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North Carolina Community Care Networks Medicare Health Care Quality Demonstration Performance Year Two Financial Results

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EXECUTIVE SUMMARY

This report contains information regarding North Carolina Community Care Networks' (NC-CCN) financial results for the second performance year (PY2) of the Medicare Health Care Quality Demonstration (January 1, 2011–December 31, 2011). This report includes the following information regarding the financial reconciliation: (1) an overview of the intervention and comparison groups, (2) performance payment results for PY2, and (3) savings calculation methodology. All calculations were performed according to the methods set forth in the NC-CCN Demonstration Protocol, Medicare Prescription Drug, Improvement, and Modernization Act (MMA) §646 Health Care Quality Demonstration (2009).

E.1 Performance Payment Results for the Second Performance Year

The PY2 financial reconciliation results are determined using a 2-year trend from the baseline (calendar year 2009) to PY2 (calendar year 2011). Overall trends in per beneficiary per month (PBPM) expenditures, standardized for baseline differences, are shown in **Figure E-1** for the intervention group (IG) and target. Standardized expenditures were higher for the IG ($852.75 PBPM) than the comparison-adjusted target ($846.12 PBPM) by 0.8%. Because there were no savings, NC-CCN did not receive any performance payments for PY2. NC-CCN would have needed to underspend the standardized target PBPM amount by $22.35, which is 2.64% (the minimum savings rate [MSR]), to qualify for payments during this PY. Figure E-1 depicts the level of expenditures necessary to achieve savings in PY2 ($823.77 PBPM) with a circle labeled "Target – Minimum Savings Requirement PY2."

E.2 Intervention and Comparison Characteristics

The IG consists of beneficiaries who received a qualifying service at a participating provider in 26 counties in North Carolina. The comparison group (CG) for NC-CCN consists of beneficiaries from selected counties in five neighboring states (Virginia, Kentucky, Tennessee, South Carolina, and Georgia) identified using the NC-CCN beneficiary assignment algorithm. In general, the PY2 CG is similar to the NC-CCN IG in nearly all important respects.

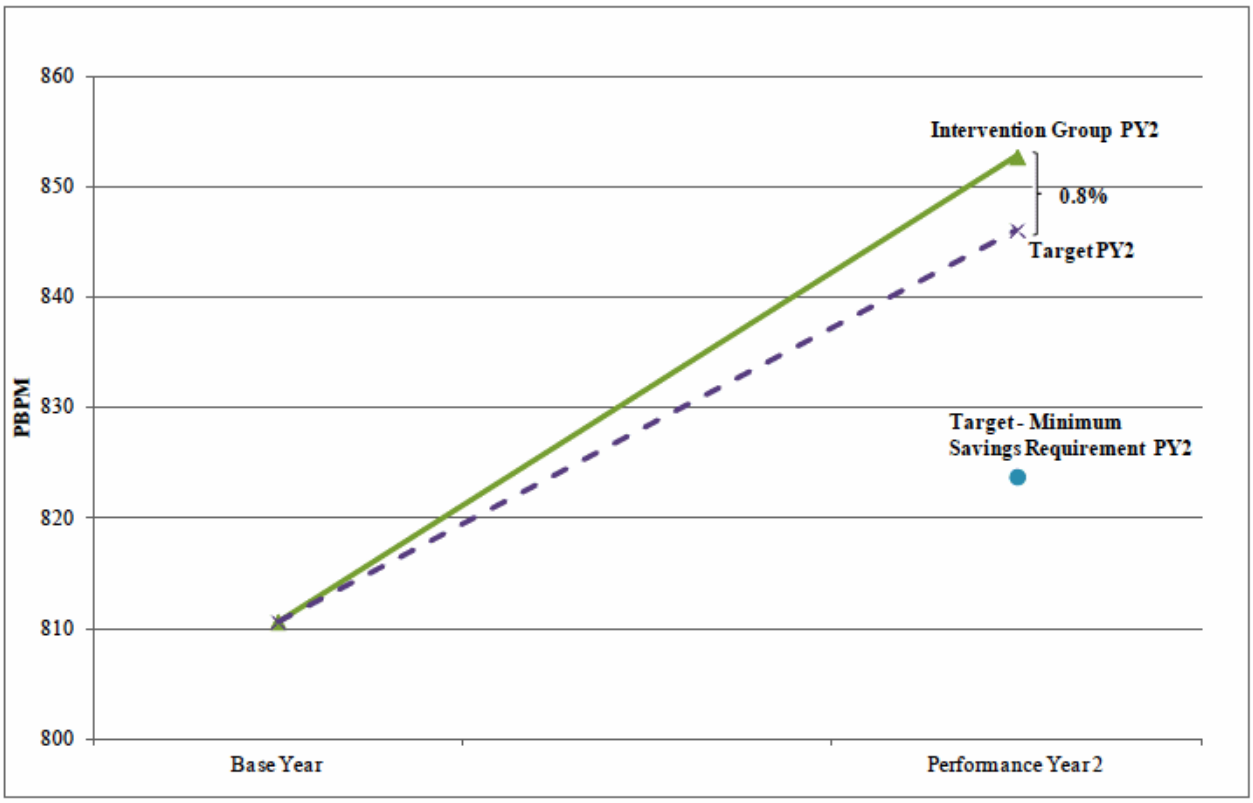
- Because the comparison target area encompasses counties in five states rather than one, the total number of PY2 CG beneficiaries was larger than the IG (103,150 vs. 52,966). The CG is selected from counties in five states to increase the precision of the target by minimizing the effect of both random and systematic fluctuations any one area could have. The larger CG also lowers the minimum savings requirement, because increasing population size decreases the MSR.

- The two groups had similar numbers of office and outpatient visits (mean = 11.0 in the IG and 10.2 in the CG), as well as similar hospital discharge rates (Table 3).

- The composition of the two groups was very similar with respect to gender, age group, hospice status, and reason for Medicare eligibility (Table 3).

- The mortality rate of the IG was slightly higher than the mortality rate of the CG in both the base year (7.1% vs. 6.5%) and in PY2 (7.0% vs. 6.3%).

Figure E-1
Performance year two per beneficiary per month expenditures



NOTES

1. The intervention group's comparison-adjusted target was $846.12 PBPM in PY2. The intervention group's standardized actual expenditures were $852.75 PBPM--higher than the target by 0.8%.
2. The value of the target minus the minimum savings requirement for PY2 was $823.77 PBPM. If the expenditures of the NC-CCN assigned beneficiaries in PY2 were below this point, NC-CCN would have achieved savings.

SOURCE: RTI analysis of October 2008 through December 2011 100% Medicare Claims Files and Enrollment Datasets.

COMPUTER OUTPUT: r56svn_saving.out (PY2)

SECTION 1
OVERVIEW OF PERFORMANCE YEAR TWO RESULTS FOR THE NORTH CAROLINA COMMUNITY CARE NETWORKS' MEDICARE HEALTH CARE QUALITY DEMONSTRATION

This report contains information regarding North Carolina Community Care Networks' (NC-CCN) financial results for the second performance year (PY2) of the Medicare Health Care Quality Demonstration (January 1, 2011–December 31, 2011). This report includes the following information regarding the financial reconciliation: (1) an overview of the intervention and comparison groups, (2) performance payment results for PY2, and (3) savings calculation methodology.

All calculations were performed according to the methods set forth in the NC-CCN Demonstration Protocol, Medicare Prescription Drug, Improvement, and Modernization Act (MMA) §646 Health Care Quality Demonstration (2009).

In this section, we will describe the methodology for selecting beneficiaries and some attributes of the intervention group (IG) and comparison group (CG) for PY2. Tables 1–4 contain information describing the attributes of the IG and CG for PY2. The information in these tables is drawn from the profile tables, which are included as an appendix to this report. The interested reader is referred to these profile tables for a more in-depth look at the IG and CG.

1.1 Beneficiary Assignment Methodology

PY2 is defined as calendar year 2011. The base year (BY) is the year before PY1, calendar year 2009, and did not change from PY1 to PY2.

1.1.1 Intervention Group

The IG population consists of North Carolina residents who meet general eligibility criteria (defined in Section 2 of the Protocol) with at least one qualifying evaluation and management (E&M) visit with a participating provider, regardless of the place of service ZIP code on that claim line item. The IG beneficiaries are identified using final action claims with dates of service falling within the start and end dates of the demonstration year and a paid-date within 6 months of the end of the demonstration year. There were 52,966 beneficiaries assigned to the IG in PY2 (see **Table 1**).

Two steps are required in assigning beneficiaries to the PY2 IG. They involve, in turn, identifying participating practices and providers and identifying IG beneficiaries:

1. Use the list of Taxpayer Identification Numbers (TINs) and National Provider Identifiers (NPIs), sent by NC-CCN to the Centers for Medicare & Medicaid Services (CMS), to identify participating practices and providers. Participating providers are identified by NC-CCN before the start of the PY.

2. Identify PY2 IG beneficiaries as beneficiaries who have at least one qualifying E&M visit with a participating provider (from Step 1), meet the general eligibility criteria

for the demonstration IG, and were not assigned to the Physician Group Practice Transition Demonstration (PGP-TD).

In PY2, CMS implemented a policy to prevent beneficiaries from being included in the savings calculations for more than one shared savings program at a time. The PGP-TD was the only shared savings program in NC in operation during NC-CCN's second performance year (calendar year 2011). The first performance year of PGP-TD was calendar year 2011 – the same year as PY2 for NC-CCN. Beneficiaries who were assigned to the first performance year of PGP-TD were excluded from both PY2 and the BY for the NC-CCN PY2 savings calculation. RTI obtained a list of the PGP-TD beneficiaries from the PGP-TD implementation contractor to perform the exclusions.

The BY IG consists of beneficiaries (1) who received a qualifying E&M visit during the BY from a provider who was a participating PY1 provider and (2) who met general eligibility criteria for the demonstration. Beneficiaries who were assigned to the first performance year (calendar year 2011) of PGP-TD were excluded from the BY for the NC-CCN PY2 savings calculation. Due to the exclusion of PGP-TD beneficiaries, the beneficiaries in the BY changed slightly from PY1 to PY2.[1]

1.1.2 Comparison Group

The CG population consists of (1) residents residing in a comparison county (depicted in **Figure 1**) in Georgia, Kentucky, South Carolina, Tennessee, or Virginia (2) who met the general eligibility criteria (defined in Section 2 of the Protocol) and (3) had at least one qualifying E&M visit with a primary care physician.[2] The comparison counties were selected because of their similarity to the NC-CCN counties with regard to the sociodemographic characteristics of their Medicare populations. The CG beneficiaries are identified using final action claims with dates of service falling within the start and end dates of the demonstration year and a paid-date within 6 months of the end of the demonstration year. There were 103,150 beneficiaries assigned to PY2 for the CG and 97,345 beneficiaries assigned to the BY for the CG (see Table 1). Two steps are involved in assigning beneficiaries to the CG:

1. Identify beneficiaries residing in the comparison counties who received at least one qualifying E&M visit during the demonstration year.

2. Among beneficiaries identified in step 1, retain those who meet all other eligibility criteria for the demonstration CG during the demonstration year.

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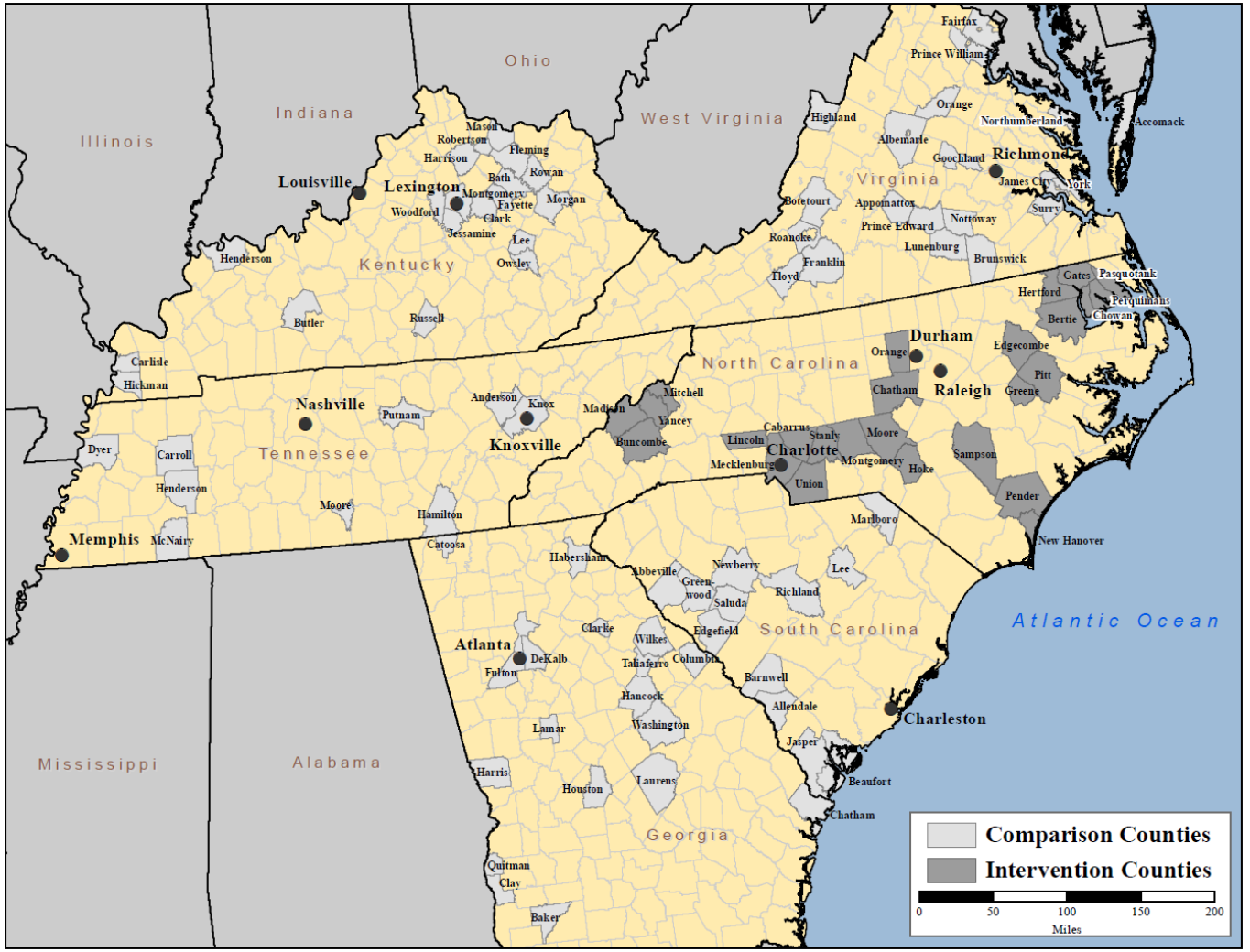
[1] There were 44,174 beneficiaries assigned to the BY in the PY1 report and 44,143 beneficiaries assigned to the BY for this report – PY2.

[2] Primary care providers are defined as providers with one of the following primary taxonomy codes in the National Plan and Provider Enumeration System (NPPES): family medicine (207Q00000X, 207QA0505X, 207QG0300X), internal medicine (207R00000X, 207RG0300X), general practice (208D00000X), physician assistant (363A00000X, 363AM0700X), nurse practitioner (363L00000X, 363LA2100X, 363LA2200X, 363LF0000X, 363LG0600X, 363LP2300X), or clinical nurse specialist (364S00000X, 364SA2100X, 364SA2200X, 364SC2300X, 364SF0001X, 364SG0600X). Visits to Federally Qualified Health Centers (FQHCs) and to Rural Health Clinics (RHCs) are counted as one E&M visit. FQHC visits are defined using bill type 73x in the BY and bill types 73x and 77x in PY2. RHC visits are defined using bill type 71x.

Figure 1
Map of the intervention group and comparison group counties



1.2 Characteristics of the Intervention and Comparison Groups

The IG is a collection of counties in the state of North Carolina and the CG includes counties in Georgia, Kentucky, South Carolina, Tennessee, and Virginia. The IG and CG counties are depicted in Figure 1.

Table 1 provides information regarding the selection of beneficiaries for the PY2 IG and CG discussed in sections 1.1.1 and 1.1.2. Further, Table 1 shows the number of beneficiaries that were excluded on the basis of the criteria in the protocol. Beneficiaries in the IG and CG are first selected from their respective counties on the basis of whether they are covered by Medicaid in at least one month of the assignment period and at least one month of the performance period. Medicaid beneficiaries are identified as beneficiaries for whom the beneficiary's state of residence was liable and paid for the beneficiary's monthly premiums.[3] Next, beneficiaries are excluded from assignment based on several criteria set forth in the Demonstration Site Protocol. The same exclusions, shown in Table 1, apply to the IG and CG with one exception. The IG has the additional exclusion for beneficiaries that were assigned to PGP-TD as discussed in Section 1.1.1. The proportion of beneficiaries excluded in each group/year is quite similar across each group/year.[4]

Further, beneficiaries in the IG must have a qualifying patient visit with a participating provider while beneficiaries in the CG must have a qualifying visit with a primary care provider. The CG is almost double the size of the IG in the BY and PY (in PY2 103,150 vs. 52,966), an artifact of the larger number of counties included in the comparison area.

Table 2 provides information on the participating practices and providers. There was a 9% decrease in the number of providers used for RTI assignment from PY1 to PY2 (932 to 847). Twenty-two practices left the demonstration after PY1 and 33 practices joined in PY2. Of the 245 practices participating in PY2, 212 were participating in PY1.

Table 3 presents a summary of several utilization, expenditure, and demographic measures for the IG and CG groups in PY2.[5] The mean count of qualified office or other outpatient E&M visits is shown for both the IG and CG. The mean visit count is similar across the groups, ranging from just under 10 visits to slightly more than 11 visits per beneficiary per year. Likewise, the mean count of hospital discharges is similar across all of the groups and ranges from 0.57 to 0.60.

Table 3 also shows two mean annualized Medicare expenditures measures. One is per beneficiary per year and the other is per beneficiary per month (PBPM). Expenditures for covered services that are incurred by beneficiaries without ESRD are capped at a value equal to

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3 The Medicare Entitlement/Buy-In Indicator is used to identify Medicaid beneficiaries. Beneficiaries with at least one month during the assignment period and performance period of Medicare Parts A and B, Medicaid state buy-in are eligible for inclusion in the intervention or comparison group. Medicaid state buy-in status is determined by a Medicare Entitlement/Buy-In Indicator value of C.

4 Reference Table 1 presents the Table 1 information for the first performance year.

5 Reference Table 2 presents the Table 3 information for the first performance year.

Table 1
Beneficiary assignments and exclusions, performance year two

Assignments and exclusions	BY Intervention Group	PY2 Intervention Group	BY Comparison Group	PY2 Comparison Group
1. Beneficiaries covered by Medicaid in the assignment period[1]	313,846	332,099	161,276	173,748
2. Total beneficiaries excluded from assignment[2]	66,032	69,469	40,368	47,279
Exclusions during the assignment period[3]				
Not alive on January 1 of demonstration period	5,409	5,509	2,440	2,491
At least one month of Part A-only or Part B-only coverage	4,147	3,980	2,263	2,297
At least one month of Medicare Advantage enrollment	48,519	50,976	32,209	38,714
Had coverage under employer-sponsored group health plan	1,972	1,753	1,527	1,307
Total exclusions during assignment period	59,178	61,371	37,935	44,210
Additional exclusions during the demonstration period[4]				
At least one month of Part A-only or Part-B only coverage	143	140	150	114
At least one month of Medicare Advantage enrollment	704	996	784	1,508
Had coverage under employer-sponsored group health plan	36	41	23	20
Not covered by Medicaid	2,999	2,933	1,490	1,447
Assigned to PGP TD[5]	2,997	4,014	—	—
Total exclusions during the demonstration period	6,854	8,098	2,433	3,069
3. Beneficiaries eligible for assignment (line 1 - line 2)	247,814	262,630	120,908	126,469
4. Intervention group: Beneficiaries with a qualifying patient visit with a participating provider at a participating practice[6,7]	42,422	51,386	—	—
5. Intervention group: Beneficiaries with a qualifying patient visit with a participating provider at a non-participating practice	1,721	1,580	—	—
6. Intervention group: Assigned beneficiaries (line 4 + line 5)	44,143	52,966	—	—
7. Comparison group: Beneficiaries eligible for assignment who were provided at least one office or other outpatient E&M service by a primary care provider[8]	—	—	97,345	103,150

(continued)

Table 1
Beneficiary assignments and exclusions, performance year two (continued)

NOTES:

Base Year: January 1, 2009–December 31, 2009

Performance Year 2: January 1, 2011–December 31, 2011

1. The Medicare Entitlement/Buy-In Indicator is used to identify Medicaid beneficiaries. Beneficiaries with at least one month during the assignment period and performance period of Medicare Parts A and B, Medicaid state buy-in are eligible for inclusion in the intervention or comparison group. Medicaid state buy-in status is determined by a Medicare Entitlement/Buy-In Indicator value of C.
2. Exclusions are not mutually exclusive. A beneficiary may be excluded for more than one reason
3. For the base year: October 2008–September 2009; For performance year two: October 2010–September 2011.
4. Exclusions during the demonstration period ensure that beneficiaries meet the general eligibility requirements outlined in protocol §2.1.1 during the entire demonstration period, not only during the assignment period.
5. Beneficiaries assigned to the Physician Group Practice Transition Demonstration (PGP TD) in performance year one (calendar year 2011) are excluded from NC-CCN BY and PY2 for PY2 financial reconciliation.
6. Beneficiaries for Highgate Family Medicine Center, Durham Family Practice, Charles Drew Medical Center, Prospect Hill CHC, and Scott Medical Center (CHC) and beneficiaries with a qualifying patient visit with participating FQHCs/RHCs are selected regardless of location of practice.
7. Beneficiaries with a qualifying patient visit with a participating provider both at a participating practice and at a non-participating practice are included in this count.
8. Primary care providers include those in family medicine, general medicine, internal medicine, geriatric medicine, and physician assistant, nurse practitioner, or clinical nurse specialist who provides primary care services. Visits to Federally Qualified Health Centers (FQHC) and to Rural Health Clinics (RHC) are counted as one E&M visit. FQHC visits are defined using bill type 73x and 77x. RHC visits are defined using bill type 71x.

COMPUTER OUTPUT: r52tb1by_exclusions.out (IG BY); r52tb1py_exclusions.out (IG PY2); r80tbl1b_CG_BY_exclusions.out (CG BY); r53tbl1_table1_exclusions.out (CG PY2)

SOURCE: RTI analysis of October 2008 through December 2011 100% Medicare Claims Files and Enrollment Datasets.

Table 2
Change in participating practices and providers

Participating Practices and Providers	PY1	Dropped in PY2	Added in PY2	PY2	Percent Change
Participating physician practices	194	17	15	192	-1.0%
Participating FQHCs/RHCs	32	2	8	38	18.8%
Combination of RHC and participating physician practice	8	3	10	15	87.5%
Total participating practices	234	22	33	245	4.7%
Total providers identified by NC-CCN[1]	932	95	10	847	-9.1%

NOTES:

FQHC–Federally Qualified Health Center; RHC–Rural Health Center

1. Includes 1 FQHC/RHC because column in participant list is used to mark FQHC/RHC providers.

the 99th percentile of the pooled sample (IG plus CG beneficiaries) claims distribution for beneficiaries without ESRD, rounded to the nearest thousand dollars, which equals $116,000 annually in PY2. Expenditures for covered services that are incurred by beneficiaries with ESRD are capped at an annualized value equal to the 99th percentile of the national claims distribution for beneficiaries with ESRD, rounded to the nearest thousand dollars, which equals $314,000 annually in PY2. In the BY, these amounts were $109,000 annually for beneficiaries without ESRD and $306,000 annually for beneficiaries with ESRD.[6] The expenditures shown in Table 3 are not adjusted for demographic differences. Overall, the IG expenditures were higher than the CG expenditures in PY2.

Lastly, Table 3 provides information regarding the demographic characteristics of the beneficiaries in the IG and CG which include age, gender, etc. The reason for Medicare eligibility was similar across each of the groups; the majority of beneficiaries were eligible by age. The mortality rate of the IG was slightly higher than the mortality rate of the CG in both the BY (7.1% vs. 6.5%) and in PY2 (7.0% vs. 6.3%). The percentage of beneficiaries in hospice was similar in the two groups in both PYs—approximately 4.0%. The composition of the two groups was very similar with respect to gender, age group, and reason for Medicare eligibility.

Table 4 shows the distribution of assigned beneficiary residence for the IG. Among the demonstration counties, the largest percentage of beneficiaries resided in Mecklenburg County for both PYs. The distribution of IG beneficiary residence was similar across all demonstration periods, with a slight increase in the percentage of beneficiaries residing in other North Carolina counties from the BY to PY2.[7]

6 In PY1, the expenditures were capped at $110,000 annually for beneficiaries without ESRD and at $308,000 annually for beneficiaries with ESRD.

7 Reference Table 3 presents the Table 4 information for the first performance year.

Table 3
Utilization, expenditures, and demographics of intervention and comparison group beneficiaries, performance year two

Assignments and exclusions	BY Intervention Group	PY2 Intervention Group	BY Comparison Group	PY2 Comparison Group
Mean count of qualified office or other outpatient E&M visits[1]	10.40	11.02	9.81	10.20
Mean count of hospital discharges[2]	0.59	0.60	0.57	0.57
Mean annualized Medicare expenditures PBPY[3]	$13,652	$14,633	$12,774	$13,631
Mean annualized Medicare expenditures PBPM[3]	$1,138	$1,219	$1,064	$1,136
Mortality (%)				
Beneficiary deaths	7.1	7.0	6.5	6.3
Beneficiaries survived	92.9	93.0	93.5	93.7
Hospice status (%)				
Hospice	3.8	4.2	3.7	4.0
Non-hospice	96.2	95.9	96.3	96.0
Medicare eligibility (%)				
Aged[4]	55.1	53.9	53.6	51.8
Disabled	42.8	43.5	44.2	45.4
ESRD[5]	2.1	2.6	2.2	2.8
Gender (%)				
Male	31.7	32.7	33.6	34.6
Female	68.3	67.3	66.4	65.4
Age (%)				
Age < 65	44.2	45.2	45.6	47.2
Age 65 - 74	23.2	23.3	24.3	23.9
Age 75 - 84	20.2	19.3	19.2	18.3
Age 85+	12.4	12.2	10.9	10.6

(continued)

Table 3
Utilization, expenditures, and demographics of intervention and comparison group beneficiaries, performance year two (continued)

NOTES:

Base Year: January 1, 2009–December 31, 2009

Performance Year 2: January 1, 2011 - December 31, 2011

1. Qualified E&M visits are listed in §9.1 of the Protocol and are counted regardless of performing provider. Visits to Federally Qualified Health Centers (FQHC) and to Rural Health Clinics (RHC) are counted as one E&M visit.
2. Refers to hospital discharges at any provider.
3. Annualized Medicare expenditures per beneficiary are calculated by dividing actual expenditures by the fraction of the year the beneficiary is alive and are capped at the weighted 99th percentile of the claims distribution for beneficiaries without ESRD and at the weighted 99th percentile of the national claims distribution for beneficiaries with ESRD. For performance year two, annualized expenditures are capped at $116,000 for non-ESRD beneficiaries and at $314,000 for ESRD beneficiaries. For the base year, annualized expenditures are capped at $109,000 for non-ESRD beneficiaries and at $306,000 for ESRD beneficiaries.
4. Includes beneficiaries age 65 and older without ESRD.
5. Includes beneficiaries with ESRD regardless of age.

COMPUTER OUTPUT:

IG BY: r52tb2by_EM_Visits.out; r52tb3by_hosp_discharges.out; r52tb4by_exp.out; r52tb6by_demographic.out

IG PY2: r52tb2py_EM_Visits.out; r52tb3py_hosp_discharges.out; r52tb4py_exp.out; r52tb6py_demographic.out

CG BY: r80tbl2b_CG_BY_EM_Visit.out; r80tbl3b_BY_discharge.out; r80tbl4b_CG_BY_exp.out; r80tbl6b_CG_BY_demogr.out

CG PY2: r53tbl2_table2_E&M_vis.out; r53tbl3_table3_discharges.out; r53tbl4_table4_exp.out; r53tbl6_table6_demographic.out

SOURCE: RTI analysis of October 2008 through December 2011 100% Medicare Claims Files and Enrollment Datasets.

Table 4
Distribution of North Carolina Community Care Network assigned beneficiary residence by demonstration area counties, performance year two

County name	County number[1]	BY Intervention Group	PY2 Intervention Group
Bertie	34070	3.0	2.8
Buncombe	34100	6.7	7.2
Cabarrus	34120	6.0	5.7
Chatham	34180	0.8	1.1
Chowan	34200	1.1	1.0
Edgecombe	34320	2.1	2.0
Gates	34360	0.5	0.5
Greene	34390	1.0	0.8
Hertford	34450	2.7	2.8
Hoke	34460	1.1	1.0
Lincoln	34540	2.3	2.2
Madison	34570	1.8	1.5
Mecklenburg	34590	17.1	16.6
Mitchell	34600	1.4	1.1
Montgomery	34610	1.6	1.5
Moore	34620	2.9	2.7
New Hanover	34640	5.4	5.3
Orange	34670	1.0	1.1
Pasquotank	34690	1.1	1.1
Pender	34700	1.5	1.4
Perquimans	34710	0.6	0.5
Pitt	34730	8.2	6.9
Sampson	34810	2.1	1.8
Stanly	34830	2.9	3.2
Union	34890	1.8	2.7
Yancey	34981	1.7	1.3
Other North Carolina Counties	—	21.5	24.3

NOTES:
Base Year: January 1, 2009–December 31, 2009; Performance Year 2: January 1, 2011–December 31, 2011

1. State and county codes used by the Social Security Administration (SSA)

COMPUTER OUTPUT: r52tb7by_demo_area.out (IG BY); r52tb7py_demo_area.out (IG PY2)

SOURCE: RTI analysis of October 2008 through December 2011 100% Medicare Claims Files and Enrollment Datasets.

SECTION 2
PERFORMANCE YEAR TWO RESULTS

This section presents the PY2 financial reconciliation results. The final section of the report discusses the methodology for the performance payment calculation.

The PY2 financial reconciliation results are determined using a two year trend from the baseline (calendar year 2009) to PY2 (calendar year 2011). **Figure 2** shows the two year trend for PY2. Standardized expenditures were higher for the IG ($852.75 PBPM) than the comparison-adjusted target ($846.12 PBPM) by 0.8%. NC-CCN needed to underspend the standardized target PBPM amount by $22.35, which is 2.64% (the MSR in line [M] of **Table 5**), to qualify for payments during PY2. Figure 2 depicts the level of expenditures necessary to achieve savings in PY2 ($823.77 PBPM) with a circle labeled "Target – Minimum Savings Requirement PY2." There were no savings in PY2; therefore NC-CCN did not receive any performance payments for PY2.

Figure 3 depicts the financial reconciliation results for the first performance year (PY1). The financial reconciliation results in PY1 were determined using a one year trend. Standardized expenditures were higher for the IG ($827.84 PBPM) than the comparison-adjusted target ($814.96 PBPM) by 1.6%. Since there were no savings in PY1, NC-CCN did not receive any performance payments for PY1. The trend in the comparison-adjusted target in PY1 was relatively flat since expenditures in the CG increased by less than 1% from $766.09 to $767.13. It is important to note that changes over the course of one year are not always reflective of the changes that would be seen over multiple years. Growth in any one year could be high or low and regress to the mean the following year.

Figure 4 combines Figure 2 with Figure 3 to depict the financial reconciliation results for the two performance years. The PY2 results are determined using a two year trend from the baseline (calendar year 2009) to PY2 (calendar year 2011), while the PY1 results were determined using a one year trend from the baseline (calendar year 2009) to PY1 (calendar year 2011). The figure shows the IG and the target for both PY1 (a one year trend) and PY2 (a two year trend). As discussed above, standardized expenditures were higher for the IG than the comparison adjusted target in both years. Since there were no savings in either year, NC-CCN has not received any performance payments.

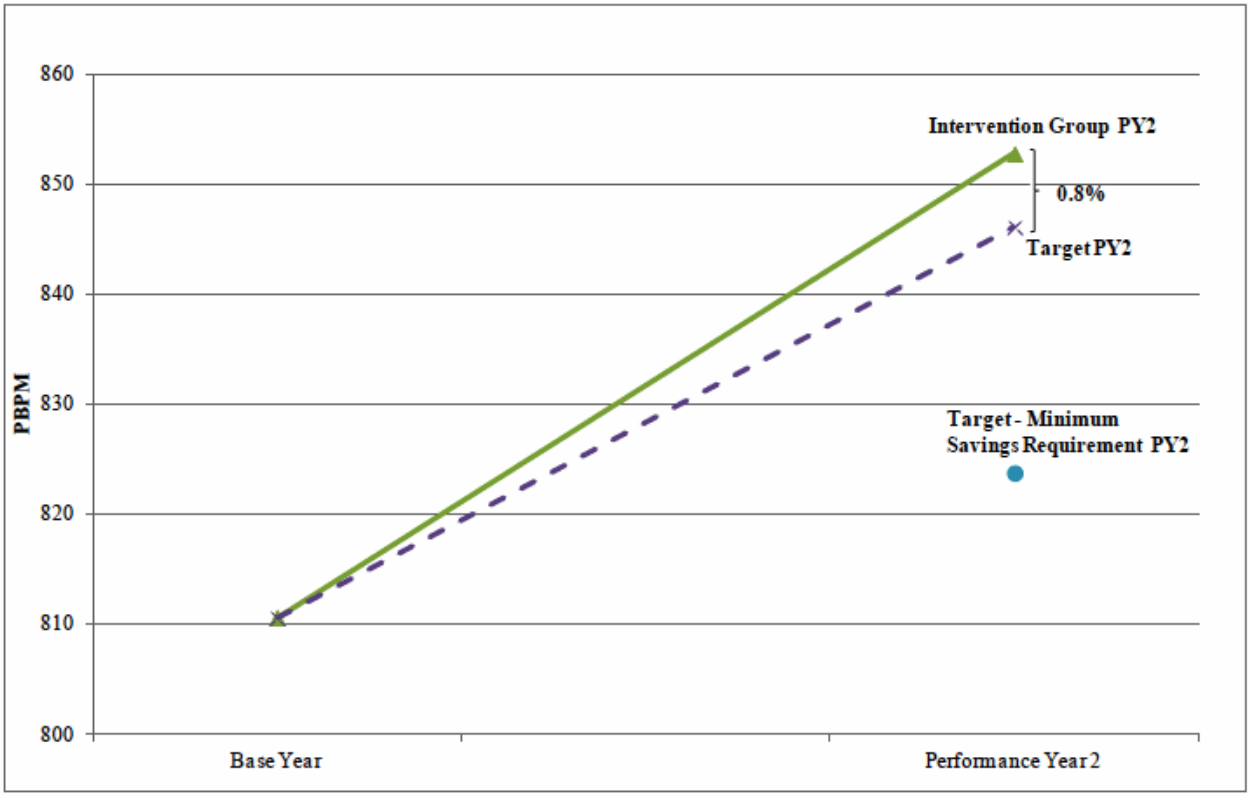
As described in Section 1.1.1, CMS implemented a policy to prevent beneficiaries from being included in the savings calculations for more than one shared savings program at a time. As a result, beneficiaries who were assigned to the first performance year of PGP-TD were excluded from both PY2 and the BY for the NC-CCN PY2 savings calculation. The BY expenditures shown in Figure 4 differ from PY1 to PY2 because of the additional exclusion in PY2 to remove beneficiaries assigned to the PGP-TD.

Table 5 provides the PY2 results for PBPM expenditures, demographic factors, the standardized target and actual assigned beneficiary expenditures, gross savings, the minimum savings requirement, net savings, shareable savings, and performance payments.[8] NC-CCN did

[8] Reference Table 4 presents the performance payment results for the first performance year.

not generate gross savings or net savings in PY2. NC-CCN spent $6.63 more PBPM than their standardized target (line [L] Gross Savings). As discussed above, NC-CCN needed to underspend the standardized target PBPM amount by the minimum savings requirement of $22.35 PBPM (line [M]) to qualify for shared savings in PY2. The total performance payment earned by NC-CCN for PY2 ($0) can be found on line [Y] in Table 5.

Figure 2
Performance year two per beneficiary per month expenditures



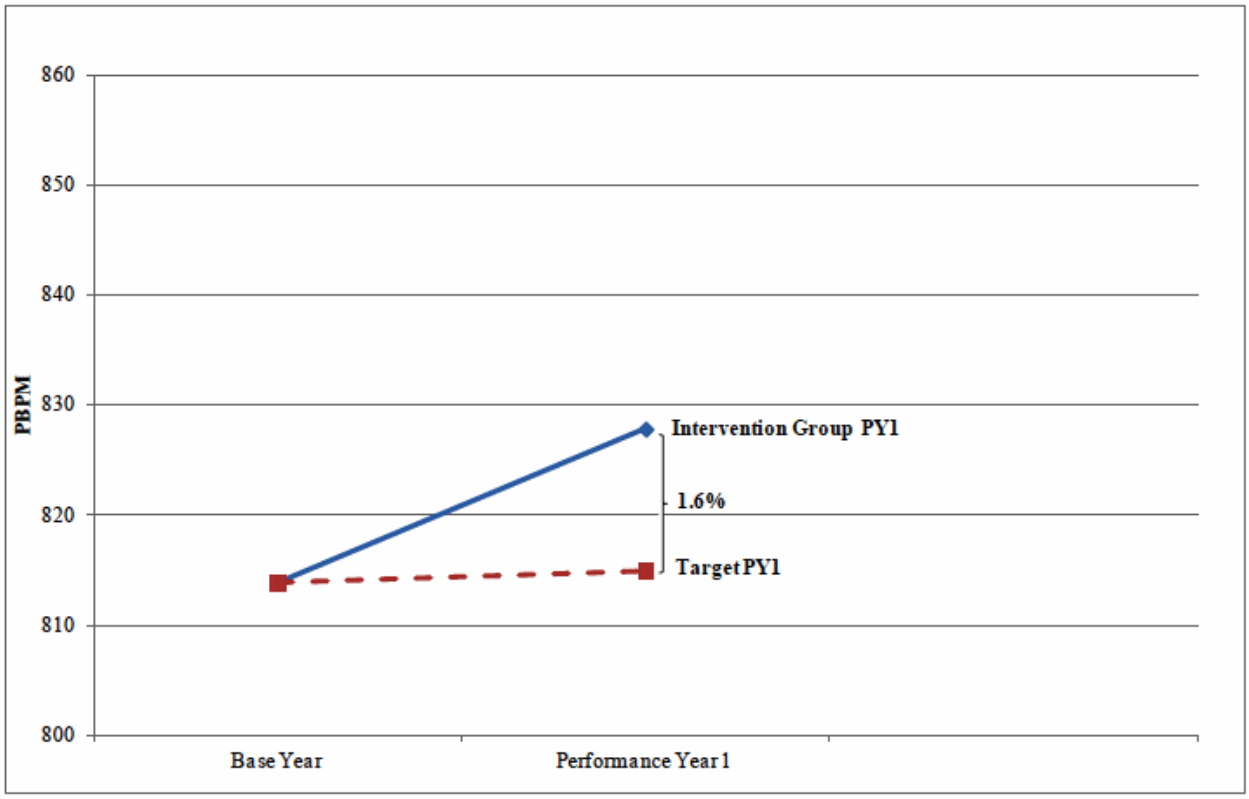
NOTES

1. The intervention group's comparison-adjusted target was $846.12 PBPM in PY2. The intervention group's standardized actual expenditures were $852.75 PBPM—higher than the target by 0.8%.
2. The value of the target minus the minimum savings requirement for PY2 was $823.77 PBPM. If the expenditures of the NC-CCN assigned beneficiaries in PY2 were below this point, NC-CCN would have achieved savings.

SOURCE: RTI analysis of October 2008 through December 2011 100% Medicare Claims Files and Enrollment Datasets.

COMPUTER OUTPUT: r56svn_saving.out (PY2)

Figure 3
Performance year one per beneficiary per month expenditures



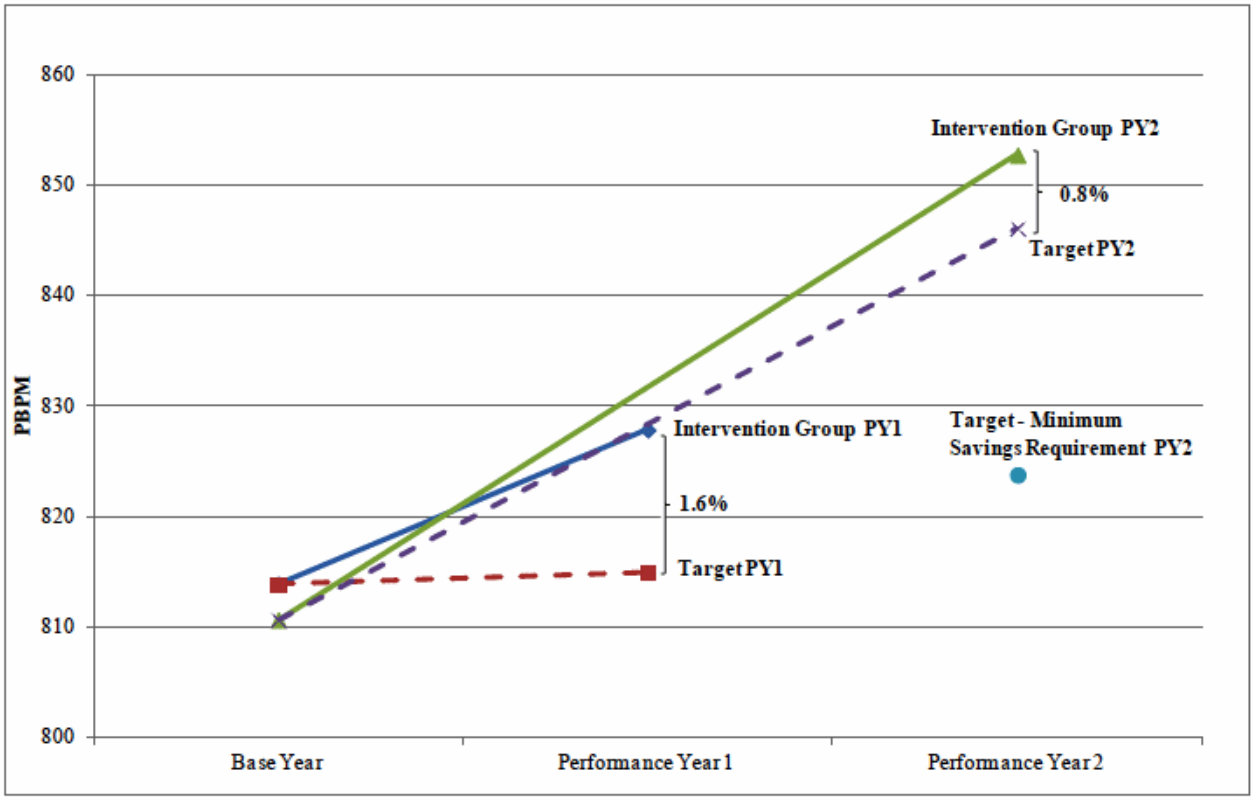
NOTES

1. The intervention group's comparison-adjusted target was $814.96 PBPM in PY1. The intervention group's standardized actual expenditures were $827.84 PBPM—higher than the target by 1.6%.

SOURCE: RTI analysis of October 2008 through December 2010 100% Medicare Claims Files and Enrollment Datasets.

COMPUTER OUTPUT: r83svn_saving.out (PY1)

Figure 4
Trends in per beneficiary per month expenditures



NOTES

1. The intervention group's comparison-adjusted target was $814.96 PBPM in PY1. The intervention group's standardized actual expenditures were $827.84 PBPM—higher than the target by 1.6%.
2. The intervention group's comparison-adjusted target was $846.12 PBPM in PY2. The intervention group's standardized actual expenditures were $852.75 PBPM—higher than the target by 0.8%.
3. The value of the target minus the minimum savings requirement for PY2 was $823.77 PBPM. If the expenditures of the NC-CCN assigned beneficiaries in PY2 were below this point, NC-CCN would have achieved savings.

SOURCE: RTI analysis of October 2008 through December 2011 100% Medicare Claims Files and Enrollment Datasets.

COMPUTER OUTPUT: r83svn_saving.out (PY1); r56svn_saving.out (PY2)

Table 5
Medicare Health Care Quality Demonstration performance payment results: North Carolina Community Care Networks, Performance Year Two

Row / Measure	Base Year	Performance Year Two
Intervention Group (IG) Beneficiaries		
[A] Per beneficiary per month (PBPM) expenditures	$1,137.66	$1,219.42
[B] Demographic factor	1.40343	1.42998
[C] Standardized PBPM expenditures	$810.63	$852.75
[D] Number of beneficiary months	509,266	611,000
Comparison Group (CG) Beneficiaries		
[E] PBPM expenditures	$1,064.49	$1,135.89
[F] Demographic factor	1.38950	1.42051
[G] Standardized PBPM expenditures	$766.09	$799.64
[H] Number of beneficiary months	1,125,279	1,191,553
Performance Payment Results		
[I] Standardized expenditure ratio	1.058	—
[J] Standardized target	—	$846.12
[K] PBPM standardized actual expenditures	—	$852.75
[L] Gross savings (target minus actual expenditures)	—	-$6.63
[M] Minimum savings requirement percentage	—	**2.64%**
[N] Minimum savings requirement	—	$22.35
[O] Net savings	—	-$28.98
[P] Net savings cap	—	—
[Q] Gross savings cap	—	—
[R] Target cap	—	—
[S] Shared savings	—	$0.00
[T] Performance payment not contingent on quality performance	—	$0.00
[U] Maximum performance payment for quality	—	$0.00
[V] Percentage of quality targets met	—	92.00%
[W] Performance payment for quality	—	$0.00
[X] Earned performance payment (PBPM)	—	$0.00
[Y] Total earned performance payment	—	$0.00
[Z] Medicare savings before award	—	—
[AA] Medicare savings after award	—	—

NOTES:
1. Statistics presented in this table are rounded for presentation purposes. Performance payment calculations use additional precision.
2. All dollar values, with the exceptions of the total earned performance payment [Y] and Medicare savings [Z] and [AA], are per beneficiary per month (PBPM) values.

(continued)

Table 5
Medicare Health Care Quality Demonstration performance payment results: North Carolina Community Care Networks, Performance Year Two (continued)

Intervention Group (IG) Beneficiaries
[A] RTI International calculations with base year (BY), Performance Year Two (PY2) Medicare claims, and enrollment data for beneficiaries assigned to the IG in the PY and in the BY.
[B] Demographic factor calculated by RTI.
[C] Expenditures divided by demographic factor, [A] / [B].
[D] Number of beneficiaries assigned to the IG in the BY and PY.

Comparison Group (CG) Beneficiaries
[E] RTI calculations with BY, PY2 Medicare claims, and enrollment data for beneficiaries assigned to the CG in the PY and in the BY.
[F] Demographic factor calculated by RTI.
[G] Expenditures divided by demographic factor, [E] / [F].
[H] Number of beneficiaries assigned to the CG in the BY and PY.

Performance Payment Results
[I] The ratio of standardized IG expenditures in the BY over standardized CG expenditures in the BY, [C for baseline]/[G for baseline].
[J] The product of the standardized expenditure ratio and standardized expenditures of the CG in the PY, [I] x [G in PY]
[K] Expenditures divided by demographic factor, [A] / [B].
[L] Target minus actual expenditures, which is equal to gross savings, [J] − [K].
[M] Minimum savings requirement percentage is based on the 95% confidence interval for the difference between actual expenditures for the IG and the expenditure target.
[N] The product of the minimum savings requirement percentage and target expenditures, [J] x [M].
[O] The difference between gross savings and the minimum savings requirement, [L] − [N].
[P] Equal to 80% of net savings, 0.80 x [O].
[Q] Equal to 50% of gross savings, 0.50 x [L].
[R] Equal to 8% of target expenditures 0.08 x [J].
[S] If net savings [R] are positive, the lesser of the gross savings cap, net savings cap, and target cap (lesser of [P], [Q], and [R]). If net savings [O] are negative, 0.
[T] Equal to 40% of shared savings in PY2, [S] x 0.40.
[U] Equal to 60% of shared savings in PY2, [S] x 0.60.
[V] Calculated by NC-CCN on the basis of quality performance.
[W] Product of the percentage of quality targets met and the maximum performance payment for quality, [U] x [V].
[X] Sum of performance payment for efficiency and performance payment for quality, [T] + [W].
[Y] Equal to total earned performance payment (PBPM) multiplied by the number of beneficiary-months incurred by beneficiaries assigned to IG during the PY, [X] x [D].
[Z] Equal to PBPM gross savings multiplied by the number of beneficiary-months incurred by beneficiaries assigned to IG during the PY, [L] x [D].
[AA] Equal to Medicare savings before award minus the award amount, [Z] − [Y].
Source: RTI analysis of January 2009–December 2011 100% Medicare claims files and enrollment datasets.
Computer output: r56svn_saving.out

SECTION 3
THE SAVINGS CALCULATION METHODOLOGY

In this section we describe the methods used to perform the savings calculation. We used a list of practices and providers provided by NC-CCN and Medicare claims data obtained through the data extract system (DESY) to perform the savings calculation and did not encounter any challenges. In each PY, the potential award payment is based on the calculated savings to Medicare. To determine the savings to Medicare, an expenditure target is calculated for the IG using the expenditures of the IG and CG as well as adjustments for differences in demographics. To generate savings, NC-CCN must underspend the target by a minimum amount (the MSR) that accounts for the amount of variation in Medicare expenditures. This section describes how expenditures are calculated and adjusted for demographic differences, the calculation of the MSR, the expenditure target, and savings.

3.1 Calculating Medicare Expenditures

To calculate total Medicare Part A and B expenditures for each beneficiary, the expenditures (Medicare payments) are summed from all of the beneficiary's claims at any Part A or B provider (hospital outlier payments and Part D expenditures are excluded). For each beneficiary that is assigned to the IG or CG, we then calculate an eligibility fraction. This eligibility fraction is the fraction of the year (fraction of 12 months) each beneficiary was enrolled in Medicare Parts A and B. Each beneficiary's expenditures are then annualized by dividing the total expenditures by the eligibility fraction. All further analyses weight the annualized expenditures by this same eligibility fraction. Annualizing and weighting the expenditures ensures that payments are correctly adjusted for new Medicare enrollees and decedents – beneficiaries who were not in the IG or CG for the entire year.[9] Weighted mean annualized expenditures divided by 12 yields the PBPM amount.

To prevent a small number of extremely costly beneficiaries from significantly affecting average expenditures, annualized expenditures are capped. Expenditures for covered services that are incurred by beneficiaries without ESRD are capped at a value equal to the 99th percentile of the pooled sample (IG plus CG beneficiaries) claims distribution for beneficiaries without ESRD, rounded to the nearest thousand dollars. Expenditures for covered services that are incurred by beneficiaries with ESRD are capped at an annualized value equal to the 99th percentile of the national claims distribution for beneficiaries with ESRD, rounded to the nearest thousand dollars.

Table 6 presents the expenditure caps for the BY and PY2.

[9] By definition, assigned beneficiaries must meet the demonstration eligibility requirements shown in Table 1 including having no months of Part A only or Part B only enrollment.

Table 6
Base Year and Performance Year Two expenditure caps

Year and Group	Expenditure cap
Base year Non-ESRD	$109,000
Base year ESRD	$306,000
Performance Year 2 Non- ESRD	$116,000
Performance Year 2 ESRD	$314,000

ESRD, end-stage renal disease.

SOURCE: RTI analysis of October 2008–December 2011 100% Medicare claims files and enrollment datasets.

Computer output: univ2009, r51by09_univariate_2009.out, univ2010, univ2011_%100_univariate.out, r51py11_univariate_2011.out

3.2 Adjusting Medicare Expenditures for Differences in Demographics

A demographic factor is used to adjust expenditures for the demographic composition of the IG and the CG in both the BY and PY:

Demographic adjusted PBPM expenditures = (PBPM expenditures) / (demographic factor).

The demographic factors are established each year on the basis of age, sex, Medicaid eligibility, and aged, disabled, and ESRD Medicare entitlement status. To calculate the demographic factors, RTI used the 2007 5% national Medicare claims data to estimate an ordinary least-squares regression with expenditures as the dependent variable and independent variables representing age, gender, and Medicaid eligibility categories. Separate regressions were run for ESRD and non-ESRD beneficiaries, and the regression coefficients were restricted to be nondecreasing within the 0–64 and 65–95+ age ranges. The coefficients from these regressions were then divided by the pooled (ESRD and non-ESRD) total sample mean expenditures to generate age-gender-Medicaid eligibility demographic factors.

To calculate the weighted demographic factor used to adjust the expenditures when calculating savings, RTI multiplied each age-gender-Medicaid eligibility demographic factor by the percentage of beneficiaries that fell into the age-gender-Medicaid eligibility category and summed across categories. This was done separately for the IG and CG in both the BY and the PY. The result was a demographic factor for each year for each group (four total) that reflects the relative expected cost associated with the demographic composition of the group in that year.

The demographic factors are estimates of the ratio of a beneficiary's expected expenditures with the indicated enrollment characteristics to the mean expenditures for the entire Medicare fee-for-service (FFS) population. For example, a demographic factor of 1.0 indicates a beneficiary with expected costliness equal to the national FFS average. A factor of 1.10 indicates a beneficiary with expected costliness 10 percent above the FFS average, and a factor

of 0.90 indicates a beneficiary with expected costliness 10 percent below the FFS average. The demographic factors measure changes in expected costliness due to changes in the demographic composition of a group.

3.3 Minimum Savings Requirement Calculation

The MSR, which is used in determining shared savings in each PY, is based on the 95 percent confidence interval for the difference between actual expenditures for the IG and the expenditure target.

$$\text{Minimum Required Savings Rate} = 1.96 \times CV \sqrt{2 \times \left(\frac{1}{n_i} + \frac{1}{n_c} \right)}$$

where CV, the coefficient of variation, is the standard deviation of BY expenditures for the pooled IG and CG sample divided by the BY mean expenditures for the pooled sample; n_i is the number of beneficiary-years assigned to the IG in the PY; and n_c is the number of beneficiary-years assigned to the CG in the PY. The MSR for PY2, 2.64%, is calculated in **Table 7**.

Table 7
Calculation of Performance Year Two minimum required savings rate

Index	Component	Group	Year	Value
[A]	Person years IGPY2	Intervention	PY2	50,917
[B]	Person years CGPY2	Comparison	PY2	99,296
[C]	Standard deviation of demographic adjusted expenditures	Intervention and Comparison	BY	$16,366
[D]	Mean of demographic adjusted expenditures	Intervention and Comparison	BY	$9,360
[E]	Coefficient of variation (CV)	= [C] / [D]	—	1.75
[F]	Minimum required savings rate	$= 1.96 \times [E] \sqrt{2 \times \left(\frac{1}{[A]} + \frac{1}{[B]} \right)}$	—	2.64%

NOTES:
Numbers may not add exactly in any given column because of rounding error. The letters within the square brackets are references to rows within this table. BY, base year; CG, comparison group; IG, intervention group; PY, performance year.

Computer output: r56svn_saving.out

SOURCE: RTI analysis of October 2008–December 2011 100% Medicare claims files and enrollment dataset sets.

3.4 Calculating Expenditure Targets

The expenditure target is the amount of standardized expenditures that would occur in the IG if the growth rate were that of the CG. For example, assume that

- the BY standardized expenditures for the IG were $1,000,
- the BY standardized expenditures for the CG were $1,200, and
- the PY standardized expenditures for the CG were $1,260, so
- the standardized expenditure ratio would be $1,000 / $1,200 (or 0.833).

In this scenario, the growth rate of CG expenditures would be 0.05 or 5% ([$1,260 / $1,200] − 1). When the CG growth rate is applied to the BY expenditures for the IG, the expenditure target for the IG would be $1,050 ($1,000 x 1.05 or $1,000 x [$1,260 / $1,200]). Another way to calculate the target for the IG is to multiply the PY expenditures for the CG by the standardized expenditure ratio ($1,260 x 0.833 or $1,260 x [$1,000 / $1,200]).

3.5 Calculating Savings and the Award Amount

Two types of savings measures are used in the demonstration: gross savings and net savings. Both types of savings are expressed on a PBPM basis. Gross savings are calculated as the difference between the expenditure target and the actual expenditures for covered services incurred by beneficiaries assigned to the IG during the PY. Any performance award payments would be made from gross savings. Net savings are the difference between gross savings and the minimum savings requirement (the product of the expenditure target and the MSR).

In each PY where savings exceeding the minimum savings requirement are generated, a percentage of the amount of the available savings calculated will be paid to NC-CCN not contingent on any other factors and a percentage will be paid contingent on performance for that period. In PY2, the percentage of the award to be paid contingent on performance was 60%.

If gross savings are less than the minimum savings requirement, no award will be paid for that PY. In PY2, NC-CCN did not generate savings and no award was paid. The PY2 gross savings were −$6.63 PBPM (Table 5, Row L) and the minimum savings requirement was $22.35 PBPM (Table 5, Row N). The net savings (−$28.98) is shown in Row O of Table 5.

REFERENCE

Reference Table 1
Beneficiary assignments and exclusions, performance year one

Assignments and exclusions	BY Intervention Group	PY1 Intervention Group	BY Comparison Group	PY1 Comparison Group
1. Beneficiaries covered by Medicaid in the assignment period	313,846	322,184	161,276	164,803
2. Total beneficiaries excluded from assignment[1]	63,107	65,757	40,368	44,029
Exclusions during the assignment period[2]				
Not alive on January 1 of demonstration period	5,409	5,329	2,440	2,254
At least one month of Part A-only or Part B-only coverage	4,147	3,773	2,236	2,236
At least one month of Medicare Advantage enrollment	48,519	51,470	32,209	35,970
Had coverage under employer-sponsored group health plan	1,899	1,770	1,527	1,326
Total exclusions during assignment period	59,255	61,659	37,935	41,309
Additional exclusions during the demonstration period[3]				
At least one month of Part A-only or Part-B only coverage	141	149	150	88
At least one month of Medicare Advantage enrollment	704	700	784	1,026
Had coverage under employer-sponsored group health plan	33	36	23	21
Not covered by Medicaid	2,999	3,228	1,490	1,596
Total exclusions during the demonstration period	3,852	4,098	2,433	2,720
3. Beneficiaries eligible for assignment (line 1 - line 2)	250,739	256,427	120,908	120,774
4. Intervention group: Beneficiaries with a qualifying patient visit with a participating provider at a participating practice[4,5]	42,454	42,629	—	—
5. Intervention group: Beneficiaries with a qualifying patient visit with a participating provider at a non-participating practice	1,720	1,869	—	—
6. Intervention group: Assigned beneficiaries (line 4 + line 5)	44,174	44,498	—	—
7. Comparison group: Beneficiaries eligible for assignment who were provided at least one office or other outpatient E&M service by a primary care provider[6]	—	—	97,345	96,437

(continued)

Reference Table 1
Beneficiary assignments and exclusions, performance year one (continued)

NOTES:

Base Year: January 1, 2009 - December 31, 2009

Performance Year 1: January 1, 2010 - December 31, 2010

1. Exclusions are not mutually exclusive. A beneficiary may be excluded for more than one reason
2. For the base year: October 2008-September 2009; For performance year one: October 2009-September 2010
3. Exclusions during the demonstration period ensure that beneficiaries meet the general eligibility requirements outlined in protocol §2.1.1 during the entire demonstration period, not only during the assignment period.
4. Beneficiaries for Highgate Family Medicine Center, Durham Family Practice, Charles Drew Medical Center, Prospect Hill CHC, and Scott Medical Center (CHC) and beneficiaries with a qualifying patient visit with participating FQHCs/RHCs are selected regardless of location of practice.
5. Beneficiaries with a qualifying patient visit with a participating provider both at a participating practice and at a non-participating practice are included in this count.
6. Primary care providers include those in family medicine, general medicine, internal medicine, geriatric medicine, and physician assistant, nurse practitioner, or clinical nurse specialist who provides primary care services. Visits to Federally Qualified Health Centers (FQHC) and to Rural Health Clinics (RHC) are counted as one E&M visit. FQHC visits are defined using bill type 73x and 77x. RHC visits are defined using bill type 71x.

COMPUTER OUTPUT: nc23tbl1_Table1.out (IG BY); nc22tbl1_table1.out (IG PY1); r80tbl1b_CG_BY_exclusions.out (CG BY); r80tbl1_CG_PY_exclusions.out (CG PY1)

SOURCE: RTI analysis of October 2008 through December 2010 100% Medicare Claims Files and Enrollment Datasets.

Reference Table 2
Utilization, expenditures, and demographics of intervention and comparison group beneficiaries, performance year one

Assignments and exclusions	BY Intervention Group	PY1 Intervention Group	BY Comparison Group	PY1 Comparison Group
Mean count of qualified office or other outpatient E&M visits[1]	10.40	9.28	9.81	8.99
Mean count of hospital discharges[2]	0.59	0.58	0.57	0.54
Mean annualized Medicare expenditures PBPY[3]	$13,644	$13,957	$12,774	$13,020
Mean annualized Medicare expenditures PBPM[3]	$1,137	$1,163	$1,064	$1,085
Mortality (%)				
Beneficiary deaths	7.1	6.8	6.5	6.3
Beneficiaries survived	92.9	93.2	93.5	93.7
Hospice status (%)				
Hospice	3.8	3.8	3.7	3.8
Non-hospice	96.2	96.2	96.3	96.2
Medicare eligibility (%)				
Aged[4]	55.0	54.5	53.6	53.3
Disabled	42.8	43.3	44.2	44.3
ESRD[5]	2.1	2.3	2.2	2.4
Gender (%)				
Male	31.7	31.8	33.6	33.7
Female	68.3	68.2	66.4	66.3
Age (%)				
Age < 65	44.2	44.7	45.6	45.9
Age 65–74	23.2	23.4	24.3	24.3
Age 75–84	20.2	19.5	19.2	18.9
Age 85+	12.4	12.3	10.9	10.9

(continued)

Reference Table 2
Utilization, expenditures, and demographics of intervention and comparison group beneficiaries, performance year one (continued)

NOTES:

Base Year: January 1, 2009–December 31, 2009

Performance Year 1: January 1, 2010–December 31, 2010

1. Qualified E&M visits are listed in §9.1 of the Protocol and are counted regardless of performing provider. Visits to Federally Qualified Health Centers (FQHC) and to Rural Health Clinics (RHC) are counted as one E&M visit.
2. Refers to hospital discharges at any provider.
3. Annualized Medicare expenditures per beneficiary are calculated by dividing actual expenditures by the fraction of the year the beneficiary is alive and are capped at the weighted 99th percentile of the claims distribution for beneficiaries without ESRD and at the weighted 99th percentile of the national claims distribution for beneficiaries with ESRD. For performance year one, annualized expenditures are capped at $110,000 for non-ESRD beneficiaries and at $308,000 for ESRD beneficiaries. For the base year, annualized expenditures are capped at $109,000 for non-ESRD beneficiaries and at $306,000 for ESRD beneficiaries.
4. Includes beneficiaries age 65 and older without ESRD.
5. Includes beneficiaries with ESRD regardless of age.

COMPUTER OUTPUT:

IG BY: r79tbl2b_BY_EM_Visit.out; r79tbl3b_BY_disharg.out; r79tbl4b_BY_exp.out; r79tbl6b_BY_demogr.out

IG PY1: r79tbl2_PY1_EM_Visit.out; r79tbl3_PY1_discharges.out; r79tbl4_PY1_exp.out; r79tbl6_PY1_demogr.out

CG BY: r80tbl2b_CG_BY_EM_Visit.out; r80tbl3b_BY_discharge.out; r80tbl4b_CG_BY_exp.out; r80tbl6b_CG_BY_demogr.out

CG PY1: r80tbl2_CG_PY1_EM_Visit.out; r80tbl3_PY1_discharge.out; r80tbl4_CG_PY1_exp.out; r80tbl6_CG_PY1_demogr.out

SOURCE: RTI analysis of October 2008 through December 2010 100% Medicare Claims Files and Enrollment Datasets.

Reference Table 3
Distribution of North Carolina Community Care Network assigned beneficiary residence by demonstration area counties, performance year one

County name	County number[1]	BY Intervention Group	PY1 Intervention Group
Bertie	34070	3.0	3.0
Buncombe	34100	6.7	8.0
Cabarrus	34120	6.0	6.0
Chatham	34180	0.8	0.7
Chowan	34200	1.1	0.8
Edgecombe	34320	2.1	2.4
Gates	34360	0.5	0.4
Greene	34390	1.0	0.9
Hertford	34450	2.7	2.8
Hoke	34460	1.1	1.1
Lincoln	34540	2.3	2.3
Madison	34570	1.8	1.8
Mecklenburg	34590	17.1	16.9
Mitchell	34600	1.4	1.3
Montgomery	34610	1.6	1.0
Moore	34620	2.9	2.7
New Hanover	34640	5.4	5.1
Orange	34670	1.0	1.0
Pasquotank	34690	1.1	1.1
Pender	34700	1.5	1.4
Perquimans	34710	0.6	0.6
Pitt	34730	8.2	7.9
Sampson	34810	2.1	2.1
Stanly	34830	2.9	3.0
Union	34890	1.8	1.9
Yancey	34981	1.7	1.6
Other North Carolina Counties	—	21.5	22.1

NOTES:
Base Year: January 1, 2009–December 31, 2009; Performance Year 1: January 1, 2010–December 31, 2010
1. State and county codes used by the Social Security Administration (SSA)
COMPUTER OUTPUT: nc23tbl8_table8_demo_area.out (BY), nc22tbl8_table8_demo_area.out (IG PY1)
SOURCE: RTI analysis of October 2008 through December 2010 100% Medicare Claims Files and Enrollment Datasets.

Reference Table 4
Medicare Health Care Quality Demonstration performance payment results: North Carolina Community Care Networks, Performance Year One

Index / Component	Base Year	Performance Year One
Intervention Group (IG) Beneficiaries		
[A] PBPM Expenditures	$1,137.02	$1,163.12
[B] Demographic Factor	1.39707	1.40501
[C] Standardized PBPM Expenditures	$813.86	$827.84
[D] Number of Beneficiary Months	509,706	514,491
Comparison Group (CG) Beneficiaries		
[E] PBPM Expenditures	$1,064.49	$1,085.02
[F] Demographic Factor	1.38950	1.41439
[G] Standardized PBPM Expenditures	$766.09	$767.13
[H] Number of Beneficiary Months	1,125,279	1,115,461
Performance Payment Results		
[I] Standardized Expenditure Ratio	1.062	—
[J] Standardized Target	—	$814.96
[K] PBPM Standardized Actual Expenditures	—	$827.84
[L] Gross Savings (Target Minus Actual Expenditures)	—	-$12.87
[M] Minimum Savings Requirement Percentage	**—**	**2.83%**
[N] Minimum Savings Requirement	—	$23.05
[O] Net Savings	—	-$35.93
[P] Net Savings Cap	—	—
[Q] Gross Savings Cap	—	—
[R] Target Cap	—	—
[S] Shared Savings	—	$0.00
[T] Performance Payment Not Contingent on Quality Performance	—	$0.00
[U] Maximum Performance Payment for Quality	—	$0.00
[V] Percentage of Quality Targets Met	—	77.78%
[W] Performance Payment for Quality	—	$0.00
[X] Earned Performance Payment (PBPM)	—	$0.00
[Y] Total Earned Performance Payment	—	$0.00
[Z] Medicare Savings Before Award	—	—
[AA] Medicare Savings After Award	—	—

NOTES:
1. Statistics presented in this table are rounded for presentation purposes. Performance payment calculations use additional precision.
2. All dollar values, with the exceptions of the total earned performance payment [Y] and Medicare savings [Z] and [AA], are per beneficiary per month (PBPM) values.

(continued)

Reference Table 4
Medicare Health Care Quality Demonstration performance payment results: North Carolina Community Care Networks, Performance Year One (continued)

Intervention Group (IG) Beneficiaries
[A] RTI International calculations with base year (BY), Performance Year One (PY1) Medicare claims, and enrollment data for beneficiaries assigned to the IG in the PY and in the BY.
[B] Demographic factor calculated by RTI.
[C] Expenditures divided by demographic factor, [A] / [B].
[D] Number of beneficiaries assigned to the IG in the BY and PY.

Comparison Group (CG) Beneficiaries
[E] RTI calculations with BY, PY1 Medicare claims, and enrollment data for beneficiaries assigned to the CG in the PY and in the BY.
[F] Demographic factor calculated by RTI.
[G] Expenditures divided by demographic factor, [E] / [F].
[H] Number of beneficiaries assigned to the CG in the BY and PY.

Performance Payment Results
[I] The ratio of standardized IG expenditures in the BY over standardized CG expenditures in the BY, [C for baseline]/[G for baseline].
[J] The product of the standardized expenditure ratio and standardized expenditures of the CG in the PY, [I] x [G in PY]
[K] Expenditures divided by demographic factor, [A] / [B].
[L] Target minus actual expenditures, which is equal to gross savings, [J] − [K].
[M] Minimum savings requirement percentage is based on the 95% confidence interval for the difference between actual expenditures for the IG and the expenditure target.
[N] The product of the minimum savings requirement percentage and target expenditures, [J] x [M].
[O] The difference between gross savings and the minimum savings requirement, [L] − [N].
[P] Equal to 80% of net savings, 0.80 x [O].
[Q] Equal to 50% of gross savings, 0.50 x [L].
[R] Equal to 8% of target expenditures 0.08 x [J].
[S] If net savings [R] are positive, the lesser of the gross savings cap, net savings cap, and target cap (lesser of [P], [Q], and [R]). If net savings [O] are negative, 0.
[T] Equal to 50% of shared savings in PY1, [S] x 0.50.
[U] Equal to 50% of shared savings in PY1, [S] x 0.50.
[V] Calculated by NC-CCN on the basis of quality performance.
[W] Product of the percentage of quality targets met and the maximum performance payment for quality, [U] x [V].
[X] Sum of performance payment for efficiency and performance payment for quality, [T] + [W].
[Y] Equal to total earned performance payment (PBPM) multiplied by the number of beneficiary-months incurred by beneficiaries assigned to IG during the PY, [X] x [D].
[Z] Equal to PBPM gross savings multiplied by the number of beneficiary-months incurred by beneficiaries assigned to IG during the PY, [L] x [D].
[AA] Equal to Medicare savings before award minus the award amount, [Z] − [Y].

COMPUTER OUTPUT: r83svn_saving.out

SOURCE: RTI analysis of October 2008 through December 2010 100% Medicare Claims Files and Enrollment Dataset sets.