MILLIMAN WHITE PAPER

Medicare's Kidney Care Choices (KCC) Model: A focus on Comprehensive Kidney Care Contracting (CKCC)

Insights for providers participating in Original Medicare risk-sharing programs for CKD and ESRD populations

Erin Lamos, ASA, MAAA
Meng Sun, MS
Austin Barrington, FSA, MAAA

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Target population and goals of the program

Chronic kidney disease (CKD) and end-stage renal disease (ESRD) are both very costly and impact a significant portion of the U.S. population. Approximately 15% of adults in the United States have CKD.[1] ESRD treatment alone accounts for over 7% in Medicare spending, but only 1% of Medicare beneficiaries have ESRD.[2] The Comprehensive Kidney Care Contracting (CKCC) program is intended to reduce Medicare expenditures and improve the quality of care for eligible Medicare beneficiaries. These beneficiaries include those with CKD stage 4 or 5 or who have ESRD and are receiving maintenance dialysis.

Key goals of the program include the following:[3]

- Delay the transition from CKD to ESRD
- Encourage early detection and dialysis treatment rather than "crashing" into the hospital with ESRD
- Encourage kidney transplants
- Adherence to maintenance dialysis for ESRD patients

Background

In order to improve care for Medicare beneficiaries with ESRD, the Centers for Medicare and Medicaid Services (CMS) first introduced the Comprehensive ESRD Care (CEC) Model. The CEC Model sought to create a patient-centered, coordinated care experience, and to ultimately improve health outcomes for this population.

The Kidney Care Choices (KCC) Model builds upon the CEC Model structure by adding financial incentives for healthcare providers to manage the care for Medicare beneficiaries with CKD stages 4 and 5 and ESRD. The KCC Model includes four payment options:

- CMS Kidney Care First (KCF) Option
- CKCC Graduated Option (Graduated Level 1 and Level 2)
- CKCC Professional Option
- CKCC Global Option

The KCF Option is open to participation by nephrology practices and nephrology professionals only, subject to meeting certain eligibility requirements.[4] Participants receive adjusted capitation payments for managing care of aligned beneficiaries with CKD stages 4 or 5, and for those on dialysis. The capitation payments are made through CKD Quarterly Capitation Payment (QCP) and Adjusted Monthly Capitation Payment (AMCP). They will also receive a Kidney Transplant Bonus (KTB) payment for every kidney transplant received by aligned beneficiaries.

CKCC options

PARTICIPANTS

The eligible participants of CKCC are Kidney Contracting Entities (KCEs). KCEs must include nephrologists or nephrology practices, as well as transplant providers, and may include dialysis facilities and other providers and suppliers.

PAYMENTS

KCEs will be eligible for the following payments: QCP, AMCP, KTB, and shared savings/shared losses under one of the following options: CKCC Graduated Level 1, CKCC Graduated Level 2, CKCC Professional, or CKCC Global.

[1] CDC (March 4, 2021). Chronic Kidney Disease in the United States, 2021. Retrieved March 14, 2023, from https://www.cdc.gov/kidneydisease/pdf/Chronic-Kidney-Disease-in-the-US-2021-h.pdf.

[2] USRDS (2022). 2022 USRDS Annual Data Report. Retrieved March 14, 2023, from: https://usrds-adr.niddk.nih.gov/2022.

[3] CMS. Kidney Care Choices (KCC) Model. Retrieved March 14, 2023, from https://innovation.cms.gov/innovation-models/kidney-care-choices-kcc-model.

[4] CMS (March 6, 2022). KCC Model: PY2023 Request for Applications (RFA), p. 13. Retrieved March 14, 2023, from https://innovation.cms.gov/media/document/kcc-py23-rfa.

All of the CKCC options have distinct accountability frameworks[5] that are summarized in Figure 1 and Figure 2.

FIGURE 1: CKCC OPTIONS RISK SHARING AND QUALITY WITHHOLD

CKCC Options	Upside Risk	Downside Risk	Quality Withhold
Graduated Level 1	40%	0%	0.0%
Graduated Level 2	50%	30%	2.5%
CKCC Professional	50%	50%	5.0%
CKCC Global	100%	100%	5.0%

FIGURE 2: APPLICABLE ADJUSTMENTS AND OTHER MONIES OWED BY (TO) CMS

	CKCC Risk Sharing Option			
	Graduated Level 1	Graduated Level 2	Professional	Global
ESRD Discount				✓
Quality Withhold		✓	✓	✓
Truncation	✓			
Stop-loss		✓	✓	✓
Weighted Minimum Savings Rate (MSR)	✓			
Risk Corridors		✓	✓	✓
High Performers Pool Bonus Amount		✓	✓	✓
Financial Guarantee		✓	✓	✓

FINANCIAL RECONCILIATION

Financial reconciliation involves the process where CMS compares the KCE's final performance year (PY) benchmarks against the KCE's performance year expenditures for beneficiaries using three months of claims run out to determine the amount of shared savings or shared losses.

Final performance year benchmarks

The benchmark process starts with the KCE's historical baseline expenditures and adjustments, including trending and Geographic Adjustment Factor (GAF), regional adjustment, and risk adjustment, which are applied to the preliminary performance year benchmarks.

To incorporate regional expenditures into the historical baseline, a specific percentage of the KCE's regional expenditures would be "blended" into the KCE's benchmarks. The percentages[6] can be found in Figure 3.

FIGURE 3: REGIONAL AND KCE HISTORICAL BLEND FOR KCE BENCHMARKS BY PERFORMANCE YEAR

Benchmark Component	PY2023	PY2024	PY2025	PY2026
KCE's Weighted Baseline Expenditure	65%	60%	55%	50%
KCE's Weighted Regional Rate	35%	40%	45%	50%

Final performance year benchmarks are the target expenditure amounts that are compared to Medicare Part A and Part B expenditures for items and services furnished to KCE beneficiaries during a performance year.

CMS calculates the final CKD performance year benchmark by adjusting the unadjusted CKD performance year benchmark by the CKD upward adjustment, CKD quality withhold amount, and CKD retention amount.

The final ESRD performance year benchmark is calculated by adjusting the unadjusted ESRD performance year benchmark by the ESRD discount, ESRD quality withhold amount, and ESRD retention amount.

Gross savings/(losses)

Gross savings/(losses) are established by calculating the difference between the performance year expenditure and the final performance year benchmark.

Net savings/(losses)

Net savings/(losses) are determined by the KCE's risk-sharing option as a portion of the gross savings/(losses).

As part of financial reconciliation, CMS also calculates other monies owed by CMS or by the KCE, including the home dialysis true-up and other monies owed as a result of participation in the High Performance Pool (HPP) and reconciliation of the CKD QCP alignment withhold, the CKD QCP leakage withhold, and the shortage area bonus). CMS adds the sum of this value and the KCE's shared savings/(losses) to determine the net amount owed by CMS or the KCE for the performance year.

Figure 4 provides a highlight of the financial reconciliation process. Blue squares correspond to the main metrics and gray squares outline the adjustments to arrive at the next metric. More details can be found in Appendix A.

[5] CMS (November 2019). Kidney Care Choices (KCC) Model: Financial Methodology and Structure for the Graduated, Professional, and Global Comprehensive Kidney Care Contracting (CKCC) Options. Retrieved March 14, 2023, from: https://innovation.cms.gov/files/slides/kcc-ckcc-finance-slides.pdf.

[6] CMS (March 6, 2022), KCC Model: PY2023 Request for Applications, op cit.

FIGURE 4: FINANCIAL RECONCILIATION

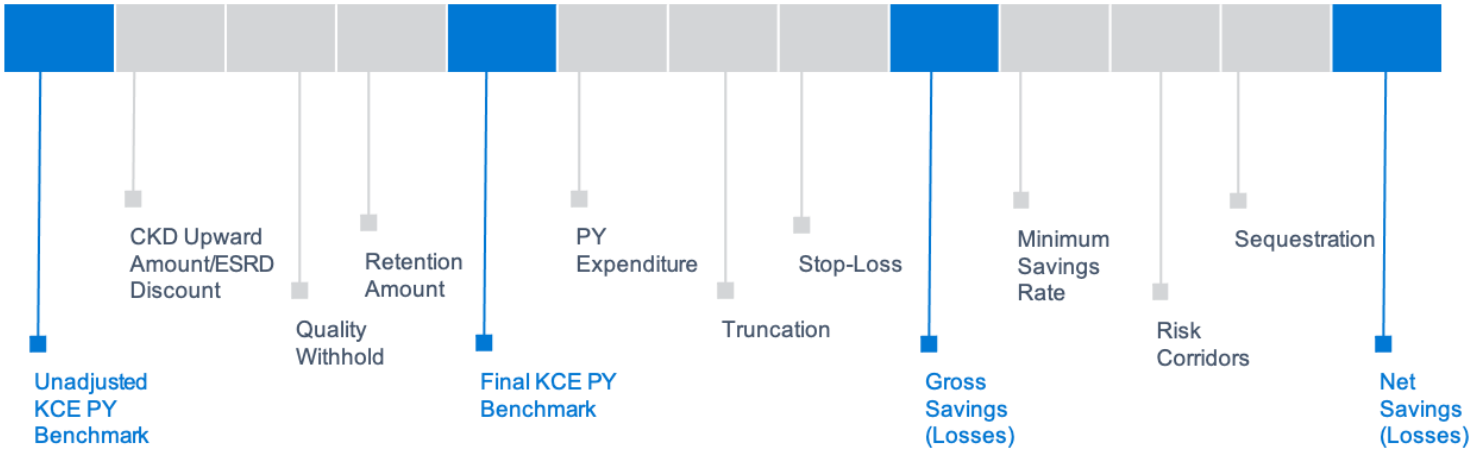
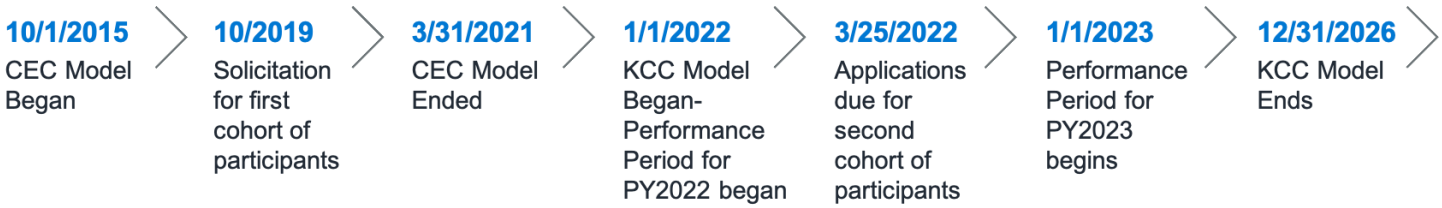


FIGURE 5: MODEL TIMELINE



TIMELINE

The first KCC Model performance period began on January 1, 2022, and will continue through December 31, 2026.[7] The second cohort of KCC Model participants began model participation on January 1, 2023. The performance period participation agreements for these KCC model participants will have a term of four performance years (2023 through 2026). Figure 5 demonstrates the key events of the model timeline

Current CKCC landscape

The CKCC program is a newer Medicare alternative payment model, and the number of KCEs is relatively small in comparison to established programs such as the Medicare Shared Savings Program (MSSP).[8] There were 85 participants for the first performance year, PY2022, and 130 participants for PY2023.[9,10] This is inclusive of those participating in the KCF track, in addition to the CKCC program. Figure 6 summarizes the PY2022 participants by track.

[7] CMS, Kidney Care Choices (KCC) Model, op cit.

[8] Smith, M., Jensen, B., Norris, C., & Anderson, J. (October 2021). Medicare Shared Savings Program: ACO Financial Results for 2020. Milliman Research Report. Retrieved March 14, 2023, from https://www.milliman.com/en/insight/medicare-shared-savings-program-aco-financial-results-for-2020.

[9] CMS. Kidney Care Choices (KCC) Model Participant Overview: Performance Year 2022; last updated 3/17/22. CMS Innovation Center. Retrieved March 14, 2023, from https://innovation.cms.gov/media/document/kcc-py22-participant-starters.

[10] CMS (January 13, 2023). Notice of CMS Kidney Care First Practices and Kidney Care Entities Participating in Performance Year 2023 of the of the Kidney Care Choices (KCC) Model. CMS Innovation Center. Retrieved March 14, 2023, from https://innovation.cms.gov/media/document/kcc-py23-participants.

FIGURE 6: DISTRIBUTION OF KCC PARTICIPANTS BY TRACK, PY2022

PROGRAM TRACK	PERCENT OF KCES
KCF	35%
CKCC: Graduated Level 1	5%
CKCC: Graduated Level 2	9%
CKCC: Professional	45%
CKCC: Global	5%

Note: Numbers do not add up to 100% due to rounding.

A majority of participants have selected the CKCC Professional track for the first performance year, bypassing the slower path to risk sharing in favor of both upside and downside risk. The Professional track also allows the KCEs to take advantage of CMS's stop-loss coverage, rather than just the claim truncation that occurs with Graduated Level 1. See Appendix A for more details on the claim truncation methodology.

Despite being relatively low in volume, the KCC participants are located in a majority of states. They are primarily concentrated on the coasts, with a noticeable gap in the Midwest. Florida and Texas have the greatest KCE presence, with a total of 12 and 10 entities, respectively, that operate in these states. Figure 7 demonstrates the geographic distribution of KCEs, in addition to KCF participants. CKD prevalence by state can be seen in Figure 8.

FIGURE 7: KCC PARTICIPANTS BY STATE

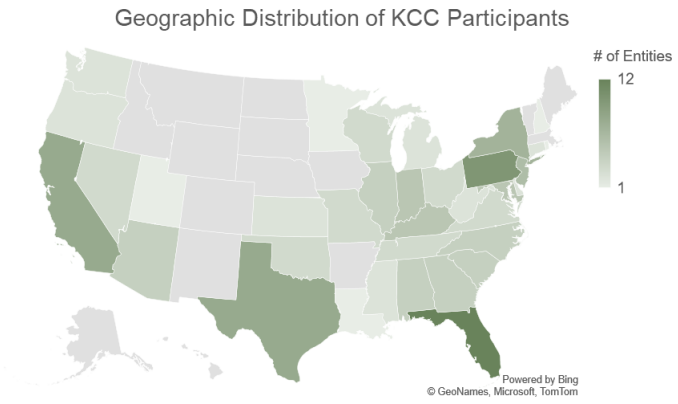
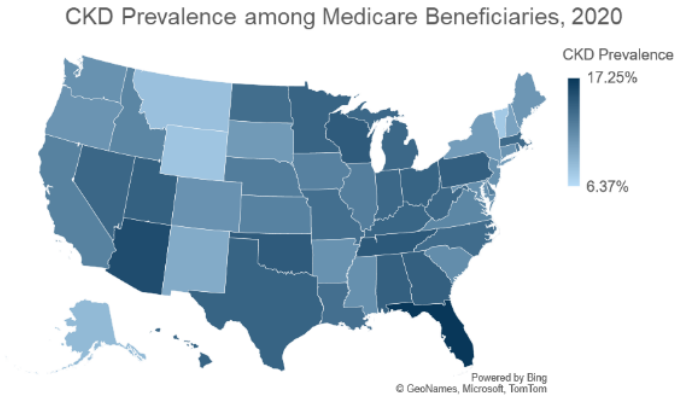


FIGURE 8: CKD PREVALENCE BY STATE



According to the 2022 Annual Data Report of the U.S. Renal Data System (USRDS),[11] Florida has the highest CKD prevalence rate among Medicare beneficiaries, at 17.25%, followed by Arizona at 15.85%. This aligns with Florida having the most KCEs. Arizona, however, only has a modest KCE presence at four total. Additionally, states like Massachusetts and North Dakota have no KCEs, but CKD prevalence measures in the top half of all U.S. states, at 13.94% and 13.68%, respectively. Prevalence rates are calculated by measuring the percentage of Medicare fee-for-service (FFS) beneficiaries diagnosed with CKD in each state.

Considerations for forecasting settlements

There is not much data yet around year-to-date (YTD) financial performance for KCEs, given that the first performance year has just come to a close, but CMS does provide quarterly and monthly reports that allow each KCE to get a sense of emerging experience and the snapshot attributed population. These reports include the following:

- Monthly expenditure report (MER)
- Monthly claim and claim line feed (CCLF) files
- Quarterly alignment report (QAR)
- Quarterly benchmark report (QBR)

[11] USRDS (2022). Identification and Care of Patients with CKD. 2022 USRDS Annual Data Report Retrieved March 14, 2023, from https://usrds-adr.niddk.nih.gov/2022/chronic-kidney-disease/2-identification-and-care-of-patients-with-ckd.

To forecast the total settlement using the available data, a number of considerations must first be taken into account. They include but are not limited to:

- Differences between retrospective and prospective beneficiary attribution methodology and the impact on the total settlement
  - Retrospective beneficiary attribution layers on checks for both Medicare Part A and Part B eligibility, Medicare as a secondary payer, non-kidney transplants, and death
- Claim completion
- Projected stop-loss payouts and the impact of stop-loss completion
- Risk corridors for the selected track
- The impact of KTB
- Sequestration
- The impact of the quality withhold and the Total Quality Score (TQS) on the benchmark
- Potential retrospective trend adjustment

There is inherently much uncertainty around claim completion, and care must be taken to ensure that historical trend factors and lag patterns can be relied upon for estimating current annual expenditures. This is especially true if significant care management actions are expected to be taken leading up to and during the performance year.

Additionally, the impact of program stop-loss is a significant component of the final settlement. Truncation thresholds and stop-loss attachments points are not known until the performance year is over, however, which adds another element of variability that must be considered and appropriately accounted for.

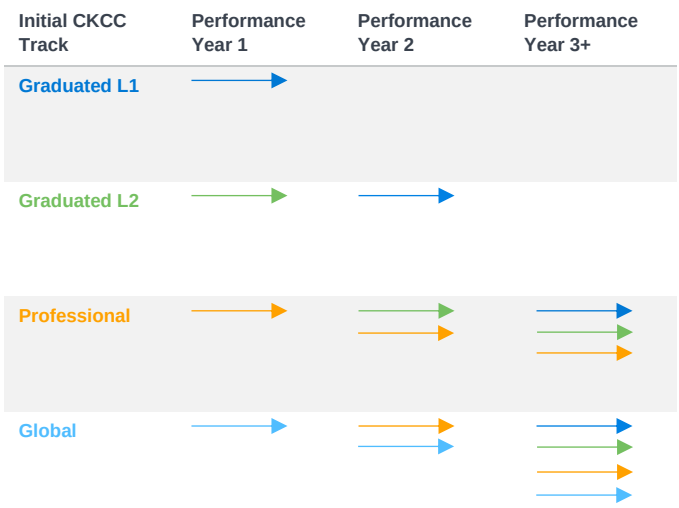
Finally, the number of prospectively assigned beneficiaries is not typically consistent with the number of retrospectively assigned beneficiaries, which should be taken into consideration when using the QARs.

What are key challenges for KCEs?

For KCEs, participating in CKCC comes with a set of manageable challenges that should be considered:

- Mandatory progression to Professional or Global payment options, as demonstrated by Figure 9.
  - Graduated Level 1, which is an upside-risk-only option, is only available for the first performance year, after which KCEs must move to Graduated Level 2 in the second performance year and either Professional or Global in the third performance year and beyond.
  - KCEs that select Graduated Level 2 for the first performance year must move to Professional for the second performance year and either Professional or Global in the third performance year and beyond.
  - KCEs that select Professional for the first performance year must stay in the Professional option or move to the Global option in subsequent performance years.
  - KCEs that select Global will stay in the Global risk-sharing option in subsequent performance years.

FIGURE 9: CKCC TRACK PROGRESSION



- Forecasting stop-loss settlements or the effect of truncation.
  - Performance year truncation thresholds and stop-loss attachment points are defined based on percentiles of average monthly expenditures for the performance year so are not known until the performance year is settled.
  - However, baseline thresholds and attachment points are provided as a reference.
- Estimating TQS at year-end.
  - Details on calculating the TQS aren't revealed in the Request for Applications.
  - KCEs with no prior experience collecting Patient Activation Measure® (PAM®) and Patient Health Questionnaire-9 (PHQ-9) scores may find it challenging to approximate potential improvements in these scores, particularly as the depression response score includes patients in the denominator that do not have a follow-up PHQ-9 score.
  - TQS influences the earned quality withhold earn-back amount, which is up to 5% of the benchmark.

- Risk score management.
  - The comparison between the average CMS-Hierarchical Condition Categories (HCC) risk score in the performance year for a KCE's attributed population and a national normalization factor influences the final settlement.
  - The aged and disabled risk score is used for beneficiaries who have CKD stages 4 or 5. The ESRD risk score is used for beneficiaries who have ESRD.
  - KCEs that influence risk scores by increasing code capture rates can benefit from larger settlements.
- High mortality rates in attributed populations.
  - According to the USRDS's 2022 Annual Data Report:
    1. In 2020, Medicare beneficiaries aged 66 years and older with CKD stages 4 or 5 had a mortality rate of 180.5 per 1,000 person-years.[12]
    2. In 2020, patients with ESRD receiving dialysis had a mortality rate of 186.0 per 1,000 person-years.[13]
  - High patient cohort turnover can make managing care and forecasting quality scores difficult.
- Keeping performance year settlement forecast estimates up to date.
  - KCEs are challenged with continuously processing new information from CMS and their practices to estimate the final settlement.
  - QBRs are provided on a lag of two to three months that can be used to create a feedback loop for more accurate forecasts.
- Working with and understanding content in CCLF files.
  - CMS provides a set of 12 CCLF text files monthly containing beneficiary demographics and claim details.
  - Aside from being organized by Part A, B, and D, these claims are not grouped into meaningful categories such as skilled nursing facility stays or emergency department visits. The data contained in the CCLF files is the most comprehensive data available to KCEs for the total historical cost of care for assigned beneficiaries.

Conclusion

Kidney care providers developing their risk-bearing strategies should contemplate the potential benefits and challenges of participating in CKCC and carefully consider which risk-sharing option is most appropriate. Participating KCEs must be comfortable with the complex financial provisions in the participation agreement, managing potentially unfamiliar CCLF data, and the commitment to traversing to higher levels of downside risk. KCEs that cannot successfully manage the total cost of care are likely to see a limited or negative return on investment. Those providers interested in participating should perform analyses and seek guidance to assess whether the model may be a good fit for their practice.

[12] USRDS (2022). Morbidity and Mortality in Patients with CKD. 2022 USRDS Annual Data Report. Retrieved March 14, 2023, from https://usrds-adr.niddk.nih.gov/2022/chronic-kidney-disease/3-morbidity-and-mortality-in-patients-with-ckd.

[13] USRDS (2022). Mortality. 2022 USRDS Annual Data Report: Retrieved March 14, 2023, from https://usrds-adr.niddk.nih.gov/2022/end-stage-renal-disease/6-mortality.

CONTACT

Erin Lamos
erin.lamos@milliman.com

Meng Sun
meng.sun@milliman.com

Austin Barrington
austin.barrington@milliman.com

Appendix A: Details of financial reconciliation[14]

1. Final CKD PY benchmark = unadjusted CKD PY benchmark + CKD upward adjustment – CKD quality withhold amount + CKD earned quality withhold amount – CKD retention amount.
    a. CKD upward amount: To account for the number of KCE beneficiaries with CKD stages 4 or 5 who have been continuously aligned to the KCE for more than 24 months and only for PY2024 and beyond.

       CKD upward adjustment = the member months of KCE beneficiaries with CKD stages 4 or 5 who have been continuously aligned to the KCE for more than 24 months x 1% x unadjusted CKD per beneficiary per month (PBPM) PY benchmark

    b. CKD quality withhold: To account for anticipated quality performance; not applicable to Graduated Level 1.

       CKD quality withhold amount = percentage of quality withhold x unadjusted CKD PY benchmark

       CKD earned quality withhold amount = KCE's TQS x CKD quality withhold amount

       - TQS = the CMS assigned achievement score (the first PY); the higher of the achievement score or the improvement score (the second year and beyond).

    c. CKD retention amount: To encourage the KCE to maintain participation in the model if the KCE provides written notice of termination of the agreement performance period on or before the termination without liability date for the KCE's second performance year.

       CKD retention amount = 1% x unadjusted CKD PY benchmark

2. Final ESRD PY benchmark = unadjusted ESRD PY benchmark – ESRD discount – ESRD quality withhold amount + ESRD earned quality withhold amount – ESRD retention amount.
    a. ESRD discount: Global risk-sharing option only.

       ESRD discount = percentage of ESRD discount x unadjusted ESRD PY benchmark

    b. ESRD quality withhold: Similar to CKD quality withhold and not applicable to Graduated Level 1.

    c. ESRD retention amount: Similar to CKD retention amount and only for the first PY.

3. Gross savings (losses) = final PY benchmark – PY expenditure (adjusted by truncation or stop-loss).
    a. PY expenditure: Expenditures for Medicare Part A and Part B items and services furnished to KCE beneficiaries during a performance year.

    b. Truncation: A cap applied to beneficiary expenditures at the individual beneficiary level to limit the financial risk posed by high-cost KCE beneficiaries and only for Graduated Level 1.

       - Truncation thresholds are established based on the 99th percentile of average monthly expenditures for CKD populations and the 95th percentile of average monthly expenditures for ESRD populations.

    c. Stop-loss: A risk mitigation option to reduce the financial uncertainty associated with infrequent but high-cost expenditures for KCE beneficiaries for Graduated Level 2, Professional, and Global.

[14] CMS Kidney Care Choices (KCC) Model, Comprehensive Kidney Care Contracting (CKCC) Options, Graduated, Professional, and Global Options Model Performance Period Participation Agreement.

4. Net savings/(losses) = gross savings/(losses) adjusted for quality and sequestration.
    a. Minimum savings rate (MSR): If the gross savings rate exceeds the KCE's weighted MSR, then the KCE will earn savings by multiplying the gross savings by the final TQS.
        - Gross savings rate = gross savings/(losses) / final performance year benchmark.
    b. Risk corridor: To establish net savings/(losses) based on percentage of gross savings/(losses) within the risk corridor.
    c. Sequestration: To be applied to the amount of shared savings, not applicable to shared losses.