RICK SCOTT
GOVERNOR

June 28
~~July 14,~~ 2013

Kathleen Sebelius
Secretary
U.S. Department of Health and Human Services
200 Independence Avenue S.W.
Washington, DC 20201

Dear Secretary Sebelius:

The State of Florida would like to renew its MEDS AD 1115 Research and Demonstration Waiver (CMS 11-W-00205/4). The Centers for Medicare and Medicaid Services (CMS) originally approved Florida's MEDS AD waiver for the period January 1, 2006 through December 3, 2010, and then renewed it for the period January 1, 2011 through December 31, 2013. Pursuant to application procedures required in 42 CFR 431.412(c) for Section 1115(a) waivers, the state requests a three-year extension, under the same waiver and expenditure authorities as those approved in the current demonstration, through December 31, 2016.

The demonstration objectives and the eligibility criteria for waiver recipients remain unchanged since implementation of the project. Medicaid services for individuals eligible for this waiver are authorized statewide by section 409.904(1) of the Florida Statutes. The program provides for medical assistance to elderly and disabled adults at or below 88% of the federal poverty level.

Please find enclosed documentation as required in 42 CFR 431.412(c) to support this request. We appreciate your efforts in working with our State to extend federal authority to maintain Medicaid eligibility for this vulnerable population.

Sincerely,

Rick Scott
Governor

Enclosures

THE CAPITOL
TALLAHASSEE, FLORIDA 32399 • (850) 488-2272 • FAX (850) 922-4292

Centers for Medicare & Medicaid Services
Office of Information Services
Information Services Design & Development Group
7500 Security Blvd
Baltimore, MD 21244-1850

Section 1115 Demonstration Program

Florida MEDS AD Section 1115 Demonstration CMS11-W-00205/4 Renewal Request

For the Period January 1, 2014 through December 31, 2016

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Florida MEDS AD Section 1115 Demonstration CMS11-W-00205/4 Renewal Request

Section I - Program Description

Program Summary

The MEDS-AD Program Section 1115 demonstration CMS 11-W-00205/4 provides Medicaid eligibility for individuals who are disabled or age 65 or over, and who are also eligible for and receiving Medicaid-covered institutional care services, hospice services, or home and community-based services; and whose incomes do not exceed 88 percent of the federal poverty level and whose assets do not exceed $5,000 for individuals or $6,000 for couples. Individuals enrolled in the demonstration receive State plan benefits and may also receive pharmacy case management services. Applicable Medicaid State plan co-payments apply and services are delivered through the same delivery system available to State plan enrollees.

Rationale and Hypothesis

The intent is to demonstrate that access to health care services and voluntary pharmacy case reviews result in measurably improved outcomes. The continued coverage, as well as the High-Intensity Pharmacy Case Management program, will be funded through savings obtained by avoiding institutional costs that would otherwise occur in the next five years had these vulnerable individuals not had access to prescribed drugs and other medical services.

In 2005, State legislation (Chapter 2005-60, Laws of Florida) directed the State to discontinue coverage of these individuals (an optional Medicaid eligibility group) under the Medicaid State plan. However, concerned that this population was at risk for costly adverse events, including institutional placement, in the absence of pharmacy and medical services, the same legislation directed the State to seek a section 1115 demonstration to provide benefits to a subset of the individuals in this eligibility group. With CMS approval, the Demonstration began operating in January 2006.

The Demonstration was predicated on the assumption that continued access to medical care, including home and community-based services and pharmacy management services, for this population, will delay deterioration in health status which drives hospitalization and/or institutionalization and result in improved patient perceptions of their health care services.

Historical Summary

The initial federal approval period for the MEDS-AD Program was January 1, 2006 through December 31, 2010. CMS approved an amendment permitting the State to receive FFP for data mining activities performed by the State's Medicaid Fraud Control Unit (MFCU) consistent with the

Memorandum of Understanding between the State and the Florida Office of the Attorney General which operates the MFCU, beginning August 1, 2010. Federal CMS approved renewal of the waiver for the period January 1, 2011 through December 31, 2013, and this renewal request would extend federal authority for the program from January 1, 2014 through December 31, 2016. The program has provided continued eligibility and services for the population, and has met budget neutrality requirements throughout the demonstration.

The process of providing pharmacy case reviews to waiver recipients who wish to participate has been refined and improved throughout the demonstration. Limitations in the original process were identified during the initial waiver period, and an improved process that includes active recipient input has been developed. Patient opinions of the quality of their health care for recipients who have chosen to participate in the case review program are measurably positive. Appendix A of this document contains the final evaluation report for the initial waiver period that ended December 31, 2010, and interim reports for the current waiver operating period.

Throughout operation of this demonstration, the State has met all requirements of the special Terms and Conditions, and the office of Medicaid Program Integrity and the MFCU have complied with the CMS approved Memorandum of Understanding concerning data mining activities. The State wishes to provide continued access to medical care, including home and community-based services and pharmacy management services, for this population, to delay deterioration in health status and result in improved patient perceptions and understanding of their health care services.

Statewide Eligibility Criteria for the Demonstration

Medicaid services for eligible individuals are authorized statewide through the MEDS AD Waiver in Florida Statutes as follows:

> "409.904 Optional payments for eligible persons.—The agency may make payments for medical assistance and related services on behalf of the following persons who are determined to be eligible subject to the income, assets, and categorical eligibility tests set forth in federal and state law. Payment on behalf of these Medicaid eligible persons is subject to the availability of moneys and any limitations established by the General Appropriations Act or chapter 216.
> (1) Subject to federal waiver approval, a person who is age 65 or older or is determined to be disabled, whose income is at or below 88 percent of the federal poverty level, whose assets do not exceed established limitations, and who is not eligible for Medicare or, if eligible for Medicare, is also eligible for and receiving Medicaid-covered institutional care services, hospice services, or home and community-based services. The agency shall seek federal authorization through a waiver to provide this coverage."

Timeframe for the Demonstration

The State seeks a renewal of this waiver authority for three years, from January 1, 2014 through December 31, 2016.

Impact of this Renewal on other Components of the State Medicaid and CHIP Programs

The renewal would not impact any other eligibility or service provisions of the State's Medicaid or CHIP programs. Renewal of the waiver would simply allow the State to maintain eligibility for this population, and all services would continue as provided under the State plan.

Section II – Demonstration Eligibility

Waiver Population

Expansion Populations

Eligibility Group Name	N/A	Income Level
Florida MEDS AD Waiver: a person who is age 65 or older or is determined to be disabled, whose income is at or below 88 percent of the federal poverty level, whose assets do not exceed established limitations, and who is not eligible for Medicare or, if eligible for Medicare, is also eligible for and receiving Medicaid-covered institutional care services, hospice services, or home and community-based services.	(waiver request)	Between State plan eligibility income level and 88% FPL, with assets not more than $5,000 for an individual or $6,000 for a couple

Eligibility Standards and Methodologies

Under this renewal authority, the State will continue to use the applicable State plan standards and methodologies to determine eligibility.

Enrollment Limits

There is no cap on enrollment in this waiver; all individuals who meet the eligibility standard are provided Medicaid services.

Enrollment History, Current Enrollment and Projected Enrollment through Renewal Period

Please see the following chart for historical enrollment under this waiver for the past three waiver years, and projected enrollment under the waiver through the renewal period.

MEDS AD Waiver Enrollment History January 2010 through February 2013
Projected Enrollment* March 2013-December 2016

Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
31,147	32,023	33,169	33,612	34,384	34,702	34,932	35,452	36,119	36,382	36,199	35,927
Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
36,618	36,960	37,287	37,554	38,377	38,405	38,994	39,006	39,004	39,753	40,394	40,513
Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
41,231	42,297	42,620	42,888	42,541	42,464	42,564	42,387	42,823	42,635	42,064	41,924
Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
41,275	41,374	43,580	43,769	43,958	44,147	44,336	44,525	44,714	44,903	45,092	45,281
Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
45,640	45,999	46,358	46,717	47,076	47,435	47,794	48,153	48,512	48,871	49,230	49,589
Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
49,948	50,307	50,666	51,025	51,384	51,743	52,102	52,461	52,820	53,179	53,538	53,897
Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
54,256	54,615	54,974	55,333	55,692	56,051	56,410	56,769	57,128	57,487	57,846	58,205

*Source: Florida Social Services Estimating Conference, January 2013

Post-eligibility Treatment of Income for Long-Term Services and Supports

The State's current eligibility rule (Rule 65A-1.716, Florida Administrative Code, Income and Resource Criteria), which utilizes spousal impoverishment rules under section 1924, of the Act, states:

> (c) Spousal Impoverishment Standards.
> 1. State's Resource Allocation Standard. The amount of the couple's total countable resources which may be allocated to the community spouse is equal to the maximum allowed by 42 U.S.C. § 1396r-5.
> 2. State's Minimum Monthly Maintenance Income Allowance (MMMIA). The minimum monthly income allowance the department recognizes for a community spouse is equal to 150 percent of the federal poverty level for a family of two.
> 3. Excess Shelter Expense Standard. The community spouse's shelter expenses must exceed 30 percent of the MMMIA to be considered excess shelter expenses to be included in the maximum income allowance: MMIA × 30% = Excess Shelter Expense Standard. This standard changes July 1 of each year.

After an individual satisfies all non-financial and financial eligibility criteria institutional care services, the department determines the amount of the individual's patient responsibility. This process is called "post eligibility treatment of income". Individuals residing in medical institutions shall have $35 of their monthly income protected for their personal need allowance.

The department applies the formula and policies in 42 U.S.C. section 1396r-5 to compute the community spouse income allowance after the institutionalized spouse is determined eligible for institutional care benefits. The department allows a deduction for the actual amount of health insurance premiums, deductibles, coinsurance charges and medical expenses, not subject to payment by a third party, incurred by a Medicaid recipient for programs involving post eligibility calculation of a patient responsibility, as authorized by the Medicaid State Plan and in accordance with 42 CFR 435.725.

Eligibility Procedures

Eligibility methodologies and standards will be the same as those used in determining eligibility under the State plan, and this waiver will continue to include only those persons age 65 or older or disabled, with income at or below 88 percent of the federal poverty level, whose assets do not exceed established limitations ($5,000 for individuals and $6,000 for a couple), and who are not eligible for Medicare or, if eligible for Medicare, are also eligible for and receiving Medicaid-covered institutional care services, hospice services, or home and community-based services.

Eligibility Changes

The State is planning to implement the applicable MAGI methodologies and MAGI equivalent income standards as required by federal law and regulation, excluding exempt individuals 65 or older.

Section III – Demonstration Benefits and Cost Sharing Requirements

1) Indicate whether the benefits provided under the Demonstration differ from those provided under the Medicaid and/or CHIP State plan:

☐ Yes ☒ No (if no, please skip questions 3 – 7)

2) Indicate whether the cost sharing requirements under the Demonstration differ from those provided under the Medicaid and/or CHIP State plan:

☐ Yes ☒ No (if no, please skip questions 8 - 11)

Section IV – Delivery System and Payment Rates for Services

1) Indicate whether the delivery system used to provide benefits to Demonstration participants will differ from the Medicaid and/or CHIP State plan:

☐ Yes

☒ No (if no, please skip questions 2 – 7 and the applicable payment rate questions)

8) If fee-for-service payment will be made for any services, specify any deviation from State plan provider payment rates. If the services are not otherwise covered under the State plan, please specify the rate methodology (if additional space is needed, please supplement your answer with a Word attachment);

   Payment will be the same as State plan provider payment rates.

9) If payment is being made through managed care entities on a capitated basis, specify the methodology for setting capitation rates, and any deviations from the payment and contracting requirements under 42 CFR Part 438 (if additional space is needed, please supplement your answer with a Word attachment); and

   Capitation rate methodology and managed care entities are same as for State plan.

10) If quality-based supplemental payments are being made to any providers or class of providers, please describe the methodologies, including the quality markers that will be measured and the data that will be collected (if additional space is needed, please supplement your answer with a Word attachment).

    No quality-based supplemental payments are being made to providers under this waiver.

Section V – Implementation of Demonstration

Implementation Schedule

Under this proposed renewal, the waiver would continue to operate as currently implemented for an additional three years, from January 1, 2014 through December 31, 2016.

How Potential Demonstration Participants Will be Notified and Enrolled into the Demonstration

Recipients will continue to be identified and notified in the State's routine eligibility determination process if they are eligible through this waiver.

Demonstration Benefits through Contracts with Managed Care Organizations

Waiver recipients will continue to receive services through the same MCOs contracted to provide State plan services. No procurement is planned.

Section VI – Demonstration Financing and Budget Neutrality

The State's assurance of budget neutrality that will be submitted with this renewal request is based upon the same methodology used for the initial waiver approval and prior renewal, and will not require an increase in the ceiling established for the current waiver period.

The following describes the method by which budget neutrality will be assured under the demonstration. The demonstration will be subject to a limit on the amount of Federal Title XIX funding that the State may receive on selected Medicaid expenditures during the demonstration period. The original approved waiver specified in the Special Terms and Conditions the aggregate financial cap on the amount of Federal Title XIX funding that the State may receive on expenditures subject to the budget neutrality cap as defined in Appendix E of this document. At the time of the last renewal, a permanent financial cap was established for this waiver and subsequent renewals, as described in the Expenditure Review section below.

Impermissible DSH, Taxes or Donations

The CMS reserves the right to adjust the budget neutrality ceiling to be consistent with enforcement of impermissible provider payments, health care related taxes, new Federal statutes, or policy interpretations implemented through letters, memoranda or regulations. The CMS reserves the right to make adjustments to the budget neutrality cap if any health care related tax that was in effect during the base year, or provider related donation that occurred during the base year, is determined by CMS to be in violation of the provider donation and health care related tax provisions of 1903(w) of the Social Security Act. Adjustments to annual budget targets will reflect the phase out of impermissible provider payments by law or regulation, where applicable.

How the Limit will be Applied

The ceiling limits identified below will apply to actual expenditures for demonstration, as reported by the State under Appendix E. If at the end of the demonstration period the budget neutrality provision has been exceeded, the excess Federal funds will be returned to CMS. There will be no new limit placed on the FFP that the State can claim for expenditures for recipients and program categories not listed. If the demonstration is terminated prior to the end of the approved demonstration years, the budget neutrality test will be based on the time period through the termination date.

Expenditure Review

The CMS shall enforce budget neutrality over the life of the demonstration, rather than on an annual basis. However, no later than 6 months after the end of each demonstration year, CMS will calculate an annual expenditure target for the completed year. This amount will be compared with the actual FFP claimed by the State under budget neutrality. Using the schedule below as a guide, if the State exceeds the cumulative target, they must submit a corrective action plan to CMS for approval. The State will subsequently implement the approved program.

Demonstration Year Cumulative Target Definition Percentage

DY 1	$2,030,843,575	8 percent
DY 2	$3,873,646,079	3 percent
DY 3	$5,697,644,476	1 percent
DY 4	$7,559,251,086	0.5 percent
DY 5	$9,402,053,590	0.0 percent

At the time of the prior renewal's approval for DY6-8 (calendar years 2011, 2012, 2013), the State and CMS mutually agreed to limit the future cumulative ceiling at the DY5 target of $9,402,053,590. The Expenditure to Date chart below identifies that beginning with DY6, the demonstration actual expenditures are being deducted from this agreed upon ceiling cap. The State will continue to demonstrate budget neutrality under this ceiling cap during the requested renewal for DY9-11 (calendar years 2014, 2015, 2016), as shown in the following table.

Expenditures to Date

Quarter	Date of Payment Expenditures	Target	Cumulative Target	Difference	Annual Cumulative Difference
Q1	$51,696,950	$507,710,894		456,013,944	
Q2	$132,235,096	$507,710,894		375,475,798	
Q3	$105,271,113	$507,710,894		402,439,781	
Q4	$146,356,839	$507,710,894	$2,030,843,575	361,354,055	1,595,283,577
Q5	$69,927,763	$460,700,626		390,772,863	
Q6	$79,047,475	$460,700,626		381,653,151	
Q7	$87,567,517	$460,700,626		373,133,109	
Q8	$90,210,963	$460,700,626	$3,873,646,079	370,489,663	3,111,332,363
Q9	$93,882,619	$455,999,599		362,116,980	
Q10	$103,108,178	$455,999,599		352,891,421	
Q11	$95,761,142	$455,999,599		360,238,457	
Q12	$96,128,169	$455,999,599	$5,697,644,476	359,871,430	4,546,450,652
Q13	$107,727,900	$465,401,653		357,673,753	
Q14	$106,365,677	$465,401,653		359,035,976	
Q15	$120,849,499	$465,401,653		344,552,154	
Q16	$133,665,863	$465,401,653	$7,559,251,086	331,735,790	5,939,448,324
Q17	$138,153,082	$460,700,626		322,547,544	
Q18	$144,229,555	$460,700,626		316,471,071	
Q19	$134,966,909	$460,700,626		325,733,717	
Q20	$148,599,566	$460,700,626	$9,402,053,590	312,101,060	7,216,301,716
Q21	$154,004,876	-		-	
Q22	$146,340,361	-		-	
Q23	$155,268,617	-		-	
Q24	$163,774,246	-		-	6,596,913,616
Q25	$165,396,338	-		-	
Q26	$184,629,761	-		-	
Q27	$165,063,579	-		-	
Q28	$168,922,270	-		-	5,912,901,668
Q29	$151,084,893			Jan-March 2013	5,761,816,775

Budget Neutrality Historic Trends and Projected Renewal Years

The following discussion is specific to this renewal budget neutrality analysis and is considered an addendum to the original waiver and prior renewal budget neutrality descriptions.
The historic table identifies all the actual waiver Demonstration Year expenditures and member months from DY1 (2006) through DY7 (2012), including the first three months of DY8 (2013).

Utilizing the historic trend rates calculated from these actual figures, the second table projects the waiver's expenditures and member months for the renewal years DY9-DY11 (calendar years 2014, 2015, 2016). As shown in the "With Waiver" projection, expenditures for the renewal period are expected to be approximately $2.7 billion, well under the funds remaining under the financial cap.

Historic Trend:
The member month figures in the historic table are an annual accumulation of the figures identified in the waiver quarterly progress reports submitted to CMS. The historic annual expenditure figures are the costs identified for this waiver in the State's quarterly CMS 64 reports for the same time periods. Costs and member month figures reported for DY1 (2006) are not included in the historic trend calculations utilized for the renewal projected years. The DY1 figures are not considered to be representative of current and future waiver population and cost characteristics. The State considers the annual trend patterns subsequent to 2006 to be a more accurate basis for measuring future waiver performance. The incomplete DY8 figures (January-March 2013) are shown for information only and are not utilized in the trend rate calculations.

Months of Aging:
The State identified 24 months for the months of aging calculation in the projection table. The 24 months are the number of months between the midpoint of the completed DY7 (2012) and the midpoint of the first renewal year DY9 (2014). The following illustrates this time period from July 2012 through June 2014:

	Months of Aging:
Jul -Dec 2012 (Completed DY7)	6 months
Jan-Dec 2013 (Incomplete DY8)	12 months
Jan-June 2014 (Renewal DY9)	6 months
	Total 24 months

Please see Appendix E for historic trends and projection tables.

Section VII – List of Proposed Waivers and Expenditure Authorities

The State requests waiver of Sections 1902(a)(10)(C) and 1903(a)(1) of the Social Security Act in order to provide eligibility and cover costs not otherwise matchable for this specific expansion population.

Section VIII – Public Notice

Dates for Public Notice Elements Required in 42 CFR 431.408:

April 24, 2013 In accordance with the consultation process outlined in the State's approved Medicaid State plan, letters were sent soliciting input and requesting consultation with Florida's two federally recognized Tribes, the Seminole Tribe and the Miccosukee Tribe. Please see Appendix B of this document for copies of the letters to the Tribes. No comments or questions were received from the Tribes.

April 29, 2013 Public Notice Document and public meeting and webinar schedule was posted to the Agency website at this link, http://ahca.myflorida.com/Medicaid/index.shtml (note Quick Link for MEDS-AD Renewal); and notice was published in Volume 39, Number 83 of the Florida Administrative Register https://www.flrules.org/Gateway/View_notice.asp?id=12938847 , which included a link to the MEDS-AD Renewal website: http://ahca.myflorida.com/Medicaid/MEDS-AD.shtml . Appendix B of this document contains a copy of the notice.

May 1, 2014 through May 30, 2013 Public Comment Period
Comments were solicited with instructions for submission by postal mail to the Agency for Health Care Administration, 2727 Mahan Drive, Bldg. 3 Room 2332A, Tallahassee, FL 32308, Attn: Marie Donnelly; or via electronic mail at MEDS-ADRenewal@ahca.myflorida.com . All comments received were posted to the Agency website at the MEDS-AD Renewal page as noted above, and were considered prior to submission of the waiver renewal request. Appendix C of this document contains a comprehensive listing of comments received and Agency responses.

May 15, 2013, 2:00 p.m. The first public meeting and webinar was presented at Medicaid Area Office 6, 6800 Dale Mabry Hwy., Suite 220, Tampa, Florida 33614, or via weblink at http://ahca.myflorida.com/Medicaid/MEDS-AD.shtml .

May 28, 2013, 1:00 p.m. The second public meeting with scheduled as part of the Medical Care Advisory Committee agenda at the Agency for Health Care Administration Headquarters, 2727 Mahan Drive, Tallahassee, Florida 32308. Appendix D of this document contains the presentation of the MEDS-AD Renewal plan to the public.

Hearing Summary

May 15 Meeting: There were no attendees from the public.

May 28 Meeting: The MEDS-AD Renewal presentation was presented twice, both as a webinar accessible through the weblink noted above, and at the scheduled meeting of the Medical Care Advisory Committee, which was attended by industry representatives for elders and the disabled and members of the media.

Mechanism Used to Notify the Public

In the notice published April 29, 2013 in Volume 39, Number 83 of the Florida Administrative Register and on its website, the Agency has provided a MEDS-AD Renewal link, http://ahca.myflorida.com/Medicaid/MEDS-AD.shtml , which can be readily accessed on the Agency's Medicaid Landing Page http://ahca.myflorida.com/Medicaid/index.shtml . The MEDS-AD Renewal page includes a link to submit comments via electronic mail to MEDS-ADRenewal@ahca.myflorida.com , or to the postal address to Agency for Health Care Administration, 2727 Mahan Drive, Bldg. 3 Room 2332A, Tallahassee, FL 32308, Attn: Marie Donnelly.

Comments Received by the State during the 30-day Public Notice Period

Comments received are posted to the Agency website at the MEDS-AD Renewal page as noted above, and were be considered prior to submission of this waiver renewal request. Appendix C of this document contains a comprehensive listing of comments received and Agency responses.

Summary of the State's Responses to Submitted Comments

Appendix C of this document contains a comprehensive listing of comments received and Agency responses.

Section IX – Demonstration Administration

Please provide the contact information for the State's point of contact for the Demonstration application.

Linda Macdonald
Senior Management Analyst II
850-412-4031
Linda.Macdonald@ahca.myflorida.com

APPENDIX A

- Final Evaluation Report on the MEDS-AD Project, 2006-2010
- Interim Report and Preliminary Findings on Data Mining Waiver Amendment
- MEDS-AD Waiver Medication Therapy Management Program Interim Report for the Period January 2011 through December 2013
- MEDS-AD Waiver Key Informant Experiences—Preliminary Findings
- MTM Program Recipient Experiences—Preliminary Findings

Final Evaluation Report on the MEDS-AD Project, 2006-2010

November 1, 2012

Report to
Florida Agency for Health Care Administration

MEDS-AD Evaluation
Contract No. MED083

University of Florida

MEDS-AD originated as an optional program under Florida Medicaid. It was designed to provide medical assistance payments and services to aged or disabled individuals with limited assets and incomes at or below eighty-eight percent of the Federal poverty level. The Florida Legislature amended the MEDS-AD program with the implementation of Medicare Part D, and directed the Agency for Health Care Administration (AHCA) to seek federal waiver authority under the revised eligibility criteria. MEDS-AD transformed into a program for aged and disabled persons without Medicare coverage who meet the income and asset qualifications, and for dually eligible individuals who receive Medicaid institutional care, hospice, or home and community-based services. On November 22, 2005, CMS approved Florida's application for the 115 MEDS-AD demonstration waiver for a period of five years effective 1 January 2006.

For calendar years 2006 through 2010 Florida Medicaid applied a program of high intensity pharmacy case management services to a subgroup of MEDS-AD beneficiaries, specifically, those eligible for Medicaid only and not currently receiving institutional care services, home and community based services (HCBS) or hospice. The pharmacy services, in addition to providing access of appropriate medical care, were intended to maintain care in the community and prevent premature institutionalization.

Background and Waiver

The Federal waiver for the MEDS-AD program requires the program to be cost-neutral and incorporate innovative service concepts. The terms and conditions of the waiver require that the total cost of medical services and high intensity pharmacy case management for persons who are enrolled in the MEDS-AD program be compared with the estimated cost of institutional care avoided.

Goals and Objectives of the MEDS-AD Program

The stated objectives of the MEDS-AD program were to prevent premature admission to an institution by maintaining care in the community with access to appropriate health care services for vulnerable populations, and to implement a pharmacy case management for reducing adverse drug reactions and unnecessary drug utilization.

The MEDS-AD program operates under a Federal waiver that requires the program to be cost-neutral and incorporate innovative service concepts.

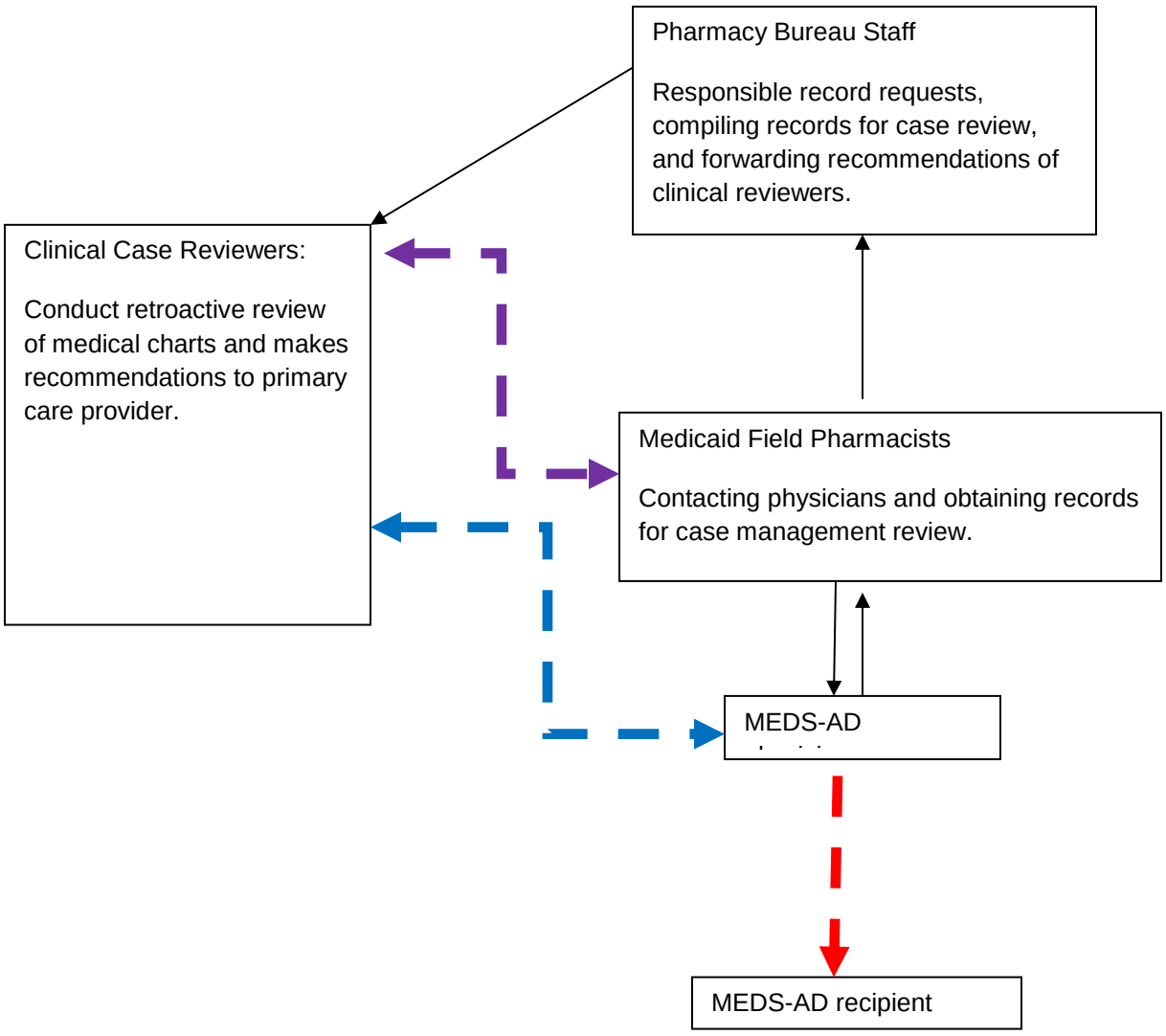
Brief Description of Program Operations

The evaluation team drafted a description of the MEDS-AD program operations gleaned from documents supplied by AHCA and Medicaid Pharmacy services as well

conferences with staff and a site visit to Medicaid offices in Tallahassee. The draft description was submitted to the Bureau for Pharmacy Services for review and comment. Figure 1 depicts the record retrieval and review process used for the MEDS-AD case management program.

Because there is no field in the Florida MMIS system for recording MEDS-AD enrollment, personnel in the office of Medicaid Pharmacy Services retrieve and screen the prescription claims history for MEDS-AD enrollees listed by the Department of Children and Families. Pharmacy Bureau staff developed a computer algorithm to identify those recipients who have intensive use of pharmacy services and based upon a manual verification of the prescription claims history, they select candidates for the Pharmacy Case Management initiative.

Figure 1. MEDS-AD Record Request and Review Process.



Evaluation Components and Key Findings

Written communications to physicians and provider satisfaction. The pharmacy staff reported good cooperation from physicians who received requests for patient records. There were no appeals, grievances or complaints made by patients or providers regarding the pharmacy case management program. There was no indication that any providers or beneficiaries dropped their enrollment in the Medicaid program as a result of the intervention program.

Key informant interviews revealed that medical records obtained from the providers were not always useful to the clinical reviewers because the records were often incomplete or difficult to read. Thus, the some reviews conducted under the current intervention program suffered from incomplete patient information. A series of recommendations emanated from the findings of the key informant interviews and were incorporated into a program modification and the subsequent request for an extension of the MEDS-AD waiver.

Beneficiary QoL and satisfaction: summary and interpretation. MEDS-AD beneficiaries who were the subject of clinical case reviews and a comparison group of program enrollees were contacted for a telephone interview as part of the evaluation process. Most reported having a personal doctor or nurse and rated that provider and their health care favorably. With regard to the case management intervention, recipients typically did not know that they were involved in an intervention because they were not directly included in the review process.

Use of Medicaid services and claims payments. The evaluation process included an examination of service use in terms of per-member per-month (PMPM) expenditures over three observation periods: (1) a period from the inception of the MEDS-AD waiver until the start of the case management intervention; (2) a period in which case management was being delivered, and (3) a period post intervention for those who were previously involved in the case management intervention. Beneficiaries selected for case management were compared with two groups of persons concurrently enrolled in MEDS-AD. One group was a comparison group formed by applying the same selection criteria used to identify those who were eventually enrolled in case management. The case management group and the comparison group were both examined against the PMPM payments for all MEDS-AD beneficiaries not in those two subgroups.

A key finding was that the case management group was the only segment for which the PMPM paid claims amount declined, as shown in the graph below (Figure 1). Although payments for pharmacy service continued to rise over time among those in the case management group, the rise was offset by in the intervention group through a reduction in PMPM expenditures for non-pharmacy services as shown in Figures 2 and 3.

Figure 1.

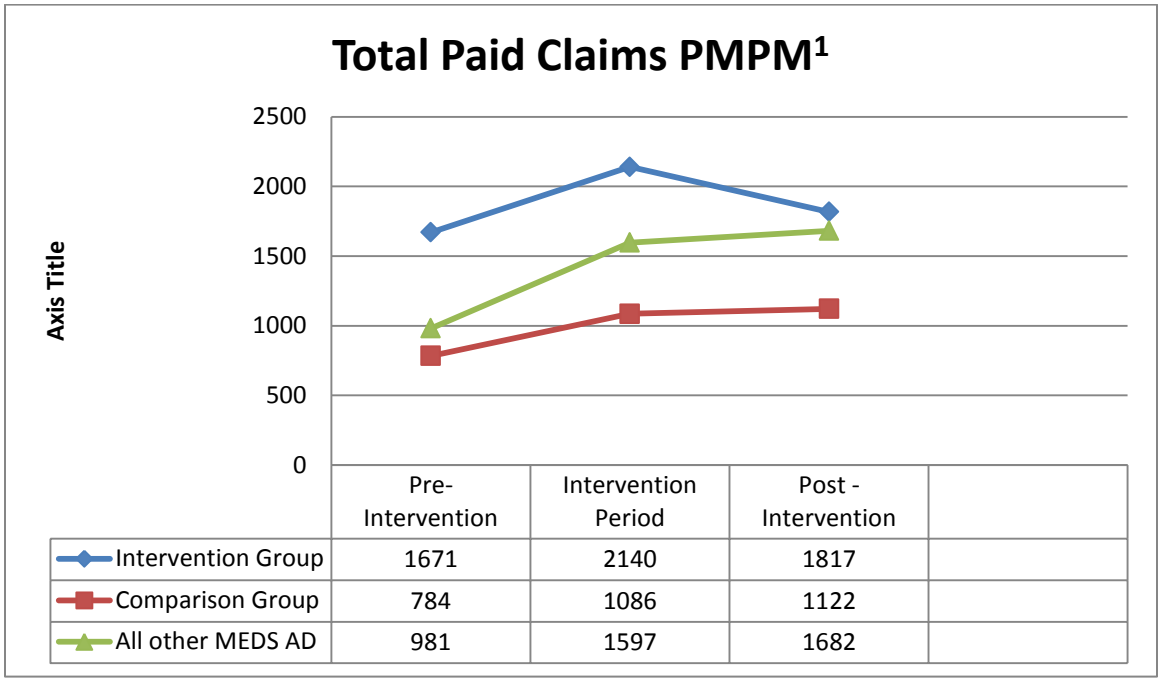


Figure 2.

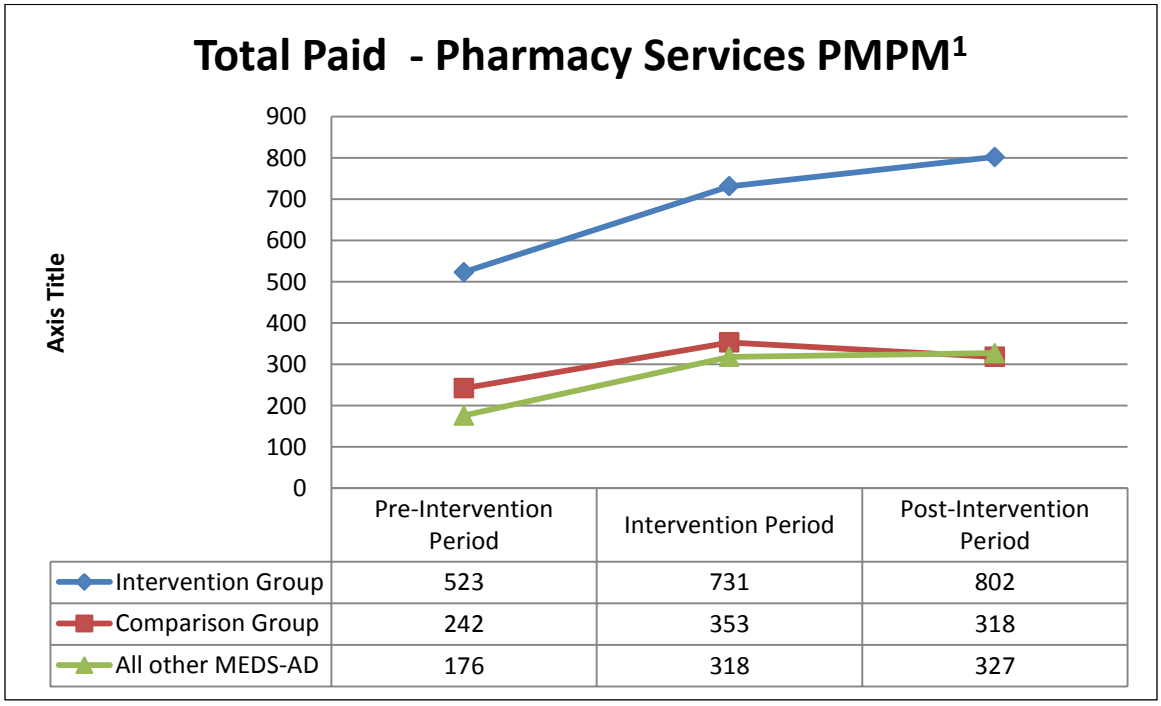
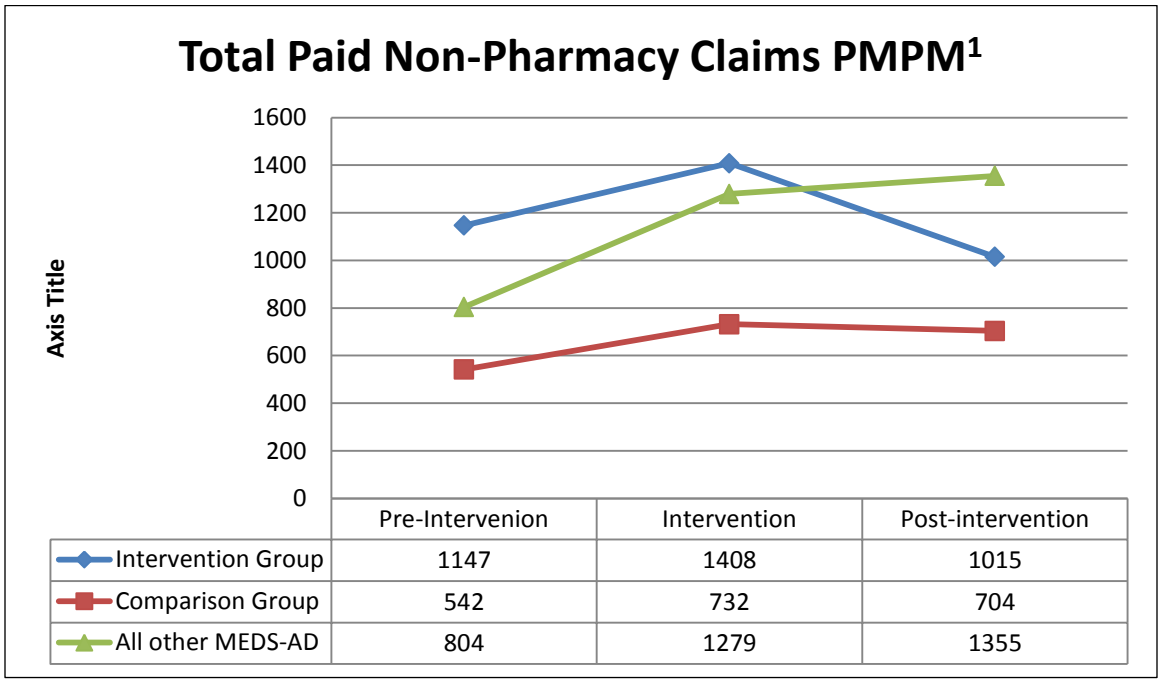


Figure 3.



The remainder of this report covers the evaluation activities in more detail and concludes with a summary of lessons learned and recommendations for future consideration in providing services to aged and disabled individuals with multiple chronic medication conditions.

Survey of Beneficiaries: Findings and Conclusions

An important component of the evaluation was to ascertain the satisfaction of MEDS-AD enrollees. Florida Medicaid routinely assesses beneficiary satisfaction using the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey which is a well-known and well-regarded tool for this purpose. The CAHPS survey was supplemented with SF-12 for measuring the quality of life and functional status of survey respondents covered under the MEDS-AD program.

Two telephone surveys of beneficiaries were conducted, one in spring 2009 and a second in early spring of 2010. Respondents included MEDS-AD recipients who had a pharmacy intervention (N=244) and a comparable group who did not (N=186). Attachment 1 includes details of the survey process along with a copy of the questions and responses.

Both groups described themselves in poor mental and physical health; however an even greater percentage of the intervention group rated their physical and mental on the lower end of the scale. Whereas 68% of the comparison group reported their

overall health as fair or poor, 86% of the intervention group characterized their health as fair or poor. Fifty-two percent of the comparison group reported that their mental health was fair or poor whereas 61% of the intervention group rated their mental health as fair or poor. Persons in the intervention group were also more likely to report health problems that persisted for 3 months or longer; limits in their ability to participate in moderate activity; and bounds on their capacity for engaging in day-to-day activities.

The response rate to the telephone survey was limited by not having current contact information for the recipients. During this period of time, many individuals were giving up land lines for cellular telephones, some of whom received phones from patient advocacy groups for reasons of personal safety. Although a relatively small number of persons declined to participate in the survey there were many who did not answer the telephone call or respond to messages. Failure to respond could be due to the poor health status of the enrollees who were contacted.

Key Informant Interviews: Findings and Conclusions

Key informants were selected for semi-structured interviews based upon their experience and varied perspectives on the MEDS-AD program. Those interviewed included representatives from the program operations staff; all physician and pharmacist clinical reviewers; Medicaid professional field staff and physicians who patients had been the subject of a MEDS-AD intervention. Attachment II describes the key informant process and findings.

The first round of key informant interviews generated a set of 14 recommendations for the MEDS-AD program for improving the timeliness and efficiency of program operations, increasing the benefit of the reviews to providers and patients, and enhancing the contributions and satisfaction of the clinical reviewers, field staff and program operations personnel. The recommendations made by the evaluation team in June 2010 were reviewed and considered by the Medicaid Pharmacy Bureau staff. Attachment III provides a copy of the recommendations that resulted from the key informant interviews.

The evaluation team and staff subsequently determined that there was no new input required from the clinical reviewers, prescribers or field staff relative to the suggestions for program modifications. Therefore, a second round of key informant interviews conducted in December 2, 2010 was targeted to members of the program staff responsible for the overall supervision and conduct of the MEDS-AD pharmacy case management program.

In the words of the key informants in the second round, the goal of MEDS-AD case management is to improve the care provided to patients by reducing poly-pharmacy when it exists and identify untreated medical indications which may require prescription medication. Coordination of care is a particular need because poly-pharmacy can be the result of individuals receiving care from multiple physicians.

Although the Pharmacy Bureau does not have regulatory responsibility for additional services under MEDS-AD, there exists a sense of professional responsibility to provide services that are likely to improve therapeutic outcomes. The MEDS-AD staff also acknowledged that although a pharmacy intervention to delay or lessen institutional care is a desirable goal, it may difficult to demonstrate these outcomes.

The case management intervention changed significantly under the renewed waiver authority. The changes were consistent with the recommendations that resulted from the first round of key informant interviews. Under the revised MEDS-AD intervention MEDS-AD beneficiaries identified by AHCA are invited to directly participate in a comprehensive medication review conducted over the telephone. Recommendations and actions plans generated by the comprehensive medication review produce timely recommendations to the beneficiary, a copy of which is communicated to the primary care provider identified by the patient.

Analysis of Paid Claims Data: Findings and Conclusions

A profile of the MEDS-AD population was constructed from information in the eligibility and paid claim files. It was found that somewhat more than one-half (67%) were women. Slightly less than one-third of the MEDS-AD population was under age 50 years, slightly more than one third of them ranged in age from 50-64 years, and the remaining third was 65 years or older. Nearly one-half (45%) had diagnosis of cardiovascular disease and nearly one-third (32%) were diagnosed with a mental disorder including psychoses (23%) and depression (8%). About half of the population had two or more chronic conditions, the most prevalent of which included with pulmonary diseases (24% of the population), arthritis (21%), and diabetes (18%). Relatively few were diagnosed with cancer (10%), dementia (less than 1%), substance abuse (less than 3%) or developmental disabilities (2.5%).

The evaluation team initially planned a longitudinal analysis of cost, quality and access parameters at the level of the individual beneficiary. However, the MEDS-AD population was continually in a state of flux. From January 2006 through September 2009 the majority of enrollees exhibited a gap in enrollment, of which slightly over half (53%) of the gaps were of 3 months duration or less. Although most beneficiaries were enrolled under fee-for-service, about 12% were enrolled in managed care plan at any point in time, with a little over 40% being in managed care at some point during their enrollment period. Having no claims to track during periods of ineligibility and no encounter claims under the HMO option, an analysis at the population level was the only feasible option.

Cost and use of services. Service use was examined over three observation periods: (1) from the inception of the MEDS-AD waiver on 1 January 2006 up to the initiation of the case management intervention on 1 October 2007, a period of 21 months; (2) a 15-month period during which case management was being delivered, October 2007 through December 2008; and (3) a 9-month post intervention period for

those beneficiaries selected for case management from January 2009 through September 2009. The analysis examined total paid claims as well as paid claims for pharmacy services and all other non-pharmacy Medicaid payments.

The per-member per-month (PMPM) claims payments for beneficiaries under case management were compared with two separate groups enrolled concurrently in the MEDS-AD program. A direct comparison group was formed by randomly selecting 700 individuals receiving multiple prescriptions using the same selection criteria that determined selection into case management. PMPM claims expenditures for the intervention and comparison groups were also compared with PMPM paid for all other MEDS-AD beneficiaries not in the two subgroups.

As shown previously in Figures 1-3, the PMPM expenditures for beneficiaries in the intervention group were greater than the PMPM expenditures in the comparison group prior to the start of the case management intervention. Table 1 summarizes the difference in PMPM expenditures between the three comparison group in the pre- and post-intervention period. PMPM expenditures in both the case management and comparison subgroups during the pre-intervention phase were greater than the PMPM expenditures for all other MEDS-AD enrollees. The PMPM for pharmacy services in the intervention group increased following the intervention however, PMPM amounts for non-pharmacy services declined as did the PMPM for total paid claims.

Table 1. Difference in PMPM MEDS-AD Expenditures Before and After Implementation of Case Management Program[1]

	PMPM – Total Medicaid expenditures	PMPM – Pharmacy Services	PMPM – Non-pharmacy services
Intervention Group N=715	$147 9% increase	$279 53% increase	($133) 12% decrease
Comparison Group N=700	$338 43% increase	$166 69% increase	$162 30% increase
All other Enrollees N=65,012	$701 71% increase	$151 9% increase	$551 69% increase

The PMPM amount increased over time in the comparison group as it had in the intervention group. However, unlike the intervention group, the PMPM for non-pharmacy services and total paid claims increased as well. All other MEDS-AD beneficiaries had the lowest PMPM for pharmacy services initially and experienced increases in the PMPM over the course of the observation periods. PMPM for MEDS-

[1] Includes all beneficiaries in the applicable group enrolled for 6 months or more in the MEDS-AD program; excludes beneficiaries enrolled in managed care plans, and beneficiaries not matched in the eligibility and/or paid claims file

AD enrollees not considered for case management increased in all expenditure categories. Additional detail on the PMPM expenditures for all groups over all periods in all expenditures categories can be found in Attachment IV.

Nursing home placement. Very few MEDS-AD beneficiaries experienced institutional placement during the course of the study; only 2.5% were admitted to a long term care facility and even fewer (1.5%) experienced a stay longer than 3 months. Less than 1% of enrollees are in an institution at any point in time. Additionally, roughly one percent of the population is enrolled in hospice at any point in time although nearly 4 percent of the total is enrolled in hospice at some point. It was not possible to reliably compare the cost and use of institutional services given small numbers combined with the difficulty of following specific beneficiaries over time.

Furthermore, many of the MEDS-AD beneficiaries met the eligibility criteria for more than one Medicaid waiver program. Once admitted to institutional care, services provided were outside the scope of the MEDS-AD program or the beneficiary was covered under an alternative program.

Drug utilization; adverse drug events. AHCA provided copies of the results of the clinical reviews completed from October 2007 through February 2009 involving 473 MEDS-AD recipients selected for pharmacy case management. The following table summarizes the nature of the potential drug therapy problems that were communicated to physicians. Reviewers made no recommendations for 122 (21%) of those reviewed. They offered 1,362 recommendations on behalf of 450 beneficiaries (mean 3.0 recommendations per beneficiary) through February 2009. The following table summarizes the type of recommendations made by the pharmacist and physician reviewers.

31.6%	No change recommended
47.4%	Monitor for drug-drug interactions
28.1%	Re-evaluate therapy
3.5%	Labs needed
14.0%	Recommend specific monitoring
3.5%	Encourage improved compliance with therapy
1.8%	Duplicate therapies noted
3.5%	Discontinue therapy
3.5%	Other clinical recommendation

Access to necessary services. Most beneficiaries who participated in the telephone surveys said they had primary care provider with whom they had a relatively long-standing relationship and with whom they were satisfied. Most respondents reported good communication with their physician including having received advice about preventive services. Language barriers did not seem to pose a major problem for the vast majority of enrollees. Most reported that their doctors were empathetic and

listened to patient concerns. Physicians offered advice to patients about their health and care plans. Although the numbers of smokers in each group was relatively small the vast majority of smokers reported that their doctors had advised them to quit.

Some access problems were reported in access to specialists, tests and treatments, and prescription medications. Reasons given for problems with access to specialists included uncertainty about where to locate a specialist, or in finding a convenient appointment time or with an acceptable travel distance. About one-third of those interviewed reported problems that included not having enough specialists to choose from, desiring access to a specialist that was not part of their plan's network, or experiencing a delay with a prior authorization or approval for the visit.

Despite some concerns about access to services, most of the population rated their health care and their personal physician highly.

Summary and Recommendations

A review of the literature at the outset of this evaluation project suggested that despite applying clinical guidelines and monitoring quality measures, there is a group of patients that are difficult to manage,[2] even if there is a multi-disciplinary, collaborative effort on behalf of the patient.[3] An evaluation of the Iowa Medicaid Pharmaceutical Case Management Program found no difference in institutional or medical expenditures among the participants after nine months of observation in spite of significantly improved medication use as measured by the Medication Appropriateness Index (MAI). The Iowa evaluation team anticipated that savings would not be apparent in the short term and, in a population with frail and declining health status, cost saving may not be expected.[4]

In an analysis conducted by Mathematica Policy Research, evidence on effective care coordination showed that strong medication management is a characteristic of programs that have successfully provided coordinated care for high-risk, high-cost patient populations.[5] Other important characteristics of successful programs are:

[2] Mallet L, Spinewine A, Huang A. The challenge of managing drug interaction in elderly people. Lancet 2007: 370:185-191.

[3] Spinewine A, Swine C, Dhillon S, Lambert P, Nachega JB, Wilmnotte L, Tulkens PM. Effect of a collaborative approach on the quality of prescribing for geriatric inpatients: a randomized, controlled trial. J Am Geriatr Soc 2007; 55:658-665.

[4] Chrischilles EA, Carter B, Voelker M, Scholz D, Chen-Hardee S, et al. Iowa Medicaid Pharmaceutical Case Management Program Evaluation. Iowa City: Report to the DHS Appropriations Subcommittee, March 5, 2003.

[5] Brown RS, Peikes D, Peterson G, Schore J, Razafindrakoto CM. Six features of Medicare coordinated care demonstration programs that cut hospital admissions of high-risk patients. Health Affairs 2012; 31: 1156-1165.

- Frequent face-to-face interactions with patients that build rapport among team members and comfort for patient;
- Caseloads small enough for care managers to operate effectively, with ongoing training and feedback for care managers;
- A strong, evidence-based patient education component to help ensure adherence to prescriptions and other treatment recommendations;
- Care setting transitions (from hospitals to outpatient care) that are managed in a comprehensive and timely way;
- Care coordinators who serve as a "communications hub" between multiple providers; and
- Resources for addressing psycho-social issues, such as loneliness and depression.

A number of innovative programs have resulted from the provisions for Medication Therapy Management (MTM) services under Medicare Part D. . An extensive review of randomized controlled trials concluded that two service elements are critical to an effective MTM program: (1) selecting patients with specific therapeutic problems and (2) timely communication with primary care providers along with routine patient follow-up.[6] Florida Medicaid should continue to monitor the development and evaluation of these new initiatives to identify programs that demonstrate cost saving and improvements in health-related quality of life for those enrolled in the MEDS-AD program

All of these findings and recommendations are consistent with lessons learned from the MEDS-AD intervention.

[6] Kucukarslan SN, Hagan AM, Shimp LA, Gainther CA, Lewis NJW. Integrating medication therapy management in the primary care medical home: a review of randomized controlled trials. Am J Health-Syst Pharm 2011; 68:335-345.

Attachment I

Survey of Beneficiaries: Findings and Conclusions

Survey Methods

The survey questions for the telephone interviews with MEDS-AD enrollees included self-reported assessments of health and functional status, as well as information on access, satisfaction and coordination of care under the MEDS-AD program. The survey was a composite of validated survey instruments that are widely used. The components were:

1. **CAHPS (Consumer Assessment of Health Plans Survey), Version 3**. The CAHPS is a family of survey instruments designed to assess experience and satisfaction with care among health plan enrollees regarding primary care, specialty care and health plan administration. It was developed with funding from the Agency for Health Care Research and Quality (AHRQ), extensively tested and validated for use in Medicaid, Medicare, SCHIP and commercial plans. Versions of the CAHPS are available in several languages and tailored to different types of health care arrangements and a variety of respondents. This survey uses incorporates core questions from the adult Medicaid version as well as supplemental questions related to chronic conditions, dental care and pharmacy services in both English and Spanish.

2. **MOS-SF-12, Version 2**: SF-12 assesses health status in both physical and mental health domains. It is a well-validated instrument and has been used around the world. The English and American-Spanish versions of the SF-12 were used in this survey.

3. **PHQ-2**: The PHQ-2 is a two-question, standardized instrument for assessing depression. It is a relatively new instrument, but it has been validated in several populations to date and is available in English and Spanish versions.

The time required for the survey was approximately 20-30 minutes. If the beneficiary was physically or mentally unable to complete the survey, the interviewer asked to speak with a caregiver who could respond on behalf of the beneficiary. Proxy respondents verified that they were over 18 years old and knowledgeable of the health care and health care needs of the listed respondent. Spanish-speaking interviewers were available upon request of the respondent.

Telephone interviews were conducted by trained interviewers at the Bureau of Economic and Business Research (BEBR), an applied research center in the Warrington College of Business Administration at the University of Florida. The BEBR has conducted numerous surveys for the Florida Agency for Health Care Administration and other state agencies. IRB-1 at the University of Florida Health Sciences Center reviewed and approved the survey and the protocols.

A letter, printed on UF stationary and personally signed by the PI, was sent by first class mail to every person on the target list of beneficiaries to inform them of the upcoming survey. The letter provided background information, contact information for

the PI and encouraged participation in the process. The telephone survey was conducted in two phases.

In the first phase all beneficiaries who had been reviewed under the High Risk Pharmacy Case Management component of MEDS-AD (N=715) were contacted in February and March 2009. Of the initial contact letters informing the beneficiary of the upcoming telephone survey, eight letters were returned as undeliverable. We were contacted by, or on behalf of, an additional 8 recipients. Two individuals were deceased; others provided updated or preferred contact information and received answers to their questions about the nature and purpose of the survey.

Of the 715 names provided to the Survey Research Center, 283 were non-working, disconnected, wrong number, etc. In order to increase the responses, the research center worked with a commercial sampling company to match those cases with a telephone number. An additional 20 responses were obtained through the number matching process.

The Survey Research Center made 20 attempts to contact each respondent at various times and on multiple occasions before considering the contact to be unreachable. This occurred for 18 cases. Interviewers were unable to reach 98 persons due to a non-working telephone number, 61 persons with a disconnected number, and 1 having an unlisted number. There were 100 cases in which the interviewer was told that this was an incorrect number for the targeted respondent. A call could not be completed in 6 cases when the caller connected with a fax or data line or in one case due to other technical problems.

Nine individuals refused to participate; 89 others declined. Some cited ill health or difficulty hearing and speaking among a variety of other reasons. A message requesting the respondent to return the call was left if the beneficiary was unavailable or when the caller reached an answering machine. In 62 cases no return call was received. In another 18 cases, a return call was made by someone other than the listed recipient. Seven persons spoke a language other than English or Spanish and were not interviewed.

The second phase of the telephone survey solicited responses from MEDS-AD beneficiaries who receive multiple prescription medications but had not been selected for intervention. The purpose of the second phase of the telephone survey was to provide a basis of comparison with beneficiaries who had received an intervention and who responded to the first survey.

To generate a comparison group of MEDS-AD enrollees, researchers at UF matched a list of current MEDS-AD beneficiaries who had not been selected for intervention against data from the recipient eligibility and paid claims files. This resulted in a pool of 5,111 persons. The list was arrayed by the number of paid prescription claims and 699 individuals receiving multiple prescriptions were randomly selected for the second phase of the beneficiary survey.

Again participants were contacted by mail before the survey was initiated. The letters were mailed by first class post to each person selected for the survey advising them that the survey was being conducted; 78 of those letters were returned as undeliverable.

There were 186 surveys completed in Phase II. A total of 308 beneficiaries could not be located for the interview. Ability to contact selected respondents was most often due to disconnected and non-working telephones (197), or wrong numbers (111). Ninety-four (94) persons declined to be interviewed, 8 spoke a language other than English or Spanish, and another 103 individuals did not answer the call or return the call in response to messages requesting their cooperation.

Responses to both phases of the survey are shown in the following tables.

	Questionnaire Item*	Comparison group (N= 186)		Intervention group (N-244) (weighted)	
		N	%	N	%
Q3	**Had Illness or Injury Needing Immediate Care in last 6 months**				
1	Yes	81	43.5	145	59.4
2	No	105	56.5	95	38.9
Q4	(For those who had an illness or injury needing immediate care) **Got Immediate Care for Illness or Injury as Soon as Desired**				
1	Never	1	1.2	2	1.4
2	Sometimes	10	12.3	20	13.8
3	Usually	7	8.6	25	17.2
4	Always	57	70.4	90	62.1
Q5	**Made Appointment for Non-Urgent Health Care at Doctor's Office or Clinic**				
1	Yes	152	81.7	207	84.8
2	No	34	18.3	36	14.8
Q6	**Got Appointment for Non-Urgent Health Care as Soon as Desired**				
1	Never	8	5.3	6	2.9
2	Sometimes	17	11.2	26	12.6
3	Usually	23	15.1	35	16.9
4	Always	100	65.8	129	62.3

AR1	**Days Waiting Between Making an Appointment and Seeing a Provider**				
1	Same day	15	9.9	25	12.1
2	1 day	11	7.2	22	10.6
3	2 to 3 days	25	16.4	47	22.7
4	4 to 7 days	28	18.4	51	24.6
5	8 to 14 days	14	9.2	19	9.2
6	15 to 30 days	26	17.1	16	7.7
7	31 to 60 days	9	5.9	10	4.8
8	61 to 90 days	5	3.3	2	1.0
9	91 days or longer	3	2.0	2	1.0
AR2	**Delay in Appointment due to Limited Hours or Availability**				
1	Never	69	45.4	85	41.1
2	Sometimes	32	21.1	65	31.4
3	Usually	18	11.8	19	9.2
4	Always	31	20.4	28	13.5
UT1	**# of Emergency Room Visits**				
0	None	120	64.5	131	53.7
1	1	35	18.8	57	23.4
2	2	12	6.5	20	8.2
3	3	7	3.8	12	4.9
4	4	4	2.2	5	2.0
5	5 to 9	2	1.1	11	4.5
6	10 or more	1	0.5	4	1.6
Q7	**Number of Times Went to Doctor's Office or Clinic for Care for Self**				
0	None	14	7.5	13	5.3
1	1	21	11.3	19	7.8
2	2	41	22.0	41	16.8
3	3	33	17.7	33	13.5
4	4	16	8.6	31	12.7
5	5 to 9	34	18.3	54	22.1
6	10 or more	9	4.8	36	14.8

H1	**Discussed Illness Prevention with Doctor in Last 6 Months**				
1	Never	35	22.7	32	15.0
2	Sometimes	33	21.4	51	23.8
3	Usually	32	20.8	29	13.6
4	Always	47	30.5	92	43.0
Q8	**Rating of Healthcare in Last 6 months**				
0	0 Worst health care possible	1	0.6	3	1.4
1	1				
2	2	4	2.6		
3	3	3	1.9	4	1.9
4	4	1	0.6	9	4.2
5	5	8	5.2	20	9.3
6	6	11	7.1	5	2.3
7	7	13	8.4	15	7.0
8	8	35	22.7	44	20.6
9	9	21	13.6	19	8.9
10	10 Best health care possible	51	33.1	90	42.1
	Mean Rating of Health Care in Last 6 Months	7.44+/-3.8		7.78+/-3.3	
AH1	**Visited Doctor's Office or Clinic for After Hours Care**				
1	Yes	10	6.5	30	14.0
2	No	143	92.9	182	85.0
AH2	**How Often was it Easy to Get Needed After Hours Care**				
1	Never	1	10.0	7	23.3
2	Sometimes	2	20.0	6	20.0
3	Usually			3	10.0
4	Always	6	60.0	12	40.0

	(For those who reported it was not "always" easy to get after hours care) **Reasons it was not easy to get needed after hours care**				
AH3_1	**Did not know where to go for after hours care**				
1	Yes			3	18.8
2	No	3	100.0	13	81.3
AH3_2	**Not sure where to find a list of doctor's offices or clinics in health plan or network that are open for after hours care**				
1	Yes			6	37.5
2	No	3	100.0	10	62.5
AH3_3	**The doctor's office or clinic that had after hours care was too far away**				
1	Yes	1	33.3	5	31.3
2	No	2	66.7	11	68.8
AH3_4	**Office or clinic hours for after hours care did not meet subject's needs**				
1	Yes			6	37.5
2	No	3	100.0	10	62.5
AH3_5	**Other**				
1	Yes	1	33.3	7	43.8
2	No	2	66.7	9	56.3
CC11	**Need for Special Therapy, Such as Physical, Occupational, or Speech Therapy**				
1	Yes	34	18.3	70	28.7
2	No	148	79.6	170	69.7
CC12	(For those who needed special therapy) **How Often was it Easy to Get Special Therapy through Health Plan**				
1	Never	3	8.8	9	12.9
2	Sometimes	5	14.7	9	12.9
3	Usually	3	8.8	12	17.1
4	Always	19	55.9	33	47.1
Q9	**Has Personal Doctor**				
1	Yes	159	85.5	223	91.4
2	No	24	12.9	18	7.4

CC1	**General Doctor or Specialist Doctor**				
1	General Doctor (Family practice or internal medicine)	132	83.0	176	78.9
2	Specialist Doctor	17	10.7	30	13.5
CC2	**How Long Seeing this Personal Doctor**				
1	Less than 6 months	11	6.9	16	7.2
2	At least 6 months but less than 1 year	14	8.8	14	6.3
3	At least 1 year but less than 2 years	21	13.2	23	10.3
4	At least 2 years but less than 5 years	53	33.3	85	38.1
5	5 years or more	46	28.9	78	35.0
CC3	**Subject has a Physical or Mental Condition that Seriously Interferes with Ability to Work, Attend School, or Manage Day-to-Day Activities**				
1	Yes	107	67.3	188	84.3
2	No	49	30.8	26	11.7
CC4	**Does Personal Doctor Understand How Health Problems that Affect Day-to Day Life**				
1	Yes	100	93.5	177	94.1
2	No	7	6.5	9	4.8
Q10	**Visits to Personal Doctor in Last 6 Months**				
0	None	6	3.8	5	2.2
1	1	13	8.2	12	5.4
2	2	45	28.3	38	17.0
3	3	27	17.0	37	16.6
4	4	14	8.8	26	11.7
5	5 to 9	33	20.8	61	27.4
6	10 or more	10	6.3	29	13.0
Q11	**Doctor Explained Things So That Patient Could Understand**				
1	Never	9	6.3	5	2.5
2	Sometimes	16	11.3	19	9.4
3	Usually	10	7.0	23	11.3
4	Always	105	73.9	154	75.9

Q12	**Doctor Listened Carefully to Subject**				
1	Never	2	1.4	3	1.5
2	Sometimes	13	9.2	23	11.3
3	Usually	7	4.9	13	6.4
4	Always	118	83.1	163	80.3
C1	**Experienced Difficulty Communicating With Doctor Due to Speaking Different Languages**				
1	Never	96	67.6	141	69.5
2	Sometimes	9	6.3	17	8.4
3	Usually	3	2.1	5	2.5
4	Always	30	21.1	36	17.7
Q13	**Doctor Showed Respect for What Subject Said**				
1	Never	7	4.9	5	2.5
2	Sometimes	4	2.8	16	7.9
3	Usually	9	6.3	13	6.4
4	Always	120	84.5	168	82.8
Q14	**Doctor Spent Enough Time With Subject**				
1	Never	2	1.4	6	3.0
2	Sometimes	14	9.9	22	10.8
3	Usually	16	11.3	23	11.3
4	Always	107	75.4	150	73.9
CO1	**Called Doctor's office During Regular Office Hours**				
1	Yes	89	56.0	155	69.5
2	No	69	43.4	67	30.0
CO2	(For those who called doctor's office during regular hours) **Got Needed Help or Advice When Called Doctor's Office During Regular Office Hours**				
1	Never	3	3.4	4	2.6
2	Sometimes	14	15.7	16	10.3
3	Usually	10	11.2	23	14.8
4	Always	62	69.7	110	71.0

CO3	**Called Doctor's Office After Regular Office Hours**				
1	Yes	27	17.0	54	24.2
2	No	132	83.0	168	75.3
CO4	(For those who called doctor's office after regular hours) **Got Needed Help or Advice When Called Doctor's Office After Regular Office Hours**				
1	Never	1	3.7	5	9.3
2	Sometimes	6	22.2	8	14.8
3	Usually	4	14.8	5	9.3
4	Always	16	59.3	35	64.8
	Reasons for Not Getting Help When Calling After Regular Office Hours				
CO5_1	**Did not know what number to call**				
1	Yes	8	72.7	17	94.4
2	No	3	27.3	1	5.6
CO5_2	**Left a message but no one returned call**				
1	Yes	5	45.5	8	44.4
2	No	6	54.5	10	55.6
CO5_3	**Could not leave a message at the number phoned**				
1	Yes	2	18.2	6	33.3
2	No	9	81.8	12	66.7
CO5_4	**Another doctor was covering for subject's personal doctor**				
1	Yes	4	36.4	6	33.3
2	No	7	63.6	12	66.7
CO5_5	**Other reason**				
1	Yes	6	54.5	5	27.8
2	No	5	45.5	13	72.2

Q15	**Rating of Personal Doctor**				
0	0 Worst personal doctor possible	3	1.9	1	0.4
1	1			1	0.4
2	2			2	0.9
3	3			1	0.4
4	4	4	2.5	2	0.9
5	5	7	4.4	8	3.6
6	6	3	1.9	7	3.1
7	7	9	5.7	8	3.6
8	8	29	18.2	19	8.5
9	9	13	8.2	18	8.1
10	10 Best personal doctor possible	88	55.3	155	69.5
	Mean Rating of Personal Doctor	8.4 +/- 3.1		9.01+/- 2.2	
CC6	**Were Any Decisions Made about Subject's Health Care**				
1	Yes	103	55.4	161	66.0
2	No	79	42.5	72	29.5
CC7	(For those who reported that health decisions were made) **How Often was Subject as Involved as He/She Wanted in Health Care Decisions**				
1	Never	9	8.7	9	5.6
2	Sometimes	10	9.7	18	11.2
3	Usually	11	10.7	15	9.3
4	Always	69	67.0	115	71.4
CC8	(For those who reported that health decisions were made)**How Often was it Easy to Get Heath Providers to Agree with Subject on the Health Management**				
1	Never	4	3.9	6	3.7
2	Sometimes	17	16.5	37	23.0
3	Usually	15	14.6	32	19.9
4	Always	65	63.1	81	50.3
H5	**Subject Received Care from a Health Provider Other Than Personal Doctor**				
1	Yes	105	56.5	146	59.8
2	No	78	41.9	93	38.1

H6	**How often did Personal Doctor seem Informed and Up-to-Date About Care Given by Other Doctors or Health Providers**				
1	Never	6	5.7	3	2.1
2	Sometimes	12	11.4	17	11.6
3	Usually	19	18.1	23	15.8
4	Always	65	61.9	97	66.4
OHP3	**Did Anyone from the Subject's Health Plan, Doctor's Office or Clinic Help Coordinate Care Among Doctors and Other Health Providers**				
1	Yes	63	60.0	107	73.3
2	No	36	34.3	33	22.6
	(For those who received help with care coordination) **Who helped coordinate care**				
OHP4_1	Someone from health plan	26	41.3	48	44.9
OHP4_2	Someone from doctor's office or clinic	45	71.4	81	75.7
OHP4_3	Someone from another organization	11	17.5	16	15.0
OHP4_4	A friend or family member	22	34.9	23	21.5
OHP4_5	You	35	55.6	55	51.4
OHP5	(For those who received help with care coordination) **Subject Satisfaction with the Help Received to Coordinate Care**				
1	Very dissatisfied	1	1.8	3	3.0
2	Dissatisfied	2	3.5	5	5.0
3	Neither dissatisfied nor satisfied			3	3.0
4	Satisfied	25	43.9	40	40.0
5	Very Satisfied	27	47.4	49	49.0
PD1	**Same Personal Doctor Before Joining the Health Plan**				
1	Yes	88	47.3	120	49.2
2	No	94	50.5	117	48.0

PD2	(For those who changed doctors after joining health plan)**Since Joining the Health Plan, How Often was it Easy for Subject to get a Personal Doctor He/She was "Happy With"**				
1	Never	16	17.0	16	13.7
2	Sometimes	21	22.3	20	17.1
3	Usually	8	8.5	22	18.8
4	Always	44	46.8	55	47.0
SUPPB	(For those who changed doctors after joining health plan) **Rating of Number of Doctors to Choose From**				
1	Excellent	23	24.5	32	27.4
2	Very Good	16	17.0	21	17.9
3	Good	25	26.6	21	17.9
4	Fair	12	12.8	9	7.7
5	Poor	8	8.5	16	13.7
6	No experience	6	6.4	11	9.4
IM2	**When Visiting Personal Doctor's Office, How Often was Patient Examined on the Examination Table**				
1	Never	12	8.5	20	9.9
2	Sometimes	36	25.4	50	24.6
3	Usually	19	13.4	28	13.8
4	Always	73	51.4	102	50.2
IM3	**When Visiting Personal Doctor's Office, How Often was Subject Weighed**				
1	Never	2	1.4	4	2.0
2	Sometimes	5	3.5	8	3.9
3	Usually	7	4.9	10	4.9
4	Always	126	88.7	181	89.2
Q16	**Has Subject Tried to Make an Appointment with a Specialist in Last 6 Months**				
1	Yes	95	51.1	150	61.5
2	No	90	48.4	94	38.5

Q17	**In Last 6 Months, How Often was it Easy to Get Appointments with Specialists**				
1	Never	11	11.6	19	12.7
2	Sometimes	13	13.7	26	17.3
3	Usually	21	22.1	19	12.7
4	Always	47	49.5	81	54.0
	(For those who reported it was not always easy to get an appointment with a specialist)**Reasons it was Not Easy to Get an Appointment with a Specialist**				
AS1_1	**Doctor did not think subject needed to see a specialist**				
1	**Yes**	6	13.3	9	14.1
2	No	39	86.7	55	85.9
AS1_2	**Health plan approval or authorization was delayed**				
1	Yes	14	31.1	21	32.8
2	No	31	68.9	43	67.2
AS1_3	**Not sure where to find a list of specialists in health plan or network**				
1	Yes	12	26.7	20	31.3
2	No	33	73.3	44	68.8
AS1_4	**The specialists were too far away**				
1	Yes	13	28.9	29	45.3
2	No	32	71.1	35	54.7
AS1_5	**Not have enough specialists to choose from**				
1	Yes	21	46.7	22	34.4
2	No	24	53.3	42	65.6
AS1_6	**The specialist that subject wanted did not belong to his/her health plan or network**				
1	Yes	22	48.9	32	50.0
2	No	23	51.1	32	50.0
AS1_7	**Could not get an appointment at a time that was convenient**				
1	Yes	19	42.2	14	21.9
2	No	26	57.8	50	78.1
AS1_8	**Other reason**				
1	Yes	13	28.9	27	42.2
2	No	32	71.1	37	57.8

Q18	**How Many Different Specialists Seen in Last 6 Months**				
0	None	55	29.6	57	23.4
1	1 specialist	49	26.3	52	21.3
2	2	40	21.5	55	22.5
3	3	19	10.2	30	12.3
4	4	8	4.3	25	10.2
5	5 or more specialists	8	4.3	15	6.1
CC5	**How Many Specialist Visits in Last 6 Months**				
1	1	36	29.0	32	18.1
2	2	26	21.0	30	16.9
3	3	14	11.3	20	11.3
4	4	11	8.9	20	11.3
5	5 to 9	22	17.7	40	22.6
6	10 or more	9	7.3	20	11.3
Q19	**Rating of Specialist**				
0	0 Worst specialist possible	2	1.6	1	0.6
1	1	2	1.6		
2	2			1	0.6
3	3	1	0.8	1	0.6
4	4	2	1.6	2	1.1
5	5	2	1.6	4	2.3
6	6	3	2.4	6	3.4
7	7	6	4.8	10	5.6
8	8	8	6.5	20	11.3
9	9	20	16.1	13	7.3
10	10 Best specialist possible	77	62.1	117	66.1
	Mean Rating of Specialist				
UT2	**Was the Specialist that Was Seen Most Often the Same Doctor as Subject's Personal Doctor?**				
1	Yes	47	37.9	67	37.9
2	No	69	55.6	105	59.3

Q20	**In Last 6 months, has Subject Tried to Get Any Care, Tests, or Treatment through Health Plan**				
1	Yes	84	45.2	126	51.6
2	No	96	51.6	106	43.4
Q21	(For those who Tried to Get Care, Tests, or Treatment) **How Often was it Easy to Get Care, Tests, or Treatment Through Health Plan**				
1	Never	6	7.1	16	12.7
2	Sometimes	21	25.0	31	24.6
3	Usually	13	15.5	17	13.5
4	Always	43	51.2	60	47.6
Q22	**Has Subject Tried to Get Information or Help from Health Plan's Customer Service**				
1	Yes	53	28.5	85	34.8
2	No	131	70.4	153	62.7
Q23	(For those who Tried to Get Help from Customer Service) **How Often did Health Plan's Customer Service Give Information or Help Needed**				
1	Never	8	15.1	14	16.5
2	Sometimes	15	28.3	26	30.6
3	Usually	4	7.5	8	9.4
4	Always	22	41.5	35	41.2
Q24	(For those who Tried to Get Help from Customer Service)**How Often did Health Plan's Customer Service Staff Treat Enrollee with Courtesy and Respect**				
1	Never			8	9.4
2	Sometimes	9	17.0	12	14.1
3	Usually	8	15.1	7	8.2
4	Always	35	66.0	58	68.2
Q25	**Did Health Plan Give Subject Any Forms to Fill Out**				
1	Yes	46	24.7	80	32.8
2	No	137	73.7	155	63.5

Q26	(For those who received forms from health plan) **How Often Were the Forms from Health Plan Easy to Fill Out**				
1	Never	3	6.5	6	7.5
2	Sometimes	4	8.7	11	13.8
3	Usually	14	30.4	17	21.3
4	Always	24	52.2	42	52.5
Q27	**Rating of Health Plan**				
0	0 Worst health plan possible	1	0.5	9	3.7
1	1	1	0.5	2	0.8
2	2	2	1.1	5	2.0
3	3	3	1.6	8	3.3
4	4	2	1.1	5	2.0
5	5	11	5.9	11	4.5
6	6	8	4.3	15	6.1
7	7	15	8.1	12	4.9
8	8	29	15.6	38	15.6
9	9	13	7.0	16	6.6
10	10 Best health plan possible	95	51.1	116	47.5
	Mean Rating of Health Plan	7.95+/-3.7		7.52+/-3.9	
PM1	**Did Subject Get any New Prescription Medicines or Refills in Last 6 Months**				
1	Yes	153	82.3	203	83.2
2	No	32	17.2	39	16.0
PM2	(For those who got new prescriptions or refills) **How Often Was it Easy to Get Prescription Medicine from Health Plan**				
1	Never	1	0.7	7	3.4
2	Sometimes	18	11.8	34	16.7
3	Usually	21	13.7	36	17.7
4	Always	111	72.5	122	60.1

PM3	(For those who got new prescriptions or refills) **How often did Enrollee Get the Needed Prescription Medicine Through Health Plan**				
1	Never			6	3.0
2	Sometimes	11	7.2	23	11.3
3	Usually	20	13.1	36	17.7
4	Always	121	79.1	135	66.5
T1	**Has Subject Called Health Plan to Get Help with Transportation in Last 6 Months**				
1	Yes	24	12.9	35	14.3
2	No	161	86.6	207	84.8
T2	(For those who called for transportation help) **How often did Subject Receive the Needed Transportation Help**				
1	Never	3	12.5	5	14.3
2	Sometimes	4	16.7	7	20.0
3	Usually	5	20.8	1	2.9
4	Always	12	50.0	20	57.1
T3	(For those who called for transportation help and reported getting that help) **How Often did the Transportation Help Meet the Subject's Needs**				
1	Never	1	4.8	1	3.3
2	Sometimes	2	9.5	4	13.3
3	Usually	4	19.0	1	3.3
4	Always	14	66.7	22	73.3

Attachment II

Key Informant Interviews: Findings and Conclusions

Key informants were selected for their experience and varied perspectives on the MEDS-AD program. Individuals with a variety of roles in the program were contacted throughout the evaluation process. The contacts are summarized below.

I. Persons responsible for MEDS-AD program operations were interviewed about the policies and procedures used in the case review process. The role and responsibilities of key staff were identified. The greatest share of the information was obtained from interviews conducted on February 9, 2009 at AHCA offices in Tallahassee. As reported in Deliverable #3, the evaluators produced a narrative description of the MEDS-AD program which was reviewed and approved by those who provided information to the evaluators. Additional information and updates have been communicated by email and teleconferencing throughout the course of the evaluation.

II. All of the physicians and clinical pharmacists who performed chart reviews were interviewed through scheduled conference calls. The first pharmacist interview occurred on February 27, 2009, followed by the first physician interview on April 24, 2009. A second physician and a pharmacist were added as clinical reviewers in July 2009 and were interviewed on November 4 and November 6, 2009, respectively. All interviews were approximately 45 minutes in length and conducted by the same two evaluators. All those interviewed read and approved written summaries of their respective interviews.

III. Two Medicaid pharmacists assigned to area offices in the state were interviewed on July 29 and July 31, 2009, respectively. These pharmacists are responsible for obtaining and transmitting chart information from physicians' offices regarding the patients who are selected for the intervention.

IV. Interviews were requested with physicians whose patients had been the subject of a MEDS AD review. The evaluation team identified a representative group of physicians from around the state, some that had been contacted about a single patient and some with multiple contacts regarding MEDS-AD patients. Multiple attempts over a period of 6 weeks produced only one completed physician interview. As the physician interviews were not yielding information of value to the evaluation, physician provider interviews were suspended.

Outline of questions and process for key informant interviews

A. Preparation for Interview
   1. Obtain the records of the last 40 patients reviewed in the month including all the information the case reviewers are given to come up with their recommendations
   2. Verify that the field pharmacists are able to obtain the records and information necessary for the case reviewers to make a complete recommendation
   3. Document the process case reviewers use to generate their recommendations, including

a. Reliance on evidence based practice guidelines
b. Application of the Medication Appropriateness Index (MAI)

4. Characterize the nature of the clinical recommendations.
5. Compare the process used by case reviewers with what was originally proposed
6. Learn how case managers communicate with the physicians
   Note: It is important that we clarify and understand the role and activities of case managers within the context of the MEDS-AD program.
7. Examine the nature of communication in regards to recommendations
8. Inquire about follow-up procedures after recommendations are generated
9. Set up a face to face interview if possible after review of the paperwork is complete; rely on a telephone interview to obtain clarify information before a face-face interview is conducted.

B. Questions posed in the interviews
   1. Regarding communication between case reviewers and field pharmacists:
      - Are the case reviewers able to obtain the information needed from the field pharmacist and their photocopies of the medical records?
      - Is the correct information being photocopied?
      - What is the history of the medical records obtained? For example, is the patient's entire history in the past year being photocopied? Or just the last week/months?
   2. Regarding communication between case reviewers and MEDS-Ad physicians:
      - How are the recommendations being communicated to the MEDS-AD MD?
      - Is support of the recommendation through literature also supplied?
      - Are recommendations being misinterpreted?
   3. Regarding communication between MEDS-AD physicians and MEDS-AD recipient:
      - Are the MDs relaying the information to the patient?
      - Does the patient understand their change in therapy?
      - Are the MD's relaying changes in frequency and lifestyle to the patient?

The evaluators used the key informant technique in an effort to better understand program operations and challenges by speaking directly with the people who are in the best position to make these observations. The objective was to gather information that the evaluation team could use to formulate recommendations for program improvement.

A summary of findings regarding the MEDS-AD program is presented in the following table. The table is organized according to issues identified and suggestions emanating from the interview.

Issue	Background	Findings from Key Informant Interviews
Selection of enrollees for intervention	Initially the intervention was targeted at enrollees receiving more than 6 prescriptions per month.	Choosing enrollees who are high utilizers of prescribed drug services was the original intent. The strategy was revised beginning in April 2009 because choosing only high utilizers overlooked enrollees do not received needed medications or who are non-compliant with their prescribed drug regimens. The initial selection of patients is manually screened to exclude persons in hospice, institutional care settings, or no longer eligible for Medicaid. Some effort is required to identify the primary care provider as there often are multiple providers for the same patient.
Notify prescribing provider	For those recipients selected for review, Medicaid staff will submit to the prescribing physician a letter and the medical records summary template requesting information necessary to conduct a case review. General information describing the review program and the prescribing physician's responsibility to respond within two weeks to the records summary request will be included. All prescribing physicians will be contacted. The letter includes contact information for any questions. A toll-free number will be provided for the practitioner to call with any questions.	Physicians contacted for the key informant did not appear to know about the MEDS-AD program. Several times a specialist was contacted instead of the primary care provider.

Retrieval of patient medical records	Field pharmacists in the Medicaid Area Offices receive a list of selected recipients each month. The pharmacist seeks medical records from the physician(s).	Initially the field pharmacists visited the physician offices, if possible, to ask for photocopy information about MEDS-AD patients. The role of the field pharmacists dramatically changed as a result of budget cuts in 2009. Visits to physician offices and pharmacies were curtailed. Due to limited contact with providers requests generally are faxed to the physician office, often to a medical records secretary. If there is no response within a week, a second contact is made either by telephone or fax. If a physician office does not respond to a request, the field pharmacist may learn that they were given the wrong telephone number or that the doctor is a specialist who has only seen the patient once or twice. If a problem is identified the field pharmacist obtains the correct information and contacts the health care provider. One field pharmacist reported checking patient records for completeness and pursuing more information if needed. One of the pharmacists often prepares a summary list of the patient's disease states and medications before sending it to ACHA. The other field pharmacist asks that the records be sent directly to ACHA. Neither of the field pharmacists who were interviewed recall being asked to provide more information due to problems with legibility or to gather additional information requested by a clinical reviewer.
Requesting information from prescribing providers	Medicaid staff will make at least two follow-up phone calls to the prescribing physician if the requested medical information has not been received within the desired timeframe. In the event the prescribing physician is non-responsive, the vendor will report the prescribing physician to the	Both field pharmacists found that physician's offices were usually very cooperative. They attributed this to their prior relationships with these offices and rarely encountered uncooperative physicians.

	Bureau of Pharmacy Services. If appropriate, the Bureau will refer the prescribing physician to the Medicaid Prescribing Pattern Review Panel.	
Independent review of cases	According to the initial program description, "Upon receipt of the requested recipient medical information from the prescribing physician, the vendor PharmD and vendor physician will jointly review the recipient's pharmacy history and medical summary and complete the case review document. The vendor will follow all state plan requirements including use of the state's preferred drug list, step therapy, prior authorizations, and dosing limitations."	The pharmacists and physicians review information separately and have had no communication with one another. Reviewers did not recall receiving instructions about the state's preferred drug list, step therapy, prior authorization or dosing limitations. Informants suggested • sharing comments from other reviewers or examples of ideal reviews • giving reviewers feedback about their recommendations; and • telling reviewers when recommendations are implemented and whether they were beneficial to the patient.
Completed review packages	After all information needed is assembled, the reviewers will develop their proposed recommendations, which are then communicated to the treating provider via fax and mail. The provider is expected to follow up within five business days of notification of the reviewer's recommendations with any questions or changes implemented in the recipient's care plan. If no response is received from the provider, Medicaid staff follows up via phone, fax, or mail until resolution and completion of the review. If no change is indicated, that is also documented in the recipient record in the database.	It appears that there is a problem in which specialists are contacted instead of primary care providers. One reviewer estimated that 20-25% of patient records came from Specialists and not from Primary Care Physicians. This was a major concern since PCP notes are needed to get a complete picture of the patient. Also specialty physicians may not benefit from recommendations that were meant for PCPs and not forwarded to the PCP. One reviewer was concerned about cases in which the primary care physician is not be aware that a patient is taking prescription medications prescribed by other physicians.

Requested information and implementation of proposed recommendation	If changes are proposed or additional medical information is required, the prescribing physician is to respond within 72 hours for patient safety concerns, within 1 week regarding recommended changes to pharmacy regimen, and within 3 weeks for additional medical information that is requested	The Agency was responsive to reviewer concerns about patterns of narcotic use by notifying the patient's physician. Reviewers asked for additional data; only one recalled having received the missing information. At one time or another, all reviewers requested additional information that was missing in the patient records; only one reviewer reported that the additional information was promptly provided. Reviewers do not get feedback from the prescribing physician or the Agency. Reviewers are not sure if their recommendations are implemented and do not know the outcomes of patients after recommendations are made.
Role of Field Pharmacists	Area office pharmacists follow up on the recommended changes (if any). In the event of a change necessary to protect the patient's safety, the prescriber is called and the area office pharmacist monitors to confirm that the change was made. In the event of non-compliance with requested actions for patient safety, prescribers may be referred to the Medicaid Prescribing Practice Review Panel, which may ultimately recommend termination of their prescribing for Medicaid patients.	The field pharmacists have not been asked follow up with the physician about a patient, nor have they received information about the review or the resolution of any problems with a case. Field pharmacists were not clear about why the information was being collected and what happens to the information after it is collected.
Prior authorization	For recipients with changes in their pharmacy regimens, Pharmacy Services will put edits or prior authorization requirements as needed to give an enrollees immediate access to new medications or to prevent unauthorized prescription refills.	Clinical reviewers were not aware of this procedure. No reviewers expressed concern about an enrollees access to medication.

Tracking intervention cases	All pertinent dates (assignment of review, completion of review by pharmacist and physician, date any prescribing changes are recommended to physician, date of visits by the area office pharmacist for academic detailing) are recorded in a simple database for eventual use in the evaluation process. Medicaid staff documents the final recommendation to the recipient's record in the review database.	Physician information was not recorded in this database. Information about recommendations was not recorded in a consistent manner.

[11] Hanlon JT, Schmader KE, Samsa GP, et al. A method for assessing drug therapy appropriateness. *Journal of Clinical Epidemiology* 1992; 45: 1045-51.

Attachment III

Recommendations for MEDS-AD Program
Submitted June 18, 2010

Recommendations for MEDS-AD Program submitted to AHCA by the evaluation team on June 10, 2010. The recommendations offer suggestions to improve the

- timeliness and efficiency of program operations;
- benefits for providers and patients;
- the utilization and satisfaction of clinical reviewers, field staff and program operations staff.

Program Operations
1. Convene program participants for the purpose of minimizing the turn-around time for reviews including, but not limited to, processes associated with A. Identifying targets for review B. Obtaining information for review C. Communicating results of the review and obtaining provider response D. Assessing the impact on patient well-being and program cost
2. Prepare a program description that includes an organizational chart and a limited number of policies and procedures for the purposes of information sharing and program efficiency. Chart should include role of field pharmacists and reviewers.
3. Provide an overview of program operations to reviewers and staff so that each understands his or her role in the overall program.
4. Develop a procedure or algorithm to identify the primary care provider which increases the likelihood that A. Appropriate records are retrieved to conduct a productive review and generate useful recommendations B. Recommendations are conveyed to the appropriate provider who is in a position to evaluate the recommendation and take action when necessary.
5. Create a patient registry for monitoring high risk beneficiaries. This could be a modification of the current case tracking system with the objective of providing feedback to clinical reviewers and Medicaid while optimizing efficiency of program operations. A. Record death, transfer to institutional care and/or patient eligibility status B. Record responses to telephone inquiries C. Standardize (or record verbatim) the nature of reviewer recommendations D. Standardize recording of physician responses to support case follow-up process E. Specify criteria for a closed case.
Clinical Reviewers
6. Provide information needed by the reviewers and do not provide information of minimal value to the review process. A. Consider developing a checklist for physician offices naming data types of interest to accompany the medical records request such as recent laboratory reports and specialist consults. B. Develop a checklist for field pharmacists; describing activities they can implement including: verification of recipient eligibility; verification that identified provider is primary care physician of record; examination of medical records to ensure that records are not illegible due to poor quality of photocopying.

7. Evaluate the quality of the first ten reviews by each clinical reviewer and provide feedback for the purpose of improving the quality and completeness of the clinical review.

8. Schedule case conferences for reviewers to address recipients for which reviewers' recommendations were contradictory or substantially different

9. Follow-up on cases with reviewers. Share provider response, if any, accompanied by a summary of claims history for the 6 months period following the transmittal of reviewer recommendations.

10. Request input based on the experience of the clinical reviewers in refining program goals and objectives, setting expectations for outcomes of the review, expediting review of priority cases and referral including circumstances that are indicative of potential fraud or abuse.

Outside Evaluators

11. Systematically and in a timely fashion, compare the reviewer recommendations, provider response and claims history regarding
    A. Action is taken in response to any recommendations
    B. Claims records are consistent with intended response
    C. Any action taken in response is sustained (for example, recipient does not just consult another provider to circumvent any change in treatment regimen)
    D. Assess the effect of alternative communication strategies between AHCA and the providers for quality assurance and for program improvement.

    Specify a process for submitting any recommendations at prescribed intervals.

12. Investigate criteria for targeting patients who are the most likely to benefit from case review, e.g.,
    A. By disease; by severity of disease; by specific multiple-morbidity combinations
    B. Post-discharge from institutional setting

Modifications for Waiver Extension Phase

13. Provide opportunities for consultation among performing providers, reviewers and/or field pharmacists upon request.

14. Create a process by which a primary care provider, a clinical reviewer, or a field pharmacist can refer a patient for a more intensive MTM review; or to a program that incorporates proven disease management modalities:
    - a thorough patient evaluation
    - an inter-disciplinary team of providers
    - use of electronic medical record technology
    - deployment of home health technology (i.e., telehealth)
    - access to community-based support services that are sensitive to population needs and local systems of care.

    Appropriate referral options may include a care coordination program; a home and community based services waiver program; a Medical Home demonstration project; enrollment in a Managed Care Organization that serves special needs populations; and assignment of a patient case manager.

Attachment IV

Analysis of Paid Claims Data: Findings and Conclusions

The Florida Department of Children and Families (DCF) certifies persons eligible for MEDS-AD. Upon request of the Medicaid Pharmacy Bureau, DCF provided a list of all persons who had been certified for MEDS-AD from January 1, 2006 through September 30, 2009. Data analysts at AHCA then matched the list of eligibles to the Medicaid recipient enrollment file and to the paid claims file. All files were transferred to UF for review and analysis.

There are three eligibility categories within the MEDS-AD Program. This evaluation concerns persons in Medicaid Eligibility Group (MEG)1 only. It is important to note that at any point in time there will be individuals moving from one eligibility group to another.

It is also important to note that the state's fiscal intermediary changed on July 1, 2008. File configuration for the relevant administrative data changed along with the contractor. This fact provided its own set of challenges with identifying and retrieving the requisite data in addition to procuring a data analyst who could perform the task using the new vendor's software.

Multiple reconciliation strategies were applied to the data set to verify the inclusion of all recipients targeted for the MEDS-AD intervention and those included on the list of beneficiaries selected for a telephone survey regarding patient satisfaction with the MEDS-AD program. However, the results are subject to the limitations described.

Table 1. Total Prescription Claims Paid (average amount paid per beneficiary per month by date of service)[2]

	Pre-intervention Period Jan 06 – Sep 07 (21 months)	Intervention Period[1] Oct 07 – Dec 08 (15 months)	Post Intervention Period Jan 09 – Sep 09 (9 months)
MEDS-AD Letter Intervention Group	$523.33 (N=10796 Months, 603 unique individuals)	$731.05 (N=7734 Months, 647 unique individuals)	$802.41 (N=2900 Months, 413 unique individuals)
MEDS-AD Letter Intervention Control Group (N=700)	$241.77 (N=7997 Months, 536 unique individuals)	$353.34 (N=6356 Months, 560 unique individuals)	$417.56 (N=3399 Months, 494 unique individuals)
All other MEDS-AD beneficiaries, ambulatory setting, not dual eligible (N=	$176.50 (N=722016 Months, 65012 unique individuals)	$317.90 (N=363586 Months, 49978 unique individuals)	$327.41 (N=233507 Months, 44697 unique individuals)

Table 2. Other Paid Claims (average amount paid per beneficiary per month by date of service)

	Pre-intervention Period Jan 06 – Sep 07 (21 months)	Intervention Period Oct 07 – Dec 08 (15 months)	Post Intervention Period Jan 09 – Sep 09 (9 months)
MEDS-AD Letter Intervention Group (N=715)	$1147.29 (N=10796 Months, 603 unique individuals)	$1408.49 (N=7734 Months, 647 unique individuals)	$1014.83 (N=2900 Months, 413 unique individuals)
MEDS-AD Letter Intervention Control Group (N=700)	$542.35 (N=7997 Months, 536 unique individuals)	$732.30 (N=6356 Months, 560 unique individuals)	$704.45 (N=3399 Months, 494 unique individuals)
All other MEDS-AD beneficiaries, ambulatory setting, not dual eligible (N=	$804.33 (N=722016 Months, 65012 unique individuals)	$1278.75 (N=363586 Months, 49978 unique individuals)	$1354.53 (N=233507 Months, 44697 unique individuals)

[1] Change of fiscal intermediary on July 1, 2008 with changes in recipient ID (from 9 to 1- digits), new file configuration and content

[2] Includes all beneficiaries in the applicable group having ≥ 6 months of enrollment in the MEDS-AD program
Excludes: beneficiaries enrolled in managed care plans; beneficiaries not matched in the eligibility and/or paid claims file (N=118?)

Table 3. Total Paid Claims (average amount paid per beneficiary per month by date of service)

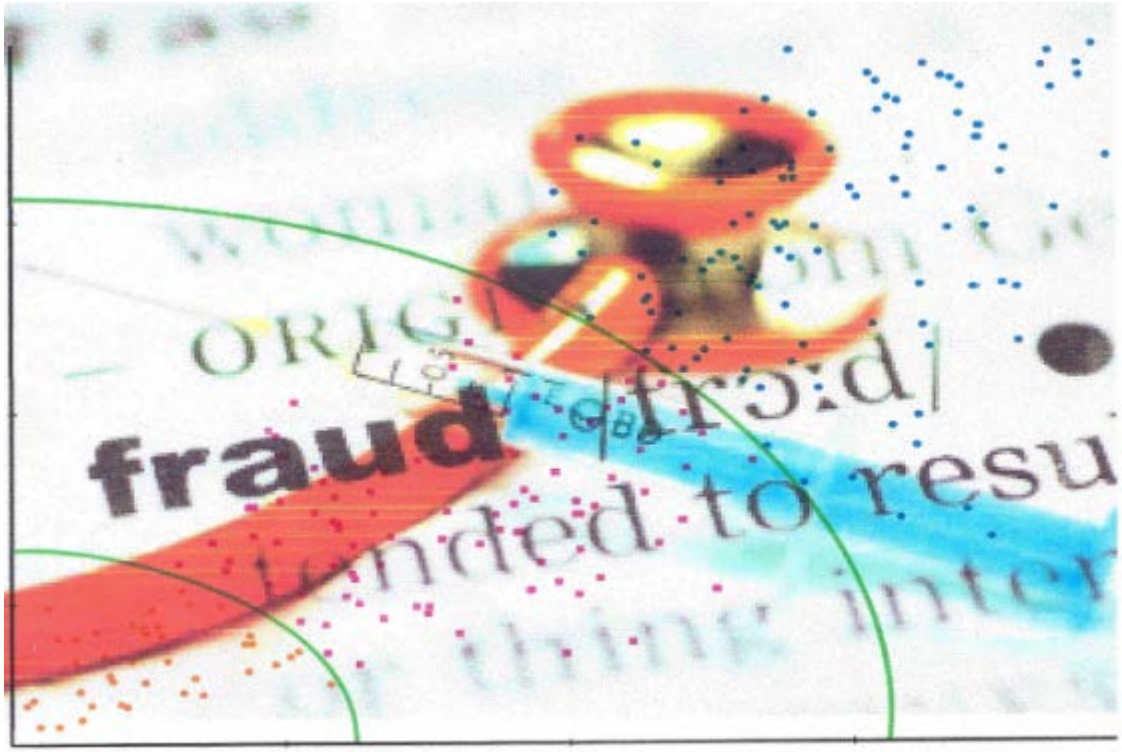
	Pre-intervention Period Jan 06 – Sep 07 (21 months)	Intervention Period Oct 07 – Dec 08 (15 months)	Post Intervention Period Jan 09 – Sep 09 (9 months)
MEDS-AD Letter Intervention Group (N=715)	$1670.62 (N=10796 Months, 603 unique individuals)	$2139.53 (N=7734 Months, 647 unique individuals)	$1817.24 (N=2900 Months, 413 unique individuals)
MEDS-AD Letter Intervention Control Group (N=700)	$784.12 (N=7997 Months, 536 unique individuals)	$1085.63 (N=6356 Months, 560 unique individuals)	$1122.01 (N=3399 Months, 494 unique individuals)
All other MEDS-AD beneficiaries, ambulatory setting, not dual eligible (N=	$980.83 (N=722016 Months, 65012 unique individuals)	$1596.65 (N=363586 Months, 49978 unique individuals)	$1681.93 (N=233507 Months, 44697 unique individuals)

[i] Note: Data extraction and analyses were conducted in large part by Jianyi Zhang, Ph.D. His contributions are greatly appreciated.

FINAL MEDS AD Waiver Evaluation: Data Mining Activities Interim Report Preliminary Findings

Prepared for
Florida Medicaid MED 143

Project 2, Deliverable 9



College of Medicine
Florida State University
June 27, 2013

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List of acronyms

AHCA = Agency for Health Care Administration

CCEB = Complex Civil Enforcement Bureau

CFR = Code of Federal Regulations

DMAR = Data Mining Analyst Report

DMG = Data Mining Grant

DMI = Data Mining initiative

DOH = Department of Health

DSS = Decision Support System

FDLE = Florida Department of Law Enforcement

FFP = Federal Financial Participation

FFY = Federal Fiscal year

FL.AG = Florida Attorney General

FL.GR = Florida General Revenue/Program Income

FLEAT = Florida Law Enforcement Analyst Training

FTE = Full Time Equivalent

MEDS-AD = Medicaid Medications for Aged and Disabled

MFCU = Medicaid Fraud Control Unit

MOU = Memorandum of Understanding

MPI = Medicaid Program Integrity

SCPP = Structure-Conduct-Performance-Paradigm

SFY = State Fiscal year

YTD = year to date

1. Background and Perspective

Expenditures for the Florida Medicaid Program exceeded $18 billion for services rendered between July 1, 2011 and June 30, 2012. While the vast majority of those expenditures were for needed services, some of the expenditures were the result of fraudulent or abusive billing.

Fraud can be defined as: A knowing or intentional deception or misrepresentation made by a person with the knowledge that the deception could result in some unauthorized benefit to oneself or some other person.

Abuse can be defined as: Provider practices that are inconsistent with generally accepted business or medical practices and that result in an unnecessary cost to the Medicaid program or in reimbursement for goods or services that are not medically necessary or that fail to meet professionally recognized standards for health care.

In Florida, the investigation of suspected Medicaid fraud is under the auspices of the Florida Attorney General (FL.AG) at its Medicaid Fraud Control Unit (MFCU), while cases of suspected abuse are handled by the Bureau of Medicaid Program Integrity (MPI),[1] located in the Office of the Inspector General of the Florida Agency for Health Care Administration (AHCA). Staffers from AHCA, MFCU, and the Department of Health (DOH) meet regularly to discuss major issues, strategies, joint projects and other matters concerning health care.

Suspected fraudulent billing practices can be discovered in many ways, one of which is analysis of claims Medicaid has paid using AHCA's Decision Support System (DSS), which is a subset of

[1] Authorized by Section 409.913, Florida Statutes, MPI audits and investigates providers suspected of overbilling or defrauding Florida's Medicaid program, recovers overpayments, issues administrative sanctions and refers cases of suspected fraud for criminal investigation.

the Medicaid Management Information System claims database. Data mining is usually perceived as an extension of traditional data analyses and statistical approaches, incorporating analytical techniques drawn from a range of disciplines. It is important to note that data mining in itself is only a tool, since it does not eliminate the need to know the business, to understand the data, and the analytical methods involved, nor does it indicate a value to the results of the analyses. Therefore, data mining results always need translation into meaningful information. In essence there are two types or approaches in data mining; namely, approaches in which data is analyzed based on overall patterns or structure, and approaches seeking to identify departures from a norm or detect unusual data patterns. To locate these overall or specific patterns, often instructions (decision rules) or algorithms are used. There are many data-mining methodologies,[2] and all involve an assessment or evaluation of the specific approach used.[3]

As the designated "single-state-agency," AHCA's data mining activities are supported by federal funding through the Federal Financial Participation (FFP) program. Federal Financial Participation, however, has not been available to support data mining activities of staff at the Florida Attorney General's Office. The Attorney General's Office and AHCA jointly requested that this prohibition[4] be waived. On July 15, 2010, the Centers for Medicare and Medicaid Services granted a waiver of CFR 1007.19.

The Florida Medicaid Medications for Aged and Disabled (MEDS-AD) demonstration waiver provides Medicaid coverage for aged or disabled residents of the State of Florida with incomes at or below 88 percent of the federal poverty level and assets at or below $5,000 for an individual (or $6,000 for a couple). As a result of the waiver of CFR 1007.19, the MEDS-AD waiver was amended to include activities related to data mining. In particular, the amendment states:

[2] Such as SEMMA for SAS and CRISP-DM for SPSS.
[3] For further reading reference is made to J. Jackson: Data Mining: A Conceptual Overview, Communications of the Association for Information Systems (Volume 8, 2002) 267-296, and
Chung H.M.l. and P. Gray, "Current Issues in Data Mining," *Journal of Management Information Systems*, forthcoming. http://www.csulb.edu/~imats/hmchung/rp1.htm
[4] Found in Code of Federal Regulations (CFR) 1007.19

Florida Statutes § 409.913(1)

The evaluation of the MEDS-AD will be revised to include tracking of costs of data mining activities and the related recoveries or measurable cost avoidance directly attributable to analysis performed by MFCU analysts in this demonstration.

The state's quarterly reporting schedule will continue, and will include the status and progress of data mining activities related to this amendment. Tracking of costs and recoveries will be submitted by the state annually within 60 days of the end of each waiver year.

On September 13, 2010, AHCA (the "Agency") and the Florida Attorney General entered into a Memorandum of Understanding (MOU) that specifies the roles and responsibilities of the two organizations relative to data mining activities. Included in the MOU are the following provisions:[5]

Coordinate all data mining activities with the Agency, prior to commencement, to ensure actions are not duplicated.

Approximately biweekly, but in no case less than monthly, designated personnel with the parties will meet in-person to discuss data mining projects.

At or before such meeting, MFCU personnel will present Agency personnel with written proposals for data mining projects by the MFCU, if any, to review whether the proposed data mining objectives duplicate existing, or recently completed, Agency data mining projects. Meetings will also provide an opportunity to interpret the outcome of data output generated by mining projects and to exchange information regarding potential projects that will enhance the productivity and efficiency of MFCU and Agency resources.

[5] MOU Section IV.A.11 and Section VI A.2 and A.3 in particular.

By approximately the next biweekly meeting, but in any case, within one month, the Agency will provide the MFCU with written verification whether the MFCU's data mining objectives are duplicative of an existing, or recently completed, Agency data mining project. The Agency may also suggest a coordinated effort between the parties with respect to proposed data mining objectives.

In October 2010, the MFCU at the Florida Attorney General's Office commenced data mining activity.

This report presents an evaluation of the MEDS-AD waiver: Data Mining Activities, contingent on the waiver of CFR 1007.19. The purpose of the evaluation is to determine if data mining activities by the Attorney General's MFCU through the MEDS-AD 1115 (a) Demonstration Waiver have resulted in the recovery of Medicaid funds that were paid as a result of fraudulent activity on the part of Medicaid providers.

A couple of considerations must be noted. First, the Data Mining Initiative (DMI) cannot be seen apart or isolated from the activities conducted within the MFCU of the Attorney General's Office, i.e. data mining reflects on the office's overall performance. In addition, given the MOU, this performance mutually reflects on both the Florida Attorney General's Office and AHCA. Although other state and federal agencies and offices may be added, the focus of this evaluation will be at the level of MFCU and the areas of understanding between the two MOU parties, this especially with respect to the waiver provision on duplication, and the opportunity to discuss, interpret and exchange information regarding potential projects that will enhance the productivity and efficiency of MFCU and AHCA's resources. Second, the timeframe for the evaluation is rather short and only covers the timeframe of October 2010 through September 2013 (YTD)[6] (i.e., FFY 2010-11 through FFY 2012-13). Given that it takes time to build legal cases, sometimes long after data mining is done, results that can be traced to MFCU data

[6] All analyses done in this deliverable are based on year-to-date data for FFY 2012-13, unless otherwise specified.

mining activities under the waiver may not be readily available as per the timeframe of evaluation. Third, MFCU activities related to physical abuse, neglect and financial exploitation (PANE) of patients residing in long-term care facilities are not considered in this evaluation, since they don't pertain to the data mining activities

Concerning the evaluation, data mining is perceived as a tool adding a dimension to the work structure within the Florida Attorney General's Office MFCU, and likewise an opportunity to add to the inter-agency activities between the Attorney General's Office, AHCA, and possibly other state and federal agencies as well. This added dimension is highly qualitative in nature, and is only measurable by derived input variables and as far as it impacts performance. Performance will be measured in terms of output (e.g., cases) and outcomes (e.g., monies recovered); especially once it can be related to the data mining activities of the MFCU, the target activities/agency of the waiver. In addition, it is incumbent on the researchers to provide recommendations on the process of data mining and possibly on the inter-agency cooperation as mentioned.

In order to provide different perspectives, various methodologies will be used for different aspects of the evaluation; ranging from comparative analyses, attendance of meetings, interviews, literature review, questionnaires, as well as a case file review to gather information and develop insights for evaluation purposes. With respect to the evaluation, the question is:

> ***Did the Data Mining Initiative (DMI) at the Medicaid Fraud Control Unit at the Florida Attorney General's Office add significantly to the results of Medicaid fraud investigation in the state of Florida?***

In essence this demands a comparison of outcomes with and without the demonstration waiver, as illustrated in Figure 1, with exclusion or inclusion of the colored field named DMI.

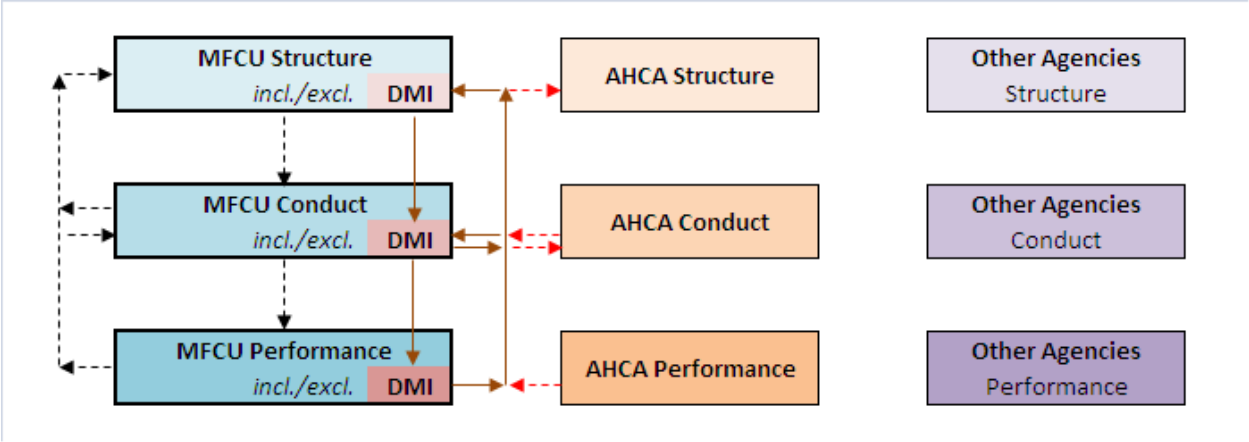


Figure 1: Structure-Conduct-Performance-Paradigm (SCPP) transposed on MFCU/DMI, AHCA and Other State and Federal Agencies.

The base framework used is the Structure-Conduct-Performance-Paradigm (SCPP) of Edward S. Mason.[7] According to this framework, an organization's performance depends on the conduct of its employees, which then depends on the structure. The reverse is also possible, e.g., once performance is determined or known, conduct and/or structure may change. In adding the Data Mining Initiative (DMI), based on the demonstration waiver and MOU, all levels will change inclusive between MFCU and DMI, as well as MFCU/DMI and AHCA (relevant arrows shown). The demonstration waiver, the MOU, and in particular the biweekly referral meeting and monthly data mining meeting (added structure elements) to discuss, interpret and exchange information on data mining projects (addition to conduct), enhances productivity and efficiency of MFCU and AHCA's resources (added performance). (Note: the red dashed arrows indicate the AHCA contributions on the various levels, as far as they pertain to the added DMI). Other agencies are also depicted in Figure 1, given that other agencies are consulted as well, but arrows are omitted since these effects fall outside the scope of this evaluation. Noteworthy amongst others is also the commitment by MFCU to have adequate trained personnel as per the MOU (likewise an added structure element). In order to provide analyses on both scenarios

[7] The paradigm was originally developed by Edward S. Mason, Harvard, in the 1930's. Since then it has been developed by J.S. Bain and other market structuralists in the field of Industrial Organization. It has also found use in amongst others the study of Economic Systems, and in Management and Organization.

(excluding versus including DMI), time series are used from FFY 2007-08 through FFY 2012-13, thus beginning a couple of years prior to the date that the demonstration waiver was granted.

In section 2, some available statistics are presented, relevant to the fraud investigation activities of the MFCU, including statistics of recent data mining activities. Preliminary results from interviews held with Key Informants on data mining are the subject of section 3. Section 4 covers the overall preliminary evaluation, and a preliminary interim conclusion is presented in Section 5.

2. Data Mining Activities Statistics

This section focuses on descriptive statistics based on data requests submitted to the Florida Attorney General's Office. It will cover more general statistics, as well as specific statistics on the data mining activities within the Medicaid Fraud Control Unit (MFCU). The purpose of presenting both types of statistics is to perceive the data mining activities in the proper relative context of the MFCU (as per Figure 1), as well as to present possible variables for the Data Mining Initiative (DMI) evaluation in section 4. This section will cover input variables (section 2.1), output variables (section 2.2), and outcome variables (section 2.3). Section 3 will cover the data mining process in further detail, based on interviews with key personnel and data mining analysts (akin to throughput variables). Figure 2 may help in perceiving the various variable categories in the proper setting. Given the variables, comparing input and output provides a measure of efficiency, while comparing input with outcome provides a measure of effectiveness. The presentation of data will be in accordance with the FFY, October 1st through September 30th.

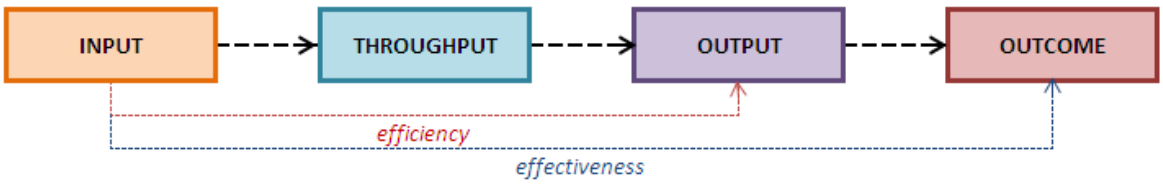


Figure 2: Input – Throughput – Output – Outcome Model.

2.1 Input: Budget, FTEs, and Training.

According to the requirements of federal statutes and regulations concerning the Federal Financial Participation (FFP), 75 percent of funding for the MFCU is provided by means of federal grants, and 25 percent are matching funds out of the State of Florida's General Revenue Fund and program income. Figure 3 depicts the MFCU budgets, inclusive of the FFP grants and the state matching funds, for FFY 2006-07 through FFY 2012-13. In addition, the MFCU funds provided through the FFP data mining grant (DMG) with matching state funds are included for FFYs 2010-11 through 2012-13.

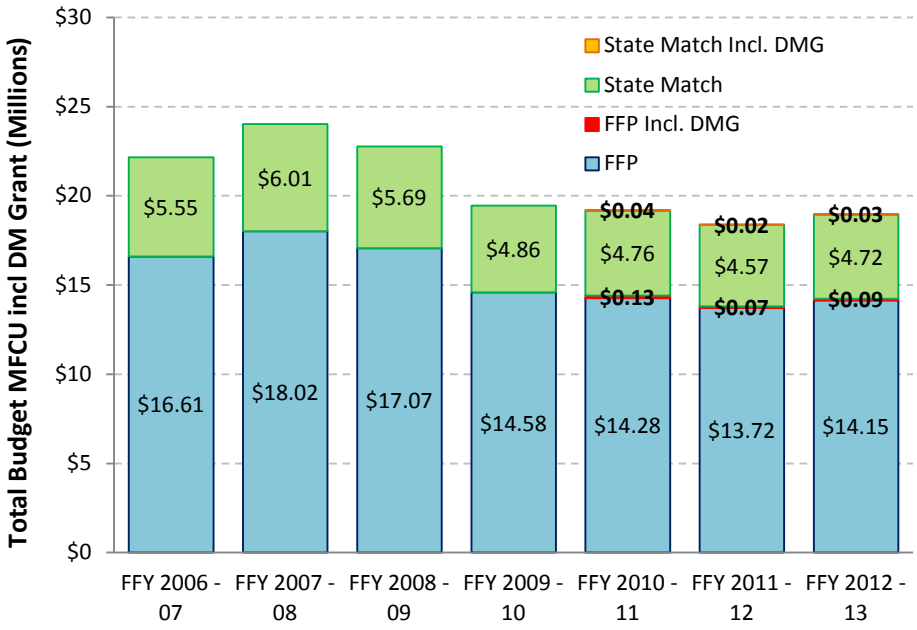


Figure 3: MFCU Budget, MFCU Grant and Data Mining Grant (Federal and State Matching Funds), FFY 2006-07 through FFY 2012-13.

As can be evidenced from Figure 3, the average total MFCU budget is approximately $20.5 million, with $15.4 million coming from the MFCU Grant and $ 5.1 million from State of Florida

matching funds. In focusing on the latter three years depicted, both FFY 2010-11 and FFY 2011-12 saw marginal budget declines, relative to the previous fiscal year budgets, while the budget for FFY 2012-13 came with a marginal increase. The added Data Mining Grants (both Federal Funding Participation (FFP) funds and Florida state matching funds), since FFY 2010-11, have had little impact on the budget and development thereof as mentioned, this given the relatively small contributions to the overall budget. The Data Mining Grant (DMG) therefore adds less than one percent (or approximately 0.7%) to the total MFCU budget. Figure 3a depicts the data mining budgets; including both FFP grant and Florida state matching funds, for FFY 2010-11 through FFY 2012-13.

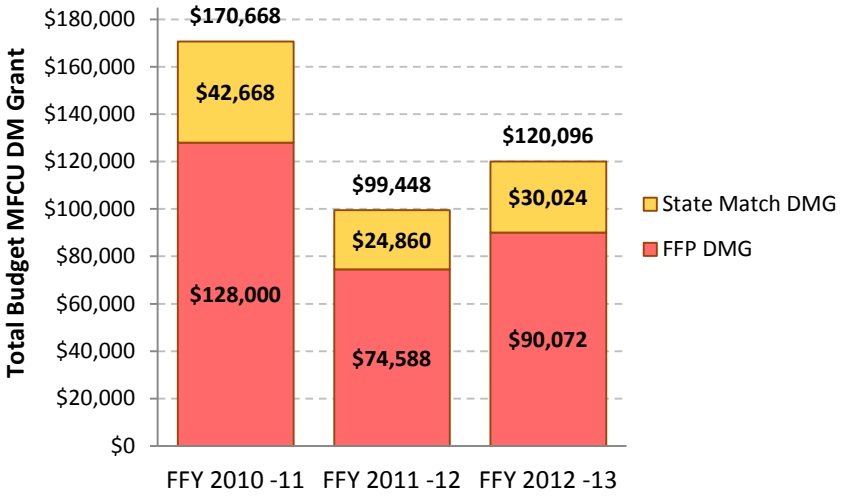


Figure 3a: MFCU Data Mining Initiative (DMI) Budget, Federal Data Mining Grant and Florida State Matching Funds, FFY 2010-11 through FFY 2012-13.

The lion's share, or 53.6 percent, of the FFY 2010-11 data mining budget was appropriated to "Equipment." The other two fiscal year budgets, namely FFY 2011-12 and FFY 2012-13, appropriated on average 51.3 percent of the respective budgets to "Salaries and Benefits." Although budgets are indicative for potential means of input, it is the actual allocation or expenditures that are relevant as a more direct input variable, and thus for the evaluation at hand. Both Figures 4 and 4a depict the differences between the budgets and expenditures, for

MFCU and DMI respectively, with the data on budgets from Figures 3 and 3a as a backdrop for comparative purposes. Both Figure 4 and 4a show that actual expenditures are less than the respective budgets. Data for the FFY 2012-13 is year-to-date (YTD).

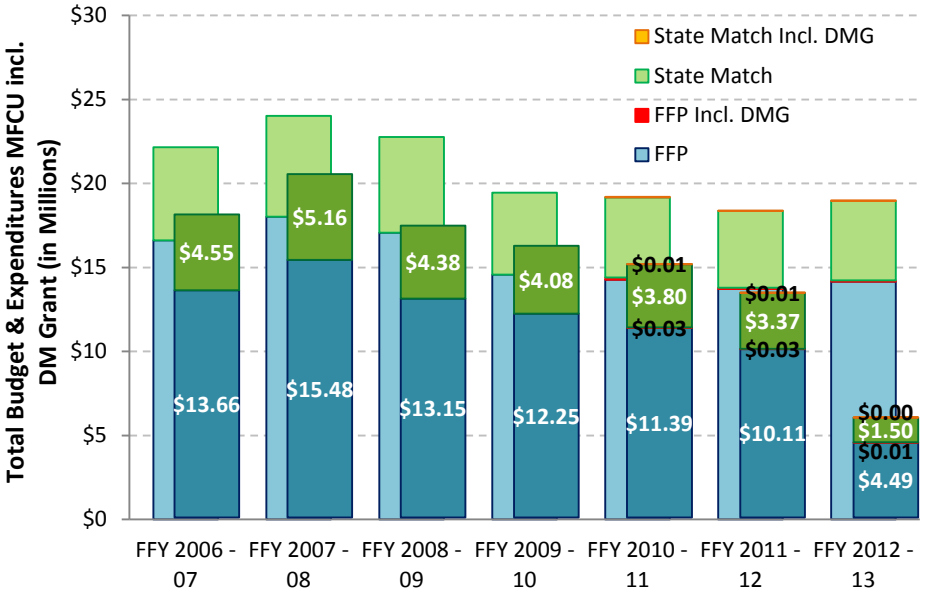


Figure 4: MFCU Budget and Expenditures, MFCU Grant and Data Mining Grant, FFY 2006-07 through FFY 2012-13 (YTD).

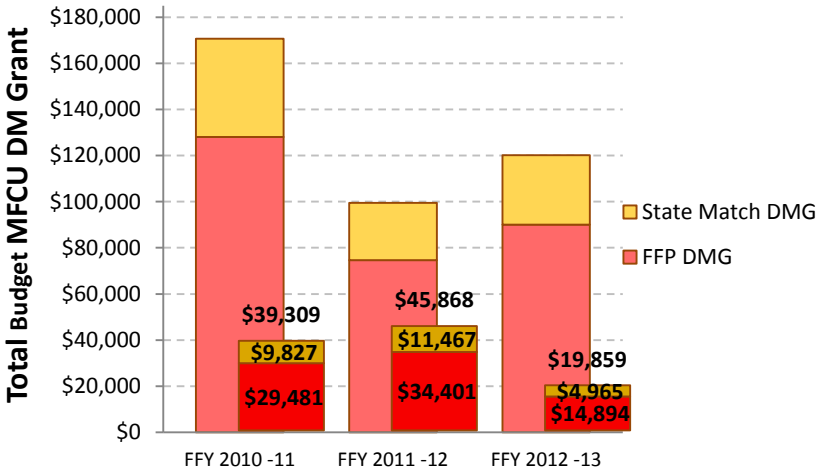


Figure 4a: MFCU Data Mining Initiative Budget and Expenditures, Federal Grant and Florida State Matching Funds, FFY 2010-11 through FFY 2012-13 (YTD).

Total expenditures by MFCU, on average, are approximately 80 percent of the fiscal year budgets, with a low of 73.5 percent for FFY 2011-12. For the DMI budget in particular (Figure 4a), expenditures come out at approximately 23.0 percent and 46.1 percent, for the two fiscal years available on the Data Mining Initiative (DMI). The lower level of expenditures is in part due to unfunded positions within MFCU.[8] As indicated, the specific expenditure data on both MFCU and DMI will be used as an input variable for the evaluation in section 4, albeit with some further corrections to be applied (e.g., to account for both time allocated for training and positions on reserve).

Table 1 provides some data on full-time equivalent (FTE) employment, both by type and by FFY 2006-07 through FFY 2012-13. The top row presents the total FTEs budgeted, while the second through fifth row provide a further breakdown by type of employment. The subsequent four rows give a breakdown and the total of FTE employment on reserve respectively, leading to a sub-total of FTEs applied or used by MFCU. Subsequently, the data mining analysts FTEs are added, from FFY 2010-11 onwards, resulting in total FTEs applied. Table 1a provides a further regional breakdown of data mining analysts by Florida MFCU region.

[8] Other reasons are as of yet unknown.

Table 1: MFCU Full Time Equivalent (FTE) Employment incl. Data Mining Analysts, Budgeted versus Applied, FFY 2006-07 through FFY 2012-13.

		FFY 2006-07	*FFY 2007-08*	*FFY 2008-09*	*FFY 2009-10*	*FFY 2010-11*	*FFY 2011-12*	*FFY 2012-13 (YTD)*
Total FTEs Budgeted		**232**	**232**	**232**	**217**	**214**	**210**	**210**
	Attorneys	26	26	26	27	27	27	27
	Investigators	131	131	106	101	100	97	97
	Auditors	7	7	7	7	10	10	10
	Support Staff	68	68	63	52	52	53	53
Reserve	Attorney			1	0	0	0	0
Reserve	Investigators	0	0	24	24	19	19	19
Reserve	Support Staff	0	0	5	6	6	4	4
				-30	-30	-25	-23	-23
Subtotal FTEs Applied		**232**	**232**	**202**	**187**	**189**	**187**	**187**
Data Mining Analysts Assigned FTE's (Tasks)						**0.45**	**0.75**	**0.75**
TOTAL FTEs Applied		**232**	**232**	**202**	**187**	**189.45**	**187.75**	**187.75**

Table 1a: MFCU Full Time Equivalent (FTE) Data Mining Analysts and Approximate Hours Devoted to Data Mining, per MFCU Region, FFY 2006-07 through FFY 2012-13.

DATA MINING GRANT					
		Region / Hours devoted to DMI			
	DMI Analysts FTEs	Northern Hours (%FTE)	Central Hours (%)	Southern Hours (%)	Total Hours (%)[9]
FY 2010-11	**0.45**	270 (15)	270 (15)	270 (15)	810 (45)
FY 2011-12	**0.75**	450 (25)	450 (25)	450 (25)	1.350 (75)
FY 2012-13	**0.75**	450 (25)	450 (25)	450 (25)	1.350 (75)

It is noted that the assigned data mining analysts FTEs (or better assigned data mining tasks) is quite small with respect to the overall MFCU employment, adding on average approximately 0.34 percent to the total formation. For evaluation purposes it is relevant to exclude the reserve FTE positions from input. In addition, on the data mining analysts' FTEs, it must be noted that two of the three original data mining analysts with the MFCU left the office in the course of FFY 2011-12.[10] The positions were filled by existing employees who were "brought up

[9] Calculus based on 1.800 hours per FTE.
[10] Exact timeframes are presently unknown, and thus its impact on applied FTEs/hours is still to be determined.

to speed" in a relative short timeframe. In principle, the input variable of data mining analysts FTEs needs to be adjusted for this timely impediment for further evaluation purposes in section 4. However, it was conveyed that little to no time was lost with the transition, and a qualitative judgment on difference in expertise and experience of data mining analysts with the specific data mining could not be made. Therefore no further adjustments are made, but the data presented needs to be valued in light of the transitions mentioned pro memory.

During the FFY 2011-12, the Medicaid Fraud Control Unit staff attended a total of 4,437.25 hours of training, while in FFY 2010-11 4,798.75 hours of training were attended. Given that there were 187 full-time employees (FTEs) assigned to the MFCU in FFY 2011-12, and 189 in FFY 2010-11, this means an average of approximately 23.6 and 25.3 hours in training per year respectively. Data mining analysts in particular attended 653.25 hours, 189 hours, and 66 hours (YTD) of training, during the federal fiscal years FFY 2010-11 through FFY 2012-13 respectively. Given that it doesn't make sense to divide the hours of training by FTEs, division by person delivers an average of 217.75 hours, 63 hours, and 22 hours (YTD) respectively for the data mining analysts.[11]

The focus of the MFCU data mining analysts' training in FFY 2010-11 was primarily on criminal analytics to increase the synergy between data mining activities and the fraud-oriented work context of the Florida Attorney General's Office, e.g., some 480 hours (or 73.5% of total training hours) were allocated towards "Florida Law Enforcement Analyst Training (FLEAT)." The main training batch of training hours was allocated towards Decision Support System (DSS) support contractor training (46 hours or 7.0%), followed by an Intelligence Officer Course (40 hours or 6.1%). In addition, seminars and webinars were attended. Main training providers were the Florida Department of Law Enforcement (FDLE), with 495 hours (or 75.8% of total training

[11] In taking approximately 1.794 hours per year for a full FTE, as per the Bureau of Labor Statistics, this comes out at 0.1214 FTE, 0.0351 FTE and 0.0123 FTE (YTD) per the fiscal years in consideration. Data retrieved from http://www.bls.gov/opub/mlr/2009/05/art1full.pdf

hours), and the AHCA, with 71 hours (or 11.3% of total training hours). Table 2 shows the top six course titles in training hours allocated in FFY 2011-12, and FFY 2012-13 (YTD) respectively. As seen from the table, the current scope of training is more diverse as compared to the first year of training, with its main emphasis of training on legal practices.

Table 2: Top Six Course Titles in Time Allocation for Training of MFCU Data Mining Analysts, FFY 2011-12 and FFY 2012-13 (YTD).

FFY 2011-12	percentage	hours
Financial Records Examination and Analysis - FREA	16.9%	32
Criminal Interview and Interrogations	12.7%	24
Tools of the Trade-Building Elder Financial Exploitation Cases	12.7%	24
Elder Abuse Training Program	8.5%	16
Certified Law Enforcement Analyst Training Seminar	8.5%	16
Courtroom Testimony	8.5%	16
	67.7%	**128**
FFY 2012-13 (YTD)		
Interactions between Medicaid Fraud Control Units and Program Integrity Units Symposium	36.4%	24
Cyber-Investigation 105 - Basic Cell Phone Investigations	24.2%	16
Exploring Interactive and Visual Data Mining	9.1%	6
Hemisphere Project	4.5%	3
State Medicaid Management Information System Long Term Care Training	4.5%	3
What Investigators & Analysts Need to Know about Facebook & Online Social Media: Awareness & Education Introductory Webinar	4.5%	3
	83.3%	**55**

2.2 Output: Complaints, Opened New Cases, Cases Investigated, and Disposition of Cases

Measures of outcome include numbers of "MFCU-opened" new cases, cases investigated, and cases closed. Complaints serve as the basis for most investigations done by the MFCU. During FFY 2011-12, the MFCU received a total of 1,317 complaints of which 292 (22.2%) were opened as operational cases. For FFY 2010-11 the MFCU opened a total of 354 new cases out of 1,661 complaints (or 21.3%). Data is depicted in Figure 5.

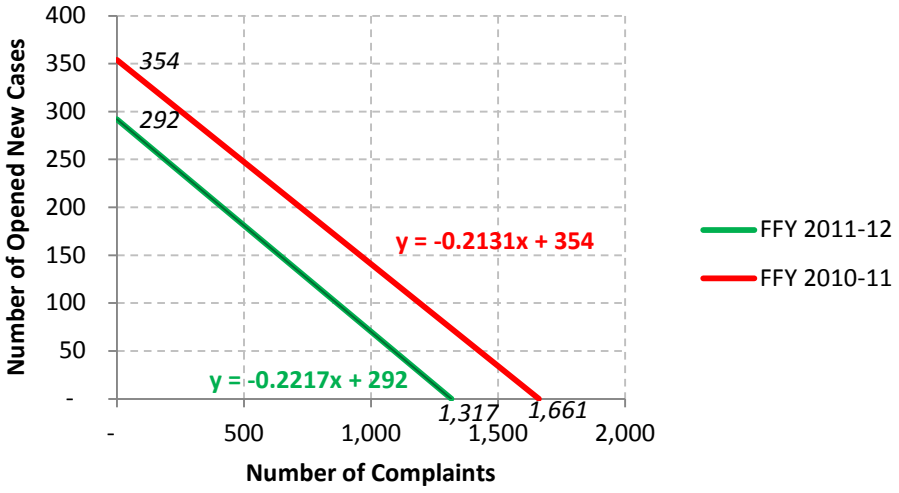


Figure 5: "MFCU-Opened" New Cases out of all Complaints, FFY 2010-11 through FFY 2011-12.

From Figure 5 it can be observed that the year to year opened new cases incidence ratio of opened new cases on complaints rose slightly from 0.2131 to 0.2217.

Table 3 provides data on the number of fraud complaints received by the MFCU. Average annual number of fraud complaints received by MFCU is 718 complaints (excluding FFY 2012-13).

Table 3: The Number of all Fraud Complaints Received by the MFCU, FFY 2006-07 through FFY 20120-13 (YTD).

Federal Fiscal Year	Number of Fraud Complaints Received
FFY 2006-07	498
FFY 2007-08	581
FFY 2008-09	510
FFY 2009-10	1171
FFY 2010-11	842
FFY 2011-12	707
FFY 2012-13 (YTD)	431

Table 4 on the next page gives an overview of the number of fraud complaints received by the MFCU, broken down by source, for the FFY 2010-11 through FFY 20120-13 (YTD). As can be evidenced from the Table 4, the number of complaints received by the source MFCU Data Mining Initiative is 27, 16, and 9 (or 3.2%, 2.3% and 2.1%) respectively for the three FFYs mentioned. Table 4a provides a selection of the same data i.e., the top eight sources of fraud complaints, with the MFCU Data Mining Initiative ranking as eight largest source, this based on relative averages for the three years FFY 2010-11 through FFY 2012-13 (YTD).

Table 4a: The Top Eight Sources by Number of all Fraud Complaints Received by the MFCU, Broken Down by Source, FFY 2010-11 through FFY 2012-13 (YTD).

	FFY 2010-11	FFY 2011-12	FFY 2012-13 (YTD)	Relative total by source FFY2010-11 through FFY 2012-13
Citizen	301	198	91	**29.8%**
Qui Tam	127	80	66	**13.8%**
Medicaid Recipient	50	108	95	**12.8%**
Family Member	22	82	69	**8.7%**
Employee	29	58	22	**5.5%**
AHCA - Medicaid Program Integrity	61	30	14	**5.3%**
Medicaid Provider	28	21	18	**3.4%**
MFCU Data Mining Initiative	**27**	**16**	**9**	**2.6%**
Total Number of Complaints	**842**	**707**	**431**	100%

Table 4: The Number of all Fraud Complaints Received by the MFCU, Broken Down by Source, FFY 2010-11 through FFY 2012-13 (YTD).

	FFY 2010-11	FFY 2011-12	FFY 2012-13 (YTD)		FFY 2010-11	FFY 2011-12	FFY 2012-13 (YTD)
AHCA - ALF Enforcement Unit			1	Family Member	22	82	69
AHCA - District Office	7	1		FBI - Federal Bureau of	4		3
AHCA - Fraud Prevention & Compliance Unit (FPCU)	2	8		FDLE - Florida Dept of Law	2		
AHCA - Health Quality Assurance	13	8	6	Government Employee	2	1	
AHCA - Medicaid Program Integrity	61	30	14	HHS - Health & Human Services	5	4	
AHCA - Office of Inspector General	3	3		HHS - OIG Health & Human Services	11	7	6
AHCA - Other Units	3	1		HMO - Investigative Unit	11	5	1
AHCA - Third Party Liability	1		1	Insurance Company	2	1	
Anonymous	13			Joint Task Force	4	1	
APD - Agency for Persons with Disabilities	20	10	6	Law Enforcement Agency	7	7	1
APS - Adult Protective Services	17	5	3	Medicaid Provider	28	21	18
Citizen	301	198	91	Medicaid Recipient	50	108	95
CMS - Center for Medicare & Medicaid Services	2			MFCU - Other than Florida	4	3	2
Confidential Informant	6	3		MFCU - Statewide Intel Team	2		
Consumer Protection Agency	1			**MFCU Data Mining Initiative**	**27**	**16**	**9**
Contractor for Center for Medicare & Medicaid	7	8	2	NAAG - National Association of	1	1	
County Health Department		1		NAMFCU - National Association of			
DEA - U.S. Drug Enforcement Agency			1	Operation Spot Check		1	
Dept of Children & Families - Inspector General	1			OSWP - Office of Statewide		1	
Dept of Children & Families - Other than APS	1	4		Press Report	2	4	
Dept of Elder Affairs	1			Qui Tam	127	80	66
DOH - Dept of Health	1	2		Social Security Administration (SSA)	1	20	
DOH - Medical Quality Assurance	1	2		Spinoff Case	31		13
DOJ - Dept of Justice	3			State Agency - Other	2		
DPAF Public Assistance Fraud		1		State Attorney's Office (SAO)	1		
Elected Official	2			U.S. Attorney's Office (USAO)		1	
Employee	29	58	22	Veteran Affairs			1
Transport				**Total Number of Complaints**	**842**	**707**	**431**

Table 5 shows the top five sources of fraud complaints received by the MFCU by provider, FFY 2010-11 through FFY 2012-13 (YTD).

Table 5: Top Five Number of all Fraud Complaints Received by the MFCU, Ranked by Provider, FFY 2010-11 through FFY 2012-13 (YTD).

FY 2010-11		
TOTAL	**842**	**Cumulative percentages of top 1 - 5**
Physician (MD) - 25	153	18%
Home and Community Based Service - 67	111	31%
Pharmaceutical Manufacturer	92	42%
Pharmacy - 20	64	50%
None	43	55%
FFY 2011-12		
TOTAL	**707**	
Physician (MD) - 25	123	17%
Home and Community Based Service - 67	99	31%
Pharmacy - 20	64	40%
None	48	47%
Dentist - 35	46	54%
FFY 2012-13 (YTD)		
TOTAL	**431**	
Physician (MD) - 25	62	14%
Dentist - 35	39	23%
General Hospital - 01	34	31%
Home and Community Based Service - 67	34	39%
Pharmacy - 20	34	47%

From the Table 5 it can be taken that the category Physicians (MD) ranks first in the three years depicted. Next, both Home and Community Based Services, and Pharmacy, show up in the top five of the three years. The last column of the Table 5 provides cumulative percentages on the top sources represented, showing that the top five providers represents a cumulative 55 percent, 54 percent and 47 percent of the total number of all fraud complaints received. Table 6 shows the sources of fraud complaints by provider type, where the source was MFCU Data Mining Initiative (DMI).

Table 6: Number of Fraud Complaints Received, by Provider Type, where the Source was Data Mining Initiative, FFY 2010-11 through FFY 2012-13 (YTD).

Federal Fiscal Year	Number
FFY 2010-11	**27**
Physician (DO) - 26	4
Physician (MD) - 25	21
Therapist (PT, OT, ST, RT) - 83	2
FFY 2011-12	**16**
Home and Community Based Service - 67	12
Physician (MD) - 25	1
Therapist (PT, OT, ST, RT) - 83	3
FFY 2012-13 (YTD)	**9**
Dentist - 35	9

For the Data Mining Initiative (DMI), the largest provider category of fraud complaints was Physician (MD). The second largest provider category is Home and Community Based Service, while Dentist is the third largest category for the DMI.

Of the complaints mentioned only a subset will result in case status (for processes see Section 3). Table 3 provides information on MFCU cases investigated and opened new cases by source (sources defined per agency/category), fiscal years FFY 2006-07 through FFY 2012-13 (YTD).

Table 7: MFCU Cases Investigated, Cases Opened, and the Source of the Cases, FFY 2006-07 through FFY 2012-13 (YTD).

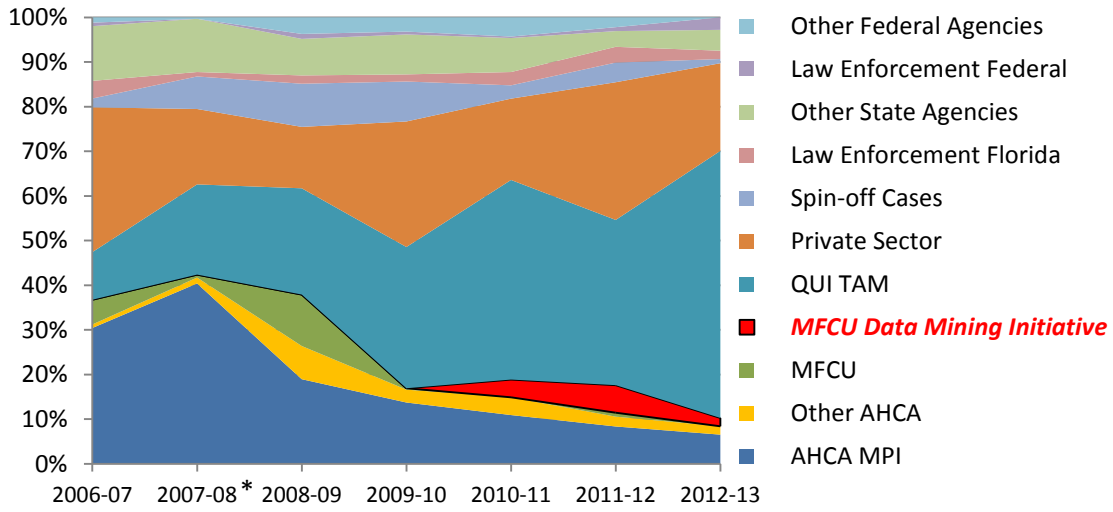
	Federal Fiscal Years						
	FFY 2006-07	FFY 2007-08	FFY 2008-09	FFY 2009-10	FFY 2010-11	FFY 2011-12	FFY 2012-13*
Cases: Investigated**	927	922	927	906	930	872	
Cases: Opened New During FFY	253	302	269	313	354	292	107
Cases: Sources of New Opened Cases (sources defined by agency):							
AHCA - Medicaid Program Integrity	77	122	51	43	33	19	7
Other AHCA	2	4	20	9	12	5	2
MFCU	14	2	31	1		2	0
MFCU Data Mining Initiative					12	14	2
Qui Tam	27	61	64	99	135	84	64
Private Sector	82	51	37	88	55	70	21
Spin-off Cases	5	22	26	28	9	10	1
Law Enforcement Florida	10	3	5	5	9	8	2
Other State Agencies	31	36	22	28	23	8	5
Law Enforcement Federal	2		3	2	1	2	3
Other Federal Agencies	3	1	10	10	13	5	0

*YTD **Caseload is a snapshot of the number of cases on the last day of the Federal Fiscal Year.

As per Table 7, the average number of cases investigated is approximately 914 cases per year (excluding FFY 2012-13). Similarly, on average approximately 278 new cases are opened during a fiscal year. The major sources of new opened cases are *qui tam*[12] and Private Sector sources (e.g., citizens, employees, providers, recipients, contractors, media), at a relative average of approximately 30.1 percent and 22.8 percent respectively. The third largest source of opened

[12] *Qui tam* is a lawsuit brought by a private citizen (popularly called a "whistle blower") against a person or company who is believed to have violated the law in the performance of a contract with the government or in violation of a government regulation, when there is a statute which provides for a penalty for such violations. Qui tam suits are brought for "the government as well as the plaintiff." In a *qui tam* action the plaintiff (the person bringing the suit) will be entitled to a percentage of the recovery of the penalty (which may include large amounts for breach of contract) as a reward for exposing the wrongdoing and recovering funds for the government. Sometimes the federal or state government will intervene and become a party to the suit in order to guarantee success and be part of any negotiations and conduct of the case. This type of action is generally based on significant violations which involve fraudulent or criminal acts, and not technical violations and/or errors. http://dictionary.law.com/default.aspx?selected=1709

new cases is the AHCA with a relative average of approximately 22.9 percent; 19.9 and 3.0 percent for AHCA-Medicaid Program Integrity and Other AHCA respectively. MFCU comes in at a relative average of approximately 2.8 percent of opened new cases, with DMI at 4.4 percent (based on FFY 2010-11 through FFY 2012-13 YTD only). DMI added 4.1 percent to the sub-total of opened new cases in FFY 2010-11, 6.6 percent of opened new cases in FFY 2011-12, and 1.9 percent of opened new cases in FFY 2012-13 (YTD). On the source or action initiating data mining, complaints are by far the prime driver of new activities, while pending (criminal) cases are next. The same data as Table 7, on opened new cases by MFCU per source, is depicted in Figure 6 in relative terms (FFY 2012-13 YTD).



** In FFY 2007-08, biweekly briefings began between AHCA MPI and MFCU with an emphasis on the quality of referrals being made to MFCU.*

Figure 6: Relative Shares of Opened New Cases by Source, FFY 2006-2007 through FFY 2012-13 (YTD).

Table 8 provides a further breakdown on opened new cases by region; DMI opened new cases versus all other cases sources, for FFY 2010-11 through FFY 2012-13 (YTD).

Table 8: Opened New Cases by Region; DMI and Other Sources, FFY 2010-11 through FFY 2012-13 (YTD).

		FFY 2010-2011		FFY 2011-2012		FFY 2012-2013 (YTD)		FFY 2010-2011	FFY 2011-2012	FFY 2012-2013 (YTD)
CCEB		135	135	89	89	64	64			
Central	DMI opened	7		6		2		58.3%	42.9%	
	Other opened	54		47		17		34.8%	37.9%	41.5%
			61		53		19			
Northern	DMI opened	3		7		-		25.0%	50.0%	
	Other opened	56		42		12		36.1%	33.9%	29.3%
			59		49		12			
Southern	DMI opened	2		1		-		16.7%	7.1%	
	Other opened	45		35		12		29.0%	28.2%	29.3%
			47		36		12			
	DMI opened	12		14		2				
	Other opened	290		213		105				
	DMI/Other*	4.1%		6.6%		1.9%				
Total			**302**		**227**		**107**			

* DMI/Other opened = 12/ (302-12), 14/ (227-14), and 2/ (107-2)

The middle columns of Table 4 show the number of DMI-attributed opened new cases (sienna colored rows) and all other sources opened new cases (blue colored rows), adding to the total in the last row of the table. As can be observed in Table 4, Complex Civil Enforcement Bureau (CCEB) is the largest source for opened new cases, with a relative average of 45.3 percent of total MFCU opened new cases for FFY 2010-11 through FFY 2012-13 (YTD). The spread of opened new cases over the MFCU regions is quite even, with Central Florida at a relative average of 20.9 percent, North Florida at 18.9 percent, and South Florida at 14.9 percent. The last three columns provide the relative shares of opened new cases per region, excluding the CCEB opened new cases (e.g., 7 / 12 = 58.3%; 54 / (290-135) = 34.8%; et cetera). The relative shares indicated in red, show that the regional DMIs added relatively more out of the DMI-opened new cases to the region, than other sources did out of all other sources. The variable "opened new cases" will be used for evaluation purposes in section 5.

Table 5 provides a list of the top five Medicaid Provider types for Medicaid fraud ranked from most to least frequency of fraud.

Table 9: Top Five of Medicaid Fraud Cases by Provider Type, FFY 2010-11 through FFY 2012-13.

Fraud Cases Opened by Provider Type		
FFY 2010-11	FFY 2011-12	FFY 2012-13 (YTD)
• Pharmaceutical Manufacturers • Home & Community Based Services • Physicians (MD) • Pharmacy • General Hospital / Therapist	• Home & Community Based Services • Pharmaceutical Manufacturers • Physicians (MD) • Pharmacy • Medical Equipment Manufacturer	• Pharmaceutical Manufacturers • Pharmacy • General Hospital / Physicians (MD) / Medical Equipment Manufacturer • Home & Community Based Services • Independent Lab

From Table 9, it can be observed that Pharmaceutical Manufacturers, Home and Community Based Services, and Physicians (MD), lead in number of opened new fraud cases according to rank numbers. Of cases attributed to the DMI, Physicians (MD), Physicians (DO), Therapists, Home and Community-Based Services, and Dentists are the main categories of opened cases by provider type. Given that cases by provider type can only be measured in frequency or rank number, this variable will not be used for further evaluation in section 4.

Table 10 gives an overview of the disposition of MFCU cases closed, as well as the subset of cases closed attributed to the Data Mining Initiative (DMI), FFY 2010-11 through FFY 2012-13 (YTD). Shade formatting in the table is provided to make a visual distinction between lower counts (blue fields), higher counts (brown and orange fields), and median counts (white fields).

Table 10: Disposition of MFCU Cases Closed and Subset of Cases Closed Attributed to the Data Mining Initiative, FFY 2010-11 through FFY 2012-13 (YTD).

	MFCU			of which: DMI		
Cases: disposition of Closed Cases	FFY 2010-11	FFY 2011-12	FFY 2012-13 (YTD)	FFY 2010-11	FFY 2011-12	FFY 2012-13 (YTD)
Administrative Closure	32	2	4			
Administrative Referral	65	55	23	1	2	
Assistance to Other Agencies		1	8		1	
Case Dismissed	22	11	6			
Case Remanded	3					
Civil Intervention Declined	5	1	1			
Civil Judgment	2	2				
Civil Settlement	45	14	17			
Consolidated	16	3	4			
Conviction	24	9	5			
Defendant Deceased			1			
Defendant filed Bankruptcy	1					
Lack of evidence	28	23	12	4	3	
Nolle Prosequi	2					
Plea Agreement	7	10	9			
Pretrial Intervention	3	2	3			
Probation			1			
Prosecution declined		6				
Resolved with Intervention	1	2				
Unfounded	18	25	9		1	
Voluntary Dismissal	11	21	24			
Grand Total Closed Cases	**285**	**187**	**127**	**5**	**7**	**0**

As can be observed from the table, only a subset of MFCU cases lead to settlement, conviction, or plea agreement. Administrative referral is 22.8 percent and 29.4 percent of MFCU cases, for FFY-2010-11 and FFY 2011-12 respectively. For the DMI these percentages are 20.0 percent and 28.6 percent respectively. Of MFCU cases, 9.8 percent and 12.3 percent are closed due to lack of evidence, in FFY-2010-11 and FFY 2011-12, respectively. Similarly, of the DMI cases 80.0 percent and 42.9 percent are closed for the same reasons. Given that the disposition of cases

closed can only be measured in frequency or rank number, this variable will not be used for further evaluation in section 4.

2.3 Outcomes: Monies Recovered

A longer term perspective on outcomes of activities by the MFCU, in terms of total amount of the monies recovered, is presented in Figure 7. Two regression lines are depicted next to the total amounts recovered, an exponential and a straight line regression. In using the exponential regression (with R^2 = 0.8484), it can be derived that the average growth in recoveries has been 26.1 percent annually. The straight regression line (with R^2=0.7823) is drawn to provide credence to the perception that recoveries might not grow as exponentially going forward.

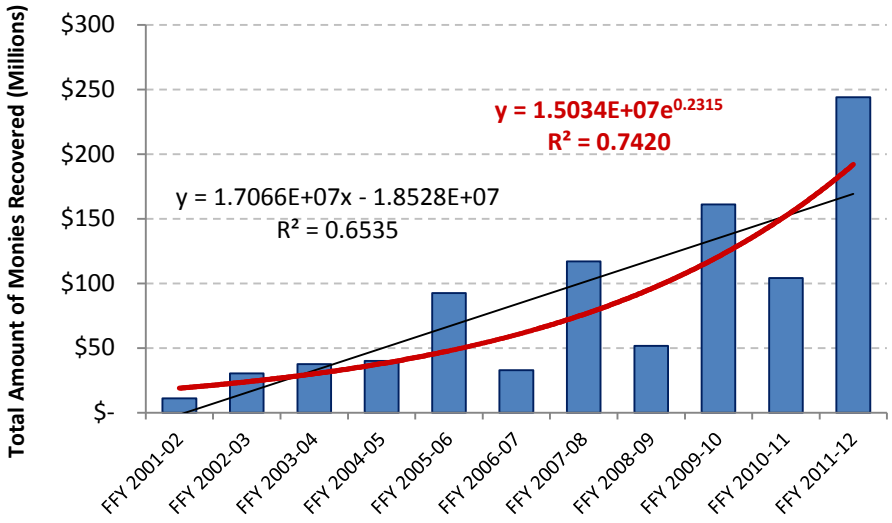


Figure 7: Total Amount of Monies Recovered by MFCU, FFY 2001-02 through FFY 2011-12.

Figure 8 compares the number of cases investigated to the total amount of monies recovered by MFCU.[13]

[13] Figure 8 and relevant narrative still based on State fiscal year (SFY).

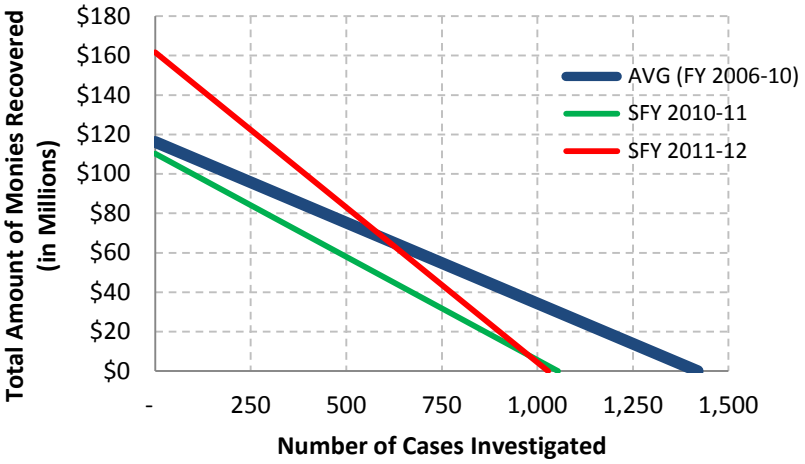


Figure 8: Number of Cases Investigated Relative to the Total Amount of Monies Recovered in Millions, Average SFY 2006-10, SFY 2010-11 and SFY 2011-12.

The bold line represents the average ratio of Total Amount of Monies Recovered versus Investigated Cases for the SFYs 2006-07 through SFY 2009-10 (1,419 cases versus $116.2 million in total recoveries). In SFY 2010-2011, MFCU recovered a total of $110.3 million on 1,054 investigated cases. With almost equal recoveries, and approximately a quarter less in number of investigated cases, this means a higher average recovery ratio on investigated cases. Similarly for SFY 2011-12, the number of cases investigated is 1,028, while the total sum of recoveries came in at $161.7 million. With an almost equal number of investigated cases the total monies recovered rose by slightly over 46 percent (approximately 46.6%). In short, the steeper the angle, the higher the ratio of monies recovered over cases investigated.

In the Florida state fiscal year (SFY) 2011-12, the total amount for civil recoveries, which include civil settlements arising from *qui tam* cases brought under Florida's False Claims Act, was $145,374,604.[14] The total for criminal recoveries based upon Medicaid fraud cases was $14,020,038.65. The total amount of monies recovered by the MFCU in SFY 2011-12 was

[14] Figure 9 and relevant narrative still based on State fiscal year (SFY).

$161,667,067.25. In addition, the MFCU's recoveries generated $22,720,363.51 through penalties imposed and $37,431.82 in interest that was deposited into the State of Florida's General Revenue Fund. The total amount of monies recovered by the MFCU for SFY 2010-11 was $110,276,959. The amount for civil recoveries by the MFCU in SFY 2010-11 was $107,079,438, and the amount for criminal recoveries based upon Medicaid fraud was $3,197,521. The Unit recoveries generated $16,414,495 through penalties imposed and $467,243 in interest deposited. Figure 9 depicts the same total amount of monies recovered per SFY relative or next to the respective input or budgetary means, total Federal Financial Participation (FFP) and Florida General Revenue Funds or Program Income. In taking the values from Figure 9, the year-to-year rise in total recoveries constitutes approximately 47 percent.

Figure 9: Total Amounts of Monies Recovered and Total FFP + Florida, SFY 2007-08 through SFY 2011-12.

In SFY 2011-12, for every FFP and General Revenue dollar spent, the MFCU generated approximately $5.54 through penalties and interest deposited into General Revenue.

To date, 12 cases attributed to the DMI have been brought to a close, and came with the following dispositions: administrative referral, assistance to other agencies, lack of evidence, or were unfounded (as per Table 6).

3. Data Mining Activities Key Informant Experiences – Preliminary Findings.

This section is mainly based on interviews with key personnel at both the Medicaid Fraud Control Unit (MFCU) and the Florida Agency for Health Care Administration (AHCA), as well as sitting in on inter-agency meetings. The purpose is to derive a clear perception of the means-end decision or process chain, from pre data mining activities within the MFCU to the perceived inter-agency communications and cooperation between MFCU and AHCA. The inter-agency communications are based on the biweekly meeting, as well as the monthly data mining meeting (added structure elements based on the memorandum of understanding (MOU)).

It needs to be mentioned that even before commencement of the Data Mining Initiative (DMI), senior management teams for both AHCA and MFCU, as well as the Department of Health (DOH), met on a monthly basis to discuss major issues, strategies, joint projects and other relevant matters. The objective in describing the activities/inter-agency activities is to find aspects relevant to the evaluation (Structure-Conduct-Performance Paradigm), and possibly potential recommendations to improve upon the data mining process within the MFCU. The following narrative will focus on the MFCU data mining analysts first, MFCU staff second, and on conduct and interactions between the organizations MFCU and AHCA third.

A questionnaire was developed with a list of semi-structured questions for interview purposes to get a clear perception of the process. For the data mining analysts, the semi-structured interview questions were categorized in such a way as to shed light on the following aspects of data mining:

1) Research team,

2) Procedures and protocols,

3) Queries, algorithms and models,

4) Validation,

5) Documentation or filing of practices, and

6) Other more general questions.

MFCU: Data Mining

1) RESEARCH TEAM

The data mining analysts in the workforce at the MFCU increased from 0.15 FTE to 0.25 FTE in each of the South, Central and North Florida offices, from Federal fiscal year (FFY) 2010-11 to FFY 2011-12. Before commencement of the Data Mining Initiative (DMI), as per October 2010, all three data mining analysts were power users with the Florida Decision Support System (DSS). The term "power user" is used to indicate the highest level of data mining analysts (based on adequate training), who have priority in data access and analyses. Since the three data mining analysts became part of the MFCU, they received 653.25 hours, 189 hours, and 66 hours (YTD) in training for each of the three years (FFY 2010-11 through FFY 2012-13) under consideration. As indicated, law enforcement criminal analyst training by the Florida Department of Law Enforcement (FDLE) constituted the major focus of training in FFY 2010-11. Subsequent training covered a variety of applied and practical issues (see Table 2).

Prior to October 2010, the research team at MFCU had access to the DSS databases (with billing and other information), but any data mining activity had to be either case specific or be based on an allegation or complaint. As with production, every subsequent project under research or investigation leads to added learning experiences by the data mining analysts (learning curve), e.g., raised understanding, new acquired perceptions, and gained insights. This learning leads not only to improved skills, but above all to a derived product or effect (spin-off). However,

added data mining activities, based on improved skill and "spin-off" (also described as "what if" questions), were not allowed if the activities did not meet the condition of research on pending and specific cases only. These potential added data mining activities (also referred to as "phishing") could only be communicated with and referred to AHCA, with the result that outcomes of data mining were received from AHCA with a time-lag only. In consequence, the learning curve gain which usually results in higher productivity was interfered with structurally. This may have resulted in not only delayed learning (and loss of learning), but also to less added productivity by the data mining analysts at MFCU, which is a loss of potential fraud or abuse cases. In addition some information may be lost in communication and the subsequent data mining activity (it is noted that files are communicated or exchanged, not methodology or results of data queries).

The present procedure under the waiver, with checks by AHCA on possible duplication (as taken from the interviews with key personnel) works quite efficiently. The direct personal communication on proposals at the biweekly meetings, (to discuss interpret and exchange information and perceptions on data mining projects, adding verbal information to potential projects) gives ample time to learn and understand the objectives and expectations of each agency. In addition to the bi-weekly meetings, analysts made reference to the monthly meeting between MFCU and AHCA on data mining, with a likewise and candid exchange on data mining issues. Increased synergies are mentioned in interviews with key personnel at both MFCU and AHCA. Both meetings seem to be highly valued, from both agency's perspectives. In short, the present procedure works fairly smoothly, and fairly efficiently. The biweekly meetings lead to an exchange of information on what everybody is doing.

2) PROCEDURES AND PROTOCOLS

The initial "trigger" for data mining analyses can be an idea (learning experience), a concept, or a person/provider, and can either be based on a complaint or pending case. Proposed or suggested data mining activities or projects by MFCU are relayed to AHCA at the biweekly meetings. AHCA distributes the suggested project to other relevant AHCA staff and vendors, and replies to MFCU usually within the timeframe of one week. This relay is instituted to check with the different agencies on whether there is an issue of duplication of data mining activities. Potential projects denied to date: Eleven out of 71 potential cases have been denied to date.

On each potential project, two checks are performed; the first is on the promise of outcome, and if promising, the data mining needs are put in queue with a tracking number and log. The second check is on whether a person/provider is already under investigation. Concerning the latter, data mining activities may add information to an open case, or potentially designate an offender as a repeat offender. Once a data mining activity by MFCU is commenced, a project file is set up. Each project is entered into the Data Mining Initiative (DMI) Tracking Log, whether approved or denied by AHCA, both for tracking and historical purposes. This DMI Tracking Log currently is in Microsoft Excel format.

3) QUERIES, ALGORITHMS AND MODELS

Different data mining techniques are used on the DSS Databases, utilizing tools such as amongst others Microsoft Excel, Access Pivot, and Phi2 (mainly by AHCA). Programmed algorithms (beyond Microsoft Excel functions) are not used and are perceived to be the prerogative of the support contractor (Hewlett Packard). On the question of whether the data mining activities could best be described by: (A) "statistics, neighborhood and clustering," or (B) "trees, networks and rules," univocally the answer was both. Outlier analysis is generally perceived as a first data mining analysts task only, and usually is a data summarization/aggregation tool, while data mining thrives on detail. Further diving into more detail or particular data was considered

necessary to look for patterns, e.g., trending, spikes, and out of the ordinary claims. Even with scale issues (large versus small providers) and/or scope issues (specialists versus general providers), data mining activities can be quite focused on provider type, type of service, specialty of medical provider, timeframe, and/or geographic locations.

4) VALIDATION

Once a data query is run and data is retrieved, the results are documented in a Data Mining Analyst Report (DMAR) with a DMAR track number. The translation by the data mining analyst, from data mining output to a report being written with recommendations, is the first step in deriving information from the data. This translation determines the further cause of the data mining analyses project in terms of justification, and for deciding whether to drop it, refer it to AHCA, or move it to the next level as a potential law enforcement issue. The latter usually will lead to further communications with the data mining analyst, on which there may be repeated rounds of data mining activities. Given the data mining analyst reports available in queue, validation is typically done by MFCU staff based on different perceptions, inclusive of legal and medical expertise. Similarly, justification is sought in filed complaints,[15] which may precede a determination to case level. It is noted that it takes time to prepare and process a legal dossier, even long after the data mining activities are done. Any subsequent involvement of law enforcement leads to a full-blown case. However, if deemed truly administrative at any stage, the project or case will be closed by the MFCU and referred to AHCA.

5) DOCUMENTATION OR FILING OF PRACTICES

All analysts' activities are accounted for in Data Mining Analyst Reports (with DMAR number, and/or subsequent OAG file-number), filed in the system, and put in the Tracking Log. Queries and models are saved and can be run again either at will or at selected regular intervals. All

[15] A complaint is an allegation that a person or provider may have committed an offense that may constitute a violation of state or Federal law.

data mining activities are reported and filed, name or case specific (as per legal practice) as key for potential later use.

An investigative report on Data Mining Initiative (DMI) comprises the following sub-tabs:

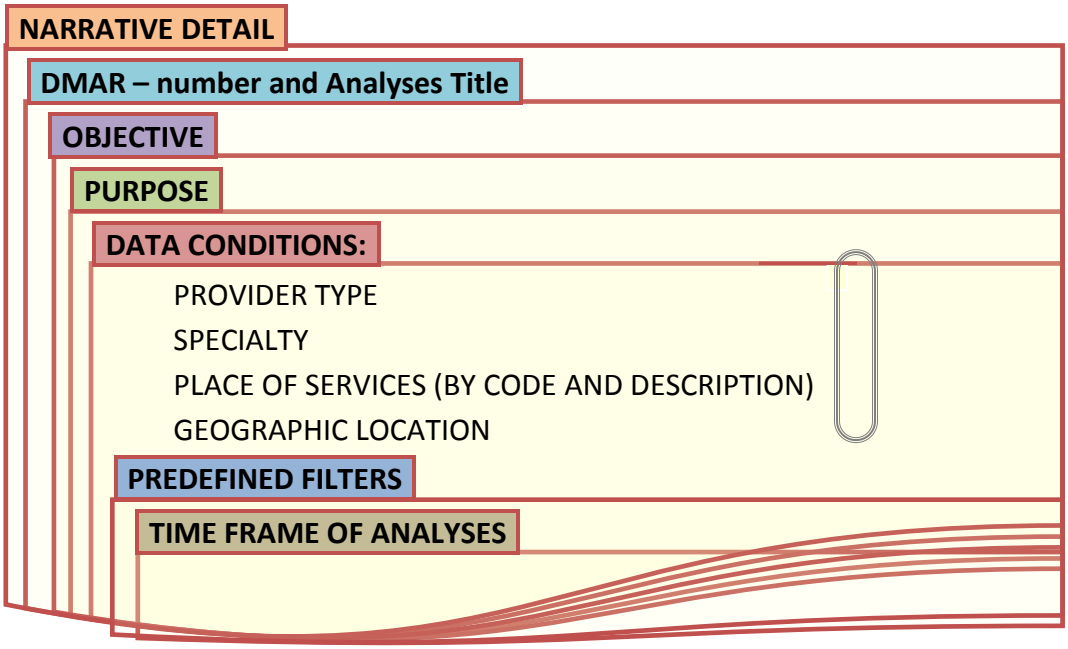


Figure 10: Various Tabs of an Investigative Data Mining Activities Report.

Once a project becomes a case, the DMAR report is combined with further investigative and legal documentation, and filed in the computer-based case management system with an OAG tracking number. This system comes with various sub tabs as well; namely, summary, contacts, investigation, status, legal status, supplemental information, attachments, evidence, and statistics.

6) OTHER MORE GENERAL QUESTIONS

Links Analyses Software was mentioned as a data mining tools/software that may be helpful for the Attorney General Office's data mining activities, and which is currently not available or in

use. Links Analyses is a VisuaLinks® - Link Analysis Software, a platform-independent, graphical analysis tool used to discover patterns, trends, associations and hidden networks in any number and type of data sources.[16] In substantiating the need, reference was made to 1) the higher volume of activities with an added number of projects, 2) more complete and robust package for tracking (instead of the presently used MS Excel), and 3) the need to generate forms and letters for AHCA, and potentially other agencies, all with increasing accessibility for future purposes.

Overall, the perception was that with the DMI, data needs were more readily met (as compared to the prior "data on request only" structure with the AHCA), that response time on "what if" data needs decreased dramatically, and supportive data mining in pending investigations readily added information to cases. The position of AHCA is fully recognized, understood and highly respected with its responsibilities and specialist expertise. The objective is to work on fraud and abuse, while the MFCU's focus is on criminal activity.

MPI/MFCU Bi-weekly Meeting and DMAR Meeting

In experiencing the MPI/MFCU Bi-weekly meeting, referral discussions went swift and with clear assignment. Under the label of topics and other discussions, various issues were exchanged in a manner of not only adding and exchanging information from various fields of expertise, whether it was medical, Medicaid protocols, legal perspectives, experience or otherwise, but quickly building a comprehensive perception on each issue. The direct accommodative and supportive communications lead to quick and increased insights for everybody present. Any other form of communication, even e-mail, between the organizations

[16] Visual Analytics Incorporated (VAI) is a leading provider of information sharing and visual data mining products. VisuaLinks presents data graphically, uncovering underlying relationships and patterns. VisuaLinks addresses the entire analytical process – from access and integration to presentation and reporting – providing a single and complete solution to a broad range of data analysis needs. For more information see: http://www.visualanalytics.com/products/visualinks/index.cfm

to achieve similar results would have taken quite a longer timeframe. In principle the meetings are an added learning curve experience, increasing expertise on handling cases and issues, and thus increasing the efficiency of means allocated by both organizations. The DMAR meeting was different in the sense that it was not the singular cases, but common denominators that were exchanged. These common denominators were the different data mining options, but also methodologies, opening new avenues and opportunities for further data mining activities.

AHCA:

The main focus of the interviews held with AHCA staff was on the interaction with MFCU. It was revealed that the director of Data Detection left the office October 2012, and the position was not filled as of this date (May 2013). Operational communication between MPI and MFCU however continues, especially with regards to the scheduled biweekly MPI/MFCU meeting addressing the project requests by MFCU (concerning the issue of potential duplications), and the monthly data mining meetings.

MPI does extensive Medicaid research on providers, practices, claims and billing, as well as payments based on its administrative, legislative, market and medical expertise, and drawing on its team of specialists. On data mining, MPI uses the DSS and has direct access via desktop/server. In addition to Microsoft Excel and IDS, Active Data Base software is used (which is deemed better than Access Pivot). Results of data mining activities by the "Detection Group" are forwarded to the "Case Management Group." This group decides on further handing; i.e., dropping the project, additional records request, processing, or referring to the MFCU if deemed potentially fraudulent. On referral to the MFCU the files are shared (not the data mining queries). All projects, inclusive of MFCU referred cases, are tracked by number.

Incoming data mining project requests from the MFCU, prior to the waiver, were put in queue since limited resources are allocated to the most promising projects first. In addition, the so-

called “power users” have priority in data mining, and thus overrule access by others. Under the waiver, incoming proposals are checked both internally and externally with other agencies for possible duplication of data mining activities. MFCU is notified usually within the timeframe of one week on its data mining requests.

The waiver allowing MFCU to data mine is seen as an additional opportunity to face abuse and fraud in a more involved manner. Data mining by MFCU is not seen as competition but as a partnership with mutual rewards in terms of getting resolve on abuse and fraud. The communication between the offices adds to the information stream and increases insights on potential issues. The data mining activities by MFCU are perceived not as full-fledged investigations, but more as auxiliary investigations with the main intent to support activities within the Florida Attorney General’s Office. With the waiver it has become possible to communicate between the two organizations on a different level, and exchange information without duplication of AHCA expertise into the office of the Florida Attorney General or, vice versa, law enforcement expertise into AHCA. Overall the waiver was considered to add to the mutual working relationship between AHCA and the MFCU. System improvements could be made by setting up a Sharepoint portal (as mentioned in the interviews).

Based both on the waiver and the MOU signed between the Office of the Attorney General and the Florida AHCA , new structures and procedures had to be put in place which define and determine the position, and to a certain extent, the conduct of the MFCU. In addition, budgetary requirements had to be met. It is observed here, that as a consequence of the waiver, the learning curve experience has improved (shorter response time form AHCA), and in addition, a new inter-agency learning experience is created by interpretation and information exchange at a high specialist data mining analyst level, between the two organizations at hand.

4. Data Mining Activities Preliminary Evaluation

On the evaluation of the Data Mining Initiative (DMI) at the Medicaid Fraud Control Unit (MFCU) at the Florida Attorney's Office, the question is whether or not the data mining waiver, as a demonstration project, added significantly to the results of Medicaid fraud investigation in the state of Florida. As per Figure 1 it was discussed that DMI can neither be seen apart or isolated from the activities within the MFCU, nor from the inter-agency activities with the Agency for Health Care Administration (AHCA). Second, there are some limited variables to provide some static measure of efficiency and effectiveness (as per Figure 2).

Figure 11 shows a recap of some of the key output data points, or achievements, from Section 2, providing both the numbers on the axes (with the right-hand side of the horizontal axis having two scales, one on complaints, and one on cases ending in settlement, conviction, or plea agreement) and perceptions on the ratio's; 1) complaints/fraud complaints, 2) fraud complaints/opened new cases, 3) opened new cases/cases disposed, and 4) cases disposed/cases ending in settlement, conviction, or plea agreement, for the FFY 2010-11 and FFY 2011-12 consecutively (similar to Figures 5 and 8). For instance in FFY 2010-11, reading the figure counter clockwise, a total of 1,661 complaints were received (first scale on the right hand side of the horizontal axis), some 842 fraud complaints were dealt with (top vertical axis), 354 new cases were opened (left hand side of the horizontal axis), and some 285 cases were disposed (bottom part of the vertical axis). Finally, some 76 cases were brought to a settlement, conviction, or plea agreement (second scale on the right hand side of the horizontal axis). Consequently, the ratios 1 through 4 (depicted by the slopes) are: 842/1,661 = 0.5069, 354/842 = 0.4204, 285/354 = 0.8051 and 76/285 = 0.2067. Similarly, for FFY 2011-12, a total of 1,317 complaints were processed, some 707 fraud complaints were handled, 292 new cases were opened, and some 187 cases were brought to a close. In addition, some 33 cases ended in a

settlement, conviction, or plea agreement. The FFY 2011-12 ratio's therefore are: 707/1,317 = 0.5368, 292/707 = 0.4130, 187/292 = 0.6404 and 33/187 = 0.1765.

The ratio's are all below one, since it should be clear that complaints outnumber cases, and not all cases come with an arrest, or a positive outcome in terms of monies recovered. It must be noted that Figure 11 depicts parallel FFY data only, and not successive (or causal) results from complaint to disposition, or tracking of complaints over the years, from complaint to disposition. Figure 11 maps the year-to-year activities of the MFCU on all fronts (data and ratios); activities on which time and other resources are allocated, to review, refer, work with the investigative team, et cetera.

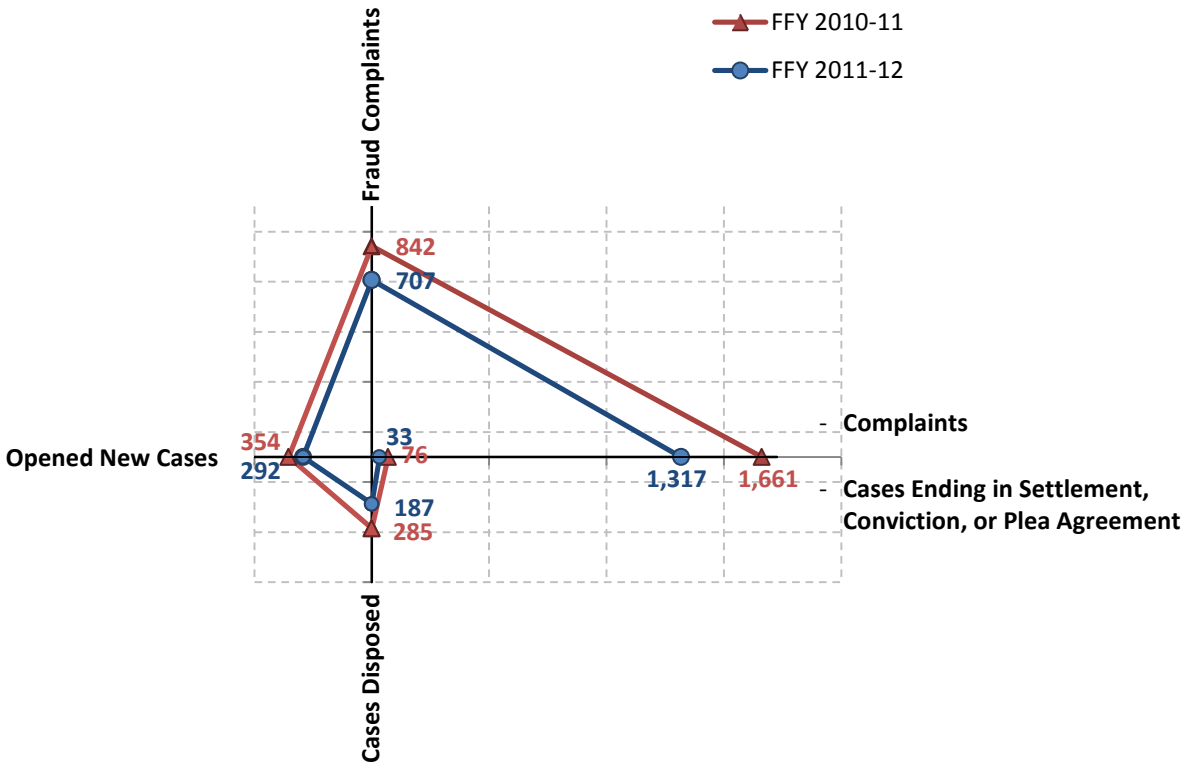


Figure 11: Number of Complaints, Opened New Cases, Disposition of Cases, and Cases Ending in Settlement, Conviction, or Plea Agreement, MFCU, FFY 2010-11 and FFY 2011-12.

Given marginal or small differences, slightly higher ratios on Fraud Complaints, Opened New Cases, Cases Disposed and Settlement, Conviction Plea Agreements for FFY 2010-11, and a slightly higher ratio on Fraud Complaints/Complaints for FFY 2011-12, the two maps show quite similar FFY activity patterns.

A similar set-up for the MFCU Data Mining Initiative (DMI) is given in Figure 12.

Figure 12: Number of Complaints, Opened New Cases, Disposition of Cases, and Cases Ending in Settlement, Conviction, or Plea Agreement, Attributed to DMI, FFY 2010-11 and FFY 2011-12.

From the Figure 12 it can be taken that the incidence ratio of Opened New Cases over Fraud Complaints changed quite dramatically from FFY 2010-11 to FFY 2011-12 (12/27 = 0.4444 and 14/16 = 0.875 respectively) and is high in comparison to the same incidence ratio of Figure 11 (354/842 = 0.4204 and 292/707 = 0.4130 for FFY 2010-11 and FFY 2011-12 respectively).

In using a time series analyses, in particular a multi regression analyses with the DMI as an added variable, it may be possible to derive some preliminary insights (given the short timeframe) from a more dynamic perspective. This brings a hypothetical element in the evaluation, which is to value and compare output/outcomes under different scenarios; namely, with and without the DMI under the waiver. For evaluation purposes, the perception is taken that the waiver provides an opportunity (e.g., data mining as a working tool) for the Attorney General's Office to increase the efficiency of labor input. DMI efforts (FFY 2006-07 through FFY 2011-13 YTD) are captured, by making the number of opened new cases dependent on the total budget and DMI adjusted FTEs (increased efficiency of labor with the DMI tool), according to the following format:[17]

$$\text{Opened New Cases} = a * (\text{FFP} + \text{FL.GR})^{\alpha} * (\text{FTE}^{\beta} * \text{DMI}^{\gamma})$$

in which:

FFP + FL.GR = Federal Financial Participation (FFP) and Florida General Revenue/Program Income means, expenditures only (in real prices of 2012),[18]

FTE = Effective employment in FTEs,[19]

DMI = Data Mining Initiative adjustment margin on FTEs.[20]

[17] For some preliminary analyses on the equation see the appendix.

[18] Annual budget data adjusted with Price Indexes for Gross Domestic Product according to Table 1.1.4. Price Indexes for Gross Domestic Product, Bureau of Economic Analyses, http://www.bea.gov, date retrieved April 15, 2013.

[19] FTEs are adjusted for time allocated to training. For the MFCU, excluding Data Analysts, 22 hours or 0.0123 FTE are assumed from each FTE for FFY 2006-07 through FFY 2008-09 and 20 hours or 0.0111 FTE for each FTE for the fiscal years FFY 2009-10 onwards. For the data analysts 0.1214 FTE, 0.0351 FTE and 0.0123 FTE per analyst per fiscal years FFY 2010-11 though FFY 2012-13 is take for training purposes. In addition for FFY 2012-13 only half a year is assumed.

[20] For years without DMI a dummy variable of 1 is used (i.e., no impact). For years with DMI an adjustment margin is used. The margin for FFY 2010-11 is taken at 0.9603 (or 1/(1+12/(302-12))), for FFY 2011-12 at 0.9383 (or 1/(1+14/(227-14))), and for FFY 2012-13 at 0.9813 (or 1/(1+2/(107-2))) as per DMI assigned opened new cases.

Given the equation, the number of opened new cases (or output) stands in direct relation to the expenditures and FTEs adjusted by a DMI factor (or input factors). The equation allows the DMI to be analyzed in conjunction with the FTEs, with DMI as an added tool to increase the efficiency of labor input. Therefore, the equation brings to the fore the essence of the evaluation issue and allows for sensitivity analyses i.e., varying one variable while leaving the others constant (ceteris paribus). A multiple regression analyses on the data points FFY 2006-07 through FFY 2012-13 (YTD) results in an expected number of new cases according to the format:[21]

$$\text{Opened New Cases} = 0.4696 * (\text{FFP} + \text{FL. GR})^{08432} * (\text{FTE}^{-1.4465} * \text{DMI}^{0.7567})$$

t-Stat	-1.0606	3.5578	-1.9808	0.4645
P-value	0.3667	0.0379	0.1419	0.6739

With $R^2 = 0.9657$ and Adj. $R^2 = 0.9314$

Figure 13 displays the actual versus the expected number of new cases, based on the multiple regression equation calculated, for the fiscal years FFY 2006-07 through FFY 2012-2013 (YTD).

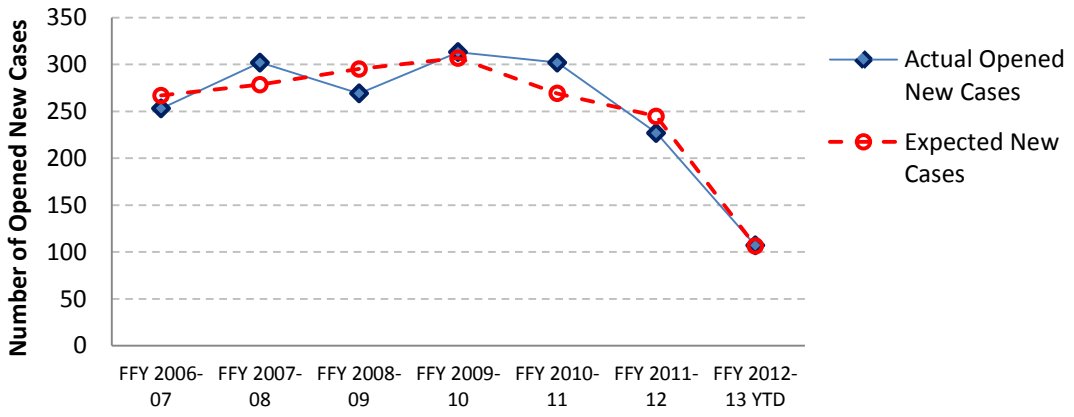


Figure 13: Actual versus Expected Number of Opened New Cases MFCU, FFY 2006-07 through FFY 2012-13 (YTD).

[21] Regression calculus done is preliminary, given that data for FFY 2012-13 is YTD, and FTEs for FFY 2012-13 is taken at half the budgeted value.

Given the equation, it is possible to conduct a sensitivity analyses, varying one variable while keeping other variables constant, measuring the impact on the output or opened new cases. Figure 14 provides the results of a sensitivity analyses done with available data.

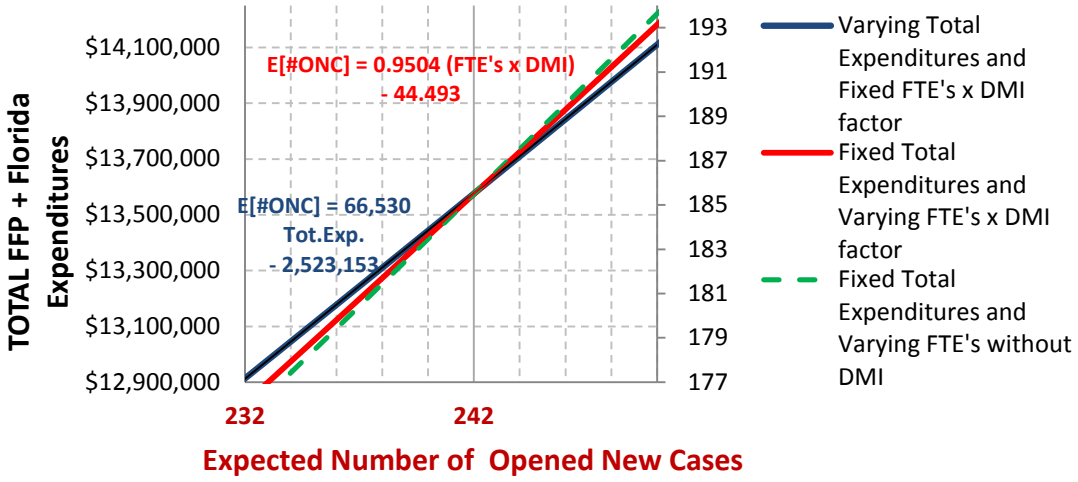


Figure 14: Sensitivity Analyses of Average Budget and Full Time Equivalent Employment on Expected Number of Cases.

The intersection in Figure 14 represents the present (FFY 2011-12) position with a total allocated expenditure at $13,580,769 (left hand scale), 185.56 applied FTEs (corrections from 187.75 FTEs due to training (right hand scale)), leading to a regression estimated number of 242 opened new cases (as per the realized 227 opened new cases in FFY 2011-12). From this present point, first the variable Total Expenditures (FFP + FL.GR) is changed within the range of plus to minus five percent, under ceteris paribus condition (i.e., leaving other variables constant), with results presented by the series "Varying Total Expenditures and Fixed FTEs x DMI factor." As can be taken from Figure 14, the positive slope of the total expenditure line means that an increase in expenditures (left hand vertical axes), will raise the output in terms of number of opened new cases (horizontal axes). More precisely, a one percent increase in

expenditures will raise the number of opened new cases by approximately 0.8419 percent (inelastic). Secondly, the DMI factor is varied (third variable in the equation, range ibid, under ceteris paribus). Since the DMI factor is taken in combination with the FTEs, this makes for the series "Fixed Total Expenditures and Varying FTEs x DMI factor." Similarly the positive slope of the line means that an increase in DMI will raise the output in terms of number of opened new cases (horizontal axes). In particular, a one percent increase in the DMI factor will raise the number of opened new cases by approximately 0.8050 percent (inelastic).
The dashed line represents opened new cases due to changes in FTEs without DMI (as per the situation of FFY 2011-12).[22] The dashed line has an elasticity of approximately 0.75409. Graphically, the lower the slope of the line, the higher the impact of a change is on the number of opened new cases. In short, the right personnel is more important than expenditures, and good personnel combined with the right tools such as DMI only improves upon the output, this by approximately 6.64 percent (0.8419/0.7409).

No relation is found between any measure of input and cases investigated. Data on cases investigated are a snapshot in time only, as per the close of the fiscal year.

No relation is found between any measure of input and cases closed.

No relation is found between any measure of input and monies retrieved. The explanation is that no measure for recoupment is attributable as of yet to DMI, since the program is still in its infancy. In addition, and more general, it may be that the order or outcome of investigations doesn't come with a similar range of values or monies retrieved, since the fraudulent entities and the order of fraudulent activities may differ in size and scope.

[22] Dashed line is obtained by transposing the situation as per FFY 2011-12, and varying the DMI margin in the regression equation from the value of 1, i.e., for years without DMI.

5. Interim Conclusion

This report presents an evaluation of the MEDS-AD waiver: Data Mining Activities, contingent on the waiver CFR 1007.19. With respect to the evaluation, the question is:

> ***Did the Data Mining Initiative (DMI) at the Medicaid Fraud Control Unit at the Florida Attorney General's Office add significantly to the results of Medicaid fraud investigation in the state of Florida?***

Given that the Data Mining Initiative (DMI) cannot be seen apart or isolated from the activities conducted within the Medicaid Fraud Control Unit (MFCU) of the Attorney General's Office, the framework used is the Structure-Conduct-Performance-Paradigm (SCPP), with DMI as an add-on to the MFCU. Various input, output and outcome variables available were looked at for properly representing the relative position of data mining activities. Descriptions were given on input variables: expenditures, FTEs, and training, from both MFCU and DMI. Output variables, especially cases investigated, opened new cases and closed cases, were looked into, and finally the outcomes in terms of monies recovered.

Static analyses showed a slight rise in the incidence ratio from 0.2028 to 0.2282 of opened new cases on number of complaints. The number of complaints received by the source MFCU Data Mining Initiative is on average 2.6 percent annually. Opened new cases attributed to the DMI showed an average of 4.4 percent of total opened new cases, over the three years of evaluation. The ratio of total amount of monies recovered over cases investigated showed a clear increase over the years (average FFYs 2006-10, FFY 2010-11, FFY 2011-12). Dynamic analyses indicates that expenditures are inelastic at 0.8419 with respect to opened new cases, while the DMI adjustment factor (adjusting FTEs for becoming more efficient) proved inelastic as well at 0.8050, this in terms of output or number of opened new cases. Therefore, the right

personnel is more important than expenditures, and good personnel combined with the right tools such as DMI only improves upon the output in terms of opened new cases. More specifically, the dynamic analyses show that DMI add approximately 6.6 percent of opened new cases, which is slightly higher than the static number of 4.4 percent mentioned.

No dynamic relation is found between any measure of input and cases investigated, cases closed, or monies retrieved.

A special concluding note must be made on the improved learning curve experience as a consequence of the waiver and MOU between the MFCU and AHCA. In addition, a new inter-agency learning experience is created by interpretation and information exchanged at the high specialist data mining analyst level.

Appendix: Production Function Used

A production function is taken to be:

$Y = f\ (K, L)$

where:

Y = total output or outcome produced in a year,

K = capital input; in this evaluation total expenditures,

L = labor input; effective FTEs per year.

Comparison will be made with:

$Y = f\ (K, L')$

in which in addition:

L' = adjusted or augmented labor input due to the DMI.

In particular a Cobb-Douglas production function is used in the format:

$Y = a\ K^{\alpha} * L^{\beta}$

in which in addition:

a = total factor productivity

α and β are the output elasticities of capital and labor, respectively. These values are constants determined by available technology.

For the purpose of this evaluation the production function is rewritten in the format:

$$\text{Opened New Cases} = \text{a} * (\text{FFP} + \text{FL. GR})^{\alpha} * (\text{FTE}^{\beta} * \text{DMI}^{\gamma})$$

MED143 CONTRACT DRAFT DELIVERABLE #7

MEDS AD Waiver MTM Program Interim Report

Prepared for Florida Medicaid
in Partial Fulfillment of Contract
MED 143

College of Medicine
College of Social Work
Florida State University

May 10, 2013

Executive Summary

This Interim Report describes the quantitative and qualitative evaluation and preliminary findings of the MEDS-AD Waiver Medication Therapy Management (MTM) Program as required by Medicaid contract MED143. Led by Principal Investigator Dr. Leslie M. Beitsch, MD, JD, an evaluation team from the Florida State University Colleges of Medicine and Social Work, the Claude Pepper Center, and the FAMU College of Pharmacy are conducting the evaluation of programs authorized through the MEDS-AD 1115 (a) Demonstration Waiver approved by the Centers for Medicare and Medicaid Services (CMS) for the period January 2011 through December 2013.

The purpose of this document is to summarize findings to date in support of the AHCA application to the Centers for Medicare and Medicaid Services MEDS-AD waiver renewal.

Evaluation of the MEDS-Ad Waiver MTM Program includes the following components:

1. Administrative Analysis and quantitative evaluation of the MEDS-AD Waiver MTM Program is being conducted by a Florida State University College of Medicine research team assessing the benefits of the MTM Program for certain aged and disabled recipients eligible for Medicaid through the Waiver Program during the period of June 1, 2011 through September 30, 2013. Key research questions are identifying differences in the utilization, expenditures, clinical outcomes, and recipient demographics between those eligible recipients who participated in the program (intervention group) and those eligible recipients who did not participate in the program (comparison group).

    - Preliminary results from the Quantitative Evaluation Team's audit of the University of Florida College of Pharmacy program reports and records as well as preliminary descriptive analysis of MTM data provided by the Florida Agency for Health Care Administration are included. These analyses are based on the claims and enrollment data available at the time of this report. Preliminary estimates of expenditures and number of services received by these populations are also provided. Appropriate

statistical tests for bivariate group comparisons are reported. Utilization, expenditure and disease prevalence are drawn from claims and enrollment data for January 1, 2010 to June 30, 2012. Inpatient hospitalization and skilled nursing facility stay records, as well as pharmacy and outpatient hospital clinic files, were provided by AHCA at the time of this report.

2. Qualitative Evaluation of the MEDS-AD Waiver MTM Program is being conducted by a Florida State University College of Social Work and Florida A & M University College of Pharmacy research team assessing the benefits and value of the MTM Program during the period of June 1, 2011 through September 30, 2013. The team employs qualitative research methods, including rigorous interview methods and empirical analytical tools, to articulate administrative, participant and physician perceptions of the MTM Program.

   - The qualitative component of this mixed methods project lends a much deeper understanding of the underlying processes that provide a more nuanced evaluation of the MEDS-AD Demonstration project based on Medication Therapy Management principles. The Research Investigative Team (RIT) associated with the qualitative evaluation effort consists of multidiscipline members who represent three academic institutions. The Lead Analyst, an Associate Professor at the FSU College of Social Work and a Co-PI of the project, is an expert in qualitative methodology and served as an essential participant in all five key informant interviews with University of Florida College of Pharmacy and AHCA Medicaid Administrative Personnel. She is also overseeing all interviews conducted by highly trained RIT Research Assistants. In addition, she, along with Florida A&M University (FAMU) Pharmacists, constructed the interview guides for key informant, primary care physicians, and MEDS-AD waiver program participants.

   - All key informants interviewed were the most knowledgeable persons available regarding the development and implementation of the current MEDS-AD Demonstration project. The Bureau Chief of Pharmacy Services for Florida Medicaid, provided insights into the etiology of the current program as well as lessons learned

from other models of care. The Clinical Administrator of Medicaid Pharmacy Services provided invaluable information regarding the implementation of the current program, including outcomes measured, characteristics of participants, and knowledge of the Medicaid population.

- Four key informants at the University of Florida's College of Pharmacy chosen by AHCA as being most knowledgeable about the MEDS-AD Demonstration project were also interviewed for this evaluation. The Center Director and three highly experienced pharmacists took great pains to describe the MTM program's implementation with a PowerPoint presentation that included detailed information regarding the MEDS-AD Demonstration project.

- Twenty-one participants have been interviewed regarding their perceptions of the services provided under the MEDS-AD Demonstration project using both open- and closed-ended questions. Preliminary findings from these interviews provide insight into their overall satisfaction with the MTM program and, additionally, feedback on specific issues such as information provided and characteristics of care provision.

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List of Acronyms

Acronym	Explanation
AHCA	Agency for Health Care Administration
AHRQ	Agency for Healthcare Research and Quality
CG1	Comparison group 1 constructed from MTM eligible non-participants.
CG2	Comparison group 2 constructed from MEG1 population
CMR	Comprehensive medication review
FSU COM	Florida State University College of Medicine
MAP	Medication action plan
MED143	Contract between FSU COM and AHCA
MEDS-AD	Medicaid waiver program; section 1115 Demonstration (Project No. 11-W-00205/4)
MEG1	Medicaid eligible population number one. A category of Medicaid recipients eligible for MEDS-AD under the waiver.
MTM	Medication therapy management
PCP	Primary care physician
QFUR	Quarterly follow-up review
UF COP	University of Florida College of Pharmacy
ACE	Angiotensin-converting-enzyme inhibitor
ARB	Angiotensin receptor blockers
GERD	Gastroesophageal reflux disease
COPD	Chronic obstructive pulmonary disease
OTC	Over the counter

SECTION I:
Interim Report on the Preliminary *Quantitative* Data Analysis

Definitions of Population Groups

This Interim Report refers to various groups and populations defined by their Medicaid or MEDS-AD waiver status, Medication Therapy Management (MTM) program status, or membership in two comparison groups. The following definitions expand on the List of Acronyms and are offered to create a consistent nomenclature for discussing the groups discussed in this report.

All persons referred to in this report are part of the Florida MEDS-AD Waiver Demonstration Project No. 11-W-00205/4 and have to meet income and asset criteria to be eligible for Medicaid. The MEDS-AD waiver program includes three separate Demonstration Populations. The Medicaid Eligible Group 1 (MEG1) population is the group relevant to this evaluation of the University of Florida College of Pharmacy (UF COP) MTM project. The MEG1 population includes individuals eligible for Medicaid but not eligible for Medicare, and who are eligible but not currently receiving institutional care, hospice, or home and community based services. The MEG1 population is the source for all Medication Therapy Management (MTM) program participants and comparison groups to be constructed for this evaluation.

Group definitions for the purpose of this evaluation are determined by a series of steps taken by the AHCA Pharmacy Program, the UF COP staff, or the evaluation team and flow logically from the source population of approximately 14,000 MEG1 Medicaid recipients for the first year of the MTM program. See Figure 1.

Step 1. AHCA Pharmacy Program staff selected Medicaid recipients from the MEG1 population at random for the MTM program. Pharmacy Program staff contacted these recipients by telephone to determine their interest in the MTM program and obtained consent to provide their names and contact information to the UF COP staff. The selected group of MEG1

Medicaid recipients sent to UF COP is designated as MTM ELIGIBLE recipients. The Pharmacy Program sent the names of approximately 652 recipients to the UF COP in Year 1.

Step 2. The UF COP staff contacted persons in the pool of MTM ELIGIBLE recipients until they had completed Comprehensive Medication Reviews (CMR) with 147 persons. The completed CMR group is designated as MTM PARTICIPANTS to distinguish them from the larger group of MTM ELIGIBLE recipients. MTM ELIGIBLE recipients who did not become MTM PARTICIPANTS are designated as MTM ELIGIBLE NON-PARTICPANTS. They may be further categorized as recipients who declined to participate, could not be reached, or were not needed and therefore no contact attempt was made.

Step 3. The evaluation team identified two comparison groups to be used in this evaluation of the MTM program. The first MTM comparison group (CG1) is defined as MTM ELIGIBLE recipients who did not become MTM PARTICIPANTS. In Year 1 this group includes approximately 505 recipients (652-147).

The second MTM comparison group (CG2) is a subset of persons in the MEG1 population that were not referred by AHCA to the UF COP. In Year 1, the subset of the MEG1 population not referred to AHCA includes approximately 13,500 recipients (approximately 14,000 MEG1 members less 652 MTM ELIGIBLE recipients). The CG2 will be selected from the remaining MEG1 members who are well matched to the MTM PARTICIPANTS based on their demographic characteristics, utilization levels, and other factors deemed relevant by the evaluation team.

Introduction and Purpose of this Report

The purpose of this document is to summarize findings to date in support of the AHCA application to the Centers for Medicare and Medicaid Services MEDS-AD waiver renewal. Results from the Evaluation Team's audit of the UF COP program reports and records as well as preliminary descriptive analysis of the Year 1 MEG1, MTM ELIGIBLE PARTICIPANTS, and MTM PARTICIPANTS are provided based on the claims and enrollment data available at the time of this report. Preliminary estimates of expenditures and number of services received by these populations are also provided. Appropriate statistical tests for bivariate group comparisons are

reported. Utilization, expenditure and disease prevalence are drawn from claims and enrollment data for January 1, 2010 to June 30, 2012. Inpatient hospitalization and skilled nursing facility stay records, as well as pharmacy and outpatient hospital clinic files, were provided by AHCA at the time of this report.

Background on the MTM Program and Evaluation

The goals of the Medication Therapy Management (MTM) Program are to improve the quality of care and prescribing practices based on best-practice guidelines, improve patient adherence to medication plans, reduce clinical risk, and lower prescribed drug costs and the rate of inappropriate spending for certain Medicaid prescription drugs for a high risk population of Medicaid recipients eligible through the MEDS-AD Waiver Program. Trained staff from the UF COP conducts telephone interviews with willing Medicaid recipients and produce a Comprehensive Medication Review (CMR) document as the first step in the intervention. Based on findings from the CMR, UF COP staff may 1) send the patient a Medication Action Plan (MAP) that includes a medication list and may include recommendations for behavioral change relevant to their condition and medication; and/or 2) send a FAX to the recipient's Primary Care Physician (PCP) with recommendations for changes in medication. Any given recipient may receive a MAP only, PCP FAX only, a MAP and a PCP FAX, or none of the post-CMR actions. Actions initiated are based on the pharmacist's expert opinion regarding over or under utilization of medication, medication interactions, or other issues related to the patient's treatment. Recommendations to the PCP may or may not be accepted and implemented by the prescriber. Subsequent to the CMR and post-CMR actions, recipients are followed for an additional nine months. UF COP staff conducts reviews of patient medication claims records provided by the Pharmacy Benefit Management vendor for Florida Medicaid to determine if recommendations have been implemented or new problems have appeared. Occasionally, these three quarterly reviews lead to another patient or PCP contact.

Evaluation Questions Addressed in this Report

This Interim Report addresses four questions.

1. Are the data quality, completeness, and standardization of patient chart and other records maintained by the UF COP during the first year of the MTM project adequate for evaluative purposes?
    a. This question allowed the evaluation team to: 1) become familiar with the content of the UF COP files and their relationship to one another, and 2) identify areas where the UF COP files lacked sufficient detail, used inconsistent coding, or deviated from standard research/evaluation best practices.
2. Can the summary results from Year 1 provided to AHCA by the UF COP using patient chart files and other MTM project records be reproduced?
    a. This question allowed the evaluation team to examine the concordance between results reported in UF COP narrative reports and patient charts.
3. What are the demographic characteristics of the MEG1 population, the MTM ELIGIBLE NON-PARTICPANTS, and MTM PARTICIPANTS; and are there differences in those characteristics between those population groups?
    a. This question addresses concerns related to the selection of appropriate comparison groups and identifies potential gaps in the data.
4. Are there differences in the utilization and expenditure profiles of the MEG1 population, the MTM ELIGIBLE NON-PARTICPANTS, and MTM PARTICIPANTS for calendar year 2011 and project Year 1 (June 1, 2012 to May 31, 2013) based on the claims and enrollment data available at the time of this report?
    a. This question addresses concerns related to the selection of appropriate comparison groups and identifies potential gaps in the data.

Methods

Data Sources

Source data for this preliminary report include UF COP patient chart files, the post-CMR summary file, the UF COP final quarterly narrative report, and AHCA claims and recipient demographic files for Year 1 of the MTM Program (June 1, 2011 to May 31, 2012).

UF COP created an individual patient chart for each of the 147 MTM PARTICIPANTS with a completed CMR. These individual Microsoft Excel Workbooks included 16 spreadsheets. Data was extracted from all 147 patient chart files and combined into 16 separate files by spreadsheet type. Issues with data recording methodology were noted in a narrative log. Table 1 lists the 16 spreadsheet names, data storage type, content, and any issues identified by the evaluation team.

MTM PARTICIPANTS were assigned to mutually exclusive categories based on post-CMR actions by UF COP as documented in the Intervention spreadsheet for each MTM participant. Individual MTM Participant interventions were coded as completed according to the following definitions: Completion of a CMR and three quarterly follow-up reviews (QFUR).

Participants were categorized as potentially inactive by scanning the Notes column of the Intervention spreadsheet. Patients became inactive due to death, change in Medicaid eligibility status, or change in MTM eligibility status. Patient demographic information and program final status was extracted from the UF post-CMR summary file of 652 MTM ELIGIBLE RECIPIENTS.

AHCA administrative data and enrollment files were extracted from five separate files for: 1) inpatient hospital claims associated with short-term general and surgical hospitals, 2) outpatient hospital claims associated with individual provider services, 3) long-term-care (LTC) claims associated with long-term facilities, 4) pharmacy claims for each prescription filled by the Medicaid recipients, and 5) recipient demographic and enrollment information in the recipient demographic file. Patient categories created from the UF files were matched to patient records from the AHCA claims and enrollment files.

Design

A retrospective examination was conducted of all Medicaid covered services and UF COP program data files and narrative reports for the MTM PARTICIPANT and NON-PARTICIPANTS for the period June 1, 2011 through May 31, 2012 and for calendar year 2011.

Analytic Methods

The analysis includes simple univariate and bivariate comparison of selected measures from all data sources with tests for statistical differences among defined groups using Chi-squared and t-tests as appropriate to compare proportions and means. Population group membership models adjusting for recipient age, race, and gender were also conducted. Models for between population group differences in expenditures and service utilization were also conducted using log transformed expenditures in a linear model and counts of service utilization in a negative binomial model. Both were adjusted for age, race, gender, and the group membership indicator for the MEG1, MTM ELIGIBLE non-PARTICPANTS, and MTM PARTICIPANTS. Qualitative assessment of the approach and quality of UF COP data files were also incorporated by comparing findings reported by UF COP in the Year 1 final report to AHCA with data extracted by the evaluation team from 147 individual patient charts created by the UF COP.

Findings

Evaluation Question 1

Are the data quality, completeness, and standardization of patient chart and other records maintained by the UF COP during the first year of the MTM project adequate for evaluative purposes?

Data Quality of the UF COP Patient Charts

Data quality for the UF COP patient charts and post-CMR was generally good and easy to understand from a programmatic point of view. The spreadsheets in each patient chart made good use of standardized drop down categories for most data elements. Additionally, the use of auto-fill to complete data elements that don't change their value and were needed in more than one spreadsheet, e.g. patient date of birth, were useful. Patient chart data elements and content appear in Table 1.

However, some potential areas for improvement were identified by the evaluation team and are listed in the last column of Table 1. The most common issue was the use of a non-standard arrangement of data cells into rows and columns. Columns that include more than one data storage type or more than one content domain are problematic from an evaluation point of view. They require additional effort to extract into standard research format used by statistical programs such as SAS or IBM SPSS and increase the likelihood of errors during that process. The use of image files in spreadsheets (Nos. 5, 8, 9, 10, 12, 14, and 16) in Table 1 below cannot be manipulated by statistical programs so information in those image files had to be reentered manually by the evaluation team. Finally, some relevant information stored in the Notes column of the Intervention spreadsheet was difficult to identify because the Notes field was entered as free text rather than standard categories. For example, patients identified as potentially inactive were noted in this field along with dozens of other free text entries. Best practice suggests that all data elements are stored uniformly in rectangular tables with data elements (field or variable names) always listed horizontally across the top of a spreadsheet, that each column uses only one data storage type (e.g. text, numeric, or date), and that the content of each column refer to only one type of data domain (e.g. a column should not include information). For example, the third column in the Demographic spreadsheet included patient, provider, and pharmacy information in one column and uses text and date formats. While these issues with the patient chart design choices made by UF COP make sense from a programmatic point of view, they were a problem from an evaluation point of view. Microsoft Access or other database programs can include a "front end" that presents information to the user in the same manner as the UF COP spreadsheets but stores the data in the "back end" in standard rectangular format. These database programs also offer additional safeguards for data integrity and standardization.

Evaluation Question 2

Can the summary results from Year 1 provided to AHCA by the UF COP using patient chart files and other MTM project records be reproduced?

Concordance between UF COP Year 1 Annual Report and Patient Chart and Post-CMR Files

The evaluation team systematically extracted data for all patient charts and utilized that information to reproduce summary results presented in the UF COP Year 1 final report.

Section A of the report is labeled *Case Status*. This section reports that 147 patients completed a CMR and were all followed for three QFURs. This was confirmed by the evaluation review of the *Intervention* spreadsheet of each of the 147 patient charts.

Section B of the report is labeled *Calls made to program participating patients (including failed attempts).* Concordance between the UF COP and FSU COM values was generally poor. Repeated attempts to reach potential participants for an initial CMR interview appointment may have not been fully documented in the patient chart or were documented elsewhere. Rescheduled CMR appointments may not have been fully documented or the manner of documentation was not evident to the evaluation team. It is not clear how important documentation of every call attempt is to the AHCA Pharmacy Program Office or to the success of the MTM Program. These data are presented for the Pharmacy Program Office's consideration for quality improvement purposes.

Section C of the UF COP summary report is labeled *Summary of Interventions.* Table 2 reproduces the UF COP table and counts alongside of FSU COM findings extracted from the *Intervention* spreadsheet of all patient charts. Concordance between the UF COP and FSU COM values was generally very good. Only one CMR intervention (*Counseled on Medication Adherence/Compliance*) had a large discrepancy between the UF and FSU findings. CMR counseling related to medication adherence/compliance may not have been fully documented or the manner of documentation was not evident to the evaluation team. The *Interventions* column in the interventions spreadsheet included 127 unique intervention categories and 2,433 intervention records for the 147 MTM PARTICIPANTS. Mean number of intervention records per participant was 16.5.

A total of 227 CMR interventions and 103 MAP interventions were discussed with the 147 MTM PARTICIPANTS. Over 100 of the CMR interventions involved counseling on medication use, related to both general concerns and side effects (79 recommendations) or administration and technique (26 recommendations). Most remaining recommendations concerned condition-specific education. Counseling on medication use was also the most common type of MAP intervention recommended, accounting for 43 of the 103 recommendations made. Of these recommendations, a total of 139 were transmitted to providers, see Table 2.

Section D of the UF COP summary report is labeled *Tabulation of Interactions (by category).* Table 3 reproduces the UF COP table and counts alongside of FSU COM findings extracted from the *Intervention* spreadsheet of all patient charts. Concordance between the UF COP and FSU COM values was exact. UF COP identified 8 drug-disease interactions, 8 Level-1 clinically significant drug-drug interactions, and 15 Level-2 clinically significant drug-drug interactions.

Section E of the UF COP summary report is labeled *Patient Response/Rating of CMR.* Table 4 reproduces the UF COP table and counts alongside of FSU COM findings extracted from the *Questions CMR* spreadsheet of all patient charts. Concordance between the UF COP and FSU COM values was exact.

Most respondents responded yes to the first question, "Did you find this appointment helpful?" (76.9%). Questions 2 to 4 received even higher approval among a smaller number of respondents with a second telephone contact 30 to 60 days after the CMR interview (90-95%).

Section F of the UF COP summary report is labeled *Provider Interventions.* Table 5 reproduces the UF COP table and counts alongside of FSU COM findings extracted from the *Questions CMR* spreadsheet of all patient charts. FSU COM findings for the number and type of provider interventions matched the UF COP report exactly. However, the evaluation team was not able to identify resolutions reported by UF COP for three provider interventions: *Lack of Efficacy Identified, Lack of Therapy (Indication) Identified, and Recommended Preferred Drug List Alternative*. Recorded resolutions to provider interventions were determined by UF COP via subsequent patient report or observed changes in claims for filled prescriptions. Overall, UF

COP and FSU COM identified 139 provider interventions. Some PARTICPANTS received more than one provider intervention and others received none as determined by the UF COP staff. The most common types of recommendations were providing combination therapy (11 recommendations), resolving gaps in therapy (22 recommendations), mitigating insufficient dosage or duration (10 recommendations), addressing drug interactions (21 recommendations), and mitigating lack of therapy (19 recommendations). Only 4 (3 percent) provider interventions addressed issues potentially related to patient adherence to treatment instructions. These recommendations were relayed to providers after discussion with patients. UF COP used the Morisky 8-Item Medication Adherence Scale administered to MTM participants immediately after the CMR interview to measure adherence. The mean summary score on the Morisky Scale for the 147 patients as recorded on each patient chart was 6.31 out of a possible score of 8.0. Specific recommendations to providers and the frequency of each are shown in Table 5.

UF COP reported a 36% resolution rate while the evaluation team finds a resolution rate of 28%, largely due to missing information for three provider interventions. *Provider Interventions* may not have been fully documented or the manner of documentation was not evident to the evaluation team. Resolutions to Provider Interventions were identified by UF COP via review of the AHCA pharmacy claims records or by patient report. Resolution rates are consistent with provider response to MTM program recommendations reported in the literature.

Evaluation Question 3

What are the demographic characteristics of the MEG1 population, the MTM ELIGIBLE non-PARTICPANTS, MTM PARTICIPANTS; and are there differences in those characteristics between those population groups?

Demographic Characteristics of the MEG1 population, MTM ELIGIBLE NON-PARTICPANTS, MTM PARTICIPANTS

The focus of this section is to describe the principal groups in terms of *counts and proportions*, i.e., the numbers of participants and which intervention they received, and participant demographics; and then to examine differences within and between the groups, employing univariate and multivariable tests for significance. The research team selected study population

groups and selected comparisons identified in the *List of Acronyms* and *Definitions of Population Groups* sections at the beginning of this document and examined their demographic make-up.

Figure 4 depicts the processes and resolution of the 652 Medicaid recipient names provided to the UF COP by the AHCA Pharmacy Program. Selected resolution categories in Figure 4 are referred to in the following descriptions of the Year 1 MTM program.

General Description of the MTM ELIGIBLE and MTM PARTICIPANT Populations (Figure 4)

A total of 652 people were categorized as MTM ELIGIBLE recipients by virtue of their eligibility for MEDS-AD Waiver Medicaid eligible population and providing consent to the AHCA Pharmacy Office for contact by UF COP MTM program staff. Among the 652 MTM ELIGIBLE recipients in this population, mean age at the start of Year 1 was 54.3 years and ranged from eight to 66 years. The median (population distribution midpoint) was 56 years. Most (n=523) spoke English only or spoke English as a second language (n=8), 108 spoke Spanish only, three spoke other languages, and no language preference was listed for 10 recipients. The pool of MTM ELIGIBLE recipients included 327 (50.2%) white recipients, 147 (22.6%) black or African American recipients, 112 (17.2%) ethnically Hispanic persons, three Asian, three Native American, nine other race, and 51 (7.8%) persons with no determined ethnoracial category. Fifty-eight percent of MTM ELIGIBLE were women (n=381).

The UF COP attempted contact with 469 (71.9%) of these individuals; the remaining 183 (28.1%) were not contacted. Of the 469 people contacted by UF COP, 199 (42.4%) agreed to a follow-up appointment for a Comprehensive Medication Review (CMR) at a future date. Of the 199 people with a scheduled CMR, 94 (47.2%) were female and 105 (52.8%) were male. This group was mostly white (122-61.3%), black (49-24.6%), Hispanic (14-7.0%) or other racial designation (14-7%). They were mostly older than 50 (70.9%), with 46 recipients falling into the 51-55 years of age category, 48 falling into the 56-60 years of age category, and 47 falling into the 61-65 years of age category. Of the remaining persons with a scheduled CMR, 40 (29.1%) were between 41 and 50 years old and 18 were between 21 and 40 years old. Non-

participants among the 469 contacted (n=270-57.6%), either declined to participate (n=73-27.0%) or could not successfully be contacted (197-73.0%). Among the 199 people with a scheduled CMR, 52 (26.1%) later declined to participate or could not be reached.

The number of MTM eligible Medicaid recipients with a completed CMR for Year 1 of the program was 147 (MTM PARTICIPANTS); 22.5% of the eligible pool of 652. Among the MTM PARTICIPANTS with a completed CMR, 138 (93.9%) spoke English or English as a second language, and 8 (5.4%) spoke Spanish only, and one record was missing the language preference information.

MTM recipient residential street addresses were used to assign the point locations to maps of Florida, see Figure 2 and Figure 3. Thirty-six recipients did not have a valid street address and were geocoded to the geographic center of their residential zip code (identified with triangles in Figure 2). These 36 points are therefore less precise in their location. Six recipients with a completed CMR were not included in Figure 2 for similar reasons. Persons in the MTM ELIGIBLE population and MTM PARTICIPANTS in Year 1 appear to be distributed around Florida in a manner consistent with the overall geographic distribution of the state's population.

All 147 MTM PARTICIPANTS met the UF COP definition of a completed intervention. A completed intervention consists of a full CMR session and three quarterly follow-up reviews. QFURs generally consist of a review of pharmacy claims records which may initiate an additional telephone contact with the MTM participant. Additional telephone contact with the MTM participant occurred 52 times during Year 1.

Participants Scheduled for a CMR (n=199) versus Non-Participants (n=270)

The evaluation team examined the impact of different demographic characteristics on MTM ELIGIBLE Medicaid recipients with a scheduled CMR (n=199) versus persons who declined without scheduling a CMR or could not be successfully contacted (n=270) by ethnoracial category, sex, and age in Table 7, Table 8, and Table 9 respectively.

No difference was found among eligibles with a CMR appointment and eligibles that did not have a CMR appointment by race or age (Table 7 and Table 9). However, eligibles with an appointment were more likely to be women than men (Table 8). Logistic regression was used to model the likelihood of a scheduled CMR versus no appointment adjusting for race, gender, and age. Women were found to be 1.54 (p=.025) times more likely to be participants than non-participants compared to men. The lack of differences by age and race is a positive finding because it suggests a lack of systematic bias by age or race among recipients with a scheduled appointment and no scheduled appointment.

Scheduled and completed CMR (n=147) versus those who declined to complete a scheduled CMR (52)

The evaluation team examined the impact of different sociodemographic characteristics on participants' with an initial scheduled CMR (n=199) who then declined (52) by age, ethnoracial background, and sex in Table 10, Table 11, and Table 12 respectively. No difference was found among those with a completed CMR versus those who declined at the time of the appointment by age, race or gender (Table 10, Table 11, and Table 12 respectively). Logistic regression was used to model the likelihood of a scheduled completed CMR versus those who set an appointment and then declined, adjusting for race, gender, and age. Each increase of one age category increased the likelihood of completing the CMR by 5% (Odds Ratio 1.05, p=.009). The lack of differences by sex and race is a positive finding because it suggests a lack of systematic bias among these two categories of persons with a scheduled CMR appointment.

Post CMR Actions by Demographic Characteristics

The evaluation team examined the impact of different sociodemographic characteristics on participants' likelihood of receiving a complete intervention and a MAP versus no MAP. Ninety-five percent (139 of 147) of MTM participants with a completed intervention also received a MAP. The analysis examined the potential influence of age, ethnoracial background, and sex; see Table 13, Table 14 and Table 15. No differences were found between participants with a complete intervention with and without a MAP. Logistic regression was used to model the likelihood of a completed intervention with and without a MAP adjusting for race, gender, and age. No significant demographic factors were identified indicating that large sociodemographic

differences did not exist between the complete group with MAP and the complete group without MAP.

Post-CMR follow-up actions conducted with participating patients by MTM program staff were also examined. Specific follow-up actions taken by MTM staff included: giving the patient a MAP and making a recommendation to their physician, just making a recommendation to the patient's physician, just giving the patient a MAP, and neither giving the patient a MAP or making a recommendation to their physician. The 147 people who received complete CMRs were eligible for this follow-up. Table 16, Table 17, and Table 18 present these post-CMR actions by age, race, and sex. None of these demographic factors was associated with the likelihood of a particular action. Logistic regression models for the likelihood of each of the post-CMR actions adjusted for age, race, and gender did not significantly impact these individuals' odds of receiving any of these four types of follow-up action.

Are there differences in demographic characteristics between all MTM ELIGIBLE Medicaid recipients (n=652) and those selected for intervention with a completed intervention (n=147)?

Of the 652 people eligible for the MTM program, 199 were scheduled for a CMR in the MTM program and 147 eventually completed the CMR and three QFURs. The 52 MTM ELIGIBLE recipients who did not participate in the intervention were lost to follow-up because they declined to finish the CMR process after initially scheduling a session. Table 19, Table 20, and Table 21 report the distribution of MTM ELIGIBLE recipients (n=651) and MTM PARTICIPANTS by CMR status and age, race, and gender respectively. The UF COP post-CMR summary file of MTM ELIGIBLE persons does not include gender or race indicators. Therefore, the UF COP was merged with the AHCA recipient demographic file. This resulted in one less record because of a duplicate record in the UF COP file. Therefore, frequencies for the MTM ELIGIBLE group in this section only sum to 651 persons. The distribution of persons by gender did not vary significantly between MTM program participants and MTM ELIGIBLE persons who did not receive the intervention. However, there were differences observed across racial/ethnic categories that were statistically significant. Hispanic recipients were 72.3% less likely to be in the intervention group (p=0002); and persons age 51 to 55 were over twice as likely to have a

completed CMR as the lowest age group, persons age 21 to 40. A logistic regression model was used to further test for differences in the likelihood of membership in these two populations after adjustment for age, race, and gender simultaneously. No statistically significant differences were found in the demographic distribution of MTM ELIGIBLE persons with and without a completed CMR. This suggests that persons who completed a CMR were demographically similar to persons who did not complete a CMR and reduces concerns that characteristics other than intervention processes might influence observed outcomes. However, this is based only on three demographic characteristics and a more comprehensive set of characteristics will have to be examined to insure comparisons between the intervention and non-intervention groups are "apple to apple" comparisons. Additional characteristics to be added in future models will include level of disease or condition severity, length of enrollment in the MTM program, length of Medicaid eligibility, number of chronic conditions, and number of prescriptions filled in the previous year.

Are there differences in characteristics of persons who declined the intervention at the initial telephone contact (n=73) and those for whom a CMR was completed?

Of the 220 people successfully contacted by UF COP, 199 scheduled a CMR with the UF COP team and 73 others declined outright. This analysis compared the 147 people with complete CMRs to the 73 who declined to participate at the initial phone contact. The distribution of racial/ethnic categories and recipient sex were no different between the two groups. However, persons with a completed CMR were more common among older recipients as compared to those who declined the intervention outright. See Table 22, Table 23 and Table 24 for the distribution by race categories, sex, and age group respectively.

Preliminary Examination of Utilization and Expenditures in the MEG1 population, MTM ELIGIBLE NON-PARTICPANTS, MTM PARTICIPANTS

Evaluation Question 4:

Are there differences in the utilization and expenditure profiles of the MEG1 population, the MTM ELIGIBLE NON-PARTICPANTS, and MTM PARTICIPANTS for calendar year 2011 and project Year 1 (June 1, 2012 to May 31, 2013) based on the claims and enrollment data available at the time of this report?

Utilization and Expenditure Estimates Using Johns Hopkins University ACG© System Version 10.0

Preliminary risk adjustment and statistical analyses were performed on the 147 Year 1 MTM PARTICIPANTS, 505 MTM ELIGIBLE NON-PARTICIPANTS and the MEG1 population of 14,891. Using calendar year 2011 enrollment and claims data, risk adjustment and descriptive tests were performed using The Johns Hopkins Adjusted Clinical Groups® (ACG) System and statistical tests were done using SAS® 9.3.

The ACG System measures the morbidity burden of patient populations based on disease patterns, age and gender. Diagnostic and pharmaceutical code information is used to provide a representation of the morbidity burden of populations, subgroups or individual patients allowing comparisons across these groups on various measures.

The risk adjustment of these cohorts allowed tests of statistical significance to be performed on selected attributes of the eligible participants and the eligible non-participants in the MEDS-AD MTM program. The results from these tests will be used to perform further statistical analyses which can determine whether a suitable cohort exists within the 14,891 of all individuals eligible for the MEDS-AD MTM with attributes similar enough so that they can be matched with the 147 individuals eligible and participating in MEDS-AD MTM for program evaluation purposes. This analysis will also provide information on whether statistically significant differences exist between the 505 individuals eligible but not participating in the MEDS-AD MTM program and these two groups which can indicate the extent of heterogeneity between these three cohorts.

The metrics used for comparisons between the three groups were Total Cost, Pharmacy Cost, Inpatient Hospital Discharges and Outpatient Hospital Visits. Actual risk adjustment scores will be reported when complete outpatient professional claims data files for this cohort are available.

Total Cost measures the total Medicaid expenditures for filled prescriptions plus medical inpatient and outpatient hospital expenditures for the individual during the year. Inpatient Hospital Discharges is a measure of the number of acute care inpatient discharges the individual has during the year for causes that are not related to child-birth and injury. Outpatient Hospital Visits measure the number of times the individual visits ambulatory and hospital outpatient departments (excluding emergency departments) during the year.

Therefore, t-tests were performed to determine whether there were statistically significant differences in the means of the respective metrics between each of the three cohorts: the 147 individuals eligible and participating in MEDS-AD MTM program (denoted "MTM Participants in Year 1"), the 505 individuals eligible and not participating in the MEDS-AD MTM program (MTM Eligible Non-Participants in Year 1), and the 14,891 population of all individuals eligible for the MEDS-AD MTM under the Section 1115 waiver (MEG1 Population Year 1). The level of statistical significance was set at $\alpha = 0.05$ and no adjustment was made for multiple comparisons. No adjustment is made for the length of Medicaid enrollment during calendar year 2011.

Table 25 contains a summary of the results of these analyses. Tables 26 to 37 provide more statistical detail on each comparison.

The results in the first column of Table 25 show that the mean values of Pharmacy Cost and Outpatient Visits were not statistically significantly different for the 147 MTM PARTICIPANTS and the 505 MTM NON-PARTICIPANTS. The lack of statistical significance on these measures indicates that these groups are relatively homogenous for this measure.

However, results in the second column show that for the 147 MTM PARTICIPANTS and the 14,891 MEG1 population have statistically significant differences in the mean values of Total

Cost, Pharmacy Cost, and Outpatient Hospital Visits. Results in the third column of Table 1 also denote statistically significant differences exist in the means of these measures for the 505 MTM NON-PARTICIPANTS and the MEG1 population.

This last result reinforces the homogeneity between the MTM PARTICIPANTS and MTM NON-PARTICIPANTS. However, the statistically significant differences between these two groups and the MEG1 population indicate a closer analysis is needed for selection of an appropriate comparison group from the MEG1 population.

The additional analysis of differences between the attributes of all three population groups will include an analysis of ranges, medians, modes, tests of normality and squared deviations from the means of relevant variables in order to determine if outliers or other factors are related to the statistically significant differences between the groups. This information will be used to derive a suitable comparison group from the MEG1 population for the MTM PARTICIPANT group.

Preliminary Examination of Utilization and Expenditures in the MEG1 population, MTM ELIGIBLE NON-PARTICPANTS, MTM PARTICIPANTS for Program Year 1, June 1, 2011 to May 31, 2012

In this section, the evaluation team summarized Total Medicaid expenditures and total services received by Medicaid recipients in the MEG1, MTM PARTICIPANT and MTM Non-PARTICIPANT populations for program Year 1, June 1, 2011 to May 31, 2012. Claims data for Medicaid utilization in this analysis included inpatient and outpatient hospital services, skilled nursing facility services and filled prescriptions only. Estimates are not adjusted for length of enrollment in Medicaid during calendar year 2011.

Table 38 summarizes the results of this analysis. Only inpatient hospital expenditures were different for comparisons between the MTM PARTICIPANTS and the MEG1 population. MTM PARTICPANTS averaged $5,907 less per hospital stay than their MEG1 counterparts (p=.025). However, the small number of inpatient discharges among MTM PARTICPANTS (25) may influence the precision of the estimate. See Table 44 for details.

Comparisons between the MTM Eligible Non-PARTICIPANTS and the MEG1 population summarized in Table 38 indicate statistically significant differences in total expenditures and pharmacy expenditures. For both measures, the MTM Non-PARTICIPANTS had higher expenditures than the MEG1 population (p=.004 in both cases). Non-PARTICIPANTS averaged $11,221 in reimbursements for 496 inpatient stays while the MEG1 population members averaged $8,648 for 11284 inpatient stays. See Table 39 and Table 41 for details. Pharmacy expenditures in the Non-PARTICPANT group averaged $6,937 per person (n=479) and $5,125 per person (n=10-577) among the MEG1 group. See Table 41 for details. However, the MEG1 is likely a more heterogeneous population so unadjusted estimates may be misleading. Additional details for all comparisons are presented in Tables 39 through 47.

Adjusted Comparisons

A linear model for log total expenditures adjusted for study population category, age, race, and gender of the recipients is presented in Table 47. Total expenditures are calculated as described above. Only the MEG1 population had a statistically different value for total expenditures. The MTM PARTICIPANT and Non-PARTICPANTS were statistically equal after adjustment. Only the 51-55 and 56-60 age categories were statistically different from the reference group (age 61 and above). This simple model explained relatively little variation (R-squared =.006). After exponentiation of the estimates presented in Table 47, the MEG1 population was found to have 61.6% of the expenditures of the reference group; the MTM PARTICIPANTS. Two age groups with significant differences were associated with about 15% higher expenditures than the reference age group of 61 and above.

A negative binomial model for total services received (hospital discharges, outpatient hospital visits, and total prescriptions filled adjusted for study population category, age, race, and gender of the recipients) is presented in Table 48. The only statistically significant predictor of the number of services received was the MEG1 population indicator. The MEG1 population used only 33% of the services used by the MTM PARTICIPANTS.

A detailed table of mean total expenditures and total services received by all 84 ethnoracial, sex, and age categories is presented in Table 49.

Future Activities

Upon receipt of a full set of claims and enrollment records for the MEG1, MTM PARTICPANT, AND MTM Non-PARTICPANT population for year 1 cohort covering the period January 1, 2010 to December 31, 2012, the Evaluation Team will complete the following analyses:

1. Summarize all utilization and expenditures for all three populations by calendar year and report findings.
2. Summarize all utilization and expenditures for all three populations for program year 1, June 1, 2011 to May 31, 2012 and report findings.
3. Risk adjust all three populations using Johns Hopkins ACG© software and other selected algorithms.
4. Conduct a propensity score analysis to assess the validity of the MTM Non-PARTICPANT population as Comparison Group 1 for the MTM PARTICIPANT and identify a suitable Comparison Group 2 from the MEG1 population. The propensity analysis will include risk adjustment, utilization and expenditures, and patient characteristics.
5. Identify the clinical outcomes of interest in the claims data and report on findings.

Upon receipt of the UF COP records for the Year 2 cohort for the period June 1, 2012 to May 31, 2013, the Evaluation Team will complete the following analyses:

1. Extract and summarize individual patient chart data from Excel files created and maintained by the MTM staff.
2. Merge Year 1 and Year 2 UF COP data for MTM PARTICIPANTS and conduct descriptive analysis of differences.
3. Merge Year 2 PARTICPANT data with claims and enrollment data for calendar year 2010 to 2012 and conduct descriptive analysis.

Upon receipt of a full set of claims and enrollment records for the MEG1, MTM PARTICPANT, AND MTM Non-PARTICPANT population for year 1 and year 2 cohort covering the period January 1, 2010 to December 31, 2013, the Evaluation Team will complete the following analyses:

1. Summarize calendar year data by population group for
    a. Expenditures and Utilization
    b. Clinical Outcomes
2. Summarize program year data by cohort and population group for
    a. Expenditures and Utilization
    b. Clinical Outcomes
3. Complete risk adjustment with full set of claims for calendar years 2010 to 2013.
4. Conduct multivariable regression models for key outcomes as defined by contract with interpretation of key differences between the MTM PARTICIPANTS, and Comparison Group 1 and Comparison Group 2.

Summary

The Quantitative Evaluation Team conducted a thorough descriptive analysis of UF COP summary reports, patient charts, and associated records. Review of their data quality and record keeping processes indicated generally good quality data that was sometimes recorded in a fashion inconsistent with good research or evaluation practices. From a program point of view, their approach is no doubt reasonable. However, from an evaluation point of view, the data was very difficult to extract and use as it was recorded in Microsoft Excel worksheets. The issues with data recording were time consuming to resolve and added another process where error could have been introduced by the Evaluation Team's efforts to move the data from individual, non-standardized spreadsheets into rectangular tables suitable for analysis.

Recommendation

A relational data base should be created using Microsoft Access or other software that stores data in standard rectangular tables and does not use images or other data storage mechanisms that cannot be easily manipulated. A relatively small investment in programming could produce a user "front end" that represents the patient charts in much the same manner as the current Excel-based system but stores the data in the "back end" in a standardized form. This should be implemented at the start of any new contract period with the UF COP.

The Evaluation Team attempted to reproduce summary results presented by the UF COP in their Year 1 summary report by extracting information from the 147 MTM recipient records stored as Excel files with 15 sheets per recipient. The Evaluation Team was generally able to reproduce good concordance with the UF COP reports for the 10 sheets that could be converted to SAS data tables. Some interventions were difficult to track because they were entered multiple times per patient or, in the case of resolutions to provider intervention, the Evaluation Team could not identify the system for recording this information. Generally, important clinical and process measures were intermingled with more mundane traffic information recorded by MTM staff as part of the overall program. Some thought could be applied to recording the most important outcomes separately from other information, a step that would naturally occur if Recommendation 1 were implemented.

The Evaluation Team conducted descriptive examination of the MTM PARTICPANT, MTM Non-PARTICIPANT, and MEG1 populations by age, race, and gender categories and more detailed examination of the MTM PARTICIPANTS by post-CMR actions. The goal was to identify the potential for systematic bias in which Medicaid recipients were selected for the MTM ELIBIGLE population (n=652) and those who subsequently completed a CMR based on age, race, and gender. Female recipients were found to be somewhat more likely to be MTM ELIGIBLES with a scheduled CMR (n=199) than to refuse or not be reachable (n=270) during the initial UF COP phone encounter. The distribution of racial categories in the MTM PARTICPANT group (n=147) versus MTM Non-PARTICIPANT group (n=505) suggests that Black recipients were less likely to be in the CMR completed group, although subsequent multivariable analysis adjusting for age, race, and gender appear to negate this finding. There was some evidence that MTM PARTICIPANTS were more likely to be older than persons who refused to initiate a CMR appointment (n=73), a finding perhaps consistent with increased need for the MTM services in those who agreed to schedule and complete a CMR.

The Evaluation Team employed the Johns Hopkins ACG software for risk adjusting for disease prevalence and severity in the MTM PARTICPANT, MTM Non-PARTICIPANT, and MEG1 populations employing the claims and enrollment data available prior to this report. The ACG

program adjusts for patient age and gender and has a sophisticated weighting scheme for grouping conditions. Reporting of actual risk scores will wait for a full set of all claim types. However, examination of total costs and total pharmacy costs output as a byproduct of the ACG algorithm indicate statistically significant differences in total costs in all three pair-wise group comparisons between PARTICPANTS, Non-PARTICIPANTS, and MEG1 populations. Pharmacy costs were similar in the PARTICPANTS and Non-PARTICIPANT groups but the MEG1 population had lower pharmacy costs than either the MTM PARTICIPANTS or Non-PARTICIPANTs. For this reason care will need to be taken in choosing an appropriate comparison group from the MEG1 population.

Additional analysis was done to examine differences in expenditures and service utilization for calendar year 2011 among the MTM PARTICPANT, MTM Non-PARTICIPANT, and MEG1 populations. There was some congruence between these unadjusted analyses and the adjusted ACG findings. For example, total costs were lower in the MEG1 population as were pharmacy costs relative to the Non-PARTICPANTS. However, the unadjusted analysis indicated higher inpatient costs for the MEG1 population relative to the MTM PARTICIPANTS. This finding was possible due to the relatively small number of hospital discharges in the MTM PARTICIPANT population in calendar year 2011.

Finally the Evaluation Teams adjusted analysis of total expenditures in a semi-log model that included recipient age, race, and gender suggested that the MEG1 population had lower total expenditures than either MTM PARTICIPANTS and Non-PARTICPANTS.

The Evaluation Team has summarized a series of next steps and anticipates meeting all evaluation goals on time.

Appendix of Tables and Figures

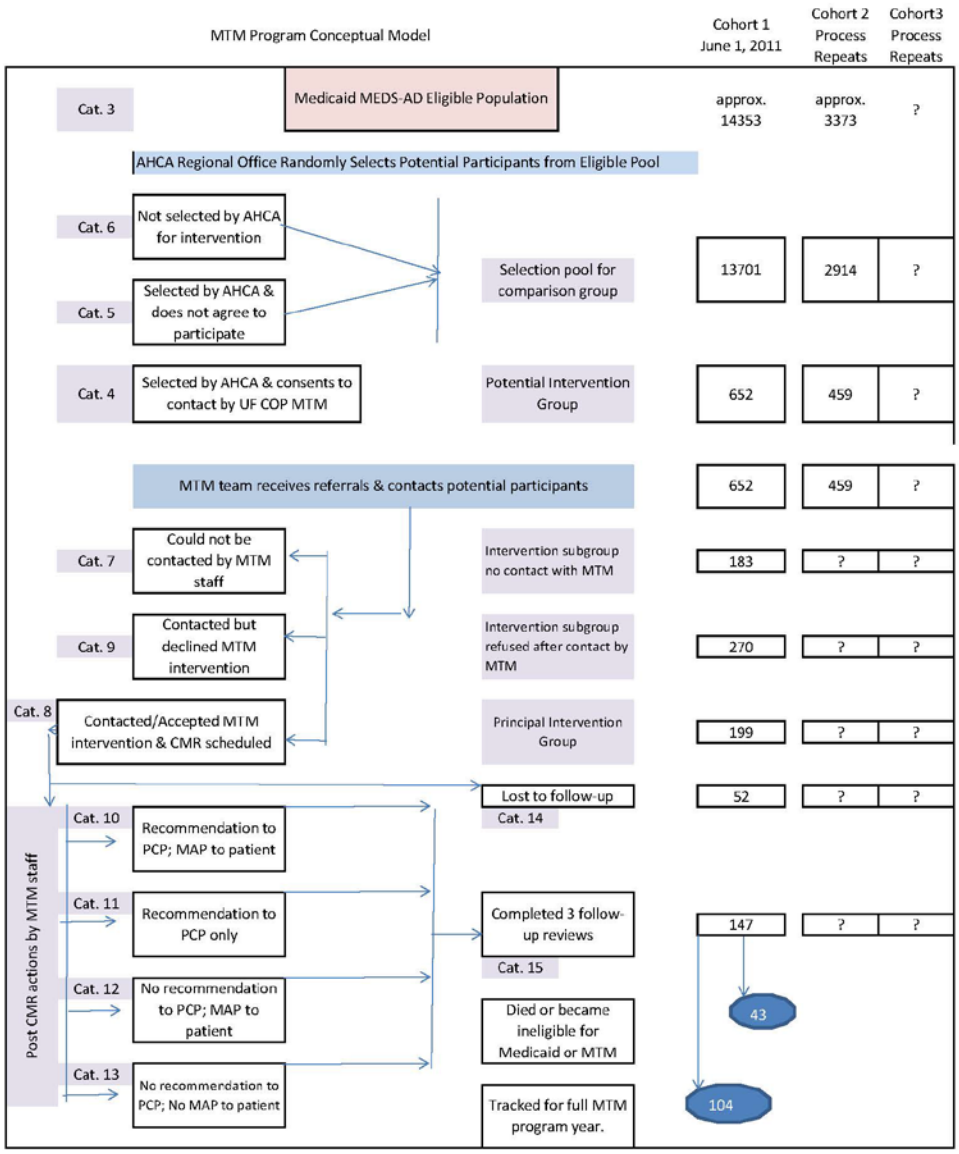

Figure 1. Florida Medicaid and University of Florida Medication Therapy Management Program recipient selection and intervention processes, June 1, 2011 to May 31, 2012

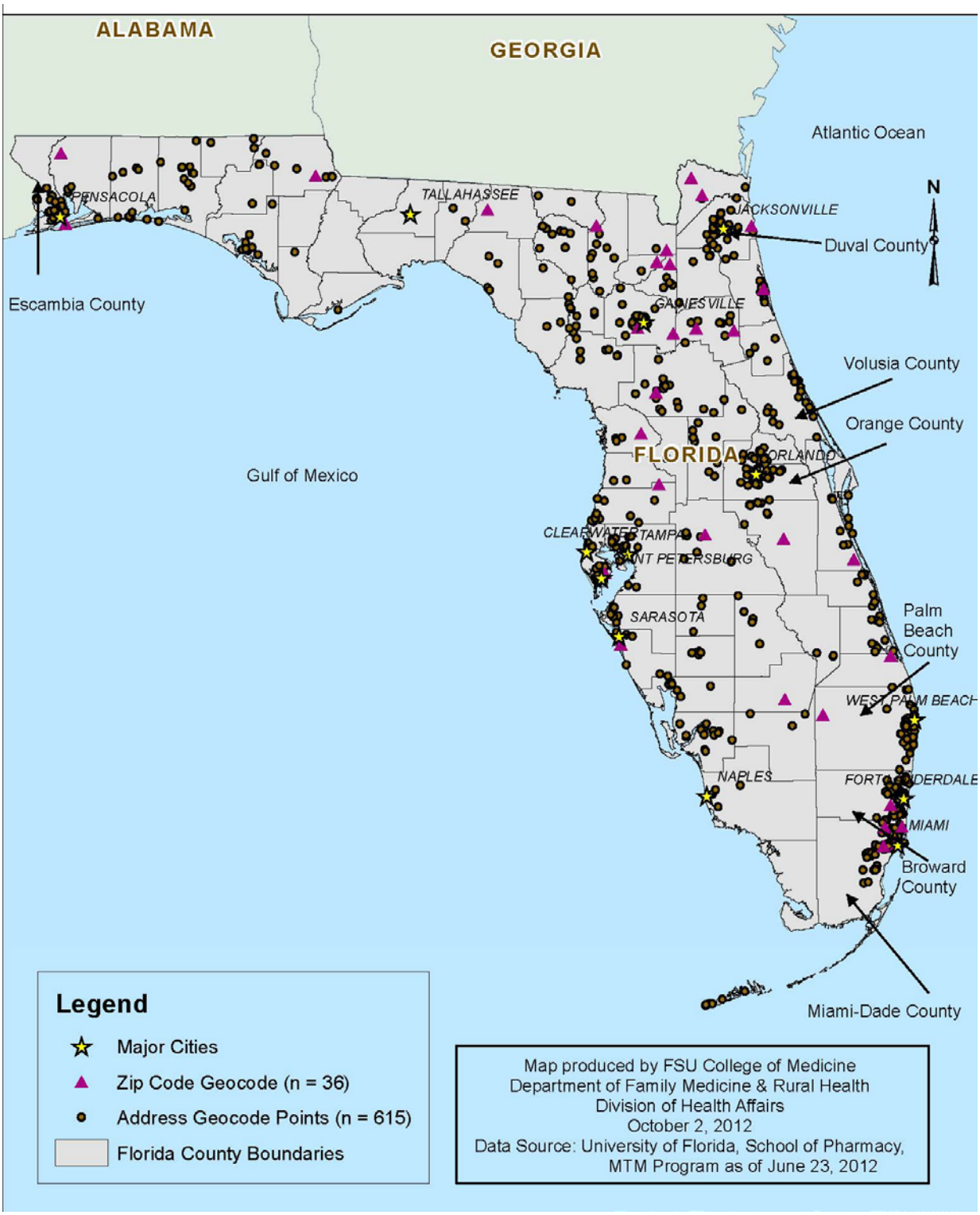

Figure 2. Geographic distribution of Florida MTM eligible recipients in Program Year 1: Recipient residential location geocoded by address or zip code, June 2011.

Note: One duplicate record removed and records identified by a triangle are geocoded to the zip code center due to incomplete address.

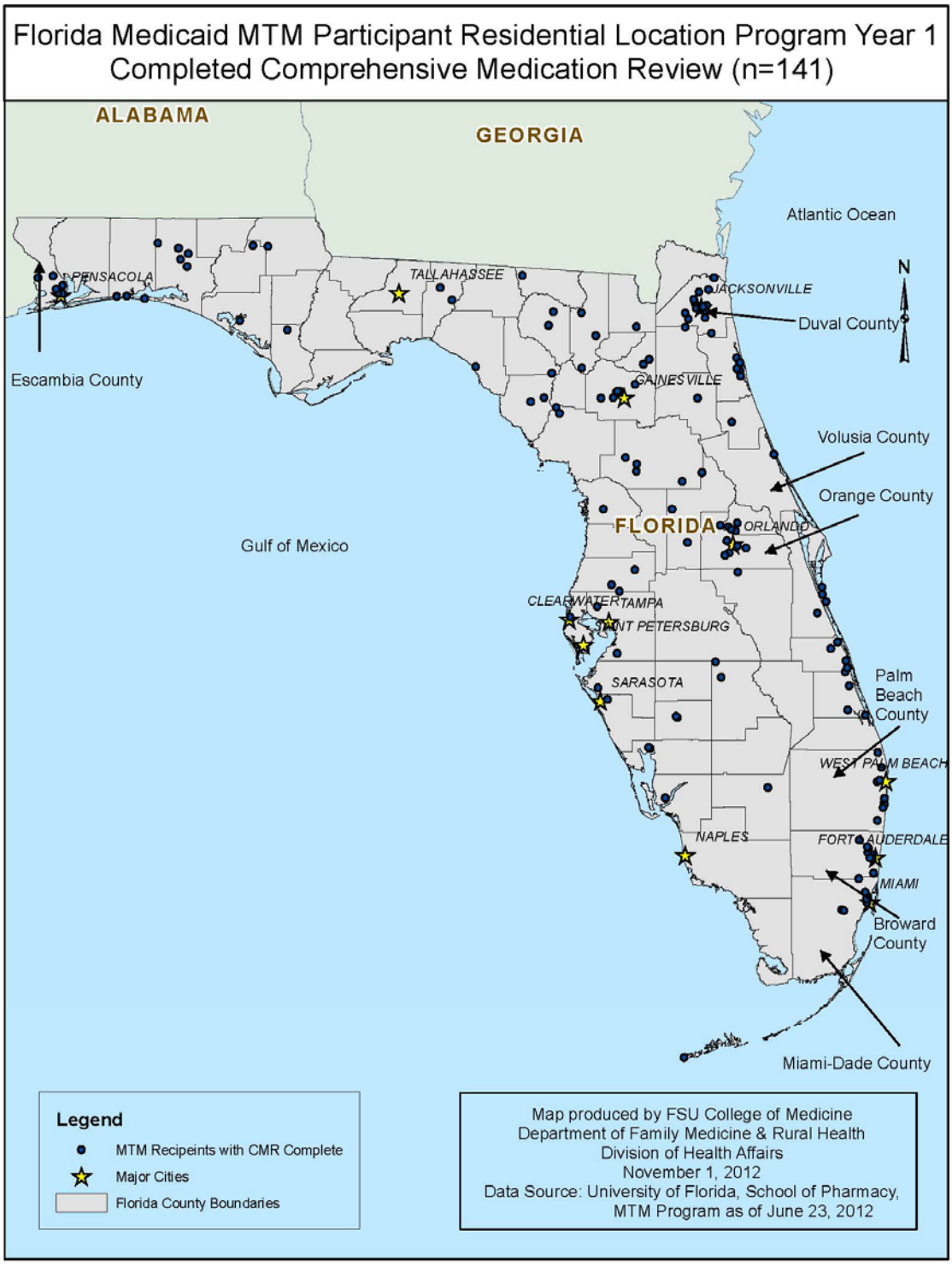

Figure 3. Geographic distribution of Florida MTM participants geocoded by address or zip code, June 2011.
Note: Only 141 of 147 participants with a completed CMR were geocoded due to missing address information.

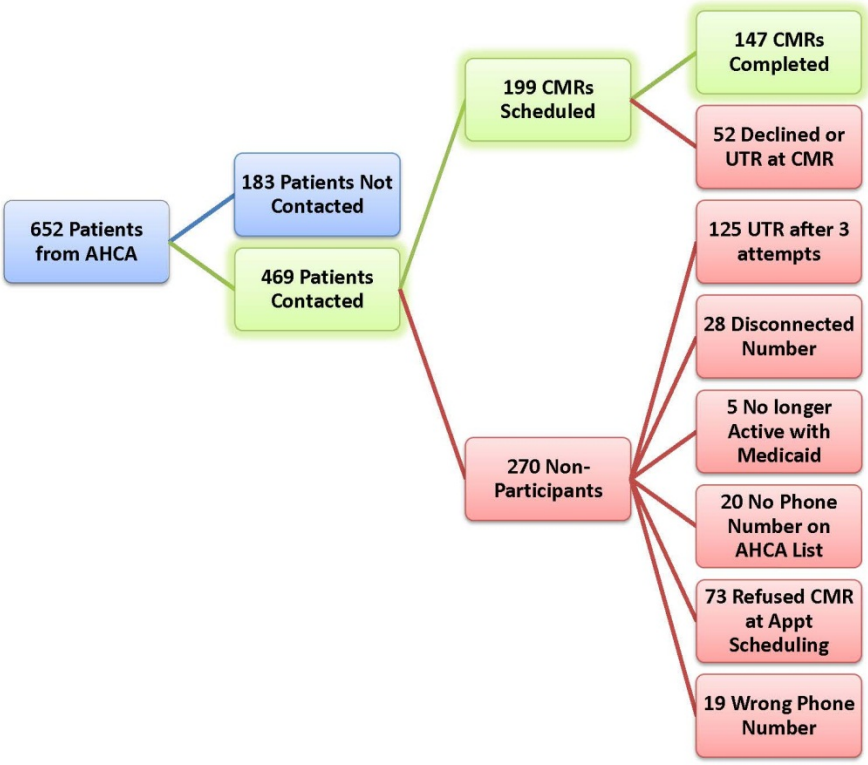

Figure 4. University of Florida College of Pharmacy recipient selection process and resolution for Year 1 of the MTM program, August 2011.
Note: Adapted from UF College of Pharmacy document: *UF MEDS-AD Post CMR 2011 Data (8-16-11)*

Table 1. Data elements, content, and data quality issues identified by the FSU COM evaluation team with patient chart files by spreadsheet name for MTM Program Year 1

Sheet No.	Patient Chart Spreadsheet and Name	Data Storage Type	Content	Issues
1	Demographics	Text, numeric, & date	Patient, provider, and pharmacy contact information.	Non-standard format: columns include more than one data domain and different storage types; extra rows with no data.
2	ICD-9 Codes	Text, numeric, & date	Pre-intervention diagnosis codes, first and last date of occurrence, and frequency.	None.
3	Interventions	Text & dates	Multiple interventions by contact date with Notes and Action Taken.	Notes are entered as free text; standard categories could have been achieved in many cases; some important information (Potential Inactive Status) should have been tracked separately with standard codes.
4	MedList_CMR	Text, numeric, & date	Drug class, NDC, name, strength, supply in days, prescriber id, refill indicator.	Therapeutic drug class should be recorded in columns; extra lines should be removed and therapeutic class is missing from first set of drugs in some patient charts.
5	Chart_CMR	Text & images	List of current medications, dosage, indication, dosing schedule, prescriber, side effects, complaints, comments, potential drug interactions, gaps in therapy, or other areas of concern. MTM reviewers Assessment and Plan for this patient.	Data recorded under Assessment and Plan is stored as an image rather than in a cell. This is problematic for efficient research/evaluation tasks.
6	Gen_Info_CMR	Text	Lifestyle, laboratory values, vaccines and allergies from patient report.	Non-standard format: columns include more than one data domain and different storage types; extra rows with no data.
7	Questions_CMR	Text	Adherence and quality assurance survey questions.	Non-standard format: columns include more than one data domain and different storage types; extra rows with no data.
8	MAP_CMR	Text & image	Duplicates most information from Chart_CMR but includes additional information for patient about steps and results by area of concern.	Non-standard format: columns include more than one data domain and different storage types; extra rows with no data. Only an issue for areas of concern, action steps, and result notes which not duplicated in Chart_CMR information.

Sheet No.	Patient Chart Spreadsheet and Name	Data Storage Type	Content	Issues
9	Fax_CMR	Text & image	Duplicates most information from Chart_CMR but includes additional information for prescriber about recommendations for change.	Non-standard format: columns include more than one data domain and different storage types; extra rows with no data. Only an issue for Identified Therapeutic Opportunities, Patient Report Problems, & Patient Adverse Reaction not duplicated in Chart_CMR information.
10	Fax_Cover_QFUR	Text & image	Cover sheet for Fax to prescriber.	None
11	MedList_QFUR-3	Text, numeric, & date	Drug class, NDC, name, strength, supply in days, prescriber id, refill indicator.	Same as MedList_CMR
12	Chart_QFUR-3	Text & image	MTM reviewers Assessment and Plan for this patient.	Data recorded under Assessment and Plan is stored as an image rather than in a cell. This is problematic for efficient research/evaluation tasks.
13	MedList_QFUR-6	Text, numeric, & date	Drug class, NDC, name, strength, supply in days, prescriber id, refill indicator.	Same as MedList_CMR
14	Chart_QFUR-6	Text & image	MTM reviewers Assessment and Plan for this patient.	Data recorded under Assessment and Plan is stored as an image rather than in a cell. This is problematic for efficient research/evaluation tasks.
15	MedList_QFUR-9	Text, numeric, & date	Drug class, NDC, name, strength, supply in days, prescriber id, refill indicator.	Same as MedList_CMR
16	Chart_QFUR-9	Text & image	MTM reviewers Assessment and Plan for this patient.	Data recorded under Assessment and Plan is stored as an image rather than in a cell. This is problematic for efficient research/evaluation tasks.

Table 2. Comparison between UF COP first year summary report Table C (Summary of Interventions by Patient Specific Interventions- These include interventions documented during a phone conversation with the patient) counts to FSU COM findings extracted from first year patient charts

	UF COP Totals	FSUCOM Totals
CMR Interventions or Other Counseling at QFUR		
Adverse Drug Event Identified	1	1
Educated on Heart Failure	1	1
Explained MTM Program to Patient	1	12
Insufficient Dosage Identified	1	1
Educated on Dyslipidemia	2	2
Educated on GERD	2	2
Counseled on Preventative Screenings/Vaccinations	3	3
OTC Therapy Recommended	3	3
Counseled on Smoking Cessation	7	7
Educated on Asthma/COPD	7	7
Counseled on Diet/Exercise	10	10
Counseled on Medication Adherence/Compliance	37	10
Educated on Disease State (Other)	12	11
Educated on Hypertension	11	11
Recommended Preferred Drug List Alternative	10	10
Educated on Diabetes	12	12
Counseled on Medication Administration/Technique	26	26
Counseled on Medication (General, side effects, indication, etc.)	81	79
Map Interventions		
Counseled on Lifestyle Modifications	1	1
Educated on Dyslipidemia	1	1
Excessive Pill Burden Identified (multiple tablets of lower strength)	1	1
Level 1 Clinically Significant Drug-Drug Interaction Identified	1	1
Combination Therapy Recommended (decrease pill burden)	2	2
Counseled on Smoking Cessation	2	2
Educated on GERD	2	2
Educated on Hypertension	2	2
Insufficient Dosage Identified	2	2
Lack of Therapy (Indication) Identified	2	2
Educated on Asthma/COPD	3	3
OTC Therapy Recommended	3	3
Counseled on Medication Adherence/Compliance	4	4
Counseled on Preventative Screenings/Vaccinations	4	4
Educated on Diabetes	4	4
Recommended Preferred Drug List Alternative	13	13
Counseled on Medication Administration/Technique	13	13

	UF COP Totals	FSUCOM Totals
Educated on Disease State (Other)	13	13
Counseled on Medication (General, side effects, indication, etc.)	30	30
Provider Specific Interventions - These include interventions that were communicated to providers via Fax		
Contraindication Identified (Drug - Disease)	1	1
Excessive Duration of Therapy Identified	1	1
Gap in Therapy - Heart Failure without a Beta-Blocker	1	1
Gap in Therapy - Potentially Inappropriate Beta-Blocker Selection in Heart Failure	1	1
Needs Preventative Screening / Immunizations	1	1
Counseled on Medication (General, side effects, indication, etc.)	2	2
Counseled on Medication Administration/Technique	2	2
Gap in Therapy - Heart Failure without an ACE-I or ARB	2	2
Gap in Therapy - Lack of Controller Medication / Beta-Agonist Overuse in Asthma	3	3
Gap in Therapy - Long-Term Steroid without Antiresorptive Agent	2	2
Insufficient Duration of Therapy Identified	2	2
OTC Therapy Recommended	2	2
Duplicate Therapy Identified	4	4
Excessive Dosage Identified	6	6
Excessive Pill Burden Identified (multiple tablets of lower strength)	5	5
Gap in Therapy - Diabetic without an ACE-I or ARB	5	4
Adverse Drug Event Identified	6	6
Level 1 Clinically Significant Drug-Drug Interaction Identified	7	7
Drug-Disease Interaction Identified	8	8
Gap in Therapy - Diabetic without a Statin	8	9
Insufficient Dosage Identified	8	8
Recommended Preferred Drug List Alternative	8	8
Lack of Efficacy Identified	10	10
Combination Therapy Recommended (decrease pill burden)	11	11
Level 2 Clinically Significant Drug-Drug Interaction Identified	15	14
Lack of Therapy (Indication) Identified	19	19

Table 3. Comparison between UF COP first year summary report Table D (*Tabulation of Interactions (by category*)) counts to FSU COM findings extracted from first year patient charts

	UF COP	FSUCOM
Intervention	Sum Totals	Sum Totals
Drug-Age Interaction Identified (Beers List)	0	0
Drug-Allergy Interaction Identified	0	0
Drug-Disease Interaction Identified	8	8
Drug-Food Interaction Identified	0	0
Drug-Pregnancy Interaction Identified	0	0
Level 1 Clinically Significant Drug-Drug Interaction Identified	8	8
Level 2 Clinically Significant Drug-Drug Interaction Identified	15	15
Level 3 Clinically Significant Drug-Drug Interaction Identified	0	0
Level 4 Clinically Significant Drug-Drug Interaction Identified	0	0

Table 4. Comparison between UF COP first year summary report Table E (*Patient Response/Rating of CMR—Quality Assurance Questions*) [3] counts to FSU COM findings extracted from first year patient charts

UF COP				FSUCOM			
Yes Count	Yes %	No Count	No %	Yes Count	Yes %	No Count	No %
113	76.9%	34	23.1%	113	76.9%	34	23.1%
140	95.2%	7	4.8%	140	95.2%	7	4.8%
39	90.7%	4	9.3%	39	90.7%	4	9.3%
63	95.5%	3	4.5%	63	95.5%	3	4.5%

Table 5.Comparison between UF COP first year summary report Table F (Provider Responses--These include resolved interventions documented or determined from review of the patient's prescription claims data or follow-up with the patient via telephone)[3] counts to FSU COM findings extracted from first year patient charts

	UF COP			FSU COM		
Provider Interventions	Interventions Identified (1st-4th Qtr.)	Intervention Resolutions (2nd - 4th Quarter)	Resolution Rate Year 1, by individual intervention	Intervention Identified (1st - 4th Quarter)	Interventions Resolutions (2nd - 4th Quarter)	Resolution Rate Year 1, by individual intervention
Adverse Drug Event Identified	6	-	0%	6	-	0%
Combination Therapy Recommended (decrease pill burden)	11	2	18%	11	2	18%
Contraindication Identified (Drug - Disease)	1	-	0%	1	-	0%
Counseled on Medication (General, side effects, indication, etc.)	2	-	0%	2	-	0%
Counseled on Medication Administration/Technique	2	1	50%	2	1	50%
Drug-Disease Interaction Identified	8	6	75%	8	6	75%
Duplicate Therapy Identified	4	2	50%	4	2	50%
Excessive Dosage Identified	6	4	67%	6	4	67%
Excessive Duration of Therapy Identified	1	-	0%	1	-	0%
Excessive Pill Burden Identified (multiple tablets of lower strength)	5	1	20%	5	1	20%
Gap in Therapy - Diabetic without a Statin	8	1	13%	9	1	11%
Gap in Therapy - Diabetic without an ACE-I or ARB	5	1	20%	4	1	25%
Gap in Therapy - Heart Failure without a Beta-Blocker	1	-	0%	1	-	0%
Gap in Therapy - Heart Failure without an ACE-I or ARB	2	-	0%	2	-	0%

	UF COP			FSU COM		
Provider Interventions	Interventions Identified (1st-4th Qtr.)	Intervention Resolutions (2nd - 4th Quarter)	Resolution Rate Year 1, by individual intervention	Intervention Identified (1st - 4th Quarter)	Interventions Resolutions (2nd - 4th Quarter)	Resolution Rate Year 1, by individual intervention
Gap in Therapy - Lack of Controller Medication / Beta-Agonist Overuse in Asthma	3	2	67%	3	3	100%
Gap in Therapy - Long-Term Steroid without Antiresorptive Agent	2	-	0%	2	-	0%
Gap in Therapy - Potentially Inappropriate Beta-Blocker Selection in Heart Failure	1	-	0%	1	-	0%
Insufficient Dosage Identified	8	7	88%	8	6	75%
Insufficient Duration of Therapy Identified	2	1	50%	2	1	50%
Lack of Efficacy Identified	10	4	40%	10	*	
Lack of Therapy (Indication) Identified	19	2	11%	19	*	
Level 1 Clinically Significant Drug-Drug Interaction Identified	7	4	57%	7	4	57%
Level 2 Clinically Significant Drug-Drug Interaction Identified	14	7	50%	14	7	50%
Needs Preventative Screening / Immunizations	1	-	0%	1	-	0%
OTC Therapy Recommended	2	-	0%	2	-	0%
Recommended Preferred Drug List Alternative	8	5	63%	8	*	
Total	139	50		139	39	
Year One Program Resolution Rate, Overall			36%			28%
*Could not identify *Resolutions* data element						

Table 6. Summary of Morisky Adherence Scale questions and summary score: Administered by UF COP staff directly following the initial CMR interview with the Year 1 cohort (n=147), June 1, 2011 to May 31, 2012

Do you sometimes forget to take your medicine?	
People sometimes miss taking their medicines for reasons other than forgetting. Thinking over the past two weeks, were there any days when you did not take your medicine?	
Have you ever cut back or stopped taking your medicine without telling your doctor because you felt worse when you took it?	
When you travel or leave home, do you sometimes forget to bring along your medicine?	
Did you take all of your medicine yesterday? *****	
When you feel like your symptoms are under control, do you sometimes stop taking your medicine?	
Taking medicine every day is a real inconvenience for some people. Do you ever feel hassled about sticking to your treatment plan?	
How often do you have difficulty remembering to take all of your medicine?******	
Mean Summary Score for 147 MTM PARTICIPANTS Year 1	6.31

Patients who answer yes to a survey item receive 1 point toward the total MMAS-8 summary score.
**Directionality of question was reversed (yes=0, no=1).*
***Question was dichotomized (Never/rarely=0, once in a while/sometimes/usually/all the time=1).*
Ref: Morisky 8-Item Medication Adherence Scale: Morisky DE, Ang A, Krousel-Wood M, Ward HJ. Predictive validity of a medication adherence measure in an outpatient setting. J Clin Hypertens.(Greenwich.). 2008;10(5):348-354.

Table 7. Number and percent of MTM ELIGIBLE Medicaid recipients with a scheduled CMR (199) versus persons who declined without scheduling a CMR or could not be successfully contacted (270) by race, Florida Medicaid MEDS-AD Waiver Program, June 1, 2011 through May 31, 2012

Participants versus Non-Participants	Race							
Count Overall %	White or European American	Black or African American	Hispanic	Asian American	American Indian or Alaskan Native	Other	Not Determined	Total
Non-Participant	155 33.0%	65 13.9%	19 4.1%	1 0.2%	1 0.2%	3 0.6%	26 5.5%	270 57.6%
Participant	122 26.0%	49 10.4%	14 3.0%	1 0.2%	0 0.0%	2 0.4%	11 2.3%	199 42.4%
Total	277 59.1%	114 24.3%	33 7.0%	2 0.4%	1 0.2%	5 1.1%	37 7.9%	469 100.0%

Pearson chi2(6) = 3.5486 Pr = 0.737 (no difference among participants and non-participants by race

Table 8. Number and percent of MTM ELIGIBLE Medicaid recipients with a schedule CMR (199) versus persons who declined without scheduling a CMR or could not be successfully contacted (270) by Gender, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Participants versus Non-Participants	Gender		
Count Overall %	Female	Male	Total
Non-Participant	102 21.7%	168 35.8%	270 57.6%
Participant	94 20.0%	105 22.4%	199 42.4%
Total	196 41.8%	273 58.2%	469 100.0%

Pearson chi2(1) = 4.2131 Pr = 0.040 (females are more likely to be participants that males)

Table 9. Number and percent of MTM ELIGIBLE Medicaid recipients with a schedule CMR (199) versus persons who declined without scheduling a CMR or could not be successfully contacted (270) by Age, Florida Medicaid Meds-AD Waiver Program June 1, 2011 through May 31, 2012

Participants versus Non-Participants	Age Categories in Years						
Count Overall %	0-20	21 - 40	41 - 50	51 - 55	56 - 60	61-65	Total
Non-Participant	1 0.2%	36 7.7%	55 11.8%	55 11.8%	57 12.2%	65 13.9%	269 57.5%
Participant	0 0.0%	18 3.8%	40 8.5%	46 9.8%	48 10.3%	47 10.0%	199 42.5%
Total	1 0.2%	54 11.5%	95 20.3%	101 21.6%	105 22.4%	112 23.9%	468§ 100.0%

Pearson chi2(5) = 3.4416 Pr = 0.632 (no difference among participants and non-participants by age category.

§Note: records sum to 468 due to deletion of a duplicate record in the UF COP MTM ELIGIBLE Non-PARTICIPANT group.

Table 10. Number and percent of MTM participants with an initial scheduled CMR (n=199) who then declined (52) by Age, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Initial Scheduled CMR, then Declined	Age in Years					
Count Overall %	21 - 40	41 - 50	51 - 55	56 - 60	61-65	Total
CMR Declined	8 4.0%	14 7.0%	11 5.5%	12 6.0%	7 3.5%	52 26.1%
CMR Completed	10 5.0%	26 13.1%	35 17.6%	36 18.1%	40 20.1%	147 73.9%
Total	18 9.0%	40 20.1%	46 23.1%	48 24.1%	47 23.6%	199 100.0%

Pearson chi2(4) = 7.9814 Pr = 0.092; Fisher's exact = 0.090 (no differences by age)

Table 11. Number and percent of MTM participants with an initial scheduled CMR (n=199) who then declined (52) by Race, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Initial Scheduled CMR, then Declined	Race and Ethnicity						
Count Overall %	White or European American	Black or African American	Hispanic	Asian American	Other	Not determined	Total
CMR Declined	30 15.1%	16 8.0%	3 1.5%	1 0.5%	0 0.0%	2 1.0%	52 26.1%
CMR Completed	92 46.2%	33 16.6%	11 5.5%	0 0.0%	2 1.0%	9 4.5%	147 73.9%
Total	122 61.3%	49 24.6%	14 7.0%	1 0.5%	2 1.0%	11 5.5%	199 100.0%

Pearson chi2(5) = 5.2848 Pr = 0.382; Fisher's exact = 0.485 (no differences by race)

Table 12. Number and percent of MTM participants with a initial scheduled CMR (n=199) who then declined (52) by Gender, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Initial Scheduled CMR, then Declined	Gender		
Count Overall %	Female	Male	Total
CMR Declined	30 15.1%	22 11.1%	52 26.1%
CMR Completed	64 32.2%	83 41.7%	147 73.9%
Total	94 47.2%	105 52.8%	199 100.0%

Pearson chi2(5) = 5.2848 Pr = 0.382; Fisher's exact = 0.485 (no difference by gender)

Table 13. Number and percent of MTM participants with a completed CMR and three completed quarterly follow-up reviews with or without a MAP by Age, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed Intervention (CMR and three Quarterly follow-ups) with and without a MAP	Age in Years					
Count Overall %	21 - 40	41 - 50	51 - 55	56 - 60	61-65	Total
No MAP	1 1%	2 1%	1 1%	3 2%	1 1%	8 5%
MAP	9 6%	24 16%	34 23%	33 22%	39 27%	139 95%
Total	10 7%	26 18%	35 24%	36 24%	40 27%	147 100%

Pearson chi2(4) = 2.3716 Pr = 0.6678; Fisher's exact = 0.524 (no difference in age)

Table 14. Number and percent of MTM participants with a completed CMR and three completed quarterly follow-up reviews with or without a MAP by Race, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed Intervention (CMR and three Quarterly follow-ups) with and without a MAP	Race					
Count Overall %	White or European American	Black or African American	Hispanic	Other	Not Determined	Total
No MAP	8 5.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	8 5%
MAP	84 57%	33 22%	11 7%	2 1%	9 6%	139 92%
Total	92 63%	33 22%	11 7%	2 1%	9 6%	147 100.0%

Pearson chi2(4) = 5.0579 Pr = 0.2814; Fisher's exact =0.3836 (no difference by race)

Table 15. Number and percent of MTM participants with a completed CMR who received a MAP, and three completed quarterly follow-up reviews by Gender, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed Intervention (CMR and three Quarterly follow-ups) with and without a MAP	Gender		
Count Overall %	Female	Male	Total
No MAP	6 4%	2 1%	8 5%
MAP	77 52%	62 42%	139 95%
Total	83 56%	64 44%	147 100%

Pearson chi2(1) = 1. 1827 Pr = 0.277; Fisher's exact p=0.466 (no difference by gender)

Table 16. Number and percent of Post CMR actions by MTM staff by Age, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Post CMR Actions by MTM Staff	Patient Age Categories					
Count Overall %	21 - 40	41 - 50	51 - 55	56 - 60	61-65	Total
Both PCP Contact and MAP to Patient	9 6.1%	22 15.0%	34 23.1%	33 22.4%	38 25.9%	136 92.5%
PCP Contact Only	1 0.7%	2 1.4%	1 0.7%	2 1.4%	0 0.0%	6 4.1%
MAP to Patient Only	0 0.0%	2 1.4%	0 0.0%	0 0.0%	1 0.7%	3 2.0%
Neither MAP to Patient nor PCP Contact	0 0.0%	0 0.0%	0 0.0%	1 0.7%	1 0.7%	2 1.4%
Total	10 6.8%	26 17.7%	35 23.8%	36 24.5%	40 27.2%	147 100.0%

Pearson chi2(4) = 3.8549 Pr = 0.426; Fisher's exact = 0.251 (no difference by age)

Table 17. Number and percent of Post CMR actions by MTM staff by Gender, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Post CMR Actions by MTM Staff	Patient Gender		
Count Overall %	Female	Male	Total
Both PCP Contact and MAP to Patient	60 40.8%	76 51.7%	136 92.5%
PCP Contact Only	1 0.7%	5 3.4%	6 4.1%
MAP to Patient Only	2 1.4%	1 0.7%	3 2.0%
Neither MAP to Patient nor PCP Contact	1 0.7%	1 0.7%	2 1.4%
Total	64 43.5%	83 56.5%	147 100.0%

Pearson chi2(3) = 3.3091 Pr = 0.346; Fisher's exact = 0.362 (no difference by gender)

Table 18. Number and percent of Post CMR actions by MTM staff by Race, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Post CMR Actions by MTM Staff	Race					
Count Overall %	White or European American	Black or African American	Hispanic	Other	Not determined	Total
Both PCP Contact and MAP to Patient	82 55.8%	32 21.8%	11 7.5%	2 1.4%	9 6.1%	136 92.5%
PCP Contact Only	6 4.1%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	6 4.1%
MAP to Patient Only	2 1.4%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	3 2.0%
Neither MAP to Patient nor PCP Contact	2 1.4%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 1.4%
Total	92 62.6%	33 22.4%	11 7.5%	2 1.4%	9 6.1%	147 100.0%

Pearson chi2(12) = 5.7158 Pr = 0.930; Fisher's exact =0.863 (no difference by race)

Table 19. Number and percent of MTM ELIGIBLE recipients with and without a completed CMR by Age, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed CMR	Age in Years							
Count Overall %	0-20	21 - 40	41 - 50	51 - 55	56 - 60	61-65	66	Total
No Completed CMR	1 0.2%	54 8.3%	102 15.7%	84 12.9%	107 16.4%	132 20.3%	24 3.7%	504 77.4%
Completed CMR	0 0.0%	10 1.5%	26 4.0%	35 5.4%	36 5.5%	40 6.1%	0 0.0%	147 22.6%
Total	1 0.2%	64 9.8%	128 19.7%	119 18.3%	143 22.0%	172 26.4%	24 3.7%	651§ 100.0%

Pearson chi2(5) = 5.7889 Pr = 0.327; Fisher's exact = 0.319 (no difference by age)

§Note: records sum to 651 due to deletion of a duplicate record in the UF COP MTM ELIGIBLE Non-PARTICIPANT group.

Table 20. Number and percent of MEDS-AD MTM ELIGIBLE recipients with and without a completed CMR by race, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed CMR	Race							
Count Overall %	White or European American	Black or African American	Hispanic	Asian American	American Indian or Alaskan Native	Other	Not determined	Total
No Completed CMR	234 35.9%	114 17.5%	101 15.5%	3 0.5%	3 0.5%	7 1.1%	42 6.5%	504 77.4%
Completed CMR	92 14.1%	33 5.1%	11 1.7%	0 0.0%	0 0.0%	2 0.3%	9 1.4%	147 22.6%
Total	326 50.1%	147 22.6%	112 17.2%	3 0.5%	3 0.5%	9 1.4%	51 7.8%	651§ 100.0%

Pearson chi2(6) = 18.8244 Pr = 0.004; Fisher's exact = 0.002 (observed distribution of race is different than expected)

§Note: records sum to 651 due to deletion of a duplicate record in the UF COP MTM ELIGIBLE Non-PARTICIPANT group.

Table 21. Number and percent of MEDS-AD MTM ELIGIBLE recipients with and without a completed CMR by gender, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed CMR	Gender		
Count Overall %	Female	Male	Total
No Completed CMR	206 31.6%	298 45.8%	504 77.4%
Completed CMR	64 9.8%	83 12.7%	147 22.6%
Total	270 41.5%	381 58.5%	651§ 100.0%

Pearson chi2(1) = 0.3328 Pr = 0.564; Fisher's exact = 0.569 (no difference by gender)

§Note: records sum to 651 due to deletion of a duplicate record in the UF COP MTM ELIGIBLE Non-PARTICIPANT group.

Table 22. Number and percent of MTM PARTICIPANTS with a completed CMR and MTM ELIGIBLE NON-PARTICPANTS who refused CMR by Age, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed CMR or Refused CMR	Age in Years					
Count Overall %	21 - 40	41 - 50	51 - 55	56 - 60	61-65	Total
Refused CMR	2 0.9%	8 3.6%	22 10.0%	15 6.8%	26 11.8%	73 33.2%
Completed CMR	10 4.5%	26 11.8%	35 15.9%	36 16.4%	40 18.2%	147 66.8%
Total	12 5.5%	34 15.5%	57 25.9%	51 23.2%	66 30.0%	220 100.0%

Pearson chi2(5) = 11.7901 Pr = 0.0378; Fisher's exact = 0.0324 (age distribution is different in the Refused CMR vs. Completed CMR group)

Table 23. Number and percent of MTM PARTICIPANTS with a completed CMR and MTM ELIGIBLE NON-PARTICPANTS who refused CMR by race, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed CMR or Refused CMR	Race						
Count Overall %	White or European American	Black or African American	Hispanic	Asian American	Other	Not determined	Total
Refused CMR	48 21.8%	12 5.5%	4 1.8%	1 0.5%	1 0.5%	7 3.2%	73 33.2%
Completed CMR	92 41.8%	33 15.0%	11 5.0%	0 0.0%	2 0.9%	9 4.1%	147 66.8%
Total	140 63.6%	45 20.5%	15 6.8%	1 0.5%	3 1.4%	16 7.3%	220 100.0%

Pearson chi2(5) = 4.0454 Pr = 0.5429; Fisher's exact = 0.5397 (race distribution is no different in the Refused CMR vs. Completed CMR group)

Table 24. Number and percent of MTM PARTICIPANTS with a completed CMR and MTM ELIGIBLE NON-PARTICPANTS who refused CMR by gender, Florida Medicaid MEDS-AD Waiver Program June 1, 2011 through May 31, 2012

Completed CMR or Refused CMR	Gender		
Count Overall %	Female	Male	Total
Refused CMR	26 11.8%	47 21.4%	73 33.2%
Completed CMR	64 29.1%	83 37.7%	147 66.8%
Total	90 40.9%	130 59.1%	220 100.0%

Pearson chi2(5) = 1.2660 Pr = 0.2605; Fisher's exact = 0.3086 (gender distribution is no different in the Refused CMR vs. Completed CMR group)

Expenditures and Service Utilization Using the JHU Risk Adjustment ACG V.10

Table 25. Summary of Statistical Analysis for MTM PARTICIPANTS, MTM ELIGIBLE NON-PARTICIPANTS, and the MEG1 population for calendar year 2011 utilization using the JHU ACG software.

	MTM Participants in Year 1 vs. MTM Eligible Non-Participants in Year 1	MTM Participants in Year 1 vs. MEG1 Population Year 1	MTM Eligible Non-Participants in Year 1 vs. MEG1 Population Year 1
Total Cost	**s. s.**	**s. s.**	**s. s.**
Pharmacy Cost	not s. s.	**s. s.**	**s. s.**
Inpatient Hospital Visits	**s. s.**	not s. s.	not s. s.
Outpatient Hospital Visits	not s. s.	**s. s.**	**s. s.**

Note: **s. s.** = statistically significant difference; not s. s. = not a statistically significant difference

Table 26. Comparison of ACG "Total Cost" for MTM ELEGIBLE NON-PARTICIPANTS and MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Total Cost		N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS		505	25147.9	43170.5	7.1000	469415
MTM PARTICIPANTS		147	19123.5	22810.7	52.9600	134087
Method	Variances	DF		t Value		Pr > |t|
Satterthwaite	Unequal	463.27		2.24		0.0255

Table 27. Comparison of ACG "Total Cost" for the MEG1 population and MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Total Cost	N	Mean	Std. Dev.	Minimum	Maximum
MEG1 POPULATION	14399	15159.2	59041.6	0	4445691
MTM PARTICIPANTS	147	19123.5	22810.7	52.9600	134087

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	166.65	-2.04	0.0431

Table 28. Comparison of ACG "Total Cost" MTM ELEGIBLE NON-PARTICIPANTS and MEG1 Population Year 1 cohort, calendar year 2011

Total Cost	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	25147.9	43170.5	7.1000	469415
MEG1 population	14399	15159.2	59041.6	0	4445691

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	572.21	5.04	<.0001

Table 29. Comparison of ACG "Pharmacy Cost" MTM ELEGIBLE NON-PARTICIPANTS and MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Pharmacy Cost	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	9400.7	22209.3	0	252431
MTM PARTICIPANTS	147	7372.0	14528.5	19.5500	123426

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	363.46	1.31	0.1923

Table 30. Comparison of ACG "Pharmacy Cost" MEG1 population and MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Pharmacy Cost	N	Mean	Std. Dev.	Minimum	Maximum
MEG1 population	14399	4766.9	30138.3	0	1995422
MTM PARTICIPANTS	147	7372.0	14528.5	19.5500	123426

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	159.11	-2.13	0.0349

Table 31. Comparison of ACG "Pharmacy Cost" MTM ELEGIBLE NON-PARTICIPANTS and MEG1 population Year 1 cohort, calendar year 2011

Pharmacy Cost	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	9400.7	22209.3	0	252431
MEG1 population	14399	4766.9	30138.3	0	1995422

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	571.12	4.54	<.0001

Table 32. Comparison of ACG "Inpatient Hospital discharges" MTM ELEGIBLE NON-PARTICIPANTS and MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Inpatient Hospital Discharges	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	0.7960	1.9700	0	29.0000
MTM PARTICIPANTS	147	0.4966	1.3718	0	12.0000

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	338.56	2.09	0.0372

Table 33.Comparison of ACG "Inpatient Hospital discharges" MEG1 population and MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Inpatient Hospital Discharges	N	Mean	Std. Dev.	Minimum	Maximum
MEG1 population	11227	0.6745	1.4372	0	24.0000
MTM PARTICIPANTS YEAR 1	147	0.4966	1.3718	0	12.0000

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	150.23	1.56	0.1205

Table 34.Comparison of ACG "Inpatient Hospital discharges" MTM ELEGIBLE NON-PARTICIPANTS YEAR 1 MEG1 Year 1 cohort, calendar year 2011

Inpatient Hospital Discharges	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	0.7960	1.9700	0	29.0000
MEG1 population	11227	0.6745	1.4372	0	24.0000

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	528.41	1.37	0.1714

Table 35. Comparison of ACG "Outpatient Hospital Visits" MTM ELEGIBLE NON-PARTICIPANTS YEAR 1 MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Outpatient Hospital Visits	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	8.1149	15.8826	0	167.0
MTM PARTICIPANTS	147	6.9388	8.7345	0	56.0000

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	443.33	1.17	0.2445

Table 36. Comparison of ACG "Outpatient Hospital Visits" MEG1 population MTM PARTICIPANTS Year 1 cohort, calendar year 2011

Outpatient Hospital Visits	N	Mean	Std. Dev.	Minimum	Maximum
MEG1 population	11227	4.9554	11.6462	0	365.0
MTM PARTICIPANTS	147	6.9388	8.7345	0	56.0000

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	152.88	-2.72	0.0072

Table 37.Comparison of ACG "Outpatient Hospital Visits" MTM ELEGIBLE NON-PARTICIPANTS and MEG1 population Year 1 cohort, calendar year 2011

Outpatient Hospital Visits	N	Mean	Std. Dev.	Minimum	Maximum
MTM ELEGIBLE NON-PARTICIPANTS	505	8.1149	15.8826	0	167.0
MEG1 population	11227	4.9554	11.6462	0	365.0

Method	Variances	DF	t Value	Pr > |t|
Satterthwaite	Unequal	528.66	4.42	<.0001

Total Medicaid Expenditures and total Services includes utilization for inpatient and outpatient hospital services, skilled nursing facilities and filled prescriptions only. Estimates are not adjusted for length of enrollment

Table 38.Summary of tests for differences in Medicaid expenditures and total services utilized for MTM PARTICIPANTS, MTM Non-PARTICIPANTS and the MEG1 population program Year 1, June 1, 2011 to May 31, 2012

	MTM Participants in Year 1 vs. MTM Eligible Non-Participants in Year 1	MTM Participants in Year 1 vs. MEG1 Population Year 1	MTM Eligible Non-Participants in Year 1 vs. MEG1 Population Year 1
Total Expenditures		n.s.	(+) p=.004
Pharmacy Expenditures		n.s.	(+) p=.004
Inpatient Hospital Expenditures		(-) p=.025	n.s.
Outpatient Hospital Expenditures		n.s.	n.s

n.s. = not significant (+) first measure in each column is higher than 2nd; (-) first measure in each column is lower than 2nd.

Table 39. Equality of mean total Medicaid expenditures: MTM Eligible Non-PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible Non-participants	496	11221	19409	872	0	165224
MEDS-AD Eligible Recipients (MEG1)	11284	8648	21872	206	0	983344
Diff (1-2)		2574	21774	999	t-Value	Pr > |t|
				Satterthwaite	2.87	0.0042

Table 40. Equality of mean total Medicaid expenditures: MTM PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std.. Dev.	Std.. Err.	Minimum	Maximum
MTM Eligible non-Participants	146	9636	17248	1428	8	143169
MEDS-AD Eligible Recipients (MEG1)	11284	8648	21872	206	0	983344
Diff (1-2)		989	21819	1817	t-Value	Pr > |t|
				Satterthwaite	0.69	0.494

Table 41. Equality of mean total Medicaid pharmacy expenditures: MTM Eligible Non-PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible Non-participants	478	6937	13235	605	0	136015
MEDS-AD Eligible Recipients (MEG1)	10577	5125	18594	181	0	966440
Diff (1-2)		1812	18395	860	t-Value	Pr > |t|
				Satterthwaite	2.87	0.0043

Table 42. Equality of mean total Medicaid pharmacy expenditures: MTM PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible with a CMR	142	6524	15383	1291	0	143169
MEDS-AD Eligible Recipients (MEG1)	10577	5125	18594	181	0	966440
Diff (1-2)		1399	18556	1568	t-Value	Pr > |t|
				Satterthwaite	1.07	0.2849

Table 43. Equality of mean total Medicaid inpatient expenditures: MTM Eligible Non-PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible Non-participants	107	13266	16528	1598	0	83659.2
MEDS-AD Eligible Recipients (MEG1)	2021	16251	21539	479	0	190958
Diff (1-2)		-2985	21317	2115	t-Value	Pr > |t|
				Satterthwaite	-1.79	0.0759

Table 44. Equality of mean total Medicaid inpatient expenditures: MTM PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible with a CMR	25	10343	12141	2428	0	59857
MEDS-AD Eligible Recipients (MEG1)	2021	16251	21539	479	0	190958
Diff (1-2)		-5907	21452	4317	t-Value	Pr > |t|
				Satterthwaite	-2.39	0.0246

Table 45. Equality of mean total Medicaid outpatient hospital expenditures: MTM Eligible Non-PARTICIPANTS versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible Non-participants	333	2464	5887	323	0	62238
MEDS-AD Eligible Recipients (MEG1)	5206	1905	3886	54	0	64507
Diff (1-2)		559	4034	228	t-Value	Pr > |t|
				Satterthwaite	1.71	0.0886

Table 46. Equality of mean total Medicaid outpatient hospital expenditures: MTM Eligible with CMR versus MEG1 population, June 1, 2011 to May 31, 2012

Population Group	N	Mean($)	Std. Dev.	Std. Err.	Minimum	Maximum
MTM Eligible with a CMR	101	2198	5945	592	0	55459
MEDS-AD Eligible Recipients (MEG1)	5206	1905	3886	54	0	64507
Diff (1-2)		293	3934	395	t-Value	Pr > |t|
				Satterthwaite	0.49	0.6235

Table 47. Linear model for total Medicaid program Expenditures among the MEG1, MTM ELIGIBLE NON-PARTICIPANT, and MTM PARTICIPANT populations by age, race, and gender, Year 1 (June 1, 2011 to May 31, 2012)

Dependent Variable: Log of Total Expenditures				
Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	8.048	0.168	47.78	<.0001
MEG1 Population	-0.484	0.165	-2.93	0.0034
Group MTM Eligible Non-PARTICIPANTS	0.152	0.187	0.82	0.4151
Group MTM PARTICIPANTS	0.000	.	.	.
Gender Female	0.000	0.037	0	0.9994
Gender Male	0.000	.	.	.
Race American Indian or Alaskan Native	-0.014	0.315	-0.04	0.9657
Race Asian American	-0.111	0.240	-0.46	0.6437
Race Black or African American	0.035	0.051	0.68	0.4972
Race Hispanic	-0.017	0.044	-0.38	0.7026
Race Not determined	0.024	0.082	0.29	0.7709
Race Other	-0.009	0.147	-0.06	0.9518
Race White or European American	0.000	.	.	.
Age Group 0 – 20	0.188	0.142	1.32	0.1858
Age Group 21 – 40	0.052	0.060	0.87	0.3863
Age Group 41 – 50	0.016	0.055	0.29	0.7737
Age Group 51 – 55	0.142	0.057	2.49	0.0128
Age Group 56 – 60	0.139	0.054	2.56	0.0105
Age Group > 60	0	.	.	.

R-squared 0.006 Model F=5.05 p<.0001

Exponentiation of coefficient of MEG1 Population (-.484=.616); Age Group 51-55 (.142=1.15); and Age Group 56-60 (.139=1.149)

Table 48. Negative binomial model for the number of total Medicaid Svs. received among the MEG1, MTM ELIGIBLE NON-PARTICIPANT, and MTM PARTICIPANT populations by age, race, and gender, Year 1 (June 1, 2011 to May 31, 2012)

Dependent Variable: Total number of Services				
Parameter	Maximum Likelihood Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	4.23	0.08	2568.94	<.0001

MEG1 Population	-0.33	0.08	15.92	<.0001
Group MTM Eligible Non-PARTICIPANTS	0.01	0.09	0.02	0.88
Group MTM PARTICIPANTS	0.00	0.00	.	.
Gender Female	0.02	0.02	1.24	0.26
Gender Male	0.00	0.00	.	.
Race American Indian or Alaskan Native	-0.05	0.16	0.1	0.75
Race Asian American	0.02	0.12	0.02	0.89
Race Black or African American	0.00	0.03	0.03	0.87
Race Hispanic	0.00	0.02	0	0.95
Race Not determined	0.05	0.04	1.41	0.23
Race Other	0.05	0.07	0.41	0.52
Race White or European American	0.00	0.00	.	.
Age Group 0 - 20	0.06	0.07	0.76	0.38
Age Group 21 - 40	0.01	0.03	0.11	0.74
Age Group 41 - 50	0.04	0.03	1.81	0.18
Age Group 51 - 55	0.04	0.03	1.69	0.19
Age Group 56 - 60	0.02	0.03	0.81	0.37
Age Group > 60	0.00	0.00	.	.
Dispersion	.95	.01		

The MEG1 Population used 33% fewer total Services than MTM PARTICPANTS.

Table 49. Mean total Medicaid expenditures and mean total services for the MEG1 population, MTM PARTICIPANTS, and MTM ELIGIBLE Non-PARTICPANTS by age, race, sex, June 1, 2011 to May 31, 2012

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
MEDS-AD Eligible Recipients (MEG1)	White or European American	Female	0 - 20	Tot. Expnd.	46	5796	56374536	41	33291
				Tot. Svs.	46	57	2585	1	204
			21 - 40	Tot. Expnd.	388	8186	203611711	6	104610
				Tot. Svs.	388	54	2922	1	360
			41 - 50	Tot. Expnd.	453	7514	197549180	6	103356
				Tot. Svs.	453	51	2862	1	379
			51 - 55	Tot. Expnd.	438	9608	1514505333	6	768708
				Tot. Svs.	438	53	2555	1	336
			56 - 60	Tot. Expnd.	385	8283	221269441	4	120171
				Tot. Svs.	385	50	2030	1	232
			> 60	Tot. Expnd.	441	8177	266854107	4	176624
				Tot. Svs.	441	53	2884	1	318
		Male	0 - 20	Tot. Expnd.	31	8977	283442826	18	64281
				Tot. Svs.	31	57	3959	1	329
			21 - 40	Tot. Expnd.	336	8722	244957963	5	137635
				Tot. Svs.	336	50	2471	1	381
			41 - 50	Tot. Expnd.	558	7820	230701698	4	135567
				Tot. Svs.	558	48	2474	1	319
			51 - 55	Tot. Expnd.	519	9645	388850088	4	266400
				Tot. Svs.	519	51	2254	1	282
			56 - 60	Tot. Expnd.	518	8915	283727335	5	155638
				Tot. Svs.	518	51	2306	1	316
			> 60	Tot. Expnd.	652	8190	248864518	4	135767
				Tot. Svs.	652	51	2619	1	290
	Black or African American	Female	0 - 20	Tot. Expnd.	26	8567	192623964	9	48956
				Tot. Svs.	26	43	2091	1	202
			21 - 40	Tot. Expnd.	192	7882	230542672	4	141562
				Tot. Svs.	192	49	2572	1	329
			41 - 50	Tot. Expnd.	242	9429	288615792	5	120433
				Tot. Svs.	242	58	2687	1	277
			51 - 55	Tot. Expnd.	163	8771	287140744	7	101761
				Tot. Svs.	163	53	2539	1	325
			56 - 60	Tot. Expnd.	203	10661	423588049	8	144507
				Tot. Svs.	203	55	2823	1	496
			> 60	Tot. Expnd.	224	7642	268912748	16	131730
				Tot. Svs.	224	49	2264	1	227

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
		Male	0 - 20	Tot. Expnd.	19	15028	674735196	8	86827
				Tot. Svs.	19	54	1427	4	123
			21 - 40	Tot. Expnd.	168	14031	5890898660	8	983344
				Tot. Svs.	168	54	3069	1	328
			41 - 50	Tot. Expnd.	167	9869	281552188	4	121412
				Tot. Svs.	167	58	3090	1	290
			51 - 55	Tot. Expnd.	150	9387	449701479	4	160742
				Tot. Svs.	150	49	2290	1	280
			56 - 60	Tot. Expnd.	172	10219	359604674	5	166935
				Tot. Svs.	172	54	3045	1	295
			> 60	Tot. Expnd.	260	8169	218009066	4	128501
				Tot. Svs.	260	46	1979	1	253
	Hispanic	Female	0 - 20	Tot. Expnd.	21	12914	528439987	47	77041
				Tot. Svs.	21	30	903	1	120
			21 - 40	Tot. Expnd.	242	8438	377405590	4	158675
				Tot. Svs.	242	47	2137	1	238
			41 - 50	Tot. Expnd.	284	8919	294308743	4	149968
				Tot. Svs.	284	57	2995	1	339
			51 - 55	Tot. Expnd.	230	11704	1481561012	18	506841
				Tot. Svs.	230	53	3499	1	538
			56 - 60	Tot. Expnd.	336	9782	338064991	4	175903
				Tot. Svs.	336	55	2642	1	298
			> 60	Tot. Expnd.	568	7983	264019501	4	197949
				Tot. Svs.	568	48	2444	1	294
		Male	0 - 20	Tot. Expnd.	22	6534	85628445	20	36101
				Tot. Svs.	22	49	1957	1	172
			21 - 40	Tot. Expnd.	169	8538	451825885	8	190983
				Tot. Svs.	169	46	1958	1	288
			41 - 50	Tot. Expnd.	285	7102	165315354	4	97800
				Tot. Svs.	285	50	2254	1	256
			51 - 55	Tot. Expnd.	231	10384	339946317	5	104994
				Tot. Svs.	231	54	2357	1	324
			56 - 60	Tot. Expnd.	320	7998	201250529	8	99860
				Tot. Svs.	320	48	1845	1	210
			> 60	Tot. Expnd.	647	9038	873075508	4	510002
				Tot. Svs.	647	53	2586	1	319
	Asian American	Female	0 - 20	Tot. Expnd.	1	49	.	49	49
				Tot. Svs.	1	9	.	9	9
			21 -	Tot. Expnd.	7	7159	114006949	4	28207

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
			40	Tot. Svs.	7	57	6944	1	236
			41 - 50	Tot. Expnd.	3	9940	99438317	136	20072
				Tot. Svs.	3	76	6993	7	169
			51 - 55	Tot. Expnd.	4	2522	7275124	436	6250
				Tot. Svs.	4	28	952	2	70
			56 - 60	Tot. Expnd.	5	29934	2610444155	1073	120696
				Tot. Svs.	5	65	4843	14	171
			> 60	Tot. Expnd.	13	4887	55332741	38	27803
				Tot. Svs.	13	59	2601	5	163
		Male	0 - 20	Tot. Expnd.	1	364	.	364	364
				Tot. Svs.	1	5	.	5	5
			21 - 40	Tot. Expnd.	5	25547	2436874307	23	113633
				Tot. Svs.	5	59	2722	2	123
			41 - 50	Tot. Expnd.	4	4468	48822952	104	14794
				Tot. Svs.	4	26	332	8	47
			51 - 55	Tot. Expnd.	2	3275	21327960	9	6540
				Tot. Svs.	2	41	882	20	62
			56 - 60	Tot. Expnd.	9	4840	31268214	12	14582
				Tot. Svs.	9	36	938	2	80
			> 60	Tot. Expnd.	12	8679	173898085	599	45426
				Tot. Svs.	12	61	3063	3	191
	American Indian or Alaskan Native	Female	21 - 40	Tot. Expnd.	2	360	159420	78	642
				Tot. Svs.	2	21	61	15	26
			41 - 50	Tot. Expnd.	6	4812	77140667	23	22604
				Tot. Svs.	6	43	3431	1	156
			51 - 55	Tot. Expnd.	4	8896	7646354	5224	11058
				Tot. Svs.	4	31	262	12	47
			56 - 60	Tot. Expnd.	1	1033	.	1033	1033
				Tot. Svs.	1	44	.	44	44
			> 60	Tot. Expnd.	4	9221	127757768	2633	26069
				Tot. Svs.	4	34	1346	14	89
		Male	21 - 40	Tot. Expnd.	3	25280	667951725	14	51667
				Tot. Svs.	3	58	2512	2	98
			41 - 50	Tot. Expnd.	10	5161	30127540	22	16983
				Tot. Svs.	10	73	4057	12	186
			51 - 55	Tot. Expnd.	1	5264	.	5264	5264
				Tot. Svs.	1	37	.	37	37
			56 -	Tot. Expnd.	2	10240	124281171	2357	18123

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
			60	Tot. Svs.	2	72	2521	36	107
			> 60	Tot. Expnd.	4	2850	6403336	141	5716
				Tot. Svs.	4	30	444	1	49
	Other	Female	0 - 20	Tot. Expnd.	4	18122	325680703	1057	43512
				Tot. Svs.	4	97	3916	46	188
			21 - 40	Tot. Expnd.	16	8783	146044196	16	41112
				Tot. Svs.	16	76	4803	2	208
			41 - 50	Tot. Expnd.	8	2063	8872872	6	6878
				Tot. Svs.	8	32	689	1	77
			51 - 55	Tot. Expnd.	8	3361	12959037	40	11314
				Tot. Svs.	8	33	945	1	82
			56 - 60	Tot. Expnd.	7	9393	144335933	256	35864
				Tot. Svs.	7	84	8879	19	289
			> 60	Tot. Expnd.	27	7457	172680172	9	57803
				Tot. Svs.	27	55	2834	1	236
		Male	0 - 20	Tot. Expnd.	4	11691	135715466	42	26554
				Tot. Svs.	4	73	3878	6	142
			21 - 40	Tot. Expnd.	11	6985	123153214	162	38018
				Tot. Svs.	11	59	1388	22	157
			41 - 50	Tot. Expnd.	17	5091	60633853	38	25816
				Tot. Svs.	17	36	1048	2	126
			51 - 55	Tot. Expnd.	18	6182	75332614	60	37922
				Tot. Svs.	18	47	2003	5	168
			56 - 60	Tot. Expnd.	26	7730	207242025	13	55689
				Tot. Svs.	26	38	1275	2	136
			> 60	Tot. Expnd.	35	13361	501382517	24	98431
				Tot. Svs.	35	63	2297	3	223
	Not determined	Female	0 - 20	Tot. Expnd.	18	10511	167007235	372	43154
				Tot. Svs.	18	87	8546	2	372
			21 - 40	Tot. Expnd.	28	8678	139371454	4	45893
				Tot. Svs.	28	64	2342	2	161
			41 - 50	Tot. Expnd.	46	11015	543009490	4	129467
				Tot. Svs.	46	55	2552	2	207
			51 - 55	Tot. Expnd.	55	10536	341435051	6	97657
				Tot. Svs.	55	53	2244	1	162
			56 - 60	Tot. Expnd.	62	10163	401423079	120	123867
				Tot. Svs.	62	55	2510	1	209
			> 60	Tot. Expnd.	104	13533	2073948725	12	438775

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
				Tot. Svs.	104	48	2556	1	308
		Male	0 - 20	Tot. Expnd.	12	5521	42813322	54	23628
				Tot. Svs.	12	56	2052	1	133
			21 - 40	Tot. Expnd.	24	12847	553737891	8	94847
				Tot. Svs.	24	56	4223	1	228
			41 - 50	Tot. Expnd.	42	10361	539583063	22	145577
				Tot. Svs.	42	56	1817	4	143
			51 - 55	Tot. Expnd.	28	3200	14472994	20	14749
				Tot. Svs.	28	47	1448	3	130
			56 - 60	Tot. Expnd.	71	5838	70588495	5	33822
				Tot. Svs.	71	49	2578	1	273
			> 60	Tot. Expnd.	130	7182	183209782	18	78253
				Tot. Svs.	130	44	1870	1	289
MTM PARTICIPANTS with a CMR	White or European American	Female	21 - 40	Tot. Expnd.	4	9820	168089593	1726	29114
				Tot. Svs.	4	59	3415	16	145
			41 - 50	Tot. Expnd.	9	5990	73308053	106	23815
				Tot. Svs.	9	51	3248	5	165
			51 - 55	Tot. Expnd.	9	19032	492446060	767	66903
				Tot. Svs.	9	94	3213	8	149
			56 - 60	Tot. Expnd.	12	3109	16345961	27	11800
				Tot. Svs.	12	56	2911	3	152
			> 60	Tot. Expnd.	6	4017	15343074	183	10131
				Tot. Svs.	6	63	1887	16	116
		Male	21 - 40	Tot. Expnd.	5	14951	286963009	373	43242
				Tot. Svs.	5	107	5391	14	199
			41 - 50	Tot. Expnd.	11	10445	252514850	126	55661
				Tot. Svs.	11	66	1691	11	130
			51 - 55	Tot. Expnd.	10	6551	23879739	1719	17030
				Tot. Svs.	10	84	2446	6	166
			56 - 60	Tot. Expnd.	13	14070	580944111	167	89705
				Tot. Svs.	13	90	2145	12	170
			> 60	Tot. Expnd.	12	16910	1600179595	473	143169
				Tot. Svs.	12	76	3371	19	223
	Black or African American	Female	0 - 20	Tot. Expnd.	1	15421	.	15421	15421
				Tot. Svs.	1	9	.	9	9
			41 - 50	Tot. Expnd.	3	3360	9167214	24	5934
				Tot. Svs.	3	60	3806	4	126

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
			51 - 55	Tot. Expnd.	4	10525	108760281	1071	20866
				Tot. Svs.	4	52	1890	4	103
			56 - 60	Tot. Expnd.	4	1857	2346322	75	3499
				Tot. Svs.	4	24	434	2	42
			> 60	Tot. Expnd.	4	8980	102594990	259	19929
				Tot. Svs.	4	60	1304	16	96
		Male	41 - 50	Tot. Expnd.	7	10892	242203142	223	45053
				Tot. Svs.	7	72	1892	13	135
			51 - 55	Tot. Expnd.	2	5551	42684273	931	10171
				Tot. Svs.	2	47	18	44	50
			56 - 60	Tot. Expnd.	5	3365	16562312	350	10499
				Tot. Svs.	5	62	2613	6	145
			> 60	Tot. Expnd.	3	1414	1459162	636	2805
				Tot. Svs.	3	18	208	2	30
	Hispanic	Female	51 - 55	Tot. Expnd.	1	18946	.	18946	18946
				Tot. Svs.	1	24	.	24	24
			> 60	Tot. Expnd.	2	2844	690489	2257	3432
				Tot. Svs.	2	24	288	12	36
		Male	51 - 55	Tot. Expnd.	2	2733	67293	2550	2916
				Tot. Svs.	2	40	1458	13	67
			56 - 60	Tot. Expnd.	1	8044	.	8044	8044
				Tot. Svs.	1	197	.	197	197
			> 60	Tot. Expnd.	5	13977	471889674	419	52194
				Tot. Svs.	5	104	3971	35	180
	Other	Female	51 - 55	Tot. Expnd.	1	699	.	699	699
				Tot. Svs.	1	20	.	20	20
		Male	> 60	Tot. Expnd.	1	12976	.	12976	12976
				Tot. Svs.	1	82	.	82	82
	Not determined	Female	51 - 55	Tot. Expnd.	3	10700	276556143	8	29859
				Tot. Svs.	3	52	2131	2	93
			> 60	Tot. Expnd.	1	2321	.	2321	2321
				Tot. Svs.	1	80	.	80	80
		Male	51 - 55	Tot. Expnd.	1	11086	.	11086	11086
				Tot. Svs.	1	117	.	117	117
			56 - 60	Tot. Expnd.	3	16738	209705931	4389	32676
				Tot. Svs.	3	175	6832	80	227
			> 60	Tot. Expnd.	1	3237	.	3237	3237
				Tot. Svs.	1	103	.	103	103

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
MTM Eligible Non-PARTICIPANTS	White or European American	Female	21 - 40	Tot. Expnd.	16	20182	1164004022	117	124660
				Tot. Svs.	16	68	3129	3	218
			41 - 50	Tot. Expnd.	23	24620	1159496114	7	153325
				Tot. Svs.	23	78	2909	1	209
			51 - 55	Tot. Expnd.	21	13649	1224516476	51	165224
				Tot. Svs.	21	78	2564	2	202
			56 - 60	Tot. Expnd.	20	14785	321847684	114	60909
				Tot. Svs.	20	71	4024	1	229
			> 60	Tot. Expnd.	15	6143	111180290	61	40592
				Tot. Svs.	15	46	845	4	98
		Male	21 - 40	Tot. Expnd.	11	6320	33383678	803	18255
				Tot. Svs.	11	59	1929	17	172
			41 - 50	Tot. Expnd.	22	6806	65288920	98	34817
				Tot. Svs.	22	66	2104	1	158
			51 - 55	Tot. Expnd.	24	7633	171049448	305	65205
				Tot. Svs.	24	75	4375	1	216
			56 - 60	Tot. Expnd.	32	13717	393489511	151	85297
				Tot. Svs.	32	90	4205	4	253
			> 60	Tot. Expnd.	46	6198	65209820	103	43947
				Tot. Svs.	46	66	3047	9	226
	Black or African American	Female	21 - 40	Tot. Expnd.	7	4077	30343348	32	15752
				Tot. Svs.	7	19	352	1	56
			41 - 50	Tot. Expnd.	7	11548	146302677	103	30453
				Tot. Svs.	7	61	1706	6	143
			51 - 55	Tot. Expnd.	4	34159	1809843306	1460	91340
				Tot. Svs.	4	116	23424	11	343
			56 - 60	Tot. Expnd.	10	10883	428421343	112	65151
				Tot. Svs.	10	63	3829	3	198
			> 60	Tot. Expnd.	14	3671	12484654	139	12097
				Tot. Svs.	14	69	2152	22	155
		Male	21 - 40	Tot. Expnd.	12	12311	174032086	393	40301
				Tot. Svs.	12	50	1017	6	103
			41 - 50	Tot. Expnd.	13	5222	30641546	432	16038
				Tot. Svs.	13	64	3033	14	227
			51 - 55	Tot. Expnd.	13	10640	331852292	398	67362
				Tot. Svs.	13	67	3654	1	186
			56 -	Tot. Expnd.	11	14660	329764606	1740	46825

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
			60	Tot. Svs.	11	64	1010	15	110
			> 60	Tot. Expnd.	18	11949	545282832	36	92100
				Tot. Svs.	18	61	3437	1	232
	Hispanic	Female	21 - 40	Tot. Expnd.	6	24362	516065409	227	60316
				Tot. Svs.	6	106	5963	23	214
			41 - 50	Tot. Expnd.	9	13725	252560710	1002	45585
				Tot. Svs.	9	73	5205	4	233
			51 - 55	Tot. Expnd.	6	18665	538458010	1236	49323
				Tot. Svs.	6	75	828	34	121
			56 - 60	Tot. Expnd.	8	9811	159473804	1176	38310
				Tot. Svs.	8	47	1340	12	131
			> 60	Tot. Expnd.	12	5564	64701223	379	28308
				Tot. Svs.	12	54	1052	12	110
		Male	41 - 50	Tot. Expnd.	11	26998	1929186904	631	153058
				Tot. Svs.	11	82	4850	5	206
			51 - 55	Tot. Expnd.	7	11189	167691165	1597	35177
				Tot. Svs.	7	94	1630	64	180
			56 - 60	Tot. Expnd.	16	4826	26881650	39	14150
				Tot. Svs.	16	77	4555	3	209
			> 60	Tot. Expnd.	24	5701	39928912	210	24960
				Tot. Svs.	24	66	2041	8	153
	Asian American	Female	41 - 50	Tot. Expnd.	1	18882	.	18882	18882
				Tot. Svs.	1	55	.	55	55
		Male	41 - 50	Tot. Expnd.	2	6200	41299235	1656	10745
				Tot. Svs.	2	103	3200	63	143
	American Indian or Alaskan Native	Male	41 - 50	Tot. Expnd.	1	4399	.	4399	4399
				Tot. Svs.	1	129	.	129	129
			> 60	Tot. Expnd.	2	4161	29953955	291	8031
				Tot. Svs.	2	42	2888	4	80
	Other	Female	21 - 40	Tot. Expnd.	1	6500	.	6500	6500
				Tot. Svs.	1	25	.	25	25
			51 - 55	Tot. Expnd.	1	21309	.	21309	21309
				Tot. Svs.	1	172	.	172	172
			56 - 60	Tot. Expnd.	2	471	6784	413	530
				Tot. Svs.	2	25	32	21	29
		Male	> 60	Tot. Expnd.	3	9326	216753576	144	26307
				Tot. Svs.	3	65	2206	22	115

Population Group	Race / Ethnicity	Sex	Age Grp.	Measure Expnd. ($) Svs. (#)	Obs.	Mean	Variance	Min.	Max.
	Not determined	Female	21 - 40	Tot. Expnd.	2	4061	31166144	114	8009
				Tot. Svs.	2	72	6962	13	131
			41 - 50	Tot. Expnd.	5	16922	942484059	17	71547
				Tot. Svs.	5	107	16052	2	317
			51 - 55	Tot. Expnd.	2	11373	1181369	10604	12142
				Tot. Svs.	2	174	450	159	189
			56 - 60	Tot. Expnd.	5	21590	585304445	496	60024
				Tot. Svs.	5	87	4554	1	168
			> 60	Tot. Expnd.	6	11164	114274435	335	27533
				Tot. Svs.	6	133	3214	49	184
		Male	0 - 20	Tot. Expnd.	1	12723	.	12723	12723
				Tot. Svs.	1	41	.	41	41
			21 - 40	Tot. Expnd.	1	2310	.	2310	2310
				Tot. Svs.	1	76	.	76	76
			41 - 50	Tot. Expnd.	6	7254	71290715	209	23458
				Tot. Svs.	6	94	4884	27	212
			51 - 55	Tot. Expnd.	4	12608	82930192	1902	22309
				Tot. Svs.	4	118	196	97	127
			56 - 60	Tot. Expnd.	4	20653	546519231	1637	54610
				Tot. Svs.	4	119	7855	12	223
			> 60	Tot. Expnd.	5	8022	32460940	1504	16501
				Tot. Svs.	5	117	2505	51	169

SECTION II:
Interim Report on the Preliminary *Qualitative* Data Analysis

An Overview of the Qualitative Evaluation Team Effort

The qualitative component of this mixed methods project lends a much deeper understanding of the underlying processes that provide a more nuanced evaluation of the MEDS-AD Demonstration project (MEDS-AD) based on Medication Therapy Management (MTM) principles. The data for this evaluation emanates from a series of personal interviews conducted by our research team with specifically chosen key informants, MTM recipients, and primary care physicians.

The Research Investigative Team (RIT) associated with the qualitative evaluation effort consists of multidiscipline members who represent three academic institutions. The Lead Analyst, an Associate Professor at the FSU College of Social Work and a Co-PI of the project, is an expert in qualitative methodology and served as an essential participant in all five interviews with University of Florida College of Pharmacy (UF COP) Call Center and Medicaid Administrative Personnel (MCAP) Key Informants. She is also overseeing all interviews conducted by the RIT Research Assistants (RAs). In addition, she, along with Florida A&M University (FAMU) Pharmacists, constructed the interview guides.

The Pharmacists are experts in MTM and geriatrics and provide extensive knowledge of patient interactions gained from hands-on clinical experience. The RIT also includes the Associate Chair of Research in the Department of Medical Humanities and Social Science at the FSU College of Medicine, who is a clinical psychologist and expert in health behavior, the Associate Dean of Research at the FSU College of Social Work, who is an interdisciplinary scholar, bringing to the team extensive research experience in health care. Their insights into health behavior will be essential in discussing best practices in later reports.

In addition, the interviews with 21 MEDS-AD participants were conducted by a staff of five graduate student research assistants (RAs) at the College of Social Work, who have been

trained by the Lead Analyst in all aspects of qualitative research methodology. These RAs conducted, transcribed and coded interviews with MEDS-AD participants under the supervision of the Lead Analyst. Their commitment to the evaluation of the MEDS-AD Demonstration project has been exemplary.

As of April 2013, the Research Investigative Team (RIT) has completed interviews with five members of Florida's Agency for Health Care Administration (AHCA) Medication Administrative Personnel (MCAP), UF COP administration and staff, and 21 MEDS-AD participants who have completed the MTM program.

Qualitative Evaluation: Key Informant Interviews

These specific preliminary findings are based on a series of interviews with MTM staff at the University of Florida College of Pharmacy (UF COP) Call Center and Medicaid Administrative Personnel (MCAP) who served as key informants. These key informants were the most knowledgeable persons available regarding the development and implementation of the current MEDS-AD Demonstration project. The Bureau Chief of Pharmacy Services for Florida Medicaid, provided insights into the etiology of the current program as well as lessons learned from other models of care. The Clinical Administrator of Medicaid Pharmacy Services provided invaluable information regarding the implementation of the current program, including outcomes measured, characteristics of participants, and knowledge of the Medicaid population. The Bureau Chief and Clinical Administrator were interviewed together in an interview that took approximately two hours.

Furthermore, the RIT interviewed four key informants at the UF COP chosen by AHCA as being most knowledgeable about the MEDS-AD Demonstration project. The UF COP Call Center Director took great pains to describe the MTM program's implementation with a PowerPoint presentation that included detailed information regarding the MEDS-AD Demonstration project. The UF COP Call Center Director also made available information regarding another concurrent MTM program conducted by UF COP personnel under contract with a Health Maintenance Organization (HMO). While the outcome data from the HMO program were not

included in evaluating the MEDS-AD Demonstration project, the lessons learned from that program were considered to be transferable to the MEDS-AD Demonstration project. This provided one example of the value added by UF COP staff who participated in the HMO program as well. Furthermore, the RIT interviewed three UF COP pharmacists who have direct knowledge, current and historic, regarding the training and implementation of all the MTM programs implemented at UF COP. Two of the UF COP pharmacists have both current and historic knowledge of the MEDS-AD Demonstration project. The third UF COP pharmacist interviewed is involved in the current day-to-day implementation of the MEDS-AD Demonstration project. Each of these interviews lasted from one to two hours.

Initially, the intent of the key informant interviews included developing a global perspective on the MEDS-AD Demonstration project and providing guidance in developing protocols for MTM participant interviews. Although the RIT had previously gained insight into the training and implementation of the MEDS-AD Demonstration project during one phone call and overviews of the project provided by AHCA, this information was not directed toward protocol development. Therefore, the information from the key informant interviews described here was essential to the development of MTM participant interview protocols currently in use. However, the beauty of qualitative research came in finding the unexpected. Without the direct conversations with the key informants described here and the resulting 40+ hours of transcription time and 97 pages of data, it would have been impossible to appreciate the dedication and thoughtfulness that these key informants expressed for the MEDS-AD Demonstration project participants who live with complex medical problems and take medications daily. The theme “value added” included below seeks to portray the additional services provided above and beyond the basic MTM model. Furthermore, when appropriate, the words of the key informants are used to convey the empathy they exhibit for the patients they serve.

Evaluation Aims

While the qualitative component of this study will be essential in understanding responses to multiple research questions, the preliminary findings associated with these specific interviews will be most useful in responding to the following study aims:

- How is program utilization consistent with best practice guidelines and Medicaid policies? (e.g., How do MTM pharmacists implement and Primary Care Physicians [PCPs] respond to the program?)

- What are the lessons learned from this program from the perspectives of Florida Medicaid Administrative Personnel (MCAP), UF COP staff, recipients and PCPs?

Other study aims, more closely aligned with the participant and PCP input, will be addressed when those populations are interviewed during subsequent phases of this evaluation. In addition, the final report, due February 24, 2014, will include a comparison of these findings with best practices as well as enhancing the understanding of the quantitative components.

Qualitative Evaluation Methods and Processes

This project used established methods of qualitative research to provide information helpful in understanding the underlying processes while evaluating the MEDS-AD Demonstration project as it is implemented by the call center at UF COP. The Research Investigative Team (RIT) from the FSU College of Social Work and FAMU College of Pharmacy conducted the interviews with these key informants.

Data Sources

Study Population. The RIT conducted interviews with a purposive sample drawn from key informants comprising Florida Medicaid Administrative personnel (MCAP) identified by AHCA and UF COP staff described above.

Interview Protocol. The RIT used a semi-structured interview guide with questions and prompts based on an initial literature review and approved by AHCA personnel. In addition, the RIT interviewers followed up on new areas and topics mentioned by the key informants, in accordance with standard interview conduct. The RIT audiotaped each interview with

permission of the participants. AHCA and Institutional Review Boards approved all interview protocols, surveys, and scripts prior to implementation. Interviews were conducted on October 29, 2012 and November 19, 2012. The RIT interviewers conducted the interviews in private conference rooms or offices. UF COP staff were interviewed individually. MCAP were interviewed together at their request. There were at least two members of the RIT, one methodologist and one pharmacist, at each interview.

Data Collection. Interviews were digitally recorded with permission of the participants and transcribed word for word. All tapes and transcriptions were kept on password-protected computers with access limited to the RIT and their Research Assistants (RAs).

Data Management. Data were entered into Atlas/ti software for analysis, an established software package that allowed for the storage of codes and served as an organization tool for studies using multiple interviews. Two members of the RIT coded one transcript, with consensus being reached on codes, themes and domains. A code list was established and used in coding subsequent transcripts.

Analytic Method. The RIT examined each interview for emerging themes, and relevant codes were developed utilizing the constant comparative method. This method allowed coders to compare new information to codes identified earlier and develop new codes if none existed for the current data. This process allowed for a structured and systematic data analysis method while optimizing the emergence of new codes to capture new ideas as they developed.

Data Analysis Process. The analytic process began with immersion in the data; that is, the RIT read the transcripts multiple times to become familiar with the content and flow. The RIT then made notations (codes) for each small bit of data, a process called “open coding.” These codes were recorded in Atlas/ti as the initial code list. Atlas/ti also allowed for “memoing;” that is, the RIT was able to make and retain notations related to underlying themes during the coding process. For the next step, the RIT looked at relationships among the initial codes, including where they co-occur, a process called axial coding. For example, one code, “I have time,” was coded word-for-word (in vivo) during the coding process.

When the overall coding process was complete, this code became part of a larger code family, "value added." The value added category included other aspects of support provided by the UF COP Call Center staff that went beyond the standard MEDS-AD Demonstration project MTM process (e.g., providing information regarding non-pharmaceutical services). The prevalence of this code family led to it being identified as a theme, an underlying (latent) process that gave meaning to the data beyond simple categorization.

There were no codes established prior to beginning this process, as this set of key informant interviews was essential to establishing contextual information. The data were analyzed for both manifest and latent codes and themes. For example, a manifest code might include the aspects of training (e.g., protocol, sequence) that were parts of the training process. However, that UF COP staff observed and supported traits such as empathy became evident when describing the training process, a latent theme that emerged.

Strategies for Rigor. A key element in establishing validity in qualitative research is triangulation (i.e., use of more than one data source or method of data collection). This portion of the study incorporated two methods of triangulation: analytic triangulation and interdisciplinary triangulation. First, during data analysis, coding involved two (2) independent coders. The interdisciplinary nature of the RIT supported interdisciplinary triangulation as both a pharmacist and a methodological expert attended each interview. At the completion of this project, data from the qualitative component will be integrated with data from the quantitative component of the MEDS-AD Demonstration project evaluation.

Key Informant Interviews -- Initial Findings

Four general themes related to the underlying processes emerged from the analyses: value added; training and implementation; continuity and connection; and special circumstances. These four themes were retained as they emerged in each of the interviews with UF COP staff and MCAP. Each theme is described below.

Value added. Embedded in all the themes described below and prevalent in every conversation with UF COP staff was a theme noted as value added. This latent theme was

broadly defined as UF COP staff providing services beyond those included in the scope and standard definition of MTM. Furthermore, the value added theme included the attitudes of the UF COP staff as honoring the MEDS-AD Demonstration project participants, treating them with dignity and genuine concern for their well-being. It was difficult, indeed impossible, to separate the value added services from the personal characteristics (i.e., commitment and dedication) of the UF COP staff. One example of this commitment was contained in the UF COP staff expression "We get excited about everything." The UF COP pharmacist went on to state "We get excited when the doctor says they're not changing it [THE MEDICATION]. We get excited because we know that they've read it [THE FAX FROM THE UF COP TEAM]." These value added services were also a function of the collaborative nature of the relationship between MCAP and UF COP that included some flexibility within the contracting process.

Indeed, the UF COP Call Center Director indicated that flexibility provided by the MCAP Bureau Chief was essential to allowing the UF COP to design the optimal MTM program. This comment was echoed by the Bureau Chief who indicated a willingness to allow UF COP personnel to use their knowledge of the help-desk model of MTM implementation in developing the MTM model specific to the MEDS-AD Demonstration project.

Examples of value added services were best described by the words of the UF COP staff themselves. For example, one simple statement "I have time for you" poignantly described the contribution to quality of life that a one-time interview, while purposed for MTM, can make. And while the gold standard of satisfaction lies in the interviews with participants themselves, it became evident to the RIT interviewers that the commitment on the part of the UF COP staff to patient well-being transcended the limitations of the MEDS-AD Demonstration project while maintaining the integrity of the MTM process. For example, when UF COP staff inadvertently contacted someone still in the Medicaid application process, they were willing to re-contact that person later when he/she had become eligible for the MEDS-AD Demonstration project.

Indeed, UF COP staff were performing tasks often defined as medical social services. Examples of these services included identifying transportation services from Tampa to Orlando to aid a patient in obtaining services from the only pain specialist who accepted patients with Medicaid.

Furthermore, UF COP staff provided information on Medicaid coverage for non-medication services such as environmental counseling for patients with diagnoses of asthma.

On the other hand, participation in the program added value to the educational experience of UF COP students who rotate through the call center, as participation provided successful training for pharmacy students to work with this socio-demographic population. These unintended outcomes suggest the potential need for additional outcome measures to capture the complete picture of the MEDS-AD Demonstration project as implemented here.

Training and Implementation. UF COP staff explained and provided detailed information, written and oral, regarding the training and implementation of the MEDS-AD Demonstration project. UF COP staff indicated that there was no one service model for MTM and that "We were gonna encourage collaboration. We were gonna talk about appropriate prescribing patterns and the goals were to improve the quality of care, improve adherence, reduce clinical risk, lower prescribed drug cost and lower the rate of inappropriate spending on certain medications, alright." It became apparent that the UF COP staff took these goals seriously and had been directly involved in working constantly toward process development and improvement. Key components included a comprehensive orientation for schedulers and interviewers, a rotation of student staff, development of a computerized record using Excel software, a specific protocol for contacting primary care physicians (PCPs), and benchmarks for identifying problem resolution. For example, as per protocol, UF COP staff faxed PCPs notifications of issues that merited review and possible modification. The issue was noted as resolved if claims data confirmed a change in response to the notification.

The data from these key informant interviews described a program structure that both imposed restrictions and allowed for some flexibility. For example, the program as described set standards for contacting participants, indicating detail as granular as the maximum and minimum number of phone calls appropriate in attempting to reach a potential participant. However, as the program developed, the UF COP staff instituted a follow-up call performed between 30 and 90 days post Comprehensive Medication Review (CMR) in order to check in with participants. Including this call was a modification of the original protocol initiated

because UF COP staff wanted to stay in touch with patients and understand their evolving situations, a clear indicator of the empathy and concern staff felt.

Within the established protocol, the UF COP staff described strategies that allowed them to optimize responses and effectiveness of the program. They used strategies such as asking the participant to gather and enumerate their medications prior to the CMR in order to increase participant engagement. In addition, UF COP staff were sensitive to "little cues" such as whether participants reported psychiatric medications initially or "held back". These examples demonstrate how perceptive UF COP staff were and how attuned they were to the participants. They also demonstrate the minutely detailed attention that UF COP staff were willing to employ in order to achieve optimal results. These strategies were shared with other staff and became part of the training process. Thus, UF COP training included creating an empathetic demeanor as demonstrated when UF COP staff encouraged student trainees to connect with patients by saying, "pretend that's your grandmother or your grandfather, your favorite aunt or uncle."

The MEDS-AD Demonstration project protocol includes two targeted outcome measures, one for adherence (the Morisky 8-item Medication Adherence Scale [MMAS-8]) and two follow up questions regarding satisfaction with the services ("Did you find this appointment to be helpful" and "Did this interview help clarify any concerns you may have had with your medications?"). Furthermore, in cases in which recommendations had been faxed to the PCP, UF COP staff reviewed claims data for changes in medication. Yet, this program went beyond adherence, satisfaction, and medication modification for both UF COP staff and MCAP. For example, when asked about what contributed to the strength of the program, the AHCA Bureau Chief stated, "…because there is one-to-one interaction with the patient. There is an understanding of who the patient is." A recommendation to capture this important outcome is included in the Initial Lessons Learned section of this report.

Continuity and connection. UF COP staff expressed a desire for continuity in contact. Although the MEDS-AD Demonstration project protocol calls for only two direct contacts between UF COP staff and program participants (i.e., the scheduling call and the CMR), UF COP key informants suggested that a seemingly important relationship occurs during these calls and that

an undergirding sense of connection potentially enhances the effectiveness of the program. As one UF COP staff stated "And some patients I did leave a card [INCLUDE A BUSINESS CARD] in what [THE MATERIALS] I sent them in the mail. It was one of those [PARTICIPANTS] that you just bonded with over the phone, or they needed the extra help." UF COP staff expressed concern when there were breaks in this connection. Breaks occurred when participants were no longer part of the program as evidenced by the absence of their claims data. As one UF COP staff member stated: "I want to follow up with them because I want to know where they're at and maybe they need an extra touch. "

Also, there were instances when the UF COP staff member who made the original call was replaced by someone else for follow up. UF COP staff related anecdotes in which participants tried to reconnect with the staff member who made the original call. One participant, who had finally requested a nicotine patch and was able to stop smoking, asked to speak to the UF COP staff member who had conducted the CMR in order to share their success story. However, when describing this anecdote, the UF COP staff pharmacist stated "And I think that's why I don't know more success stories because they [OTHER UF COP STAFF] do the follow up call." This finding provides an area for exploration during the participant interviews currently being conducted to see if participants also express the need for longer and more frequent contact.

Special circumstances. This theme emerged as a response to queries about exceptions to protocol. However, it should be noted that some of these instances included MTM participants who were contacted as a result of their participation in another contracted study conducted by UF COP staff. These anecdotes were informative, however, as they described responses to situations that could arise with the MEDS-AD Demonstration project participants as well.

The UF COP staff described events that prompted them to make quick judgments and unique responses. UF COP staff noted that they utilized a crisis management protocol; however, specific conditions such as the presence of depression, sometimes coupled with chronic pain and/or including suicidal ideation; participants at the end of life; and use of drugs not prescribed for them, prompted the need for somewhat unique responses. These events also required that UF COP staff make judgments regarding the severity of the condition and

consequent actions. For example, one UF COP staff member described two separate instances related to suicidal ideation that occurred in one day. While both participants were referred to an intervention hot line, one required an immediate conference call with hot-line staff based on the patient's condition. In the other case, the follow-up contact was left up to the patient. This need to evaluate and triage critical situations became a part of what might have been expected to be a routine call and demonstrates the challenging nature of conducting any MTM program by telephone.

End-of-life circumstances presented another unique challenge for UF COP staff due to limitations of medical information. Staff reported that they had ICD-9 codes that indicated a potentially terminal diagnosis such as breast cancer, but they did not know the stage of the disease. However, UF COP staff also noted that some patients are open in describing their end-of-life circumstances and included references beyond medical needs. Again, UF COP staff were positioned and challenged to provide support to MEDS-AD Demonstration project participants, who were often isolated at this critical juncture in their lives.

UF COP staff indicated that they routinely asked about use of drugs not prescribed for participants. Since this question inferred behavior that might be socially undesirable, UF COP staff strategically prefaced the question with a statement that all patients are asked the same questions. Some patients openly acknowledged this drug use and were forthcoming, suggesting that the UF COP staffs' sensitivity and strategic thought were helpful.

Key Informant Interviews -- Conclusions

These preliminary findings indicate that qualitative methods, specifically interviews with key informants identified by AHCA, provide information that is not available from other sources. Furthermore, the findings from the key informant interviews are helpful in developing interview guides appropriate for the MEDS-AD Demonstration project participants who are currently being interviewed. However, most notably, these key informant interviews went beyond these basic goals and painted a picture of caring UF COP staff and MCAP who were genuinely

concerned for the well-being of the MEDS-AD Demonstration Project participants and sought to add value to the participants' lives as well.

Qualitative Evaluation: MTM Participant Interviews

It is the very essence of this evaluation to hear the opinions of MEDS-AD participants, often in their own words, that provide information not available from any other source. Indeed, they, the participants, are the true experts on the effectiveness and meaning of the MEDS-AD effort.

Research Questions

The interviews with MEDS-AD participants are most closely aligned with the following Research Questions:

- What are the most successful aspects of the MTM program based on participant perspectives?
- What are the lessons learned from this program from the perspectives of Florida Medicaid administrative personnel (MCAP), MTM staff, recipients (i.e., participants) and PCPs?
- How does this program impact recipients' (i.e., participants') ability to understand medications, take a more active part in their care, and understand the questions to ask their doctor or when to contact their doctor?

This project used established methods of qualitative research to provide information helpful in understanding the underlying processes while evaluating the MEDS-AD Demonstration project as it is implemented by the call center at UF COP.

Methods and Processes

Data Sources

Study Population (MTM Participants). The RAs conducted interviews with a sample randomly selected from the universe of MEDS-AD participants (n = 147) who had completed the program (i.e., had a completed CMR and three subsequent claims reviews). An initial sampling frame of

45 potential participants was not sufficient to meet the goal of 20 completed interviews. Therefore the sampling frame was refreshed with additional potential respondents, 20 of whom had agreed to participate in a second year of the MEDS-AD Demonstration project.

Recruitment. RIT mailed a letter to each potential participant that explained the study and invited their participation. The letters were written in easily understandable language and included the name of the UF COP staff member who had conducted the CMR. This method was designed to aid participants in understanding the specific program referenced in the letter and consequent interview. Furthermore, the letter stated that findings would be kept confidential and that neither participation nor refusal would have any effect on their Medicaid benefits. The letter was followed by a phone call that included additional information, an opportunity for potential participants to ask questions, and informed consent for those participants who wished to participate. A copy of the informed consent was mailed to each interview participant.

Interview Protocol. The RIT used a semi-structured interview guide with questions and prompts based on an initial literature review, input from MCAP and UF COP Call Center staff, and approved by AHCA personnel. Interviewers used screening questions that determined that the participant was the person identified and an additional question to determine if they remembered the MEDS-AD Demonstration project. There were three overarching, open-ended questions (1. How would you describe the medication management program in which (CONTACT NAME) asked you about your medicines? 2. What do you see as the best part of the program? 3. If you could change one thing about the program, what would it be?)

In addition, the interviewers followed up on new areas and topics mentioned by the MEDS-AD participants, in accordance with standard interview conduct. Finally, there were five closed-ended (yes/no) questions and one global rating item. The RAs audiotaped each interview with permission of the participants. AHCA and Institutional Review Boards approved all interview protocols, surveys, and scripts prior to implementation. Interviews with participants who have completed the MEDS-AD program were conducted between March 1, 2013 and April 26, 2013. All interviews were conducted by telephone and were scheduled for the convenience of the MEDS-AD participants.

Data Management. A tracking database in Microsoft ACCESS was maintained throughout the project to record pertinent information regarding contacts made with participants, enrollment status, and to provide interviewers with background information regarding diagnoses, health behaviors, and medications. Interviews were digitally recorded with permission of the participants and transcribed word for word using Dragon Naturally Speaking software. All tapes and transcriptions were kept on password-protected computers with access limited to the RIT and RAs.

Data Analysis. Data were entered into Atlas/ti software for analysis, an established software package that allowed for the storage of codes and served as an organizational tool for studies using multiple interviews. Four RAs coded one transcript, with consensus being reached on codes, themes and domains under the supervision of the Lead Analyst. A code list was established and used in coding subsequent transcripts. However, additional codes were allowed to emerge during the coding process. At the end of the coding process, there were 31 codes identified. These codes were organized into code families (i.e., codes with associated meanings or references) and themes allowed to emerge. However, qualitative coding is an iterative process and will continue throughout the project. Further analyses will be completed that will compare themes with the MCAP interviews and well as other respondents (i.e., physicians) who have not yet been interviewed. In addition, the responses to the closed-ended questions included in the interview guide were tabulated.

MTM Participant Interviews -- Initial Findings

There were 66 cases randomly selected for recruitment. After removal of ineligible participants, letters were sent to 58 potential participants with phone follow-up, twenty-three interviews were completed. Unfortunately, one was not usable due to a technical problem and one was considered an unreliable respondent (i.e., did not seem to understand fully the focus of the interview as the MEDS-AD Demonstration project). Thus, these findings are drawn from 21 interviews with MEDS-AD participants who indicated they remembered the project and provided information that would substantiate their understanding.

Of the participants with completed interviews (n=21) as of April 26, 2013, 13 (62%) were female; 8 (38%) were white, 4 (19%) were black, and nine (43%) lacked information regarding race. Ages ranged from 45 to 64 years old.

Open-Ended Questions

The overall responses to questions in this category were positive and enthusiastic. When asked about the experience of participating in the MEDS-AD Demonstration project, the participants were overwhelmingly positive in their responses. One participant's response was that: "It [MEDS-AD] was great. It was really, really great." The responses grouped into four categories, or code families: 1) Evaluation of the pharmacist(s); 2) Evaluation of the MEDS-AD program process; 3) Best practices; and 4) Recommendations.

Evaluation of the Pharmacist(s). The participants were especially appreciative of the concern they felt that the pharmacists demonstrated for them. As one participant stated, "She always talked with me, and that felt good talking with her." Another said: "That they was (sic) concerned."

Evaluation of the MEDS-AD program process. Participants found the process helpful, especially in providing information not readily available from other sources. One participant indicated "Well if you don't know what you're taking, she can tell you that" and "basically…I got all of my meds on one sheet." The interactive nature of the call was depicted in this quotation "She

asked me some questions and I said well yeah and she said you might want to mention that to your doctor."

Best practices. When asked about the best part of the program, most participants focused on the increased understanding of their medications. One participant stated "the information she gave me" and another said simply "It was informative." Other responses to the question regarding best part included "just really starting to understand my medicines better." However, it was not unusual to hear that "It was all good."

Recommendations. When asked for recommendations, participants again provided a positive context indicating most often that they would support additional contacts. As one participant stated, "I just wish they would keep calling me. It's been a long time"; and another said: "I'd say keep going and never stop."

Close- Ended Questions

Positive experiences of participants were also reflected in their answers to questions under this category. These findings align with those found in the open-ended questions in that participants were satisfied with the program overall, received helpful information and were positive in describing the treatment they received from the UFSOP staff who conducted the CMRs.

Interview Responses

Responses to the five closed-ended (yes/no) questions are summarized in Table 1. These questions were derived from existing measures of quality related to MTM programs.

Table 1: Answers to Closed-ended Questions

	Yes N(%)	No N(%)	NA[1] N(%)
1. Was the CONTACT NAME [2]*(or use pharmacist)* from the University of Florida who talked to you about your medicines respectful?	20(95)	0(0)	1(5)
2. Did CONTACT NAME[2] *(or use the pharmacist)* go through your medications and provide helpful information about your medications?	19(90)	1(5)	1(5)
3. Where you happy with the assistance CONTACT NAME[2] *(or use the pharmacist)* provided?	21(100)	0(0)	0(0)
4. Did you feel that you had a better understanding of your medications after your Medication Therapy call?	18(86)	3(14)	0(0)
5. Did you find the information that CONTACT NAME[2] *(or use the pharmacist)* sent you in the mail helpful?	16(76)	3(14)	2(10)

[1] Not answered.

[2] In order to enhance recognition of the program, whenever possible, interviewers used the name(s) of the pharmacist(s) who had conducted the CMR.

Participants also were asked to make one global evaluation of the program overall. These results are indicated on Table 2.

Table 2: Global Evaluation of the MEDS-AD Demonstration Project

	Very Poor N(%)	Poor N(%)	Fair N(%)	Good N(%)	Very Good N(%)
How would you rate the overall care that you experienced with the medication program?	0(0)	0(0)	0(0)	7(33)	14(67)

MTM Participant Interviews -- Limitations

These findings are limited by the small sample size (n=21) and the sample biases often associated with interviews or surveys conducted with participants who choose to participate. That is, it is assumed that those with the strongest opinions are the most likely to respond and complete the interview process. Also, the interviews took place retrospectively with participants who may have completed the MEDS-AD program more than a year before. However, the RIT sought to overcome these issues by being certain that participants indicated that they remembered the program and interviews were terminated if they did not or removed from analyses if the participant was deemed unreliable. The RIT will also interview members of a more reluctant group for MTM in the literature, primary care physicians, to gather their perspective on this intervention.

MTM Participant Interviews -- Conclusions

Despite the limitations stated above, it is clear that MEDS-AD recipients who participated in the first cohort of qualitative interviews were pleased with the program as administered and found the information provided during the CMR helpful. They provided nuanced (i.e., appreciation for the concern of the UFSOP staff; the mailed information was the least helpful) and global support for the MEDS-AD Demonstration project. All participants rated the program good or very good overall. The recommendation that the program continue provides insight into the needs of participants for support in addressing their complex medical issues and a strong basis for continuation.

Future Activities

The formal Qualitative Evaluation of the MEDS-AD Waiver Medication Therapy Management Program continues with three additional series of interviews, either currently underway or planned during the next several months. RIT staff will interview:

- Primary Care Physicians responsible for medication therapy delivery to MTM recipients
- MTM Participants who completed a CMR but became ineligible to continue in the full MTM program, and
- 20 respondents from the second-year study cohort who refused to participate in the MTM program.

Qualitative Evaluation -- Primary Care Physician Interviews

Another essential source of data is interviews with Primary Care Physicians (PCPs) who are associated with the MEDS-AD Demonstration project participants.

Research Questions

PCP interviews are most closely aligned with the following Research Questions:

- What are the lessons learned from this program from the perspectives of Florida Medicaid administrative personnel (MCAP), MTM staff, recipients (i.e., participants) and *PCPs*?

- How does this program impact recipients' (i.e., participants') ability to understand medications, take a more active part in their care, and *understand the questions to ask their doctor or when to contact their doctor?*

Methods and Processes

Data Sources

Access to PCPs for any research questions is an ongoing problem that is well-established in the literature and well-acknowledged within the RIT. Thus, the focus at this point in the evaluation of the MEDS-AD Demonstration project is establishing strategies that will enhance recruitment and participation.

Study Population. The initial sampling frame for this study population was drawn by including the names of PCPs who were linked with the 66 potential MEDS-AD participant interviewees. That is, for each potential MEDS-AD participant, there was one PCP named as caring for that MEDS-AD participant. The RAs contacted the PCP offices, confirming or establishing correct contact information and deleted names of PCPs who could not be contacted.

In addition, initial findings from the Quantitative Component indicated that 28% of recommendations to PCPs had been resolved. (Resolved status is a function of UFSOP staff noting a change in Medicaid claims data that occurred after and congruent with a recommendation communicated from the UF SOP staff to the PCP, usually by FAX). Thus, it became evident that the evaluation would benefit (i.e., be more comprehensive) from identifying and interviewing a subset of those physicians as well as other PCPs who had received recommendations that were not noted as resolved. Therefore, the RIT is currently, in conjunction with the Lead Analyst on the Quantitative Component, developing a sampling frame that includes PCPs with resolved cases; PCPs who received faxes, but cases were not resolved; and PCPs who were associated with MEDS-AD Demonstration project recipients but did not receive faxes. It is the goal of the RIT to interview at least 7 from each group.

Recruitment. Another strategy underway to enhance PCP participation is the use of a key informant (i.e., a Medical Doctor [MD] who will provide information regarding the optimal recruitment methods for approaching and engaging PCPs). At this juncture, the RIT is examining the universe of PCPs associated with the MEDS-AD Demonstration project as well as the Research Network maintained by the FSU College of Medicine in order to identify at least one key informant who is listed on both.

Interview Protocol. Information from the key informant, as well as current practices identified in the literature review, and input from the completed MCAP, UF SOP staff, and MEDS-AD participants will be used in finalizing an interview protocol. With the exception of one or more key informant interviews, PCP interviews will be conducted by phone and at the convenience of the PCP.

Primary Care Physician Interviews – Initial Conclusion

The multi-disciplinary nature of the RIT along with cooperation of the Lead Analyst and other personnel from the Quantitative Component are essential in developing an optimal strategy for approaching and engaging PCPs in the evaluation of the MEDS-AD Demonstration project. It is expected that this portion of the project will be completed according to the MED143 Contract deliverable schedule.

Qualitative Evaluation -- MTM Participant Interviews (Non-Program Completions)

In order to understand the MEDS-Ad Demonstration project fully, the RIT will interview 20 MTM participants who have a completed CMR, however, became ineligible for the program or were removed from the program prior to the completion of three claims reviews.

To optimize these interviewees recall, participants will be drawn from the second-year cohort of recipients. As their experiences will most closely resemble the MTM participants who have completed the program (i.e., they are unlikely to realize that their program was not completed and their CMR experience would have been similar), they will be interviewed using the same methods and protocols described above, allowing for changes in the protocol should such changes be indicated. Therefore, after three interviews have been completed, the RIT will review the responses and adjust the protocol if necessary. These interviews will be completed according to the MED143 Contract deliverable schedule.

Qualitative Component: MTM Participant Refusals Interviews

Finally, 20 respondents from the second-year cohort, those who refused to participate, will be interviewed to determine their reasons for not participating. In order to minimize time between refusal and interview and, therefore, optimize the validity of responses, the interviews will be conducted beginning with the most recent refusals. Protocols will be developed with input from participants, UF SOP staff, MCAP, and physicians. These interviews will be completed according to the MED143 Contract deliverable schedule.

Qualitative Evaluation Summary

The Qualitative Component of the evaluation of the MEDS-AD Demonstration project will provide a comprehensive understanding of the program from the views of those who are most closely involved in its development, implementation, and outcomes. For the final report, these qualitative findings will be integrated with the quantitative component to enhance the understanding of the MEDS-AD Demonstration project from multiple perspectives.

Interim Report Findings and Recommendations

Findings

I. Quantitative Evaluation Findings:

   a. The first year cohort of 147 MTM participants with CMR and the 505 MTM ELIGIBLE NON-PARTICIPANTS appear to be reasonably homogeneous in terms of demographics, expenditures, and utilization levels.

      i. MTM ELIGIBLE NON-PARTICIPANTS should make a reasonable comparison group for the MTM PARTICIPANTS (Comparison Group 1) but further testing on a wider group of comparative variables will be done.

   b. The MEG1 population is a more heterogeneous population than MTM PARTICIPANTS and MTM ELIGIBLE Non-PARTICIPANTS and selection of Comparison Group 2 from the MEG1 population will require propensity score matching in order to identify a suitable second comparison group.

   c. However, these findings are based on claims data available at the time of the report which did not include any professional medical claims. This additional data is expected shortly and will become part of further analysis and reporting under this contract.

II. Qualitative Evaluation Findings:

a. As of April 2013, the Research Investigative Team (RIT) has completed all key informant interviews directed by Florida's Agency for Health Care Administration (AHCA) Medication Administrative Personnel (MCAP). Those interviews included MCAP administrators and University of Florida College of Pharmacy (UF COP) administration and staff. The RIT has also completed interviews with 21 MEDS-AD participants who have completed the MTM program.

b. Qualitative methods, specifically interviews with key informants identified by AHCA, provided information for the MEDS-AD program evaluation that is not available from any other sources.

c. All key informants interviewed were the most knowledgeable persons available regarding the development and implementation of the current MEDS-AD Demonstration project. The Bureau Chief of Pharmacy Services for Florida Medicaid provided insights into the etiology of the current program as well as lessons learned from other models of care. The Clinical Administrator of Medicaid Pharmacy Services provided invaluable information regarding the implementation of the current program, including outcomes measured, characteristics of participants and knowledge of the Medicaid population.

d. Four key informants at the University of Florida's College of Pharmacy chosen by AHCA as being most knowledgeable about the MEDS-AD Demonstration project were also interviewed for this evaluation. The Center Director and three highly experienced pharmacists took great pains to describe the MTM program's implementation with a PowerPoint presentation that included detailed information regarding the MEDS-AD Demonstration project.

e. Twenty-one MTM participants have been interviewed regarding their perceptions of the services provided under the MEDS-AD Demonstration project using both open- and closed-ended questions. Preliminary findings from these

interviews provide insight into their overall satisfaction with the MTM program and, additionally, feedback on specific issues such as information provided and characteristics of care provision.

f. The MTM PARTICIPANTS who participated in the first cohort of qualitative interviews were pleased with the program as administered and found the information provided during the CMR process helpful.

Recommendation

Based on the findings to date, we believe that valid comparisons of the MTM PARTICIPANTS and two planned comparison groups are possible and will provide valid results. Therefore the evaluation should continue.

MED143 CONTRACT DRAFT DELIVERABLE #5

MEDS AD Waiver MTM Program Evaluation:

Key Informant Experiences-Preliminary Findings

Prepared for Florida Medicaid
in Partial Fulfillment of Contract
MED 143

College of Social Work
Florida State University

March 29, 2013

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Introduction

The purpose of this report is to provide AHCA with a project-specific Preliminary Analysis and to ensure that the preliminary research, data collection, and analyses of the data conform to the intent of the project. Within that context, the qualitative component of this mixed methods project lends a much greater understanding of the underlying processes that, when taken in conjunction with the quantitative findings, will provide a deep and nuanced evaluation of the MEDS-AD Demonstration project based on Medication Therapy Management (MTM) principles.

The Research Investigative Team (RIT) associated with the qualitative effort consisted of members who represented multiple disciplines and academic institutions. The Lead Analyst, an Associate Professor at the FSU College of Social Work and a Co-PI of the project is an expert in qualitative methodology and served as an essential participant in all five interviews. In addition, she, along with Florida A&M University (FAMU) Pharmacist A, constructed the interview guides prior to meeting with key informants. FAMU Pharmacist A, a Professor at FAMU as well as an expert in MTM and geriatrics, provided knowledge of patient interactions gained from hands-on clinical experience. FAMU Pharmacist B, also of the FAMU College of Pharmacy, has both MTM and teaching experience as well and was particularly helpful in discussing patient outcomes associated with MTM. The Associate Dean of Research at the FSU College of Social Work brought to the team extensive research experience in health care and health behavior. Her insights into health behavior will be helpful in discussing best practices in later reports.

These specific preliminary findings are confined to interviews with MTM staff at the University of Florida College of Pharmacy (UFCOP) Call Center and Medicaid Administrative Personnel (MCAP) who served as key informants. These key informants were the most knowledgeable persons available regarding the development and implementation of the current MEDS-AD Demonstration project. The Bureau Chief of Pharmacy Services for Florida Medicaid, provided insights into the etiology of the current program as well as lessons learned from other models of

care. The Clinical Administrator of Medicaid Pharmacy Services provided invaluable information regarding the implementation of the current program, including outcomes measured, characteristics of participants, and knowledge of the Medicaid population. The Bureau Chief and Clinical Administrator were interviewed together in an interview that took approximately two hours.

Furthermore, the RIT interviewed four key informants at the UFCOP chosen by AHCA as being most knowledgeable about the MEDS-AD Demonstration project. The UFCOP Call Center Director took great pains to describe the MTM program's implementation with a PowerPoint presentation that included detailed information regarding the MEDS-AD Demonstration project. The UFCOP Call Center Director also made available information regarding another concurrent MTM program conducted by UFCOP personnel under contract with a Health Maintenance Organization (HMO). While the outcome data from the HMO program were not included in evaluating the MEDS-AD Demonstration project, the lessons learned from that program were considered to be transferable to the MEDS-AD Demonstration project. This provided one example of the value added by UFCOP staff who participated in the HMO program as well. Furthermore, the RIT interviewed three UFCOP pharmacists who have direct knowledge, current and historic, regarding the training and implementation of all the MTM programs implemented at UFCOP. Two of the UFCOP pharmacists have both current and historic knowledge of the MEDS-AD Demonstration project. The third UFCOP pharmacist interviewed is involved in the current day-to-day implementation of the MEDS-AD Demonstration project. Each of these interviews lasted from one to two hours.

Initially the intent of the key informant interviews included developing a global perspective on the MEDS-AD Demonstration project and providing guidance in developing protocols for participant interviews. Although the RIT had previously gained insight into the training and implementation of the MEDS-AD Demonstration project during one phone call and overviews of the project provided by AHCA, this information was not directed toward protocol development. Therefore, the information from the key informant interviews described here was essential to the

development of participant interview protocols currently in use. However, the beauty of qualitative research came in finding the unexpected. Without the direct conversations with the key informants described here and the resulting 40+ hours of transcription time and 97 pages of data, it would have been impossible to appreciate the dedication and thoughtfulness that these key informants expressed for the MEDS-AD Demonstration project participants who live with complex medical problems and take multiple medications daily. The theme "value added" included below seeks to portray the additional services provided above and beyond the basic MTM model. Furthermore, when appropriate, the words of the key informants are used to convey the empathy they exhibit for the patients they serve.

While the qualitative component of this study will be essential in understanding responses to multiple research questions, the preliminary findings associated with these specific interviews will be most useful in responding to the following study aims:

- How is program utilization consistent with best practice guidelines and Medicaid policies? (e.g., How do MTM pharmacists implement and Primary Care Physicians [PCPs] respond to the program?)

- What are the lessons learned from this program from the perspectives of Florida Medicaid Administrative Personnel (MCAP), UFCOP staff, recipients and PCPs?

Other study aims, more closely aligned with the participant and PCP input, will be addressed when those populations are interviewed. In addition, the final report, due February 24, 2014 will include a comparison of these findings with best practices as well as enhancing the understanding of the quantitative components.

Methodology

This project used established methods of qualitative research to provide information helpful in understanding the underlying processes while evaluating the MEDS-AD Demonstration project as it is implemented by the call center at UFCOP.

The Research Investigative Team (RIT) from the FSU College of Social Work and FAMU College of Pharmacy conducted the interviews.

Study Population. The RIT conducted interviews with a purposive sample drawn from key informants comprising Florida Medicaid Administrative Personnel (MCAP) identified by AHCA and UFCOP staff described above.

Interview Protocol. The RIT used a semi-structured interview guide with questions and prompts based on an initial literature review and approved by AHCA personnel. In addition, the RIT interviewers followed up on new areas and topics mentioned by the key informants, in accordance with standard interview conduct. The RIT audiotaped each interview with permission of the participants. AHCA and Institutional Review Boards approved all interview protocols, surveys, and scripts prior to implementation. Interviews were conducted on October 29, 2012 and November 19, 2012. The RIT interviewers conducted the interviews in private conference rooms or offices. UFCOP staff were interviewed individually. MCAP were interviewed together at their request. There were at least two members of the RIT, one methodologist and one pharmacist, at each interview.

Data Management. Interviews were digitally recorded with permission of the participants and transcribed word for word. All tapes and transcriptions were kept on password-protected computers with access limited to the RIT and their Research Assistants (RAs).

Data Analysis. Data were entered into Atlas/ti software for analysis, an established software package that allowed for the storage of codes and served as an organization tool for studies using multiple interviews. Two members of the RIT coded one transcript, with consensus being reached on codes, themes and domains. A code list was established and used in coding subsequent transcripts.

Method. The RIT examined each interview for emerging themes, and relevant

codes were developed utilizing the constant comparative method. This method allowed coders to compare new information to codes identified earlier and develop new codes if none existed for the current data. This process allowed for a structured and systematic data analysis method while optimizing the emergence of new codes to capture new ideas as they developed.

Process. The analytic process began with immersion in the data; that is, the RIT read the transcripts multiple times to become familiar with the content and flow. The RIT then made notations (codes) for each small bit of data, a process called "open coding." These codes were recorded in Atlas/ti as the initial code list. Atlas/ti also allowed for "memoing;" that is, the RIT was able to make and retain notations related to underlying themes during the coding process. For the next step, the RIT looked at relationships among the initial codes, including where they co-occur, a process called axial coding. For example, one code, "I have time," was coded word-for-word (in vivo) during the coding process. When the overall coding process was complete, this code became part of a larger code family, "value added." The value added category included other aspects of support provided by the UFCOP Call Center staff that went beyond the standard MEDS-AD Demonstration project MTM process (e.g., providing information regarding non-pharmaceutical services). The prevalence of this code family led to it being identified as a theme, an underlying (latent) process that gave meaning to the data beyond simple categorization.

There were no codes established prior to beginning this process, as this set of key informant interviews was essential to establishing contextual information. The data were analyzed for both manifest and latent codes and themes. For example, a manifest code might include the aspects of training (e.g., protocol, sequence) that were parts of the training process. However, that UFCOP staff observed and supported traits such as empathy became evident when describing the training process, a latent theme that emerged.

Strategies for Rigor. A key element in establishing validity in qualitative research is triangulation (i.e., use of more than one data source or method of data collection). This portion of the study incorporated two methods of triangulation: analytic triangulation and interdisciplinary triangulation. First, during data analysis, coding involved two (2) independent coders. The interdisciplinary nature of the RIT supported interdisciplinary triangulation as both a pharmacist and a methodological expert attended each interview. At the completion of this project, data from the qualitative component will be integrated with data from the quantitative component of the MEDS-AD Demonstration project evaluation

Initial Findings

Four general themes related to the underlying processes emerged from the analyses: value added; training and implementation; continuity and connection; and special circumstances. These four themes were retained as they emerged in each of the interviews with UFCOP staff and MCAP. Each theme is described below.

Value added. Embedded in all the themes described below and prevalent in every conversation with UFCOP staff was a theme noted as value added. This latent theme was broadly defined as UFCOP staff providing services beyond those included in the scope and standard definition of MTM. Furthermore, the value added theme included the attitudes of the UFCOP staff as honoring the MEDS-AD Demonstration project participants, treating them with dignity and genuine concern for their well being. It was difficult, indeed impossible, to separate the value added services from the personal characteristics (i.e., commitment and dedication) of the UFCOP staff. One example of this commitment was contained in the UFCOP staff expression "We get excited about everything." The UFCOP pharmacist went on to state "We get excited when the doctor says they're not changing it [THE MEDICATION]. We get excited because we know that they've read it [THE FAX FROM THE UFCOP TEAM]." These value added services were also a function of the collaborative nature of the

relationship between MCAP and UFCOP that included some flexibility within the contracting process.

Indeed, the UFCOP Call Center Director indicated that flexibility provided by the MCAP Bureau Chief was essential to allowing the UFCOP to design the optimal MTM program. This comment was echoed by the Bureau Chief who indicated a willingness to allow UFCOP personnel to use their knowledge of the help-desk model of MTM implementation in developing the MTM model specific to the MEDS-AD Demonstration project.

Examples of value added services were best described by the words of the UFCOP staff themselves. For example, one simple statement "I have time for you" poignantly described the contribution to quality of life that a one-time interview, while purposed for MTM, can make. And while the gold standard of satisfaction lies in the interviews with participants themselves, it became evident to the RIT interviewers that the commitment on the part of the UFCOP staff to patient well-being transcended the limitations of the MEDS-AD Demonstration project while maintaining the integrity of the MTM process. For example, when UFCOP staff inadvertently contacted someone still in the Medicaid application process, they were willing to recontact that person later when he/she had become eligible for the MEDS-AD Demonstration project.

Indeed, UFCOP staff were performing tasks often defined as medical social services. Examples of these services included identifying transportation services from Tampa to Orlando to aid a patient in obtaining services from the only pain specialist who accepted patients with Medicaid. Furthermore, UFCOP staff provided information on Medicaid coverage for non-medication services such as environmental counseling for patients with diagnoses of asthma.

On the other hand, participation in the program added value to the educational experience of UFCOP students who rotate through the call center, as participation provided successful training for pharmacy students to work with this sociodemographic population. These unintended outcomes suggest the potential need for additional outcome measures to capture the complete picture of the MEDS-AD Demonstration project as implemented here.

Training and Implementation. UFCOP staff explained and provided detailed information, written and oral, regarding the training and implementation of the MEDS-AD Demonstration project. UFCOP staff indicated that there was no one service model for MTM and that "we were gonna encourage collaboration, we were gonna talk about appropriate prescribing patterns and the goals were to improve the quality of care, improve adherence, reduce clinical risk, lower prescribed drug cost and lower the rate of inappropriate spending on certain medications, alright." It became apparent that the UFCOP staff took these goals seriously and had been directly involved in working constantly toward process development and improvement. Key components included a comprehensive orientation for schedulers and interviewers, a rotation of student staff, development of a computerized record using Excel software, a specific protocol for contacting primary care physicians (PCPs), and benchmarks for identifying resolution. For example, as per protocol, UFCOP staff faxed PCPs notifications of issues that merited review and possible modification. The issue was noted as resolved if claims data confirmed a change in response to the notification.

The data from these key informant interviews described a program structure that both imposed restrictions and allowed for some flexibility. For example, the program as described set standards for contacting participants, indicating detail as granular as the maximum and minimum number of phone calls appropriate in attempting to reach a potential participant. However, as the program developed, the UFCOP staff instituted a follow-up call performed between 30 and 90 days post Comprehensive Medication Review (CMR) in order to check in with participants. Including this call was a modification of the original protocol initiated because UFCOP staff wanted to stay in touch with patients and understand their evolving situations, a clear indicator of the empathy and concern staff felt.

Within the established protocol, the UFCOP staff described strategies that allowed them to optimize responses and effectiveness of the program. They used strategies such as asking the participant to gather and enumerate their medications prior to the CMR in order to increase participant engagement. In addition, UFCOP

staff were sensitive to "little cues" such as whether participants reported psychiatric medications initially or "held back". These examples demonstrate how perceptive UFCOP staff were and how attuned they were to the participants, and further demonstrate the minutely detailed attention that UFCOP staff were willing to employ in order to achieve optimal results. These strategies were shared with other staff and became part of the training process. Thus, UFCOP training included creating an empathetic demeanor as demonstrated when UFCOP staff encouraged student trainees to connect with patients by saying, "pretend that's your grandmother or your grandfather, your favorite aunt or uncle."

The MEDS-AD Demonstration project protocol includes two targeted outcome measures, one for adherence (the Morisky 8-item Medication Adherence Scale [MMAS-8]) and two follow up questions regarding satisfaction with the services ("Did you find this appointment to be helpful" and "Did this interview help clarify any concerns you may have had with your medications?"). Furthermore, in cases in which recommendations had been faxed to the PCP, UFCOP staff reviewed claims data for changes in medication. Yet, this program went beyond adherence, satisfaction, and medication modification for both UFCOP staff and MCAP. For example, when asked about what contributed to the strength of the program, the Bureau Chief stated, "…because there is one-to-one interaction with the patient. There is an understanding of who the patient is." A recommendation to capture this important outcome is included in the Initial Lessons Learned section of this report.

Continuity and connection. UFCOP staff expressed a desire for continuity in contact. Although the MEDS-AD Demonstration project protocol calls for only two direct contacts between UFCOP staff and program participants (i.e., the scheduling call and the CMR), UFCOP key informants suggested that a seemingly important relationship occurs during these calls and that an undergirding sense of connection potentially enhances the effectiveness of the program. As one UFCOP staff stated "And some patients I did leave a card [INCLUDE A BUSINESS CARD] in what [THE MATERIALS] I sent them in the mail. It was one of those [PARTICIPANTS] that you just bonded with over the phone, or they needed the extra

help." UFCOP staff expressed concern when there were breaks in this connection. Breaks occurred when participants were no longer part of the program as evidenced by the absence of their claims data. As one UFCOP staff member stated: "I want to follow up with them because I want to know where they're at and maybe they need an extra touch."

Also, there were instances when the UFCOP staff member who made the original call was replaced by someone else for follow up. UFCOP staff related anecdotes in which participants tried to reconnect with the staff member who made the original call. One participant, who had finally requested a nicotine patch and was able to stop smoking asked to speak to the UFCOP staff member who had conducted the CMR in order to share the success story. However, when describing this anecdote, the UFCOP staff pharmacist stated "And I think that's why I don't know more success stories because they [OTHER UFCOP STAFF] do the follow up call." This finding provides an area for exploration during the participant interviews currently being conducted to see if participants also express the need for longer and more frequent contact.

Special circumstances. This theme emerged as a response to queries about exceptions to protocol. However, it should be noted that some of these instances included MTM participants who were contacted as a result of their participation in another contracted study conducted by UFCOP staff. These anecdotes were informative, however, as they described responses to situations that could arise with the MEDS-AD Demonstration project participants as well.

The UFCOP staff described events that prompted them to make quick judgments and unique responses. UFCOP staff noted that they utilized a crisis management protocol; however, specific conditions such as the presence of depression, sometimes coupled with chronic pain and/or including suicidal ideation; participants at the end of life; and use of drugs not prescribed for them, prompted the need for somewhat unique responses. These events also required that UFCOP staff make judgments regarding the severity of the condition and consequent actions. For example, one UFCOP staff member described two separate

instances related to suicidal ideation that occurred in one day. While both participants were referred to an intervention hot line, one required an immediate conference call with hot-line staff based on the patient's condition. In the other case, the follow-up contact was left up to the patient. This need to evaluate and triage critical situations became a part of what might have been expected to be a routine call and demonstrates the challenging nature of conducting any MTM program by telephone.

End-of-life circumstances presented another unique challenge for UFCOP staff due to limitations of medical information. Staff reported that they had ICD-9 codes that indicated a potentially terminal diagnosis such as breast cancer, but they did not know the stage of the disease. However, UFCOP staff also noted that some patients are open in describing their end-of-life circumstances and included references beyond medical needs. Again, UFCOP staff were positioned and challenged to provide support to MEDS-AD Demonstration project participants, who were often isolated at this critical juncture in their lives.

UFCOP staff indicated that they routinely asked about use of drugs not prescribed for participants. Since this question inferred behavior that might be socially undesirable, UFCOP staff strategically prefaced the question with a statement that all patients are asked the same questions. Some patients openly acknowledged this drug use and were forthcoming, suggesting that the UFCOP staffs' sensitivity and strategic thought were helpful.

Initial Lessons Learned

These findings are preliminary, as they are based solely on interviews with seven key informants identified by AHCA. These findings will become more meaningful when considered in conjunction with findings from other respondent groups. However, these data did suggest three lessons learned regarding the current MEDS-AD Demonstration project as implemented by the staff at the UFCOP Call Center.

First, making additional medical information available to the UFCOP staff before, during, and after contact with the MEDS-AD Demonstration project participants may enhance the staff's ability to anticipate and meet the needs of the participants. This possibility was also discussed with the MCAP who confirmed that they (MCAP and thus UFCOP staff) do not have access to the participants' medical records.

Furthermore, RIT pharmacists indicated having access to patient lab reports could provide a much more nuanced understanding of resolutions to problems. That is, not only should the change in medication be noted (as is now the definition of resolution and is available from Medicaid claims data), there needs to be documentation that indicates whether this change had an effect on the medical condition of the participant as indicated by post-change lab reports. These recommendations were made as describing an optimal model of MTM that may be potentially unrealistic for the MEDS-AD Demonstration project. In a prior model of MTM described by MCAP, obtaining the medical record had become a hurdle to providing timely responses, and medical information, when available, was outdated. Therefore, the availability of medical information would need to be timely and likely depend upon future advances in technology.

The second lesson is that UFCOP staff performed medical social services (e.g., obtaining transportation, identifying providers who take patients with Medicaid, describing additional services available through Medicaid) that were frequently the purview of social workers. In fact, the USCOP Call Center Director indicated that in his experience, social work graduate students often were part of the call center staff. It was commendable that current UFCOP staff performed many of these services that go beyond MTM in its most conservative definition. It did suggest, however, that the addition of social workers to call center teams could be a consideration for future MTM programs envisioned by AHCA.

Finally, there were outcomes that currently are not measured that represent strengths of the MTM model as implemented within the MEDS-AD Demonstration project by the UFCOP staff. Recognition of the humanity and worth of the participants touched by this program was significant as both *a reason for* the

program (as indicated by MCAP) and *a strength of* the program (as indicated by UFCOP staff). However, there was no measure of quality of life of the patients who are touched by the program.

Conclusion

These preliminary findings indicate that qualitative methods, specifically interviews with key informants identified by AHCA, provide information that is not available from other sources. Furthermore, the findings from the key informant interviews are helpful in developing interview guides appropriate for the MEDS-AD Demonstration project participants who are currently being interviewed. However, most notably, these key informant interviews went beyond these basic goals and painted a picture of caring UFCOP staff and MCAP who were genuinely concerned for the well-being of the MEDS-AD Demonstration Project participants and sought to add value to the participants' lives as well.

MED143 CONTRACT DRAFT DELIVERABLE #12

MTM Program Recipient Experiences – Preliminary Findings

Prepared for Florida Medicaid
in Partial Fulfillment of Contract
MED 143

College of Social Work
Florida State University

May 29, 2013

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Introduction

The purpose of this report is to provide AHCA with preliminary findings based on telephone interviews conducted with a sample of the MEDS-AD Medication Therapy Management (MTM) program participants.

The Research Investigative Team (RIT) associated with the qualitative effort consisted of members who represented multiple disciplines and academic institutions.

The Lead Analyst, an Associate Professor at the FSU College of Social Work and a Co-PI of the project is an expert in qualitative methodology and directed and monitored a team of Research Assistants (RAs) from the FSU College of Social Work who conducted the interviews with MTM program participants.

The interview process was also informed by two Florida A&M University (FAMU) College of Pharmacy professors participating on the RIT. They brought expertise in MTM and geriatrics, provided knowledge of patient interactions gained from hands-on clinical experience, and were particularly helpful in discussing patient outcomes associated with MTM. Additionally, the Associate Dean of Research at the FSU College of Social Work brought to the team extensive research experience in health care and health behavior.

Qualitative Evaluation: MTM Participant Interviews

It is the very essence of this evaluation to hear the opinions of MEDS-AD participants, often in their own words, that provide information not available from any other source. Indeed, they, the participants, are the true experts on the effectiveness and meaning of the MEDS-AD effort.

Research Questions

The interviews with MEDS-AD participants are most closely aligned with the following Research Questions:

- What are the most successful aspects of the MTM program based on participant perspectives?
- What are the lessons learned from this program from the perspectives of Florida Medicaid administrative personnel (MCAP), MTM staff, recipients (i.e., participants) and primary care providers (PCPs)?
- How does this program impact recipients' (i.e., participants') ability to understand medications, take a more active part in their care, and understand the questions to ask their doctor or when to contact their doctor?

This project used established methods of qualitative research to provide information helpful in understanding the underlying processes while evaluating the MEDS-AD Demonstration project as it is implemented by the call center at University of Florida College of Pharmacy (UF COP).

Methods and Processes

Data Sources

Study Population (MTM Participants). The RAs conducted interviews with a sample randomly selected from the universe of MEDS-AD participants (n = 147) who had completed the program (i.e., had a completed CMR and three subsequent claims reviews). An initial sampling frame of 45 potential participants was not sufficient to meet the goal of 20 completed interviews. Therefore the sampling

frame was refreshed with an additional 21 potential respondents, 20 of whom had agreed to participate in a second year of the MEDS-AD Demonstration project.

Recruitment. RIT mailed a letter to each potential participant that explained the study and invited their participation. The letters were written in easily understandable language and included the name of the UF COP staff member who had conducted the CMR. This method was designed to aid participants in understanding the specific program referenced in the letter and consequent interview. Furthermore, the letter stated that findings would be kept confidential and that neither participation nor refusal would have any effect on their Medicaid benefits. The letter was followed by a phone call that included additional information, an opportunity for potential participants to ask questions, and informed consent for those participants who wished to participate. A copy of the informed consent was mailed to each interview participant. Figure 1 summarizes the recruitment process.

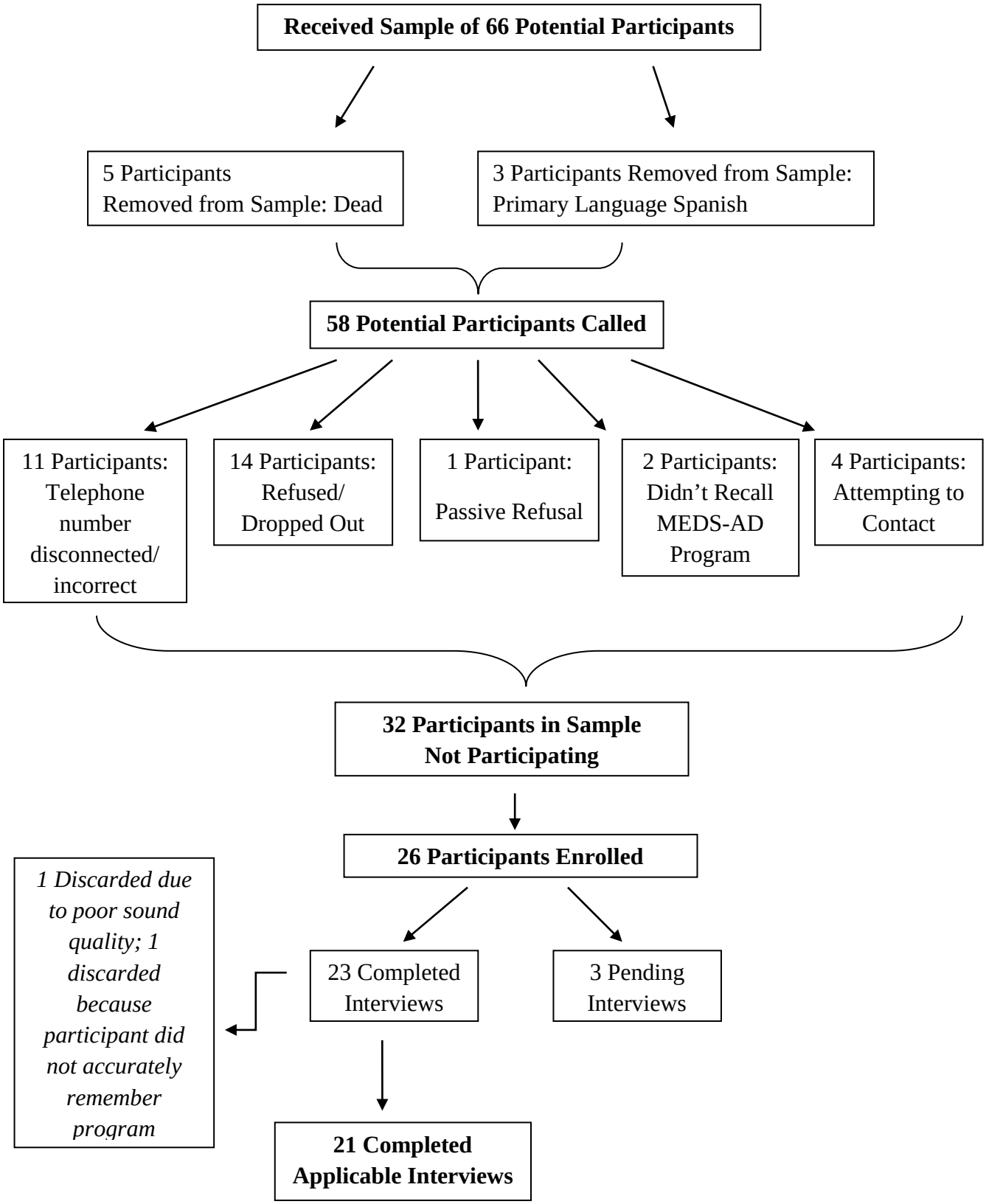

Figure 1: MTM Participant Interview Recruitment Process

Interview Protocol. The RIT used a semi-structured interview guide with questions and prompts based on an initial literature review, input from MCAP and UF COP Call Center staff, and approved by AHCA personnel. Interviewers used screening questions that determined that the participant was the person identified and an additional question to determine if they remembered the MEDS-AD Demonstration project.

There were three overarching, open-ended questions:

1. How would you describe the medication management program in which (CONTACT NAME) asked you about your medicines?
2. What do you see as the best part of the program?
3. If you could change one thing about the program, what would it be?

In addition, the interviewers followed up on new areas and topics mentioned by the MEDS-AD participants, in accordance with standard interview conduct. Finally, there were five closed-ended (yes/no) questions and one global rating item. The RAs audiotaped each interview with permission of the participants. AHCA and Institutional Review Boards approved all interview protocols, surveys, and scripts prior to implementation. Interviews with participants who have completed the MEDS-AD program were conducted between March 1, 2013 and April 26, 2013. All interviews were conducted by telephone and were scheduled for the convenience of the MEDS-AD participants.

Data Management. A tracking database in Microsoft ACCESS was maintained throughout the project to record pertinent information regarding contacts made with participants, enrollment status, and to provide interviewers with background information regarding diagnoses, health behaviors, and medications. Interviews were digitally recorded with permission of the participants and transcribed word for word using Dragon Naturally Speaking software. All tapes and transcriptions were kept on password-protected computers with access limited to the RIT and RAs.

Data Analysis. Data were entered into Atlas/ti software for analysis, an established software package that allowed for the storage of codes and served as an organizational tool for studies using multiple interviews. Four RAs coded one

transcript, with consensus being reached on codes, themes and domains under the supervision of the Lead Analyst. A code list was established and used in coding subsequent transcripts. However, additional codes and themes were allowed to emerge during the coding process.

At the end of the coding process, there were 31 codes identified. These codes were organized into code families (i.e., codes with associated meanings or references) and themes. However, qualitative coding is an iterative process and will continue throughout the project. Further analyses will be completed that will compare themes with the previously conducted Medicaid program office key informant interviews as well as other respondents (i.e., physicians) who have not yet been interviewed. In addition, the responses to the closed-ended questions included in the interview guide were tabulated.

MTM Participant Interviews -- Initial Findings

There were 66 cases randomly selected for recruitment. After removal of ineligible participants, letters were sent to 58 potential participants with phone follow-up. Twenty-three interviews were completed. Unfortunately, one was not usable due to a technical problem and one was considered an unreliable respondent (i.e., did not seem to understand fully the focus of the interview as the MEDS-AD Demonstration project). Thus, these findings are drawn from 21 interviews with MEDS-AD participants who indicated they remembered the project and provided information that would substantiate their understanding.

Of the participants with completed interviews (n=21) as of May 23, 2013, 13 (62%) were female; 8 (38%) were white, 4 (19%) were black, and nine (43%) lacked information regarding race. Ages ranged from 45 to 64 years old.

Open-Ended Questions

The overall responses to questions in this category were positive and enthusiastic. When asked about the experience of participating in the MEDS-AD Demonstration project, the participants were overwhelmingly positive in their responses. One participant's response was that: "It [MEDS-AD] was great. It was really, really great." The responses were grouped into four categories, or code families: 1) Evaluation of the pharmacist(s); 2) Evaluation of the MEDS-AD program; 3) Best practices; and 4) Recommendations.

Evaluation of the Pharmacist(s). Overall, the participants were very positive in their evaluations of the pharmacists. They were especially appreciative of the concern they felt that the pharmacists demonstrated for them. As one participant stated, "She always talked with me, and that felt good talking with her." Another said: "That they was (sic) concerned." They also described the pharmacists as helpful, honest, and polite. Perhaps this was best summed up by one participant's statement "Well, she was nice."

In most cases, the participants described the pharmacists as knowledgeable. One participant stated "I had some questions about my medications and she answered

them for me" and another said "I thought they were very knowledgeable." However, there were a few comments that indicated the pharmacists may have been novices such as "you could tell that they were just learning." Some participants also noted that the pharmacist was a resource such as "she gave me some numbers that I could've called."

Evaluation of the MEDS-AD program. Overall, participants were favorable in their evaluation of the program. There were three conceptual categories within this code family: 1) problem identification; 2) understanding; and 3) medication adherence.

Problem identification

Participants acknowledged that there were medication issues that emerged solely as a result of the MEDS-AD MTM program. The interactive nature of the call was depicted in this quotation "She asked me some questions and I said well yeah and she said you might want to mention that to your doctor." Another said "And I did follow-up on one of the things [DISCUSSED WITH PHARMACIST] with my doctor."

Understanding

Participants found the process especially helpful in understanding their medications and providing information not readily available from other sources. One participant indicated "Well if you don't know what you're taking, she can tell you that" and "basically…I got all of my meds on one sheet." Other typical comments were "he really just helped me to understand" and "I'm aware of what I'm taking."

Participants compared the information from the MEDS-AD MTM program with information from other sources and found it more helpful, even superior. As one participant stated "Because, you know, the nurses don't really tell me anything. This has been the only thing that has helped me understand [MY MEDICATION] and I've been to a lot of doctors before."

Medication Adherence

One outcome, increased medication adherence, was clearly evident from the participants' perspective. For example, one participant indicated that increased medication adherence was directly related to having received the phone call "Yeah, keep enforcing, keeping pushing you know, 'cause a lot of the medications I wasn't

really taking." Another said "she got me going on them [MEDICATIONS]" and "I used to be real bad with medications, right?...Yeah, she did help me with that." However, a small number (n = 4) of participants did state that they obtained information from other sources and found the MEDS-AD MTM program redundant. One participant stated "I already know what I take."

Best practices. When asked about the best part of the program, most participants focused on the increased understanding of their medications. One participant stated simply "It was informative." Others said "the information she gave me." and "I guess to see that I was taking the right ones." Other responses to the question regarding the best part of the MEDS-AD MTM program included "just really starting to understand my medicines better." Participants also responded regarding the demeanor of the UF COP staff with "Well, she was nice and she explained to me what I was taking and why I was taking it." However, it was not unusual to hear that "It was all good."

Recommendations. When asked for recommendations, participants again provided a positive context indicating most often that they would support additional contacts. As one participant stated, "I just wish they would keep calling me. It's been a long time"; and another said: "I'd say keep going and never stop." Indeed, some participants indicated it would be helpful to have more information on medications that had been prescribed since completing the program. For example, one participant stated "I wish that they would call me more so that I could ask about this medicine" and another said "I'm taking these new medicines and I don't know what they mean." However, the most common response to what could be improved about the program was a variation on "I wouldn't change anything" or "Nothing. It was fine."

Close- Ended Questions

Positive experiences of participants were also reflected in their answers to questions under this category. These findings align with those found in the open-ended questions in that participants were satisfied with the program overall, received

helpful information and were positive in describing the treatment they received from the UF COP staff who conducted the CMRs.

Interview Responses

Responses to the five closed-ended (yes/no) questions are summarized in Table 1. These questions were derived from existing measures of quality related to MTM programs.

Table 1: Answers to Closed-ended Questions

	Yes N(%)	No N(%)	NA[1] N(%)
1. Was the CONTACT NAME [2]*(or use pharmacist)* from the University of Florida who talked to you about your medicines respectful?	20(95)	0(0)	1(5)
2. Did CONTACT NAME[2] *(or use the pharmacist)* go through your medications and provide helpful information about your medications?	19(90)	1(5)	1(5)
3. Where you happy with the assistance CONTACT NAME[2] *(or use the pharmacist)* provided?	21(100)	0(0)	0(0)
4. Did you feel that you had a better understanding of your medications after your Medication Therapy call?	18(86)	3(14)	0(0)
5. Did you find the information that CONTACT NAME[2] *(or use the pharmacist)* sent you in the mail helpful?	16(76)	3(14)	2(10)

[1] Not answered.

[2] In order to enhance recognition of the program, whenever possible, interviewers used the name(s) of the pharmacist(s) who had conducted the CMR.

Participants also were asked to make one global evaluation of the program overall. These results are indicated on Table 2.

Table 2: Global Evaluation of the MEDS-AD Demonstration Project

	Very Poor N(%)	Poor N(%)	Fair N(%)	Good N(%)	Very Good N(%)
How would you rate the overall care that you experienced with the medication program?	0(0)	0(0)	0(0)	7(33)	14(67)

MTM Participant Interviews -- Limitations

These findings are limited by the small sample size (n=21) and the sample biases often associated with interviews or surveys conducted with participants who choose to participate. That is, it is assumed that those with the strongest opinions are the most likely to respond and complete the interview process. Also, the interviews took place retrospectively with participants who may have completed the MEDS-AD program more than a year before. However, the RIT sought to overcome these issues by being certain that participants indicated that they remembered the program. Interviews were terminated if participants did not clearly remember the MEDS-AD Demonstration Program project or removed from analyses if the participant was deemed unreliable at the end of the interview. The RIT will also interview primary care physicians to gather their perspective on this intervention.

MTM Participant Interviews -- Conclusions

Despite the limitations stated above, it is clear that MEDS-AD recipients who participated in the first cohort of qualitative interviews were pleased with the program as administered and found the information provided during the CMR helpful. They provided nuanced (i.e., appreciation for the concern of the UFCOP staff; the mailed information was the least helpful) and global support for the MEDS-AD Demonstration project. All participants rated the program good or very good overall. Their recommendation that the program continue provides insight into the needs of participants for support in addressing their complex medical issues and echoes the statements of UF COP staff who wished to keep in touch beyond the CMR.

APPENDIX B

- Copies of Letters to Tribes Regarding Renewal of the MEDS-AD Waiver
- Copy of Public Notice Published in Volume 39, Number 83 of the Florida Administrative Register

RICK SCOTT
GOVERNOR

FLORIDA AGENCY FOR HEALTH CARE ADMINISTRATION

Better Health Care for all Floridians

ELIZABETH DUDEK
SECRETARY

April 24, 2013

Ms. Cassandra Osceola
Health Director
Miccosukee Tribe of Florida
P.O. Box 440021, Tamiami Station
Miami, FL 33144

Dear Ms. Osceola:

We are writing to consult with the Miccosukee Tribe of Florida, at least 30 days prior to submitting a Section 1115 Research and Demonstration Waiver renewal application to the Centers for Medicare and Medicaid Services (Federal CMS). The proposed MEDS-AD Waiver renewal is not anticipated to have a direct impact on the federally recognized Tribes in Florida at this time. However, in the spirit of our collaboration with the Miccosukee Tribe of Florida, this notice and invitation to comment is provided.

Under Florida's currently approved State Plan Amendment (SPA) 2012-006, notice of changes in the Medicaid program which are anticipated to have direct impact on the federally recognized Tribes in Florida must be sent 30 days prior to submission of an initial waiver, waiver amendment, or SPA.

The Agency for Health Care Administration (Agency) is seeking to renew the federal waiver authority to continue to provide Medicaid eligibility to the MEDS-AD group, according to provisions of Section 409.904(1), Florida Statutes, which states:

> Subject to federal waiver approval, a person who is age 65 or older or is determined to be disabled, whose income is at or below 88 percent of the federal poverty level, whose assets do not exceed established limitations, and who is not eligible for Medicare or, if eligible for Medicare, is also eligible for and receiving Medicaid-covered institutional care services, hospice services, or home and community-based services. The agency shall seek federal authorization through a waiver to provide this coverage.

Description of Current and Proposed MEDS-AD Program

Since January 2006, Medicaid eligibility for this group has been authorized through the Florida Medicaid MEDS-AD 1115 Research and Demonstration Waiver #11-W-00205/4. The current federal approval for this waiver will expire on December 31, 2013. The Agency is requesting a renewal of authority to continue the program as it currently operates through December 31, 2016.

A link to the Public Notice Document for the proposed MEDS-AD waiver renewal will be posted by April 24, 2013 on the following program website: http://ahca.myflorida.com/Medicaid/index.shtml. The website will also provide the public with an opportunity to provide meaningful input and review other public comments. Two public hearings are scheduled as follows:

A public meeting and webinar is scheduled for May 15, 2013 at Medicaid Area Office 6, 6800 N. Dale Mabry Highway, Suite 220, Tampa, FL 33614. For instructions how to access the webinar, please use web link noted above .

A second opportunity for public comment on this renewal will be provided at the Medical Care Advisory Committee meeting scheduled for May 28, 2013 at Agency Headquarters, 2727 Mahan Drive Building 3, Tallahassee, FL 32308.

We welcome your comments on the proposed MEDS AD waiver renewal. If at any time you would like to discuss the proposed renewal please contact Marie Donnelly at (850) 412-4149, or email Marie.Donnelly@ahca.myflorida.com.

Sincerely,

Justin M. Senior
Deputy Secretary for Medicaid

JMS/md
Cc: Denise Ward, Support Services Coordinator, Miccosukee Health Clinic

RICK SCOTT
GOVERNOR

FLORIDA AGENCY FOR HEALTH CARE ADMINISTRATION

Better Health Care for all Floridians

ELIZABETH DUDEK
SECRETARY

April 24, 2013

Ms. Connie Whidden
Health Director
Seminole Tribe of Florida
3006 Josie Billie Avenue
Hollywood, FL 33024

Dear Ms. Whidden:

We are writing to consult with the Seminole Tribe of Florida, at least 30 days prior to submitting a Section 1115 Research and Demonstration Waiver renewal application to the Centers for Medicare and Medicaid Services (Federal CMS). The proposed MEDS-AD Waiver renewal is not anticipated to have a direct impact on the federally recognized Tribes in Florida at this time. However, in the spirit of our collaboration with the Seminole Tribe of Florida, this notice and invitation to comment is provided.

Under Florida's currently approved State Plan Amendment (SPA) 2012-006, notice of changes in the Medicaid program which are anticipated to have direct impact on the federally recognized Tribes in Florida must be sent 30 days prior to submission of an initial waiver, waiver amendment, or SPA.

The Agency for Health Care Administration (Agency) is seeking to renew the federal waiver authority to continue to provide Medicaid eligibility to the MEDS-AD group, according to provisions of Section 409.904(1), Florida Statutes, which states:

> Subject to federal waiver approval, a person who is age 65 or older or is determined to be disabled, whose income is at or below 88 percent of the federal poverty level, whose assets do not exceed established limitations, and who is not eligible for Medicare or, if eligible for Medicare, is also eligible for and receiving Medicaid-covered institutional care services, hospice services, or home and community-based services. The agency shall seek federal authorization through a waiver to provide this coverage.

Description of Current and Proposed MEDS-AD Program

Since January 2006, Medicaid eligibility for this group has been authorized through the Florida Medicaid MEDS-AD 1115 Research and Demonstration Waiver #11-W-00205/4. The current federal approval for this waiver will expire on December 31, 2013. The Agency is requesting a renewal of authority to continue the program as it currently operates through December 31, 2016.

A link to the Public Notice Document for the proposed MEDS-AD waiver renewal will be posted by April 24, 2013 on the following program website: http://ahca.myflorida.com/Medicaid/index.shtml . The website will also provide the public with an opportunity to provide meaningful input and review other public comments. Two public hearings are scheduled as follows:

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We welcome your comments on the proposed MEDS AD waiver renewal. If at any time you would like to discuss the proposed renewal please contact Marie Donnelly at (850) 412-4149, or email Marie.Donnelly@ahca.myflorida.com.

Sincerely,

Justin M. Senior
Deputy Secretary for Medicaid

JMS/md
Cc: Kathy Wilson, Eligibility & Utilization Services Program Manager

Notice of Meeting/Workshop Hearing

AGENCY FOR HEALTH CARE ADMINISTRATION
Medicaid

The Agency for Health Care Administration announces a public meeting to which all persons are invited.

DATE AND TIME: May 15, 2013, 2:00 p.m., and May 28, 2013, 1:00 p.m.

PLACE: May 15: Medicaid Area Office 6, 6800 Dale Mabry Hwy, Suite 220, Tampa, FL 33614. This meeting will also be presented as a webinar.

May 28: Agency for Health Care Administration Headquarters, 2727 Mahan Drive, Bldg. 3, Tallahassee, FL 32308.

GENERAL SUBJECT MATTER TO BE CONSIDERED: The Agency for Health Care Administration is seeking to renew the federal waiver authority to continue to provide Medicaid eligibility to the MEDS-AD group, according to provisions of Section 409.904(1), Florida Statutes.

A link to the public notice document concerning this renewal request, instructions for how to submit comments, and a link to the Federal Centers for Medicaid and Medicare Services may be found at http://ahca.myflorida.com/Medicaid/index.shtml. All interested stakeholders will be able to provide comments for 30 days, from May 1 through May 30, 2013. The Agency will post all comments received for public review.

For a copy of the agenda for these meetings, or any person requiring special accommodations to participate in either meeting, please contact Marie Donnelly by email at Marie.Donnelly@ahca.myflorida.com, or call (850)412-4149.

Pursuant to the provisions of the Americans with Disabilities Act, for special accommodations, please advise the Agency at least 7 days prior. If you are hearing or speech impaired, please contact the Agency via the Florida Relay Service, (800) 955-8771 (TDD) or (800) 955-8770 (voice).

A copy of the agenda may be obtained by contacting: Marie Donnelly by email at Marie.Donnelly@ahca.myflorida.com, or call (850)412-4149.

APPENDIX C

- Comments Received and Agency Responses

MEDS-AD Waiver Renewal Public Comment Period May 1, 2013-May 30, 2013

Comments Received and Agency Responses

Comment received from Florida Legal Services 5/1/2013:

I am writing to get clarification on the notice below concerning AHCA's request to re-new the MEDS-AD 1115 Waiver. The federal CMS waiver site includes an April 26, 2012 renewal request characterized as currently pending. That proposal includes substantial modifications to the Medically Needy program. (Florida Legal Services previously provided comments to federal CMS on AHCA's April 26, 2012 request to renew this 1115 waiver. A copy is attached).

Is the April 26, 2012 renewal request the proposal which will be discussed at the meetings noticed below? If not, has the Agency filed or does it plan to file a modified renewal request with federal CMS?

If so, can you provide us a copy?

Agency Response:

To date, the Agency has not received approval or denial of the Medically Needy amendment request that was submitted to CMS on April 26, 2012. The notice published this week (April 29, 2013) pertains to a simple renewal of the existing MEDS-AD waiver authority. This renewal request will be submitted to CMS in June of this year, and the renewal request document will be posted to the Agency website at that time.

Question received from Florida Legal Services at 5/28/2013 Public Meeting:

If the State implemented Medicaid expansion to 133% FPL, would this waiver be necessary?

Agency Response:

The expansion population would not include individuals age 65 or over or who have Medicare, therefore the waiver would still be necessary to offer Medicaid eligibility to those persons.

Question received from Florida Legal Services at 5/28/2013 Public Meeting:

Since the State did not implement Medicaid expansion, is it possible that CMS would not approve this waiver extension?

Agency Response:

Since the objective of ACA is to expand health care coverage, it is unlikely that CMS would deny the State's request to continue Medicaid coverage for this group.

APPENDIX D

- Public Meeting Presentation of the MEDS-AD Waiver Renewal Plan

Florida Medicaid MEDS-AD

1115 Research and Demonstration Waiver

Renewal Request June 30, 2013

What is the MEDS-AD Program?

- As authorized in 409.904(1), Florida Statutes, the MEDS-AD Program provides Medicaid eligibility for individuals who:
  - Are disabled or age 65 or over
  - Are also receiving Medicaid-covered institutional care services, hospice services, or home and community-based services
  - Have incomes that do not exceed 88 percent of the federal poverty level and assets that do not exceed $5,000 for individuals or $6,000 for couples

What does the Agency intend to demonstrate with this waiver?

This demonstration project seeks to show that access to health care services and voluntary pharmacy case reviews result in measurably improved health outcomes for this population.

What is the impact of this renewal on other components of the Florida Medicaid program?

- The renewal does not impact any other eligibility or service provisions of the Agency's Medicaid or CHIP programs.
- Renewal of the waiver would simply allow the Agency to maintain eligibility for this population, and all services would continue as in the current program.

Why is the Agency Holding these Public Meetings?

- In order to continue to provide Medicaid eligibility for this group, the Agency must obtain federal approval to renew the MEDS-AD Program, which is currently set to expire December 31, 2013.
- The renewal application must be submitted 6 months prior to the expiration date.

MEDS-AD 1115 Research and Demonstration Waiver Renewal

- Public Comment Period:

May 1 – May 30, 2013

- Public Meeting Locations:

May 15: Medicaid Area Office 6, Tampa, Florida – via webinar

May 28: Medical Care Advisory Committee, Tallahassee, Florida

Additional Methods for Public Input:

A link to the public notice document concerning this renewal request, instructions for how to submit comments, and a link to the Federal Centers for Medicaid and Medicare Services may be found at http://ahca.myflorida.com/Medicaid/index.shtml . Click on the quick link for MEDS-AD Waiver Renewal. All interested stakeholders will be able to provide comments for 30 days, from May 1 through May 30, 2013. The Agency will post all comments received for public review at the above website address.

Email:

Members of the media should contact the Office of Communications at AHCACommunications@ahca.myflorida.com, or by calling 850-412-3623.

Members of the public can email comments about the MEDS-AD program to MEDS-ADRenewal@ahca.myflorida.com , or **mail** them to:

MEDS-AD 1115 Research and Demonstration Waiver
Office of the Deputy Secretary for Medicaid
Agency for Health Care Administration
2727 Mahan Drive, MS #8
Tallahassee, Florida 32308

APPENDIX E

- Historic Trends and Expenditure Projection Tables

DEMONSTRATION RENEWAL: HISTORIC WITH WAIVER DATA

	DY1 (2006)	DY2 (2007)	DY3 (2008)	DY4 (2009)	DY5 (2010)	DY6 (2011)	DY7 (2012)	Jan-Mar 2013 DY8 (2013)	TOTAL
TOTAL EXPENDITURE	$ 476,509,435	$ 357,168,588	$ 399,593,828	$ 484,172,897	$ 555,892,325	$ 636,952,674	$ 636,430,348	$ 91,609,505	$ 3,638,329,600
ELIGIBLE MEMBER MONTHS	291,263	275,464	300,276	334,134	413,463	477,686	520,424	124,919	2,737,629
COST PER ELIGIBLE	$ 1,636.01	$ 1,296.61	$ 1,330.76	$ 1,449.04	$ 1,344.48	$ 1,333.41	$ 1,222.91	$ 733.35	$ 1,329.01
									DY2-DY7
TREND RATES	**ANNUAL CHANGE**								**TREND RATE**
TOTAL EXPENDITURE		N/A	11.88%	21.17%	39.11%	14.58%	-0.08%	N/A	12.25%
ELIGIBLE MEMBER MONTHS		N/A	9.01%	11.28%	23.74%	15.53%	8.95%	N/A	13.57%
COST PER ELIGIBLE		N/A	2.63%	8.89%	-7.22%	-0.82%	-8.29%	N/A	-1.16%

DEMONSTRATION RENEWAL: WITH WAIVER BUDGET PROJECTION

	TREND RATE	MONTHS OF AGING	RENEWAL DEMONSTRATION YEARS (DY) DY9 (2014)	DY10 (2015)	DY11 (2016)	TOTAL RENEWAL
Eligible Member Months	13.57%	24	671,250	762,339	865,789	
Total Cost Per Eligible	-3.36%	24	$ 1,142	1,104	1,067	
Contracted Case Review Costs *			$ 99,600	99,600	99,600	
Total Projected Renewal Expenditure			**$ 766,740,482**	**$ 841,519,002**	**$ 923,591,454**	**$ 2,531,850,938**

* University of Florida Call Center operation