

**Better Payment Policies for
Quality of Care:
Fostering the Business Case for
Quality Phase I – Medicaid
Demonstrations**

**Final Report – Site Summaries
October 2007**



UNC

**THE CECIL G. SHEPS CENTER
FOR HEALTH SERVICES RESEARCH**

Research Team

The Cecil G. Sheps Center for Health Services
Research
&
The Department of Health Policy and Administration

The University of North Carolina at Chapel Hill

Sandra B. Greene, DrPH
Kerry Kilpatrick, PhD
Kristen Reiter, PhD
Frances Ochart, BS
Carol Porter, BS
Kathleen Crook, MPA
Charlotte Williams, MPH
Emily Keyes, MSPH
Allison Hamblin, MSPH

Project Background

Mercy Care Plan's quality enhancing initiative (QEI) was implemented through the *Business Case for Quality* (BCQ), a multi-site demonstration project designed by the Center for Health Care Strategies (CHCS) to test the existence of a business case for quality for Medicaid managed care organizations. Ten Medicaid managed care entities implemented pilot interventions that addressed a range of clinical conditions and intervention strategies. The interventions, launched in April 2004, were evaluated by a research team at the University of North Carolina at Chapel Hill. BCQ was funded by the Robert Wood Johnson Foundation (RWJF) and The Commonwealth Fund (CMWF).

Arizona

Mercy Care Plan

The Medicaid program in the state of Arizona is called the Arizona Health Care Cost Containment System (AHCCCS). Mercy Care Plan (MCP) is a not-for-profit managed care health plan serving 200,000 AHCCCS members in eight counties of Arizona. It is administered by Schaller Anderson. Of these members, approximately 4,000 are enrolled in the Arizona Long Term Care System (ALTCS), a program that serves aged, blind, or disabled individuals who need ongoing services at a nursing facility level of care. However, program participants do not have to reside in a nursing home. Approximately 48% of ALTCS participants live in their own homes or an assisted living facility and receive needed in-home services. ALTCS bundles all services (acute, prescription drugs, behavioral health, case management, disease management and home, community-based and institutional care) into one service package.

MCP has disease management programs in diabetes, asthma, congestive heart failure, perinatal care, and HIV/AIDS. The diabetes program has operated for over three years, and now enrolls over 8,000 members including 15% who are high-risk. To support this program, MCP has a fully integrated diabetes clinical information system with claims, encounter, pharmacy and laboratory data.

Reimbursement Model

Arizona was the first state in the nation to operate a statewide mandatory Medicaid managed care program under an 1115 waiver. Operating under this program, MCP receives capitated payments for each enrolled member based on their eligibility category. To the extent that utilization decreases, MCP benefits financially until the capitation levels are reduced.

Quality Enhancing Intervention

MCP launched a new disease management intervention for selected members with diabetes, congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD) or some combination of these three conditions. This intervention relies on specialized case managers (registered nurses) trained in CHF, COPD and diabetes care management, who promote self-management/self-efficacy and act as a liaison with patients' primary care provider. In-home assessments are conducted every 90 days and self-management training is provided on an as needed basis. The specialized case managers have case-loads of up to 45 members, including 8-10 high risk members. Case managers receive on-going education through the local chapter of the American Heart Association, American Lung Association and special

classes for CHF through local hospitals, such as cardiac rehabilitation. The primary care providers of the selected members are provided clinical care management assistance through educational programs, a diabetes disease registry, partnerships in starting diabetes group visit clinics, practice tools and decision aids such as visit forms and flow sheets, and regular performance feedback.

Target Population

MCP focused this intervention on ALTCS members residing in Maricopa County with the targeted clinical conditions listed above. Using historical claims data, MCP identified 144 individuals with the targeted conditions. These individuals were Medicaid only and excluded members enrolled in hospice, those permanently residing in a nursing home and individuals with end stage renal disease. The 144 participants were randomized into 69 cases and 76 controls.

Baseline Claims Findings

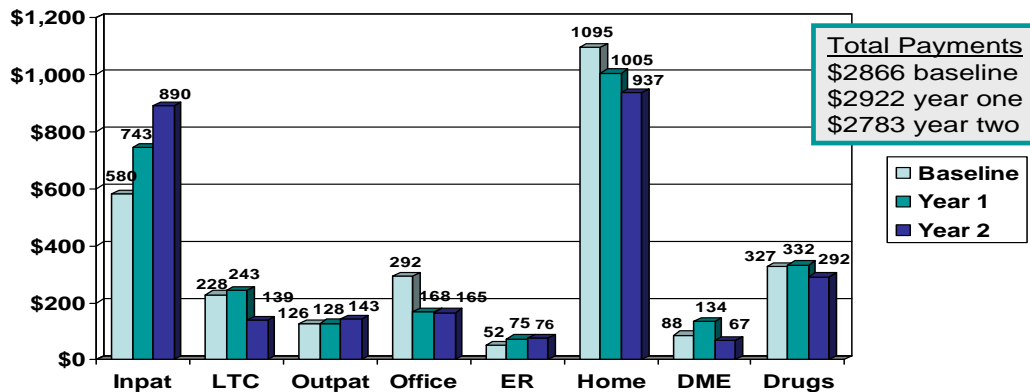
The age range of the 69 cases in the baseline year was 35 to 89 years, with a mean age of 61 years. The controls also had a mean age of 61 years, though they ranged in age from 21 to 93 years. Most members remained throughout the year such that there were 67 average member months for the cases and 77 for the controls. There were no patients in either the cases or controls with more than \$250,000 in claims experience in the year prior to the intervention. However, among the cases there was one person with 7 admissions in the year prior to the intervention and in the controls there were 7 patients with at least 7 admissions. While these were all relatively high cost patients, their reasons for hospitalizations were consistent with the target diagnoses, and consequently no high-cost members were excluded from the analysis. **(Appendix 2)**

During the baseline year the total PMPM payments for the cases were \$2,866, with the largest portion, \$1,095, for home care. The average payments for inpatient care were \$580, followed by \$327 for prescription drugs and \$229 for long term care. We were not able to calculate a rate for home visits, but determined that this population averaged 4,564 hospital days and 4,309 long term care days per 1000 persons. In addition to the high rates of inpatient care, office visits averaged 12.6 visits per person and the average number of prescriptions was 94 per person per year. **(Figure 2.1, Table 2.1)**

Table 2.1: Arizona Utilization Measures

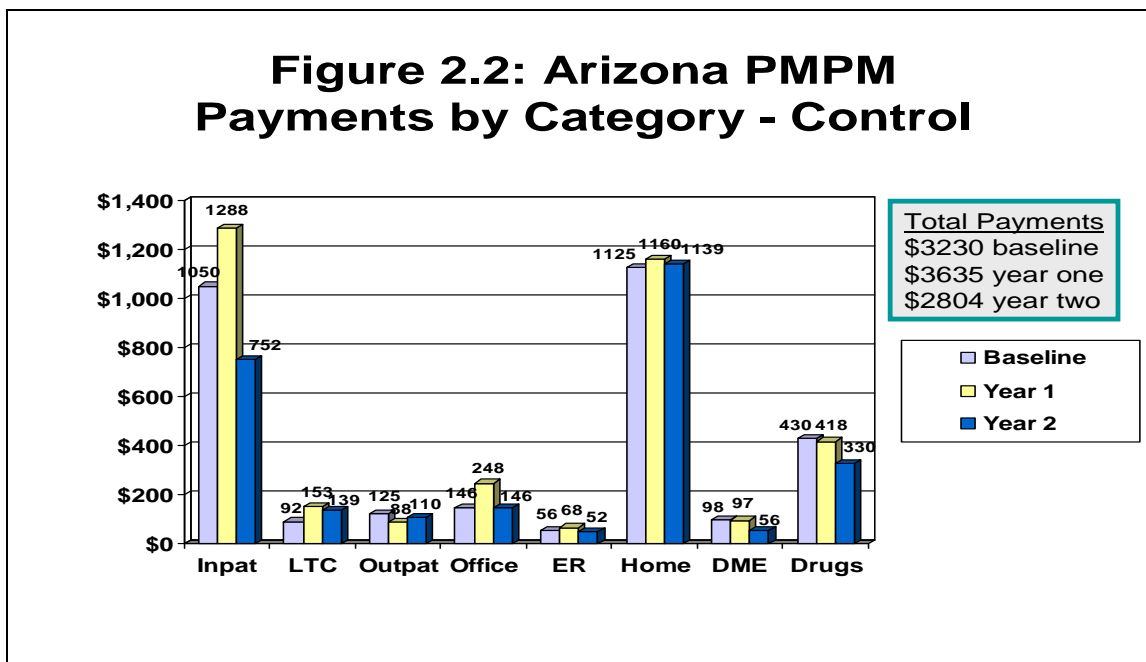
Utilization	Baseline Case N=69	Year 1 Case N=102	Year 2 Case N=103	Baseline Control N=78	Year 1 Control N=113	Year 2 Control N=109
Admissions/1000	957.7	1,185.6	1,160.8	1,227.4	1,164.2	1,048.4
Days/1000	4,563.8	5,055.8	6,682.4	8,239.1	9,745.8	5,865.2
LTC Admissions/1000	164.6	204.4	141.3	156.7	204.0	158.3
LTC Days/1000	4,309.4	9,021.3	3,422.0	1,788.8	6,565.2	6,814.7
Office visits per person	12.6	11.7	13.9	12.1	13.1	12.5
ER visits per person	1.7	2.4	2.4	1.8	2.0	1.9
Prescriptions per person	94.0	99.5	94.8	102.0	111.5	96.2

Figure 2.1: Arizona PMPM Payments by Category - Case



The average payment for the controls was \$3,230 or 12.7% higher than the cases. Utilization patterns of the controls were strikingly different from the cases in several ways. Their hospital days per 1000 rate, 8,239 days, was twice that of the cases, whereas their rate of long term care of 1,789 days was less than half the rate of the cases. However their office visit rate of 12.1 was similar, as was their rate of prescription drugs, 102 per person. (Table 2.1, Figure 2.2)

Figure 2.2: Arizona PMPM Payments by Category - Control



Years One and Two Claims Findings

Mercy Care added members to both their QEI and control groups during year one. There were 102 members in the QEI in year one ranging in age from 18 to 90 years, with a mean age of 60 and an average 73 member months. There were 113 controls in year one, ranging in age from 22 to 94 and a mean age of 61. The average member months were 83. In year two there were 103 members in the QEI ranging in age from 19 to 90, a mean age of 60 and 99 average member months. And the control group had 109 members with an age range of 28 to 95, mean age of 62 and 101 average member months. **(Appendix 2)**

Overall the total PMPM payments for the cases increased 2.0% in year one, declined 4.7% in year two, for an overall decrease of 2.9% over the two years. The controls experienced a similar pattern of payment change, with a 12.5% increase in year one, followed by a 22.9% drop in year two, resulting in a 13.2% overall decline. **(Figure 2.3)** Over the two years, the largest payment increase for the cases was for inpatient care. The inpatient admission rate increased 21.2% to 1,160.8 admissions per 1000 persons and the day rate increased 46.4% to 6,682.8 days per 1000 persons. By year two, this day rate exceeded the 5,865.2 day rate for the control group. Aside from inpatient utilization, payments for all other categories of care declined for the cases. **(Figure 2.1, Table 2.1)** Among the controls, payments for all categories of care except for hospital outpatient declined by year two. Long term care use increased dramatically, from 1,788.8 to 6,814.7 days per 1000 persons. **(Figure 2.1, Table 2.1)**

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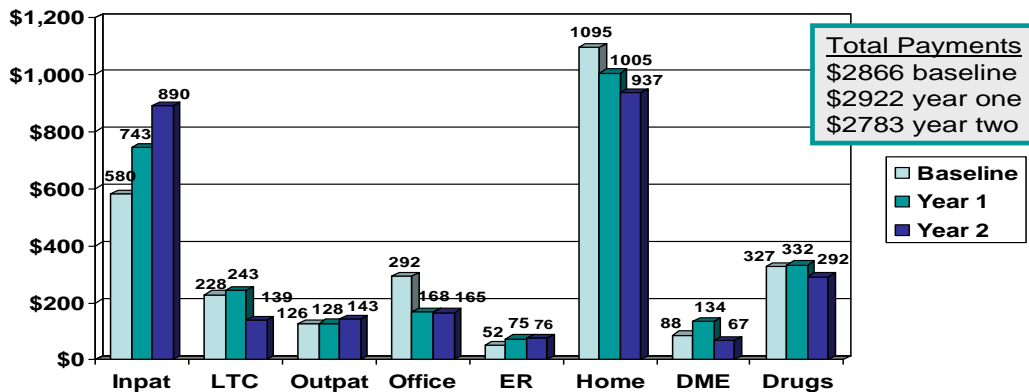
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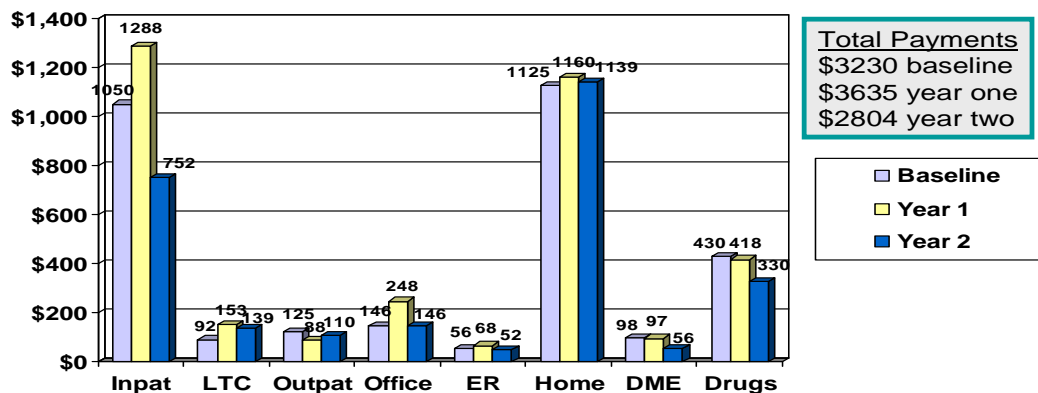
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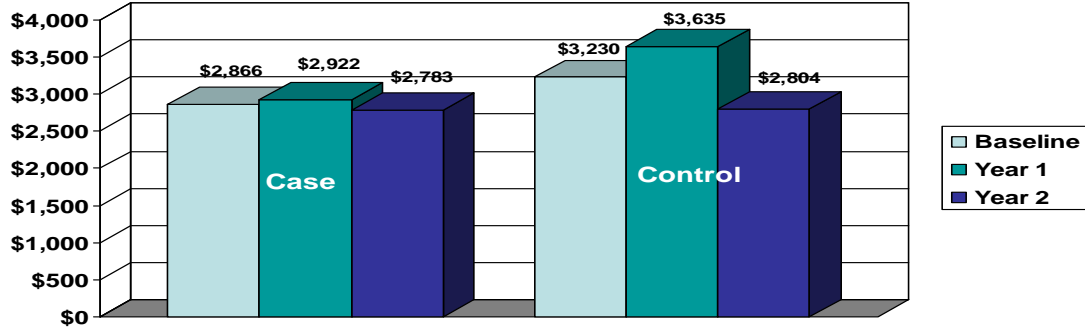


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Figure 2.3: Arizona PMPM Payment Totals



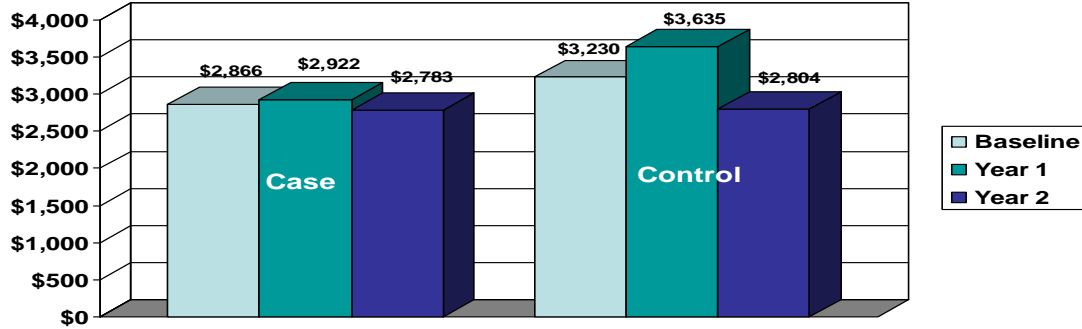
Investment and Operating Costs

During the baseline year, Mercy Care spent \$84,651 in administrative expense for program start up. This included payments for nurse case managers, a program manager and other support staff. In year one, operating expense totaled \$229,848 followed by \$268,577 in year two. Personnel costs included funding for nurse case managers, data analysts, program manager and other clinical support. A large proportion of the budget, 55% in year one and 58% in year two were indirect costs. (Table 2.2)

Table 2.2: Arizona Operating Costs

Costs	Baseline	Year 1	Year 2
Personnel	\$30,000	\$95,975	\$106,097
Office	\$300	\$6,582	\$6,602
Equipment	0	0	0
Other direct	0	0	0
Indirect	\$54,351	\$127,291	\$155,877
Total	\$84,651	\$229,848	\$268,577

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Return on Investment

Over the three years, the total start up costs and ongoing operating expense totaled \$560,963 on a discounted basis. The net decline in claim costs over the two years was a modest \$45,794 on a discounted basis. Since these savings were not sufficient to offset the operating costs, the net present value was negative \$515,169 for a return on investment of 0.08 (Note that a break even return on investment is 1.00). (Table 2.3)

Table 2.3: Arizona Return on Investment

	Baseline	Year 1	Year 2	Total
<u>Investment in QEI</u>				
Investment/Operational Costs	84,651	229,848	268,576	
Discounted Costs	84,651	223,153	253,159	560,963
<u>Savings/Increases from QEI</u>				
Utilization Savings		(49,342)	99,405	
Discounted Savings		(47,905)	93,699	45,794
<u>ROI Metrics</u>				
Benefit-Cost Ratio				0.08
Net Present Value				(\$515,169) negative

APPENDIX 2

AZ Mercy Care - Cost Adjusted												
QEI- CHF, COPD, Diabetes			QEI Start Date: 10/01/2004				Data Contact- Craig Newton					
Utilization and Membership	Group	Age Statistics				Members in Claims	Average Member Months	Total Payments PMPM	Individual Average PMPM			
		Min	Max	Mean	Median				LOW	HIGH		
Baseline:10/03-09/04	Case N	35	89	60.5	60	69	67	\$2,866.45	\$444.51	\$14,643		
	Control N	21	93	60.6	60	78	77	\$3,229.64	\$411.55	\$15,768		
Year 1: 10/04-09/05	Case N	18	90	59.6	61	102	73	\$2,922.47	\$11.15	\$9,287		
	Control N	22	94	60.9	60	113	83	\$3,635.00	\$1.97	\$34,996		
Year 2: 10/05-09/06	Case N	19	90	60.1	61	103	99	\$2,782.86	\$182.47	\$22,602		
	Control N	28	95	62.0	62	109	101	\$2,804.25	\$142.05	\$10,042		
Utilization Measures	Case			Control								
	Baseline	Year 1	Year 2	Baseline	Year 1	Year 2						
Admissions/1000	957.7	1,185.6	1,160.8	1,227.4	1,164.2	1,048.4						
Days/1000	4,563.8	5,055.8	6,682.4	8,239.1	9,745.8*	5,865.2						
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Office visits/person	12.6	11.7	13.9	12.1	13.1	12.5						
ER visits/person	1.7	2.4	2.4	1.8	2.0	1.9						
Home visits/person	NA	NA	NA	NA	NA	NA						
Prescriptions/person	94.0	99.5	94.8	102.0	111.5	96.2						
PMPM Payments	Case						Control					
	Baseline	%Tot	Year 1	%Tot	Year 2	%Tot	Baseline	%Tot	Year 1	%Tot	Year 2	%Tot
Inpatient	\$580.38	20.2	\$743.35	25.4	\$890.08	32.0	\$1,049.84	32.5	\$1,288.14	35.4	\$751.74	26.8
LTC	\$228.61	8.0	\$242.72	8.3	\$139.32	5.0	\$91.80	2.8	\$152.78	4.2	\$138.70	4.9
Outpatient	\$125.92	4.4	\$127.94	4.4	\$143.53	5.2	\$124.83	3.9	\$88.08	2.4	\$110.47	3.9
Office	\$292.43	10.2	\$167.55	5.7	\$165.10	5.9	\$146.01	4.5	\$248.22	6.8	\$145.90	5.2
ER	\$51.51	1.8	\$74.89	2.6	\$75.63	2.7	\$56.28	1.8	\$68.25	1.9	\$51.91	1.9
Home	\$1,094.94	38.2	\$1,005.00	34.4	\$936.95	33.7	\$1,124.68	34.8	\$1,159.65	31.9	\$1,138.76	40.6
Ambulance	\$27.95	1.0	\$42.84	1.5	\$30.39	1.1	\$46.63	1.5	\$53.02	1.5	\$41.27	1.5
Transportation	\$35.31	1.2	\$29.97	1.0	\$23.23	0.8	\$43.64	1.4	\$42.47	1.2	\$21.50	0.8
DME	\$87.55	3.1	\$134.06	4.6	\$67.00	2.4	\$98.20	3.0	\$96.58	2.7	\$55.70	2.0
Pharmacy	\$327.47	11.4	\$331.79	11.4	\$291.88	10.5	\$430.38	13.3	\$417.64	11.5	\$329.81	11.8
Other	\$14.38	0.5	\$22.36	0.7	\$19.75	0.7	\$17.35	0.5	\$20.17	0.5	\$18.49	0.6
Total	\$2,866.45	100%	\$2,922.47	100%	\$2,782.86	100%	\$3,229.64	100%	\$3,635.00	100%	\$2,804.25	100%

* 1 patient had 272 inpatient days and diagnoses are consistent with the focus of the QEI

** 4 patients had > 100 LTC days and diagnoses are consistent with the focus of the QEI