Comprehensive Primary Care Initiative
Shared Savings Methodology

VERSION 4.0

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Introduction

The Comprehensive Primary Care (CPC) initiative is a four-year multi-payer initiative designed to strengthen primary care. Since CPC's launch in October 2012, CMS has collaborated with commercial and State health insurance plans in seven United States regions to offer population-based care management fees and shared savings opportunities to participating primary care practices to support the provision of five comprehensive primary care functions: (1) Risk-Stratified Care Management; (2) Access and Continuity; (3) Planned Care for Chronic Conditions and Preventive Care; (4) Patient and Caregiver Engagement; and (5) Coordination of Care across the Medical Neighborhood. The initiative is testing whether provision of these primary care functions at each practice site – supported by multi-payer payment reform, continuous use of data to guide quality improvement, and meaningful use of health information technology – can achieve improved care, better health for populations, and lower costs.[1]

This paper describes the technical details for the methodology that CMS uses to determine if a region in the CPC initiative earns Medicare shared savings and how those savings will be distributed across CPC practices in the region. Participating payers in each region who have chosen to implement shared savings have their own methodologies. As described above, CMS provides practices with enhanced accountable payment that takes two forms: (1) a monthly care management fee and (2) a shared savings opportunity. CPC practices can earn shared savings for each of the last three years of the four-year program. Calendar year 2014 was the first shared savings performance year. The second and third shared savings performance years are calendar years 2015 and 2016, respectively.

CMS' shared savings methodology has five key principles, outlined below in this introduction and described in detail throughout the rest of this paper.

1. CMS calculates shared savings at the CPC region level.

- At the CPC practice level, small population sizes mean that any estimate of expenditures will be volatile and unreliable.
- Aggregating spending over all practices in a region stabilizes the estimate.
- "Rising tide lifts all boats" – supports work among colleagues in each region.

A key guiding principle for the calculation of shared savings is to estimate what Medicare fee-for-service (FFS) expenditures would have been in the region, absent the CPC initiative. We then compare this estimate to the region's actual performance year expenditures. We describe how this is done in principles 2 and 3 below.

2. CMS uses claims experience in the region to estimate future expenditures.

To determine what Medicare FFS expenditures would have been in the region without CPC, CMS first calculates costs for a time period prior to the start of CPC, called the baseline. The baseline period for CPC is calendar year 2012. Upon creation of the baseline, CMS trends these expenditures forward to create an estimate of performance year expenditures, which we refer to as the expenditure target. We operationalize these calculations in several steps.

- **Section 1** describes how we calculate the baseline.
- **Table 2** lists the baseline expenditures for each CPC region for the 2012 baseline year.
- **Section 2** describes how we calculate the expenditure target.

[1] For more information about CPC: http://innovation.cms.gov/initiatives/comprehensive-primary-care-initiative/

3. If a region spends less than the expenditure target by more than 1%, we share the savings.
To determine if each region spent less than the target by more than 1%, we compare the region's actual performance year expenditures to the target.

- **Section 3** describes how we calculate performance year expenditures.
- **Section 4.1** describes our methodology for determining if there are savings to be shared with the region.

4. A practice's share is determined by the relative proportion of care management fees in the region.
In order to account for both relative size and patient acuity, the portion of regional shared savings that each practice can earn is equal to the percentage of the region's total annual Medicare care management fees that went to the practice. This is equal to each practice's total annual Medicare care management fees divided by the region's sum of total annual Medicare care management fees. A practice is eligible only for its calculated portion of savings.

- **Section 4.2** describes the distribution of shared savings to practices.
- **Section 4.3** describes the requirements to earn those savings.

5. Only practices that maintain or improve quality of care are eligible to share in the savings.
For each performance year, practices must earn half of the possible quality points from any combination of measures and benchmark gates. Practices are scored on three types of quality measures: five practice-level Consumer Assessment of Healthcare Providers and Systems (CAHPS) patient experience measures, three regional claims-based quality measures, and nine (out of thirteen) practice-level electronic clinical quality measures (eCQMs). For the first performance year, 2014, practices were required to successfully report 9 out of 11 eCQMs and were not scored based on these measures' performance; beginning in 2015, practices were required to report 9 out of 13 eCQMs and were scored on performance. To score the claims-based quality measures and eCQMs, we use benchmarks which are equivalent to the 25th, 50th, and 75th percentiles of national performance. To score the patient experience measures, we use benchmarks which are equivalent to two standard deviations below the mean, the mean, and two standard deviations above the mean among practices in the Agency for Healthcare Research and Quality (AHRQ) CAHPS database.

- **Section 5** describes how CMS calculates each practice's quality score.
- **Table 10** lists the benchmarks for the survey-derived patient experience measures.
- **Table 11** lists the benchmarks for the claims-derived quality measures.
- **Table 12** lists the benchmarks for the eCQMs.

To illustrate how the calculations in these five principles work together, in **Section 6**, we provide an example calculation of the distribution of shared savings in one region. This example is fictitious and does not reflect the experience expected to occur during any given performance year.

Finally, we provide background supporting materials in the Appendices:

- **Appendix A** reviews CMS' attribution methodology. We use this methodology to assign Medicare FFS beneficiaries to each practice.
- **Appendix B** reviews the quality measures that we use for the distribution of shared savings and the points available.
- **Appendix C** describes the methodology we used to determine the benchmarks for the patient experience measures.
- **Appendix D** provides a glossary of key terms discussed throughout this paper.

Section 1: Calculation of the Historical Baseline

The historical baseline expenditures represent what each region spent for a similar group of beneficiaries before the CPC initiative began. Calendar year 2012 is the baseline or "pre-initiative" period. CMS is not recalculating baseline expenditures in subsequent performance years (that is, we are not "rebasing"), because the baseline should reflect expenditures unaffected by the CPC initiative.

There are two major steps in the baseline calculation, discussed in turn below:

1. Define the baseline population and the conditions under which beneficiaries are eligible.
2. Define the types of expenditures included and for what time period.

1.1 Historical Baseline Population and Eligibility

The baseline population includes all beneficiaries attributed to a selected CPC practice for at least one of the four quarters of 2012. To determine the baseline population, the CPC initiative uses a prospective methodology to attribute beneficiaries to practices. This means that we use historical data (patient visits to primary care practices during a "look back" time period) to make attributions for a future time period. For example, we look back to the period from October 2009 – September 2011 to make patient attributions to CPC practices for the first quarter of 2012. We use the same attribution methodology for the 2012 baseline population as we use for all quarterly attributions completed in each performance year. The detailed attribution methodology, including the time periods used to make attributions throughout the demonstration, is included in **Appendix A**. The historical look back periods that we use for the 2012 quarterly attributions for calculating the baseline population are listed in Table 1 below.

Table 1: Look Back Periods for Historical Baseline Beneficiary Attribution

Attribution Quarter	Look Back Period
2012, Quarter 1	October 2009 – September 2011
2012, Quarter 2	January 2010 – December 2011
2012, Quarter 3	April 2010 – March 2012
2012, Quarter 4	July 2010 – June 2012

Beneficiaries are included in the historical baseline calculation for only the applicable portion of the year for which they were eligible. Attributed beneficiaries become ineligible for the following reasons:

- Death;
- Enrollment in a Medicare Advantage (MA) or Program of All-Inclusive Care for the Elderly (PACE) plan;
- Loss of Medicare Part A or Part B;
- Medicare becomes secondary payer (for working aged or working disabled beneficiaries only);
- Moving to an institutional facility;
- Incarceration.

A beneficiary becomes ineligible on the effective date of the change in status. For example, a beneficiary enrolling in an MA plan on June 1 will be eligible through May 31, and will become ineligible on June 1. The exception is death, where a beneficiary is considered eligible on the date of death and ineligible on the following day. We do not use a "once out, always out" approach to ineligibility. For example, a beneficiary enrolling in an MA plan on June 1 and disenrolling from that plan on August 31 will be eligible through May 31, ineligible from June 1 to August 31, and eligible from September 1 through December 31, assuming all other eligibility criteria are met.

1.2 Historical Baseline Expenditures

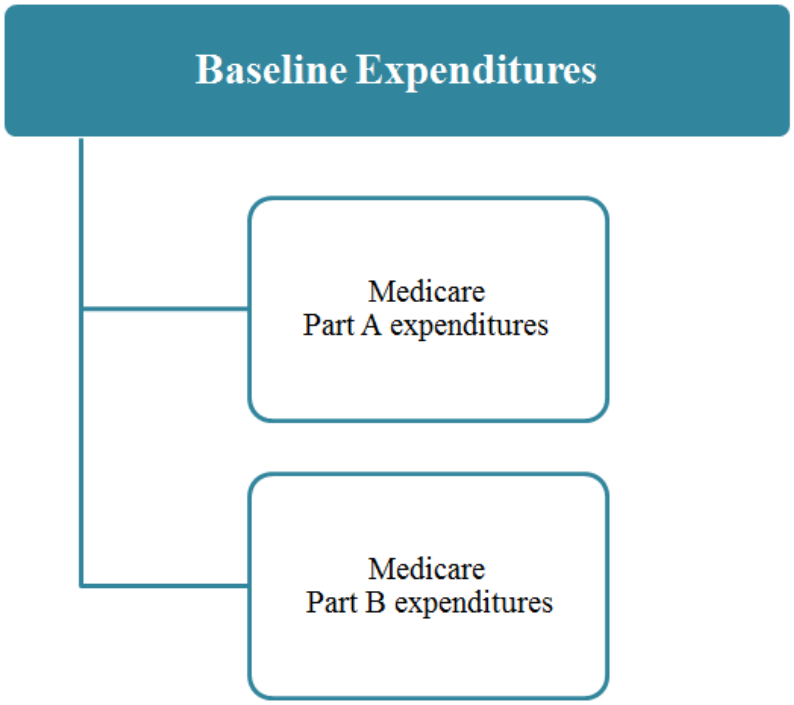
The historical baseline expenditures are calculated by summing all eligible claims in calendar year 2012. Although this period includes experience during the last quarter of 2012, after CPC began, we do not expect any impact on cost in the first few months of CPC. We pull all Medicare claims incurred in 2012 for beneficiaries included in the baseline population.

Baseline expenditures include expenditures for all beneficiaries for all claims where the service date is during a period of eligibility in 2012. The service date for most claims is the date the beneficiary received the service (referred to as the "from date" on the claim). For inpatient and skilled nursing facility (SNF) claims, the service date is the date the beneficiary was admitted to the facility (the admission date on the claim).

Baseline expenditures include all Medicare Part A and Part B FFS expenditures (payments) from the inpatient, SNF, outpatient, physician, durable medical equipment (DME), home health agency (HHA), and hospice claims files.

Indirect medical education (IME) and disproportionate share hospital (DSH) payments are excluded, as are inpatient pass through amounts, which include direct medical education, capital-related costs, and bad debt (see Figure 1 below).

Figure 1: Components of Baseline Expenditures



Expenditures are calculated on a per beneficiary per month (PBPM) basis at the region level and for two enrollment categories (see **Section 1.2.1** below).

1.2.1 Expenditures by Enrollment Category

Baseline expenditures are calculated separately for the following groups of beneficiaries, based on Medicare status:

- Aged – beneficiaries eligible for Medicare by age;
- Disabled – beneficiaries eligible for Medicare based on disability.

Each person each month (known as a "person month") has a status of either Aged or Disabled. Expenditures are categorized accordingly. The expenditure target is adjusted based on the mix of these enrollment categories in the performance year population, described below in **Section 2.3**.

1.3 Baseline Expenditures in Each Region

Table 2 lists the 2012 baseline expenditures for each CPC region. The last column expresses the baseline in PBPM terms. Across all CPC regions, the average baseline expenditure is $772 PBPM.

Table 2: 2012 Baseline Expenditures for Each CPC Region

Region	Per Beneficiary Per Month (PBPM)
Arkansas	$742
Colorado	$716
New Jersey	$891
New York: Capital District-Hudson Valley	$789
Ohio/Kentucky: Greater Cincinnati-Dayton	$809
Oklahoma: Greater Tulsa	$777
Oregon	$700
All Regions	**$772**

Section 2: Calculation of the Expenditure Target

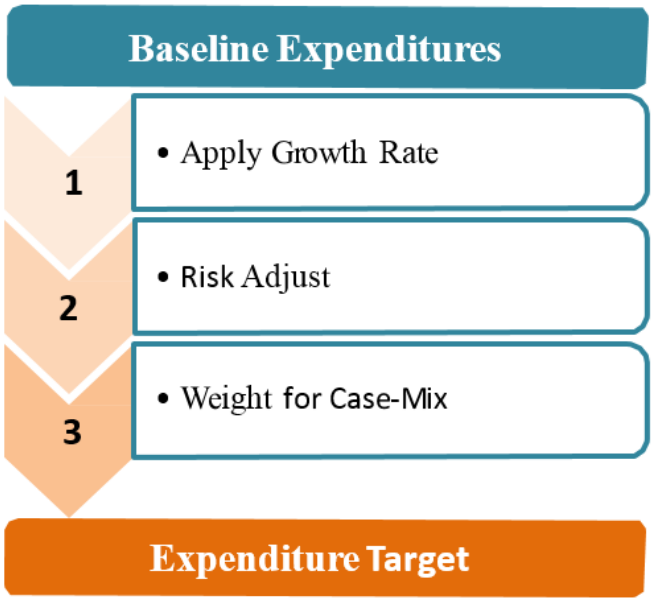
The expenditure target for each performance year is constructed by adjusting and trending the historical baseline expenditures (see **Section 1**) forward to each performance year, as detailed in this section. A separate expenditure target is calculated for each CPC region. Table 3 shows the actual expenditure targets used for each region in performance years 2014, 2015, and 2016.

Table 3: PBPM Expenditure Targets in 2014, 2015, and 2016 for Each CPC Region

Region	2014	2015	2016
Arkansas	$760	$782	$789
Colorado	$737	$755	$733
New Jersey	$897	$914	$922
New York: Capital District-Hudson Valley	$793	$818	$826
Ohio/Kentucky: Greater Cincinnati-Dayton	$824	$828	$806
Oklahoma: Greater Tulsa	$823	$875	$880
Oregon	$745	$805	$787
All Regions	**$794**	**$823**	**$816**

Figure 2 provides an overview of the adjustments we make each year.

Figure 2: Overview of Expenditure Target Calculations



We adjust the historical baseline expenditures each performance year to reflect the spending levels and beneficiary characteristics of the performance year population. To calculate the expenditure target for each performance year, we project the baseline expenditures forward to estimate what the expenditures would have been in each region, absent the CPC initiative.

The baseline expenditures will be updated each performance year using the following steps, which are discussed in detail in the following subsections:

- Trend: Trend the historical baseline expenditures from 2012 to the performance year. We do this

separately for each enrollment category (Aged and Disabled).

- Risk Adjustment: Adjust the historical baseline expenditures to reflect changes in the risk level of the performance year population relative to the baseline population. We do this separately for each enrollment category.
- Case Mix Adjustment: Adjust the mix of Aged and Disabled beneficiaries in the baseline population to reflect that of the performance year population. We blend the trended, risk-adjusted expenditures for each enrollment category together using the proportions of each in the performance year.

2.1 Trending to the Performance Year

To trend the baseline expenditures to the performance year, separate growth rates are established for each region and for each beneficiary enrollment category. Growth rates are determined by an analysis of the expenditures of a reference population defined for each region and each performance year. The reference population for each year, beginning with 2012, includes all beneficiaries in each region who meet the eligibility criteria for attribution but were not attributed to a CPC practice in any quarter of the year (see **Section 1.1**). We calculate trend factors from one year to the next as the percentage change in PBPM reference population expenditures between those two years.

For example, to calculate the percentage growth rate between 2012 and 2013, we define separate reference populations for 2012 and 2013. We extract the 2012 Medicare claims for the 2012 reference population and the 2013 Medicare claims for the 2013 reference population. We then determine the percentage growth rate in expenditures by calculating the ratio of 2013 expenditures (on a PBPM basis) to 2012 expenditures for each enrollment category in each region. The formula for the percentage growth rate for 2013 is as follows:

$$\textit{Percentage Growth Rate from 2012 to 2013} = \frac{\textit{2013 Reference Population PBPM Expenditures}}{\textit{2012 Reference Population PBPM Expenditures}}$$

We calculate a new growth rate for each performance year and do not change the growth rates calculated in prior years. For example, to calculate the percentage growth rate for performance year (PY) 2015, we calculate the percentage growth rate from 2014 to 2015, called Growth2015. The total growth rate applied in determining the expenditure target for PY 2015 is

$$\textit{Total 2015 Growth Factor} = \textit{Growth}_{2013} * \textit{Growth}_{2014} * \textit{Growth}_{2015}$$

Because we determine trends separately for each enrollment category, there are two percentage growth rates for each performance year, each applied to the corresponding expenditures by enrollment category. For example, the percentage growth rate determined for the Disabled category is applied to the historical baseline expenditures for beneficiaries in the Disabled category. This is illustrated in Table 4 below; all dollar amounts shown are PBPM.

Table 4: Illustration of Growth Rate Application

Description	Aged	Disabled
Percentage Growth Rate	0.5%	1.0%
Historical Baseline Expenditures	$680	$500
Projected Expenditures **= (1 + Growth Rate) * Baseline Expenditures**	$683.40	$505

Growth rates between 2012 and 2013 and between 2013 and 2014 do NOT reflect the 2% reduction in Medicare payments due to sequestration, which went into effect April 1, 2013. In other words, these growth rates reflect the change in expenditures as if sequestration had not occurred. See **Section 3.2.4** for details on adjustment for sequestration.

2.2 Risk Adjustment

After determining the percentage growth rate we adjust the baseline expenditures, by enrollment category, to reflect the risk of the performance year demonstration population. The baseline population contains an inherent level of risk that could differ from that of the demonstration population in each performance year. As a result, we risk adjust the baseline expenditures, so that we make a more accurate comparison between the actual expenditures and the target expenditures.

We measure risk level using scores produced by the CMS-Hierarchical Condition Category (CMS-HCC) model. The CMS-HCC model is used to pay Medicare Advantage plans according to the level of healthcare services required by their plan members. On average, plans with relatively sicker members receive relatively higher payments than plans with relatively healthier members. The CMS-HCC model is prospective; it uses demographic and diagnosis information from one year to predict health expenditures in the following year.

We generally follow the risk adjustment method used by other CMS programs, including the Pioneer Accountable Care Organization (ACO) Program.[2] Under this approach, all attributed beneficiaries receive a full risk score update for the performance year, based on diagnoses and demographics. Once risk scores have been updated, we calculate the average updated risk score for each enrollment category. Then we develop a "risk score ratio" by dividing the updated risk scores by the baseline risk scores for each enrollment category. To make the risk adjustment, we multiply each enrollment category's baseline expenditures by its risk score ratio, as illustrated in Table 5.

Table 5: Illustration of Risk Adjustment

Title Description	Aged	Disabled
Baseline Risk Score	1.1	1.05
Updated Risk Score	1.2	1.1
Risk Score Ratio = Updated Risk Score / Baseline Risk Score	1.09	1.048
Trended Baseline Expenditures, before Risk Adjustment	$683.40	$505.00
Trended Baseline Expenditures, after Risk Adjustment = Trended Baseline Expenditures * Risk Score Ratio	**$744.91**	**$529.24**

[2] http://innovation.cms.gov/Files/x/PioneerACOBmarkMeghodology4to5.pdf

2.3 Adjusting for Case Mix

After determining the percentage growth rate and risk adjustment, we determine the mix of Aged and Disabled beneficiaries in the performance year population and reweight the baseline expenditures of each enrollment category to match the proportions in the performance year. Because the baseline population contains a certain percentage of Aged and Disabled beneficiaries, which may differ in each performance year population, and because the costs of these two population categories differ, it is necessary to adjust the baseline expenditures to reflect target expenditures more accurately for the performance year population. For example, assume the baseline population contains 80% Aged and 20% Disabled beneficiaries with average monthly expenditures of $745 and $529 per person, respectively (as shown in **Table 6**). This is an average monthly expenditure of $702 per person. However, in the performance year there are 82% Aged and 18% Disabled beneficiaries. The higher proportion of Aged beneficiaries will likely result in a higher average cost because the Aged beneficiaries have a higher average cost than the Disabled beneficiaries. Reweighting the expenditures accounts for this change in case mix. Reweighting the expenditures in this example results in an average monthly expenditure of $706 per person rather than $702, as shown below in Table 6.

Table 6: Illustration of Case Mix Adjustment

Title Description	Aged	Disabled	Total Expenditures
Trended, Risk-Adjusted Expenditures	$744.91	$529.24	
Baseline Population	80%	20%	**$701.92**
PY Population	82%	18%	**$706.22**

In Table 6, $706.22 is the expenditure target for the region.

Section 3: Calculation of Actual Expenditures

As with the baseline and target expenditures, actual performance year expenditures are calculated separately for each CPC region. Expenditures are calculated after at least three months have elapsed after the performance year, when claims are nearly 100% complete. For example, for performance year 2015, CMS used three months of claims runout and the financial reconciliation began in April 2016. For performance year 2014, CMS used six months of claims runout and the calculation began in July 2015. Practices may expect results to be reported roughly nine months after the close of the performance year (i.e., Fall 2015 for performance year 2014). The sections below detail our methods of calculating the region level performance year expenditures.

3.1 Performance Year Population and Eligibility

The performance year population includes all beneficiaries attributed to a participating CPC practice for at least one of the four quarters of the performance year. Beneficiaries attributed to practices that terminate participation in CPC during the performance year will be included, though practices that terminate during the performance year are generally not eligible for shared savings payments.[3] Beneficiaries are included in the performance year expenditure calculation for only the portion of the year when they are both eligible for the demonstration and attributed to a participating CPC practice. The same ineligibility criteria apply to the performance year population as to the historical baseline population (see **Section 1.1**).

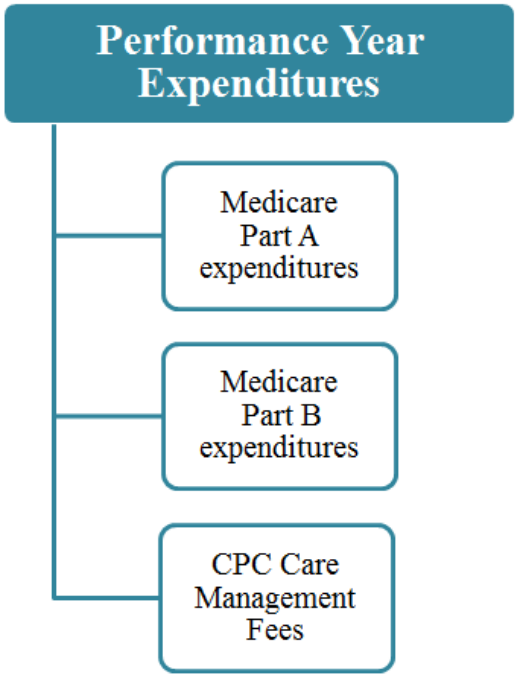
3.2 Expenditures

Expenditures are included for all beneficiaries during the time they are both attributed and eligible during the performance year. In other words, we do not use beneficiaries' claim expenses during periods when they are not attributed. We include expenditures for all claims where the service date is during the period of eligibility. The service date for most claims is the date the beneficiary received the service (referred to as the "from date" on the claim). For inpatient and SNF claims, the service date is the date the beneficiary was admitted to the facility (the admission date on the claim).

As in the calculation of the baseline expenditures, we include all Medicare Part A and Part B FFS expenditures (payments) from the inpatient, SNF, outpatient, physician, DME, HHA, and hospice claims files. IME and DSH payments will be excluded, as will inpatient pass through amounts, which include direct medical education, capital-related costs, and bad debt. Finally, actual expenditures include all CPC Medicare care management fees paid by CMS during each performance year (see **Figure 3** below).

[3] Practices that terminate after the performance year are eligible for shared savings payments if they meet all of the reporting requirements for the performance year.

Figure 3: Components of Performance Year Expenditures



Actual expenditures will be calculated for the same enrollment categories as for the baseline expenditures – Aged and Disabled.

3.2.1 Application of Completion Factors

We apply a completion factor to Part A and Part B expenditures combined for the performance year expenditure calculation. The completion factor estimates the expense of any claims incurred in the performance year but not yet paid by Medicare (and thus not yet available in the Medicare data) as of the time we determine the expenditures. For example, claims are sometimes not submitted to Medicare until more than six months after the service was incurred. These claims are not included in the claims used to determine expenditures and the completion factor is used to estimate the amount of the claims for the performance year that will be paid later. The completion factor is provided by CMS' Office of the Actuary (OACT).

3.2.2 Outlier Adjustment

We do not apply an outlier adjustment in these calculations.[4] There is a minimum of 40,000 beneficiaries in each region per year and, with populations of this size, there is no need to adjust for outliers to reduce overall variation. Using uncapped expenditures allows regions greater opportunity to generate and earn shared savings.

3.2.3 Sequestration Adjustment

Beginning April 1, 2013, all Medicare expenditures are reduced by 2% due to sequestration. In the absence of sequestration, Medicare expenditures would be approximately 2% higher (technically 1/0.98 or 2.041% higher) than they actually are. All of the CPC performance years are covered in full by sequestration, but the baseline year (2012) used in the calculation of the expenditure target was not. To make an appropriate comparison between the actual expenditures and the expenditure target, we adjust the actual expenditures at the claim level, based on the date of service, to yield an amount equal to what the actual expenditures would have been in the absence of sequestration. Otherwise, the 2% sequestration reduction would be misrepresented as savings.

[4] Outlier adjustment is an adjustment that accounts for patients with very high expenditures.

All non-DME claims with a *through date* of April 1, 2013 or after will be adjusted by dividing the Medicare payment by 0.98, in order to reflect how sequestration was actually implemented. DME claims with a *from date* of April 1, 2013 or after will be adjusted by dividing the Medicare payment by 0.98. Dividing by 0.98 will increase the claim payments up to the amount that would have been paid in the absence of sequestration.

This adjustment increases the actual performance year expenditures for all practices in all regions, in order to put them on par with baseline expenditures. This ensures that we can make an equivalent comparison of actual expenditures and the target.

Section 4: Shared Savings Calculation

Shared savings are calculated separately for each of the seven CPC regions for each of the three shared savings performance years (2014, 2015, and 2016). In each performance year, we calculate each region's expenditure target, as described in **Section 2,** and each region's actual expenditures, as described in **Section 3**. In this section, we describe how we compare the actual expenditures with the expenditure target in each region to determine if there have been savings and how those savings are shared with practices. Note that if sequestration is in effect at the time any shared savings payments are made, CMS would reduce the calculated savings payments by 2%, as required by the law.

CMS will share a percentage of the savings above certain thresholds with the practices in each region, as described in **Section 4.1**. If a region earns shared savings, each practice in that region is eligible for a share of the savings based on the acuity and size of its beneficiary population. For example, larger practices with relatively sicker patients are eligible for a larger proportion of shared savings. Shared savings payments to individual practices are contingent upon quality performance; practices that do not score high enough on quality performance will not receive their share of the savings. The method for distributing savings to practices is described in **Section 4.2** and the requirements for a practice to receive a payment are listed in **Section 4.3**. **Section 5** provides information on the quality measures and quality scoring method.

4.1 Savings Corridors

We compare the expenditures of the attributed beneficiaries in each CPC region to the target expenditures for each region. If the CPC region's actual expenditures (including care management fees) are less than the region's target expenditures, we then determine whether or not the savings generated falls into one of three savings corridors. This "gated corridor" approach increases the savings sharing percentages as regions save more money and as CMS becomes more confident that "true" savings have occurred.

CMS shares 10% of all net savings above 1.0% plus 30% of all net savings above 2.3%. If a region reaches 3.5% net savings, CMS will share 50% of all net savings (first dollar). This is summarized in Table 7 below.

Table 7: Percentage of Savings Shared Based Upon Net Percentage Saved

Savings Corridor	If the Net Percentage Savings (S) is…	CMS will share with practices in the region…
A	$S \leq 1\%$	Zero
B	$1\% < S\% \leq 2.3\%$	10% of the savings between 1% and S%
C	$2.3\% < S\% \leq 3.5\%$	10% of the savings between 1% and 2.3% PLUS 30% of the savings between 2.3% and S%
D	$S\% > 3.5\%$	50% of the savings between 0% and S%

4.2 Distribution of Savings among CPC Practices

If there are savings to be shared with the practices in a region, the shareable savings are divided among all practices in the region that were participating as of the last day of the performance year. The percentage of regional savings that a practice can earn is equal to the practice's total annual care management fees divided by the region's sum of total annual care management fees. This is illustrated in the formula below:

A = Percentage of Regional Savings that a practice may earn

B = Total care management fees paid to the practice in the performance year

C = Total care management fees paid to ALL practices in the region in the performance year A = B / C

Total care management fees reflect both the number of attributed beneficiaries and the risk-adjusted care

management fees paid for those beneficiaries. In this way, the amount of savings earned by each practice is dependent upon the acuity and size of that practice's CPC population.

Practices that earn at least 50% of the total quality points available in each performance year and meet eCQM reporting requirements receive their full share of the regional savings; practices earning less than 50% of the total points available or that do not meet the eCQM reporting requirements do not receive a shared savings payment. All unpaid savings return to the Medicare Trust Fund. That is, money that is "left on the table" by practices that do not meet these quality requirements are not distributed among the qualifying practices in the region.

4.3 Requirements for Receiving a Shared Savings Payment

In order to receive a payment, practices must meet the following requirements:

- Practices must have participated in the model for the entire performance year through December 31st.[5]
- Practices must have submitted the required number of eCQMs for the performance year (**see Section 5.1**).
- Practices must have achieved at least half of the possible points for the performance year, which may be earned from any combination of measures. The maximum number of points available in performance year 2014 was 70; the maximum number of points available in performance years 2015 and 2016 ranges from 154 to 175. The maximum number of points available in 2015 and 2016 depends on the number of eCQMs each practice reported. The increase in total quality points available between 2014 and 2015 reflects that eCQMs are scored for performance in 2015 and 2016. Information on the quality measures and how points are earned is located in **Section 5**.

If a region does not earn shared savings, CMS still calculates quality scores for practices to inform their improvement efforts. The quality measures selected for the CPC initiative are described below in **Section 5.1** and are listed in **Appendix B**. The benchmarking methodology used in the calculation of quality points is described in **Section 5.3**.

[5] Practices that begin participation during the year and are still participating at the end of the year are also eligible for shared savings, as long as they meet reporting requirements for the performance year.

Section 5: Quality Measures and Performance

CPC uses quality measurement to provide practices with data to inform care improvement efforts, to measure changes in quality of care and patient experience, and to allocate shared savings. This section details the three types of quality measures used to determine shared savings eligibility: eCQMs, claims-derived measures, and survey-derived patient experience measures.

5.1 Quality Measures

CMS selected the quality measures, listed in **Appendix B**, by reviewing current measures used in other CMS programs. Our goal was to identify measures focused on ambulatory quality, linked to care outcomes, and that have known performance gaps. The measures are derived from claims, patient surveys, and eCQMs. Many CPC quality measures are also used in the CMS Medicare and Medicaid EHR Incentive Program to ensure consistency.

Table 8 summarizes the approach for phasing in the measures over the three shared savings performance years in the CPC initiative. Note that "R" indicates only reporting of the measures is required for shared savings quality scoring and "Scored" indicates the measures are scored and assigned points that contribute to an overall shared savings quality score.

Table 8: How Measures Will Be Used

Measure Type	2014	2015	2016
Electronic clinical quality measures (eCQMs)	R	Scored	Scored
Claims-derived care coordination measures	Scored	Scored	Scored
Survey-derived patient experience measures	Scored	Scored	Scored

In 2014, shared savings scoring on the eCQMs was based on successful reporting only, and the claims- derived and survey-derived measures were scored based on performance. In 2015 and 2016, all three types of quality measures are scored based on performance. In all years, practices were required to report at least nine eCQMs. The requirements for 2016 eCQM reporting for CPC are detailed in the **CPC eCQM Manual**.

5.2 Calculation of Performance Rates

Performance on the patient experience and eCQMs is assessed at the practice level. Performance on the three claims-derived measures is assessed at the regional level because these measures require much larger sample sizes to produce reliable results. We discuss performance rates for each measure type below.

5.2.1 Survey-derived Patient Experience Measures

The patient experience measures are important in the shared savings quality scoring because these measures reflect how practices' patients are experiencing improved quality as the CPC initiative is implemented and are a direct reflection of the importance that CMS places on truly patient-centered care.

We calculate performance rates for each of the patient experience measures for each practice using the CAHPS Analysis Program, version 4.1, which allows users to analyze CAHPS survey data to make valid comparisons of performance.[6] Each CPC CAHPS composite measure is listed in Table 9 below, along with the point scale used for scoring the measure. For all of the CPC CAHPS composite measures, a higher mean value is considered to be better than a lower mean value.

[6] The CAHPS Analysis Program is programming code that was developed and tested by AHRQ to generate practice-level output from CAHPS survey results. This code can be adjusted using parameters within the code to generate composite scores from CAHPS survey results. Documentation for the CAHPS Analysis Program can be found here: https://cahpsdatabase.ahrq.gov/files/CGGuidance/Instructions%20for%20Analyzing%20CAHPS%20Surveys.pdf

Table 9: Patient Experience Composite Measures and Point Scales

Composite Measure	CAHPS Point Scale
Getting Timely Appointments, Care, and Information (5 questions) How Well Providers Communicate (6 questions) Attention to Care from Other Providers (2 questions)	Scale 1 – 4 "always" = 4 "usually" = 3 "sometimes" = 2 "never" = 1
Shared Decision Making (3 questions)[7]	Scale 1 – 4 "a lot" = 4 "some" = 3 "a little" = 2 "not at all" = 1
Providers Support Patient in Taking Care of Own Health (2 questions)	0 – 1 "yes" = 1 "no" = 0
Patient Rating of Provider and Care (1 question)	0 – 10 (patients answer on a scale of 0 – 10)

See Table 19 in **Appendix C** for a list of the survey questions in each composite. Questions within a composite with missing values are dropped. We adjust each practice's mean value (as generated by the CAHPS Analysis Program) using the variables age, gender, education, and overall health. Finally, since adjusting the mean value of a practice with a limited number of surveys can result in a much larger difference between the unadjusted and adjusted mean, we use a smoothing curve to reduce skewness in the mean values.

Calculating statistically valid performance rates requires having a sufficient amount of data for the results to be reliable. AHRQ recommends that for each patient experience measure, a 0.7 reliability threshold is appropriate. The reliability threshold is based on the number of surveys and the variance of scores received for the measure. We calculate a practice's performance rate for a measure only when there are enough surveys to estimate a reliable result, i.e., a reliability value of at least 0.7. If a measure has a reliability value less than 0.7, we assign the practice the average performance rate of all CPC practices with reliability values greater than or equal to 0.7 for that measure. Due to a relatively high number of practices with reliability values below 0.7 for the shared decision making composite measure, CMS does not score this measure.

5.2.2 Claims-derived Care Coordination Measures

For the claims-derived quality measures, we calculate region-level performance rates because a large sample size is needed for statistical reliability. Performance rates on these measures are calculated in accordance with the specifications used by the Medicare Shared Savings Program (Shared Savings Program). These specifications can be found at the links shown below. While the specifications for these three measures refer to the ACO as the unit of analysis, for CPC the unit of analysis is the CPC region.

- Risk Standardized All Condition Readmission

  Performance is measured as the risk-standardized percentage of hospital discharges (as defined in the specifications) that resulted in a readmission. Lower percentages indicate better performance.
  https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO-8.pdf

- Ambulatory Sensitive Conditions Admissions for Heart Failure (HF)

  Performance is measured as the ratio of the observed to expected number of hospital admissions for heart failure in the region. Lower ratios indicate better performance.

  https://www.cms.gov/Medicare/Medicare-Fee-for-Service- Payment/sharedsavingsprogram/Downloads/ACO-10.pdf

- Ambulatory Sensitive Condition Admissions for Chronic Obstructive Pulmonary Disease (COPD) or

[7] The Shared Decision Making Composite is not incorporated in the 2014, or 2015, or 2016 shared savings quality scoring.

Asthma in Older Adults

Performance is measured as the ratio of the observed to expected number of hospital admissions for COPD or asthma in the region. Lower ratios indicate better performance. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO-9.pdf

5.2.3 Electronic Clinical Quality Measures (eCQMs)

CPC emphasizes quality measures derived from EHRs because they focus practices' attention at the point of care and provide a rich source of clinical data. Performance rates are calculated for 2015 and 2016 for the eCQMs. As described above, in 2014 only successful reporting of the eCQMs was used in the shared savings calculations.

Performance rates on each measure are calculated according to the measure specifications, which are located in the CMS eCQI Resource Center. Similar to patient experience of care measures, calculating statistically valid performance rates requires having a sufficient amount of data for the results to be reliable. For eCQM measures, we use a 0.7000 reliability threshold. We calculate a practice's performance rate for a measure only when there is sufficient data to estimate a reliable result, i.e., a reliability value of at least 0.7000. If a measure has a reliability value less than 0.7000, we assign the practice the average performance rate of all CPC practices with reliability values greater than 0.7000 for that measure.

For practices who report more than nine eCQMs, we use the top nine scores (those with the most points) when calculating the quality score.

5.3 Calculation of Quality Benchmarks and Shared Savings Quality Scores

Once performance rates for each measure are calculated, we calculate an overall quality score for each practice. The overall quality score, along with whether the practice successfully met eCQM reporting requirements for each year, determines whether each practice receives any shared savings payment available for the performance year. The overall quality score is equal to the sum of the quality points earned for each measure. **Appendix B** summarizes the number of points available for each measure. The number of quality points earned for each measure is determined by comparing the measure's performance rate to three absolute benchmarks, or "gates." Practices earn more points the higher the performance band in which their measure scores fall.

Benchmarks for Survey-derived Patient Experience Measures: AHRQ's CAHPS database is the source of external benchmarks for these measures. The same benchmarks were used in PY 2014, PY 2015, and PY 2016. The three patient experience measure benchmark gates are set at two standard deviations (SDs) below the mean, the mean, and two standard deviations above the mean of performance. See **Appendix C** for information on the methodology used to determine these benchmarks. Table 10 provides the benchmarks for the five scored patient experience measures.

Table 10: Benchmarks for Patient Experience Measures

NQF #	Title	2 SD Below Mean	Mean	2 SD Above Mean
0005	Getting Timely Appointments, Care, and Information	2.89	3.35	3.81
0005	How Well Providers Communicate	3.47	3.73	3.99
0005	Patient Rating of Provider and Care	7.99	8.90	9.82
0005	Attention to Care from Other Providers	3.00	3.47	3.95
0005	Providers Support Patient in Taking Care of Own Health	0.23	0.47	0.71
0005	Shared Decision Making	N/A	N/A	N/A

Benchmarks for Claims-derived Care Coordination Measures: We use the benchmarks developed for the Medicare Shared Savings Program, in which all Tax Identification Numbers (TINs) for national FFS claims data were used to calculate benchmarks. The SSP benchmarks were the same in PY 2014 and PY 2015, but they were updated for PY 2016. The benchmark gates are set at the 25th, 50th, and 75th percentile of national performance. Table 11 provides the benchmarks for the three claims-based quality measures in PY 2014 and PY 2015. Table 12 provides the benchmarks for the three claims-based quality measures in PY 2016. Note that for all three measures lower scores mean better performance. This is reflected in the benchmarks in Table 11 and Table 12 where more points are awarded for lower performance rates. All practices in a region earn points for the claims-derived care coordination measures if the region meets or exceeds an absolute threshold based on external benchmarks.

Table 11: Benchmarks for PY 2014 and PY 2015 Claims-derived Quality Measures

NQF #	Title	25th Percentile	50th Percentile	75th Percentile
1789	Risk Standardized All Condition Readmission (percent of discharges)	16.75%	16.24%	15.82%
0277	Ambulatory Sensitive Conditions Admissions for Heart Failure (HF) (ratio of observed to expected HF admissions)	1.33%	0.88%	0.47%
0275	Ambulatory Sensitive Conditions Admissions for Chronic Obstructive Pulmonary Disease (COPD) (ratio of observed to expected COPD admissions)	1.37%	0.84%	0.44%

Table 12: Benchmarks for PY 2016 Claims-derived Quality Measures

NQF #	Title	25th Percentile	50th Percentile	75th Percentile
1789	Risk Standardized All Condition Readmission (percent of discharges)	15.40%	15.07%	14.81%
0277	Ambulatory Sensitive Conditions Admissions for Heart Failure (HF) (ratio of observed to expected HF admissions)	1.47%	1.08%	0.75%
0275	Ambulatory Sensitive Conditions Admissions for Chronic Obstructive Pulmonary Disease (COPD) (ratio of observed to expected COPD admissions)	1.55%	0.92%	0.50%

Benchmarks for eCQMs: Beginning in 2015, performance on the eCQMs is measured and included in shared savings quality scores. Group Practice Reporting Option (GPRO) Quality Data Reporting Architecture Category 3 (QRDA-3) data from the Physician Quality Reporting System (PQRS) is the source of external benchmarks for measures listed in Table 13. The benchmark gates are set at the 25th, 50th, and 75th percentiles of national performance (shown in Table 13).

Table 13: Benchmarks for eCQMs

Measure #	Title	25th Percentile	50th Percentile	75th Percentile
CMS 165 v4 NQF 0018	Controlling High Blood Pressure	54.24%	62.61%	69.48%
CMS 138 v4 NQF 0028	Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	70.10%	85.22%	92.58%
CMS 125 v4 NQF NA[8]	Breast Cancer Screening	3.42%	32.82%	56.70%
CMS 130 v4 NQF 0034	Colorectal Cancer Screening	2.19%	29.61%	57.42%
CMS 147 v5 NQF 0041	Preventive Care and Screening: Influenza Immunization	5.78%	25.92%	43.14%
CMS 122 v4 NQF 0059[9]	Diabetes: Hemoglobin A1c Poor Control	n/a	n/a	n/a
CMS 163 v4.1 NQF NA[10]	Diabetes: Low Density Lipoprotein (LDL) Management	23.93%	36.51%	46.86%
CMS 182 v5.2 NQF NA[11][12]	Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control	35.71%	54.52%	68.26%
CMS 144 v4 NQF 0083	Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LSVD)	78.26%	90.83%	100.00%
CMS 139 v4 NQF 0101	Falls Screening	1.18%	28.57%	71.79%
CMS 2 v5 NQF 0418	Depression Screening	0%	1.00%	11.00%
CMS 127 v4 NQF 0043[13]	Pneumonia Vaccination Status for Older Adults	n/a	n/a	n/a
CMS 68 v5 NQF 0419	Documentation of Current Medications in the Medical Record	72.96%	90.88%	97.00%

Section 6: A Shared Savings Example

We provide the following example to illustrate the distribution of shared savings in one region. This example is for illustrative purposes only and does not necessarily reflect the experience expected to occur during any given performance year. In the following example:

- Row 1: The actual expenditures for a region with 450,000 person months were $873 PBPM.
- Row 2: The target expenditures for the region were $900 PBPM.
- Rows 3-4: The region saw savings of $27 PBPM, or 3%. This level of savings falls into Savings Corridor C, 2.3% - 3.5%.
- Rows 5-10: The region had $5.265 million ($11.70 PBPM) savings in Savings Corridor B (between 1% and 2.3%), and $3.185 million ($6.30 PBPM) savings in Savings Corridor C (between 2.3% and 3.5%). There were no savings in Savings Corridor D (above 3.5%).
- Rows 11-13: CMS shares 10% of the savings in Savings Corridor B plus 30% of savings in Savings Corridor C with the region.

[8] CMS 125 v4 - This measure is no longer NQF endorsed.
[9] CMS 122 v4/NQF 0059 -We did not create benchmarks because of a technical error in the measure logic in the July 2014 version of this measure.
[10] CMS 163 v4.1 - This measure is no longer NQF endorsed.
[11] CMS 182 v5.2 - This measure is no longer NQF endorsed.
[12] CMS 182 v5.2 - This measure has two performance rates. We did not score or create benchmarks for the second performance rate because of a technical error in the measure logic of the July 2014 version of this measure. We used the first performance rate.
[13] CMS 127 v4/NQF 0043 - We did not create benchmarks because the July 2014 version of this measure is based on outdated clinical practice guidelines.

- Row 14: The total shared amount is the equivalent of $1.377 million or $3.06 PBPM.
- Row 15: In the performance year, the region received $9 million in care management fees.
- Row 16: Practice A was paid $180,000 in care management fees.
- Rows 17-18: Practice A is eligible for 2% of the region's total savings, or $27,540 (2% * $1,377,000).
- Row 19: Because shared savings payments are subject to a 2% sequestration reduction, Practice A is eligible to receive $26,989.20 ($27,540 * 0.98) after sequestration has been taken into account.

If Practice A met the minimum quality requirements for the performance year (35 out of 70 quality points and eCQM reporting in PY 2014, or half of total quality points in PY 2015 and PY 2016, which varies based on which 9 eCQM measures are reported and scored), then Practice A would receive a shared savings payment of $26,989.20.

Table 14: Example Calculation of PBPM Shared Amount

Row	Item	Amount	PBPM Amount	PBPM Calculation	Description
1	Actual Expenditures	$392,850,000	$873		
2	Target Expenditures	$405,000,000	$900		
3	Savings	$12,150,000	$27	= $900 - $873	Difference between actual and target expenditures.
4	Savings Percentage	3%	3%	= 1 - $873/$900	Savings as a percentage of target expenditures.
5	1% Savings	$4,050,000	$9	= 1% * $900	Threshold used to determine amount of savings above 1%.
6	2.3% Savings	$9,315,000	$20.70	= 2.3% * $900	Threshold used to determine amount of savings above 2.3%.
7	3.5% Savings	$14,175,000	$31.50	= 3.5% * $900	Threshold used to determine amount of savings above 3.5%.
8	Savings in Corridor B (1% to 2.3%)	$5,265,000	$11.70	= $20.70 - $9	Amount of savings above 1% threshold.
9	Savings in Corridor C (2.3% to 3.5%)	$2,835,000	$6.30	= $27 - $20.70	Amount of savings above 2.3% threshold.
10	Savings in Corridor D (above 3.5%)	$0	$0	n/a	Amount of savings above 3.5% threshold.
11	10% Shared Amount	$526,500	$1.17	= 10% * $11.70	Amount CMS shares for savings in Corridor B.
12	30% Shared Amount	$850,500	$1.89	= 30% * $6.30	Amount CMS shares for savings in Corridor C.
13	50% Shared Amount	$0	$0	n/a	Amount CMS shares for savings in Corridor D.
14	**Total Shared Amount**	**$1,377,000**	**$3.06**	**= $1.17 + $1.89**	Total amount CMS shares with the region.
15	Regional Care Management Fees	$9,000,000		n/a	Amount of care management fees the region received in the performance year.
16	Practice A Care Management Fees	$180,000		n/a	Amount of care management fees Practice A received in the performance year.
17	Percentage of regional savings Practice A may earn	2%		$= \frac{\$180,000}{\$9,000,000}$	Percentage of regional care management fees distributed to Practice A, to reflect patient acuity and population size.
18	Savings Practice A is eligible to earn	$27,540		= 2% * $1,377,000	Total portion of the region's savings that Practice A is eligible to receive.
19	Post-sequestration Amount	**$26,989**		= 98% * $27,540	Shared savings payments are subject to a 2% sequestration reduction.

Appendix A: Beneficiary Attribution Methodology

CMS uses a prospective attribution methodology to identify the population of Medicare fee-for-service beneficiaries for whom practices within a region are accountable for care and costs in the Comprehensive Primary Care (CPC) Initiative. The Medicare beneficiary attribution is the basis for the monthly care management fees paid to practices as well as the shared savings calculation. Each quarter, beneficiaries are attributed to the practice of primary care providers who billed for the plurality of their primary care OR to the practice that billed the most recent Chronic Care Management (CCM) visit during the most recent 24-month period for which data is available. If a beneficiary has an equal number of qualifying visits to more than one practice, the beneficiary is attributed to the practice with the most recent CCM visit, and then to the practice with the most recent non-CCM visit (if no CCM visits were billed). For each participating practice the following information is used to conduct beneficiary attribution: Practice name, Address, Tax ID and Part A Provider Number (for Critical Access Hospitals). For each individual practitioner within the selected practice the Provider Name, Individual NPI, effective start date of participation, and effective termination date of participation are used to conduct beneficiary attribution.

The beneficiary population used for the shared savings calculation will include all beneficiaries attributed for at least one of the four quarters of the performance year. Beneficiary experience will be included for any month/portion of a month when the beneficiary is both attributed and eligible. Thus, we do not hold practices accountable for beneficiary claim expenses during times when they are not attributed. Reasons for ineligibility after a beneficiary has been attributed are:

- Death;
- Enrollment in a MA/PACE plan;
- Loss of Part A or Part B;
- Medicare becomes secondary payer;
- Move to an institutional facility;
- Incarceration.

The process for attributing beneficiaries to CPC practices each quarter is described below.

Step 1: Identify all beneficiaries eligible for attribution.

Beneficiaries must:

- Be enrolled in Part A and Part B Medicare – this is verified using the Part A and Part B entitlement information in the Medicare Enrollment Database (EDB).
- Use Medicare coverage as their primary insurer – this is verified using the primary payer information in the Medicare EDB.
- Not have end stage renal disease (ESRD) or be enrolled in hospice the first time they are attributed (enrolling in hospice or becoming ESRD after having been attributed does not disqualify a person from future attribution) – this is verified using hospice and ESRD effective dates in the Medicare EDB.
- Not be enrolled in Part C Medicare Advantage, a Medicare cost plan, or PACE Plan – this is verified using the group health organization enrollment fields in the Medicare EDB. These fields cover all three types of plans identified.
- Not be institutionalized – this is verified using the most recent Minimum Dataset (MDS) information available. Beneficiaries are considered institutionalized if they received a quarterly or annual assessment in the 12 months prior to the last day of the look back period.
- Not be incarcerated.
- Not be enrolled in any other program or model that includes a Medicare FFS shared savings opportunity.

Step 2: Identify the pool of claims from which to pull eligible visits.

For all beneficiaries who meet the criteria above:

- Claims must be incurred in the 24-month period used for the specific payment quarter (see Table 15 for the attribution schedule). There is one month of claims runout past the last day of the look back period.
- Claims are pulled from the Physician (Carrier) files and from the Outpatient files. Most practices' claims can be found in the Physician file; however, claims submitted by Critical Access Hospitals (CAHs) must be found in the Outpatient files.

Claims are pulled by beneficiary state of residence as it appears on the claim, thus identifying where the beneficiary lived at the time the service was provided. Using the entire nation's claims for each beneficiary attribution would be extremely cumbersome and time-consuming. As such, we pull claims for 29 states – this includes the entire state for each region participating in the demonstration as well as all bordering states. The attribution is run for all regions and all of these 29 states combined, not separately by region and bordering states. See **page 25** for a listing of the states.

Step 3: Identify all claims that count as eligible visits.

To count as an eligible visit, the claim must meet the following criteria:

- The service(s) provided on the claim must have been rendered by a provider who meets one of the following criteria:
    - Has one of the specialty codes located in **Table 15**; or
    - Was participating in the CPC demonstration at the time the claim occurred. This is determined using the provider effective and termination dates collected from the practices; or
    - Provided CCM services (regardless of specialty or CPC participation).[14]
    - When a provider leaves a practice, his or her TIN and NPI information remains on the demonstration provider file and is marked with a termination date. In this way, past visits to that provider during the look back period continue to be counted toward the practice.

Providers that are participating in the CPC Initiative have been selected based on the initiative's selection criteria. While we checked the specialty codes of providers in National Plan and Provider Enumeration System (NPPES) during the initial selection process, we do not check the specialty codes as part of the quarterly alignment process.

- The claim must have one of the following Current Procedural Technology (CPT) codes :

[14] Only claims with CCM codes on them are eligible for providers who do not have one of the primary care specialties listed in Table 16.

Table 15: Qualifying CPT Codes

Descriptor	CPT Code
Office/Outpatient Visit E&M	99201-99205 99211-99215
Complex Chronic Care Coordination Services	99487-99489
Transitional Care Management Services	99495-99496
Nursing Home & Home Care	99304-99310 99315-99316,99318 99324-99328 99334-99337 99339-99345 99347-99350
Welcome to Medicare and Annual Wellness Visits	G0402, G0438, G0439
Chronic Care Management Services[15]	99490
Outpatient Clinic Visit for Assessment and Management (CAHs only)[16]	G0463
Advance Care Planning[17]	99497

Step 4: If the most recent claim in the look back period was for CCM services, attribute the beneficiary to the practice or provider that provided the CCM service.

- Claims are considered for both eligible demonstration and eligible non-demonstration providers. A provider is identified as a single TIN-NPI combination in the Physician file and a single Provider Number-NPI combination in the Outpatient file. This is because Outpatient claims do not contain a TIN.
- A CPC practice is defined by the TIN-NPI or Provider Number-NPI combinations identified on the practice's application for participation in the demonstration and as updated throughout the demonstration. A non-CPC practice is defined as a single TIN-NPI or Provider Number-NPI combination for lack of information regarding how they are grouped as actual practices.
- If the most recent claim in the look back period was NOT for CCM services, continue to Step 5.

Step 5: Count the number of eligible visits for each provider.

- Visits are counted for both demonstration and non-demonstration providers. All eligible TIN-NPI combinations from the Physician file and all eligible Provider Number-NPI combinations from the Outpatients file are included.

Step 6: Count the number of eligible visits to each "practice."

- A practice is defined by the TIN-NPI or Provider Number-NPI combinations identified on the practice's application for participation in the demonstration and as updated throughout the demonstration. For example, two providers participating in the demonstration as a practice will have their eligible visits added together for the purposes of attributing beneficiaries to practices.
- Non-demonstration practices are defined as single TIN-NPI or Provider Number-NPI combinations for lack of information regarding how they are grouped as actual practices.

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[15] Represents a new CPT code included in the Centers for Medicare & Medicaid Services (CMS) Medicare payments for physician fees for 2015, issued as a final rule with a comment period on November 13, 2014, effective January 1, 2015. This new code will be included in the CPC attribution methodology starting in July 2015 because that will be the first quarterly payment that will include claims from 2015 in the look back period. See Table 1 for details about the attribution schedule and look back periods. See https://www.federalregister.gov/articles/2014/11/13/2014-26183/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-clinical-laboratory for the Medicare physician fee schedule final rule for CY 2015.

[16] Represents a new CPT code included in the CY 2014 OPPS final rule. This code requires hospitals and *allows* CAHs to use the code G0463 to replace codes 99201-99205 and 99211-99215. This code will be included in the CPC attribution methodology starting in April 2016. See https://www.federalregister.gov/articles/2013/12/10/2013-28737/medicare-and-medicaid-programs-hospital-outpatient-prospective-payment-and-ambulatory-surgical for the OPPS final rule for CY 2014.

[17] Represents a new CPT code included in the CY 2016 Physician Fee Schedule final rule. This code will be included in the CPC attribution methodology starting in July 2016 because that will be the first quarterly payment that will include claims from 2016 in the look back period. See https://www.federalregister.gov/articles/2015/11/16/2015-28005/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-and-other-revisions#h-123 for the Medicare physician fee schedule final rule for CY 2016.

Step 7: Attribute each remaining eligible beneficiary to the practice that provided the plurality of visits.

- This step applies only to eligible beneficiaries who were not attributed to a practice in Step 4.
- If a beneficiary has an equal number of eligible visits to more than one practice, the beneficiary will be attributed to the practice with the most recent visit.

Table 16: Beneficiary Attribution Schedule

First Cohort: Arkansas, Oklahoma

Quarter	Quarter Start	Quarter End	Look back Period	Paid Thru
Q1	10/1/2012	12/31/2012	5/2010 - 4/2012	5/31/2012

Second Cohort: Colorado, New Jersey, New York, Ohio-Kentucky, Oregon

Quarter	Quarter Start	Quarter End	Look back Period	Paid Thru
Q1	11/1/2012	12/31/2012	8/2010 - 7/2012	8/31/2012

All Regions

Quarter	Quarter Start	Quarter End	Look back Period	Paid Thru
Q2	1/1/2013	3/31/2013	10/2010 - 9/2012	10/31/2012
Q3	4/1/2013	6/30/2013	1/2011 - 12/2012	1/31/2013
Q4	7/1/2013	9/30/2013	4/2011 - 3/2013	4/30/2013
Q5	10/1/2013	12/31/2013	7/2011 - 6/2013	7/31/2013
Q6	1/1/2014	3/31/2014	10/2011 - 9/2013	10/31/2013
Q7	4/1/2014	6/30/2014	1/2012 - 12/2013	1/31/2014
Q8	7/1/2014	9/30/2014	4/2012 - 3/2014	4/30/2014
Q9	10/1/2014	12/31/2014	7/2012 - 6/2014	7/31/2014
Q10	1/1/2015	3/31/2015	10/2012 - 9/2014	10/31/2014
Q11	4/1/2015	6/30/2015	1/2013 - 12/2014	1/31/2015
Q12	7/1/2015	9/30/2015	4/2013 - 3/2015	4/30/2015
Q13	10/1/2015	12/31/2015	7/2013 - 6/2015	7/31/2015
Q14	1/1/2016	3/31/2016	10/2013 - 9/2015	10/31/2015
Q15	4/1/2016	6/30/2016	1/2014 - 12/2015	1/31/2016
Q16	7/1/2016	9/30/2016	4/2014 - 3/2016	4/30/2016
Q17	10/1/2016	12/31/2016	7/2014 – 6/2016	7/31/2016

Table 17: States Used for Beneficiary Attribution

CPC Regions that are Full States

CPC Region	State
New Jersey	Delaware, Pennsylvania, **New York***
Oregon	Washington, Idaho, Nevada, California
Arkansas	**Oklahoma**, Missouri, Tennessee, Louisiana, Mississippi
Colorado	New Mexico, Arizona, Utah, **Oklahoma**, Kansas, Nebraska, Wyoming

CPC Regions that are Partial-States

CPC Region	State
Ohio-Kentucky (Cincinnati-Dayton Region)	Indiana, West Virginia, Pennsylvania**
Oklahoma (Greater Tulsa Region)	Texas, Kansas, Missouri, Arkansas, New Mexico, **Colorado**
New York (Capital District-Hudson Valley Region)	Pennsylvania, **New Jersey**, Connecticut, Massachusetts, Vermont

*Border states with bold font are also primary demonstration states.

**VA, TN, and IL were not identified as border states for the Ohio-Kentucky region because the demonstration area is in the extreme northern portion of KY. However, TN is included as a border state for AR. MI was not included as a border state for OH because the demonstration area is in the extreme southern portion of the state.

Unique List of States (30)

Arkansas
Arizona
California
Colorado
Connecticut
Delaware
Idaho
Indiana
Kansas
Kentucky
Louisiana
Massachusetts
Missouri
Mississippi
Nebraska
New Jersey
New Mexico
Nevada
New York
Ohio
Oklahoma
Oregon
Pennsylvania
Tennessee
Texas
Utah
Vermont
Washington
West Virginia
Wyoming

Figure 4: CPC States and Borders

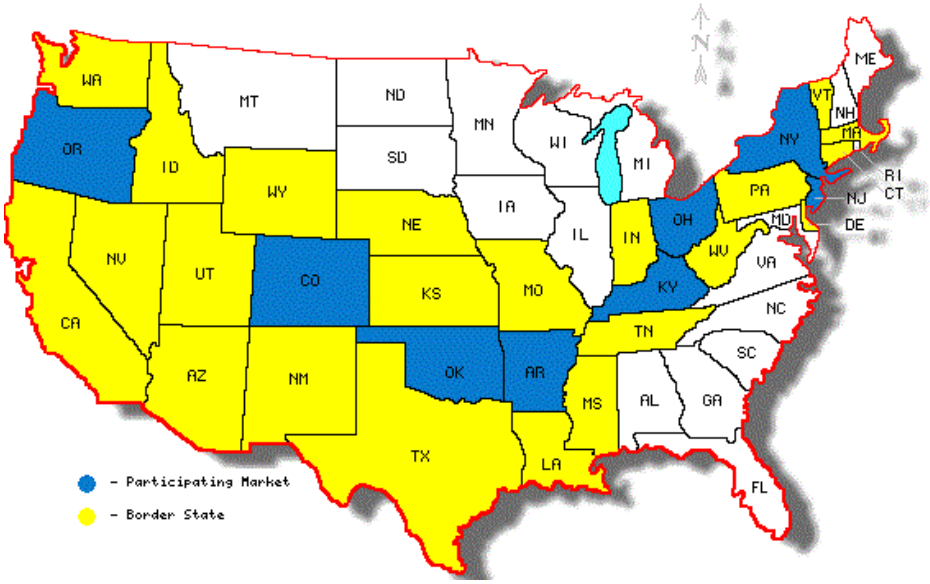

Table 18: Eligible Provider Specialties and Taxonomy Codes

Eligible Provider Specialties	Taxonomy
Family Medicine	207Q00000X
Adult Medicine	207QA0505X
Geriatric Medicine	207QG0300X
Hospice and Palliative Medicine	207QH0002X
General Practice	208D00000X
Internal Medicine	207R00000X
Geriatric Medicine	207RG0300X
Hospice and Palliative Medicine	207RH0002X
Clinical Nurse Specialist	364S00000X
Acute Care	364SA2100X
Adult Health	364SA2200X
Chronic Care	364SC2300X
Community Health/Public Health	364SC1501X
Family Health	364SF0001X
Gerontology	364SG0600X
Holistic	364SH1100X
Women's Health	364SW0102X
Nurse Practitioner	363L00000X
Acute Care	363LA2100X
Adult Health	363LA2200X
Community Health	363LC1500X
Family	363LF0000X
Gerontology	363LG0600X
Primary Care	363LP2300X
Women's Health	363LW0102X
Physician Assistant	363A00000X
Medical	363AM0700X

Appendix B: Quality Measures by Type and Points Awarded

Table 19: Quality Measures by Type and Points Awarded

Electronic Clinical Quality Measures (eCQMs)

Measure #	Title	25th – 49th Percentile	50th – 74th Percentile	Above 75th Percentile
CMS 165 v4 NQF 0018	Controlling High Blood Pressure	4	7	12
CMS 138 v4 NQF 0028	Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	4	7	9
CMS 125 v4 NQF NA[18]	Breast Cancer Screening	4	7	12
CMS 130 v4 NQF 0034	Colorectal Cancer Screening	4	7	12
CMS 147 v5 NQF 0041	Preventive Care and Screening: Influenza Immunization	4	7	9
CMS 127 v4 NQF 0043[19]	Pneumonia Vaccination Status for Older Adults	n/a	n/a	n/a
CMS 122 v4 NQF 0059[20]	Diabetes: Hemoglobin A1c Poor Control	12	12	12
CMS 163 v4.1 NQF NA[21]	Diabetes: Low Density Lipoprotein (LDL) Management	4	7	12
CMS 182 v5.2 NQF NA[22][23]	Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control	4	7	12
CMS 144 v4 NQF 0083	Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LSVD)	4	7	12
CMS 139 v4 NQF 0101	Falls Screening	4	7	9
CMS 2 v5 NQF 0418	Depression Screening	4	7	9
CMS 68 v5 NQF 0419	Documentation of Current Medications in the Medical Record	4	7	12

Claims-based Quality Measures

Measure #	Title	25th – 49th Percentile	50th – 74th Percentile	Above 75th Percentile
NQF 1789	Risk Standardized All Condition Readmission	4	7	10
NQF 0277	Ambulatory Care Sensitive Condition Admissions: Heart Failure	3	4	5
NQF 0275	Ambulatory Care Sensitive Condition Admissions: Chronic Obstructive Pulmonary Disease	3	4	5

[18] CMS 125v4 – This measure is no longer NQF endorsed.
[19] CMS 127v4/NQF0043 – We did not create benchmarks because the July 2014 version of this measure is based on outdated clinical practice guidelines.
[20] CMS 122v4/NQF0059 - We did not score or create benchmarks because of a technical error in the logic of the July 2014 version of this measure. All practices that reported this measure in 2015 and 2016 received maximum points.
[21] CMS 163 v4.1 - This measure is no longer NQF endorsed.
[22] CMS 182 v5.2 - This measure is no longer NQF endorsed.
[23] CMS 182v4/NQF0075 – This measure has two performance rates. We did not score or create benchmarks for the second performance rate because of a technical error in the logic of the July 2014 version of this measure.

Patient Experience of Care CAHPS) Measures

Measure #	Title	Between -2 SD and mean	Between mean and 2 SD	Above +2 SD
NQF 0005	How Well Providers Communicate	5	8	10
NQF 0005	Patient Rating of Provider and Care	5	8	10
NQF 0005	Attention to Care from Other Providers	5	8	10
NQF 0005	Providers Support Patient in Taking Care of Own Health	5	8	10
NQF 0005	Shared Decision Making[24]	n/a	n/a	n/a

[24] The Shared Decision Making Composite is not incorporated in the 2014, 2015, or 2016 shared savings quality scoring.

Appendix C: CAHPS Benchmarking Methodology

The AHRQ's CAHPS database was used as the data source for calculation of the CAHPS benchmarks. We chose this database because:

1. The sampling frame, as in CPC, includes all patients in the practice;
2. The survey items included in the CAHPS database were most similar to the patient survey used in CPC;
3. It includes a large amount of geographically representative data (546 out of 833 potential practices are either 100% primary care or multi-specialty practices that include primary care practitioners); and
4. It includes variables needed to conduct risk adjustment to account for differences in performance, rather than differences in patient characteristics obfuscating those differences in performance.

We calculated scores for each of the CPC composite measures for each practice using the CAHPS Analysis Program, version 4.1, which allows users to analyze CAHPS survey data to make valid comparisons of performance. AHRQ developed and tested the CAHPS Analysis Program code to generate practice-level output from CAHPS survey results. This code is easily adjusted using parameters to generate composite scores from CAHPS survey results. Documentation for the CAHPS Analysis Program can be found here: https://cahpsdatabase.ahrq.gov/files/CGGuidance/Instructions%20for%20Analyzing%20CAHPS%20Surveys.pdf

Each CPC composite measure is listed in Table 18, along with the point scale used for scoring the measure. For all of the CPC composite measures, a higher mean value is considered to be better than a lower mean value.

Table 20: Patient Experience Composite Measures and Point Scales

Composite Measure	CAHPS Point Scale
Getting Timely Appointments, Care, and Information (five questions) How Well Providers Communicate (6 questions) Attention to Care from Other Providers (2 questions)	1 – 4 "always" = 4 "usually" = 3 "sometimes" = 2 "never" = 1
Shared Decision Making (3 questions)	Scale 1-4 "a lot" = 4 "some" = 3 "a little" = 2 "not at all" = 1
Providers Support Patient in Taking Care of Own Health (2 questions)	0 – 1 "yes" = 1 "no" = 0
Patient Rating of Provider and Care (1 question)	1 – 10 (patients answer on a scale of 1 – 10)

The questions that make up each composite measure are shown in **Table 19**. We risk adjusted each practice-specific composite score using age, gender, education, and overall health. We used a smoothing curve to account for differences in number of survey responses.

Finally, we determined the mean and standard deviation of each composite measure. The first benchmarking point is two standard deviations below the mean, the second is the mean, and the third is two standard deviations above the mean.

Table 21: Patient Experience Composite Measure Survey Questions

Composite Measure	Survey Questions
Getting Timely Appointments, Care, and Information	Q7. Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away Q10. Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care Q15. When patient phoned provider's office during regular office hours, s/he always received an answer to his/her medical question that same day Q17. When patient phoned provider's office after regular office hours, s/he always received an answer to his/her medical question as soon as needed Q23. If patient had an appointment, s/he always saw provider within 15 minutes of appointment time
How Well Providers Communicate	Q24. Providers always explained things to patient in a way that was easy to understand Q25. Provider always listened carefully to patient Q27. When patient talked with provider about health questions and concerns, provider always gave patient easy-to-understand information Q28. Provider always seemed to know the important information about patient's medical history Q29. Provider always showed respect for what patient had to say Q30. Provider always spent enough time with patient
Patient Rating of Provider and Care	Q37. Patient rating of provider as best provider possible (9-10, out of a maximum of 10)
Attention to Care From Other Providers	Q40. If patient visited a specialist, provider always seemed informed and up- to-date about the care patient received from specialists Q45. If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking
Providers Support Patient in Taking Care of Own Health	Q42. Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health Q43. Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health
Shared Decision Making	Q34. If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine Q35. If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine Q36. If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best

Appendix D: Glossary and Acronym List

ACO: Accountable Care Organization

AHRQ: Agency for Healthcare Research and Quality

Baseline Population: Medicare FFS beneficiaries in each region who would have been attributed to CPC in 2012, identified via the same attribution method used during the CPC initiative.

Baseline Expenditures: The sum of Medicare Part A and Part B claims expenditures for the baseline population during the baseline period 2012.

Benchmarks: Absolute thresholds for quality performance based on national data.

CAH: Critical Access Hospital

CAHPS: Consumer Assessment of Health Care Providers and Systems

Case Mix: The proportion of patients within each enrollment category among the population.

CCM: Chronic Care Management

CMS: Centers for Medicare and Medicaid Services

COPD: Chronic Obstructive Pulmonary Disease

CPC: Comprehensive Primary Care initiative

CPT: Current Procedural Technology

DME: Durable Medical Equipment

DSH: Disproportionate Shared Hospital

eCQM: Electronic Clinical Quality Measures

E&M: Evaluation and Management

EDB: Enrollment Database

Enrollment Categories: In order to account for differences in average spending for different types of patients, we group attributed patients into either aged or disabled enrollment categories.

ESRD: End Stage Renal Disease

Expenditure Target: The amount of money each region would be expected to spend, absent the CPC initiative. Projected based on the trended, adjusted, and weighted baseline expenditures.

FFS: Fee for service

GPRO: Group Practice Reporting Option

HCC: Hierarchical Condition Category

HF: Heart Failure

HHA: Home Health Agency

ID: Identification Number

IME: Indirect Medical Education

MA: Medicare Advantage

MDS: Minimum Dataset

Net Savings: The difference between the expenditures target and the performance year expenditures. Negative net savings imply that the region did not earn shared savings.

NPI: National Provider Identifier

NPPES: National Plan and Provider Enumeration System

OACT: Office of the Actuary

PACE: Program of All-Inclusive Care for the Elderly

PBPM: Per beneficiary per month

Performance Year Expenditures: The sum of Medicare Part A and Part B claims expenditures, and the care management fees paid by CMS to the region for CPC attributed Medicare patients in the performance year.

PQRS: Physician Quality Reporting System

PY: Performance Year

QRDA 3: Quality Data Reporting Architecture Category 3

Reference Population: A group of patients in each region representative of CPC attributed beneficiaries. Medicare expenditures for the reference population are used to project region-specific growth rates.

Savings Corridor: Net savings tiers, used to determine how much of the net savings CMS will share with the region.

SD: Standard Deviation

SNF: Skilled Nursing Facility

TIN: Tax Identification Number