Health Care Costs

Home Health Care Costs - Significant Differences
CY 2003-2004

FC Study Groups	FC Baseline PMPM $	FC End of Study Period PMPM $	FC Rate-of-Change	FC Percent Change	CG Baseline PMPM $	CG End of Study Period PMPM $	CG Counterpart Rate-of-Change	CG Counterpart Percent Change	Difference in Rate-of-Change Between FC and CG	Difference at Baseline Between FC and CG	Difference at End of Study Between FC and CG	Significant Difference
Non Milwaukee	$332	$308	-$24	-7.2%	$707	$768	$61	8.6%	-$85	-$375	-$460	***
Milwaukee FE	$105	$518	$413	393.3%	$396	$776	$380	96.0%	$33	-$291	-$258	***
Non Milwaukee Prior Wvr Exp.	$300	$282	-$18	-6.0%	$697	$799	$102	14.6%	-$120	-$397	-$517	***
Milwaukee Prior Wvr Exp.	$98	$52	-$46	-46.9%	$697	$943	$246	35.3%	-$292	-$599	-$891	*
Non Milwaukee w/ No Prior Wvr Exp.	$418	$286	-$132	-31.6%	$767	$1,013	$246	32.1%	-$378	-$349	-$727	*
Milwaukee w/ No Prior Wvr Exp.	$122	$76	-$46	-37.7%	$767	$1,013	$246	32.1%	-$292	-$645	-$937	*

Level of Significance: *p<.1, **p<.05, ***p<.01

Personal Care Costs

Analyses from personal care service costs reveal a set of mixed results that do not clearly illustrate similar patterns among those Family Care study groups who significantly differed from their CG counterparts. With the exception of the individuals with developmental disabilities in the four non-Milwaukee CMO counties, all other Family Care study groups experienced notably higher percentage increases in their rates of change in comparison to their CG counterparts. The individuals with developmental disabilities in the four non-Milwaukee CMO counties were the only Family Care study group to show a decreasing rate of change percentage (-23.0). Their CG counterparts actually increased 4.1 percent in their rate-of-change over the study period duration.

When applying rate-of-change to the starting PMPM costs of the four collective non-Milwaukee CMOs, individuals with developmental disabilities in the four non-Milwaukee CMOs, and the non-Milwaukee County CMO individuals with waiver participation before enrollment in Family Care, all continued to have significantly lower personal care costs over the course of the study period. The other three Family Care study groups all ended the study with higher PMPM costs, which were significantly greater than those of their CG counterparts. Additionally, each of these groups were within the Milwaukee County CMO.

Table 18: Personal Care Costs

Personal Care Costs - Significant Differences
CY 2003-2004

FC Study Groups	FC Baseline PMPM $	FC End of Study Period PMPM $	FC Rate-of-Change	FC Percent Change	CG Baseline PMPM $	CG End of Study Period PMPM $	CG Counterpart Rate-of-Change	CG Counterpart Percent Change	Difference in Rate-of-Change Between FC and CG	Difference at Baseline Between FC and CG	Difference at End of Study Between FC and CG	Significant Difference
Non Milwaukee	$353	$430	$77	21.8%	$719	$726	$7	1.0%	$70	-$366	-$296	***
Milwaukee FE	$511	$827	$316	61.8%	$449	$411	-$38	-8.5%	$354	$62	$416	***
Non Milwaukee DD	$400	$308	-$92	-23.0%	$1,036	$1,078	$42	4.1%	-$134	-$636	-$770	**
Non Milwaukee Prior Wvr Exp.	$338	$478	$140	41.4%	$744	$740	-$4	-0.5%	$144	-$406	-$262	***
Milwaukee Prior Wvr Exp.	$525	$807	$282	53.7%	$744	$740	-$4	-0.5%	$286	-$219	$67	***
Milwaukee w/ No Prior Wvr Exp.	$481	$875	$394	81.9%	$488	$660	$172	35.2%	$222	-$7	$215	***

Level of Significance: *p<.1, **p<.05, ***p<.01

Supportive Home Care Costs

Similar to the circumstances surrounding personal care costs, supportive home care costs present findings that produce inconsistent patterns among those Family Care study groups that significantly differ from their CG counterparts. For example, individuals in the Milwaukee County CMO with waiver experience before Family Care enrollment and those individuals in the four non-Milwaukee CMOs with no prior waiver participation before FC enrollment both experience significant decreases over the course of the study period and end with PMPM costs nearly half ($331 vs. $601) and one third ($358 vs. $982) those of their CG counterparts.

Conversely, the four non-Milwaukee CMOs showed PMPM costs at the end of the study that significantly differed from their comparison group counterparts. In fact, this group's ending PMPM cost was nearly twice as much as that of the CG ($649 vs. $336, respectively). The two additional Family Care groups with end of study period PMPM costs higher than their CG counterparts (individuals with physical disabilities and those with waiver participation before Family Care enrollment in the non-Milwaukee County CMOs) had significantly greater costs, albeit slightly higher, than the comparison groups ($644 vs. $606; $798 vs. $729).

The largest percentage rate of change increase between the Family Care groups occurred among the individuals in the non-Milwaukee County CMOs with waiver experience before Family Care enrollment (21.3). Notably, the same group in the Milwaukee County CMO had the greatest decrease in the percentage rate of change over the study period (-37.4). The home health, personal care and supportive home care findings suggest a need for better understanding of the interaction and utilization of these services within the Family Care benefit package.

Table 19: Supportive Home Care Costs

Supportive Home Care Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee	$611	$649	$38	6.2%	$500	$336	-$164	-32.8%	$202	$111	$313	***
Non Milwaukee PD	$614	$644	$30	4.9%	$852	$606	-$246	-28.9%	$276	-$238	$38	***
Non Milwaukee Prior Wvr Exp.	$658	$798	$140	21.3%	$733	$729	-$4	-0.5%	$144	-$75	$69	***
Milwaukee Prior Wvr Exp.	$529	$331	-$198	-37.4%	$733	$601	-$132	-18.0%	-$66	-$204	-$270	***
Non Milwaukee w/ No Prior Wvr Exp.	$492	$358	-$134	-27.2%	$584	$982	$398	68.2%	-$532	-$92	-$624	**
Level of Significance: *p<.1, **p<.05, ***p<.01												

Emergency Room (ER) Costs and Utilization

The Family Care groups with significantly different emergency room costs from the comparison group were those with and those without prior waiver experience in the non-Milwaukee County CMO and those without prior waiver experience in the Milwaukee group. Each of these subgroups were notably different from the comparison group, with the exception of the individuals with no prior waiver experience from the Milwaukee County CMO.

These Family Care groups with significant differences experienced decreasing rates of change over the duration of the study timeframe. The only study group with an end of study period PMPM cost significantly higher than its CG counterpart ($41 vs. $39) were those individuals with prior waiver experience in the four non-Milwaukee CMO counties. Notwithstanding this higher final outcome, this group's rate-of-change is significantly decreasing over time.

Utilization rates for the significantly different Family Care groups all showed greater percentage decreases in the rates-of-change over the study period than the comparison group as well as producing significantly different rates of change from their CG counterparts. However, both the non-Milwaukee CMO counties and Milwaukee County CMO groups with prior waiver participation had higher ER utilization rates than the comparison group (35.1 vs. 24.0, and 30.4 vs. 24.0, respectively) by the end of the study period. The non-Milwaukee CMO individuals with no prior waivers were 8.6 visits per 100 less than the comparison group by the end of the observation period.

Table 20: Emergency Room Costs

Emergency Room Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee Prior Wvr Exp.	$51	$41	-$10	-19.6%	$37	$39	$2	5.4%	-$12	$14	$2	*
Non Milwaukee w/ No Prior Wvr Exp.	$73	$71	-$2	-2.7%	$71	$73	$2	2.8%	-$4	$2	-$2	*
Milwaukee w/ No Prior Wvr Exp.	$56	$50	-$6	-10.7%	$71	$73	$2	2.8%	-$8	-$15	-$23	**
Level of Significance: *p<.1, **p<.05, ***p<.01												

Table 21: Emergency Room Visits

Emergency Room Visits - Significant Differences CY 2003-2004 - Rate Per 100												
FC Study Groups	*FC Baseline PMPM Visit Rate Per 100*	*FC End of Study Period PMPM Visit Rate Per 100*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM Visit Rate Per 100*	*CG End of Study Period PMPM Visit Rate Per 100*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee Prior Wvr Exp.	41.1	35.1	-6.0	-14.6%	27.9	24.0	-3.9	-14.0%	-2.1	13.2	11.1	***
Milwaukee Prior Wvr Exp.	37.0	30.4	-6.6	-17.8%	27.9	24.0	-3.9	-14.0%	-2.7	9.1	6.4	***
Non Milwaukee w/ No Prior Wvr Exp.	46.6	33.4	-13.2	-28.3%	35.4	42.0	6.6	18.6%	-19.8	11.2	-8.6	**
Level of Significance: *p<.1, **p<.05, ***p<.01												

Hospital Admission Rate

Only one Family Care study group significantly differed from the comparison group on hospital admission rates: the four non-Milwaukee County CMO counties. Although the rate of change experienced over the two-year study period is less for this Family Care group than for their comparison group (6.2 vs. 7.6), it began the study period with a higher PMPM baseline rate per 100 individuals (39.0 vs. 37.0). The slower rate at which Family Care members' admission rate grew did not overcome this initial baseline difference between the two groups and by the end of the study period, and was slightly higher (0.6 per one hundred) than the comparison group.

Table 22: Hospital Admission Rate

Hospital Admission Rate - Significant Differences CY 2003-2004 - Rate Per 100												
FC Study Groups	*FC Baseline PMPM Rate Per 100*	*FC End of Study Period PMPM Rate Per 100*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM Rate Per 100*	*CG End of Study Period PMPM Rate Per 100*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee FE	39.0	45.2	6.2	15.9%	37.0	44.6	7.6	20.5%	-1.4	2.0	0.6	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Inpatient Hospital Costs and Utilization Rate

An interesting pattern emerges among the Family Care groups that are significantly different from the comparison group. All four Family Care (Milwaukee and non-Milwaukee frail elders, non-Milwaukee members with physical disabilities, and non-Milwaukee members without prior waiver experience) begin with significantly higher baseline PMPM costs than their comparison group counterparts, but overcome these higher starting costs with significant decreases in inpatient hospital costs over the course of the two-year study. The result is that three of the four groups end the study period with significantly lower PMPM service costs. The only comparison group not experiencing increasing rates of change over the study period were individuals with developmental disabilities.

The only Family Care group that does not yield results that overcome this initial starting deficit relative to the CG is the individuals in the non-Milwaukee CMO counties with prior waiver experience. However, the $119 starting point difference is substantially reduced to just $3 by the end of the study, although it remains a significant difference. In terms of inpatient hospital utilization, this same group remains relatively stable at a 1.2 visit per one hundred rate of change, while the comparison group sharply increases 103.0 visits per one hundred and ends the study period with a sizeable and significant difference of 111.4 visit rate per one hundred than that of the Family Care group.

The gap between the individuals with physical disabilities in the non-Milwaukee CMO counties and comparison group also grows over the duration of the study period. This Family Care group has an initial starting difference of just under 48 per one hundred (47.8) inpatient hospital visits less than the comparison group at baseline with the margin increasing substantively by the end of the study (59.4) between the two groups.

Table 23: Inpatient Hospital Costs

Inpatient Hospital Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee FE	$70	$34	-$36	-51.4%	$65	$99	$34	52.3%	-$70	$5	-$65	***
Milwaukee FE	$163	$81	-$82	-50.3%	$65	$99	$34	52.3%	-$116	$98	-$18	***
Non Milwaukee PD	$364	$124	-$240	-65.9%	$243	$183	-$60	-24.7%	-$180	$121	-$59	***
Non Milwaukee Prior Wvr Exp.	$205	$107	-$98	-47.8%	$86	$104	$18	20.9%	-$116	$119	$3	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Table 24: Inpatient Hospital Stay Rate

Inpatient Hospital Stay Rate - Significant Differences CY 2003-2004 - Rate Per 100												
FC Study Groups	*FC Baseline PMPM Stay Rate Per 100*	*FC End of Study Period PMPM Stay Rate Per 100*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM Stay Rate Per 100*	*CG End of Study Period PMPM Stay Rate Per 100*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee PD	374.8	327.0	-47.8	-12.8%	419.0	386.4	-32.6	-7.8%	-15.2	-44.2	-59.4	**
Non Milwaukee Prior Wvr Exp.	312.9	314.1	1.2	0.4%	322.5	425.5	103.0	31.9%	-101.8	-9.6	-111.4	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Outpatient Hospital Costs and Utilization Rate

Two of the four Family Care groups have significantly lower PMPM costs for outpatient hospital services at the end of the study compared to the CG. Although the rates are decreasing among four Family Care groups, the comparison groups' rate of change decreases more in two of the four groups. By the end of the study, costs for two Family Care groups (non-Milwaukee CMO FE and non-Milwaukee CMO individuals with prior waiver experience) remained higher than the comparison group. These two groups also began the study at significantly higher costs PMPM. At the same time, the Milwaukee CMO FE and individuals with developmental disabilities in the non-Milwaukee County CMOs groups each began and ended the study with PMPM costs less than those of the comparison group.

Specific to rate-of-change for outpatient hospital visits, far more groups among Family Care members saw significant differences relative to the comparison group than are seen between these same groups for outpatient hospital costs. Although individuals with no prior waiver experience in the Milwaukee County CMO yielded a significantly lower rates of outpatient hospital visits per one hundred by the end of the study period (77.2 vs. 84.2), the other five Family Care groups that ended with outpatient hospital rates less than those of the comparison group were from the non-Milwaukee CMO counties. The non-Milwaukee CMO counties as a whole, as well as the physically disabled, and individuals with and without prior waiver experience, all have rates significantly less than their comparison group counterparts. Although the elderly individuals in the non-Milwaukee County CMOs had a greater percentage rate of change increase over the study

period (18.3 vs. 4.0), they still remained significantly less than their comparison group counterparts at the duration of the study in terms of outpatient hospital visits per one hundred (46.6 vs. 75.0).

Table 25: Outpatient Hospital Costs

Outpatient Hospital Costs - Significant Differences CY 2003-2004												
FC Study Groups	*FC Baseline PMPM $*	*FC End of Study Period PMPM $*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM $*	*CG End of Study Period PMPM $*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee FE	$52	$34	-$18	-34.6%	$48	$12	-$36	-75.0%	$18	$4	$22	**
Milwaukee FE	$26	$10	-$16	-61.5%	$48	$12	-$36	-75.0%	$20	-$22	-$2	**
Non Milwaukee DD	$21	$17	-$4	-19.0%	$35	$29	-$6	-17.1%	$2	-$14	-$12	**
Non Milwaukee Prior Wvr Exp.	$33	$11	-$22	-66.7%	$25	$7	-$18	21.9%	-$4	$8	$4	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Table 26: Outpatient Hospital Visits

Outpatient Hospital Visits - Significant Differences CY 2003-2004 - Rate Per 100												
FC Study Groups	*FC Baseline PMPM Visit Rate Per 100*	*FC End of Study Period PMPM Visit Rate Per 100*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM Visit Rate Per 100*	*CG End of Study Period PMPM Visit Rate Per 100*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee	50.3	39.7	-10.6	-21.1%	71.6	78.8	7.2	10.1%	-17.8	-21.3	-39.1	*
Non Milwaukee FE	39.4	46.6	7.2	18.3%	71	75.0	4.0	5.6%	3.2	-31.6	-28.4	**
Non Milwaukee PD	55	38.6	-16.4	-29.8%	67	57.6	-9.4	-14.0%	-7	-12	-19.0	***
Non Milwaukee Prior Wvr Exp.	44.2	32.2	-12.0	-27.1%	47.7	36.5	-11.2	-23.5%	-0.8	-3.5	-4.3	***
Milwaukee Prior Wvr Exp.	65.8	71.8	6.0	9.1%	47.7	36.5	-11.2	-23.5%	17.2	18.1	35.3	*
Non Milwaukee w/ No Prior Wvr Exp.	55.8	50.4	-5.4	-9.7%	81.0	84.2	3.2	4.0%	-8.6	-25.2	-33.8	**
Milwaukee w/ No Prior Wvr Exp.	66.6	77.2	10.6	15.9%	81.0	84.2	3.2	4.0%	7.4	-14.4	-7.0	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Physician Office Visit Costs

Among the four Family Care groups that significantly differed from the comparison groups, only the non-Milwaukee CMO frail elderly and physically disabled ended the study with significantly less physician office visit costs relative to the comparison group ($93 vs. $94 and $72 vs. $78). At the same time, the Milwaukee CMO frail elderly and individuals with prior waiver experience each show increasing rates-of-change over the study and end with higher PMPM physician office visit costs than the comparison group ($105 vs. $94 and $120 vs. $83).

An additional aspect to consider when assessing physician office visit cost differences between Family Care members and the comparison group is that of primary care physician visits. As discussed in the section "Primary Care Physician Visits," the interdisciplinary teams at each CMO are working with Family Care members to more efficiently develop preventative practices and restrain costs through unnecessary utilization practices. Having a usual source of primary care enhances achieving prevention goals for Family Care members. While there is room for continued improvement in reducing overall visits to physicians, differences between the practices of internists and family physicians suggest that slightly longer visits through this managed care approach will contribute to achieving proven prevention strategies.

As evidenced with the results in that section, visits to primary care physicians are significantly higher for Family Care members throughout 2003 and 2004 and may potentially minimize more substantial cost-savings findings when examining all physician office visit costs. The purpose of looking at all physician office visits, including those to primary care physicians, was to capture the full effect of physician office visits related to costs.

The escalating role of managed care programs such as Family Care, with its emphasis on increased productivity, supports changes identified in these analyses. The benefit for members in seeing primary care physicians aids these individuals with increased prevention through familiarity and attention with the associated increase in the duration of primary care visits.

Table 27: Physician Office Visit Costs

Physician Office Visit Costs - Significant Differences
CY 2003-2004

FC Study Groups	FC Baseline PMPM $	FC End of Study Period PMPM $	FC Rate-of-Change	FC Percent Change	CG Baseline PMPM $	CG End of Study Period PMPM $	CG Counterpart Rate-of-Change	CG Counterpart Percent Change	Difference in Rate-of-Change Between FC and CG	Difference at Baseline Between FC and CG	Difference at End of Study Between FC and CG	Significant Difference
Non Milwaukee FE	$95	$93	-$2	-2.1%	$100	$94	-$6	-6.0%	$4	-$5	-$1	*
Milwaukee FE	$99	$105	$6	6.1%	$100	$94	-$6	-6.0%	$12	-$1	$11	***
Non Milwaukee PD	$90	$72	-$18	-20.0%	$84	$78	-$6	-7.1%	-$12	$6	-$6	**
Milwaukee Prior Wvr Exp.	$110	$120	$10	9.1%	$87	$83	-$4	-4.6%	$14	$23	$37	***

Level of Significance: *p<.1, **p<.05, ***p<.01

Prescription Drugs Costs and Utilization Rate

The majority of the significant differences in prescription drug costs and utilization result in the non-Milwaukee CMO counties. Two of these groups in the non-Milwaukee CMOs (the non-Milwaukee CMO aggregate group and the frail elderly) begin with initial average monthly drug costs less than those of the comparison group ($366 vs. $387 and $314 vs. $332), but all four groups in these CMOs experience higher prescription drug costs relative to the CG by the end of the study.

Only the non-Milwaukee CMO members with developmental disabilities reach the end the study with higher utilization rates for prescription drugs relative to the comparison group (44.5 per one hundred). All the other non-Milwaukee CMO subgroups yield significantly lower utilization rates for prescription drugs. Individuals with prior waiver experience in the Milwaukee County CMO begin and end the study time frame with significantly lower utilization rates than those of the comparison group.

Table 28: Prescription Drug Costs

Prescription Drug Costs - Significant Differences
CY 2003-2004

FC Study Groups	FC Baseline PMPM $	FC End of Study Period PMPM $	FC Rate-of-Change	FC Percent Change	CG Baseline PMPM $	CG End of Study Period PMPM $	CG Counterpart Rate-of-Change	CG Counterpart Percent Change	Difference in Rate-of-Change Between FC and CG	Difference at Baseline Between FC and CG	Difference at End of Study Between FC and CG	Significant Difference
Non Milwaukee	$366	$434	$68	18.6%	$387	$403	$16	4.1%	$52	-$21	$31	**
Non Milwaukee FE	$314	$378	$64	20.4%	$332	$374	$42	12.7%	$22	-$18	$4	*
Non Milwaukee DD	$387	$491	$104	26.9%	$322	$322	$0	0.0%	$104	$65	$169	***
Non Milwaukee Prior Wvr Exp.	$377	$443	$66	17.5%	$349	$399	$50	14.3%	$16	$28	$44	**

Level of Significance: *p<.1, **p<.05, ***p<.01

Table 29: Prescription Drug Utilization Rates

Prescription Drug Utilization Rates - Significant Differences CY 2003-2004 - Rate Per 100												
FC Study Groups	*FC Baseline PMPM Rate Per 100*	*FC End of Study Period PMPM Rate Per 100*	*FC Rate-of-Change*	*FC Percent Change*	*CG Baseline PMPM Rate Per 100*	*CG End of Study Period PMPM Rate Per 100*	*CG Counterpart Rate-of-Change*	*CG Counterpart Percent Change*	*Difference in Rate-of-Change Between FC and CG*	*Difference at Baseline Between FC and CG*	*Difference at End of Study Between FC and CG*	*Significant Difference*
Non Milwaukee	765.8	880.2	114.4	14.9%	903.4	1,038.0	134.6	14.9%	-20.2	-137.6	-157.8	***
Non Milwaukee FE	850.7	1,034.1	183.4	21.6%	866.5	1,043.5	177.0	20.4%	6.4	-15.8	-9.4	*
Non Milwaukee DD	663.9	757.9	94.0	14.2%	639.4	713.4	74.0	11.6%	20	24.5	44.5	**
Non Milwaukee PD	791.5	886.1	94.6	12.0%	1023.5	1,105.5	82.0	8.0%	12.6	-232	-219.4	***
Non Milwaukee Prior Wvr Exp.	829.6	964.2	134.6	16.2%	1,045.2	1,158.6	113.4	10.8%	21.2	-215.6	-194.4	*
Milwaukee Prior Wvr Exp.	794.7	922.3	127.6	16.1%	1,045.2	1,158.6	113.4	10.8%	14.2	-250.5	-236.3	*
Non Milwaukee w/ No Prior Wvr Exp.	755.1	976.1	221.0	29.3%	832.0	988.4	156.4	18.8%	64.6	-76.9	-12.3	*
Level of Significance: *p<.1, **p<.05, ***p<.01												

Summary of Cost-Effectiveness Analyses

Significant differences between counties on several long-term care and primary and acute services remained after stringently controlling for the twelve individual characteristics. Further, variables differentiating between Family Care program counties demonstrate significant changes among several long-term care and primary and acute outcomes. While conventional interpretations might suggest that some differences in costs and utilization of long-term care services and other health related services can be attributed to such things as the availability of providers, supply is not necessarily the only factor affecting service cost and utilization. Further, the significant contribution of the RUCA variable (community type based on zip code of residence) and controlling for the "Milwaukee effect" (residing in Milwaukee County in the three months before the study period) suggests that there are pockets within counties where differences can and are being detected.

After controlling for socio-demographic and health-related factors, geographic differences across the state of Wisconsin and those among the Family Care counties, significant differences continued to exist. The geographic differences warrant greater scrutiny to gain a better understanding of the specific attributes of counties, above and beyond an individuals' particular health status or individual characteristics. Overall, geographic variation in cost and utilization was relatively strong and directly investigating other factors correlated with long-term care costs and utilization may be productive.

In summary, results from the three different methodological approaches employed in the cost-effectiveness analyses (Path Analysis, Two Level HLM models, and HLM Rate-of-Change models) substantiate one another in their findings that total Medicaid costs and total long-term care service costs cost less for the Family Care than the comparison group when observing the programmatic effects at the highest structural contexts. The path analyses revealed that there were significant reductions in both direct and indirect programmatic effects of Family Care when assessing Medicaid and total long-term care PMPM costs relative to the comparison group. Moreover, the two level HLM analyses for total Medicaid PMPM costs demonstrated that the four non-Milwaukee CMO counties as a collective unit, each of the three target groups in these counties, and the Milwaukee County CMO frail elderly all had significantly less PMPM costs than the comparison group. Finally, the HLM rate-of-change models showed that long-term care

PMPM costs were significantly less for the non-Milwaukee CMO counties, the non-Milwaukee CMO counties frail elderly and individuals with physical disabilities, and the Milwaukee County CMO frail elderly relative to the comparison group. The only higher level group not to yield a significant difference compared to the CG were individuals with developmental disabilities in the non-Milwaukee CMO counties.

When examining specific total long-term care and primary and acute services individually, fewer examples of consistent trends exist across target groups, geographies, and other subgroups. These results, in and of themselves, are not surprising. The Family Care program serves three very distinct target groups, all with different service needs and individual characteristics. The program itself operates in five counties, with Milwaukee county having very unique characteristics and attributes that differ greatly from those of the four other Family Care counties as well as the rest of the counties throughout Wisconsin. Finally, individual members who enroll in Family Care may or may not have had prior waiver experience other do not.

Limitations of Costs and Utilization Analysis

Stringent methods to minimize the influence of measurement errors were undertaken, in order to assure fair comparisons; observe longitudinal changes over time; and control the effects of confounding due to extraneous factors, in order to isolate and measure the effects of Family Care on utilization and cost. However, it is important to consider the limitations of the underlying data before drawing strong conclusions. As mentioned previously, the scope of the study is limited in duration, and is limited to a subset of all possible health services. Additional limits on the conclusions stem from data quality issues.

Data on cost and utilization were combined from several different sources, including Medicaid eligibility files, Medicaid claims files, HSRS LTC Module, CMO data systems, Family Care Functional Screen database, and Medicare Minimum Data Set (MDS). Data quality checks were performed and cases were eliminated for the following reasons:

- Duplicate ID numbers (more than one number per person).
- Discrepancies between enrollment dates and dates of service on claims.
- Individuals with less than two full weeks of enrollment.
- Discrepancies between Family Care enrollment records and LTC waiting lists.

Some restrictions were placed on periods when data were considered valid. Any non-null utilization or cost data for recipients on Medicaid LTC waivers were ignored if the individual was a confirmed Family Care enrollee, so all post-Family Care data were contributed by the CMO data system, not the HSRS system. Data preceding the enrollment or “pseudo-enrollment” date for individuals identified as “rookies” were ignored if they were within one month before the enrollment date. Otherwise, individuals identified as “rookies” on the basis of Medicaid eligibility files were dropped if they had Medicaid claims data indicating more than one month of Medicaid experience before their assigned enrollment date.

If a case had missing data for the Functional Status Impairment Scale, or the CDPS Illness Burden Index, then the grand mean was used for that case and a binary "dummy" variable was set to indicate that data were missing. This allows the rest of the non-missing data for that case to be used in the analysis, with any potential bias removed by the coefficient of the dummy variable. While this method does not bias the estimated coefficients for FSIS or CDPS, it does cause "inefficient estimates" of the standard error and confidence interval, as these may be too narrow, thus increasing the chance of "false positive" errors. This problem was avoided in the path analysis by using only those cases that had no data missing for both FSIS and CDPS.

Finally, it must be noted that the administrative data sets on which this analysis are based are subject to continuous revision as claims are adjusted and data entry errors corrected over time. The issues of "claims lag" and "data run-out" should be minimal in the Medicaid data sets, CMO Encounter data and the HSRS data set, which achieved "final" status for 2004 before the analysis begun.

Limitations and Assumptions of Multilevel Analysis

Bryk and Raudenbush (1992) identify five assumptions that should be met for HLM to work successfully:

A. The error term of each level-1 unit should have a mean of zero and the residuals should be normally distributed. For example, if the level-1 units or individual long-term care and fee-for-service recipients and level-2 units are counties, then the mean of the error within each classroom should be zero, the residuals should be normally distributed, and all counties should have variances equal to the other counties in the sample.
B. Level-1 predictors are independent of the level-1 error term. That is, the covariance between level-1 predictors and the error term should be zero.
C. Level-2 error terms each have a mean of zero and adhere to a multivariate normal distribution.
D. Level-2 predictors are independent of all level-2 error terms. Thus, all variables in the second level of the model are not related to any of the error terms on that level of the model, including the error term for the level-1 intercept, and the error term for any of the slopes of level-1 variables.
E. The level-1 error terms are independent of level-2 error terms. That is, there is not relationship between the error term at level-1 and the error term in the level-2 equation for the level-1 intercept, or the error term in any of the equations used to estimate the slopes of level-1 variables.

The assumptions necessary for linear regression analyses also apply to analyses using HLM and they can be just as complex. One assumption of linear equations is that the errors, because of measurement noise and omitted variables, are distributed normally and are independent of the variables in the equation. In addition, any assumption that the relationships are linear is often overlooked in regression analyses and HLM.

One assumption that relates only to HLM is also important. The major criterion for HLM analyses is to have appropriate data. This means that the data must be hierarchical, with groups nested within higher-level groups, and with enough cases within and between groups to provide sufficient degrees of freedom for the linear equations. As well, the data must be especially accurate and the variables especially reliable and valid because small inaccuracies at one level can lead to bias in relationships found at the next level.

Finally, like other linear models, level-2 models in HLM are sensitive to large standard errors of the estimates, to omitted variables, and to the transformations of existing variables. All of these factors mentioned display the potential dangers of using this new sophisticated methodology on poor concepts, poor data, or both. Burstein, Kim and Delandshere (1989) remind researchers that the new, more powerful methods can produce very complex, yet very wrong, results if data assumptions are not carefully considered[47].

Within the interpretation of HLM there are some notable points. Most importantly, analyses based on this method will always be non-experimental and correlational, not causational. Fortunately or unfortunately, correlation does not prove causation. Therefore, one must proceed with caution when interpreting results from HLM and not imply any causal effects.

---

[47] Burstein, L., Kim, K-S., & Delandshere, G. (1988). *Multilevel investigations of systematically varying slopes: Issues, alternatives, and consequences.* In R.D. Bock (Ed.), *Multilevel analysis of educational data*. San Diego: Academic Press.

V. Cost-Restraint Management Practices

One of Family Care's goals is to increase efficiencies in long-term care service delivery through a managed care model, where more individuals can be served while maintaining control over increasing costs. In formal interviews with CMO staff, they perceived a shift in emphasis within Family Care. The CMO staff suggested that during the first four years of Family Care, emphasis was placed on meeting the needs of the members and addressing their personal long-term care choices. Over the past year, the CMO staff perceived that the State staff placed a stronger emphasis on increasing efficiencies in their long-term care service delivery systems; specifically, controlling costs while still maintaining high quality services and ensuring member choice.[48]

State staff agree that cost-effectiveness was not discussed as frequently in the first several years of Family Care, but point out that the nature of managed care implies cost-effectiveness and provides an inherent incentive to promote cost-restraint. The transition from a non-risk-based long-term care model to a risk-based managed care model was difficult for the CMO staff and their governing boards. As a result, the notion of cost-restraint through managed care may have been unintentionally deemphasized by both state and CMO staff.

Cost-effectiveness does not mean providing the cheapest available services. Instead, the CMO staffs focus on the two questions when determining the cost-effectiveness of their service plans: 1) Is the current service effective? 2) Is there an equally effective service that is less costly? The cost-effectiveness analysis discussed previously shows that Family Care is reducing long-term care costs, as well as some primary and acute costs, such as hospital inpatient and prescription drug costs. However, if Family Care was shown to be as expensive as the existing long-term care service delivery system it may still be considered *cost-effective*. To date, Family Care has eliminated long-term care waiting lists and improved the quality of services provided to its members through increased provider networks, member-centered service planning and of member outcomes achievement, and has done so while also reducing costs.

The CMO management teams and DHFS staff emphasized that operating as a managed care program required the CMOs' staff to develop an awareness of costs throughout all their tasks. Operating as traditional home-and community-based waiver programs before Family Care, they were not designed to restrain costs, but rather to provide a full complement of services to eligible participants without direct consideration of costs. In contrast, Family Care is designed to work with all eligible members, their families and available supports to develop the most cost-effective care plan for each member. Incorporating attention to costs and efficiencies throughout CMO operations has occurred slowly, with substantial efforts by the CMOs and significant assistance from DHFS staff. After five years of implementation, Family Care administrative and care planning

[48] This information comes from face-to-face, in-depth interviews with the CMOs and subsequent discussions with state Family Care staff during period between February 2005 and August 2005.

practices have overcome many hurdles, but are now showing consistent and sustainable improvements in quality, access and cost-effectiveness.

Cost Saving Practices

As awareness of the need to restrain costs, while providing high quality services and encouraging member choice, has grown, the CMOs have each developed and adopted new cost-restraint practices. These practices can generally be divided into two categories: 1) administrative/managerial policies, procedures or updates and, 2) service coordination and planning changes. Administrative changes include practices such as hiring a purchasing agent to coordinate durable medical equipment purchases or improving information technology systems to increase managerial and administrative efficiencies. Service coordination changes refer to service planning and delivery modifications.

Administrative and Managerial Cost-Restraint Measures

Each CMO has implemented administrative practices designed to reduce costs. These practices have included development of claims systems that directly verify utilization and costs against individual service plans (ISPs) for authorized service amounts and timeframes; hiring purchasing agents; buying medical supplies in bulk; and assigning business personnel to handle member financial issues and removing this responsibility from the service coordinators.[49]

One CMO developed a bidding process for two of their purchased services aimed at increasing provider competition and limiting rate increases over time. Each supportive home care agency submits estimated costs to the CMO, which uses the lowest estimate to set their supportive home care rate. The CMO then sends out requests for participation at the established rate. Any provider willing to provide the required scope of services at the established rate and meets the CMO's quality requirements is allowed to participate. However, the lowest bidder must be willing and capable of providing all supportive home care services in case no other providers are capable of providing services at that rate. Therefore, even if a provider presents the lowest bid, but is too small to provide supportive home care services for all members, their bid is not considered for establishing the base rate. Ultimately, the CMO directs all of its members who do not specify a choice of providers to the lowest bidder in a "preferred provider" arrangement. This CMO did not see a rise in supportive home care rates for three years.

In an effort to save residential costs, one CMO has capped their CBRF rates. Flat rates are established based on care needs and each CBRF is paid at the same rate levels based on the members they are serving. This practice limits the possibility that CBRFs may charge many different rates for individuals with similar needs or charge different rates for residents based on specific services provided within the CBRF. At a minimum, capping CBRF rates and/or establishing an explicit rate structure may help to project future costs.

[49] One CMO has provided a detailed list of their cost savings initiatives. This list can be found in Appendix E.

The cost-effectiveness analysis shows that CBRF costs PMPM are higher among the DD and frail elderly populations in the Family Care counties than in the non-Family Care counties. CBRF PMPM costs in the Family Care counties are also increasing at a higher rate than in the non-Family Care counties among these populations, despite the limited efforts to control costs in these areas described above.

Higher CBRF costs in the Family Care counties may be the result of moving more people out of nursing homes, compared to the non-Family Care counties. Individuals with significant care needs would be placed in nursing homes in the non-Family Care counties, resulting in a loss of eligibility for the waiver program; whereas in Family Care, the CMO remains responsible for the cost of nursing home care for members and often seeks to place them in community settings, usually in a CBRF. The movement of former nursing home residents or members with nursing home levels of care into CBRFs may account for some of the increase in CBRF costs.

In addition, one CMO indicated a scarcity of CBRF beds in their county, particularly for members with extensive medical and/or behavioral health needs. CMO staff suggested that the lack of CBRF beds in some areas, the high demand for these residential settings caused by Family Care, the closure of the state DD centers, and few qualified ICF-MRs have allowed provider agencies to increase their CBRF rates. In general, CBRF rates include varying levels of home health, personal and supportive care, for which some CMOs negotiate final rates, while others accept the providers' established rates. The CMO directors have noted that CBRF rates appear to vary greatly between Family Care counties for similar packages of services. The lack of competition in some counties and the limited tracking of CBRF rates across counties may contribute to the higher cost of CBRFs in the Family Care counties.

The cost-effectiveness analysis shows that CBRF costs differ between the Family Care and non-Family Care counties, but further analyses are needed to identify the causes of the county-level differences (i.e. the unique characteristics of each county that contribute to reduced or increased costs and utilization that are not specifically identified by this analysis). These county-level differences may include the size and relative bargaining power of the providers within the county; the strength of the union presence within the county; or the diversity of the economic base within the county. This analysis accounts for the differences between the counties; however, these differences need to be analyzed and their causes understood in order to be addressed.

One CMO has established a residential placement system that relies solely on adult family home (AFH) arrangements, which are more cost-effective than CBRFs. This CMO also relies on volunteers to provide some services, where appropriate.

Other CMOs have capped rates on additional services. For example, one CMO has established flat daily rates for 24 residential DD programs that provide supportive home care. The flat daily rates for this "around-the-clock" care are established to avoid unique rates for each member who receives supportive home care services.

Technological cost-saving measures have also been implemented by the CMOs. Notably, one CMO has developed a clinical information technology (IT) system where all IDT members have electronic access to individual service plans (ISPs). Member files are entered into the system using less-costly administrative staff, allowing more time for care workers to focus on their caseloads. The clinical IT system also assists with identifying out-of-network providers and improves communication and negotiation of rates with these providers.

Service Coordination and Planning Cost-Restraint Measures

The CMOs first address cost savings at an individual level, directly with their members. The member, or their guardian, is an active participant in the care planning process. CMO staff work with the member to identify what s/he expects from their long-term care services, and then negotiates available services with the member during the care planning process to tailor each ISP to meet their unique needs. The negotiation process helps to restrain costs by selecting the most efficient means to address the member's personal outcomes.

Fundamental changes in how the CMO builds an individual ISP were among the first actions taken by the CMOs to reduce costs. In two CMOs the IDTs were directed to review each of their ISPs for potential cost savings. The RAD used in care planning by all CMOs contains a step that instructs the CMOs to pick the least costly service alternative if it will not impair the member's ability to achieve their personal outcomes. The utilization review process emphasized this point.

During this utilization review (UR) process, the IDTs were charged with identifying services that could be streamlined or provided more efficiently. In addition, implementation of the RAD was assessed for accuracy. In some cases, more cost-effective alternative services were purchased to replace existing services, or services were dropped completely if they were not helping the members to achieve their outcomes. Duplicative services were also reduced through these reviews.

One CMO encountered some financial difficulties in 2003, which caused a "culture change" within the organization and the adoption of new practices to monitor costs on an individual and aggregate level. An obstacle in controlling costs was determining how best to say "no" to member requests. Although the RAD is designed to direct care managers and IDTs to choose the most cost-effective ways to support members' outcomes, there was reluctance to restrict services. Care managers were concerned about providing some very high-cost services, such as $20,000 home modifications, but remained reluctant to restrict those services if they could help the member achieve their personal outcomes.

The CMO director organized a series of staff meetings where each care manager received a complete accounting of their clients' services and costs. These meetings served to discuss the appropriateness of these high-cost services and also provided care managers with peer feedback regarding their existing service plans. The care managers also began to see inappropriate billings or services that they had not intended to pay for. Through

this detailed review process, care managers became more confident in their ability to negotiate alternative services with members, ISPs were modified and new efficiencies were built into the plans.

These initial meetings have evolved into standing meetings held once per week where care managers set the agenda and discuss their cases openly with one another. These meetings provide input on how to best negotiate with members when selecting services and also provide peer review of existing ISPs. The peer reviews help each care manager question the relevance and necessity of each aspect of their ISPs and also influence each care manager to be more diligent when creating a cost-effective ISP.

In response to similar financial concerns, another CMO mandated a 30-day review of all ISPs. Each care manger supervisor was given copies of their care managers' ISPs and asked to review every detail of the plans with the care managers and report back to the CMO director within 30 days. The supervisors were instructed to look for "enhanced services" where members were receiving more services than were required to meet their needs and outcomes. The fictional example provided by the CMO was a case in which three hours of cleaning services were authorized when one would be sufficient, but the second two were provided for socializing.

New policies have been implemented based on the findings from this process. All new cases are reviewed by supervisors during their regularly scheduled bi-weekly care manager meetings. These reviews are preliminary and help the care managers develop an ISP that is both effective and efficient. As the final ISP is turned into the supervisor, it is reviewed a second time. Following these initial reviews, each ISP is reviewed every six months by the supervisor. These reviews coincide with the six-month member plan review, but occur before review with the members. In approximately five months, this process has helped turn a $200,000 monthly loss into a $45,000 monthly gain.

Similarly, this CMO and others have set-up utilization review committees (URCs) to serve in an advisory capacity for reviewing ISPs with services that are not part of the Family Care benefit package, such as purchasing a mattress, and those that cost more than $300 annually. The dollar limit may differ across CMOs, but the principle remains the same. The URCs, serving in an advisory role to the IDTs, help facilitate creative and efficient service planning by generating new care plan options that may not have been originally considered by the IDT. The IDTs incorporate the URCs recommendations where appropriate and make the final decisions regarding what services to authorize.

At least one county has taken the idea of URCs one step further by reviewing out-of-benefit[50] services for relevance and cost-effectiveness. The CMO did realize some cost savings, but more importantly to the CMO staff, the review process became an effective training tool that helped to provide consistency across IDTs. Minutes from the URC

[50] It should be emphasized that these services are not in the Family Care benefit package. These services, if provided, are intended to help members achieve their personal outcomes and include things such as air conditioners, computers, phone service or other items that may logically be expected to increase the likelihood of achieving the member's outcomes.

meetings are distributed to all CMO staff so that team members have new suggestions for handling similar out-of-benefit requests for services.

Some CMOs have begun to reassess specific categories of service, such as home health care, personal care and supportive home care. Historically these services have been largely overlapping and are differentiated mainly by funding sources. In the non-Family Care waiver counties in Wisconsin, DHFS has mandated that each county maximize the use of personal care services, which are paid by the fee-for-service State Medicaid Plan. Personal care services are generally more costly than equivalent supportive home care services due to Medicaid administrative requirements, such as nurse supervisory visits and reporting requirements. Because personal care services are included in the Family Care capitation rate, the CMOs are not bound by this mandate and can establish the most cost-effective mix of personal care, supportive home care and home health care suitable for each member. Each IDT includes a nurse, eliminating the need for many of the nurse supervisory visits normally mandated by Medicaid. In addition, unlike general Medicaid where providers develop their own plans of services for members, under Family Care, the IDT is charged with devising a comprehensive and efficient care plan for each member. This program feature frees Family Care from the potential conflict of interest highlighted by providers who seek to provide as much care as possible to their members, as opposed to providing the most appropriate and efficient care.

The CMOs have been able to increase efficiencies by paying a single non-Medicare certified provider to provide many of these services under the personal care designation, specifically services that were provided by home health agencies. Home health agencies can provide personal care, but they must meet restrictive Medicare requirements and deliver a medically-oriented model of personal care, which is generally more costly. In addition, combining services within a single provider reduces the number of workers entering the home and improves provider efficiency, which also reduces costs. The cost-effectiveness analysis discussed earlier shows a large decrease in the utilization of home health care during the 2003-2004 study period. The decrease in home health care utilization is a reflection of the CMOs' efforts to design the most effective and efficient care plans for their members.

One CMO director discussed how they have managed home health, personal and supportive care, while maximizing informal supports to supplement these services. This CMO has moved much of its home health aide services to personal care, and moved some personal care to supportive home care. The biggest impact that this CMO has had on its home care population resulted from moving the home health aide services into personal care. This CMO has also emphasized the use of natural supports in these areas. Similarly, another CMO has stopped coding services under home health care and is instead using the supportive home care code to represent care that includes supportive home care, personal care and home health care, for which they have negotiated a combined rate.

The CMOs have begun consideration of a sub-capitated model, where providers are given a capitated rate to provide an established set of services, thereby assuming some of the

financial risk previously assumed by the CMO. Two CMOs have used a sub-capitated model to provide residential programming to specific sub-populations of their members.[51] The first CMO has a sub-capitation arrangement with a large residential provider (120 members), but still pays for other services in the benefit package, such as transportation and therapy separately. The second CMO reimburses a large residential provider a flat daily rate for each enrolled resident at the comprehensive level of care. If a resident only requires an intermediate level of care, the CMO negotiates a lower sub-capitated rate. The flat daily rate includes supportive home care, skilled nursing, durable medical supplies (DMS) and durable medical equipment (DME). Although these services are reimbursed as a package, they are authorized on the members' service plans individually. Any services required by members that are included in the daily rate are the sole responsibility of the residential provider with no further billing to the CMO. Other CMOs are considering a similar approach, particularly for servicing members with DD.

The CMOs have implemented policies to maximize Medicare coverage and other available payers. Maximizing Medicare or other payer coverage of services reduces costs to the CMOs and general Medicaid. The CMOs maximize these payers by instructing their Medicare certified provider on which services can be billed through Medicare, as well as following-up with the providers to be sure that Medicare was appropriately billed. One county has hired a Medicare consultant to assist them with maximizing Medicare coverage for their members.

These cost saving measures can be described as good managed care practices. CMO and state staff focused much of their initial efforts in Family Care on establishing the basic administrative and functional structure of the program, ensuring member choice and achieving member outcomes. Now that Family Care is well-established, both CMO and state staff are better able to focus on improving their managed care practices. For instance, state staff have suggested that each CMO use available data to identify areas where vigorous care management may result in significant cost savings. The cost-effectiveness results suggest possible service areas to target, such as CBRFs and personal care. If these activities focus specifically on the quality of services, and also improve cost-effectiveness, they may qualify as one of the performance improvement projects (PIPs) required of each CMO.

CMOs have struggled in recent years to find new and innovative ways to increase efficiency and reduce costs while maintaining their high level of care. Some CMOs have suggested that greater control over primary and acute medical care may help them control costs by assuring that members receive the necessary care to maintain or improve their health and functioning, similar to the Wisconsin Partnership Program (WPP). Responsibility for primary and acute medical care is not prohibited by the Family Care contract, but would require extensive discussions with state and federal staff in order to implement. Not controlling primary and acute medical utilization and not being able to restrict membership were frequently mentioned by CMO staff as areas that restrict their ability to further control costs.

[51] Two of the Family Care counties contain large convents with a significant portion of sisters who qualify for membership in Family Care.

In summary, the CMOs have adopted and employed a number of management practices to improve the efficiency of their service delivery and restrain costs. Some of these described in this report, and they include:

Administrative and Managerial Cost-Restraint Measures

- Hiring a purchasing agent to purchase all durable medical equipment;
- Moving all business decision and functions to business or financial staff and moving all administrative responsibilities to administrative staff; and
- Developing new information technology systems that eliminate duplicate billings, assure appropriate eligibility and streamline access to member records.

Service Coordination and Planning Cost-Restraint Measures

- Reinforcing appropriate use of the RAD with all staff;
- Training care managers on negotiating the most cost-effective service plan with members and their families;
- Emphasizing managed care principles with all staff;
- Discussing managed care principles with members and their families;
- Establishing preferred-provider[52] arrangement;
- Undertaking different forms of utilization review, including standing committees where care managers collaborate to find the most cost-effective solutions for each ISP;
- Maximizing Medicare and other payer coverage;
- Utilizing less costly residential arrangements if appropriate and maximizing the use of volunteers for some services;
- Instituting sub-capitation arrangements with some providers;
- Capping expenses on some services, such as CBRFs; and
- Establishing guidelines and specific rates for CBRFs to eliminate paying different rates for each member within a CBRF.

[52] The State and CMO management have struggled to appropriately define the concept of a "preferred provider" in the context of Family Care. In the "Choice in Family Care" document found in Appendix C preferred providers are defined this way, "…the member can choose among the providers in the CMO's provider network. However, the CMO may be able to have a more cost-effective arrangement with one provider than another; in this case, the CMO can offer the most cost-effective way to provide the necessary supports."

VI. Conclusions/Lessons Learned

The current Independent Assessment contains a detailed discussion of access, quality and cost-effectiveness within Family Care. The access and quality assessments drew heavily from in-person interviews conducted with CMO directors and staff. The cost-effectiveness analysis drew information from Medicaid administrative claims and eligibility data, Family Care-specific data, LTCFS data and MDS data. The cost-effectiveness analysis consists of two path analyses, a multilevel analysis of total Medicaid costs, and a long-term care, and primary and acute care rate-of-change analysis. Each analysis contributes something unique to this understanding of the cost-effectiveness of Family Care, yet all of the analyses support the success of Family Care in reducing costs among its members. Together, these components have highlighted areas where Family Care is most cost-effective, while also identifying a range of strategies used to yield cost savings and improve health and long-term care services for members.

The access findings suggest that RC, CMO and state staff have consistently worked to improve access to long-term care services and supports in the Family Care counties. Provider networks have increased, functional assessments have improved, enrollment has been streamlined and disenrollment tracking is becoming more detailed. In addition, the CMOs continue to look for ways to improve access to Family Care. Highlighted below are areas where the CMOs, DHFS and the EQRO could focus their improvement efforts to further promote access to Family Care.

- Improve coordination between the LTCFS and member assessments. (DHFS and CMOs)
- Work with the RCs to provide more detailed disenrollment information, particularly regarding voluntary disenrollment. (DHFS)
- Improve outreach to attract individuals before their health or functioning deteriorates to the point that they can no longer stay in the community. (RCs)
- Clarify expectations of RNs for coordinating non-covered services, such as primary and acute health care. (DHFS and CMOs)
- Work with the CMOs to come up with alternatives for care of very high cost DD cases. (DHFS and CMOs)
- Clarify for the CMOs the available options for coordinating behavioral health services for their members. (DHFS)

The independent assessment findings suggest that the CMOs continue to improve the quality of long-term care services provided through Family Care. Waiting lists for services have been eliminated for over three years, member outcome achievement remains high, and each CMO has continued to improve its cost-effectiveness through improving efficiencies and implementing innovative cost-saving measures. With

assistance from DHFS and the EQRO, the CMOs continue to look for areas in need of further quality improvement. The following list highlights some of these areas.

- Provide more support in clarifying for members what "choice" means in Family Care and in clarifying the distinction between outcomes and desires for specific services. (CMOs)
- Provide care manager training that focuses on person-centeredness and cost management. (CMOs and DHFS)
- Establish monthly meetings where care managers can openly discuss their existing cases and discuss options for new cases. (CMOs)
- Work with the CMOs to develop a joint outcome-type tool for assessing member progress towards their individual long-term care goals. (DHFS)
- Develop a data set or predictive tool that each CMO can use to predict their future capitated rates. (DHFS)
- Develop an approach for sharing best practices among the CMOs. The State should take the lead in this area, as all CMOs report to state staff on a regular basis. (DHFS and CMOs)
- Analyze home health, personal and supportive home care as a bundled set of services to better understand their fiscal impact on Family Care. These services remain difficult to analyze separately, particular utilization, as each CMO still reports these services using multiple units of service.

Each component of the cost-effectiveness analysis supports and confirms the overall conclusion of the IA, that Family Care reduces overall Medicaid and long-term care costs while providing more effective long-term care services than the fragmented existing waiver system. The path analyses show that Family Care has a significant direct effect on overall Medicaid and long-term care costs, reducing costs in both cases. In addition, Family Care indirectly reduces these costs by impacting institutionalizations, illness burden and functional status among members.

The multilevel analysis conducted on total Medicaid costs supports the direct effect of Family Care on reducing these costs. After controlling for differences between individuals (e.g., gender, illness burden, functional status), and accounting for the existence of county-level differences, the multilevel analysis shows a significant difference of $452 PMPM between the non-Milwaukee Family Care counties and their comparison group counterparts. The Milwaukee County frail elderly also significantly outperformed their comparison group counterparts, reducing Medicaid costs by $274 PMPM.

Lastly, the long-term care and primary and acute care rate-of-change analysis also shows that Family Care significantly reduces these costs. Again, controlling for differences between individuals and accounting for the existence of county-level differences, this analysis looks at the change in costs as a member gains more experience in Family Care. In other words, does the cost-saving effect of Family Care strengthen or weaken over time? The findings from this analysis show that total long-term care costs are rising significantly slower in the non-Milwaukee and Milwaukee Family Care counties than among their comparison group counterparts. Long-term care costs start out lower among

the members of Family Care and continue to remain lower throughout the two-year study period.

At the aggregate level of total Medicaid costs and total long-term care costs, Family Care consistently out performs the comparison group; however, there are specific services, or services among specific target groups, where Family Care does not perform as well as the comparison group. Among the four non-Milwaukee Family Care counties these areas include:

- CBRF costs;
- Personal care costs;
- Supportive home care costs; and
- Prescription drug costs.

Among the Milwaukee County frail elderly members, these areas include:

- CBRF costs;
- Personal care costs; and
- Hospital outpatient costs.

These findings are not surprising. Family Care is designed to support members in choosing where they live. In most cases, members choose to live in their own homes; however, this arrangement is not always possible. Therefore, many members choose other residential settings; including adult family homes (AFHs) and community based residential facilities (CBRFs). Nursing homes are generally considered the most restrictive living arrangement in long-term care, providing a lower level of community integration than AFHs or CBRFs. As a result, most Family Care members who can live successfully outside of a nursing home choose to move into these alternative settings, shifting Family Care expenses from nursing homes to AFHs or CBRFs.[54]

Personal care and supportive home care services are included in nursing home rates, but only included in AFH and CBRF rates on a limited basis. Therefore, the CMOs must purchase many of these services separately, increasing their PMPM costs in these areas.

It is also possible that Family Care members may have been under-medicated before entering the program. As a program, Family Care provides more comprehensive care management, which may lead to a more appropriate mix of medications for each member. Adequate medications may be contributing to the reduced costs of hospitalization and physician visits seen among the Family Care members. On the whole, Family Care is costing less in long-term care services and total Medicaid costs, so it is reasonable to assume that increases in CBRF, personal care, supportive home care and prescription drug costs in Family Care are contributing to lower spending in other

[54] CBRFs are often more prevalent than AFHs in Wisconsin counties and typically offer a more comprehensive level of care, making them the most common alternative living arrangement for members with a nursing home level of care.

categories of service. These findings warrant further investigation to fully understand their impact.

Family Care serves three very distinct target groups, all with different service needs and individual characteristics. The program operates in five counties, and Milwaukee County has several characteristics that differ greatly from the other Family Care counties, as well as the remaining Wisconsin counties. The various combinations of county, target group and service area where Family Care does not out perform the comparison group provides opportunities for focusing further investigation.

Importantly, the multilevel analysis controls for differences between individuals and allows for the existence of unidentified differences between counties. This method provides the most accurate estimates of real cost differences between the Family Care counties and the non-Family Care counties currently available. Because of the breadth of the analysis, we are able to pinpoint specific combinations of geographic location, target group and service area where further analyses may be beneficial.

Focusing on these target areas will require discussions among state, CMO, RC and EQRO staff to hypothesize what county-level differences may exist that could be affecting the performance of Family Care. For example, Milwaukee is the largest, most urban community in Wisconsin. What associated county-specific factors may be confounding the effectiveness of Family Care in CBRF, personal care and hospital outpatient costs? If identified, these county-specific factors can be operationalized and included in new cost-effectiveness models. Including these factors in new multi-level cost-effectiveness models will further account for the differences between counties and significantly refine our understanding of the direct effect of Family Care on total Medicaid and long-term care costs.

VII. Appendix

A. List of Acronyms

ADL	Assessments of Activities of Daily Living
ADRCs,	Aging Disability Resource Centers (RC)
ALJ	Administrative Law Judge
BPT	Best Practice Team
BQA	Bureau of Quality Assurance
CARES	Client Assistance for Re-employment and Economic Support
CBRF	Community-Based Residential Facilities
CCS	Comprehensive Community Support
CDPS	Chronic Illness and Disability Payment System
CG	Comparison Group
CMS	Center for Medicare and Medicaid
CMOs	Care Management Organizations
CQL	Council on Quality and Leadership
CSP	Community Support Program
DD	Developmental Disablities
DHA	Division of Hearing and Appeals
DHFS	Division of Health Care and Family Services
DME	Durable Medical Equipment
DMS	Durable Medical Supplies
EQOR	External Quality Review Organization
ER	Emergency Room

ES	Economic Support
FC	Family Care
FE	Frail Elderly
FSIS	Functional Status Impairment Scale
HLM	Hierarchical Linear Modeling
IA	Independent Assessment
ICFMR	Intermediate Care Facilities for the Mentally Retarded
IDTs	Inter-Disciplinary Teams
IRRT	Inter-Rater Reliability Testing
ISPs	Individual Service Plan
LPN	Licenses Nurse Practitioners
LTC	Long-Term Care
LTCFS	Long-Term Care Functional Screen
MCAP	Member-Centered Assessment and Plan
MCPs	Member-Centered Care Plans
MDS	Medicare Minimum Data Set
OCD	Obsessive Compulsive Disorder
OLS	Ordinary Least Squares
OT	Occupational Therapist
PD	Physical Disabilities
PIP	Performance Improvement Projects
PMPM	Per Member Per Month
PWC	Price Waterhouse Coopers

RAD	Resource Allocation Decision (process)
RC	Resource Center
RFI	Requests for Information
RFP	Requests for Proposal
RN	Registered Nurses
RUCA	Rural-Urban Commuting Area
UR	Utilization Review
URCs	Utilization Review Committees
WPP	Wisconsin Partnership Program

B. Choice in Family Care

Family Care has frequently been described as increasing the choices available to consumers. At the same time, Family Care limits choice – through its defined provider network, and because the CMO must provide services and supports as cost-effectively as possible. This seeming conflict in what Family Care tries to achieve -- both to increase and to limit choice -- has been difficult for care managers, providers, consumers and state staff to understand and operationalize. These stakeholders have identified the need for a document that clearly describes what "choice" means in Family Care. This is that document.

There are several principles which work together to form the overall philosophy of Choice in Family Care. There is no rule or formula for how these different principles work together in each situation, because each member and situation is different and unique. Understanding these principles will hopefully help you understand better what "choice" means in the Family Care program.

Entitlement: The Family Care benefit package is available to all eligible people in the service areas in which it exists, and people do not have to wait until funding is available to receive services. Eligible people also have a choice of receiving services under the Medicaid fee-for-service system, but that does not provide all the long-term care services available in Family Care.

Service Flexibility. The Family Care benefit is flexible in that it allows interdisciplinary teams to authorize alternative services and supports that will be most effective and cost-effective, even if they are not included in the defined benefit package. In Family Care, interdisciplinary teams authorize those services that best meet the needs of the consumer in the least costly manner, and that are not covered by other insurance policies or payment sources. For example, having both supportive home care and personal care in the Family Care benefit allows care managers to be flexible and use supportive home care instead of the more expensive personal care benefit for most direct care needs.

Personal outcomes. Family Care uses an individualized, person-centered process to identify the member's personal outcomes and preferences. One way Family Care measures the quality of the services and supports provided is by how effective they are in supporting the member's personal outcomes. Family Care may not be able to help the member get all the results he wants out of life – some outcomes might be outside the realm of what health and long-term care supports can achieve, or the cost of fully achieving an outcome might mean that the member has to compromise on what can be provided.

Cost-effectiveness. In order to assure services are available to all who need them, everyone involved in Family Care must work to assure those services are as cost-effective as possible. This includes enrollees and their families and representatives. Members do not have the right or ability to choose whatever services they want; rather,

they have the right and responsibility to choose among the cost-effective options the CMO makes available to them. Being cost-effective means the least costly options that are effective in supporting the member's outcomes.

The care management team. The care management team (also called the interdisciplinary team or IDT) consists of the member and the CMO nurse and social worker/care manager. The team members work together to identify the enrollee's outcomes and find the most cost-effective ways to support those outcomes. This takes a lot of communication, negotiation and even compromise. Both the CMO staff and member have responsibility to fully engage in this process – the member is not just a passive recipient of services, but a partner in finding the most effective and cost-effective ways to get the results he or she wants from Family Care services.

Choice of residential setting. One of the most meaningful ways Family Care gives people choices is that members do not need to wait for community-based services. Where the entitlement to Family Care isn't available, people may be on a waiting list for services in their own home or in a community-based congregate living situation.

There is a strong emphasis in Family Care on people being able to live in the setting of their choice, and especially on being able to live in non-institutional settings if that is their preference. The CMO, however, still has a responsibility to find the most cost-effective options to accomplish that. In many instances, the member living in his or her own home will be the most economical option. However, that may not always be the case. For example, there may be times when the cost of necessary modifications to a member's own home is not reasonable, compared to the cost of living in an apartment or alternate community-based residential setting. The CMO should strive to offer people ways to live in the settings of their choice, and in non-institutional settings if that is their preference, and it should work to assure the options it can offer are as cost-effective as possible.

Choice of Care, Supports, and Services. Once the member has decided what outcomes he or she wants to work toward, the member and the CMO interdisciplinary care management team decide what services or supports are most cost-effective in achieving those outcomes. The CMO will hopefully be able to offer more than one choice of service to meet the member's outcomes, but that may not always be possible. The CMO's responsibility is to offer the most cost-effective way - balancing cost and choice - to support the member's outcomes.

Choice of Providers. For providers who come into the member's home or provide intimate personal care, the CMO must purchase services from whoever the member chooses as long as that person meets the CMO's requirements and accepts the CMO's rates.

For other services, the member can choose among the providers in the CMO's provider network. However, the CMO may be able to have a more cost-effective arrangement with one provider than another; in this case, the CMO can offer the most cost-effective

way to provide the necessary supports. For example, a CMO might have an arrangement with one supportive home care provider for a daily or overnight rate for services, and only contract for hourly services with another supportive home care provider. The daily rate is almost always more economical, and the CMO can limit choice to the most cost-effective way to provide the needed support.

Members can request a provider who is not in the provider network and the CMO must consider the request. Instances where a member's request for a provider outside the network should be honored by the CMO include when network providers: a) do not have the capacity or specialized expertise to meet the need; b) cannot meet the need on a timely basis; or c) are located in geographic locations or buildings that make transportation or physical access an undue hardship to the member.

Self-Directed Supports. Members can choose to self-direct all or some of their services.

- If members choose this option, the CMO will make resources, including a budget, available to the member based on what it would have spent if it managed those services. The member can then use that budget amount to buy specific services to meet their needs.
- The CMO can limit the services that a member can self-direct. For instance, this option is not available for residential living arrangements.
- The CMO may put limits on the self-directed option if members are not staying within their budget, if they have used resources illegally or in a way that is too risky to health and safety, or if someone else is making decisions for the member that are not based on what the member wants.

Health and safety: The CMO cannot provide goods or services that are dangerous or illegal. While the CMO cannot stop members from making some unhealthy or risky choices (such as smoking or engaging in a dangerous hobby), the CMO needs to carry out its own responsibilities and obligations to protect—or at least not endanger—members' health and safety. The CMO will not provide supports for unnecessarily unhealthy or risky choices.

Appeals. Even though the member is part of the care management team, there will be times in a managed care program when the CMO and member will not agree on what supports are reasonable or necessary. The member can then appeal the CMO's decision, to the CMO itself, or to the state.

C. Long-Term Care and Primary and Acute Rate-of-Change Findings

Table I: Non-Milwaukee CMO Costs Per Member Per Month

Table I: Non-Milwaukee CMO Costs Per Member Per Month Multilevel Rate of Change Model Coefficients Calendar Years 2003-2004											
	Total Long Term Care $	Home Health Care $	Nursing Home $	Personal Care $	Residential Care (CBRF) $	Supportive Home Care $	Emergency Room $	Inpatient Hospital $	Outpatient Hospital $	Physician Outpatient $	Prescription Drugs $
	n=21,242	n=2,063	n=3,973	n=4,165	n=2,743	n=8,638	n=4,985	n=6,550	n=9,433	n=15,949	n=18,162
Non Milwaukee CMO Cost	-$353***	-$375***	-$1,803***	-$366***	-$565***	$111*	$10	$49*	-$1	$14*	-$21*
CG Cost (Intercept)	$1,875***	$707***	$4,073***	$719***	$2,270***	$500**	$43*	$163**	$33	$23**	$387***
Illness Burden Index	$231***	$74***	$51*	$37***	$23	$12	$3*	$41	$40***	$7***	$48***
Functional Status Impairment Score	$155***	$21	-$56	$177***	$76***	$143***	$1	$119	-$14	$0	-$30***
Functional Status Impairment Score Imputation	-$855***	-$124	-$1,007***	$15	-$101*	$0	$14	-$64	$44**	-$13***	-$67***
Institutionalization	$765***	-$345	-$830***	-$162	-$6	-$106	-$2	-$118	-$113***	-$18**	$8
Gender	$27	-$133	-$182	$142***	-$99**	$175***	$10	-$321*	$115***	$9*	-$51***
Last Year of Life	$317***	$434**	-$691***	$341***	-$199**	$98	$17	$238	$78**	$40***	$5
Medicare Dual Eligible	-$364***	-$69	-$182	-$319***	-$277***	-$163***	-$55***	-$234***	-$95***	-$74***	$19
Community Type (RUCA)	$12*	-$51***	$349***	-$44***	$36***	$34***	$1	$0	$3	-$2*	-$5**
Milwaukee Residence	-$51	-$12	$352**	-$8	$129**	$18	-$5	-$478**	$119	-$10	-$55***
Waiver Participation	$674***	$92	-$181	$292***	$50	$250***	-$4	$152	-$82***	-$5	$13
Developmentally Disabled (vs. FE)	$2,112***	$548***	$397	$361***	$535***	$1,075***	-$9	$278	$140***	-$18*	-$7
Physically Disabled (vs. FE)	-$584***	$754***	$722***	$85	$358***	$161***	-$4	-$102	$24	$3	$75***
CG PMPM Rate of Change	$19***	$3**	$36***	$0.29**	-$212***	-$3.42**	$0.21	-$2*	-$0.46	-$0.17	$0.33*
Non Milwaukee County CMO PMPM Rate of Change	$12***	-$1**	$16***	$3***	$546***	$0.79***	$0.21	$2	-$0.42	-$0.21	$1.42***
Proportion of Variance Explained Between Counties	21.5%	15.7%	28.7%	16.7%	16.8%	19.0%	24.9%	15.1%	10.1%	12.0%	11.2%

* p<0.1, ** p<0.05, *** p<0.01

Table II: Non-Milwaukee CMO Utilization Per Member Per Month

Table II: Non-Milwaukee CMO Utilization Per Member Per Month Multilevel Model Rate of Change Coefficients					
Calendar Years 2003-2004					
	Emergency Room Rate (per 100)	Hospital Admission Rate (per 100)	Inpatient Hospital Rate (per 100)	Outpatient Hospital Rate (per 100)	Prescription Drug Rate (per 100)
	n=4,771	n=6,212	n=6,214	n=10,136	n=15,817
Non Milwaukee CMO Utilization Rate	3.0	1.1	22.2	-21.3***	-137.6***
CG Utilization Rate (Intercept)	43.0*	36.9	295.2	71.6	903.4***
Illness Burden Index	2.69***	-.11	-7.02	6.34***	71.16***
Functional Status Impairment Score (FSIS)	.80	.21	-5.93	-2.03*	-27.43***
FSIS Imputation	8.85***	-.45	40.91	4.72**	-197.82***
Institutionalization	-.36	-2.72	-.23	-24.54***	-101.64***
Gender	-6.40**	1.2	-9.36	.94	-152.78***
Last Year of Life	8.09	15.07***	101.03	8.74*	179.42***
Medicare Dual Eligible	2.41	-1.18	-55.86	-6.26**	158.70***
Community Type (RUCA)	-.80*	-.49**	-18.52	.62	-12.50***
Milwaukee Residence	-19.65***	.42	-78.81	6.21**	-53.73***
Waiver Participation	.70	-1.716	.426	-10.78***	17.84
Developmentally Disabled (vs. FE)	-11.25**	6.29	100.00	.56	-201.76***
Physically Disabled (vs. FE)	-11.45***	2.10	85.57***	2.11	81.11***
Comparison Group PMPM Rate of Change	0.17	0.16	0.71*	0.15	2.80***
Non Milwaukee County CMO PMPM Rate of Change	0.06	0.08	0.29	-0.22*	2.38***
Proportion of Variance Explained Between Counties	18.0%	13.1%	14.4%	10.5%	10.9%

* p<0.1, ** p<0.05, *** p<0.01

Table III: Family Care Elderly Costs Per Member Per Month

Table III: Family Care Elderly Costs Per Member Per Month Multilevel Rate of Change Model Coefficients Calendar Years 2003-2004	Total Long Term Care $	Home Health Care $	Nursing Home $	Personal Care $	Residential Care (CBRF) $	Supportive Home Care $	Emergency Room $	Inpatient Hospital $	Outpatient Hospital $	Physician Outpatient $	Prescription Drugs $
	n=14,716	n=1,185	n=3,295	n=2,898	n=2,071	n=5,677	n=2,650	n=4,553	n=5,485	n=9,816	n=11,976
Non Milwaukee CMO FE County Cost	-$1*	-$228**	-$1,565**	-$242***	$309***	-$165***	-$1	$5	$4**	-$5***	-$18***
Milwaukee CMO FE County Cost	-$250***	-$334**	-$737*	$62***	$429***	-$122***	$5*	$98	-$22***	-$1*	$12***
CG FE Cost (Intercept)	$1601***	$396*	$4,048***	$449***	$1,687***	$622***	$54	$65	$48**	$100***	$332
Illness Burden Index	$21**	$78***	$72***	$42**	$20	$16	$2**	$39	$36***	$7***	$48***
Functional Status Impairment Score (FSIS)	$117***	$7	-$71	$166***	$72***	$139***	$0	$120	-$12	$0	-$30***
FSIS Imputation	-$852***	$56	-$1,010***	$39	-$142***	$7	$6	-$51	$56***	-$13***	-$67***
Institutionalization	$798***	-$492**	-867***	-$161	$0	-$97	-$1	-$121	-$100***	-$19**	$9
Gender	-$36	-$139	-$277**	$137***	-$71	$164***	$7	-$313*	$112***	$10**	-$53***
Last Year of Life	$506***	$402*	-$730***	$376***	-$179**	$101	$12	$233	$87**	$39***	$7
Medicare Dual Eligible	$45	-$106	-$186	-$321***	-$216***	-$157***	-$52***	-$240***	-$100***	-$76***	$22*
Community Type (RUCA)	-$6	-$50***	$334***	-$44***	$38***	$32***	$1	-$1	$4	-$2	-$4**
Milwaukee Residence	$133***	$46	$338**	-$34	$120**	-$5	-$5	-$461**	$129**	-$8	-$61***
Waiver Participation	$546***	$99	-$278**	$309***	$68	$264***	-$4	$150	-$92***	-$6	$12
CG FE PMPM Rate of Change	$32***	$0.79	$40***	$40***	$16*	-$0.33	$0.08	$1	-$0.75**	-$0.13***	$0.88
Non Milwaukee County CMO FE PMPM Rate of Change	$12***	$1.21	$20***	$2	$19***	$0.31	-$0.42	-$1***	-$0.38**	-$0.04*	$1.33*
Milwaukee County CMO FE PMPM Rate of Change	$8***	$13.91***	$27*	$7*	$17***	-$3.58	-$0.50	-$2***	-$0.33**	$0.13***	$0.71
% of Variance Explained Between Counties	15.1%	15.7%	26.1%	17.3%	15.0%	19.8%	29.0%	15.1%	10.9%	12.6%	11.4%

* p<0.1, ** p<0.05, *** p<0.01

Table IV: Family Care Elderly Utilization Per Member Per Month

Table IV: Family Care Elderly Utilization Per Member Per Month Multilevel Model Rate of Change Coefficients					
Calendar Years 2003-2004					
	Emergency Room Rate (per 100)	Hospital Admission Rate (per 100)	Inpatient Hospital Rate (per 100)	Outpatient Hospital Rate (per 100)	Prescription Drug Rate (per 100)
	n=2,487	n=4,212	n=4,213	n=5,930	n=10,152
Non Milwaukee CMO FE Utilization Rate	-1.1*	1.9	53.9	-31.6***	-15.8
Milwaukee CMO FE Utilization Rate	-1.0*	-0.1	57.3	-2.2**	-123.3***
CG FE Utilization Rate (Intercept)	42.6*	37.1	291.0**	71.0***	866.5
Illness Burden Index	2.5***	-.14	-4.64	6.26***	72.18***
Functional Status Impairment Score (FSIS)	.60	.22	-7.12	-1.65	-27.09***
FSIS Imputation	6.46***	-.63	36.30	7.06***	-167.45***
Institutionalization	1.8	-2.68	-3.37	-23.76***	-89.24***
Gender	-6.29**	1.18	-6.74	.84	-156.50***
Last Year of Life	10.77*	15.07***	102.19	10.02**	173.79***
Medicare Dual Eligible	3.34	-1.11	-65.05	-5.90**	136.23***
Community Type (RUCA)	-.42	-.47*	-20.27	.69	-15.00***
Milwaukee Residence	-21.84***	.33	-82.69	5.55*	-32.24
Waiver Participation	.29	-1.75	3.76	-11.48***	10.72
Developmentally Disabled (vs. FE)	-10.43	7.9*	27.11	3.08	-262.76***
Physically Disabled (vs. FE)	-11.05*	3.13	-14.10	7.12	34.27
Comparison Group FE PMPM Rate of Change	0.10	0.16	1.85	0.08*	3.69*
Non Milwaukee CMO FE PMPM Rate of Change	-0.12	0.13*	0.73	-0.08***	3.82*
Milwaukee CMO FE PMPM Rate of Change	-0.11	0.16	0.87	0.15	2.79*
% of Variance Explained Between Counties	19.3%	13.0%	15.8%	10.6%	10.5%

* $p<0.1$, ** $p<0.05$, *** $p<0.01$

Table V: Family Care Developmentally Disabled Costs Per Member Per Month

Table V: Family Care Developmentally Disabled Costs Per Member Per Month Multilevel Rate of Change Model Coefficients											
Calendar Years 2003-2004											
	Total Long Term Care $	Home Health Care $	Nursing Home $	Personal Care $	Residential Care (CBRF) $	Supportive Home Care $	Emergency Room $	Inpatient Hospital $	Outpatient Hospital $	Physician Outpatient $	Prescription Drugs $
	n=1,402	n=181	n=86	n=243	n=256	n=423	n=330	n=336	n=591	n=1,367	n=1,361
Non Milwaukee CMO DD Cost	-$193***	-$506	-$802	-$636**	$308	$95	$28***	$120	-$14**	-$3*	$65***
CG DD Cost (Intercept)	$4180	$933	$4,674	$1,036*	$2,463**	$1,469**	$38	$77	$35**	$79**	$322**
Illness Burden Index	-$21	$72***	$155***	$44***	-$21	$11	$2*	$48	$39***	$7***	$48***
Functional Status Impairment Score (FSIS)	$497***	-$52	-$140***	$170***	$58**	$141***	$0	$131*	-$12	$0	-$30***
FSIS Imputation	$11	$206**	-$969***	$74*	-$281***	$44	$6	-$138	$34*	-$16***	-$55***
Institutionalization	$2,076***	-$579***	-$1,037***	-$219**	$158**	-$93	$0	-$76	-$117***	-$19**	$18
Gender	-$322**	-$83	-$365***	$144***	-$106**	$173***	$7	-$356	$118***	$9*	-$50***
Last Year of Life	$175	$279	-$985***	$382***	-$124	$94	$13	$221	$76*	$40***	$3
Medicare Dual Eligible	-$746***	-$172	-$585***	-$316***	-$171**	-$161***	-$52***	-$2,614***	-$92***	-$73***	$20
Community Type (RUCA)	-$21	-$29	$307***	-$41***	$24*	$47***	$1	-$31	$1	-$3**	-$4**
Milwaukee Residence	-$716**	$51	$118	-$19	$63	$8	-$4	-$445**	$117***	-$9	-$54***
Waiver Participation	$2,544***	$23	-$403***	$294***	$32	$268***	-$6	$141	-$74***	-$4	$12
CG DD PMPM Rate of Change	$13	-$6*	$50***	$1.75*	$6***	-$14.50	-$0.33	-$0.17	-$0.13**	-$0.13	$0
Non Milwaukee CMO DD PMPM Rate of Change	$22	$2	-$13***	-$4**	$18***	$4.13	-$0.33	$3	-$0.08**	-$0.04	$4***
% of Variance Explained Between Counties	34.3%	11.9%	22.4%	16.7%	20.8%	18.6%	29.2%	14.8%	10.3%	11.8%	11.2%

* p<0.1, ** p<0.05, *** p<0.01

Table VI: Family Care Developmentally Disabled Utilization Per Member Per Month

Table VI: Family Care Developmentally Disabled Utilization Per Member Per Month Multilevel Model Rate of Change Coefficients Calendar Years 2003-2004					
	Emergency Room Rate (per 100)	Hospital Admission Rate (per 100)	Inpatient Hospital Rate (per 100)	Outpatient Hospital Rate (per 100)	Prescription Drug Rate (per 100)
	n=321	n=247	n=246	n=891	n=926
Non Milwaukee CMO DD Utilization Rate	4.2	7.8	45.4	-1.7	24.5
CG DD Utilization Rate (Intercept)	38.8	37.0	155.5	61.7	639.4
Illness Burden Index	2.54***	-.14	-7.23	6.43***	73.72***
Functional Status Impairment Score (FSIS)	.86	.21	-4.28	-1.71	-29.60***
FSIS Imputation	9.44***	-.75	32.44	6.89***	-148.13***
Institutionalization	-.41	-2.58	8.38	-23.46***	-85.14***
Gender	-6.36**	1.12	-13.33	.75	-151.46***
Last Year of Life	7.95	15.15***	100.13***	7.83	165.91***
Medicare Dual Eligible	1.71	-1.10	-42.40	-4.81*	113.74***
Community Type (RUCA)	-.78*	-.42*	-19.46	-.46	-12.18***
Milwaukee Residence	-20.49***	.01	-79.48	8.42***	-33.85*
Waiver Participation	.26	-1.65	-1.59	-10.38***	1.10
Frail Elderly (vs. DD)	1.45	-8.25	-.06	1.29	263.50***
Physically Disabled (vs. DD)	-9.98	-6.21	88.05	1.50	362.05***
Comparison Group DD PMPM Rate of Change	-0.004	0.008	0.68	-0.10	1.54
Non Milwaukee CMO DD PMPM Rate of Change	0.08	0.32	6.1	0.02	1.96*
% of Variance Explained Between Counties	18.2%	13.0%	14.6%	9.0%	10.0%

* p<0.1, ** p<0.05, *** p<0.01

Table VII: Family Care Physically Disabled Costs Per Member Per Month

Table VII: Family Care Physically Disabled Costs Per Member Per Month Multilevel Rate of Change Model Coefficients Calendar Years 2003-2004											
	Total Long Term Care $	Home Health Care $	Nursing Home $	Personal Care $	Residential Care (CBRF) $	Supportive Home Care $	Emergency Room $	Inpatient Hospital $	Outpatient Hospital $	Physician Outpatient $	Prescription Drugs $
	n=5,124	n=697	n=591	n=1,024	n=416	n=2,538	n=2,005	n=1,661	n=3,356	n=4,766	n=4,825
Non Milwaukee CMO PD Cost	-$645***	-$722	-$1,880**	-$462**	$184*	-$238***	$5	$121*	-$2***	$6***	-$105*
CG PD Cost (Intercept)	$2,097***	$1,159***	$4,674	$963***	$2,336**	$852***	$51	$243	$45***	$84***	$517***
Illness Burden Index	$392***	$77***	$60**	$41***	-$21	$14	$2**	$39	$36***	$7	$48***
Functional Status Impairment Score (FSIS)	$96**	-$15	-$105**	$166***	$79***	$136***	$0	$131*	-$10	$0	-$31***
FSIS Imputation	-$1,265***	$26	-$974***	$41	-$289***	$9	$6	-$122	$64***	-$11**	-$61***
Institutionalization	$124	-$495**	-$796***	-$163	$140*	-$88	$0	-$94	-$90***	-$17**	$13
Gender	-$7	-$89	-$94	$151***	-$119**	$172***	$7	-$342*	$111***	$10**	-$50***
Last Year of Life	$470	$278	-$845***	$383***	-$138	$105	$13	$206	$90**	$39***	$4
Medicare Dual Eligible	-$175***	-$190*	-$285**	-$348***	-$235***	-$165***	-$51***	-$2,694***	-$105***	-$75***	$18
Community Type (RUCA)	-$23**	-$38**	$305***	-$47***	$29**	$38***	$1	-$17	$4	-$2*	-$4**
Milwaukee Residence	-$2,978***	$32	$502***	-$34	$76	-$14	-$4	-$423**	$133***	-$7	-$58***
Waiver Participation	$803***	$7	-$65	$324***	-$5	$264***	-$5	$127	-$96***	-$7	$14
CG PD PMPM Rate of Change	$8***	$6*	$24**	$1.67	$21	-$51***	-$0.42	-$2.50	-$0.13	-$0.13*	-$0.79
Non Milwaukee CMO PD PMPM Rate of Change	$14***	-$1.25	$8***	$5	$36	$0.63***	-$0.42	-$10***	-$0.50	-$0.38**	$1.25
% of Variance Explained Between Counties	30.8%	16.0%	25.4%	16.9%	15.1%	19.4%	29.0%	15.0%	11.2%	12.8%	11.2%

* p<0.1, ** p<0.05, *** p<0.01

Table VIII: Family Care Physically Disabled Utilization Per Member Per Month

Table VIII: Family Care Physically Disabled Utilization Per Member Per Month Multilevel Model Rate of Change Coefficients					
Calendar Years 2003-2004					
	Emergency Room Rate (per 100)	Hospital Admission Rate (per 100)	Inpatient Hospital Rate (per 100)	Outpatient Hospital Rate (per 100)	Prescription Drug Rate (per 100)
	n=1,963	n=1,753	n=1,755	n=3,315	n=4,739
Non Milwaukee CMO PD Utilization Rate	2.2	2.8	-44.2	-12.0***	-232.0*
CG PD Utilization Rate (Intercept)	33.7	38.7	419.0	67.0**	1023.5**
Illness Burden Index	2.72***	-.16	-6.28	6.21***	74.37***
Functional Status Impairment Score (FSIS)	.76	.21	-4.87	-1.78	-33.80***
FSIS Imputation	10.42***	-.48	21.89	6.59***	-193.30***
Institutionalization	-.82	-2.61	7.24	-23.21***	-110.14***
Gender	-6.39**	1.1	-13.03	1.13	-140.10***
Last Year of Life	8.33	15.13***	103.80***	7.65	158.89***
Medicare Dual Eligible	1.61	-1.06	-42.08	-5.92**	138.02***
Community Type (RUCA)	-.68	-.42*	-20.66***	.01	-14.56***
Milwaukee Residence	-20.45***	.18	-87.54***	9.40***	-46.72**
Waiver Participation	.74	-1.70	.56	-10.88***	18.37
Frail Elderly (vs. PD)	13.84**	-2.74	-24.70	-11.34**	75.86*
Developmentally Disabled (vs. PD)	3.37	4.31	81.30	-16.10***	-114.44**
Comparison Group PD PMPM Rate of Change	0.27	-0.008	-0.68	-0.20*	1.71*
Non Milwaukee CMO PD PMPM Rate of Change	-0.21	0.008	-1.00**	-0.34***	1.97**
% of Variance Explained Between Counties	18.4%	13.1%	14.8%	9.7%	10.8%

* p<0.1, ** p<0.05, *** p<0.01

Table IX: Family Care Costs Per Member Per Month – Individuals with Prior Waiver Experience

Table IX: Family Care Costs Per Member Per Month – Individuals with Prior Waiver Experience Multilevel Rate of Change Model Coefficients Calendar Years 2003-2004											
	Total Long Term Care $	Home Health Care $	Nursing Home $	Personal Care $	Residential Care (CBRF) $	Supportive Home Care $	Emergency Room $	Inpatient Hospital $	Outpatient Hospital $	Physician Outpatient $	Prescription Drugs $
	n=11,121	n=1,641	n=1,833	N=2,867	n=2,023	n=6,646	n=3,141	n=4,272	n=5,739	n=9,950	n=10,799
Non Milwaukee CMO Wvr Exp Cost	-$772***	-$397***	-$987***	-$406*	$86**	-$75**	$14*	$119	$8*	$1	$28*
Milwaukee CMO Wvr Exp Cost	-$840***	-$599***	-$273***	-$219	$217***	-$204*	$16*	$100	$48**	$23***	$3**
CG Wvr Exp Cost (Intercept)	$2,481***	$697***	$2,917***	$744***	$1,920***	$733***	$37**	$86*	$25**	$87*	$349*
Illness Burden Index	$119***	$62***	$83***	$36***	$29**	$13	$1	$44	$44***	$7	$48***
Functional Status Impairment Score (FSIS)	$239***	-$8	-$39	$180***	$74***	$142***	$0	$121	-$15	$0	-$30***
FSIS Imputation	-$366***	$54	-$691***	$27	-$99*	-$9	$10**	-$122	$49**	-$13**	-$55***
Institutionalization	$203	-$389*	-$922***	-$197**	-$11	-$116	$0	-$101	-$145***	-$18**	$10
Gender (1=Male)	$77	-$114	-$254**	$129***	-$108**	$170***	$2	-$341*	$108***	$9*	-$50***
Last Year of Life	$589***	$365*	-$722***	$323***	-$193**	$93	$14	$229	$77**	$40***	$4
Medicare Dual Eligible	-$435***	-$80	$41	-$304***	-$254***	-$161***	-$53***	-$2,685***	-$76***	-$75***	$19
Community Type (RUCA)	$21	-$34*	$307***	-$43***	$45***	$34***	$2*	-$10	$3	-$2	-$5**
Milwaukee Residence	-$88	-$33	$360**	$13	$151***	$20	$0	-$485**	$107***	-$11	-$54***
Developmentally Disabled (vs. FE)	$1695***	$634***	$525	$309***	$537***	$1,077***	$0	$299	$181***	-$17*	-$5
Physically Disabled (vs. FE)	-$297***	$784***	$921***	$135**	$365***	$164***	-$1	-$133	$37	$3	$77***
CG Wvr Exp PMPM Rate of Change	$13***	$2**	$45***	-$0.08	$9**	-$2.75*	$0.08	$0.38	-$0.38	-$0.08	$1.04*
Non Milwaukee CMO Wvr Exp PMPM Rate of Change	$18***	-$0.38***	$16***	$3***	$22**	$1.46***	-$0.42*	-$2*	-$0.46*	-$0.21	$1.38**
Milwaukee CMO Wvr Exp PMPM Rate of Change	$8***	-$1.29***	$27***	$6***	$14*	-$3.92***	-$0.58**	$1.63	-$0.33	$0.21***	$0.42
% of Variance Explained Between Counties	13.8%	17.3%	29.1%	17.6%	20.4%	19.6%	34.0%	14.9%	11.6%	12.4%	11.2%

* p<0.1, ** p<0.05, *** p<0.01

Table X: Family Care Utilization Rate Per Member Per Month

Table X: Family Care Utilization Rate Per Member Per Month – Individuals with Prior Waiver Experience Multilevel Rate of Change Model Coefficients					
Calendar Years 2003-2004					
	Emergency Room Rate (per 100)	Hospital Admission Rate (per 100)	Inpatient Hospital Rate (per 100)	Outpatient Hospital Rate (per 100)	Prescription Drug Rate (per 100)
	n=2,996	n=3,886	n=3,889	n=6,623	n=9,302
Non Milwaukee CMO Wvr Exp Utilization Rate	13.2***	0	-9.6	-3.5***	-215.6*
Milwaukee CMO Wvr Exp Utilization Rate	9.1***	-1.2	14.4	18.1***	-250.5***
CG Wvr Exp Utilization Rate (Intercept)	27.9***	38.6	322.5	47.7*	1045.2**
Illness Burden Index	1.59***	-.13	-7.13	6.53***	69.41***
Functional Status Impairment Score (FSIS)	.65	.23	-5.98	-1.87	-27.31***
FSIS Imputation	12.13***	-.96	33.49	8.11***	-205.85***
Institutionalization	.01	-2.49	3.11	-26.05***	-71.02***
Gender	-10.54***	1.07	-10.07	1.03	-142.63***
Last Year of Life	9.49*	15.04***	98.73***	9.38*	177.26***
Medicare Dual Eligible	.72	-1.17	-59.45**	-4.96*	118.57***
Community Type (RUCA)	-.22	-.47*	-17.95***	.67	-11.64***
Milwaukee Residence	-16.42***	.19	-81.40***	5.37*	-33.79*
Developmentally Disabled (vs. FE)	-5.83	6.79*	107.14	1.05	-235.99***
Physically Disabled (vs. FE)	-8.41***	1.98	82.64***	2.29	75.00***
CG Wvr Exp PMPM Rate of Change	-0.08*	0.06	2.15*	-0.23*	2.36*
Non Milwaukee CMO Wvr Exp PMPM Rate of Change	-0.13***	0.04	0.03*	-0.25***	2.80*
Milwaukee CMO Wvr Exp PMPM Rate of Change	-0.14***	0.16	0.93	0.13*	2.66*
% of Variance Explained Between Counties	34.0%	13.0%	14.3%	11.5%	11.7%

* $p<0.1$, ** $p<0.05$, *** $p<0.01$

Table XI: Family Care Costs Per Member Per Month – Individuals with No Prior Waiver Experience

Table XI: Family Care Costs Per Member Per Month – Individuals with No Prior Waiver Experience Multilevel Rate of Change Model Coefficients Calendar Years 2003-2004	Total Long Term Care $	Home Health Care $	Nursing Home $	Personal Care $	Residential Care (CBRF) $	Supportive Home Care $	Emergency Room $	Inpatient Hospital $	Outpatient Hospital $	Physician Outpatient $	Prescription Drugs $
	n=10.121	n=422	n=2.140	n=1.298	n=720	n=1.992	n=1.844	n=2.278	n=3.694	n=5.999	n=7.363
Non Milwaukee CMO No Wvr Exp Cost	-$260***	-$349*	-$2,081**	-$94*	$671*	-$92*	$2*	$100	$0	$5	-$78**
Milwaukee CMO No Wvr Exp Cost	-$159***	-$645**	-$674*	-$7	$635*	-$142*	-$15**	$21	$68**	-$12*	-$86*
CG No Wvr Exp Cost (Intercept)	$1,680***	$767**	$3,603***	$488*	$1,442**	$584*	$71**	$131	$30***	$100	$415***
Illness Burden Index	$258***	$56***	$92***	$43***	-$18	$10	$1	$44	$41***	$7***	$48***
Functional Status Impairment Score (FSIS)	$123***	-$22	-$21	$164***	$67**	$139***	$0	$125	-$16	-$0	-$31***
FSIS Imputation	-$1,048***	$145	-$541***	$99**	-$308***	$39	$3	-$90	$27	-$16***	-$63***
Institutionalization	$841***	-$327	-$972***	-$207**	$141*	-$104	$1	-$111	-$147***	-$18**	$2
Gender	$27	-$116	-$329***	$140***	-$105**	$174***	$3	-$324*	$114***	$9*	-$52***
Last Year of Life	$161	$304	-$643	$368***	-$123	$93	$16	$239	$73*	$40***	$5
Medicare Dual Eligible	-$318***	$23	$286**	-$319***	-$169**	-$169***	-$50***	-$2,709***	-$67***	-$73***	$22*
Community Type (RUCA)	$11	-$15	$256***	-$36***	$26**	$49***	$1	-$22	$2	-$3***	-$3*
Milwaukee Residence	-$24	$6	$340**	-$18	$80	-$1	$0	-$441**	$103***	-$9	-$59***
Developmentally Disabled (vs. FE)	-$48	$817***	$508	$423***	$503***	$1,126***	-$1	$214	$165***	-$23**	$2
Physically Disabled (vs. FE)	-$667***	$921***	$1,049***	$127**	$281***	$208***	-$2	-$127	$23	-$1	$80***
CG No Wvr Exp PMPM Rate of Change	$30***	$5	$33***	$3.58	$2	$18.71**	$0.08	-$0.08	-$0.21	-$0.13	-$0.21
Non Milwaukee CMO No Wvr Exp PMPM Rate of Change	$12**	-$3*	$15***	$4	$17*	-$2.79**	-$0.25**	-$0.63	-$0.33	-$0.13	$1.38
Milwaukee CMO No Wvr Exp PMPM Rate of Change	$9**	-$1*	$27	$8*	$4	-$1.33	-$0.08*	$2	-$0.38	-$0.04	$1.33
% of Variance Explained Between Counties	26.8%	17.2%	30.0%	15.7%	10.0%	18.6%	33.3%	14.9%	11.0%	12.0%	11.4%

* p<0.1, ** p<0.05, *** p<0.01

Table XII: Family Care Utilization Rate Per Member Per Month

Table XII: Family Care Utilization Rate Per Member Per Month – Individuals with No Prior Waiver Experience Multilevel Rate of Change Model Coefficients					
Calendar Years 2003-2004					
	Emergency Room Rate (per 100)	Hospital Admission Rate (per 100)	Inpatient Hospital Rate (per 100)	Outpatient Hospital Rate (per 100)	Prescription Drug Rate (per 100)
	n=1,774	n=2,326	n=2,325	n=3,513	n=6,515
Non Milwaukee CMO No Wvr Exp Utilization Rate	11.2**	5.8	64.3	8.1**	-76.9***
Milwaukee CMO No Wvr Exp Utilization Rate	6.6	2.5	13.2	18.9*	-51.9***
CG No Wvr Exp Utilization Rate (Intercept)	35.4*	37.2	299.9	47.7*	832.0***
Illness Burden Index	1.47***	-.109	-6.97	6.46***	73.04***
Functional Status Impairment Score (FSIS)	.24	.164	-6.18	-2.24*	-30.45***
FSIS Imputation	5.33**	-.31	36.73	3.74*	-157.383***
Institutionalization	2.66	-2.83	1.56	-26.69***	-80.29***
Gender	-10.34***	1.36	-8.71	.33	-148.45***
Last Year of Life	11.21**	15.02***	97.72***	7.83	163.22***
Medicare Dual Eligible	3.64*	-2.27	-64.05**	-2.47	102.72***
Community Type (RUCA)	-.16	-.40*	-18.75***	-.41	-11.99***
Milwaukee Residence	-16.45***	.33	-76.27	7.19**	-29.45
Developmentally Disabled (vs. FE)	-4.37	6.47*	100.20	-1.62	-206.76***
Physically Disabled (vs. FE)	-9.33***	1.70	79.38***	-.30	95.70***
CG No Wvr Exp PMPM Rate of Change	0.14*	0.07	-0.92	0.07*	3.26**
Non Milwaukee CMO No Wvr Exp PMPM Rate of Change	-0.28**	0.17	0.7	-0.11**	4.60*
Milwaukee CMO No Wvr Exp PMPM Rate of Change	-0.06	0.17	0.98	0.22*	3.13
% of Variance Explained Between Counties	33.8%	13.4%	14.8%	10.8%	10.3%

* p<0.1, ** p<0.05, *** p<0.01

Table XIII: Total Medicaid Costs

Table XIII: Total Medicaid Costs Multilevel Model Coefficients Calendar Years 2003-2004					
	Level 2				
	Non-Milwaukee Family Care	Non-Milwaukee Family Care FE	Non-Milwaukee Family Care DD	Non-Milwaukee Family Care PD	Milwaukee Family Care FE
	n=21,242				
	-$452***	-$274**	-$1,014***	-$268**	-$55*
Level 1					
CG Cost (Intercept)	$3,108***	$2,501***	$4,548***	$2,404***	$2,501**
Illness Burden Index	$191***	$182***	$188***	$190***	$182***
Functional Status Impairment Score	$139*	$134*	$144*	$136*	$134*
Functional Status Impairment Score Imputation	-$368**	-$318**	-$431***	-$404***	-$318**
Institutionalization	$1,140***	$1,216***	$1,118***	$1,129***	$1,216***
Gender	-$26	-$22	-$20	-$23	-$22
Last Year of Life	-$513**	-$514**	-$513***	-$512***	-$514**
Medicare Dual Eligible	-$472**	-$493**	-$481**	-$477***	-$493**
Community Type (RUCA)	-$34**	-$25**	-$32**	-$33**	-$25**
Milwaukee Residence	-$161**	-$155**	-$154**	-$158**	-$155**
Waiver Participation	$1,205**	$1,250**	$1,211**	$1,209**	$1,250**
Non-Matched 234 Control	$1,258***	$1,296***	$1,376***	$1,285***	$1,296***
Developmentally Disabled (vs. FE)	$1,355***	$1,991***	-$1,727***	$2,050***	$1,991***
Physically Disabled (vs. FE)	$330*	-$11	-$1,309***	-$310*	-$11
Proportion of variance explained between groups:	20.3%	20.0%	19.5%	19.1%	20.0%
Level of Significance: *p<.1, **p<.05, ***p<.01					

D. References

Adcock, E. P. and Phillips, G. W. (1998). Measurement of school and classroom effectiveness: A hierarchical approach. Presented to the Annual Meeting of the American Educational Research Association, San Diego, CA.

Bartko JJ, Pulver AE, Carpenter WT. The Power of Analysis: Statistical Perspectives.Part 2. Psychiatry Research.1988; 23:301-309.

Boyle, M.H. and Willms, J.D. (2001). Multilevel Modeling of Hierarchical Data in Developmental Studies. Journal of Child Psychological Psychiatry, Vol. 42, No. 1, 141-162.

Brewer JK. Effect Size: The most troublesome of the hypothesis testing considerations. CEDR Quarterly. 1978; 11(4):7-10.

Bryk, A.S. and Raudenbush, S.W. (1987). Application of Hierarchical Linear Models to Assessing Change. Psychological Bulletin, vol. 10, No. 1, 147-159.

Chapman, R.S., Hesketh, L.J., and Kistler, D.J. (2002). Predicting longitudinal change in language production and comprehension in individuals with Down syndrome. Journal of Speech, Language, and Hearing Research, Vol. 45, No. 5, 902-15.

Li, L.W. (2005). Trajectories of ADL Disability Among Community Dwelling Frail Older Persons. Research on Aging, vol. 27, No. 1., 56-79.

Leon AC, Shear K, Portera L, Klerman GL. Effect Size as a Measure of Symptom-Specific Drug Change in Clinical Trials. Psychopharmacology Bulletin. 1993; 29(2):163-167.

Mendro. R. L., Webster, W. J., Bembry, K. L., and Orsak, T. H. (1995). An application of hierarchical linear modeling to determining school effectiveness. Paper presented to the Annual Meeting of the American Educational Research Association. San Francisco, CA.

Meyer, R. H. (1997). Value-added indicators of school performance: A primer. Economics of Education Review, vol. 16, No. 3.

Naumova, E.N., Must, A., and Laird, N.M. (2001). Tutorial in Biostatistics: Evaluating the impact of "critical periods" in longitudinal studies of growth using piecewise mixed effects models. International Journal of Epidemiology, Vol. 30, No. 6, 1332-1342.

Phillips, G. W. and Adcock, E. P. (1997). Using hierarchical linear models to evaluate the value added by schools. Paper presented to the Annual Meeting of the American Educational Research Association, New York, NY.

Pulver AE, Bartko JJ, McGrath JA. The Power of Analysis: Statistical Perspectives. Part 1. Psychiatry Research.1988; 23:295-299.

Raudenbush, S. W. and Bryk, A. S. (2002). HLM 5: Hierarchical Linear Models: Applications and Data Analysis Methods. 2nd Edition. Thousand Oaks, CA: Sage Publications.

Raudenbush, S. W. Bryk, A. S., Cheong, Y. F., and Congdon, R (2004). HLM 6: Hierarchical Linear and Nonlinear Modeling. Lincolnwood, IL: Scientific Software International.

Rosnow RL, Rosenthal R. Statistical procedures and the justification of knowledge in psychological science. American Psychologist.1989; 44:1276-1284.

Rosenthal R. Progress in clinical psychology: Is there any? Clinical Psychology: Science and Practice. 1995; 2:133-150.

Rosenthal R, Rubin DB. The Counternull value of an effect size: a new statistic. Psychological Science. 1994; 5(6):329-334.

E. CMO Cost Saving Initiatives

Administrative

- Buying certain Medical Supplies in bulk (i.e. incontinence supplies)
- Weekly meetings to discuss claims/discrepancies in authorizations and claims. Minutes taken and will be compiled in a policies manual.
- Claims system that edits against ISP for authorized amounts and timeframes.
- Operations Review Committee meets monthly to review efficiency and cost-effectiveness of all operations
- Creating a Utilization Review Committee to review "out-of-benefit" items.
- Purchase one family membership at YMCA and receive twelve cards for member use
- Have regular discussions at section meetings about possible savings ideas.
- Work with the Resource Center to establish a Loan Closet for DME.
- Creation of Volunteer Network to deliver member goods
- Delivery of DMS directly to CBRF's
- Time and Expense Programming, which was operational in December 2002, forces consistency in the way that all CMO staff activity and work related expenses are logged. Time spent recording activity for service coordination is reduced by approximately *50%.*
- Claims Specialists who handle Coordination of Benefits, ISP entry, authorization mailings, claims payment, and claims questions for members according to an alphabetical division.
- Business personnel who do all price checking, purchasing, shipment arrangements, receiving, and inventory maintenance.
- Hiring a full time claims specialist supervisor to oversee and direct coordination of benefits, claims authorizations, and claims payments.
- Hiring more claims specialists to keep member caseload to about 125.
- Hiring purchasing agent specific to CMO
- Business personnel, rather than service coordinators, deal with member financial issues.

Service Coordination

- Implementing the clinical IT system to better identify out-of-network providers. This will improve communications and negotiations of rates with providers.
- Regularly review, with providers, member's services; particularly those that are paid on a per diem basis.
- Create IDT workgroup to develop consistent and cost effective service coordination practices/protocols
- Clinical IT functions will be fully operational March 1, 2003. All files will be organized in a standard format. All Interdisciplinary Teams will receive technical and policy training. Help screens with policy and technical documentation is built into the system. Interdisciplinary Teams will share one member record. All

CMO member records will be available to assigned on-call staff. Less expensive support staff will be used to build member files in order to allow the more expensive service coordination staff to maximize the number of members they can serve. The volume and need to optically image documents for record keeping will be minimized on along term basis. This will save computer hardware cost and the hourly cost of imaging documents.

- Portable technology will be used to allow Interdisciplinary Teams to complete case notes, assessment and member centered plan updates in the field. This will eliminate some of the need for social work and RN service coordinators to come back to the office to complete paperwork.
- Hiring a third service coordinator supervisor who is a nurse. This person will supervisor both nurses and social workers. This person will also be responsible for Prevention and Wellness.

Providers

- Requirement that providers submit BOB' s/maximization of Medicare and other third party pay sources.
- Rate setting tools for CBRF and AFH rates.
- Identify DMS/DME providers who provide quality items at lower rates.
- Identifying commonly purchased DMS items and purchasing these in bulk.
- Discounted Rates negotiated with CBRF providers
- Creation of in-house/contracted home modification service through Gemini Employment Leasing.
- Bundled services/sub-capitated daily rate for Convent members
- Sub-capitated daily rates for DD residential programs/placements
- Exploring the "Preferred Provider" option for some services
- Monthly transportation rate for members going to Sheltered Employment.