DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Medicare & Medicaid Services

Medicare Learning Network®

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Hospital Value-Based Purchasing

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Introduction

The Hospital Value-Based Purchasing (VBP) Program is a Centers for Medicare & Medicaid Services (CMS) initiative that rewards acute-care hospitals with incentive payments for the quality of care they provide to Medicare beneficiaries.

Please note: The information in this publication applies only to the Medicare Fee-For-Service Program (also known as Original Medicare).

This booklet explains how the VBP Program works and how hospital performance is measured and scored. It also previews changes in future VBP Program years.

How Does Hospital VBP Work?

CMS rewards hospitals based on:

- The **quality** of care provided to Medicare patients;
- How closely best clinical practices are followed; and
- How well hospitals enhance patients' experiences of care during hospital stays.

Hospitals are no longer paid solely on the **quantity** of services they provide.

The Affordable Care Act of 2010 established the Hospital VBP Program, which applies to payments beginning in Fiscal Year (FY) 2013 and affects payment for inpatient stays in more than 3,000 hospitals across the country.

"Whether you are a patient, a provider, a business, a health plan, or a taxpayer, it is in our common interest to build a health care system that delivers better care, spends health care dollars more wisely and results in healthier people."

Sylvia Mathews Burwell, Secretary of the U.S. Department of Health and Human Services

January 26, 2015

Under the Hospital VBP Program, Medicare makes incentive payments to hospitals based on either:

- How well they perform on each measure; or
- How much they improve their performance on each measure compared to their performance during a baseline period.

How Does the VBP Program Measure Hospital Performance?

CMS bases hospital performance on an approved set of **measures** and **dimensions** grouped into specific quality **domains**. These domains vary depending on the program's FY. Table 1 provides the applicable domains for FYs 2016–2018, as well as the specified weight (used for scoring purposes) of each domain.

Table 1. Applicable Domains for FYs 2016–2018

FY	Applicable Domains & Weights
2016	Clinical Process of Care (10%) Patient Experience of Care (25%) Outcome (40%) Efficiency (25%)
2017*	Patient and Caregiver-Centered Experience of Care/Care Coordination (25%) Safety (20%) Clinical Care (30%) • Clinical Care – Outcomes (25%) • Clinical Care – Process (5%) Efficiency and Cost Reduction (25%)
2018	Patient and Caregiver-Centered Experience of Care/Care Coordination (25%) Safety (25%) Clinical Care (25%) Efficiency and Cost Reduction (25%)

* Beginning with FY 2017, CMS reclassified the quality domains to align more closely with CMS' National Quality Strategy (NQS). NQS serves as a blueprint for health care stakeholders across the country and helps prioritize quality improvement efforts, share lessons, and measure collective success.

Hospital VBP Program Measures

Tables 2–4 list the Hospital VBP Program measures for FYs 2016–2018.

Table 2. Hospital VBP Program Measures for FY 2016

Measure ID	Measure/Dimension Description	Domain
AMI-7a	Fibrinolytic Therapy Received Within 30 Minutes of Hospital Arrival	Clinical Process of Care
IMM-2	Influenza Immunization	Clinical Process of Care
PN-6	Initial Antibiotic Selection for Community-Acquired Pneumonia (CAP) in Immunocompetent Patients	Clinical Process of Care
SCIP-Inf-2	Prophylactic Antibiotic Selection for Surgical Patients	Clinical Process of Care
SCIP-Inf-3	Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time	Clinical Process of Care

Table 2. Hospital VBP Program Measures for FY 2016 (cont.)

Measure ID	Measure/Dimension Description	Domain
SCIP-Inf-9	Urinary Catheter Removal on Postoperative Day 1 or Postoperative Day 2	Clinical Process of Care
SCIP-Card-2	Surgery Patients on a Beta-Blocker Prior to Arrival Who Received a Beta-Blocker During the Perioperative Period	Clinical Process of Care
SCIP-VTE-2	Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery	Clinical Process of Care
Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey	1. Communication with Nurses; 2. Communication with Doctors; 3. Responsiveness of Hospital Staff; 4. Pain Management; 5. Communication about Medicines; 6. Cleanliness and Quietness of Hospital Environment; 7. Discharge Information; and 8. Overall Rating of Hospital.	Patient Experience of Care
CAUTI	Catheter-Associated Urinary Tract Infection	Outcome
CLABSI	Central Line-Associated Blood Stream Infection	Outcome
MORT-30-AMI	Acute Myocardial Infarction (AMI) 30-Day Mortality Rate	Outcome
MORT-30-HF	Heart Failure (HF) 30-Day Mortality Rate	Outcome
MORT-30-PN	Pneumonia (PN) 30-Day Mortality Rate	Outcome
AHRQ PSI-90 composite	Complication/Patient Safety for Selected Indicators (composite)	Outcome
SSI	Surgical Site Infection: • Colon • Abdominal Hysterectomy	Outcome
MSPB-1	Medicare Spending per Beneficiary (MSPB)	Efficiency

Table 3. Hospital VBP Program Measures for FY 2017

Measure ID	Measure Description	Domain
CAUTI	Catheter-Associated Urinary Tract Infection	Safety
CLABSI	Central Line-Associated Blood Stream Infection	Safety
CDI	Clostridium difficile Infection (C. difficile)	Safety
MRSA	Methicillin-Resistant Staphylococcus aureus Bacteremia	Safety
AHRQ PSI-90 composite	Complication/Patient Safety for Selected Indicators (composite)	Safety

Table 3. Hospital VBP Program Measures for FY 2017 (cont.)

Measure ID	Measure Description	Domain
SSI	Surgical Site Infection: • Colon • Abdominal Hysterectomy	Safety
MORT-30-AMI	Acute Myocardial Infarction (AMI) 30-day Mortality Rate	Clinical Care – Outcomes
MORT-30-HF	Heart Failure (HF) 30-day Mortality Rate	Clinical Care – Outcomes
MORT-30-PN	Pneumonia (PN) 30-day Mortality Rate	Clinical Care – Outcomes
AMI-7a	Fibrinolytic Therapy Received Within 30 Minutes of Hospital Arrival	Clinical Care – Processes
IMM-2	Influenza Immunization	Clinical Care – Processes
PC-01	Elective Delivery Prior to 39 Completed Weeks Gestation	Clinical Care – Processes
MSPB-1	Medicare Spending per Beneficiary (MSPB)	Efficiency and Cost Reduction
HCAHPS Survey	1. Communication with Nurses; 2. Communication with Doctors; 3. Responsiveness of Hospital Staff; 4. Pain Management; 5. Communication about Medicines; 6. Cleanliness and Quietness of Hospital Environment; 7. Discharge Information; and 8. Overall Rating of Hospital.	Patient and Caregiver-Centered Experience of Care/ Care Coordination

Table 4. Hospital VBP Program Measures for FY 2018

Measure ID	Measure Description	Domain
CAUTI	Catheter-Associated Urinary Tract Infection	Safety
CLABSI	Central Line-Associated Blood Stream Infection	Safety
CDI	Clostridium difficile Infection (C. difficile)	Safety
MRSA	Methicillin-Resistant Staphylococcus aureus Bacteremia	Safety
AHRQ PSI-90 composite	Complication/Patient Safety for Selected Indicators (composite)	Safety
PC-01	Elective Delivery Prior to 39 Completed Weeks Gestation	Safety

Table 4. Hospital VBP Program Measures for FY 2018 (cont.)

Measure ID	Measure Description	Domain
SSI	Surgical Site Infection: • Colon • Abdominal Hysterectomy	Safety
MORT-30-AMI	Acute Myocardial Infarction (AMI) 30-day Mortality Rate	Clinical Care
MORT-30-HF	Heart Failure (HF) 30-day Mortality Rate	Clinical Care
MORT-30-PN	Pneumonia (PN) 30-day Mortality Rate	Clinical Care
MSPB-1	Medicare Spending per Beneficiary (MSPB)	Efficiency and Cost Reduction
HCAHPS Survey	1. Communication with Nurses; 2. Communication with Doctors; 3. Responsiveness of Hospital Staff; 4. Pain Management; 5. Communication about Medicines; 6. Cleanliness and Quietness of Hospital Environment; 7. Discharge Information; 8. Care Transition*; and 9. Overall Rating of Hospital.	Patient and Caregiver-Centered Experience of Care/ Care Coordination

* The Care Transition measure adds three questions to the HCAHPS Survey, beginning in FY 2018. For more information, see Page 49551 of the Final Rule at https://www.gpo.gov/fdsys/pkg/FR-2015-08-17/pdf/2015-19049.pdf on the Internet.

How Is Hospital Performance Scored?

CMS assesses each hospital's total performance by comparing its **Achievement** and **Improvement** scores for each applicable Hospital VBP measure. CMS uses a threshold (50th percentile) and benchmark (mean of the top decile) to determine how many points to award for the Achievement and Improvement scores. CMS compares the Achievement and Improvement scores and uses whichever is greater.

To determine the domain scores, CMS adds points across all measures.

- **Achievement points** are awarded by comparing an individual hospital's rates during the performance period to all hospitals' rates from the baseline period:
  - Hospital rates at or above benchmark = 10 Achievement points
  - Hospital rates below the Achievement threshold = 0 Achievement points
  - Hospital's rate is equal to or greater than the Achievement threshold and less than the benchmark = 1–10 Achievement points

- **Improvement points** are awarded by comparing an individual hospital's rates during the performance period to that same individual hospital's rates from the baseline period:
  - Hospital rates at or above benchmark = 9 Improvement points
  - Hospital rates at or below baseline period rate = 0 Improvement points
  - Hospital's rate is between the baseline period rate and the benchmark = 0–9 Improvement points

The Patient Experience of Care domain score is the sum of a hospital's HCAHPS base score and that hospital's HCAHPS Consistency score.

- **Consistency points** are awarded by comparing a hospital's Patient Experience of Care dimension rates during the performance period to all hospitals' Patient Experience of Care rates from a baseline period:
  - If all dimension rates are at or above Achievement threshold = 20 Consistency points
  - If any dimension rate is at or below the worst-performing hospital dimension baseline period rate = 0 Consistency points
  - If the lowest dimension rate is greater than the worst-performing hospital's rate but less than the Achievement threshold = 0–20 Consistency points

CMS calculates a hospital's **Total Performance Score (TPS)** by:

1) Combining the greater of either the hospital's Achievement or Improvement points for each measure to determine a score for each domain;
2) Then multiplying each domain score by a specified "weight" (percentage); and
3) Then adding together the weighted domain scores.

In FYs 2013 and 2014, hospitals must receive scores on **all** domains to receive a TPS. However, CMS revisited this policy because the Hospital VBP Program evolved from its initial domains to an expanded measure set with additional domains.

As a result, for FY 2015 and FY 2016 Program years, hospitals with sufficient data to receive **at least two out of the four** domain scores will receive a TPS. For those hospitals with at least two domain scores, TPSs will be reweighted proportionately to the scored domains to ensure the relative weights for the scored domains remain equivalent to the weighting when there are scores in all four domains.
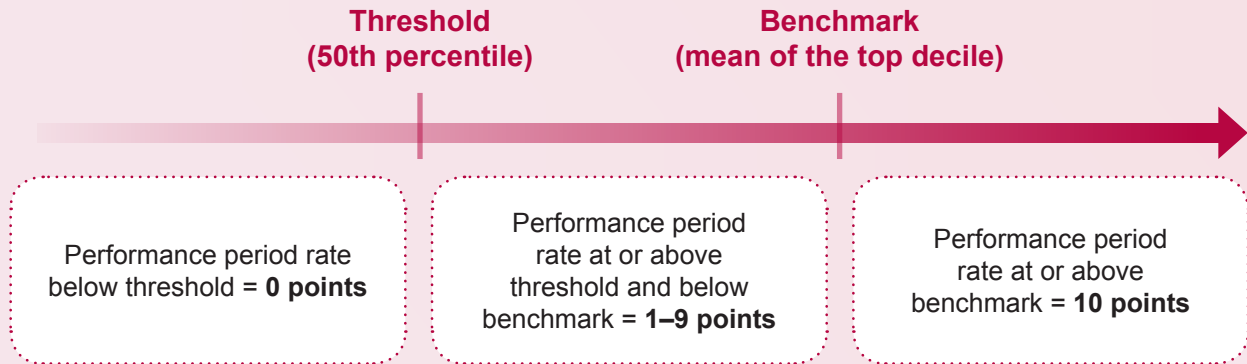
CMS further revised its policy for FY 2017, allowing hospitals with sufficient data in **at least three out of the four** domain scores to receive a TPS. CMS continued the adoption of this policy for the FY 2018 Hospital VBP Program.

The following steps guide you through the process of how CMS scores hospital performance.
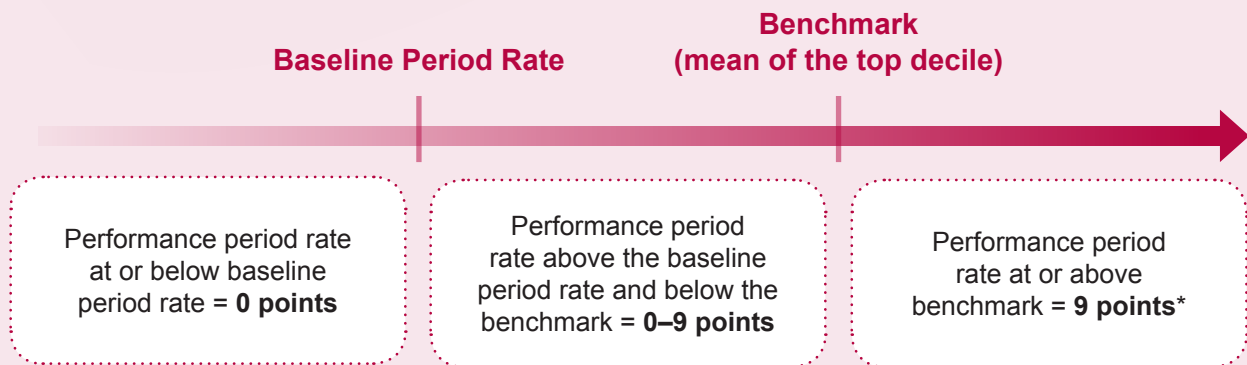
Step 1. Calculate Achievement and Improvement points for each measure or dimension.

Achievement Points: Compare your **individual** hospital's rates during the performance period to **all** hospitals' performance during the baseline period.

**Threshold
(50th percentile)**

**Benchmark
(mean of the top decile)**

Performance period rate below threshold = **0 points**

Performance period rate at or above threshold and below benchmark = **1–9 points**

Performance period rate at or above benchmark = **10 points**

Improvement Points: Compare your **individual** hospital's rates during the performance period to your **individual** hospital's rates during the baseline period.

Baseline Period Rate

**Benchmark
(mean of the top decile)**

Performance period rate at or below baseline period rate = **0 points**

Performance period rate above the baseline period rate and below the benchmark = **0–9 points**

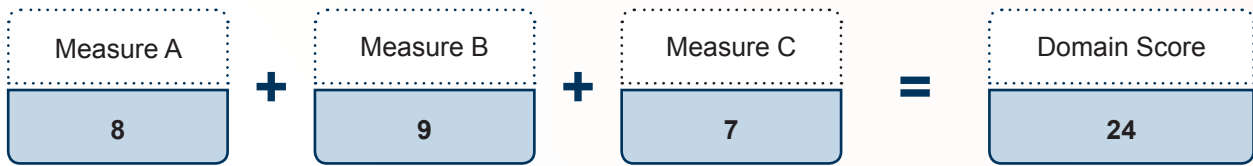Performance period rate at or above benchmark = **9 points***

* Hospitals that have rates at or better than the benchmark but do not improve from their baseline period rate (that is, have a performance period rate worse than the baseline period rate) will receive 0 improvement points as no improvement was actually observed.

Step 2. Add the **greater** of either the Achievement or Improvement points for **each measure or dimension**.

Example: In FY 2017, the Clinical Care – Process subdomain has 3 measures.

Measure	Achievement Points	Improvement Points
A	6	8
B	9	4
C	4	7

Measure A		Measure B		Measure C		Domain Score
8	**+**	9	**+**	7	**=**	24

Step 3. Normalize the domain score.

$$\left(\frac{\text{Domain Score (from Step 2)}}{\text{10 x Number of Measures in Domain}} \right) \times 100 = \text{Normalized Score}$$

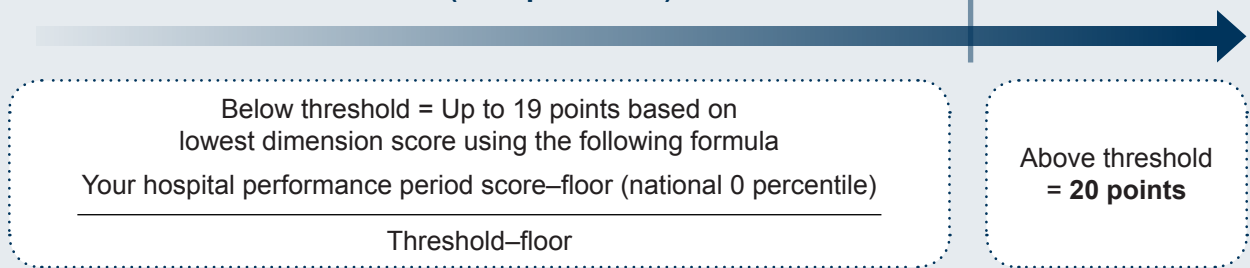$$\left(\frac{24}{10 \times 3} \right) \times 100 = 80$$

Step 4. Calculate HCAHPS Consistency score for the Patient Experience of Care domain.

Consistency points reward hospitals that have scores above the 50th percentile in all 8 dimensions in FY 2016 and FY 2017 and all 9 dimensions in FY 2018 of the HCAHPS.

Threshold (50th percentile)

Below threshold = Up to 19 points based on lowest dimension score using the following formula

$$\frac{\text{Your hospital performance period score–floor (national 0 percentile)}}{\text{Threshold–floor}}$$

Above threshold = **20 points**

Step 5.	Add the HCAHPS Consistency score from Step 4 to the Patient Experience of Care normalized score (HCAHPS Base Score) from Step 3.

HCAHPS Consistency Score (Step 4) **+** Patient Experience of Care Normalized Score (HCAHPS Base Score) (Step 3) **=** Patient Experience of Care Domain Score
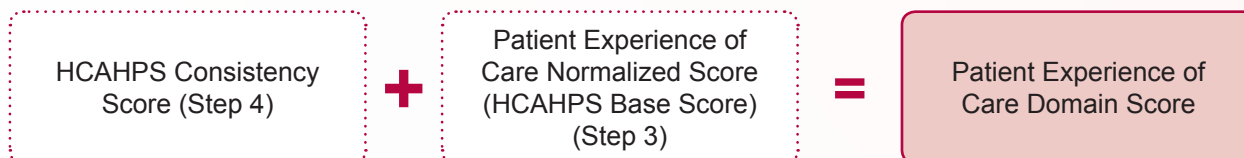
Step 6.	Multiply the domain score by the specified weight.

2016		2017		2018	
Patient Experience of Care Score (Step 5)	x 25%	Patient and Caregiver-Centered Experience of Care/Care Coordination Score (Step 5)	x 25%	Patient and Caregiver-Centered Experience of Care/Care Coordination Score (Step 5)	x 25%
Clinical Process of Care Score (Step 3)	x 10%	RECLASSIFIED Clinical Care Score (Step 3) (Outcome 25% + Process 5%)	x 30%	Clinical Care Score (Step 3)	x 25%
Efficiency Score (Step 3)	x 25%	Efficiency and Cost Reduction Score (Step 3)	x 25%	Efficiency and Cost Reduction Score (Step 3)	x 25%
Outcome Score (Step 3)	x 40%	Safety Score (Step 3)	x 20%	Safety Score (Step 3)	x 25%

2016	2017	2018
Patient Experience of Care Weighted Score (Step 6)	Patient and Caregiver Centered Experience of Care/Care Coordination Weighted Score (Step 6)	Patient and Caregiver Centered Experience of Care/Care Coordination Weighted Score (Step 6)
+	**+**	**+**
Clinical Process Weighted Score (Step 6)	RECLASSIFIED Clinical Care Weighted Score (Step 6) (Outcome + Process)	Clinical Care Weighted Score (Step 6)
+	**+**	**+**
Efficiency Weighted Score (Step 6)	Efficiency Weighted Score (Step 6)	Efficiency Weighted Score (Step 6)
+	**+**	**+**
Outcome Weighted Score (Step 6)	Safety Weighted Score (Step 6)	Safety Weighted Score (Step 6)
TPS Scores are required in **at least 2** domains to calculate a TPS. The excluded domain weights will be redistributed to calculate the TPS.	**TPS** Scores are required in **at least 3** domains to calculate a TPS. The excluded domain weights will be redistributed to calculate the TPS.	**TPS** Scores are required in **at least 3** domains to calculate a TPS. The excluded domain weights will be redistributed to calculate the TPS.

What Are the Hospital VBP Program Performance Periods?

A Hospital VBP Program **performance period** is a designated time span used to capture data that shows how well a hospital is performing. CMS compares data collected during the performance period to data collected for each participating hospital during a **baseline period**. Tables 5–7 provide baseline and performance period dates for FYs 2016–2018.

Table 5. Baseline and Performance Periods for FY 2016

Domain	Baseline Period	Performance Period
Outcome: AHRQ PSI-90 composite	Oct. 15, 2010–June 30, 2011	Oct. 15, 2012–June 30, 2014
Outcome: Healthcare-Associated Infections (CAUTI, CLABSI, SSI)	Jan. 1, 2012–Dec. 31, 2012	Jan. 1, 2014–Dec. 31, 2014
Outcome: Mortality	Oct. 1, 2010–June 30, 2011	Oct. 1, 2012–June 30, 2014
Clinical Process of Care	Jan. 1, 2012–Dec. 31, 2012	Jan. 1, 2014–Dec. 31, 2014
Efficiency	Jan. 1, 2012–Dec. 31, 2012	Jan. 1, 2014–Dec. 31, 2014
Patient Experience of Care	Jan. 1, 2012–Dec. 31, 2012	Jan. 1, 2014–Dec. 31, 2014

Table 6. Baseline and Performance Periods for FY 2017

Domain	Baseline Period	Performance Period
Safety: AHRQ PSI-90 composite	Oct. 1, 2010–June 30, 2012	Oct. 1, 2013–June 30, 2015
Safety: Healthcare-Associated Infections (CAUTI, CLABSI, SSI, CDI, MRSA)	Jan. 1, 2013–Dec. 31, 2013	Jan. 1, 2015–Dec. 31, 2015
Clinical Care – Outcomes	Oct. 1, 2010–June 30, 2012	Oct. 1, 2013–June 30, 2015
Clinical Care – Process	Jan. 1, 2013–Dec. 31, 2013	Jan. 1, 2015–Dec. 31, 2015
Efficiency and Cost Reduction	Jan. 1, 2013–Dec. 31, 2013	Jan. 1, 2015–Dec. 31, 2015
Patient and Caregiver-Centered Experience of Care/Care Coordination	Jan. 1, 2013–Dec. 31, 2013	Jan. 1, 2015–Dec. 31, 2015

Table 7. Baseline and Performance Periods for FY 2018

Domain	Baseline Period	Performance Period
Safety: AHRQ PSI-90 composite	July 1, 2010–June 30, 2012	July 1, 2014–June 30, 2016

Table 7. Baseline and Performance Periods for FY 2018 (cont.)

Domain	Baseline Period	Performance Period
Safety: Healthcare-Associated Infections (CAUTI, CLABSI, SSI, CDI, MRSA)	Jan. 1, 2014–Dec. 31, 2014	Jan. 1, 2016–Dec. 31, 2016
Safety: PC-01	Jan. 1, 2014–Dec. 31, 2014	Jan. 1, 2016–Dec. 31, 2016
Clinical Care	Oct. 1, 2009–June 30, 2012	Oct. 1, 2013–June 30, 2016
Efficiency and Cost Reduction	Jan. 1, 2014–Dec. 31, 2014	Jan. 1, 2016–Dec. 31, 2016
Patient and Caregiver-Centered Experience of Care/Care Coordination	Jan. 1, 2014–Dec. 31, 2014	Jan. 1, 2016–Dec. 31, 2016

NOTE: To collect enough data to generate the most reliable measure scores possible, CMS increased the length of certain domain measures' baseline and performance periods for future Hospital VBP Program years. As a result, baseline and performance periods for certain Safety and Clinical Care measures are finalized for FYs 2019–2021. For more information, refer to https://www.gpo.gov/fdsys/pkg/FR-2015-08-17/pdf/2015-19049.pdf on the Internet.

How Is the Hospital VBP Program Funded?

The Hospital VBP Program is funded by a percentage withheld from participating hospitals' Diagnosis-Related Group (DRG) payments. This applicable percentage varies until FY 2017. Table 8 lists these percentages.

Table 8. Applicable Percentage Withheld

FY	Applicable Percentage
2013	1.00%
2014	1.25%
2015	1.50%
2016	1.75%
2017	2.00%
2018 and subsequent FYs	2.00%

Other funding specifics for the program include:

- The law requires that the total amount of aggregate value-based incentive payments equals the amount available for value-based incentive payments.

- CMS finalized a linear exchange function to translate TPSs into value-based incentive payments.

Resources

Table 9 provides resources for additional information.

Table 9. Hospital Value-Based Purchasing Resources

Resource	Website
CMS Hospital VBP Program	https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospital-Value-Based-Purchasing
Final Rules in the Federal Register (policies for the Hospital VBP Program)	• Hospital Inpatient VBP Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2011-05-06/pdf/2011-10568.pdf • FY 2012 Inpatient Prospective Payment Systems (IPPS)/Long-Term Care Hospital (LTCH) Prospective Payment System (PPS) Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2011-08-18/pdf/2011-19719.pdf • Calendar Year (CY) 2012 Outpatient Prospective Payment System (OPPS)/Ambulatory Surgical Center (ASC) Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2011-11-30/pdf/2011-28612.pdf • FY 2013 IPPS/LTCH Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2012-08-31/pdf/2012-19079.pdf • FY 2014 IPPS/LTCH Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2013-08-19/pdf/2013-18956.pdf • CY 2014 OPPS/ASC Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2013-12-10/pdf/2013-28737.pdf • FY 2015 IPPS/LTCH Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2014-08-22/pdf/2014-18545.pdf • FY 2016 IPPS/LTCH Final Rule: https://www.gpo.gov/fdsys/pkg/FR-2015-08-17/pdf/2015-19049.pdf
HCAHPS	http://www.hcahpsonline.org
Hospital Quality Initiative	https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits
"MLN Guided Pathways: Provider Specific Medicare Resources" booklet	https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNEdWebGuide/Downloads/Guided_Pathways_Provider_Specific_Booklet.pdf
NQS	https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/Downloads/CMS-Quality-Strategy.pdf
Social Security Laws	https://www.ssa.gov/OP_Home/ssact/title18/1886.htm

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