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North Carolina Community Care Networks Health Care Quality 646 Demonstration Performance Year One Financial Results

Final Report

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OVERVIEW OF NC-CCN HEALTH CARE QUALITY 646 DEMONSTRATION PERFORMANCE YEAR ONE RESULTS

This package contains information regarding NC-CCN's financial results for the first performance year of the Health Care Quality 646 Demonstration (January 1, 2010–December 31, 2010). The results presented include: (1) assignment methodology, (2) intervention group (IG) profile tables for performance year one as well as the corresponding base year, (3) comparison group (CG) profile tables for performance year one as well as the corresponding base year, and (4) performance payment results.

All IG calculations were determined using the list of physicians provided by NC-CCN. The list included National Provider Identifiers (NPIs) which were used to identify physicians and assigned beneficiaries.

Assignment Methodology

Intervention Group

There are two steps involved in assigning beneficiaries to the IG as specified in Section 2 of the Protocol.

These steps are shown in Tables 1 of the Beneficiary Profiles. The two steps are:

- Identify beneficiaries who meet the general eligibility criteria for the demonstration IG during the assignment period and during the demonstration period.
- Identify the total number participating physician organizations, defined as the sum of participating physician practices, FQHCs/RHCs, and combination RHCs and physician organizations.

The IG population consists of North Carolina residents who meet general eligibility criteria (defined in Section 2 of the Protocol) and had at least one qualifying evaluation and management (E&M) visit with a participating physician, regardless of the place of service ZIP code on that claim line item. In the first two years of the demonstration beneficiaries must be Medicaid eligible. The IG was 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 six months of the end of the demonstration year. The same list of providers was used to determine participating providers in the performance year and the corresponding base year and to assign beneficiaries to each year.

Comparison Group

Two similar steps were used to assign beneficiaries to the CG. They involve identifying beneficiaries residing in the comparison counties who met the general assignment criteria set forth in Section 2 of the Protocol during the assignment and demonstration periods and identifying qualifying beneficiaries with at least one qualifying E&M visit with a primary care provider (PCP). These steps are shown in Tables 1 of the Beneficiary Profiles. The two steps are:

- Identify beneficiaries in the comparison counties who meet the general eligibility criteria for the demonstration CG during the assignment period and during the demonstration period.

- From these qualifying beneficiaries, identify beneficiaries that received at least one qualifying treatment from a PCP who was not participating in NC-CCN.

Calculating Medicare Expenditures

To calculate total Medicare Part A/B expenditures for each beneficiary, the expenditures are summed from all of the beneficiary's claims at any Part A/B provider (Part D expenditures are not included). The expenditures are then annualized by dividing by the fraction of the year (fraction of 12 months) each beneficiary was enrolled in Medicare Parts A and B. All further analyses weight the annualized expenditures by this eligibility fraction. Annualization and weighting ensures that payments are adjusted for months of beneficiary eligibility, including new Medicare enrollees and decedents.

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 end stage renal disease (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 1 presents the expenditure caps for the base year and performance year 1.

Table 1
Base year and performance year 1 expenditure caps

Year	Group	Expenditure cap
Base Year	Non-ESRD	$109,000
Base Year	ESRD	$306,000
Performance Year 1	Non-ESRD	$110,000
Performance Year 1	ESRD	$308,000

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

Computer Output: univ2009, univ2010, r78unby_univ, r78unpy1_univ

Demographic Factor Calculation

A demographic factor is used to adjust expenditures for changes in demographic composition over time for the IG and CG in both the base year and performance year.

Demographic Adjusted PBPM Expenditures = (PBPM Expenditures) / (Demographic Factor)

The demographic factors are established each year based on 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/Medicaid eligibility categories. Separate regressions were run for ESRD and non-ESRD beneficiaries and the regression coefficients were restricted to be non-decreasing within 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 is done separately for the IG and CG in both the base year and the performance year. The result was a demographic factor for each year for each group (4 in total) that reflects the relative expected cost associated with the demographic composition of the group in that year.

Minimum Required Savings Rate Calculation

The minimum required savings rate (MSR) is used in determining shared savings in each performance year. The MSR is based on the 95% confidence interval for the difference between actual expenditures for the IG and the expenditure target.

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

where CV (coefficient of variation) is the standard deviation of base year expenditures for the pooled IG and CG sample divided by the base year mean expenditures for the pooled sample, n_i is the number of beneficiary-years assigned to the IG in the performance period, and n_c is the number of beneficiary-years assigned to the CG in the performance period. Table 2 shows the calculation of the MSR for the first performance year.

Table 2
Calculation of performance year 1 MSR

Index	Component	Group	Year	Value
[A]	Person Years IGPY1	Intervention Group	Performance Year 1	42,874.25
[B]	Person Years CGPY1	Comparison Group	Performance Year 1	92,955.08
[C]	Standard Deviation of Risk Adjusted Expenditures	Intervention Group and Comparison Group	Base Year	$16,382.92
[D]	Mean of Risk Adjusted Expenditures	Intervention Group and Comparison Group	Base Year	$9,371.82

Index	Component	Group	Year	Value
[E]	Coefficient of Variation (CV)	= [C]/[D]	—	1.75
[F]	MSR	$= 1.96 * [E] \sqrt{2 * \left[\frac{1}{[A]} + \frac{1}{[B]}\right]}$	—	2.83%

NOTE: Numbers may not add exactly in any given column due to rounding error.

SOURCE: RTI International

Computer Output: r82msr_MSR

Assigned Beneficiary Profile Tables

The purpose of the assigned beneficiary profile tables is to provide information about the characteristics and utilization patterns of IG beneficiaries. There is a set of tables for the IG in performance year one, as well as a set for the IG in the corresponding base year. The IG profile tables provide a broad range of information regarding NC-CCN's assigned beneficiaries. The tables present the results of the assignment process and statistics on office visits, hospital utilization, expenditures, demographics, Medicare and Medicaid eligibility, and geographic distribution. The IG beneficiary profile includes seven tables for both the base year and the first performance year denoted (BY) and (PY1), respectively.

- Table 1-1 shows the assignment and exclusion statistics. Assignment criteria are set forth in Section 2 of the Protocol.
- Table 1-2 shows the distribution of qualified office or outpatient E&M visits provided to assigned beneficiaries.
  - Note that this demonstration utilizes a one-touch E&M visit assignment rule.
- Table 1-3 shows the distribution of hospital discharges for NC-CCN assigned beneficiaries.

- Table 1-4 shows the distribution of capped annualized Medicare expenditures per NC-CCN assigned beneficiary.
  - Note that the table shows the caps for ESRD and non-ESRD beneficiaries separately.
- Table 1-5 presents the components of annualized Medicare expenditures per NC-CCN assigned beneficiary, which are not capped.
- Table 1-6 presents demographic and eligibility characteristics of the population, including Medicare and Medicaid eligibility.
- Table 1-7 shows the geographic distribution of the NC-CCN assigned beneficiaries by county.

Comparison Group Profile

The CG profile tables provide a broad range of information regarding NC-CCN's CG beneficiaries. The tables present the results of the Demonstration's assignment process and statistics on office visits, hospital utilization, expenditures, demographics, Medicare and Medicaid eligibility, and geographic distribution for the first performance year as well as corresponding base year. The comparison profile includes seven tables for both the base year and the first performance year denoted (BY) and (PY1) respectively. The CG profile tables provide the same information for the CG as the IG profiles do for the IG.

Performance Payment Results

The performance payment results table reports shareable savings from the first performance year of the demonstration. Table 3 provides results for PBPM expenditures, demographic factors, the standardized target and actual assigned beneficiary expenditures, shareable savings, performance payment not contingent on quality, performance payment contingent on quality performance and performance year one (PY1) earned performance payment (if any). In PY1, the performance payment not contingent on quality performance is 50% of the shared savings and the maximum performance payment contingent on quality performance is 50% of the shared savings.

The total performance payment earned by NC-CCN for PY1 can be found on line [AB] (total earned performance payment) of the performance payment table.

NC-CCN PERFORMANCE PAYMENT RESULTS PERFORMANCE YEAR ONE

Table 3
Health Care Quality Demonstration performance payment results
NC-CCN, 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]	Beneficiary Month Weight	—	1
[M]	Combined Standardized Target	—	$814.96
[N]	Combined Actual Expenditures	—	$827.84
[O]	Gross Savings (Target Minus Actual Expenditures)	—	-$12.87
[P]	Minimum Savings Requirement Percentage	—	2.83%
[Q]	Minimum Savings Requirement	—	$23.05
[R]	Net Savings	—	-$35.93
[S]	Net Savings Cap	—	—
[T]	Gross Savings Cap	—	—
[U]	Target Cap	—	—
[V]	Shared Savings	—	$0.00
[W]	Performance Payment Not Contingent on Quality Performance	—	$0.00
[X]	Maximum Performance Payment for Quality	—	$0.00
[Y]	Percentage of Quality Targets Met	—	77.78%
[Z]	Performance Payment for Quality	—	$0.00
[AA]	Earned Performance Payment (PBPM)	—	$0.00
[AB]	Total Earned Performance Payment	—	$0.00
[AC]	Medicare Savings Before Award	—	—
[AD]	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 exception of the Medicare Savings [AC] and [AD] are per beneficiary per month (PBPM) values.
3 Performance payment caps are not shown in [S], [T], and [U] because Net Savings [R] were negative.

Intervention Group (IG) Beneficiaries

[A] RTI calculations with BY, PY1 Medicare claims and enrollment data for beneficiaries assigned to the intervention group in panel 1 and their baseline.

[B] Demographic factor calculated by RTI.
[C] Expenditures divided by Demographic Factor. [A] / [B].
[D] Number of Beneficiaries Assigned to the Intervention Group in Panel 1 in Baseline period and Performance period.

Comparison Group (CG) Beneficiaries

[E] RTI calculations with BY, PY1 Medicare claims and enrollment data for beneficiaries assigned to comparison group in panel 1 and baseline.
[F] Demographic factor calculated by RTI.
[G] Expenditures divided by Demographic Factor. [E] / [F].
[H] Number of Beneficiaries Assigned to the Comparison Group in Panel 1 in Baseline period and Performance period.

Performance Payment Results

[I] The ratio of Standardized Intervention Group Expenditures in Baseline Period over Standardized Comparison Group Expenditures in Baseline Period [C for Baseline]/[G for Baseline] .
[J] The product of the Standardized Expenditure Ratio and Standardized Expenditures of the Comparison Group in the performance period [I] x [G in Performance Period]
[K] Expenditures divided by Demographic Factor. [A] / [B].
[L] For Panel 1: the number of beneficiary months in Panel 1 for PY2 divided by the sum of the number of beneficiary months in Panel 1 and Panel 2 for PY2. For Panel 2: the number of beneficiary months in Panel 2 for PY2 divided by the sum of the number of beneficiary months in Panel 1 and Panel 2 for PY2: [D PY2 Panel 1]/{[D PY2 Panel 1]+[D PY2 Panel 2]}; [D PY2 Panel 2]/{[D PY2 Panel 1]+[D PY2 Panel 2]}.
[M] The sum of [J for Panel 1] multiplied by [L for Panel 1] and [J for Panel 2] multiplied by [L for Panel 2].
[N] The sum of [J for Panel 1] multiplied by [C for Panel 1] and [J for Panel 2] multiplied by [C for Panel 2].
[O] Target Minus Actual Expenditures, which is equal to Gross Savings [M] - [N].
[P] Minimum savings requirement percentage is based on the 95% confidence interval for the difference between actual expenditures for the intervention group and the expenditure target.
[Q] The product of the Minimum Savings Requirement Percentage and Target Expenditures [M] x [P].
[R] The difference between gross savings and the minimum savings requirement [O] - [Q].
[S] Equal to 80% of net savings. 0.80 x [R].
[T] Equal to 50% of gross savings. 0.50 x [O].
[U] Equal to 8% of Target expenditures 0.08 x [M].
[V] If Net Savings [R] are positive the lesser of the gross savings cap, net savings cap, and target cap (Lesser of [S], [T], and [U]). If Net Savings [R] are negative 0.
[W] Equal to 50% of shared savings in PY1 [V] x 0.50.
[X] Equal to 50% of shared savings in PY1 [V] x 0.50.
[Y] Calculated based on quality performance.
[Z] Product of the percentage of quality targets met and the maximum performance payment for quality [Y] x [X].
[AA] Sum of performance payment for efficiency and performance payment for quality [W] + [Z].
[AB] Equal to total earned performance payment (PBPM) multiplied by the number of beneficiary-months incurred by beneficiaries assigned to IG during the performance period. [AA]x[D for Combined Panels].
[AC] Equal to PBPM gross savings multiplied by the number of beneficiary-months incurred by beneficiaries assigned to IG during the performance period. [O]x[D for Combined Panels].
[AD] Equal to Medicare savings before award minus the award amount [AC]-[AB].

COMPUTER OUTPUT: r83svn_saving.out

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