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
THE CECIL G. SHEPS CENTER
FOR HEALTH SERVICES RESEARCH

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Project Background

AXIS Healthcare'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).

Minnesota
AXIS Healthcare

The Medicaid program in the state of Minnesota is administered by the Minnesota Department of Human Services. AXIS Healthcare, in partnership with the State Medicaid Office and a Medicaid Health Plan, created the Minnesota Disability Health Options program (MnDHO) which operates under 1915 (a) and (c) Waivers, and Medicare 402 Waiver. MnDHO is a fully integrated managed care model for persons with disabilities. Enrollees choose from a small primary care network and have a health coordinator who works with them closely to navigate the healthcare delivery system.

Reimbursement Model

MnDHO services are capitated and include the entire Medicaid and Medicare benefit set. However, pharmacy is not included in the capitation. Capitation rates incorporate both a dependency-based case mix system, with additional reimbursement to adequately finance the behavioral and mental health needs of the membership. Depending upon the rate cell a member falls in, the 2004 capitation rate ranges from $400 to over $26,000 PMPM, with the current membership averaging $6,800 PMPM.

The existing payment structure makes it unclear whether there is a strong incentive to promote a reduction in utilization rates. Capitation rates are stable for a year at a time, however if members improve sufficiently they could shift from a higher tier to a lower tier, effectively reducing the overall capitation rate. AXIS does have a 50/50 gain-sharing arrangement with UCare, the Medicare licensed carrier with which it contracts. This arrangement does provide a positive incentive to improve the functioning of its members and to reduce medical expenses.

Quality Enhancing Initiative

The objective of AXIS's QEI is to reduce the incidence of urinary track infections and reduce the health impacts of those UTIs that occur in their high risk population. Urinary tract infection is a common, serious problem in populations with severe physical disability. AXIS established a "UTI Response System" with multiple components, including:

- *Risk Stratification***.** AXIS Healthcare developed a risk stratification model for urinary tract infection. Data have consistently identified 45 to 50 percent of AXIS members to be at-risk for UTI.
- *Patient Education***.** Distribution of materials to at-risk members through one-on-one meetings (and some group meetings) beginning with highest risk members. Emphasis is placed on early identification of UTI symptoms and immediate reporting to 24-hour on-call nurse.

- *Prompt Patient Assessment***.** In home, urgent assessment of urinary symptoms with emergency room triage when indicated by clinical instability. Comprehensive data collection within hours of member contact. If clinically stable, vital signs, urinalysis, urine culture, and blood testing are performed. Data are forwarded to the treating primary physician.
- *Empiric Antimicrobial Therapy*. Following clinical assessment, empiric antibiotics are initiated under AXIS treatment protocol.
- *Culture Targeted Antibiotic Treatment.* Systems were developed to track all urinary cultures and targeted antibiotic therapy delivered as soon as cultures mature. Health coordinators facilitate home IV therapy when indicated.

Target Population

The QEI targeted 176 MnDHO enrollees with altered urinary drainage typified by individuals with spinal cord injuries, multiple sclerosis and spina bifida. Seventy-five percent of the members are 35 years or older. Seventy-eight percent are white, and 15% are Black or African American. Twenty-eight percent enrolled in MnDHO while in a long-term care facility, with 54 of these individuals subsequently transitioned into the community. Forty-six percent self-report depression, 49% report anxiety, 51% claim difficulty with sleep and 75% identify the presence of chronic pain.

Baseline Claims Findings

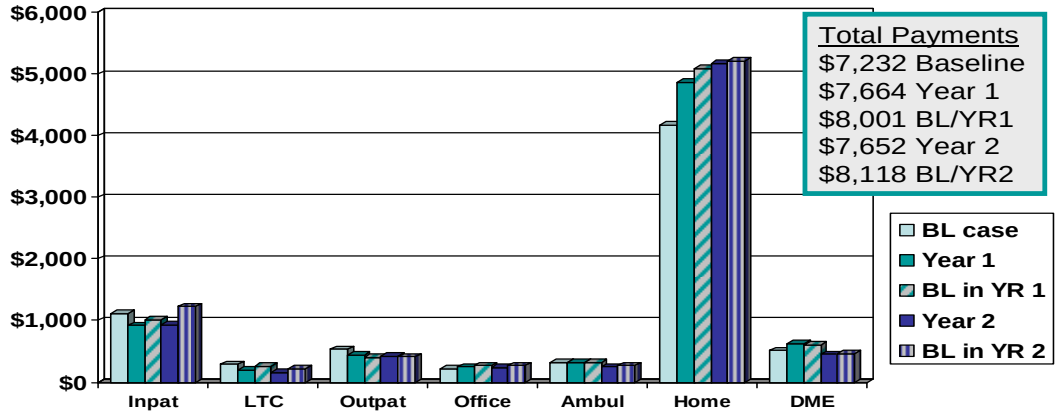
The 176 members who were eligible for the QEI ranged in age from 19 to 64 years, with a mean age of 43. Due to some attrition during the baseline year, the average number of members present throughout the year was 150. We examined the baseline data for persons with extremely high costs, but did not remove any outliers. (**Appendix 5**)

The total PMPM payments for this population totaled $7,232 during the baseline year. This is an extremely high level of payment, and reflects the illness severity of this patient population. The largest single component of care, $4,178 or 58%, was for home care. The home visit rate was 137.4 visits per person per year. If there were multiple claims for home services on the same day, we counted one visit. Consequently, this visit rate represents the number of days on which at least one home service was provided. The second largest PMPM payment was for hospital inpatient care. This payment averaged $1,121. Patients were admitted at a rate of 1,144.2 admissions and 6,838.2 days per 1000 persons per year, and a 6.0 average length of stay. Other significant PMPM payments were for hospital outpatient care ($533), DME ($513), ambulance service ($315) and office visits ($215). The office visit rate for this population averaged 8.5 visits per person per year. No pharmacy utilization or payment data were available. (**Table 5.1, Figure 5.1, Appendix 5**)

Table 5.1: Minnesota Utilization Measures

Utilization	Baseline Case N= 176	Year 1 N=205	Baseline in Year 1 N=121	Year 2 N=208	Baseline in Year 2 N=122
Admissions/1000	1,144.2	1,045.2	1,066.1	1,279.9	1,573.7
Days/1000	6,838.3	5,482.9	5,636.4	7,079.1	8,836.2
Office visits per person	8.5	8.2	7.7	7.1	6.9
ER visits per person	1.8	1.8	1.8	2.1	2.1
Home visits per person	137.4	132.4	142.2	132.8	135.0
Prescriptions per person	NA	NA	NA	NA	NA

Figure 5.1: Minnesota PMPM Payments by Category



Years One and Two Claim Findings

During year one AXIS added 29 additional participants. The 205 participants had a similar age range as the group in baseline, from 20 to 64 years of age, with a mean age of 42 years. The average members during year one was 179 participants. In year two there were only 3 additional participants, for a total of 208, with an average of 202 members during the year. Their ages ranged from 21 to 65 years of age, with a mean age of 43. (**Appendix 5**)

During year one the total PMPM payments increased 6.0% to $7,664. The largest increase was for home care, increasing 16.6% from $4,178 to $4,870. However, the home care visit rate declined moderately, from 137.4 to 132.4 visits. DME payments also increased, from $513 to $618. However, payments for both hospital inpatient and outpatient care declined. The admission rate was unchanged, but the days per 1000 rate declined from 6,838.3 to 5,482.9 days. Payments for LTC also decreased, from $287 to $198. (**Figure 5.1, Appendix 5**)

During year two, total PMPM payments remained virtually unchanged at $7,652. Over the two years of the QEI, payments increased 5.8%. Further payment increases were seen in home care which was offset by lower payments for DME and ambulance services. (**Figure 5.1**)

Cohort Analysis

Due to a large number of persons who entered and left the QEI over the three year period, we conducted a secondary analysis of individuals in years two and three who were also present in the baseline year. The hypothesis was that the QEI may show more positive results for those participants who were in the program longer. The results are shown in **Figure 5.2**. In year one, there were 121 participants who had been present in baseline. Their total PMPM payments increased 10.6% to $8,001. In year two there were 122 participants who had been present in the baseline year, and their total PMPM payments were $8,118, a 12.3% increase from baseline. Consequently, over the three years the 12.3% claim payment increase for the cohort was greater than the 5.8% increase exhibited by the entire QEI population.

Investment and Operating Costs

During the baseline year AXIS spent $19,231 on development and start up costs for the QEI, expenses primarily for the medical director, principal investigator and a nurse case manager. In year one, operating expense totaled $51,215 primarily for the personnel listed above. Year two expense totaled $34,768. (**Table 5.2**)

Figure 5.2: Minnesota PMPM Payment Totals

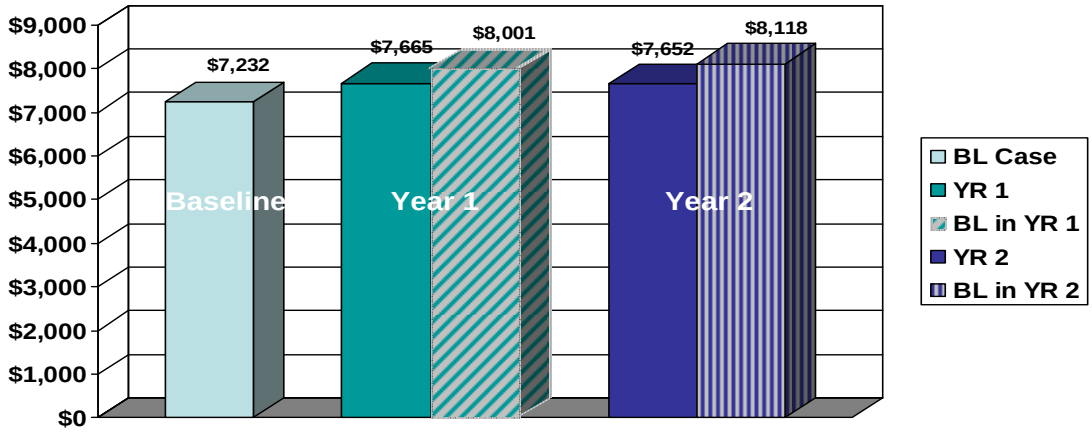


Table 5.2: Minnesota Operating Costs

Costs	Baseline	Year 1	Year 2
Personnel	16,552	41,272	30,330
Office	1,490	5,714	1,567
Equipment	1,189	0	0
Other direct	0	0	0
Indirect	0	4,229	2,871
Total	$19,231	$51,215	$34,768

Return on Investment

Over the three years the start up costs and operating expense totaled $101,727 on a discounted basis. Claims cost increased in both years, resulting in a combined cost increase of $1,861,489 on a discounted basis. Combining the operating expense with the claim costs resulted in a net present value of -$1,963,216, for a benefit cost ratio of -18.30. (**Table 5.3**)

Table 5.3: Minnesota Return on Investment

	Baseline	Year 1	Year 2	Total
Investment in QEI				
Investment/Operational Costs	19,231	51,215	34,768	
Discounted Costs	19,231	49,724	32,773	101,727
Savings/Increases from QEI				
Utilization Savings		(928,860)	(1,018,128)	
Discounted Savings		(901,805)	(959,684)	(1,861,489)
ROI Metrics				
Benefit-Cost Ratio				(18.30)
Net Present Value				(1,963, 216) negative

APPENDIX 5

MN-AXIS Healthcare QEI - Disabilities	QEI Start Date:10/01/2004				Data Contact - Robert Kreiger					
	Age Statistics				Members	Average Member	Total Payments		Individual Average PMPM	
Utilization and Membership	MIN	MAX	MEAN	MEDIAN	in Claims	Months	PMPM		LOW	HIGH
Base period: 10/03-09/04	19	64	42.60	44	176	150	$7,232		$357.00	$26,278
Year 1 : 10/04-09/05	20	64	42.15	43	205	179	$7,665		$112.00	$22,091
Baseline in Year 1	-	-	-	-	121	121	$8,001		$385.00	$22,091
Year 2 : 10/05-09/06	21	65	43.06	44	208	202	$7,652		$159.58	$34,557
Baseline in Year 2	-	-	-	-	122	119	$8,118		$215.94	$34,557
Utilization Measures	**Baseline**		**Year 1**		**Baseline in Year 1**		**Year 2**		**Baseline in Year 2**	
Admissions/1000	1,144.2		1,045.2		1066.1		1279.9		1573.7	
Days/1000	6838.3		5,482.9		5636.4		7079.1		8836.2	
Office visits/person	8.5		8.2		7.7		7.1		6.9	
ER visits/person	1.8		1.8		1.8		2.1		2.1	
Home visits/person	137.4		132.4		142.2		132.8		135.0	
Prescriptions/person	na		na		na		na		na	
PMPM Payments	**Baseline**	**%Tot**	**Year 1**	**%Tot**	**Baseline in Year1**	**%Tot**	**Year 2**	**%Tot**	**Baseline in Year2**	**%Tot**
Inpatient	$1,121.29	15.5	$922.14	12.0	$1,007.04	12.6	$927.18	12.1	$1,223.55	15.1
LTC	$286.95	4.0	$197.96	2.6	$252.70	3.2	$151.94	2.0	$213.34	2.6
Outpatient	$532.97	7.4	$438.90	5.7	$393.94	4.9	$412.64	5.4	$408.28	5
Office	$215.18	3.0	$247.09	3.2	$267.95	3.3	$235.47	3.1	$268.84	3.3
ER	$64.48	0.9	$41.97	0.5	$38.96	0.5	$48.61	0.6	$53.83	0.7
Ambulance	$315.27	4.4	$320.11	4.2	$323.73	4.0	$248.24	3.2	$266.49	3.3
Home	$4,177.74	57.6	$4,870.03	63.5	$5,097.83	63.7	$5,163.88	67.5	$5,209.19	64.2
Pharmacy	na	na	na	na	na	na	na	na	na	na
DME	$513.24	7.1	$618.25	8.1	$609.78	7.6	$448.78	5.9	$455.92	5.6
Other	$5.16	0.1	$8.26	0.2	$9.08	0.2	$15.56	0.2	$18.21	0.2
Total	$7,232.28	100%	$7,664.71	100%	$8,001.01	100%	$7,652.30	100%	8117.65	100%