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The analytics provided in this document is based on claims data and information provided to Treo Solutions, LLC (Treo) by Community Care of North Carolina (CCNC). CCNC provides Treo with claims and enrollment data on a quarterly basis. Treo Solutions has completed processing for two quarterly feeds representing calendar years 2007 through the middle of fiscal year 2010. Treo has been working closely with CCNC to develop a mutual understanding of their data through application of the proprietary Treo data discovery processes. These processes include checks for data integrity, completeness and reasonableness. The results are reviewed with the client before data is used for analytical purposes. The aggregated data and charts in this report have been reviewed by Treo, in conjunction with CCNC staff, to ensure that the data are in line with what CCNC would expect based on their knowledge of their population. As Treo's relationship continues with CCNC our understanding of their data and the population they serve will continue to mature.

## Highlights of Treo Solutions Report

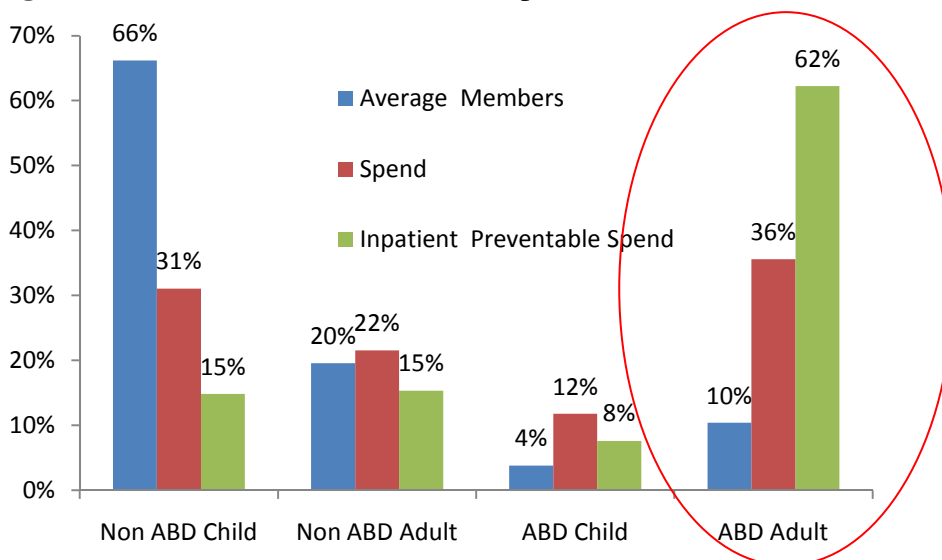
### Community Care of North Carolina: results for the ABD non-dual population

CCNC has consistently demonstrated an ability to restrain system costs relative to trends evident in North Carolina's unenrolled (non-CCNC) Medicaid population. The following analyses examine CCNC impacts on the adult ABD (non-dual) Medicaid population, a good proxy for the Medicare population for which CMS is charged with reducing costs. Analyses were conducted by Treo Solutions, an independent healthcare analytics company, using industry standard methodologies for risk adjustment and identification of potentially preventable hospital utilization developed by 3M. CCNC's favorable impact on both cost and access in this population suggests significant potential benefit to expanding CCNC's role to serve Medicare patients statewide.

### CCNC taking on more patients with complex, expensive health needs

CCNC enrollment of the ABD non-dual population increased by 33 percent (from 54,291 to 72,297 individuals) between 2007 and 2010<sup>1</sup>. These ABD non-dual enrollees have more complex medical needs overall than the non-dual ABD population that is not enrolled in CCNC. Figure 1 shows the distribution of the Medicaid population by ABD and non-dual ABD adult and child. While the adult ABD population only accounts for 10 percent of the non dual enrollment, it consumes 36 percent of the spend and 62 percent of the potentially preventable inpatient spend (including both potentially preventable admissions and readmissions).

**Figure 1:** Distribution of members and spend for 7/09-6/10 (2010):

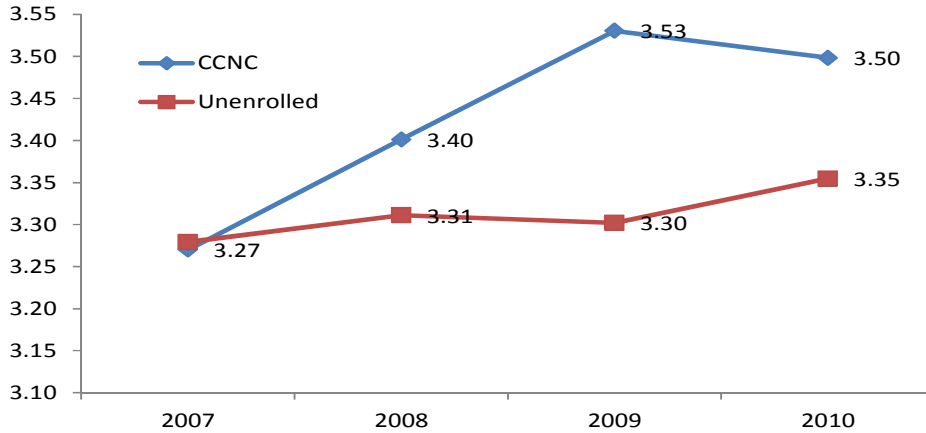


It is important to understand that CCNC is reducing costs for enrolled members even as they are enrolling increasingly sicker individuals with complex and chronic health care

<sup>1</sup> Note: 2010 data in this report reflect the 12-month period ending June 2010, the most recent 12-month period for which complete data are currently available).

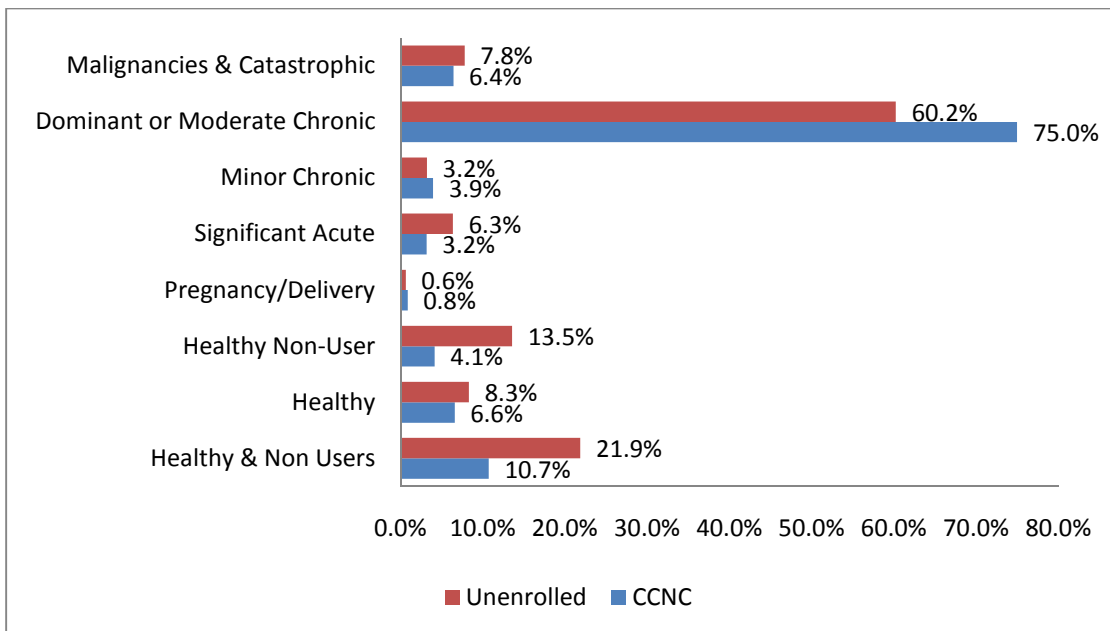
conditions. While the overall risk scores for the CCNC and the unenrolled populations were similar (3.27, 3.28) in 2007, the overall “risk score” among CCNC enrollees now is 3.50 versus 3.35 for the unenrolled. **See Figure 2.**

**Figure 2: Risk scores of adult ABD Medicaid recipients, CCNC enrolled vs. unenrolled.**



In fact, a full 81.4 percent of CCNC enrollees have either a dominant or moderate chronic condition, a malignancy, or a catastrophic health condition, compared to 68 percent of the unenrolled population. Similar trends are evident within the adult, non-dual ABD population. **See Figure 3.**

**Figure 3. Adult, non-dual ABD population breakdown, CCNC vs. Unenrolled.**



## Better access, lower spending

Given this population's health status, providing ready access to health care service is extremely important. Among CCNC enrollees, only 4.1 percent are not using the health care system at all, compared to 13.5 percent of the unenrolled population. This strongly suggests that among relatively healthy non-dual ABD adult recipients, those enrolled in CCNC are experiencing better access to care.

It is enlightening to compare the actual spend per member, per month (PMPM) for the adult ABD population with the expected PMPM spend. Despite broadening access to care, total spending for the CCNC adult enrolled population (adjusted for clinical risk) has been *less than expected* for all years reviewed. **See Figure 4.** In contrast, spending for the unenrolled population has been significantly *higher than expected* since 2008. In the most recent 12-month period, spending for the enrolled population was 1.5% *less than expected* versus 10.1 percent *higher than expected* actual spend for the unenrolled group.

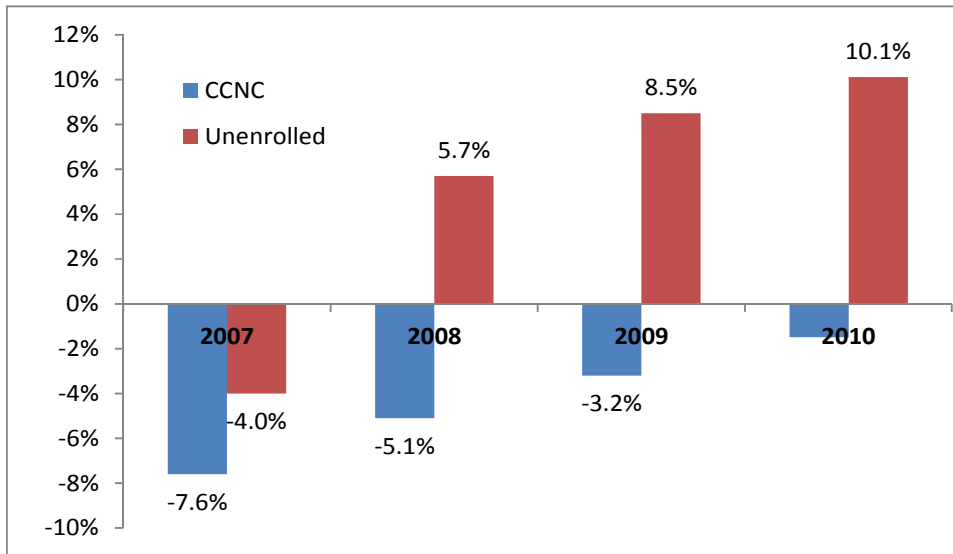
**Figure 4.** PMPM costs for Adult ABD Population

<u>CCNC</u>	2007	2008	2009	2010
Total PMPM	\$1,377	\$1,408	\$1,487	\$1,447
CRG Weight <sup>2</sup>	3.2702	3.4011	3.5304	3.4981
Expected PMPM	\$1,490	\$1,483	\$1,537	\$1,468
Variance	-7.6%	-5.1%	-3.2%	-1.5%
<u>Unenrolled</u>				
Total PMPM	\$1,434	\$1,526	\$1,559	\$1,551
CRG Weight	3.2793	3.3112	3.3020	3.3547
Expected PMPM	\$1,494	\$1,444	\$1,437	\$1,408
Variance	-4.0%	5.7%	8.5%	10.1%

The nearly 12% delta between PMPM costs for CCNC and unenrolled populations is apparent when this information is presented graphically. **See Figure 5.**

<sup>2</sup> CRG – clinical risk group. A claims-based classification system that assigns individuals to a single, mutually-exclusive risk group based on historical, clinical and demographic characteristics.

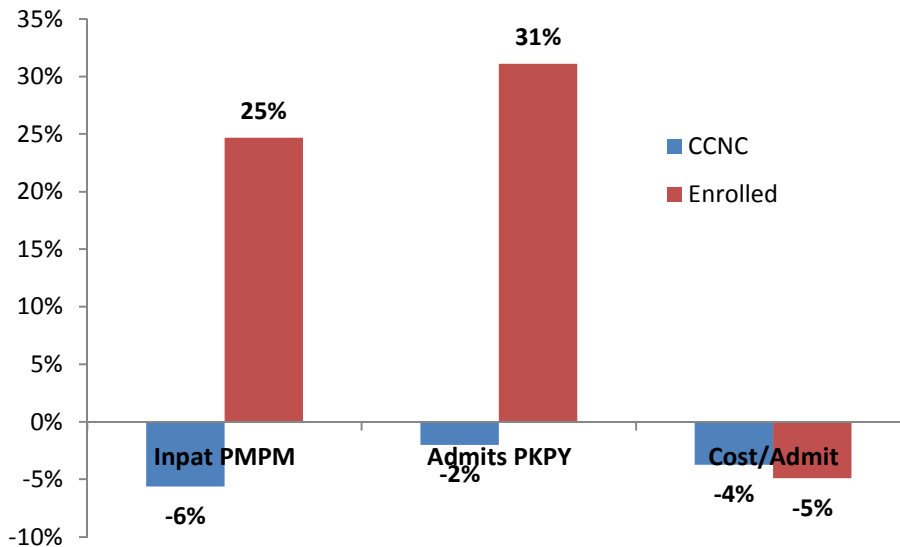
**Figure 5.** Actual versus expected costs for CCNC vs. unenrolled population



### Inpatient efficiencies

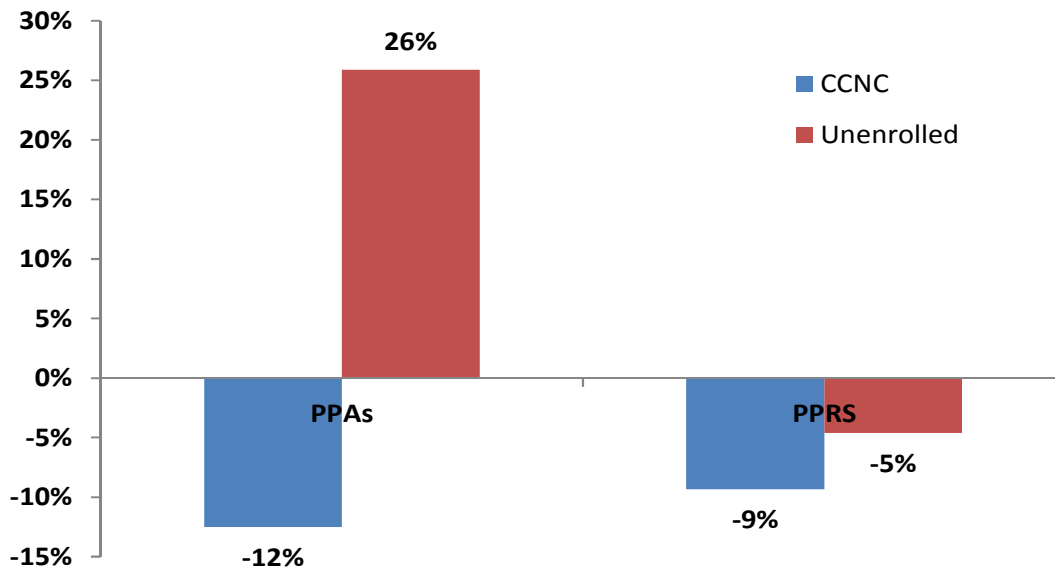
Reducing hospitalizations in the enrolled group appears to be a significant factor in these savings. Over a four-year period, CCNC enrolled inpatient PMPM spend has shown a 6% decrease. This decrease is a combined result of reduction in utilization (2%) and reduction in the cost per admission(4%). Admission rates have declined by 2.0 percent, and inpatient spending has declined by 5.6 percent. **See Figure 6.**

**Figure 6.** Four-year % Change for Adult ABD Population: Inpatient Spending, Inpatient Admissions Per Thousand members per year (PKPY) and cost per admission:



In contrast, inpatient spend PMPM for unenrolled adult ABD non-duals have increased by 25%. While the unenrolled adult ABD population has also seen a decrease in the cost per admit (5%) the 31% trend in the utilization rate PKPY has resulted in a 25% increase in the spend PMPM. Reduction in inpatient utilization has been even more impressive for preventable admissions.” See Figure 7. Potentially preventable admissions have declined by 12.5 percent among CCNC-enrolled population, while increasing by 25.9 percent among the unenrolled. Potentially preventable readmissions have declined by 9.3 percent among CCNC enrollees, compared to a 4.6 percent decline among the unenrolled.

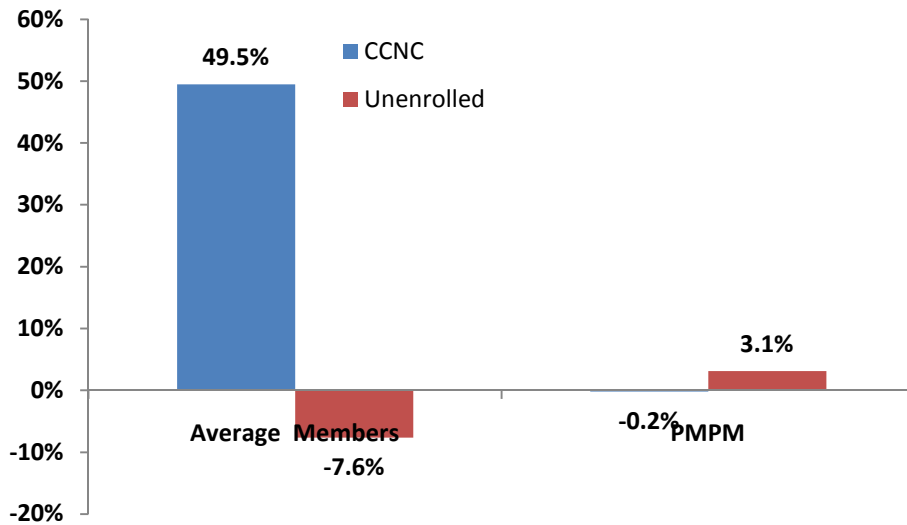
**Figure 7.** Four-year % Change for Adult ABD Population: Preventable Admissions, Readmissions PKPY



### Impact on behavioral care

There is also evidence that CCNC’s system of care has produced favorable results in the treatment of mental illnesses. Medicaid recipients with serious, chronic mental illness have moved into the CCNC program at a faster rate than the non-chronic mentally ill population. See Figure 8. CCNC enrollment of these members has increased by 49.5 percent over the past 4 years, while the population with serious mental illness has decreased by 7.6 percent in the unenrolled population. In the most recent 12 month period, nearly a third of the adult non-dual ABD population – 21,070 of 72,297 CCNC enrollees – has a serious and chronic mental illness. Yet per-member, per-month spending for this population within CCNC has declined by 0.2 percent while increasing by 3.1 percent outside of CCNC

**Figure 8.** Four-year Trends in the Adult ABD Population with a Serious Chronic Mental Health Condition:



A similarly favorable impact on this population’s hospitalization rate is also evident, with both *total* inpatient admission rates and *potentially preventable* admission rates decreasing in the CCNC population. **See Figure 9.** Among non-enrolled members with a serious, chronic mental illness, both inpatient admittances and potentially preventable admissions are rising. Potentially preventable readmittances among the non-enrolled are decreasing, but they remain significantly higher than the CCNC-enrolled group.

**Figure 9.** Preventable Admissions and Readmissions for adult ABD population chronic mental illness

