

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

**Final Report – Site Summaries
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UNC

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Project Background

California Partnership HealthPlan'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).

California

California Partnership HealthPlan

The Medicaid program in the state of California, Medi-Cal, is administered by the California Department of Health Services (CDHS). Partnership HealthPlan of California (PHC) is a Medicaid managed care plan in Northern California that contracts with CDHS to serve 84,000 members in Solano, Napa and Yolo counties. A public/private non-profit health plan, PHC operates as a County Organized Health System. PHC serves beneficiaries in all eligibility categories, including Aged, Blind, Disabled, Family, Medically Needy, and Long Term Care (LTC). PHC is also responsible for limited services for pregnancy and catastrophic illness categories.

Reimbursement Model

CDHS contracts with PHC under a capitation arrangement whereby PHC assumes full financial risk for Medicaid beneficiaries in the three counties. Capitation rates are based on eligibility category. In addition to medical services, hospital services, and medical equipment, PHC's capitation includes LTC, California Children's Services (CCS-Title V) benefits, mental health services (Solano County only), substance abuse services, and pharmacy benefits (except HIV and atypical antipsychotic medications).

PHC in turn pays capitated rates to the providers and delivery systems that contract to provide care for most of its members. As these rates are 130% of Medicaid rates, PHC is a relatively attractive payer for these providers. Some providers are capitated for primary and specialty care, while others are capitated for primary care only. Laboratory and vision services are capitated for most eligible members. Meanwhile, members with certain high-cost conditions are reimbursed under fee-for-service. As a result of this payment system, if utilization decreases, savings accrue to the providers and not to PHC, except for providers caring for fee-for-service members.

In addition to the capitation or fee-for-service payments, providers are also eligible for quality bonus incentives, paid annually in the amount of \$1-\$2 PMPM. Performance measures that are used to determine the amount of payments in this program include breast cancer screening rates, well-infant visit rates, asthma and diabetes management, and participation in quality improvement projects. Under this program, approximately \$700,000 is distributed annually to providers.

The claims analysis used in the ROI calculation is based on allowed charges rather than payments. It was determined that allowed amounts instead of capitation payments would reflect a more accurate assessment of costs, and changes in those costs that may be from the quality initiative. It is recognized,

however, that in an MCO with multiple capitation arrangements calculation of true costs is confounded.

Quality Enhancing Intervention

The objective of PHC's quality enhancing intervention is to improve the quality and systems of care for members with diabetes, and to do this through the Diabetes Planning and Action Leads to Success (PALS) initiative. Previously, PHC had initiated the following planning and intervention activities to improve diabetes care:

- Developed and distributed a Clinical Practice Guideline (CPG) in 2000.
- Included diabetes measures in the quality bonus incentive program since 2001.
- Sponsored practitioner diabetes education sessions annually since 2000.
- Sponsored diabetes training for office site staff.
- Conducted consumer focus groups.
- Met with providers to develop potential interventions.
- Conducted presentations at PCP practice sites on registry implementation and solicited input on the implementation of a diabetes registry.

Building on these initiatives, PHC designed the current QEI to convene stakeholders, provide support to practice sites for better identification and stratification of the target population, establish diabetes registries at practice sites and the health plan, educate practitioners and their office staff, inform and engage the target population in self-management, and measure care process and outcomes. The following initiatives were included:

- Convene a multi-stakeholder "Diabetes Collaborative".
- Facilitate periodic "Collaborative" and Practice Site Team meetings
- Provide training on the Chronic Care Model including community resources and policies, organization of the health system, self-management support, delivery system design, decision support, and clinical information systems.
- Provide training in continuous quality improvement.
- Provide support to clinics to set common objectives, practice-site specific objectives, overcome barriers, and accomplish goals.
- Assist sites in collaborating with and mobilizing community resources
- Provide diabetes flow sheets, practice guidelines, patient education materials, training curricula, and tools and guides for implementing registries.
- Assist with reporting and data exchange.
- Assist setting up systems for patient education in self-management
- Modify the bonus incentive program to add diabetes indicators for process and outcomes of care.

Target Population

Diabetes is one of PHC's top 10 diagnoses in the ambulatory setting and in pharmacy, and accounts for about 15% of all PHC health care costs. According to the 2001 California Health Interview Survey, Solano County had an adult diabetes prevalence rate 6.6%, the highest prevalence in the Bay area. Importantly, diabetes prevalence in African American and Latino adults was at least twice that of Caucasian adults. As 29% of PHC members are Latino and 19% are African American, about 20,000 of PHC's 42,000 adult members are in the ethnic/racial groups at highest risk. PHC estimates that it has about 4,100 members with *diagnosed* diabetes, the target population for the QEI. Using HEDIS specifications, PHC constructed a Diabetic Registry of patients from paid claims. Members of all ages were included.

The Diabetes Collaborative Program was conducted in five practice sites, by including all members in these sites who were identified in the registry. The remaining diabetics identified in the registry were included in the control group.

Baseline Claims Findings

PHC identified 1,074 diabetics who were eligible for the QEI at some point during the baseline year. The average monthly membership was 763 persons. Members ranged in age from birth to 93 years of age, with a mean age of 53 years. The control group consisted of 5,808 individuals, with an average monthly membership of 4,983 persons. Their ages ranged from 1 to 98 years, and a mean age of 59 years. We identified 5 members with unusually high claims costs, over \$200,000 in the baseline year. After consideration of the diagnoses for these individuals, we concluded they should not be excluded. The conditions for which they were being treated were generally related to their diabetes.

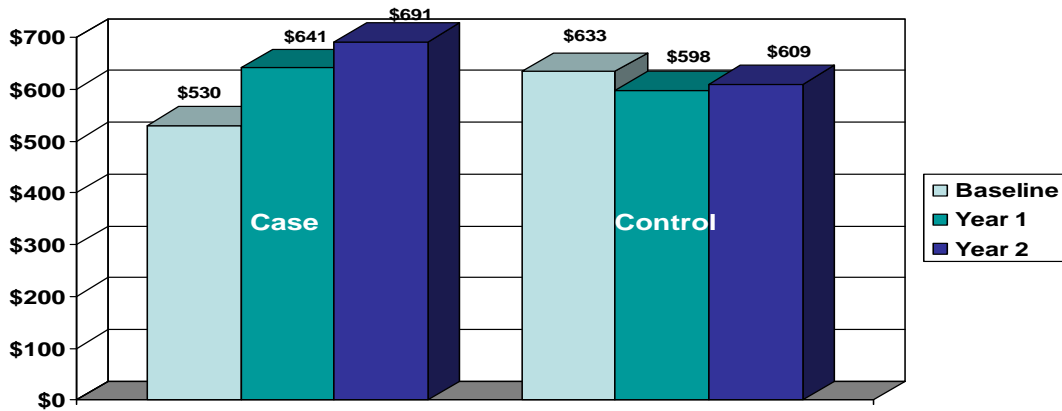
(Appendix 3)

During the baseline year and prior to the implementation of the QEI, the total PMPM payments for the cases was \$530 and for the controls was 19% higher at \$633. **(Figures 3.1, 3.2)** The primary difference in the cases and controls was in payments for hospital inpatient and outpatient care which were 19% and 55% higher, respectively, for the controls. The higher payments for inpatient care were reflected in a higher rate of hospital days, with a rate that was 20% higher in the controls than for the cases. **(Table 3.1)** These differences in utilization and payments between the cases and controls at baseline limit the usefulness of the control group as an appropriate comparison to the cases.

Table 3.1: California Utilization Measures

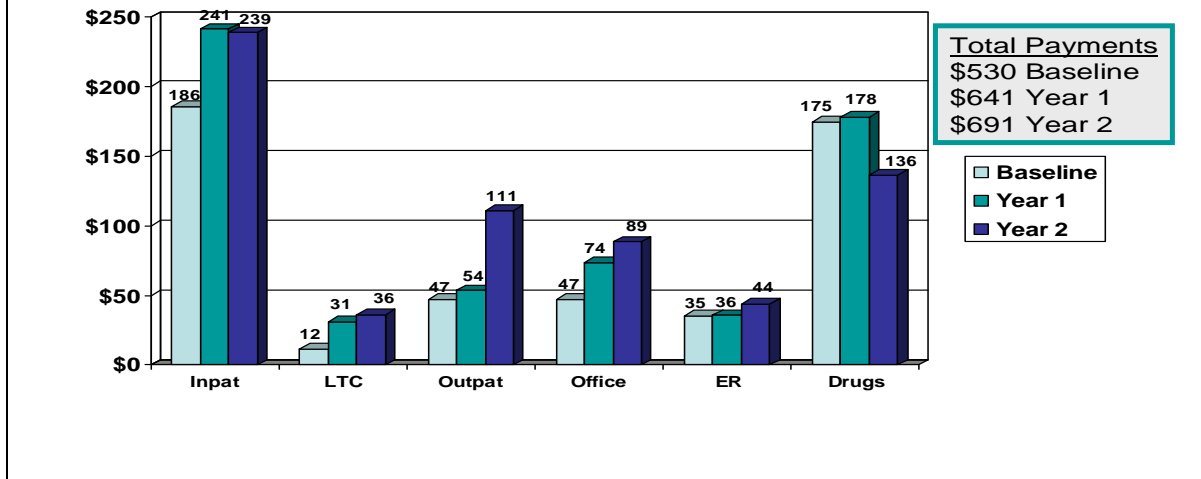
Utilization	Baseline Case N= 1074	Year 1 Case N=1,193	Baseline in Year 1 Case N= 804	Year 2 Case N=1,058	Baseline in Year 2 Case N= 534	Baseline Control N= 5,808	Year 1 Control N=6,122	Baseline in Year 1 Control N= 4,978	Year 2 Control N=6,669	Baseline in Year 2 Control N=4,455
Admissions/1000	262.2	297.1	289.2	347.1	379.1	227.4	197.5	186.7	280.97	235.0
Days/1000	1060.6	1446.9	1465.3	1318.5	1531.5	1278.4	991.8	920.5	1190.3	1088.5
Office visits per person	6.7	6.5	6.6	6.2	6.3	7.6	7.4	7.4	7.18	7.2
ER visits per person	1.3	1.3	1.3	1.6	1.5	1.1	1.0	1.0	1.19	1.1
Home visits per person	1.4	1.7	1.8	2.5	3.1	2.0	2.0	2.1	2.1	2.3
Prescriptions per person	45.6	45.5	48.6	33.7	35.9	50.9	48.9	49.9	38.2	39.4

Figure 3.1: California PMPM Payment Totals, All Patients



Among the cases, the largest payment was for hospital inpatient care, with a PMPM payment of \$186 and a utilization rate of 1,061 days per 1000 persons per year. The second largest payment was for outpatient drugs, which was \$175 per person and an average 45.6 prescriptions per person. This was followed by \$47 PMPM for hospital outpatient care. Office visits payments were also \$47 PMPM, with an average of 6.7 visits per person. (Figure 3.2, Table 3.1)

Figure 3.2: California PMPM Payments by Category – Cases



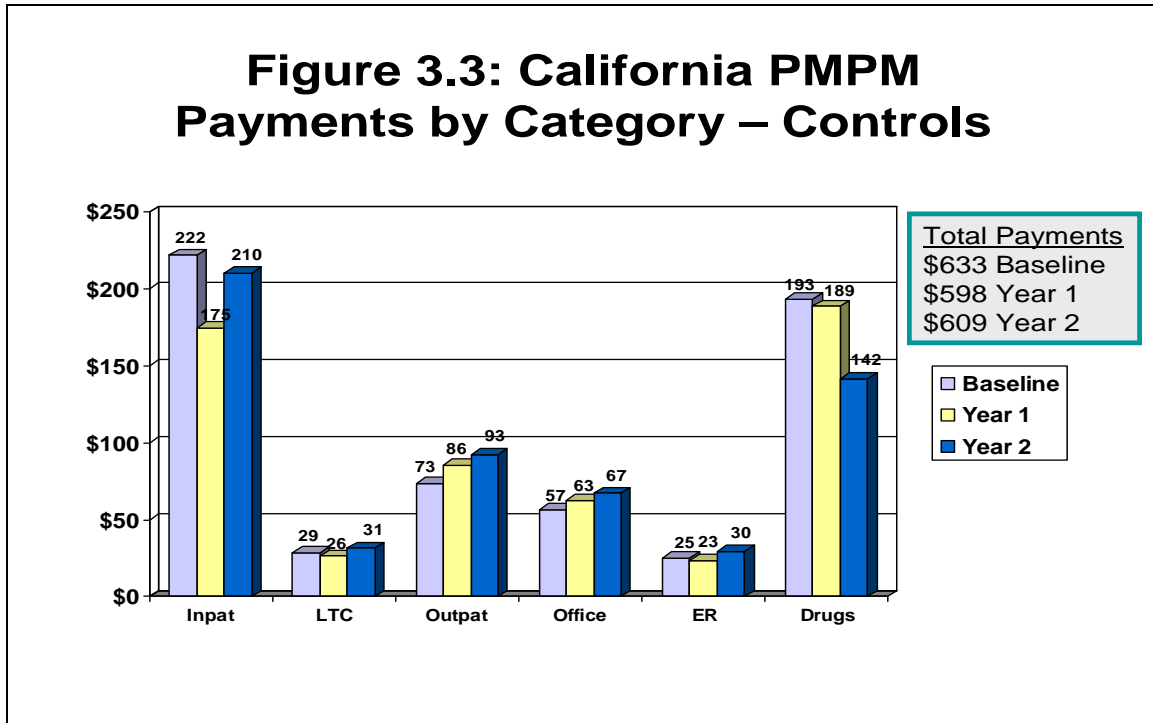
Years One and Two Claims Findings

During year one there were 1,193 individuals eligible for the QEI, and an average monthly membership of 808 persons. The age range was 1 to 94 years of age, with a mean age of 54 years. In year two there was a modest decline to 1,058 persons with an average membership of 689 persons. Ages ranged from 2 to 95 years, with a mean age of 55 years. The control group increased in size in year one to 6,122, with an average monthly membership of 5,240 persons. Their ages ranged from birth to 99 years, with a mean age of 59 years. The control group expanded again in year two, with 6,689 persons. The age range was from 1 to 104 years, and a mean age of 59. **(Appendix 3)**

Overall, the PMPM payments for the cases increased 20.9% in year one and 7.8% in year two, for a two year *increase* of 30.4%. **(Figure 3.1)** On the other hand, the PMPM payment for the controls decreased 5.5% in year one, and increased 1.8% in year two, for a two year *decrease* of 3.8%. The PMPM payments by category for the cases are shown in **Figure 3.2**. Payments increased over the two years for most of the categories, including hospital inpatient and outpatient care, long term care, office services and emergency room care. Only pharmacy payments declined. Over the two years the hospital admission rate increased 32.4% and the hospital day rate increased 24.3%. (It maybe noteworthy, however, that the inpatient day rate declined 8.9% in year two.) The office visit rate moderated slightly from 6.7 to 6.2 visits per person over two years, and ER visits increased slightly, from 1.3 to 1.6 visits per person. The average number of prescriptions per person declined from 45.6 to 33.7. **(Table 3.1)**

In contrast to the cases, the PMPM payments by category for controls were relatively stable over the two years. **(Figure 3.3)** Payments for hospital

outpatient care increased the most, from \$73 in baseline to \$93 in year two. Similar to the cases, drug PMPM payment dropped, from \$193 in baseline to \$142 in year two. The hospital admission rate increased 23.6% during the two years, though the day rate declined 6.9%. Prescription drugs declined from 50.9 to 38.2 prescriptions per person. All other utilization measures were virtually unchanged. (Table 3.1)



Cohort Analysis

Due to the large number of persons who entered and left the QEI during the three years, we conducted a secondary analysis of years one and two data for persons who had also been present in the baseline data. It was hypothesized that these were the persons who would benefit most from the intervention, given their longer time in the program. For this analysis there were 804 cases and 4,978 controls in year one, and 534 cases and 4,455 controls in year two. These results are shown in **Figures 3.4, 3.5, 3.6**. The total PMPM payments for the cases in this cohort increased 31.0% which was more than the 21.1% when all patients were included. Consequently, the addition of new patients into the QEI served to reduce the overall payments of the study population. The overall costs for the controls that had also been in baseline, *decreased* 6.2% over the two years, compared to a *decrease* of 3.8% when all controls were included. These findings can best be seen by comparing **Figure 3.1** that includes all patients, to **Figure 3.4** that includes the smaller cohort.

Figure 3.4: California PMPM Payment Totals, Cohort present in baseline

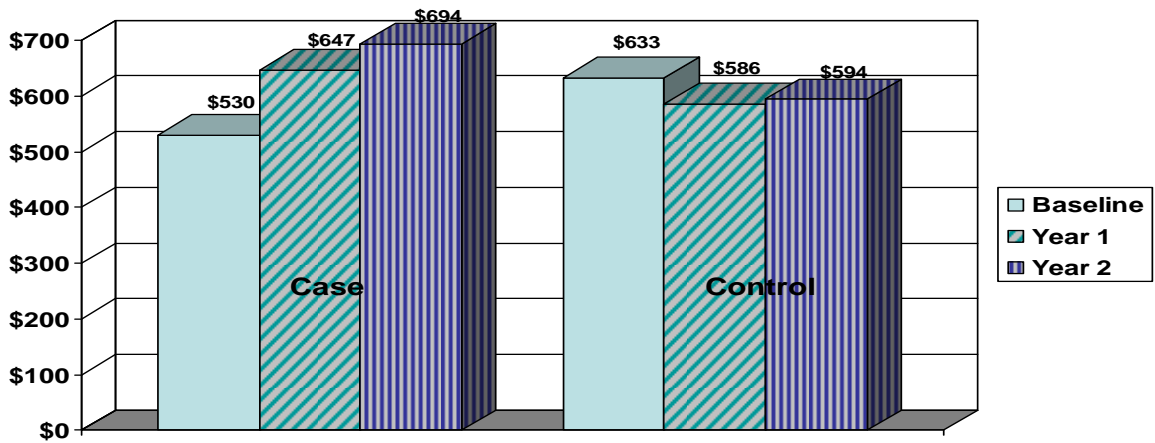


Figure 3.5: California PMPM Payments by Category - Case cohort present all 3 years

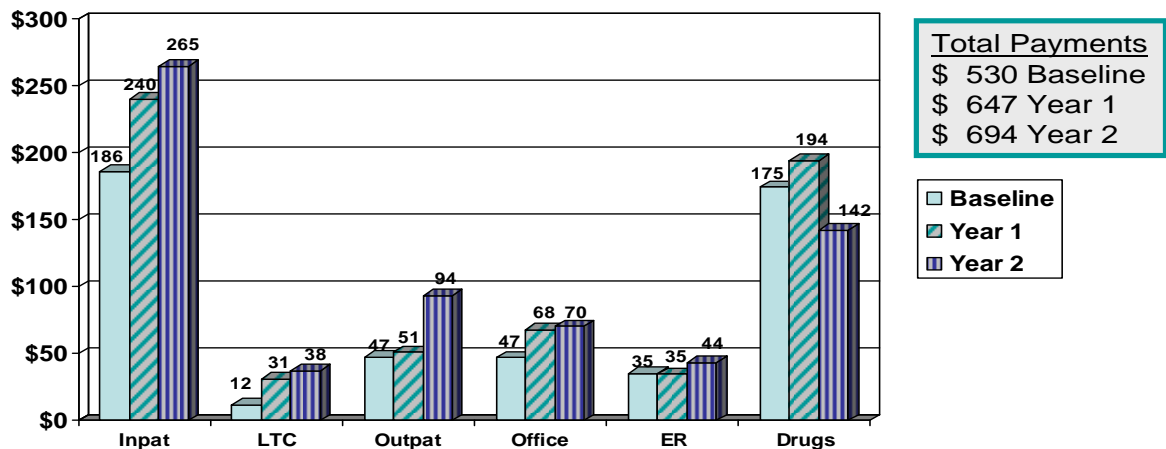
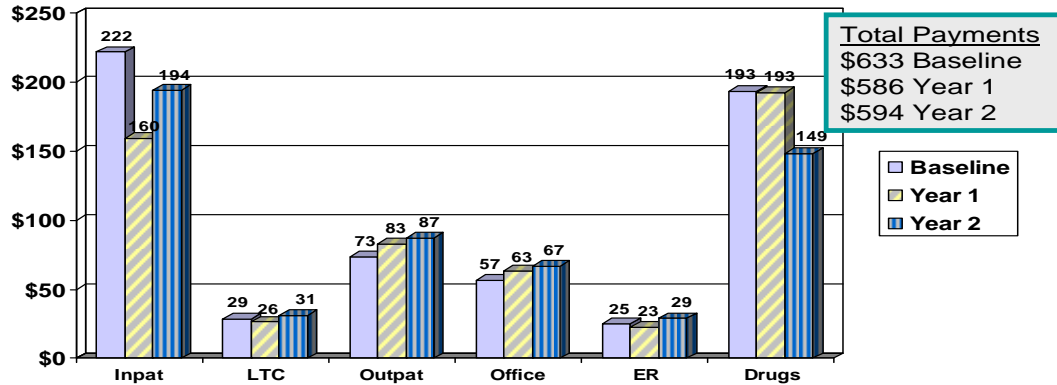


Figure 3.6: California PMPM Payments by Category – Control cohort present all 3 years



Investment and Operating Costs

During the baseline year, PHC invested \$29,177 in the development of their QEI. This was predominately for the project manager, but also included staffing by the principal investigator and a quality manager. During year one of the QEI, PHC spent \$58,873 in operating cost. Most of this cost was for personnel, including the program manager and a consultant. In the final year of the QEI, operating costs moderated to \$40,340, with less time required of the program manager, and no consulting costs. The quality manager and a data analyst were also funded in this year. (Table 3.2)

Table 3.2: California Operating Costs

Costs	Baseline	Year 1	Year 2
Personnel	\$24,841	\$47,520	\$34,108
Office	\$529	\$3,674	\$970
Equipment	0	0	0
Other direct	0	0	0
Indirect	\$3,806	\$7,679	\$5,262
Total	\$29,177	\$58,873	\$40,340

Return on Investment

Over the three years the start up costs and ongoing operating expense totaled \$124,358, on a discounted basis. The net effect of the claim cost increases for the cases and the decreases for the controls was an increase of \$2,827,636 on a discounted basis. Adding this increase in claims cost to the investment and operating costs, results in a net present value -\$2,951,994, for a net benefit cost ratio of -22.74. (Table.3.3)

Table 3.3: California Return on Investment

	Baseline	Year 1	Year 2	Total
<u>Investment in QEI</u>				
Investment/Operational Costs	29,176	58,873	40,340	
Discounted Costs	29,176	57,158	38,024	124,358
<u>Savings/Increases from QEI</u>				
Utilization Savings		(1,423,664)	(1,533,466)	
Discounted Savings		(1,382,198)	(1,445,439)	(2,827,636)
<u>ROI Metrics</u>				
Benefit-Cost Ratio				(22.74)
Net Present Value				(\$2,951,994) negative

APPENDIX 3

CA-Partnership											08/02/2007	
Summary using allow												
QEI- Diabetes											Data Contact- Dave Hosford, Cindi Ardans	
QEI Start Date : 10/01/2004												
Utilization and Membership	Group	Age Statistics				Members in Claims	Average Member	Total Payments	Individual Average			
		min	max	mean	median				LOW	HIGH		
Baseline: 08/03-07/04	Case N	0	93	52.99	53	1,074	763	\$ 529.53	\$ 0.17	\$ 8,601		
	Control N	1	98	58.55	61	5,808	4,983	\$ 633.42	\$ 0.38	\$ 53,506		
Year 1: 08/04-07/05	Case N	1	94	54.09	54	1,193	808	\$ 641.21	\$ 0.62	\$ 11,790		
	Control N	0	99	58.80	61	6,122	5,240	\$ 598.27	\$ 0.17	\$ 23,617		
Baseline in Year 1	Case N	-	-	-	-	804	626	\$ 646.58	\$ 0.62	\$ 11,790		
	Control N	-	-	-	-	4,978	4,536	\$ 585.67	\$ 0.17	\$ 20,943		
Year 2: 08/05-07/06	Case N	2	95	55.39	56	1,058	689	\$ 690.76	\$ 0.05	\$ 25,923		
	Control N	1	104	58.89	61	6,669	5,424	\$ 609.18	\$ 0.15	\$ 40,430		
Baseline in Year 2	Case N	-	-	-	-	534	401	\$ 693.61	\$ 0.27	\$ 10,030		
	Control N	-	-	-	-	4,455	3,937	\$ 594.44	\$ 0.15	\$ 40,430		
Utilization Measures	Case					Control						
	Baseline	Year 1	Year 2	Baseline in Year 1	Baseline in Year 2	Baseline	Year 1	Year 2	Baseline in Year 1	Baseline in Year 2		
Admissions/1000	262.2	297.1	347.1	289.2	379.1	227.4	197.5	280.97	186.7	235.0		
Days/1000	1,060.6	1446.9	1318.5	1,465.3	1,531.5	1,278.4	991.8	1190.27	920.5	1088.5		
Office visits/person	6.7	6.5	6.2	6.6	6.3	7.6	7.4	7.18	7.4	7.2		
ER visits/person	1.3	1.3	1.6	1.3	1.5	1.1	1.0	1.19	1.0	1.1		
Home visits/person*	1.4	1.7	2.5	1.8	3.1	2.0	2.0	2.1	2.1	2.3		
Prescriptions/person	45.6	45.5	33.7	48.6	35.9	50.9	48.9	38.26	49.9	39.4		
PMPM Payments	Case											
	Baseline	%Tot	Year 1	%Tot	Year 2	%Tot	Baseline in Year 1	%Tot	Baseline in Year 2	%Tot		
Inpatient	\$ 186.01	35.1	\$ 241.44	37.7	\$ 238.91	34.6	\$ 239.92	37.1	\$ 264.85	38.2		
LTC	\$ 11.85	2.2	\$ 31.38	4.9	\$ 35.91	5.2	\$ 30.95	4.8	\$ 37.56	5.4		
Outpatient	\$ 47.34	8.9	\$ 53.56	8.4	\$ 111.02	16.1	\$ 51.18	7.9	\$ 93.67	13.5		
Office	\$ 47.04	8.9	\$ 73.81	11.5	\$ 88.50	12.8	\$ 68.28	10.6	\$ 70.48	10.2		
ER	\$ 35.24	6.6	\$ 35.83	5.5	\$ 44.13	6.4	\$ 34.75	5.4	\$ 43.81	6.3		
Home	\$ 18.66	3.5	\$ 18.79	2.9	\$ 29.04	4.2	\$ 19.56	3.0	\$ 35.32	5.1		
Pharmacy	\$ 174.51	33.1	\$ 178.14	27.8	\$ 136.16	19.7	\$ 194.16	30.0	\$ 142.37	20.5		
Other	\$ 8.88	1.7	\$ 8.26	1.3	\$ 7.09	1.0	\$ 7.78	1.2	\$ 5.55	0.8		
Total	\$ 529.53	100%	\$ 641.21	100%	\$ 690.76	100%	\$ 646.58	100%	\$ 693.61	100%		
PMPM Payments	Control											
	Base	%Tot	Year 1	%Tot	Year 2	%Tot	Baseline in Year 1	%Tot	Baseline in Year 2	%Tot		
Inpatient	221.85	35.0	174.89	29.2	\$ 210.24	34.5	\$ 159.66	27.3	\$ 194.39	32.7		
LTC	28.84	4.6	26.4	4.4	\$ 31.49	5.2	\$ 26.47	4.5	\$ 31.23	5.3		
Outpatient	73.34	11.6	85.5	14.3	\$ 92.56	15.2	\$ 83.20	14.2	\$ 87.47	14.7		
Office	56.9	9.0	62.84	10.6	\$ 67.22	11	\$ 63.08	10.8	\$ 66.82	11.2		
ER	25.06	3.9	23.23	3.9	\$ 29.62	4.9	\$ 22.58	3.9	\$ 29.02	4.9		
Home	24.61	3.9	26.29	4.4	\$ 25.58	4.2	\$ 27.72	4.7	\$ 26.87	4.5		
Pharmacy	193.11	30.5	188.67	31.5	\$ 141.55	23.2	\$ 192.79	32.9	\$ 148.56	25		
Other	9.71	1.5	10.45	1.7	\$ 10.92	1.8	\$ 10.17	1.7	\$ 10.08	1.7		
Total	\$ 633.42	100.0	\$ 598.27	100%	\$ 609.18	100%	\$ 585.67	100%	\$ 594.44	100%		