maryland
health services
cost review commission

Care Transformation Steering Committee

August 2022

Agenda

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1. Review of Target Prices for Performance Year 1
2. Modification to Target Pricing Methodology for Year 2
3. Next step on CTI

CTI Target Prices for Year 1

Calculation of the Target Prices for CTI

Target prices for CTI are set by inflating the baseline period costs and adjusting for changes in the risk mix. We set the target price in three steps:

1. Regress TCOC on the risk adjustors using the Statewide population:
   A. For CTI that is anchored with a hospital touch (Care Transitions, Palliative Care, ED Care, etc.), we regress TCOC ~ Hospital Intercept + Coefficient x HCC + Coefficient x DRG.
   B. For CTI without a Hospital touch (Geographic and Primary Care CTI) Regress TCOC ~ Intercept + Coefficient x HCC.
2. Predict TCOC using the DRG and the HCC from the baseline period.
3. Calculate the Final Target Price using the HCC and the DRG from the performance period population after the end of the performance year.

Differences between the Baseline Costs vs the Target Price

Several participants noticed that the target price and the baseline period costs were not exactly equal.

Example 1: CTI 01-60 is a Care Transition CTI that includes beneficiaries with 1 or more chronic conditions (Alzheimer's or dementia, heart failure, or some cancers).

1. The regression yields the coefficients TCOC ~ $16,649.90 + $4,627.48 x HCC + $24,198.37 x DRG.
2. Target Price = $16,649.90 + $4,627.48 x 2.030 + $24,198.37 x 0.7938 = $45,253.80 while the baseline period costs were $45,911.72.

Example 2: CTI 03b-007 is an episodic primary care CTI that includes beneficiaries residing in eastern shore zip codes with 1 or more chronic conditions and an NPI touch.

1. The regression yields the coefficients TCOC ~ $3,345.18 + $8,421.36 x HCC.
2. Target Price = $3,345.18 + $8,421.36 x 1.104 = $12,646.00 while the baseline period costs were $13,450.38.

Differences in the Target Price and the Baseline Period Costs

The target price and the baseline period costs should be equal, though we do expect small differences between the target price and baseline period costs. We were able to attribute the differences between the target prices and the baseline costs to three causes:

1. Error in combining hospital fixed effects;
2. Differences between the statewide population and the hospitals' baseline population in geographic models;
3. Differences between the statewide population and the hospitals' baseline population due to overlaps.

Error in Calculating Hospital Intercepts

In setting the target prices for the hospitals with system participants (e.g. MedStar as a single participant instead of separate CTI for Union Memorial, Harbor Hospital, etc.) the intercept was calculated incorrectly.

- In hospital specific CTI, the regression is TCOC ~ Hospital Intercept + Coefficient x HCC + Coefficient x DRG. Each hospital has its own Hospital Intercept. This captures hospital specific costs.
- In setting a Target Price for a system CTI, this intercept should be equal to the weighted average of all the individual hospital intercepts that are included in the regression.
- We were not weighting the hospital specific intercepts correctly and so the Target Prices for system CTI was incorrect. This includes system participants in Care Transition and Palliative Care CTI and ED CTI.

Differences in Geographic Costs

In setting target prices for geographic CTI, we used the statewide intercept but not include a separated intercept for the geographic locations chosen by the hospital.

- E.g. we used a regression TCOC ~ Intercept + Coefficient x HCC. The intercept was the State average and not (for example) the Baltimore City average.
- If there are difference between the State average costs and the geographic average costs that are not due to differences in HCC, then the target price will not be equal to the baseline period costs.

Corrections for Yr 1 Target Prices

Due to the error in the target prices, we will be recalculating the Yr 1 target prices to make the following changes:

1. We will correct the calculation of the intercepts for the system CTI and for the ED CTI;
2. We will adjust the fixed effect for geographic CTI to exclude any beneficiary who resides outside of the hospital's chosen geographic area from their participant fixed effect.
   - We originally used the entire statewide population to ensure that we had sufficient data to set a target price.
   - There are some CTI that use a very small geographic are (e.g. single zip codes). We will need to monitor these in the future to make sure that the target price is stable.

Example for Geographic Target Prices:

1. We regress TCOC ~ Intercept + Coefficient x HCC, where the population includes only those in the geographic area.
   - Prior Regression: TCOC ~ $3,345.18 + $8,421.36 x HCC.
   - New Regression: TCOC ~ $3,327.86 + $8,448.44 x HCC.
2. We predict the TCOC using the mean HCC score of 1.104, which sets the target price as $12,658.57, closer to the baseline costs.

Next Steps for Yr 1

The updated target prices for Yr 1 episodes will be published in the CTP on 8/26 update.

- Episodes will continue to complete.
- The final calculation for the PY1 savings will be available in the Spring. We will circulate the official calculation of the savings and offset to participants for review.

Please let us know if there are any questions.

CTI Target Prices for Year 2

Remainder of the Differences

There is a small residual difference between the target price and the baseline period population. These differences are caused by the removal of overlapping episodes in the hospitals' baseline costs.

- When we run the risk adjustment regression, we included all eligible beneficiaries. But the hospital's baseline costs remove some episodes (namely overlapping episodes and those assigned to other CTI).
- Overlapping beneficiaries can have slightly higher or lower costs, on average, than the average baseline cost of all beneficiaries.

Example

For instance, when we run the regression on CTI 01-60 and add in a fixed effect for beneficiaries who meet the criteria for the CTI but are not attributed to the hospital in the baseline period (e.g. overlaps or falling outside of the geographic definition) we get the following.

- TCOC ~ $17,304.01 + $4,630.20 x HCC + $24,196.22 x DRG - $1,968.11 x Non-Participating Episodes
- This indicates that the average cost of the removed episodes is almost $2000 cheaper than the average episode.
- When these episodes are accounted for the target price is equal to $45,911.72, which is exactly equal to the baseline period costs.

Fix for Year 2

For Performance Year 2, we will remove the overlap beneficiaries when setting the target price.

- This will ensure that for Performance Year 2, the target price will be guaranteed to equal the performance period costs for all CTIs.
- These target prices will be available as of the August CTI update.

We decided not to change the target prices for Performance Year 1 because:

- The magnitude of the deviation was not large;
- There was no systematic bias;
- We did not want to change the Target Price retrospectively.

The target prices with this fix will be published in the September CTP release.

Next Steps

CTI Next Steps

- The CTP will be updated with the PY2 target prices on 8/26.
- We will be adding features to the CTP. This will include the ‘audit view’ of the CTI which shows the number of episodes dropped at each step in the CTI.
  - E.g. the number of beneficiaries meeting the chronic condition criteria, and the number meeting the prior hospitalization criteria, the number dropped due to overlaps, and so on.
  - This will be available when creating new CTI Definitions.
- We welcome suggestions from hospitals on new features that would be useful in the CTP.
- If hospitals want to propose additional CTI please send proposal to the HSCRC and we will begin working on them with the CT Steering Committee.