

Bundled Payments
for Care Improvement
Advanced | **BPCI
Advanced**

Deeper Dive into Pricing Methodology

August 2023



Welcome, BPCI Advanced Applicants. This webcast provides a deeper dive into the pricing methodology and serves as a companion to the Introduction to Pricing Methodology webcast. The Introduction to Pricing Methodology webcast provides an overview of the entire pricing methodology, while this webcast focuses more closely on the Target Pricing phase.

Webcast Facilitators



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My name is Ashley Franklin, and I am a Public Health Analyst at CMS. I am joined here today by my colleague, Aaron Broun. We are excited to share more information on the pricing methodology within BPCI Advanced.

Webcast Outline



- Target Price Overview
- Risk Adjustment Overview
- CMS Target Price Calculation Steps*
 - Steps 1-6: Estimate Clinical Episode (CE)-Level Spending
 - Steps 7-13: Formulate Preliminary Hospital Benchmark Prices
 - Steps 14-15: Formulate Preliminary Physician Group Practice-Acute Care Hospital (PGP-ACH) Benchmark Prices
 - Steps 16-18: Create Preliminary Target Prices
 - Steps 19-20: Create Final Target Prices

**These steps correspond to the steps in the Target Price Specifications.*




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The webcast will cover an overview of Target Prices and Risk Adjustment. Then, we'll go through the steps for estimating Clinical Episode-level spending, formulating preliminary Hospital Benchmark Prices, formulating preliminary Physician Group Practice-Acute Care Hospital Benchmark Prices, creating preliminary Target Prices and creating final Target Prices.

Learning Objectives



At the conclusion of this webcast, Participants will be able to understand how the Model:

-  Calculates preliminary Hospital and PGP-ACH Benchmark Prices
-  Creates preliminary Target Prices
-  Sets final Target Prices

At the conclusion of this webcast, you should understand how the Model calculates the preliminary Hospital and PGP-ACH Benchmark Prices, creates the preliminary Target Prices and sets the final Target Prices. For an overview of the Model's pricing methodology, please review the Introduction to Pricing Methodology webcast. We recommend reviewing the Introduction to Pricing Methodology webcast before going through this one.

Pricing Methodology Learning Resources

1 Introduction to Pricing Methodology
(101-level webcast)

We recommend reviewing the Introduction webcast before moving on to the Deeper Dive.

2 Deeper Dive into Pricing Methodology (201-level webcast)

3 Pricing Methodology Technical Specifications Guide



[Introduction to Pricing Methodology webcast](#)



[Deeper Dive into Pricing Methodology webcast](#)



[Pricing Methodology Technical Specifications Guide](#)

Please note that BPCI Advanced is releasing multiple resources for Applicants to learn about the Model's pricing methodology this summer! For an overview of the Model's pricing methodology, please review the Introduction to Pricing Methodology webcast. For a list of all the technical specifications and what they cover, the Pricing Methodology Technical Specifications Guide provides further information.

Common Terms in BPCI Advanced

Pricing Methodology Acronyms

ACH – Acute Care Hospital	MS-DRG – Medicare Severity Diagnosis Related Groups
APC – Ambulatory Procedure Codes	OLS – Ordinary Least Squares
CEs – Clinical Episodes	PCMA – Patient Case Mix Adjustment
CECs – Clinical Episode Categories	PGHA – Peer Group Historical Adjustment
CESLGs – Clinical Episode Service Line Groups	PGP – Physician Group Practice
CQS – Composite Quality Score	PGT – Peer Group Trend
HCPCS – Healthcare Common Procedure Coding System	PGTFA – Peer Group Trend Factor Adjustment
HCC – Hierarchical Condition Category	PP – Performance Period
HBP – Hospital Benchmark Price	SBS – Standardized Baseline Spending

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Before we dive into today's learning content, this slide presents the terms that are used throughout the presentation. Each term will be defined at its first use and abbreviated at later uses.

SECTION 1

Target Price Overview

- Goals of Target Pricing
- Hospital Target Price Key Features

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Now we will move into the first section, Target Price overview. This section will go over the essential features of BPCI Advanced Target Prices, the components of Acute Care Hospital, or ACH, Target Prices, and the components of Physician Group Practice, or PGP, Target Prices.

Goals of Target Pricing



Encourage both high- and low-cost providers



Reward improvement over time



Adjust for patient case mix



Account for providers' regions and other relevant characteristics



Encourage Medicare savings while maintaining high-quality care

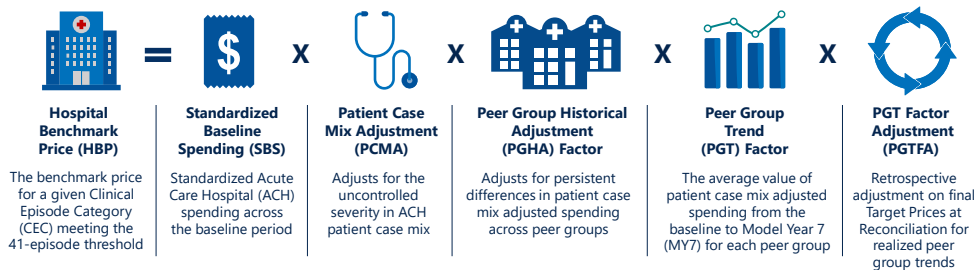
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The essential goals for BPCI Advanced Target Prices are to:

- Encourage both high- and low-cost providers to participate in the Model
- Reward Participants' improvement over time
- Adjust for variations in patient care utilization and outcomes that are not under the control of providers
- Allow for levels and trends of Clinical Episode spending that are distinct, according to unique provider characteristics, and
- Reduce the cost of care while maintaining high-quality care

Hospital Target Price Key Features

$$\text{Hospital Benchmark Price (HBP)} = \text{SBS} \times \text{PCMA} \times \text{PGHA Factor} \times \text{PGT Factor} \times \text{PGTFA}$$



$$\text{ACH Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$

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This slide shows the two main formulas for hospital's Benchmark and Target Prices.

First, the Hospital Benchmark Price, or **HBP**, is the product of the Standardized Baseline Spending, the Patient Case Mix Adjustment, the Peer Group Historical Adjustment Factor, the Peer Group Trend Factor and the PGT Factor Adjustment.

The **SBS** is standardized ACH spending across the baseline period to account for historical efficiency.

The **PCMA** adjusts for the complexity of an ACH's patient case mix.

The **PGHA Factor** adjusts for persistent differences in patient case mix-adjusted spending across peer groups over the entire baseline period.

The **PGT Factor** projects the average value of the patient case mix adjusted spending from the baseline period to the middle of Model Year 7 for each peer group. This is a *prospective trend*.

The **PGT Factor Adjustment** adjusts for realized peer group trends by recentering the benchmark price according to realized Performance Period Clinical Episode spending within each peer group nationally, otherwise known as a retrospective adjustment. The PGT Factor Adjustment is only applied during the final Target Price construction during Reconciliation.

Next, CMS applies the CMS Discount to the HBP to calculate the preliminary Target Price. The CMS Discount accounts for the Medicare savings under the Model.

Physician Group Practice Target Price Key Features

$$\text{PGP-ACH Target Price} = \text{HBP} \times \text{Relative Case Mix} \times (1 - \text{CMS Discount Factor})$$



PGP-ACH Benchmark Price

The HBP for CEs the PGP triggers at a specific ACH. The PGP receives a CEC-specific HBP per ACH.



Relative Case Mix

Measures whether a PGP's case mix of CEs at an ACH presents a higher or lower expenditure risk, compared to the case mix of CEs at the ACH overall.

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For PGPs, there are extra steps in the calculation. Given that PGPs initiate Clinical Episodes at multiple ACHs, the PGP-ACH Target Price builds off of the ACH price and incorporates a Relative Case Mix.

The HBP, whose calculation was shown on the previous slide, provides the initial dollar value of a PGP's Benchmark Price for Clinical Episodes initiated at a specific ACH. All components of the ACH-HBP are the same, but the Model will calculate a Clinical Episode Category, or CEC-specific HBP for each ACH where the PGP triggers Clinical Episodes.

The Relative Case Mix measures whether the overall case mix of a PGP's Clinical Episodes at an ACH presents a higher or lower expenditure risk, compared to the case mix of Clinical Episodes at the ACH overall.

SECTION 2

Risk Adjustment Overview

- Patient Case Mix
- Peer Groups

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Now that we have gone over an overview of the Target Pricing calculations, we will take a look at risk adjustment. Risk adjustment is based on a hospital's patient case mix and peer group.

Stage 1: Patient Case Mix

The Model builds the following patient characteristics into the pricing calculations:

- Hierarchical Condition Category (HCC), HCC Interactions and HCC Severity
- Medicare Severity Diagnosis Related Groups (MS-DRGs) / Ambulatory Payment Classifications (APCs)
- Recent resource use
- Clinical Episode Category (CEC)-specific adjustments
- Demographics
- Long-term institutional use
- COVID-19 infection rate
- Dementia



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This slide shows the list of patient characteristics that are included in the pricing calculation as risk adjusters. The coefficients for each of the risk adjusters can be found in the Preliminary Target Price Summary Workbooks. Of note, the COVID-19 infection rate was a newly added patient case mix characteristic in response to Participant concerns about COVID-19 Clinical Episode exclusions. Rather than excluding Clinical Episodes in which a beneficiary has a COVID-19 diagnosis, the infection rate adjusts for the effect of community-level COVID-19 rates on episode spending.

Stage 2: Peer Groups

The Model constructs peer groups based on the following ACH characteristics:



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Next, the Model uses the following ACH peer group characteristics to construct Target Prices:

- Major teaching hospital status
- Urban or rural classification
- Safety net indicator
- Census division, and
- Bed size

Note that the Model provides data on these peer group characteristics quarterly. Now I'm going to hand the mic to my colleague Aaron to tell us more about Target Price calculations.

SECTION 3

CMS Target Price Calculation Steps

- Estimate CE-Level Spending
- Formulate Preliminary Hospital Benchmark Prices
- Formulate Preliminary PGP-ACH Benchmark Prices
- Create Preliminary Target Prices
- Create Final Target Prices

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Thanks, Ashley! My name is Aaron Broun, and I'm a Social Science Research Analyst on the BPCI Advanced Model team. Now that we have covered Target Pricing and risk adjustment, we will go through Target Pricing step-by-step. There are 20 steps in total, and they cover:

- Estimating Model of Clinical Episode-Level Spending
- Formulating Preliminary Hospital Benchmark Prices
- Formulating Preliminary PGP-ACH Benchmark Prices
- Creating Preliminary Target Prices, and lastly,
- Creating Final Target Prices

SECTION 3

Estimate Clinical Episode-Level Spending

- Steps 1-6 for Target Price Calculations

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Estimating Clinical Episode-level spending covers the first six steps of the process.

Estimate Model of Clinical Episode-Level Spending

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$



Step 1: Limit the population to eligible providers.

Step 2: Estimate a CE-level risk adjustment model.

Step 3: Calculate the CE-level patient case mix adjustment amount.

Step 4: Capture coefficients for ACH peer group characteristics.

Step 5: Calculate predicted CE spending.

Step 6: Using the episode level file, calculate the average observed and average predicted CE spending for each ACH.

These steps correspond to the steps in the [MY7 Target Price Specifications](#).

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On this slide you can see the first six steps for estimating Clinical Episode-level spending. Note that these steps correspond to the steps in the Target Price Specifications.

In Step 1, the Model sets a Clinical Episode minimum where an ACH must have initiated at least 41 Clinical Episodes for a specific CEC in the baseline period to receive Target Prices for this CEC. The Clinical Episode minimum requirement reduces low volume uncertainties. Please note that PGPs do not need to meet the Clinical Episode minimum to participate, but they will only receive preliminary Target Prices for the ACHs where they initiated Clinical Episodes that meet the Clinical Episode minimum requirement.

In Step 2, the Model estimates a compound log-normal risk adjustment model and calculates Clinical Episode spending while accounting for patient characteristics, peer group characteristics and quarter-year flags.

In Step 3, the Model calculates the Clinical Episode-level patient case mix adjustment amount based on patient characteristics. This will be a component for the PCMA and the PGP Relative Case Mix.

In Step 4, the Model estimates peer groups and peer group trends using ordinary least squares, or OLS, regression at the ACH-quarter level, weighted by the number of Clinical Episodes initiated at the ACH-quarter level.

In Step 5, the Model then multiplies the predicted ratio from Step 4 and the Clinical Episode-level patient case mix adjustment amount from Step 3.

In Step 6, the Model uses the Clinical Episode-level file to calculate the average observed and average predicted Clinical Episode spending for each ACH. This is an input for the ACH Historical Adjustment component, coming up in Step 8.

Walk Through of Steps 1–6

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$

Sample Data for a Clinical Episode Category					Step 3	Step 4a	Step 4b	Step 5	Step 6a	Step 6b
Clinical Episode ID	Quarter	ACH	PGP ID	CE Spending (Observed Spending)	CE-level PCMA Amount	Observed Spending/CE-level PCMA	Predicted Ratio from Peer Group Factor OLS	Predicted CE Spending	Avg. Observed Spending	Avg. Predicted Spending
1	2019Q1	H1001	P001	\$10,000	\$8,500	1.18	1.25	\$10,625	\$24,500	\$27,469
2	2019Q1	H1001	P001	\$25,000	\$31,000	0.81	1.25	\$38,750		
3	2019Q1	H1001	P002	\$12,500	\$8,000	1.56	1.25	\$10,000		
4	2019Q2	H1001	P002	\$30,000	\$37,800	0.79	1.15	\$43,470		
5	2019Q2	H1001	P002	\$45,000	\$30,000	1.50	1.15	\$34,500		
6	2019Q1	H1002	P001	\$63,000	\$56,000	1.13	1.28	\$71,680	\$55,250	\$53,980
7	2019Q2	H1002	P001	\$57,000	\$34,000	1.68	1.26	\$42,840		
8	2019Q3	H1002	P002	\$45,000	\$29,000	1.55	1.3	\$37,700		
9	2019Q3	H1002	P002	\$56,000	\$49,000	1.14	1.3	\$63,700		

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Let's see an example applying steps 1 through 6 that we just covered:

In the first row of the table, you can see for ACH H1001, Clinical Episode 1, the observed spending of \$10,000 is divided by the patient case mix adjustment amount calculated in Step 3, \$8,500, to obtain the 1.18 value for Step 4a. The predicted ratio from OLS found in Step 4b, 1.25, is multiplied by the patient case mix adjustment amount, \$8,500, to obtain the predicted Clinical Episode spending of \$10,625 for Step 5.

Once we have the observed and predicted Clinical Episode spending for all five Clinical Episodes for ACH H1001, at Step 6, the Model averages these spending values to obtain the average observed spending, \$24,500, and the average predicted spending, \$27,469.

SECTION 3

Formulate Preliminary Hospital Benchmark Prices

- Steps 7-13 for Target Price Calculations

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The next steps, 7 to 13, will cover the formulation of preliminary Hospital Benchmark Prices.

Formulation of the Preliminary Hospital Benchmark Price

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$



Step 7: Calculate the average observed Clinical Episode spending.

Step 8: Calculate the ACH Historical Adjustment.

Step 9: Calculate SBS.

Step 10: Calculate preliminary PCMA.

Step 11: Calculate the PGHA.

Step 12: Calculate the PGT.

Step 13: Calculate the preliminary HBP.

These steps correspond to the steps in the [MY7 Target Price Specifications](#).

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In Step 7, the Model takes the average of the observed Clinical Episode spending for the national set of Clinical Episodes in the Clinical Episode Category. This is an input to SBS in Step 9 and the denominator for preliminary PCMA in Step 10.

In Step 8, the Model calculates the ACH Historical Adjustment as the ratio of average observed to average predicted Clinical Episode spending for each ACH while controlling for patient and peer group characteristics. A value less than one indicates an ACH's baseline period spending was lower than the average ACH, and a value greater than one indicates an ACH's baseline period spending was higher than the average ACH. This adjustment is an input for the next step, calculating the ACH's SBS component.

In Step 9, the Model calculates the SBS by multiplying the average observed Clinical Episode spending from Step 7 by the ACH Historical Adjustment from Step 8.

In Step 10, the Model then divides the average Clinical Episode-level case mix adjustment amount from Step 3 by the average observed Clinical Episode spending from Step 7 to calculate the preliminary PCMA. Note that the preliminary PCMA is calculated using all of an Episode Initiator's baseline period Clinical Episodes.

In Step 11, the Model calculates the PGHA by predicting the ACH's patient case mix adjusted spending in each of the 16 quarters from the baseline using the OLS coefficients from Step 4 and the ACH's peer group characteristics, and then averaging the results.

In Step 12, the Model calculates the PGT by predicting the ACH's patient case mix adjusted spending in the middle quarter of the Model Year using the OLS coefficients from Step 4 and the ACH's peer group characteristics, and then dividing the value by the PGHA.

In Step 13, the Model calculates the preliminary HBP by multiplying the SBS from Step 9, the preliminary PCMA from Step 10, the PGHA from Step 11 and the PGT from Step 12 for each ACH.

Walk Through of Steps 7–13

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$

	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12	Step 13
ACH	Average Observed Clinical Episode Spending	ACH Historical Adjustment	Standardized Baseline Spending (SBS)	Preliminary PCMA	PGHA	PGT	Preliminary HBP
H1001	\$40,530	0.89	\$36,072	0.57	1.51	0.9	\$27,942
H1002	\$40,530	1.02	\$41,341	1.04	1.21	0.95	\$49,422

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Now we will apply these steps to the ACH H1001 example we saw before. In Step 7, we have the average observed Clinical Episode spending of \$40,530, based on national data. For Step 9, the SBS, the Model multiplies \$40,530 from Step 7 with the Historical Adjustment of 0.89 from Step 8 to obtain \$36,072.

Now let's look at Step 10, the preliminary PCMA. The Model obtains a value of 0.57 by dividing the average of the Clinical Episode-level case mix adjustment amounts from Step 3, \$23,060, by the average observed Clinical Episode spending of \$40,530 from Step 7.

In Step 11, the PGHA is calculated by averaging the OLS coefficients from Step 4b and the peer group characteristics across 16 quarter-years.

Then, for Step 12, the PGT is calculated by taking the OLS coefficient from Step 4b and peer group characteristics for the middle quarter and dividing by the 1.51 PGHA.

Finally, looking at Step 13, to obtain the preliminary HBP of \$27,942, the SBS is multiplied by the PCMA, PGHA and PGT – from steps 10 through 13 respectively.

SECTION 3

Formulate Preliminary PGP-ACH Benchmark Prices

- Steps 14-15 for Target Price Calculations

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Steps 14 and 15 in the Target Pricing process go over the formulation of preliminary PGP-ACH Benchmark Prices.

Formulation of the Preliminary PGP-ACH Benchmark Price

$$\text{PGP - ACH HBP} = \text{HBP} \times \text{Relative Case Mix}$$

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$



Step 14: Calculate the preliminary PGP Relative Case Mix.

- Determine whether the overall case mix of a PGP's Clinical Episodes at an ACH during the baseline period is more or less costly compared to the case mix of all Clinical Episodes at the ACH during the same period.

Step 15: Calculate preliminary PGP-ACH Benchmark Price.

- The product of preliminary HBP (Step 13) and preliminary Relative Case Mix (Step 14).

These steps correspond to the steps in the [MV7 Target Price Specifications](#).

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In Step 14, the Model calculates the average preliminary PCMA at the PGP-ACH level by averaging all of the Clinical Episode-level patient case mix adjustment amounts over all of the Clinical Episodes for the PGP-ACH combination and dividing by the average observed Clinical Episode spending. Then the Model calculates the preliminary Relative Case Mix as the ratio of PGP-ACH preliminary PCMA to ACH preliminary PCMA.

In Step 15, the Model calculates the preliminary PGP-ACH Benchmark Price by multiplying the preliminary HBP from Step 13 and the preliminary Relative Case Mix from Step 14.

Walk Through of Steps 14–15

$$\text{PGP} - \text{ACH HBP} = \text{HBP} \times \text{Relative Case Mix}$$

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$

		Step 13	Step 14a	Step 14b	Step 15
PGP ID	ACH	Preliminary HBP	PGP-ACH Preliminary PCMA	Preliminary Relative Case Mix	Preliminary PGP-ACH Benchmark Price
P001	H1001	\$27,942	0.49	0.86	\$24,030
P001	H1002	\$49,422	1.11	1.07	\$52,882
P002	H1001	\$27,942	0.62	1.10	\$30,457
P002	H1002	\$49,422	0.96	0.93	\$45,468

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Returning to ACH H1001, the example now shows the ACH along with ACH H1002 under PGP P001.

Looking at the first row, for Step 14a, the PGP-ACH preliminary PCMA of 0.49 for P001-H1001 is calculated by dividing the average of the Clinical Episode-level patient case mix adjustment amounts over all Clinical Episodes for the PGP-ACH combination, by the average observed Clinical Episode spending of \$40,530 from Step 7.

Then, in Step 14b, the preliminary Relative Case Mix is calculated by dividing the PGP-ACH preliminary PCMA of 0.49 from Step 14a by the ACH preliminary PCMA of 0.57 from Step 10, resulting in 0.86.

Finally, for Step 15, the preliminary PGP-ACH Benchmark Price: multiply the preliminary HBP of \$27,942 from Step 13 by the preliminary Relative Case Mix of 0.86 from Step 14b to yield \$24,030.

SECTION 3

Create Preliminary Target Prices

- Steps 16-18 for Target Price Calculations

Preliminary Target Prices are provided prior to the start of the Model Year.

The next section, steps 16 to 18, covers the creation of the preliminary Target Prices.

Create Preliminary Target Prices

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$



Step 16: Apply CMS Discount Factor.

- 2% for medical Clinical Episodes.
- 3% for surgical Clinical Episodes.

Step 17: Convert preliminary Target Prices into real dollars.

- Create a ratio of sum of real Clinical Episode spending to standardized allowed amount spending.
- Multiply the Target Price by the ratio.

Step 18: Adjust preliminary Target Price.

These steps correspond to the steps in the [MY7 Target Price Specifications](#).

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In Step 16, the Model applies the CMS Discount Factor, which reduces the Target Price. The CMS Discount Factor is intended as the Medicare savings under the Model. The CMS Discount Factor is 2% for medical Clinical Episodes and 3% for surgical Clinical Episodes.

In Step 17, the Model converts the preliminary Target Prices into real dollars by multiplying the Target Price by a ratio of the sum of real Clinical Episode spending to the standardized allowed spending amount at the Episode Initiator-Clinical Episode level.

In Step 18, the Model adjusts the preliminary Target Prices during the Model Year to account for the most recently available Medicare payment rates released in the Federal Register. Adjustments are made for standardized Clinical Episode Spending updates, risk adjustments and the rest of the Target Price construction.

Walk Through of Steps 16–18

$$\text{PGP} - \text{ACH HBP} = \text{HBP} \times \text{Relative Case Mix}$$

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$

ACH	Step 13	Step 16	Step 17	Preliminary Target Price in Real Dollars	PGP ID	ACH	Step 15	Step 16	Step 17	Preliminary Target Price in Real Dollars
	Preliminary HBP	Preliminary ACH Target Price	Preliminary ratio of real dollars to payment standardized dollars				Preliminary PGP ACH Benchmark Price	Preliminary Target Price	Preliminary ratio of real dollars to payment standardized dollars	
					P001	H1001	\$24,030	\$23,309	1.02	\$23,775
H1001	\$27,942	\$27,104	1.01	\$27,375	P001	H1002	\$52,882	\$51,296	1.02	\$52,322
					P002	H1001	\$30,457	\$29,543	1.02	\$30,134
H1002	\$49,422	\$47,939	1.01	\$48,418	P002	H1002	\$45,468	\$44,104	1.02	\$44,986

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Now let's go back to the example data. Looking at Step 16 in the preliminary ACH Target Price calculation, a CMS Discount of 3% is applied to the preliminary HBP from Step 13 to get a preliminary ACH Target Price of \$27,104, or \$27,375 in real dollars.

In the PGP-ACH table, the discount is also applied for PGPs using the PGP-ACH Benchmark Prices from Step 15. The preliminary Target Prices are then multiplied by the preliminary ratio of real dollars to payment standardized dollars to obtain the preliminary Target Price of \$23,775 in real dollars for Step 17.

SECTION 3

Create Final Target Prices

- Steps 19-20 for Target Price Calculations
Note that these steps occur during Reconciliation.

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Finally, you will go over the creation of the final Target Prices in steps 19 to 20. Note that this section is retrospective. These calculations are not included in the preliminary Target Pricing workbook and will be completed with data from the Performance Period.

Create Final Target Prices

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$



Step 19: Calculate the PGT Factor Adjustment.

- Cap the PGT Factor Adjustment at 5%.

Step 20: Create Final Target Price.

These steps correspond to the steps in the [MY7 Target Price Specifications](#).

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In Step 19, the Model retrospectively calculates the PGT Factor Adjustment by first multiplying the modified updated PCMA by the ACH's PGHA, PGT, SBS and count of Performance Period Clinical Episodes. This product is the denominator of the uncapped PGT Factor Adjustment. The Model then sums the total observed Clinical Episode spending from all ACHs in the peer group. This total is the numerator of the uncapped PGT Factor Adjustment. Finally, the PGT Factor Adjustment is capped at 5%.

In Step 20, the Model creates the Final Target Prices. For ACHs, the Model updates the Clinical Episode-level PCMA to account for the realized case mix of the Model Year Clinical Episodes and multiplies it by the PGT Factor Adjustment. For PGPs, the Model updates the Relative Case Mix so the Performance Period case mix of the PGP's episodes at an ACH is compared to the baseline period case mix. The HBP in the PGP-ACH Benchmark Price formula is only updated with the PGT Factor Adjustment.

Walk through of Steps 19–20

$$\text{HBP} = \text{SBS} \times \text{PCMA} \times \text{PGHA} \times \text{PGT} \times \text{PGTFA}$$

$$\text{Target Price} = \text{HBP} \times (1 - \text{CMS Discount})$$

Step 19

Hospital	Total Observed Clinical Episode Spending for Clinical Episodes initiated at the ACH	Standardized Baseline Spending (SBS)	Updated Patient Case Mix Adjustment (PCMA) of Clinical Episodes Initiated at the ACH	Peer Group Historical Adjustment (PGHA)	Peer Group Trend (PGT)	Clinical Episodes Initiated at ACH During PP	Peer Group
H1001	\$1,283,850	\$28,960	1.02	1.03	1.08	45	PG1
H1002	\$2,355,780	\$54,125	0.94	1.03	1.08	42	PG1
H1003	\$2,255,000	\$41,569	0.98	1.07	1.01	50	PG2
H1004	\$2,020,800	\$40,300	0.95	1.07	1.01	48	PG2

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Returning to the example data: the table now shows the Target Pricing components for four hospitals that belong to two peer groups. On the left, the total observed Clinical Episode spending covers all of the Clinical Episodes triggered at the ACH, which is why these numbers look higher than usual. Note that the PCMA in the fourth column has also been updated at this time.

For a Given Clinical Episode Category and Performance Period:

Step 19				
Peer Group	Numerator for Uncapped PGT Factor Adjustment	Denominator for Uncapped PGT Factor Adjustment	Uncapped PGT Factor Adjustment	Capped PGT Factor Adjustment
PG1	\$3,639,630	\$3,855,711	0.94	0.95
PG2	\$4,275,800	\$4,187,238	1.02	1.02

- This example shows a calculation for the PGT Factor Adjustment for two peer groups (PG1 and PG2), with two ACHs within each peer group. ACH counts within a CEC-peer group can vary from a handful to over 50 ACHs.
- The PGT Factor Adjustment value is capped at 0.95 for PG1.
- The updated PCMA used here is calculated among all Clinical Episodes initiated at the ACH during PP11, rather than among Clinical Episodes attributed to the ACH.

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This slide shows the calculation of the PGT Factor Adjustment for the two peer groups. For Peer Group 1, multiplying the values for the updated PCMA, PGHA, PGT, SBS and number of Clinical Episodes from the previous table results in \$3,639,630. This value is divided by the total spending across the two ACHs in the peer group, which is \$3,855,711. This results in an uncapped PGT Factor Adjustment of 0.94.

The PGT Factor Adjustment value is then capped at 0.95.

Please note that the updated PCMA used in the calculation includes all of the Clinical Episodes initiated at the ACH during the Performance Period, rather than all of the Clinical Episodes attributed to the ACH.

Final Target Price

Step 20						
PGP ID	ACH	Preliminary Target Price	Updated PCMA	Relative Case Mix	Capped PGTFA	Final Target Price
N/A	H1001	\$45,907	1.02	N/A	0.95	\$44,484
P001	H1001	\$48,662	1.02	1.12	0.95	\$51,776

- ACHs multiply the preliminary Target Price by the updated PCMA and the capped PGT Factor Adjustment.
- For each PGP-ACH combination, multiply the preliminary Target Price by the relative case mix and the capped PGT Factor Adjustment.

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Now let's put the final steps together. The first row shows an ACH and the second row shows the ACH for a particular PGP.

For the ACH, the preliminary Target Price of \$45,907 is multiplied by the updated PCMA based on all the episodes initiated at the ACH and the capped PGTFA of 0.95 to get the final Target Price of \$44,484.

For the PGP-ACH combination, the preliminary Target Price of \$48,662 is multiplied by the Relative Case Mix and the capped PGTFA of 0.95 to get the final Target Price of \$51,776.

SECTION 4

Key Takeaways

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Now I'll hand it back to Ashley to summarize the key takeaways from this webcast and wrap up by sharing a few additional resources.

Key Takeaways

- 1 The preliminary HBP for a given CEC is the product of the SBS, PCMA, PGHA and PGT. The preliminary PGP-ACH Benchmark Price is the product of the preliminary HBP and the preliminary Relative Case Mix.
- 2 Apply the CMS Discount Factor to the HBP to obtain the preliminary Target Price.
- 3 After claims data from the PP is received, the PGTFA is calculated. During Reconciliation, the final Target Price includes the SBS using the total observed Clinical Episode spending, the updated PCMA, the PGHA, the PGT and the retrospective PGTFA.

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Thanks, Aaron. In the webcast we went step-by-step through the Target Price calculations.

The preliminary HBP for a given CEC is the product of the Standardized Baseline Spending, Patient Case Mix Adjustment, Peer Group Historical Adjustment and Peer Group Trend Factor. The preliminary PGP-ACH Benchmark Price is the product of the preliminary HBP and the preliminary Relative Case Mix.

Apply the CMS Discount Factor to the HBP to obtain the preliminary Target Price.

After data from the Performance Period is received, the Peer Group Trend Factor Adjustment is calculated. The final Target Price includes the Standardized Baseline Spending using the total observed Clinical Episode spending, the updated Patient Case Mix Adjustment, the Peer Group Historical Adjustment, the Peer Group Trend Factor and the retrospective Peer Group Trend Factor Adjustment.

Pricing Methodology Technical Resources



- *These resources are updated for every Model Year.*
- *All resources listed below are for MY7 and are available in the BPCI Advanced Participant Portal > Document Library section. They can also be downloaded by clicking on each file name.*
- *Prior Model Years' Technical Resources can be found in the BPCI Advanced: Participant Resources webpage and the BPCI Advanced Participant Portal > Document Library section.*

- [BPCI Advanced Clinical Episode List – MY7](#)
- [BPCI Advanced Exclusions List - MY7](#)
- [Target Price Specifications – MY7](#)
- [Clinical Episode Construction Specifications – MY7](#)
- [Clinical Episode Construction Specifications – MY7 – Appendix: HH Update Factors](#)
- [Clinical Episode Construction Specifications – MY7 – Appendix: SNF Update Factor Calculation](#)
- [MY7 Target Price Data Dictionary](#)
- [Convener MY7 CY2023/FY2023 Preliminary Target Price template](#)
- [PGP MY7 CY2023/FY2023 Preliminary Target Price template](#)
- [ACH MY7 CY2023/FY2023 Preliminary Target Price template](#)
- [National ACH MY7 CY2023/FY2023 Preliminary Target Price template](#)
- [Convener MY7 Baseline Summary template](#)
- [PGP MY7 Baseline Summary template](#)
- [ACH MY7 Baseline Summary template](#)

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Additional pricing methodology resources, such as a complete list of MS-DRG and Healthcare Common Procedure Coding System, or HCPCS, codes that trigger a Clinical Episode, a complete list of Clinical Episode exclusions and comprehensive specifications for Target Price and Clinical Episode Construction are linked in the slides for this webcast and are available in the Documents section of the BPCI Advanced Participant Portal. The resources on the slide are updated for every Model Year. Technical resources from prior Model Years can be found on the BPCI Advanced: Participant Resources webpage and in the Documents section in the Participant Portal. Additional learning opportunities are forthcoming.

The preliminary Target Prices workbook that the Model will issue to Applicants and Participants also has a user guide tab that will walk through the pricing methodology calculations covered in this webcast.