

N.C. Health Choice - Blue Cross/Blue Shield Utilization Report, 1999

Introduction

This document provides data related to members of the North Carolina Health Choice (NCHC) group collected from October 1998 through September 1999. The data has not been adjusted for outstanding claims since there is no historical reference on which to base the completion factors.

Norms are based on all youth (under age 19) from the State of North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan. Norms have not been age and sex adjusted.

"Catastrophic" admissions (admissions incurring more than \$50,000 in allowed charges or with a length of stay in excess of 30 days) have been excluded from utilization rate and charge statistics. However, payment data includes catastrophic admissions.

Demographics

The average monthly enrollment for October 1998 through September 1999 was 34,567 members (see Table 1). Non-Copay members comprised over two-thirds of this total. The sex distribution of both segments was about half male and half female. More than half of all members were between 6 and 12 years old (see Table 2). Most members were white (55 percent), while 35 percent were black.

Inpatient Utilization and Average Charges

Of the two segments, the Copay group had significantly higher utilization than did the Non-Copay members (see Table 3). While the average charge per admission was higher for the Copay segment than the Non-Copay group, the average charge per day was lower.

Inpatient utilization for the total group varied somewhat from the norm. Although the admission rate was slightly higher than the norm, the day rate and average length of stay were below the norm. The average allowed charge per admission was well below the norm, but the average allowed charge per day was slightly above the norm.

The four diagnostic categories with the highest admission rates were (1) respiratory diseases, (2) injury and poisoning, (3) digestive diseases, and (4) endocrine, nutritional, and metabolic diseases and immunity disorders (see Table 4). These rates were significantly higher than the norm. The most common respiratory diagnosis was asthma. One member incurred over \$100,000 of payments due to 6 respiratory admissions ranging from asthma, to pneumonia, to respiratory failure. No single diagnosis for injury and poisoning was most prevalent. Appendicitis was the most common diagnosis

among digestive diseases. The most common metabolic disorder was disorder of fluid, electrolyte, and acid-base balance.

Although the admission rate for mental health disorders was higher than the norm, the average length of stay and the average allowed charges were below the norm (see Table 5).

Outpatient Utilization and Average Charges

Copay members relied more heavily on hospital outpatient, ambulatory surgery, and office setting than did the Non-Copay members (see Table 8). Non-Copay members relied more heavily on the emergency room setting. The average allowed charge for hospital outpatient services was higher for Copay members than Non-Copay patients. The reverse was true for the ambulatory surgery setting.

When compared to the norm, the NCHC utilization rate was 14 percent higher for the hospital outpatient setting and 96 percent higher for the emergency room setting, but the average allowed charges for these services were lower than the norms.

In the emergency room setting (see Table 9), urgent and non-urgent utilization rates were more than double the corresponding norms.

Among office visit settings, utilization of specialist care was well below the norm especially for the Non-Copay segment (see Table 10).

Overall, outpatient utilization of mental health services (see Table 12) was slightly higher than the norm. The drug abuse visit rate, which was significantly higher than the norm, reflected services incurred by 31 members.

Payments

Payments per member per month (see Table 13) were significantly larger for the Copay segment due primarily to greater inpatient payments (caused by higher inpatient utilization).

When compared to the norm, the NCHC group incurred high institutional outpatient, professional outpatient, and office costs. The outpatient payments were attributable to the high outpatient utilization rates (hospital outpatient and emergency room). The high office payments mainly reflected the lack of a deductible for members of the NCHC group.

Payments for two diagnostic categories (respiratory diseases and diseases of the nervous system) significantly exceeded the norm see Table 15).

There were 9 catastrophic admissions to acute care hospitals (see Table 16) as well as 11 outlier mental health admissions (see Table 17). Total payments for these admissions were nearly \$900,000.

Table 1 Demographics - Average Annual Enrollment

October 1998 Through September 1999

Age Groups	Non-Copay	Copay	Total
0	2	26	28
1 - 5	3,262	3,712	6,973
6 - 12	13,335	4,736	18,071
13 - 18	6,962	2,354	9,316
19 +	141	38	179
Total	23,701	10,866	34,567

Gender	Non-Copay	Copay	Total
Female	11,777	5,283	17,060
Male	11,925	5,583	17,507
Total	23,701	10,866	34,567

Ethnicity	Non-Copay	Copay	Total
Asian	311	109	420
Black	9,117	2,766	11,883
Hispanic	1,088	558	1,646
Indian	482	216	698
White	12,024	6,848	18,872
Other	678	367	1,045
Unknown	2	2	4
Total	23,701	10,866	34,567

Table 2 NC Health Choice Demographics - Percentage of Membership

October 1998 Through September 1999

	Non-Copay	Copay	Total
Age Groups			
0	0%	0%	0%
1 - 5	14%	34%	20%
6 - 12	56%	44%	52%
13 - 18	29%	22%	27%
19 +	1%	0%	1%
Gender			
Female	50%	49%	49%
Male	50%	51%	51%
Ethnicity			
Asian	1%	1%	1%
Black	38%	25%	34%
Hispanic	5%	5%	5%
Indian	2%	2%	2%
White	51%	63%	55%
Other	3%	3%	3%

Table 3 NC Health Choice Inpatient Utilization Statistics, Acute-Care General Hospitals

October 1998 Through September 1999

	Non-Copay	Copay	Total	Norm
Participants	23,701	10,866	34,567	--
Admissions	562	412	974	--
Days	1,876	1,622	3,498	--
Admissions/1000	23.7	37.9	28.2	27.0
Days/1000	79.2	149.3	101.2	127.1
Average Length of Stay *	3.12	3.56	3.31	3.90
Average Allowed Charge/Adm. *	\$5,582	\$6,250	\$5,865	\$7,078
	\$4,321	\$4,938	\$4,582	\$5,528
	\$1,262	\$1,312	\$1,283	\$1,551
Average Allowed Charge/Day *	\$1,748	\$1,670	\$1,712	\$1,662
	\$1,365	\$1,322	\$1,345	\$1,316
	\$383	\$348	\$367	\$346

* Outlier claims (claims with a length of stay greater than 30 days or a total charge greater than \$50,000) have been excluded from these calculations.

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Table 4 NC Health Choice Inpatient Utilization Statistics by Diagnostic Classification Acute Care Hospitals

October 1998 Through September 1999

	Admissions per 10,000 Members		Percentage of Total Admissions	
	NCHC	Norm	NCHC	Norm
Infectious and Parasitic Diseases	15.3	17.3	5.4%	6.4%
Neoplasms	4.1	9.5	1.4%	3.5%
Endocrine, Nutritional and Metabolic Diseases and Immunity Disorders	28.9	14.4	10.3%	5.3%
Diseases of Blood and Blood-Forming Organs	7.5	4.0	2.7%	1.5%
Mental Disorders	22.6	18.8	8.0%	6.9%
Diseases of the Nervous System and Sense Organs	6.1	8.0	2.2%	3.0%
Circulatory Diseases	3.8	1.9	1.3%	0.7%
Respiratory Diseases	73.8	52.4	26.2%	19.4%
Digestive Diseases	30.7	25.3	10.9%	9.4%
Genitourinary Diseases	13.9	9.5	4.9%	3.5%
Pregnancies	5.2	23.3	1.8%	8.6%
Skin Diseases	4.6	2.9	1.6%	1.1%
Musculoskeletal Diseases	7.8	7.1	2.8%	2.6%
Congenital Anomalies	7.2	10.1	2.6%	3.7%
Perinatal Conditions	0.0	27.1	0.0%	10.0%
Ill-Defined Conditions	13.6	12.2	4.8%	4.5%
Injury and Poisoning	35.9	26.3	12.7%	9.7%
Other	0.9	0.3	0.3%	0.1%

Table 5 NC Health Choice Inpatient Utilization Statistics for Mental Disorders

October 1998 Through September 1999

At Acute Care General Hospitals

	Non Copay 1	Copay 2	Total 3	Norm
Admissions	43	41	84	--
Days	299	283	582	--
Admissions/10000	18.1	37.7	24.3	21.2
Days/10000	126.2	260.4	168.4	160.9
Average Length of Stay	6.95	6.90	6.93	7.60
Average Allowed Charge/Adm.	\$4,998	\$5,360	\$5,175	\$5,878
Average Allowed Charge/Day	\$719	\$777	\$747	\$774

1 Excludes 4 outlier cases in which the average length of stay exceeded 50 days or the total charge exceeded \$30,000.

2 Excludes 1 outlier case (average length of stay > 30 days of charges > \$30,000).

3 Excludes the 5 Non-Copay and Copay outlier cases (see Table 17 for a list of outlier cases).

At Psychiatric Hospitals

	Non Copay 1	Copay	Total 2	Norm
Admissions	122	36	158	--
Days	1,316	337	1,653	--
Admissions/10000	51.5	33.1	45.7	20.0
Days/10000	555.3	310.1	478.2	159.9
Average Length of Stay	10.79	9.36	10.46	7.98
Average Allowed Charge/Adm.	\$5,511	\$5,151	\$5,429	\$5,220
Average Allowed Charge/Day	\$511	\$550	\$519	\$655

1 Excludes 6 outlier cases in which the average length of stay exceeded 50 days or the total charge exceeded \$30,000.

2 Excludes the 6 Non-Copay outlier cases (see Table 17 for a list of outlier cases).

Table 8 NC Health Choice Institutional Outpatient Utilization and Charge Statistics

October 1998 Through September 1999

	Non-Copay	Copay	Total Group	Norm
Hospital Outpatient Dept.				
Visits	6,164	3,507	9,671	--
Visits/1,000	260.1	322.7	279.8	245.3
Av. Charge per Visit	\$715	\$815	\$751	\$775
Emergency Room				
Visits	8,032	3,355	11,387	--
Visits/1,000	338.9	308.8	329.4	168.0
Av. Charge per Visit	\$386	\$387	\$386	\$455
Ambulatory Surgical Centers				
Visits	158	134	292	--
Visits/1,000	6.7	12.3	8.4	8.2
Av. Charge per Visit	\$2,585	\$2,498	\$2,545	\$2,636
Office Visits				
Visits	73,666	41,892	115,558	--
Visits/1,000	3,108.1	3,855.3	3,343.0	3,547.8
Av. Charge per Visit	\$66	\$66	\$66	\$65

Table 9 NC Health Choice Emergency Room Utilization Statistics

October 1998 Through September 1999

	Non Copay	Copay	Total	Norm
Total ER Utilization				
Visits	8,032	3,355	11,387	--
Visits/1,000	338.9	308.8	329.4	168.0
Av. Charge per Visit	\$386	\$387	\$386	\$455
Emergent				
Visits	1,605	717	2,322	--
Visits/1,000	67.7	66.0	67.2	45.4
Av. Charge per Visit	\$591	\$582	\$588	\$655
Urgent				
Visits	3,438	1,553	4,991	--
Visits/1,000	145.1	142.9	144.4	66.0
Av. Charge per Visit	\$342	\$353	\$345	\$408
Non-Urgent				
Visits	2,989	1,085	4,074	--
Visits/1,000	126.1	99.9	117.9	56.6
Av. Charge per Visit	\$326	\$306	\$320	\$351

Table 10 NC Health Choice Office Utilization and Charge Statistics

October 1998 Through September 1999

	Non-Copay	Copay	Total Group	Norm
Total Visits	73,666	41,892	115,558	--
Visits/1,000	3,108.1	3,855.3	3,343.0	3547.8
Av. Charge per Visit	\$66	\$66	\$66	\$65
Primary Care Utilization				
Visits	45,573	27,378	72,951	--
Visits/1,000	1,922.8	2,519.6	2,110.4	2104.2
Av. Charge per Visit	\$56	\$55	\$56	\$54
Specialist Care Utilization				
Visits	28,093	14,514	42,607	--
Visits/1,000	1,185.3	1,335.7	1,232.6	1443.6
Av. Charge per Visit	\$83	\$85	\$84	\$81

Table 12 NC Health Choice Outpatient Mental Health Utilization Statistics

October 1998 Through September 1999

	Non-Copay	Copay	Total Group	Norm
Mental Health				
Visits per 1,000 Members	567.9	550.2	562.3	534.3
Av. Visits per Member with at Least One Visit	5.3	5.7	5.4	7.0
Alcohol Abuse				
Visits per 1,000 Members	0.3	0.2	0.3	0.4
Av. Visits per Member with at Least One Visit	1.3	1.0	1.3	3.0
Drug Abuse				
Visits per 1,000 Members	17.2	36.4	23.3	6.8
Av. Visits per Member with at Least One Visit	21.5	26.4	23.6	9.2
Grand Total				
Visits per 1,000 Members	585.4	586.8	585.8	541.5
Av. Visits per Member with at Least One Visit	5.4	6.0	5.6	7.0

Table 13 NC Health Choice Per Member per Month Payments, by Place of Service

October 1998 Through September 1999

	Non-Copay	Copay	Total	Norm
Institutional				
Inpatient	\$8.97	\$16.97	\$11.49	\$13.20
Outpatient	\$17.00	\$20.34	\$18.05	\$10.41
Inpatient	\$2.52	\$1.94	\$2.34	\$1.12
Outpatient	\$0.49	\$0.63	\$0.53	\$1.04
Total Institutional	\$28.98	\$39.88	\$32.41	\$25.77
Professional				
Inpatient	\$2.89	\$4.77	\$3.48	\$3.41
Outpatient	\$9.14	\$10.87	\$9.69	\$5.32
Office	\$21.41	\$23.81	\$22.16	\$12.03
Drugs	\$8.04	\$6.40	\$7.53	\$4.10
Other	\$1.31	\$1.53	\$1.38	\$2.04
Total Professional	\$42.80	\$47.38	\$44.24	\$26.89
Grand Total	\$71.78	\$87.26	\$76.64	\$52.66

Table 15 NC Health Choice Payments by Diagnostic Category

October 1998 Through September 1999

	Total Payments	Payments per Member per Month	
	NCHC	NCHC	Norm
Infectious and Parasitic Diseases	\$887,612	\$2.14	\$1.18
Neoplasms	\$517,538	\$1.25	\$1.85
Endocrine, Nutritional and Metabolic Diseases and Immunity Disorders	\$640,898	\$1.55	\$1.39
Diseases of Blood and Blood-Forming Organs	\$312,517	\$0.75	\$0.80
Mental Disorders	\$2,753,531	\$6.64	\$4.68
Diseases of the Nervous System and Sense Organs	\$3,792,750	\$9.14	\$3.91
Circulatory Diseases	\$339,768	\$0.82	\$0.60
Respiratory Diseases	\$4,795,347	11.56	\$5.94
Digestive Diseases	\$1,728,486	\$4.17	\$2.61
Genitourinary Diseases	\$1,143,032	\$2.76	\$1.29
Pregnancies	\$53,403	\$0.13	\$0.26
Skin Diseases	\$603,737	\$1.46	\$0.72
Musculoskeletal Diseases	\$1,432,988	\$3.45	\$3.25
Congenital Anomalies	\$857,029	\$2.07	\$2.78
Perinatal Conditions	\$27,266	\$0.07	\$3.98
Ill-Defined Conditions	\$2,607,414	\$6.29	\$3.36
Injury and Poisoning	\$4,897,953	\$11.81	\$7.23
Other	\$1,277,466	\$3.08	\$6.85

Table 16 NC Health Choice Catastrophic Admissions to Acute Care Hospitals

October 1998 Through September 1999

Diagnosis	APDR G	Age	Sex	Length of Stay	Allowed Charges	Payments	Transplant	Died in Hospital	Hospital
Spinal Cord Injury	462	17	F	51	\$174,016	\$172,811	NO	NO	Out-of-State
Burn of Abdominal Wall	472	8	F	10	\$102,822	\$102,822	NO	NO	UNC Hospitals
Pneumonia	462	1	F	40	\$93,036	\$87,514	NO	NO	Duke University Hospital
Depressive Disorder	426	13	F	92	\$69,463	\$69,097	NO	NO	Out-of-State
Congenital Anomaly	104	11	M	5	\$65,983	\$65,126	NO	NO	Duke University Hospital
Scoliosis	807	12	F	17	\$61,473	\$60,973	NO	NO	Duke University Hospital
Chemotherapy	577	16	F	37	\$46,679	\$46,679	NO	NO	UNC Hospitals
Pneumonia	740	18	F	31	\$42,023	\$41,710	NO	NO	UNC Hospitals
Lung Disease	462	18	F	46	\$23,158	\$22,385	NO	NO	UNC Hospitals
					\$678,653	\$669,117			
1 Catastrophic admissions incur allowed costs greater than \$50,000 or lengths of stay greater than 30 days									

Table 17 NC Health Choice Outlier Mental Health Admissions

October 1998 Through September 1999

Type of Hospital	Diagnosis	APDRG	Age	Sex	Length of Stay	Allowed Charges	Payments	Hospital
Acute Care	Manic-Depressive Psychosis	430	15	F	63	\$29,343	\$25,700	Out-of-State
	Depressive Disorder	426	13	F	92	\$69,463	\$69,097	Out-of-State
	Psychosis	427	12	F	64	\$26,404	\$24,874	Out-of-State
	Drug Dependence	748	15	M	56	\$25,739	\$24,418	Out-of-State
	Neurotic Depression	426	16	M	55	\$26,386	\$26,386	Out-of-State
						\$177,335	\$170,475	
Sppecialty	Drug Dependence	470	15	M	107	\$13,375	\$12,706	Open House Counseling Serv
	Psychosis	430	14	F	87	\$33,617	\$30,148	Dorothea Dix Hosp
	Psychosis	430	15	F	61	\$22,845	\$80	Dorothea Dix Hosp
	Depressive Disorder	431	13	F	61	\$23,119	\$0	Dorothea Dix Hosp
	Depressive Disorder	426	16	M	87	\$44,343	\$1,078	Dorothea Dix Hosp
	Adjustment Reaction	427	16	M	217	\$47,232	\$0	Charter of Wilson-Salem
						\$184,531	\$44,012	