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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FOR HEALTH SERVICES RESEARCH

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Project Background

Monroe Plan for Medical Care'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).

New York
Monroe Plan for Medical Care, Inc.

Monroe Plan for Medical Care (MP) is an independent practice association (IPA) which includes over 3,000 providers. In partnership with Excellus BlueCross BlueShield MP serves low-income individuals and the working poor in a seven county region in upstate New York. Medicaid managed care is mandatory in Monroe County and operates under a CMS 1115 waiver. MP is the predominant Medicaid provider in a seven county region through its Blue Choice Option (BCO) Medicaid managed care plan and Family Health Plus (FHP), a New York State Medicaid plan for adult working poor. Medicaid-eligible beneficiary categories include Temporary Assistance to Needy Families (TANF), Safety Net Assistance (SNA), and Supplemental Security Income (SSI) (groups with specified special needs may opt out of mandatory enrollment) and Family Health Plus. MP is the sole SCHIP Child Health Plus (CHP) delivery system in the seven counties.

MP has a total enrollment of over 72,000 enrollees, comprised of approximately 56,000 Medicaid enrollees (BCO and FHP) as well as 16,000 Child Health Plus enrollees. Enrollees are predominantly African-American (41%), with approximately one-third white, and 16% Latino. More than half of the Medicaid enrollees are under 19 and 74% are female.

Reimbursement Model

New York State reimburses Excellus BlueCross BlueShield on a per-member per-month capitation and in turn, Excellus contracts with MP at full risk for healthcare services. While NYS has carved out pharmacy costs for BCO, MP has recently received access to some pharmacy data. However, pharmacy data are not available for almost three-fourths of the patients. MP has direct responsibility for the pharmacy benefit for Family Health Plus. Mental health services are included with the exception of a carve-out for SSI patients; outpatient substance abuse is another carve-out. Patient transportation is included in the rates for Monroe County but is paid for by the other counties. BCO and FHP do not require co-pays. In general, for the population targeted by the intervention, MP would financially benefit from a reduction in utilization.

Quality Enhancing Interventions

MP implemented two QEIs under their Quality Improvement Pays Project (QIPP) from nationally-recognized clinical best practices. The QEI target populations are children with asthma (under age 19) and adults with diabetes (age 19–65). For both QEIs, MP expanded outreach, care management and coordination of care activities across primary care and specialty services. Their asthma programs are based on evidence-based practice guidelines from the

Heart, Lung and Blood Institute (NHLBI)/National Asthma Education and Prevention Program (NAEPP) and American Academy of Allergy, Asthma, and Immunology. In a similar manner, the proposed QEI for diabetes by fostering more effective treatment patterns intends to reduce complications such as cardiovascular, eye, kidney and lower-extremity disease. The Diabetes Control and Complications Trial Research Group and other studies have demonstrated that improvements in glycemic control reduce these complications and improve health outcomes and quality of life.

For asthma QEI participants, MP expanded utilization of the Integrated Therapeutics Group (ITG) asthma quality of life survey throughout entire MP population. And for the diabetes cohort, MP implemented a semi-annual quality of life survey for the diabetic population, using a nationally recognized tool.

Monroe Plan Intervention A: Childhood Asthma

Baseline Claims Findings

MP identified 4,240 children eligible for their QEI during the baseline year, with an average of 3,602 children per month. The children ranged in age from birth to 17 years of age, with a mean age of 7.2 years. In collaboration with the site staff, we constructed a decision rule for considering outliers. If the total cost for the case is higher than the value for the 90th percentile AND is higher than two times the next highest values AND there are diagnoses unrelated to the targeted clinical condition AND the costs due to the unrelated diagnoses are 50% of total costs, the individual is removed as an outlier. Using this decision rule, one case was removed in year one. (**Appendix 6a**)

In collaboration with the site, the UNC evaluation team applied cost adjustment factors to years one and two data. The purpose of this was to account for changes in payments that were due solely to price increases, rather than any impact from the QEI. This allows a more accurate comparison of the data over the three years. All data cited below for years one and two have been adjusted.

During the baseline year, prior to the QEI implementation, the total PMPM payments for member care were $151, excluding payments for prescription drugs.[2] For participants for whom prescription drug data were available, the largest PMPM payment was for drugs ($57). For all children, the second largest amount, $54, was for care provided in the office setting. This was followed by ER services ($36), inpatient care ($29) and hospital outpatient care ($25). (**Figure 6.1.a**) The hospital admission rate for this population was 98.3 admissions per 1000 children, and a hospital day rate of 324.3 days per 1000 children, resulting in an average length of stay of 3.3 days. The children experienced an office visit rate of 7.0 visits per person, and an ER visit rate of 1.1

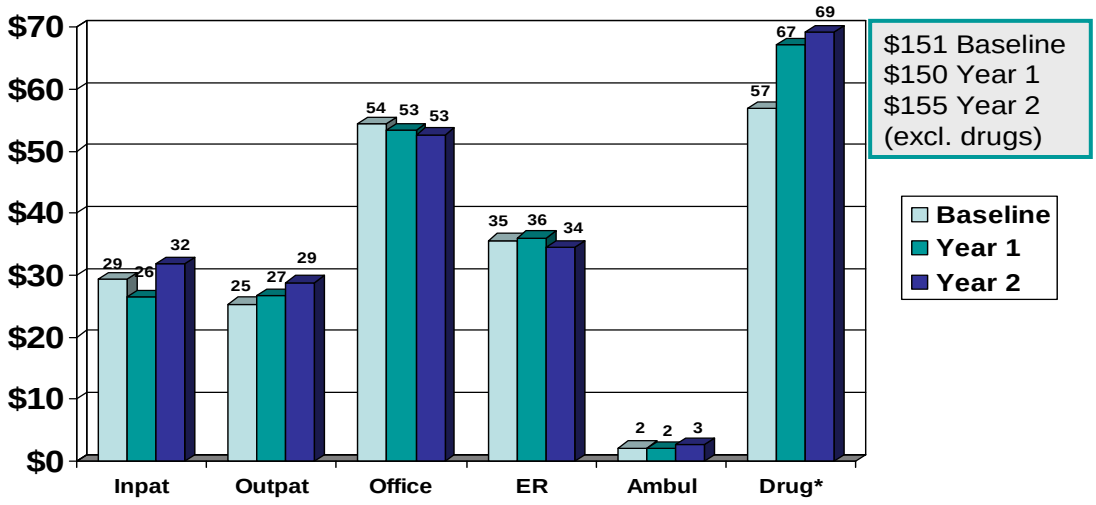
[2] Since prescription drug data are only available for one-fourth of the participants, drug payments are excluded from the totals.

per person. For the persons for whom there was prescription drug data, the rate of prescriptions was 11.7 prescriptions per person. (**Table 6.1.a**)

Table 6.1.a: New York Utilization Measures Childhood Asthma

Utilization	Baseline N= 4,240	Year one N= 5,002	Year two N= 4,710
Admissions/1000	98.3	92.7	97.1
Days/1000	324.3	321.6	365.1
Office visits per person	7.0	6.9	6.5
ER visits per person	1.1	1.0	1.0
Home visits per person	0.1	0.1	0.1
Prescriptions per person (for 26-32% of patients)	11.7	15.7	12.1

Figure 6.1.a: New York PMPM Payments by category – Childhood Asthma



*Drugs included for 26-32% of patients

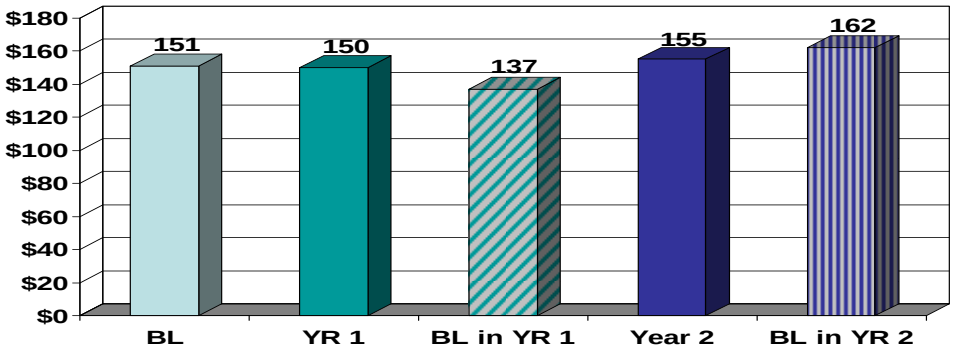
Years One and Two Claims Findings

During year one, MP expanded into three new counties and enrolled new eligible children, for a total of 5,002 children who participated at some time during the year. The average monthly membership was 4,306 children. The children ranged in age from birth to 18 years with a mean age of 7.4 years. During year two there were 4,710 children present at some time during the year, with an average monthly membership of 4,070. The age range was birth through age 18, with a mean age of 7.6 years. (**Appendix 6a**)

Total PMPM payments remained virtually the same, $150, during the first year of the QEI, followed by a modest 3.8% increase to $155 in the second year. Payments decreased modestly in year one for hospital inpatient care, followed by an increase in year two. This is reflected in the utilization rates, with a slight decline in the admission and day rate in year one, followed by an increase in year two. Office visits declined very slightly, from 7.0 to 6.9 to 6.5, while the payments for office services remained flat. Emergency room use and payments were virtually unchanged. For children for whom prescription drug payments were available, the number of prescriptions remained stable, while the payments increased from $57 to $69. (**Figure 6.1.a**, **Table 6.1.a**)

MP chose to add new children during years one and two of the QEI, children who were not present at baseline. Questions were raised concerning the potential impact of new entrants on the analysis and whether they diluted the effectiveness of the QEI. Would the QEI have more impact after children had been in it longer? To test this we performed a secondary analysis on children present in year one and year two, who had been in the QEI at baseline. Of the original 4,240 children who were in baseline, only 1,858 were present in year one, and only 938 in year two. **Figure 6.2.a** shows the total PMPM payments for this cohort of children. For the children in year one, who had also been present in baseline, total PMPM payments were $137, representing a 9% decrease in payments. The decline was in inpatient care, with a drop in the admission rate from 98 to 53 admissions per 1000 children. For the children for whom we had prescription drug payments, their drug payments increased 27%, from $57 to $85 PMPM. This analysis provides some evidence that the QEI may have had more impact on the children who had the benefit of the QEI longer. However, we saw different findings among children who remained in the intervention into year two. Their total PMPM payments increased to $162, slightly higher than the payments for all children in the year two cohort. For this group of 938 children, the hospitalization rate increased, as did payments for inpatient care. We also saw an increase in payments for prescription drugs, from $85 to $111, for those children for whom we had data. (**Appendix 6a**)

Figure 6.2.a: Total PMPM Payments Childhood Asthma



Investment and Operating Costs

Total investment costs spent in the baseline year to develop the QEI totaled a modest $9,575. Most of this expense was for personnel. In year one, the operating expense was $262,101, of which $144,046 was for personnel. Most of this expense was for the nurse educator and outreach workers. Office operations cost $32,600 and indirect expense was $83,455. In year two, operating expenses moderated from year one, with a reduction in the expense for the nurse educator, from a full time FTE to 40%. The total operating expense in year two was $207,618. Personnel expense was $106,979 and indirect expense was $65,001. (**Table 6.2.a**)

Table 6.2.a: New York Operating Costs Childhood Asthma

Costs	Baseline	Year one	Year two
Personnel	$5,700	$144,046	$106,979
Office	0	$32,600	$33,578
Equipment	0	$2,000	$2,060
Other direct	$2,500	0	0
Indirect	$1,375	$83,455	$65,001
Total	$9,575	$262,101	$207,618

Return on Investment

Over the three years, operating expense totaled $459,742 on a discounted basis. While there were modest claims savings in year one ($49,205), claims expense increased in year two. The net total discounted claim cost increase over the two years was -$166,245. The net present value was -$625,987 for a benefit cost ratio of -0.36. (**Table 6.3.a**)

Table 6.3.a: New York ROI
Childhood Asthma

	Baseline	Year 1	Year 2	Total
Investment in QEI				
Investment/Operational Costs	$9,575	$262,101	$207,618	
Discounted Costs	$9,575	$254,467	$195,700	$459,742
Savings/Increases from QEI				
Utilization Savings		$50,682	($228,571)	
Discounted Savings		$49,205	($215,450)	($166,245)
ROI Metrics				
Benefit Cost Ratio				(0.36)
Net Present Value				($625,987) negative

Monroe Plan Intervention B: Adult Diabetes

Baseline Claims Findings

MP identified 1,712 adults eligible for their diabetes QEI, for an average monthly membership of 1,422 participants. Participants ranged in age from 18 to 81 years, with a mean age of 45.4 years. We examined the data for outlier cases, and found none that meet our criteria outlined previously. (**Appendix 6b**)

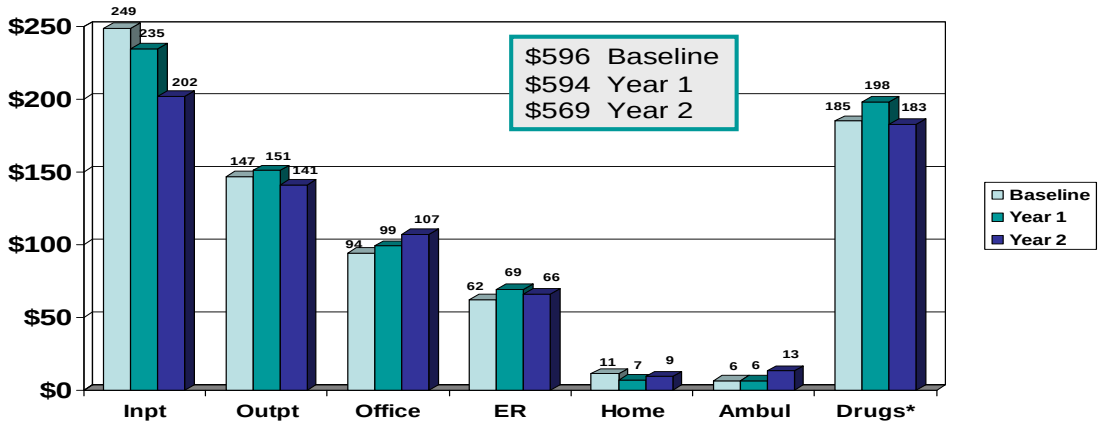
The total PMPM payments for all services, during the baseline year, were $596, excluding prescription drugs. The largest component of the payments, $249, was for inpatient hospital care. This was followed by $147 for hospital outpatient care. Sixteen percent of the total payment was for office visits ($94 PMPM) and ten percent for ER use ($62 PMPM). (**Figure 6.1.b**) Prescription drug payment data was available for one-third of the patients in baseline. For these patients the average PMPM payment was $185.

Table 6.1.b: New York Utilization Measures Adult Diabetes

Utilization	Baseline N = 1,712	Year one N = 2,086	Year two N = 2,154
Admissions/1000	382.6	389.1	367.4
Days/1000	2,023.9	2,164.1	1,878.9
Office visits per person	9.7	9.6	9.8
ER visits per person	1.3	1.4	1.4
Home visits per person	1.0	0.7	1.0
Prescriptions per person (for 28-39% of patients)	38.4	49.5	45.4

Translated into utilization rates, the baseline population experienced hospital care at the rate of 382.6 admissions and 2,023.9 days per 1000 persons, for an average length of stay of 5.3 days. Emergency room use was modest at a rate of 1.3 per person. The office visit rate was 9.7 visits per person. (**Table 6.1.b**) For the third of patients for whom there was prescription drug data, the rate of prescriptions was 38.4 per person.

Figure 6.1.b: New York PMPM Payments by category – Adult Diabetics



*Drugs included for 28-39% of patients

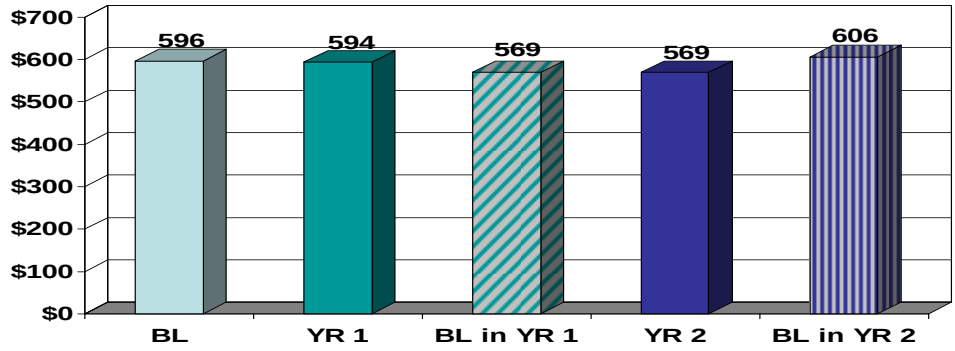
Years One and Two Claims Findings

During year one, MP allowed additional eligible adult diabetes to enroll in the QEI from expansion into three new counties. A total of 2,086 individuals were enrolled for some part of year one, with an average membership of 1,737 per month. In year two a total of 2,154 individuals participated, for an average of 1,799 per month. The mean age of participants remained stable at 46 years. However a shift in the age range was evident. The baseline age range was from 18 to 81 years, and by year two, the range was from 18 to 71 years. (**Appendix 6b**)

Total PMPM payments for the adult diabetics remained stable over the three years, declining $2 in year one, and another $25 in year two. This is a 4% decrease over the time period. Within categories of care, the decreases in payments were for inpatient and outpatient hospital care. Payments for both hospital inpatient and outpatient care declined, 18.7% and 4.0% respectively. Payments for office visits increased 14.3% though the visit rate remained almost the same. The admission and day rates edged up slightly in year one, with the admission rate changing from 382.6 to 389.1 admissions per 1000 persons, while the days increased from 2,023.9 to 2,164.1 per 1000 persons. In year two these rates eased slightly, with the admission rate dropping to 367.4 and the days to 1,878.9 days per 1000 persons. ER visits were stable, with a rate of 1.3 visits in the baseline year, followed by 1.4 in the next two years. For those adult diabetics for whom we had prescription drug data, the number of prescriptions was 38.4 in baseline, followed by 40.2 in year one and 36.0 in year two. (**Table 6.1.b and Figure 6.1.b**)

As with the asthma QEI, we performed a secondary analysis of the diabetes QEI data to look at the impact from adding new persons. The results of this are shown in **Figure 6.2.b**. and in **Appendix 6b**. Of the 2,086 persons present in year one, only 1,180 had been present in the baseline year. Repeating the analysis on this cohort, the total PMPM payments were indeed lower, at $569. This suggests that the QEI may have been more beneficial to the patients who were in the program longer. The reductions in payments were most noticeable in the category of inpatient care, and the admission rate declined to 355.2 admissions per 1000, as compared to a rate of 389.1 for all persons present in year one. However, the results were different when analyzing the remaining part of the cohort in year two. By this second year of the QEI, only 838 members remained. The total PMPM payment for these members increased to $606, and the predominant increase was for inpatient care. The admission rate for this group was 385.5 admissions and 1,980.5 days per 1000 persons. These rates are comparable to the baseline, but the population is now only half the number due to high attrition. It is also notable that while the mean age of the 838 persons is still 46 years, the age range is younger, from 20 to 66 years of age.

Figure 6.2.b: New York PMPM Payments Adult Diabetes



Investment and Operating Costs

The investment and operating costs for the adult diabetes QEI mirror the costs for the asthma program. Start-up costs were modest, with an expenditure of $15,295. Most of this expense was primarily for personnel. Operating costs in years one and two were considerably higher, totaling $246,722 in year one and $254,859 in year two. In both years over half of the costs were for personnel, primarily for nurse educators but also for portions of time for nurse case managers, outreach workers and program management. Indirect expenses were $73,338 in year one and $76,273 in year two. (**Table 6.2.b**)

Table 6.2.b: New York Operating Costs Adult Diabetics

Costs	**Baseline**	**Year 1**	**Year 2**
Personnel	$10,510	$138,784	$142,948
Office Ops	0	$32,600	$33,578
Equipment	0	$2,000	$2,060
Other direct	$2,500	0	0
Indirect	$2,285	$73,338	$76,273
Total	$15,295	$246,722	$254,859

Return on Investment

Over the three years the start up costs and ongoing operating expense totaled $459,742 on a discounted basis. Claims costs decreased resulting in savings of $572,377 on a discounted basis. Subtracting the investment from the claim savings, the net present value was a $77,317, for a benefit cost ratio of 1.16. (**Table 6.3.b**)

Table 6.3.b: New York ROI Adult Diabetes

	Baseline	Year 1	Year 2	Total
Investment in QEI				
Investment/Operational Costs	$15,295	$246,722	$254,859	
Discounted Costs	$15,295	$239,536	$240,229	$495,059
Savings/Increases from QEI				
Utilization Savings		$28,469	577,911	
Discounted Savings		$27,640	544,736	572,377
ROI Metrics				
Benefit Cost Ratio				1.16
Net Present Value				$77,317 Positive

APPENDIX 6A

NY – Monroe Plan - Cost Adjusted												
QEI- Asthma				QEI Start Date: 10/01/04						Data Contact- Howard Brill		
	Age Statistics				Members		Average Member		Total Payments		Indiv Ave PMPM	
Utilization and Membership	Min	Max	Mean	Median	in Claims		Months		PMPM		LOW	HIGH
Baseline: 07/03-06/04	0	17	7.2	7	4,240		3,602		$150.78*		$0.42	$9,531
Year 1: 07/04 – 06/05	0	18	7.4	7	5,002		4,306		$149.71*		$0.38	$7,293
Baseline in Year 1: 07/04-06/05	0	17	7.9	7	1,858		1,696		$136.54*		$0.38	$1,819
Year 2: 07/05 – 06/06	0	18	7.6	7	4,710		4,070		$155.46*		$0.16	$8,303
Baseline in Year 2: 07/05-06/06	1	17	8.6	8	938		853		$161.63*		$3.35	$7,255
Utilization Measures	**Baseline**		**Year 1**		**Baseline in Year 1**		**Year 2**		**Baseline in Year 2**			
Admissions/1000	98.3		92.7		53.1		97.1		69.2			
Days/1000	324.3		321.6		187.0		365.1		275.5			
Office visits/person	7.0		6.9		6.7		6.5		6.4			
ER visits/person	1.1		1.0		1.0		1.0		1.0			
Home visits/person	0.1		0.1		0.03		0.1		0.1			
Prescription/person	11.7**		12.2**		15.7**		12.1**		18.6**			
PMPM Payments	**Baseline**	**%Tot**	**Year 1**	**%Tot**	**Baseline in Year 1**	**%Tot**	**Year 2**	**%Tot**	**Baseline in Year 2**	**%Tot**		
Inpatient	$29.23	19.4	$26.45	17.7	$14.59	10.7	$ 31.88	20.5	$24.30	15.0		
LTC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Outpatient	$25.35	16.8	$26.63	17.8	$26.52	19.4	$ 28.83	18.5	$32.83	20.3		
Office	$54.34	36.0	$53.31	35.6	$54.26	39.7	$ 52.66	33.9	$57.22	35.4		
ER	$35.61	23.6	$36.03	24.1	$35.34	25.9	$ 34.43	22.1	$37.95	23.5		
Home	$0.72	0.5	$1.47	1.0	$0.23	0.2	$ 0.79	0.5	$0.91	0.6		
Ambulance	$2.14	1.4	$2.06	1.3	$2.23	1.6	$ 2.60	1.7	$3.74	2.3		
Pharmacy	$56.89**		$67.09**		$85.32**		$69.19**		$111.35**			
Other	$3.39	2.3	$3.76	2.5	$3.37	2.5	$ 4.27	2.8	$4.68	2.9		
Total	$150.78*	100%	$149.71*	100%	$136.54*	100%	$155.46*	100%	$161.63*	100%		
1 outlier removed in Year 1 * Does not include pharmacy data (do not receive claims for BCO [Medicaid] program-carve out by NY state).												
** Percent of patients with pharmacy claims	28.6		26.4		26.5		31.8		27.6			

APPENDIX 6B

NY – Monroe Plan - Cost Adjusted												
QEI- Diabetes				QEI Start Date: 10/01/04						Data Contact- Howard Brill		
	Age Statistics				Members	Average Member				Total Payments	Indiv Ave PMPM	
Utilization and Membership	Min	Max	Mean	Median	in Claims	Months				PMPM	LOW	HIGH
Baseline: 07/03-06/04	18	81	45.4	46	1,712	1,422				$595.54*	$2.54	$21,612
Year 1: 07/04 – 06/05	18	82	45.6	46	2,086	1,737				$594.05*	$3.38	$19,652
Baseline in Year 1: 07/04-06/05	19	82	46.6	48	1,180	1,050				$568.51*	$4.40	$16,407
Year 2: 07/05 – 06/06	18	71	46.1	47	2,154	1,799				$568.77*	$4.78	$12,843
Baseline in Year 2: 07/05-06/06	20	66	47.3	48	838	752				$605.91*	$4.78	$12,843
Utilization Measures	**Baseline**		**Year 1**		**Baseline in Year 1**	**Year 2**				**Baseline in Year 2**		
Admissions/1000	382.6		389.1		355.2	367.4				385.5		
Days/1000	2,023.9		2,164.1		2,099.7	1,878.9				1,980.5		
Office visits/person	9.7		9.6		9.8	9.8				10.2		
ER visits/person	1.3		1.4		1.4	1.4				1.4		
Home visits/person	1.0		0.7		0.8	1.0				1.0		
Prescription/person	38.4**		40.2**		49.5**	36.0**				45.4**		
PMPM Payments	**Baseline**	**%Tot**	**Year 1**	**%Tot**	**Baseline in Year 1**	**%Tot**	**Year 2**	**%Tot**	**Baseline in Year 2**	**%Tot**		
Inpatient	$248.95	41.8	$234.68	39.5	$210.13	37.0	$202.38	35.6	$207.06	34.2		
LTC	$7.12	1.2	$4.67	0.8	$5.47	1.0	$4.23	0.7	$7.08	1.2		
Outpatient	$147.25	24.7	$151.35	25.5	$145.55	25.6	$141.41	24.9	$154.31	25.5		
Office	$93.86	15.8	$98.85	16.6	$99.88	17.6	$107.26	18.9	$110.75	18.3		
ER	$62.16	10.4	$68.54	11.6	$71.71	12.6	$66.35	11.7	$74.15	12.2		
Home	$10.86	1.8	$6.70	1.1	$8.20	1.4	$8.76	1.5	$9.54	1.5		
Ambulance	$6.21	1.0	$6.41	1.1	$6.53	1.1	$13.47	2.4	$16.83	2.8		
Pharmacy	$185.12**		$197.69**		$255.25**		$182.61**		$252.79**			
Other	$19.13	3.3	$22.85	3.8	$21.04	3.7	$24.91	4.3	$26.19	4.3		
Total	$595.54*	100%	$594.05*	100%	$568.51*	100%	$568.77*	100%	$605.91*	100%		
* Does not include pharmacy data (do not receive claims for BCO [Medicaid] program-carve out by NY state).												
** Percent of patients with pharmacy claims	36.0		36.9		31.0		38.5		28.4			