BlueCross BlueShield Association

Blue Distinction® Specialty Care

Program Selection Criteria: Cardiac Care

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Blue Cross Blue Shield Association is an association of independent Blue Cross and Blue Shield companies.

Document Overview

The Program Selection Criteria outlines the Quality, Business, and Cost of Care Selection Criteria and evaluation processes used to determine eligibility for the Blue Distinction® Centers (BDC) for Cardiac Care program (this Program).

Sections of this document include:

1. Blue Distinction Centers for Cardiac Care
2. Evaluation Process
3. Quality Evaluation
4. Quality Selection Criteria
5. Business Selection Criteria
6. Cost of Care Evaluation
7. Cost of Care Selection Criteria

Blue Distinction Centers for Cardiac Care

The BDC for Cardiac Care program evaluates facilities performing the following cardiac procedures, for adult patients who are at least 18 years of age:

- Percutaneous Coronary Interventions (PCI)
- Coronary Artery Bypass Graft (CABG)
- Aortic Valve Replacement (AVR)
- Mitral Valve Replacement and Repair (MVRR)

The facility must provide both PCI and cardiac surgery services to be considered for designation. Additionally, each facility must participate and have current registry data from the American College of Cardiology (ACC), Society of Thoracic Surgeons (STS), and publicly available hospital data from Centers for Medicare and Medicaid (CMS) Care Compare website.

Designation as a BDC for Cardiac Care differentiates facilities locally, as well as nationally, and includes two levels of designation:

- **Blue Distinction Centers (BDC):** Facilities recognized for their expertise in delivering specialty care.
- **Blue Distinction Centers+ (BDC+)**: Facilities recognized for their expertise and cost-efficiency in delivering specialty care.

Quality is key*: only those facilities that first meet nationally established quality measures for BDC will be considered for designation as a BDC+.*

Designations are awarded to individual facilities (i.e., unique bricks-and-mortar facilities with unique addresses).

Any facility with multiple locations (different addresses) was evaluated separately for each location. Health systems and other groups of multiple facilities/clinics are not designated collectively.

Evaluation Process

Blue Distinction Specialty Care programs establish nationally consistent and continually evolving approaches to evaluating quality and value of care. The evaluation process include:

Quality

Nationally consistent approach to evaluating quality and safety was used, incorporating quality measures with meaningful impact, including delivery system features and specific quality outcomes to which all can aspire.

Cost

Nationally consistent and objective approach for selecting BDC+ was used to address market and consumer demand for cost savings and affordable healthcare.

Access

Blue members' access to Blue Distinction Centers was considered to achieve the Program's overall goal of providing differentiated performance on Quality and, for the BDC+ designation, Cost of Care.

Data Sources

Objective data from the Provider Survey, Plan Survey, Third-Party Registry Data, and National Blue Claims Dataset (Claims Data) information were used to evaluate and identify facilities that meet the Program's Selection Criteria. Table 1 below outlines the data sources used for evaluation of this Program.

Table 1: Data Sources

Selection Criteria Components	Data Source	Blue Distinction Centers (BDC)	Blue Distinction Centers+ (BDC+)
Quality	• Quality data supplied by applicant facility in the Provider Survey; to include STS Adult Cardiac Surgery Database Registry Data • NCDR® CathPCI Registry® Data • Publicly Available CMS Care Compare Hospital Data • Local Blue Plan Quality Criteria *(if applicable)*	✓	✓
Business	• Data supplied by Plan in the Plan Survey • Review of Blue Brands Evaluation • Local Blue Plan Business Criteria *(if applicable)*	✓	✓
Cost of Care	• Claims Data • Local Blue Plan Cost Criteria *(if applicable)*		✓

Note: Due to challenges presented by the COVID-19 pandemic, BCBSA reserves the right to make necessary accommodations to this Program's Selection Criteria. Accommodations, if any, will be made on a nationally consistent basis and communicated through your local Blue Plan.

Quality Evaluation

Blue Distinction Specialty Care programs establish a nationally consistent approach to evaluating quality and safety by incorporating quality measures with meaningful impact. Selection Criteria continues to evolve through each future evaluation cycle, consistent with medical advances and measurement in this specialty area. The measurement framework for this and other Blue Distinction programs were developed using the following guiding principles:

- Utilize a credible process and produce credible results with meaningfully differentiated outcomes
- Align with other national efforts using established measures, where appropriate and feasible
- Simplify and streamline measures and reporting process
- Enhance transparency and ease of explaining program methods

Quality Methodology

Facilities were evaluated on quality measures developed through a process that included: input from the medical community and quality measurement experts; review of medical literature, together with national quality and safety initiatives; and a thorough analysis of meaningful quality measures. The quality evaluation was based on applicant facility responses to the Provider Survey and Third-Party Registry Data.

This Program evaluates facility performance on the following procedures:

- Percutaneous Coronary Intervention (PCI)
- Coronary Artery Bypass Graft (CABG)
- Aortic Valve Replacement (AVR)

The Quality Selection Criteria includes structure, process, and patient outcome measures that are specific to both PCI and cardiac surgery procedures. Each facility completed a Provider Survey that included structure and process measures, and risk adjusted patient outcomes from its Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database (ACSD) for the most recent reporting timeframe (at the time of application). The facilities were also evaluated on third-party registry data obtained from the ACC National Cardiovascular Data Registry (NCDR®) CathPCI Registry® and publicly available CMS Care Compare hospital measures, both for the most current reporting timeframe (at time of application).

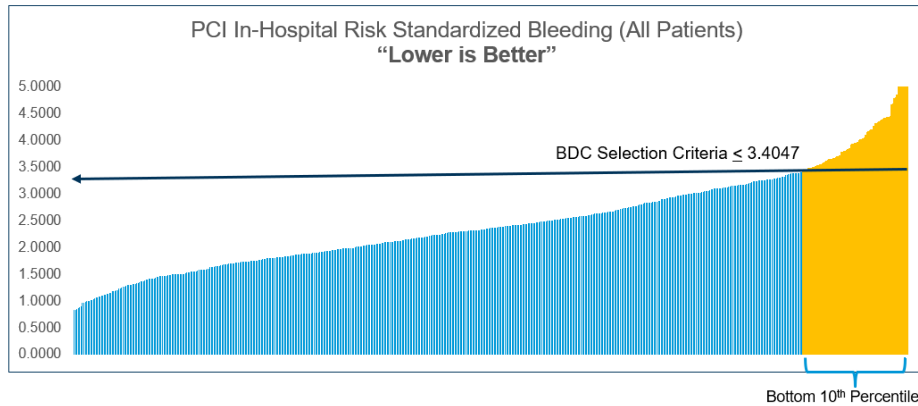
Below is a summary of the quality evaluation for the third-party registry data:

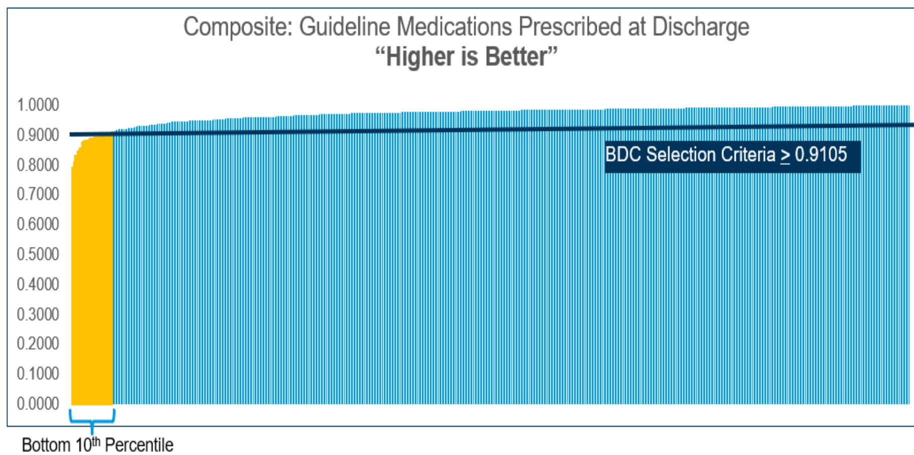
- STS ACSD measures for CABG and AVR procedures were measured on the overall composite star rating, provided by the facility within the Provider Survey.
- ACC NCDR CathPCI Registry Executive Summary Measures for PCI procedures were measured on the facility's rate compared to the National (US Registry Aggregate) 10th percentile benchmark. Facilities must have four consecutive quarters with a benchmark inclusion status of "Green" for the measures to be evaluated, if not, then the data was insufficient and was not evaluated. This data was obtained from the

ACC Corporate Dashboard by BCBSA with facility consent. The direction of the measure is dependent on whether lower results or higher results represent better performance (e.g., lower bleeding rate is better, but higher adherence to medication is better).

Figure 1 Below contains two graphs to help explain the CathPCI Executive Summary Measure direction.

Figure 1: CathPCI Executive Summary Measure Direction





- Care Compare hospital measures for CABG and Acute Myocardial Infarction (AMI) were measured using the statistical performance category. This data was obtained from CMS Care Compare website.

Quality Selection Criteria

Scoring of quality measures is based on both required and flexible measures.

- Table 2 below outlines the quality measures that are required. The facility must meet **ALL** the required measures to be consideration for the designation.
- Table 3 below outlines the flexible measures where the facility must meet a specific number of measures within the flexible measure category. There are two flexible measure categories: 1) structure and process

measures - facility must meet one out of three measures; and 2) NCDR CathPCI Executive Summary Measures - facility must meet four out of five measures.

Required Measures

Table 2: Required Measures (Facility must meet ALL measures)

Quality Selection Criteria: Required Measures		
Measure Name	**Data Source**	**Selection Criteria Description**
National Accreditation*	Provider Survey Question #5	The facility is fully accredited by **at least one** of the following national accreditation organizations: * • The Joint Commission (TJC) (without provision or condition) in the Hospital Accreditation Program • Healthcare Facilities Accreditation Program (HFAP) of the American Osteopathic Information Association (AOIA) as an acute care hospital • National Integrated Accreditation Program (NIAHO^{SM}) – Acute Care of DNV GL Healthcare • Center for Improvement in Healthcare Quality (CIHQ) in the Hospital Accreditation Program **NOTE: To enhance quality while improving Blue Members' access to qualified providers, alternate local Accreditations that are at least as stringent as any National Accreditations, above, may be offered under the local Blue Plan Criteria; for details, contact the facility's local Blue Plan.*
System for Documenting REL Data	Provider Survey Question #14	Facility has an established system to document self-identified race, ethnicity, and primary language.
STS Participation and Reporting	Provider Survey Question #16	**All** Cardiothoracic Surgeons participate and report cardiac surgery procedures to the Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database (ACSD).
STS Harvest Report Available	Provider Survey Question #17	Facility has the Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database (ACSD) most recent Harvest Report that includes Star Ratings.
STS ACSD: CABG Overall Composite Star Rating	Provider Survey Question #19	Facility's STS Isolated Coronary Artery Bypass Graft (CABG) Overall Composite Star Rating is **greater than or equal to 2 stars**.
STS ACSD: AVR Overall Composite Star Rating	Provider Survey Question #22	Facility's STS Isolated Aortic Valve Replacement (AVR) Overall Composite Star Rating is **greater than or equal to 2 stars**.
CathPCI: Facility PCI Volume	NCDR CathPCI Registry Data	Facility's Percutaneous Coronary Intervention (PCI) volume, reported in the most recent CathPCI Registry® report is **greater than or equal to 100 procedures.**
PCI In-Hospital Risk Standardized Bleeding (All Patients)	NCDR CathPCI Executive Summary Measure #40	Facility's PCI In-Hospital Risk Standardized Bleeding (all patients) rate is **less than or equal to** the National 10th Percentile Benchmark.
Composite: Major Adverse Events (Select PCI Patients)	NCDR CathPCI Executive Summary Measure #44	Facility's Composite Major Adverse Events (select PCI patients) rate is **less than or equal to** the National 10th Percentile Benchmark.

Quality Selection Criteria: Required Measures		
Measure Name	**Data Source**	**Selection Criteria Description**
PCI In-Hospital Risk Standardized Mortality (All Patients)	NCDR CathPCI Executive Summary Measure #48	Facility's PCI In-Hospital Risk Standardized Mortality (all patients) rate is **less than or equal to** the National 10th Percentile Benchmark.
CABG 30-Day Risk Standardized Mortality Rate	Care Compare Publicly Available Hospital Data	Coronary Artery Bypass Graft (CABG) 30-day risk standardized mortality rate is reported as **"better than or no different than the national rate**."
CABG 30-Day Risk Standardized Readmission Rate	July 2021	Coronary Artery Bypass Graft (CABG) 30-day risk standardized readmission rate is reported as **"better than or no different than the national rate."**
AMI 30-Day Risk Standardized Mortality Rate	Care Compare Publicly Available Hospital Data	Acute Myocardial Infarction (AMI) 30-day risk standardized mortality rate is reported as **"better than or no different than the national rate."**
AMI 30-Day Risk Standardized Readmission Rate	July 2021	Acute Myocardial Infarction (AMI) 30-day risk standardized readmission rate is reported as **"better than or no different than the national rate."**
Local Plan Quality Criteria (If Applicable)	Plan Survey	An individual Blue Plan, at its own independent discretion, may establish and apply local quality requirements as additional Local Plan Quality Selection Criteria for eligibility in a Blue Distinction Centers program, for facilities located within its Service Area.

Flexible Measures

Table 3: Flexible Measures

Quality Selection Criteria: Flexible Measures		
Measure Name	**Data Source**	**Selection Criteria Description**
Structure/Process Flexible Category: Must Meet 1 out of 3 Measures		
Cardiac Rehabilitation Program Certified by AACVPRR	Provider Survey Question #7	Facility's cardiac rehabilitation program (or the cardiac rehabilitation program facility refers patients to) is certified by the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR).
Participation in AACVPRR Outpatient Cardiac Rehabilitation Registry	Provider Survey Question #8	Facility's cardiac rehabilitation program (or the cardiac rehabilitation program facility refers patients to) participates in the AACVPR Outpatient Cardiac Rehabilitation Registry to track patient outcomes.
Cardiac Rehabilitation Program Best Practices	Provider Survey Question #9	Facility's cardiac rehabilitation program (or the cardiac rehabilitation program facility refers patients to) includes **greater than or equal to 3** best practices.
NCDR CathPCI Executive Summary Measure Category: Must Meet 4 out of 5 Measures		
PCI within 90 Minutes (Patients with STEMI)	NCDR CathPCI Executive Summary Measures #4	Facility's PCI within 90 Minutes rate is **greater than or equal to** the National 10th Percentile Benchmark.
Proportion of PCI Procedures Not Classifiable for AUC Reporting (All Patients)	NCDR CathPCI Executive Summary Measures #30	Faculty's Proportion of PCI Procedures Not Classifiable for Appropriate Use Criteria (AUC) Reporting (all patients) rate is **less than or equal to** the National 10th Percentile Benchmark.

Quality Selection Criteria: Flexible Measures		
Measure Name	**Data Source**	**Selection Criteria Description**
Proportion of PCI Procedures That Were Evaluated as Rarely Appropriate (PCI Patients with Stable Ischemic Heart Disease)	NCDR CathPCI Executive Summary Measures #36	Facility's Proportion of PCI Procedures That Were Evaluated as Rarely Appropriate (PCI patients with stable ischemic heart disease) rate is **less than or equal to** the National 10th Percentile Benchmark.
Composite: Guideline Medications Prescribed at Discharge	NCDR CathPCI Executive Summary Measures #38	Facility's Composite Guideline Medications Prescribed at Discharge rate is **greater than or equal to** the National 10th Percentile Benchmark.
Cardiac Rehabilitation Referral	NCDR CathPCI Executive Summary Measures #45	Facility's Cardiac Rehabilitation Referral rate is **greater than or equal to** the National 10th Percentile Benchmark.

Quality Informational Measures

The following informational measures are outlined in Table 4 and were reported by facilities in the Provider Survey. These measures are not included in the evaluation for scoring and are to be used as an educational tool for quality improvement.

Note: Participation in public reporting for the ACC NCDR CathPCI Registry and STS ACSD may become requirements in future cycles of the BDC for Cardiac Care program.

Table 4: Informational Measures

Informational Measures		
Measure Name	**Source**	**Selection Criteria Description**
Enhanced Recovery Protocols	Provider Survey Question #10	Facility utilized enhanced recovery protocols (or is in the process of creating enhanced recovery protocols) for cardiac surgical patients.
Publicly Reports ACC NCDR® CathPCI Registry® Data	Provider Survey Question #11	Facility currently publicly reports ACC NCDR CathPCI Registry data for PCI procedures.
Publicly Reports STS Adult Cardiac Surgery Database (ACSD) Registry Data	Provider Survey Question #12	Facility currently publicly reports STS ACSD Registry data for cardiac surgery (includes CABG and valve) procedures.
Analyzes and Reports Cardiac Care Service Line Data	Provider Survey Question #15	Facility routinely reviews, analyzes, and reports cardiac medical and cardiac surgery service line data by race and ethnicity.

Business Selection Criteria

The Business Selection Criteria consists of the following components:

1. Facility Performs Services
2. Facility Preferred Provider Organization (PPO) Participation

3. Physician/Surgeon PPO Participation
4. Blue Brands Criteria; and
5. Local Blue Plan Business Criteria (if applicable)

A facility must meet **all** components listed below in Table 5 to meet the Business Selection Criteria for the Blue Distinction Centers for Cardiac Care designation.

Table 5. Business Selection Criteria

Business Selection Criteria	
Facility Performs Services	Facility must provide Cardiac Care services.
Facility PPO Participation	Facility must participate in the local Blue Plan's BlueCard® Preferred Provider Organization (PPO) network.
Physician/Surgeon PPO Participation	All Key Physicians and Surgeons who perform cardiac care procedures at the applicant facility, as identified in the Provider Survey, are required to participate in the local Blue Plan's BlueCard PPO Network. **De Minimis exception to this criterion will be considered on an individual case basis through a nationally consistent appeal process.*
Blue Brands Criteria	Facility and its corporate family meet BCBSA criteria for avoiding conflicts with BCBSA logos and trademarks.
Local Blue Plan Business Criteria (if applicable)	An individual Blue Plan, at its own independent discretion, may establish and apply local business requirements as additional Local Plan Business Selection Criteria for eligibility in a Blue Distinction Centers program, for facilities located within its Service Area.

Cost of Care Evaluation

Cost of care measures were designed to address market and consumer demand for cost savings and affordable healthcare. The Cost of Care Selection Criteria were used to provide a consistent and objective approach to identify BDC+ facilities.

Quality is key: only those facilities that first meet nationally established, objective quality and business measures for BDC will be considered for designation as a BDC+.

Defining the Episodes

Cost of care evaluation was based on a nationally consistent analysis of Blue Plans' Claims Data. To provide validity for comparisons, cost analytics for the BDC Cardiac Care program focus on commonly performed cardiac procedures.

Cost Data Sources

Each facility's cost of care is calculated using adjusted allowed amounts for specific cardiac episodes of care for actively enrolled Blue Members, derived from Blue Plans' Claims Data incurred January 1, 2018, through August 31, 2021, and paid through November 30, 2021.

Clinical Category Identification Criteria

Episodes of care were triggered by using CPT, HCPCS, or ICD-10 PCS procedure codes. To provide validity for comparisons, cost analytics for the BDC Cardiac Care program focus on the following major, commonly performed cardiac revascularization and valve procedures:

- Coronary Artery Bypass Graft (CABG)
- Percutaneous Coronary Interventions (PCI)
- Aortic Valve Replacement (AVR)
- Mitral Valve Repair and Replacement (MVRR)

To be considered complete and comparable, included episodes were required to have both professional and facility triggers present (e.g., a CABG episode with a facility claim for the index procedure, but no physician claim, was excluded). Outpatient episodes were excluded for all cardiac procedures except for PCI.

Categorization by Procedure Type

Due to differences in expected costs, a distinction must be made for CABG and PCI procedures that were performed for acute myocardial infarction (AMI) compared to those performed for patients with coronary disease without evidence AMI.

Thus, the following Clinical Categories were considered in the Cost of Care evaluation for BDC Cardiac Care:

- CABG
    - Sub-categories: CABG with AMI; CABG without AMI
- PCI
    - Sub-categories: PCI with AMI; PCI without AMI
- Cardiac Valve Procedures
    - Sub-categories: Aortic valve replacement; Mitral valve repair; Mitral valve replacement

Cardiac surgery is complex. More than one procedure may be performed during the same operative session and multiple procedure codes may be submitted. In these cases, additional logic is needed to identify the type of surgery provided for categorization and analysis. One commonly used strategy ranks procedures in terms of either relative cost or risk, and then labels the combined procedures based on the procedure with the highest relative cost. This approach is used in the Medicare Severity Diagnosis Related Groups (MS-DRG) grouper.

Table 6 below shows the hierarchical ranking used for BDC cardiac episodes, which follows the ranking used in the MS-DRG system. The episode was labeled based on the procedure with the highest rank value. For example, a patient with a valve replacement and CABG performed at the same time would be classified based on the valve procedure[1].

Table 6. Hierarchical Ranking

Cardiac Procedure Type	Hierarchy Rank
Cardiac Valve Procedure	1

[1] In cases where a patient has an aortic and mitral valve procedure, the aortic valve procedure takes precedence over the mitral procedure. In situations where a second PCI occurred within the episode window of an initial PCI, costs for the second PCI are added as part of the total episode cost. This scenario occurred in about 7.40% of PCIs.

CABG	2
PCI	3

Member Exclusion Criteria

- Exclude age <25 or >64 years
- Exclude discharge status Left Against Medical Advice (LAMA)
- Exclude in-hospital death
- Exclude when primary payer is not a BCBS Plan
- Exclude members not continuously enrolled for the duration of the episode

Clinical category costs are adjusted for the impact of significant patient co-morbidities, via risk adjustment methods; and high-cost outlier cases are managed, as outlined below.

Episode Window

Each surgery episode type has time windows before and after the episode trigger event (primary surgical procedure) within which relevant services may be included. The episode window for cardiac procedures begins 30 days before the index event (look-back period) and ends 90 days after index event (look-forward period). Episodes were included in the analysis only if the member was continuously enrolled with relevant BCBS benefits for the entire duration of the episode.

Cost Components Included in Episode

After an episode was "triggered," services must be linked to the episode in a comprehensive and consistent manner to ensure completeness and comparability of costs. Services and related costs were included if they were logically related to the episode – either if provided for the same condition for which the surgery was provided, as a supporting component of the surgery, or as likely sequelae of the surgery (such as a symptom or complication),

Table 7 below provides more detailed examples of services included in a CABG episode, categorized based on timing relative to the index event:

Table 7. Services Included in CABG Episode

Examples of Services Included in a CABG Episode by Time Relative to Index Event		
Timing Relative to Index Event	**Relationship Category**	**Example**
Pre-Operative	Relevant diagnosis	Encounter for pre-op exam
	Relevant service	Pre-op pulmonary function test
Index Event	Triggering service	Surgical procedure for CABG
	Relevant diagnosis	Coronary artery disease (the 1°diagnosis for the surgery)
		Acute post-operative pain (a complication of surgery)
	Relevant service	Anesthesia (a supporting service)
	Complication	Post-operative pneumothorax
	Unrelated comorbidity	Internal medicine consultation for diabetes
Post-Operative	Relevant diagnosis	Post-operative pain
	Relevant service	Cardiac rehabilitation
	Complication	Surgical wound infection

Refinement of Episode Selection by Diagnosis

To enhance the comparability of cost comparisons within clinical categories, only episodes with commonly used and clinically comparable primary diagnoses and typical MS-DRGs are included within each clinical category. Episodes that displayed primary diagnosis codes for atypical or infrequent diagnoses or those that were not clinically relevant to the scope of the BDC for Cardiac Care evaluation were not included in the analyses for Cost of Care.

Table 8 below lists cardiac episode categories and the accepted MS-DRG categories for each of those procedure categories.

Table 8. Included MS-DRGs for Episode Categories

BDC Cardiac Episode Category	Included MS-DRG Category
CABG	**231** coronary bypass with percuatneous transluminal coronary angioplasty (PTCA) with mcc **232** coronary bypass with percuatneous transluminal coronary angioplasty (PTCA) without mcc **233** coronary bypass with cardiac catheterization with mcc **234** coronary bypass with cardiac catheterization without mcc **235** coronary bypass without cardiac catheterization with mcc **236** coronary bypass without cardiac catheterization without mcc
PCI	**246** percutaneous cardiovascular procedures with drug-eluting stent with mcc or 4+ arteries or stents **247** percutaneous cardiovascular procedures with drug-eluting stent without mcc **248** percutaneous cardiovascular procedures with non-drug-eluting stent with mcc or 4+ arteries or stents **249** percutaneous cardiovascular procedure with non-drug-eluting stent without mcc **250** percutaneous cardiovascular procedure without coronary artery stent with mcc **251** percutaneous cardiovascular procedure without coronary artery stent without mcc
Valve	**216** cardiac valve & other major cardiothoracic procedures with cardiac catheterization with mcc **217** cardiac valve & other major cardiothoracic procedures with cardiac catheterization with cc

	218 cardiac valve & other major cardiothoracic procedures with cardiac catheterization without cc/mc **219** cardiac valve & other major cardiothoracic procedures without cardiac catheterization with mcc **220** cardiac valve & other major cardiothoracic procedures without cardiac catheterization with cc **221** cardiac valve & other major cardiothoracic procedures without cardiac catheterization without cc/mcc

CC – Complications or Comorbidities
MCC – Major Complications or Comorbidities

As noted above, filters also were applied to exclude atypical primary diagnoses. Table 9 below lists the expected primary diagnoses for each BDC for Cardiac Care episode category.

Table 9. Included Primary Diagnosis for Episode Categories

BDC Cardiac Episode	Included Primary Diagnosis
CABG & PCI	Coronary Artery Disease Coronary Artery Disease w. AMI Unstable Angina Angina Pectoris
AV Replacement	Aortic Valve Disease (Excluding Congenital Disorders)
Mitral Valve Repair or Replacement	Mitral Stenosis Mitral Valve Disease Mitral Insufficiency Mitral Stenosis w/ Insufficiency

Adjusting Episode Costs

Adjustments in episode costs were needed for both the validity and fairness of cost comparisons among applicant facilities. Facility episode costs were analyzed and adjusted separately for each clinical category, as follows:

- Adjustments in episode costs are needed for both the validity and fairness of cost comparisons among applicant facilities. Two types of adjustment include:
  1) Factor adjustment - which adjusts for factors known to have a predictable impact on costs of care; these include:
     - Adjustments for predictable cost differences related to geography
     - Adjustments for predictable cost differences due to risk (or, more specifically, due to differences in the clinical characteristics of patients and age that have a measurable and predictable impact on costs)
  2) Outlier management – which protects against rare, unpredictable high-cost and extremely low events that could have a dramatic impact on average costs for an applicant facility.
- A geographic adjustment factor was applied to the episode cost**,** to account for geographic cost variations in delivering care. Adjustments made for predictable cost differences related to geography used the 2022 Geographic Adjustment Factors (GAFs) for 112 Geographic Practice Cost Index (GPCI) localities level, as defined by CMS.
- Risk adjustment was used to adjust for variation in cost that may relate to differences in patient severity (with or without comorbidity), as well as case mix, using the following steps:

- Identified patient severity levels, using the MS-DRG risk stratification system.
- Created separate risk bands within the clinical category episodes, based on patient severity level and gender. Only one age band, 25-64 years, was used for all patients because there was no meaningful variation in cost based on age subgroups.
- Multiple sub-categories that account for expected differences in cost due to procedure sub-category (procedure with or without acute myocardial infarction or valve with CABG), and setting (inpatient vs. outpatient), were used to further risk-stratify. Outpatient was used for PCI procedures only.
- Managed outliers through winsorization within risk bands. Outliers were identified in each risk band as those values for which geographically adjusted costs were the top 2 percent and bottom 2 percent of episode costs. Outlying cost values were truncated to these points, to preserve their considerations in calculating the overall episode cost estimate while moderating their influence.

Minimum Case Volume Requirement - National

At the national level, a minimum of two hundred cases per risk cohort was required to calculate consistent cost estimates in each sub-category level.

Calculated Risk Adjustment Factor

The mean of the geographically adjusted, winsorized episode costs for each clinical category/risk level combination at the national level was the expected cost for that clinical category/risk level combination. The national expected cost for each clinical category/risk level combination was divided by the national mean cost for the clinical category, to calculate the Risk Ratio for each clinical category/risk level combination. The Risk Adjustment Factor (which is the inverse of the Risk Ratio) was multiplied by each facility's geographically adjusted and winsorized facility episode costs for each clinical category/risk level combination to normalize for risk, resulting in a final episode cost that is both geographically adjusted, and risk adjusted.

Establishing the Cost Measure

Each episode was attributed to the applicant facility where the primary procedure occurred, based on trigger events that occurred at that facility for each of the three clinical categories: CABG, PCI, and Valve Procedures. Each Clinical Category Facility Cost (CCFC) was calculated separately, based on the median value of the adjusted episode costs. Confidence intervals (90 percent) were calculated around each Clinical Category Facility Cost measure; the Upper Confidence Limit (UCL) of the measure was divided by the National Median Episode Cost for the Clinical Category to become the Clinical Category Facility Cost Index (CCFCI). The combined cost index of the median UCL was rounded down to the nearest 0.025 to give facilities the benefit of the doubt and to avoid situations where a facility narrowly missed BDC+ eligibility by an immaterial margin. The rounded median UCL was the measure used for cost scoring.

For reliability, a minimum of five procedures was required within a clinical category for the data to be included in the calculation of a Composite Facility Cost Index (CompFCI) for a facility. There were no minimum volumes for individual facilities at the sub-category level, only the rolled-up total cases per clinical category.

Using each of the Clinical Category Facility Cost Index values, an overall Composite Facility Cost Index (CompFCI) was calculated for the facility. Each Clinical Category Facility Cost Index was weighted by that facility's own volume and facility costs to calculate a composite measure of cost called the Composite Facility Cost Index.

Composite Facility Cost Indices (CompFCI) for each facility, calculated using the UCL of individual clinical category facility cost indices (CCFI), were then compared to a national cost threshold set by BCBSA. A facility was selected for BDC+ designation if the CompFCI was lower than the national cost threshold, demonstrating that the expected composite facility cost index was lower than the national cost threshold cost index.

Cost of Care Selection Criteria

In addition to meeting the nationally established, objective Quality and Business Selection Criteria for BDC, an applicant facility also must meet **all** the following Cost of Care Selection Criteria (Table 10) requirements to be considered eligible for the BDC+ designation.

Table 10. Cost of Care Selection Criteria

Cost of Care Selection Criteria	
Measure Name	**Selection Criteria Description**
Episode Volume: PCI Procedures	The facility has **greater than or equal to 5** matched episodes of cost data for the Percutaneous Coronary Intervention (PCI) Clinical Category:
Episode Volume: Cardiac Surgery Procedures	The facility has **greater than or equal to 5** matched episodes of cost data in at **least one** of the Clinical Categories: • Coronary Artery Bypass Graft (CABG) Clinical Category • Cardiac Valve Procedures Clinical Category
Composite Cost Index	Composite Cost Index must be **less than** the nationally established threshold of 1.125.
Local Plan Cost Criteria (If Applicable)	An individual Blue Plan, at its own independent discretion, may establish and apply local cost requirements as additional Local Plan Cost Selection Criteria for eligibility in a Blue Distinction Centers program, for facilities located within its Service Area.

Questions

Contact your local Blue Plan with any questions.

Blue Distinction Centers (BDC) met overall quality measures for patient safety and outcomes, developed with input from the medical community. A Local Blue Plan may require additional criteria for providers located in its own service area; for details, contact your Local Blue Plan. Blue Distinction Centers+ (BDC+) also met cost measures that address consumers' need for affordable healthcare. Each provider's cost of care is evaluated using data from its Local Blue Plan. Providers in CA, ID, NY, PA, and WA may lie in two Local Blue Plans' areas, resulting in two evaluations for cost of care; and their own Local Blue Plans decide whether one or both cost of care evaluation(s) must meet BDC+ national criteria. National criteria for BDC and BDC+ are displayed on www.bcbs.com. Individual outcomes may vary. For details on a provider's in-network status or your own policy's coverage, contact your Local Blue Plan and ask your provider before making an appointment. Neither Blue Cross and Blue Shield Association nor any Blue Plans are responsible for non-covered charges or other losses or damages resulting from Blue Distinction or other provider finder information or care received from Blue Distinction or other providers.