



BLUE CROSS AND BLUE SHIELD OF NORTH CAROLINA

# Provider Performance Analytics

Core Methodology Guide for Providers



## **Provider Performance Analytics**

Provider Performance Analytics is Blue Cross NC's provider-facing methodology for evaluating provider performance across quality of care, clinical appropriateness of care, and cost of care. This Core Methodology is intended for publication on the Provider Performance Analytics provider webpages and is designed to help providers understand how performance information is developed, interpreted, and used.

Provider Performance Analytics uses claims-based information, enrollment data, provider and specialty information, and methodologies supported by Blue Cross NC and its contracted methodology partners. The methodology is informed by Blue Health Intelligence cost measurement and Motive Medical Intelligence quality and appropriateness measurement, while reflecting Blue Cross NC program requirements, provider transparency expectations, and member navigation needs.

The methodology is intended to provide meaningful, provider-level performance insights. It is not intended to replace independent clinical judgment, determine medical necessity for an individual service, or direct treatment decisions for any individual patient.

## Table of Contents

|                                                       |        |
|-------------------------------------------------------|--------|
| 1. Purpose and Overview                               | pg. 4  |
| 2. Program Design and Measurement Framework           | pg. 5  |
| 3. Data Sources                                       | pg. 6  |
| 4. Provider Attribution Methodology                   | pg. 7  |
| 5. Quality Measurement Methodology                    | pg. 9  |
| 6. Appropriateness Measurement Methodology            | pg. 10 |
| 7. Cost of Care Measurement Methodology               | pg. 13 |
| 8. Composite Scoring and Performance Evaluation       | pg. 15 |
| 9. Minimum Thresholds and Statistical Reliability     | pg. 19 |
| 10. Specialty Eligibility and Providers Not Evaluated | pg. 21 |
| 11. Continuous Evaluation and Methodology Review      | pg. 22 |
| 12. Provider Questions and Methodology Inquiries      | pg. 23 |
| 13. Legal and Methodology Disclaimer                  | pg. 24 |

## SECTION 01

# Purpose and Overview

Blue Cross NC is committed to helping members find care that is clinically appropriate, high quality, and affordable. Provider Performance Analytics supports that commitment by evaluating provider performance across three domains: quality of care, clinical appropriateness of care, and cost of care.

### DOMAIN 01

#### Quality

Evidence-Based Care — alignment with evidence-based clinical recommendations.

### DOMAIN 02

#### Appropriateness

Better Practice Alignment — care decisions consistent with accepted clinical standards.

### DOMAIN 03

#### Cost

Cost Efficiency — fair cost comparison after accounting for patient mix and context.

The program is designed to support provider transparency, member navigation, provider engagement, and future value-based initiatives. Results may be used to inform provider directory displays, network analytics, internal reporting, and other member-facing or provider-facing tools when the methodology and data support those uses.

This Core Methodology explains the general approach used to evaluate providers. It summarizes the measurement framework, data sources, attribution logic, domain scoring, minimum thresholds, specialty eligibility, and ongoing methodology review process.

Provider Performance Analytics is designed to evaluate providers using a multidimensional view. The methodology considers whether care is aligned with evidence-based standards, whether care decisions are clinically appropriate, and whether the cost of care is reasonable after accounting for relevant differences in patient mix and clinical context.

---

## SECTION 02

# Program Design and Measurement Framework

Provider Performance Analytics uses a multidimensional framework so that provider performance is not assessed through cost alone. Each domain is evaluated separately and may be combined into a broader performance view when sufficient data are available.

### Quality of Care

Quality of Care evaluates whether provider practice patterns align with evidence-based clinical recommendations and whether avoidable complications are minimized. Quality measurement focuses on areas of care that can reasonably be attributed to an individual provider, such as condition management, procedure-related outcomes, and follow-up care.

### Appropriateness of Care

Clinical Appropriateness of Care evaluates whether care decisions are consistent with evidence-based best practices and accepted clinical standards. Appropriateness measurement focuses on services and care patterns where variation may indicate overuse, underuse, avoidable utilization, or opportunities to better align care with clinical evidence.

### Cost of Care

Cost of Care evaluates the cost associated with care delivery using methods designed to compare providers fairly within relevant clinical and peer contexts. Cost results may account for expected differences in patient risk, clinical complexity, geography, pharmacy coverage, episode type, and other relevant factors.

### Peer Comparison

Performance results are intended to compare providers within clinically relevant peer groups. Depending on the domain and specialty, peer comparisons may consider specialty designation, provider type, service line, practice setting, geographic market, attributed member or episode mix, network context, and applicable risk adjustment or normalization methodology.

## SECTION 03

# Data Sources

Provider Performance Analytics uses administrative claims, enrollment, provider, and specialty information available to Blue Cross NC and its contracted methodology partners. Because the methodology is claims-based, results depend on the completeness, timing, and accuracy of claims and related administrative data.

## Primary Sources

### ■ Blue Health Intelligence (BHI)

Used to support provider-level cost measurements, including condition, treatment, and procedure of episode-based cost of care for many specialties and total fee-for-service cost of care for primary care and related longitudinal care specialties.

### ■ Motive Medical Intelligence

Used to support provider-level quality and appropriateness measurement through clinically curated measures based on evidence, specialty guidelines, claims analytics, and expert review.

### ■ Blue Cross NC Claims and Provider Data

Used to support provider identification, attribution logic, specialty mapping, eligibility validation, and internal operational reporting.

## Data Sources May Include

- professional claims
- facility claims
- outpatient claims
- inpatient claims
- pharmacy claims when applicable
- provider specialty/taxonomy files

- member eligibility and enrollment data
- provider demographic or network information, when applicable

Provider Performance Analytics does not rely on medical records unless specifically incorporated into a future methodology or review process. Claims-based measurement may not capture all clinical details relevant to an individual patient encounter.

#### SECTION 04

## Provider Attribution Methodology

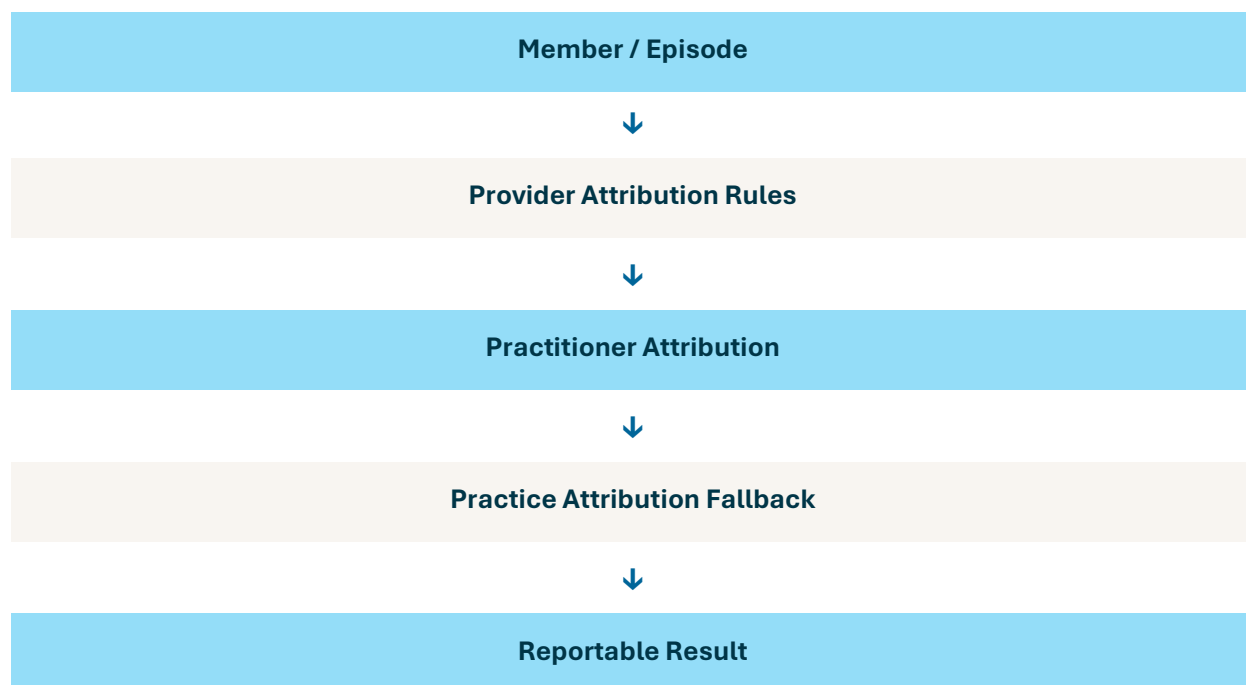
Attribution is the process used to assign a member, episode, service, measure, or care decision to the provider whose role is most relevant to the performance being measured. Attribution varies by domain because quality, appropriateness, and cost evaluate different aspects of care.

**Attribution methodologies vary by measure type.**

Examples may include:

- attribution to the ordering provider
- attribution to the rendering provider
- attribution to the provider performing the procedure
- attribution based on evaluation and management history
- attribution using specialty-specific claims logic
- member-to-primary-care-provider relationships
- provider taxonomy or specialty designation

## How Attribution Flows



### Attribution Hierarchy

In practice, attribution follows a hierarchical approach where practitioner-level performance is prioritized. When sufficient practitioner-level data is not available, performance results may be attributed to using an associated practice or group-level relationship. This fallback approach helps ensure that providers are evaluated whenever sufficient data exists within their broader clinical context, while still prioritizing individual-level performance when available.

Only cases meeting attribution criteria are included in performance measurement. Cases that cannot be confidently attributed to a provider are excluded from scoring.

This methodology is intended to ensure providers are evaluated only on care decisions or care patterns reasonably within their clinical influence.

For quality and appropriateness measures, attribution generally focuses on the provider responsible for the care decision, service, procedure, or follow-up being evaluated. For cost measures, attribution may be based on the provider responsible for a procedure, the provider with the strongest specialty-specific relationship to an episode, or the primary care provider most connected to a member's longitudinal care.

## SECTION 05

# Quality Measurement Methodology

Quality measurement evaluates whether provider practice patterns align with evidence-based clinical recommendations and whether avoidable complications are minimized. The methodology focuses on aspects of care that can reasonably be attributed to an individual provider.

### Measures May Assess:

- adherence to specialty-specific clinical practice guidelines
- condition-based quality performance
- procedure-based quality outcomes
- complication avoidance
- follow-up care patterns
- recommended care management
- alignment with evidence-based treatment pathways

Quality methodologies are informed by nationally recognized evidence, specialty society guidelines, peer-reviewed literature, claims-based analysis, and expert provider review.

#### MEASURE TYPE

##### Condition-Based

Condition-based quality measures may evaluate the thoroughness, intensity, or consistency of care provided over time for a specific condition. These measures may include multiple indicators that collectively assess whether care aligns with guideline-directed recommendations.

#### MEASURE TYPE

##### Procedure-Based

Procedure-based quality measures may evaluate complication rates or related outcomes following a defined procedure. These measures focus on procedure-related results that can be reasonably associated with the provider responsible for the care.

#### SUMMARY VIEW

##### Quality Practice Score

Providers who meet the applicable denominator, attribution, and specialty requirements will receive a Quality Practice Score, which summarizes performance across eligible quality measures. Higher scores generally reflect stronger alignment with evidence-based care and lower rates of avoidable complications, where applicable.

A provider must meet the applicable denominator, specialty, and attribution requirements before a quality score is considered reportable.

# Appropriateness Measurement Methodology

Appropriateness measurement evaluates whether care decisions are consistent with evidence-based best practices and accepted clinical standards. The methodology focuses on services and care patterns where variation may indicate overuse, underuse, avoidable utilization, or opportunities to better align care with clinical evidence.

## Quality Practice Score Directionality

**Higher Quality Practice Scores indicate stronger performance.** In general, a higher score reflects stronger alignment with evidence-based standards and, where applicable, lower rates of avoidable complications. A lower score does not necessarily indicate poor care; however, it may identify opportunities to review care patterns, documentation, or alignment with evidence-based clinical guidance.

These measures focus on clinical decision-making and variation in care delivery.

## Measurement Topics Generally Include Services Associated With

- potential overuse
- avoidable utilization
- unwarranted variation
- unnecessary imaging or procedures
- opportunities for evidence-based optimization
- patient harm or avoidable use of high-cost resources

## Appropriateness Measurement Is Developed Using

- clinical evidence review
- provider expert input
- claims-based analytics
- specialty-specific methodology validation
- peer-reviewed literature and guideline review

### Range of Better Practice (ROBP)

The Range of Better Practice framework is based on Motive Medical Intelligence's Practicing Wisely methodology. Motive uses ROBP as a measure-level threshold to account for clinical context, reasonable variation in care, and factors that may not be fully captured in claims data. This approach helps ensure that appropriateness measures are applied in a way that is clinically reasonable and fair to providers.

The framework reflects Motive's approach to accounting for reasonable variation in clinical practice and the limitations of administrative claims data, including:

- patient-specific clinical nuance
- diagnostic uncertainty
- coding variation
- undocumented comorbidities
- regional practice variation
- limitations in claims data
- differences in available clinical information

Appropriateness rates are developed using standardized measure logic that defines the eligible population, exclusions, attribution approach, and numerator criteria. Cases that cannot be fairly evaluated or confidently attributed are excluded from measurement.

The Range of Better Practice framework is intended to avoid penalizing providers for reasonable clinical variation while still identifying patterns that may be misaligned with evidence-based care.

## **Appropriateness Practice Score**

When a provider meets applicable denominator, attribution, and specialty requirements, individual appropriateness measures may contribute to an Appropriateness Practice Score. Higher appropriateness scores generally indicate stronger alignment with evidence-based care decisions and lower rates of potentially inappropriate or avoidable care.

### **Appropriateness Practice Score Directionality**

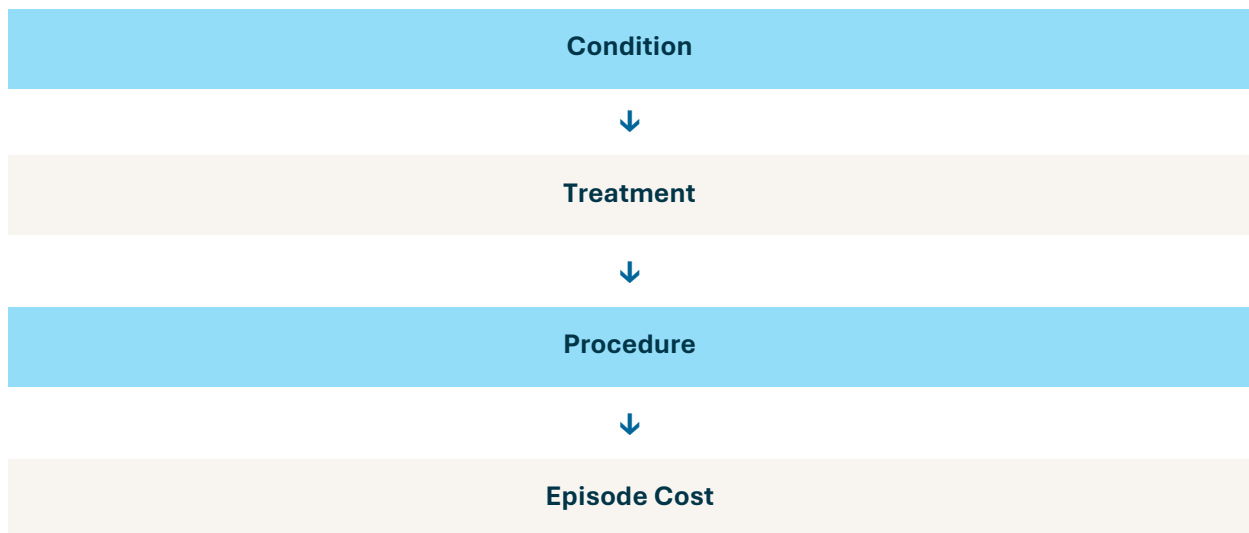
Higher appropriateness scores generally indicate stronger alignment with evidence-based care and lower rates of potentially inappropriate, avoidable, or low-value care. Lower appropriateness scores generally indicate more opportunities to align care patterns with evidence-based standards.

## Cost of Care Measurement Methodology

Cost of care measurement evaluates the cost associated with care delivery using methods designed to compare providers fairly within relevant clinical and peer contexts. The methodology is informed by Blue Health Intelligence cost measurement approaches and may include episode-based cost of care or total fee-for-service cost of care, depending on specialty and provider role.

### Episode-Based Cost of Care

Episode-based cost measurement is used for many specialist evaluations. It groups clinically related claims into episodes that represent care for a condition, treatment, or procedure.



Condition episodes are generally diagnosis-based and reflect care for a defined condition over a specified period. Treatment episodes are generally anchored to a procedure or major intervention and include related services during a defined time window.

## Total Cost of Care

Used for applicable primary care and longitudinal care evaluations. This method measures the allowed cost of care for attributed members during a defined measurement period and may include medical and pharmacy costs when pharmacy data are available and methodology criteria are met.

Total Cost of Care may consider attributed member population, member months of enrollment, medical allowed amounts, pharmacy allowed amounts when applicable, member risk profile, benefit or pharmacy coverage status, and primary care attribution logic.

### Episode-Based Cost Measurement May Consider

- Allowed amounts
- Service utilization
- Site of care
- Procedure type
- Episode severity
- Duration of treatment
- Pharmacy claims, when applicable
- Medical claims included in the episode window

## Risk Adjustment

To support fair comparisons, cost results may be adjusted for the factors below. Risk adjustment is intended to account for differences outside of a provider's control so performance comparisons are as equitable as possible.

Age · Gender · Comorbidity Burden · Social Risk Factors · Geographic Variation · Episode Complexity · Pharmacy Coverage · Condition/Treatment Type · Enrollment Duration

## Expected Cost and Observed Cost

Cost performance generally compares observed cost to expected cost. Observed cost represents the actual allowed cost associated with attributed members or episodes after applicable exclusions and adjustments. Expected cost represents the cost expected for a comparable member or episode based on factors such as clinical risk, demographics, social risk, geography, pharmacy coverage, episode type, and relevant cohort characteristics.

For applicable cost measures, a cost index may be calculated by dividing observed cost by expected cost. A cost index below 1.0 generally indicates lower-than-expected cost after adjustment, while a cost index above 1.0 generally indicates higher-than-expected cost after adjustment.

### Outlier Management

Outlier management may be applied under the Blue Health Intelligence (BHI) cost methodology to help prevent rare or extreme costs from disproportionately affecting provider results. This may include truncation, winsorization, or excluding services or cases that do not meet clinical or methodological criteria or limiting the impact of unusually high or low-cost values. **Winsorization** caps extreme cost values at a defined level so they remain in the analysis but have less influence on the result. **Truncation** sets defined upper or lower boundaries for cost values included in the analysis.

#### SECTION 08

## Composite Scoring and Performance Evaluation

Provider Performance Analytics may evaluate each domain independently or combine available domain results into a broader performance view. The use of a composite result depends on the reporting purpose, eligible domains, specialty, and data sufficiency. When a composite approach is used, domain results are normalized so providers can be compared within appropriate peer groups.

## Composite Scoring Weighting

Blue Cross NC uses a weighted average based on the reportable domains available for the provider. Domain results are normalized before composite scoring so results can be compared within appropriate specialty peer groups.

### Scenario 1

Domains available: Cost of Care, Quality, and Appropriateness

**Cost 60% + Quality 20% + Appropriateness 20% = Composite Result**

### Scenario 2

Domains available: Cost of Care and Quality

**Cost 60% + Quality 40% = Composite Result**

### Scenario 3

Domains available: Cost of Care and Appropriateness

**Cost 60% + Appropriateness 40% = Composite Result**

### Scenario 4

Domains available: Quality and Appropriateness

**Quality 50% + Appropriateness 50% = Composite Result**

If a provider does not have reportable results for all three domains, the composite score is calculated using the applicable available-domain scenario. A missing domain is not treated as zero performance; instead, it means the provider did not have a reportable score in that domain due to methodology rules, data availability, specialty applicability, minimum threshold requirements, or other scoring criteria.

For additional composite scoring permutations or specialty-specific weighting questions, providers may contact Blue Cross NC through the applicable Provider Performance Analytics inquiry process.

## Composite Scoring Process

The following describes the general composite scoring approach used when multiple reportable domain results are available:

Composite scoring incorporates applicable domain results only when those results meet methodology, attribution, and data sufficiency requirements. Domain results that are not reportable are not treated as poor performance or assigned a zero value.

When results indicate materially different performance from the relevant peer comparison group, additional handling may be applied to support fair interpretation, reduce undue influence from extreme values, and maintain consistency across reporting outputs.

Where a composite result is calculated, available reportable domain results are combined according to the applicable specialty and reporting rules. The specific weighting approach may vary by specialty, domain availability, and reporting use case.

Providers without sufficient data to support a reliable composite result are treated as non-reportable for the composite measure, although individual domain results may still be available when those domains meet applicable reporting standards.

### Normalization Framework

To enable meaningful comparison across specialties, composite results may be normalized within clinically relevant specialty or peer groups using a standardized approach.

Normalization converts underlying performance results into a relative view of how a provider compares with peers evaluated under similar clinical and methodological conditions.

The normalized results are intended to support consistent interpretation across specialties, even when underlying score distributions, measure availability, or domain applicability differ.

Normalization helps prevent differences in specialty-specific score distributions from disproportionately influencing overall provider evaluation or downstream reporting decisions.

A missing domain is not treated as zero performance. Instead, it means the provider did not have a reportable score in that domain due to methodology rules, data availability, specialty applicability, minimum threshold requirements, or other scoring criteria.

Composite scoring is applied only when the available domain results meet applicable reporting standards. Providers without sufficient data for a composite score may still have individual domain information available, depending on the reporting use case.

Composite approaches may vary depending on:

Performance categories or bands may be used to translate domain results into easier-to-understand groupings. These groupings are intended to support consistent interpretation and should be considered alongside the methodology limitations described in this document.

# Minimum Thresholds and Statistical Reliability

Minimum volume, denominator, and reliability standards are applied before results are reported. These standards help reduce the influence of random variation and support fair comparisons among providers.

A provider must meet minimum denominator requirements before performance results are reportable.

Thresholds are applied to reduce the likelihood that small case volume or random variation disproportionately affects results.

Providers who do not meet required thresholds may not receive reportable performance results in one or more domains.

Minimum thresholds are not a judgment about a provider's clinical ability. They are used to determine whether enough information is available to calculate a reliable result.

Thresholds may differ by domain, specialty, measure type, and methodology partner. For example, an appropriateness or quality measure may require a minimum number of eligible cases, while a cost measure may require a minimum number of attributed episodes or attributed members plus a reliability standard.

## Examples include:

- A quality or appropriateness measure may require a minimum number of eligible cases before a provider receives a measure rate.
- A quality or appropriateness practice score may require a minimum number of qualifying measures or indicators within a specialty or domain.
- A cost measure may require a minimum number of attributed episodes, attributed members, or member months.
- A cost measure may also require a reliability standard to support statistically credible comparison.

## Special Score Handling

Certain internal score values may be used to support data processing, quality control, or reporting decisions. These values distinguish between valid normalized scores, insufficient data, excluded records, and performance results that do not meet applicable thresholds.

- Valid normalized composite scores are generally expressed on the applicable reporting scale when the provider meets methodology and data sufficiency requirements.
- Internal non-reportable indicators may be used when there is not enough data to calculate a reliable score.
- Internal exclusion indicators may be used when a provider or record is not included in the applicable output dataset.
- Special handling rules help prevent missing, excluded, or non-reportable data from being misinterpreted as poor performance.

## Specialty Eligibility and Providers Not Evaluated

Performance measurement is currently available for select specialties where sufficient claims volume exists, methodological validity is established, and statistical credibility thresholds can be met. Measured specialties may expand over time as data availability and methodology mature. Eligibility may vary across quality, appropriateness, and cost domains.

### A Provider May Not Receive a Performance Result If

- the provider's specialty is not currently included in the measurement program
- the provider does not have enough eligible claims, members, episodes, or measures
- the provider does not meet minimum denominator or reliability requirements
- the provider does not meet specialty or taxonomy criteria for a measure
- the provider cannot be confidently attributed to eligible cases
- the provider's data are incomplete or cannot be validated for the applicable methodology
- the measure does not apply to the provider's scope of practice
- the provider is newly participating or does not have sufficient historical data

Provider types may include physicians and other eligible clinicians, such as advanced practice providers, when the applicable methodology, data, specialty mapping, and program rules support inclusion.

# Continuous Evaluation and Methodology Review

Blue Cross NC anticipates reviewing methodology components on a recurring basis, including at least annually when new measurement periods, data updates, vendor methodology releases, or program changes are available. Updates may include measure additions or retirements, specialty expansion, revised thresholds, scoring refinements, attribution updates, and changes needed to reflect current clinical evidence or operational requirements.

## Methodology May Be Updated Based On

- changes in clinical evidence
- vendor enhancements
- data improvements
- regulatory requirements
- specialty feedback
- operational needs
- changes in provider or member-facing use cases

Blue Cross NC anticipates reviewing methodology components on a recurring basis, including at least annually when new measurement periods, data updates, vendor methodology releases, or program changes are available. Updates may include measure additions or retirements, specialty expansion, revised thresholds, scoring refinements, attribution updates, and changes needed to reflect current clinical evidence or operational requirements.

## SECTION 12

# Provider Questions and Methodology Inquiries

Blue Cross NC recognizes the importance of transparency and provider engagement. Providers may ask questions about methodology, data interpretation, attribution, specialty eligibility, or reported results through the applicable Blue Cross NC provider communication or inquiry process.

### Providers May Submit Questions Regarding

- measure definitions
- attribution methodology
- specialty eligibility
- scoring logic
- data interpretation
- minimum thresholds
- domain availability
- reportable and non-reportable results

#### NEED HELP?

### Methodology Questions

[provideranalyticsinquiry@bcbsnc.com](mailto:provideranalyticsinquiry@bcbsnc.com)

Inquiries may be reviewed by Blue Cross NC clinical, analytical, network, and operational teams, with support from methodology partners as appropriate. A question or inquiry does not guarantee a change to a score, designation, or methodology outcome.

## Legal and Methodology Disclaimer

This document is intended as a provider-facing summary of the Provider Performance Analytics Core Methodology used by Blue Cross NC.

The methodology described in this document is for informational and educational purposes only. It does not guarantee inclusion in any Blue Cross NC program, designation, directory display, network status, reimbursement arrangement, or value-based program.

Performance measurement results are based on available claims and administrative data and may not capture every clinical detail relevant to an individual patient encounter.

Claims-based measurement has inherent limitations, including but not limited to coding variation, claims lag, incomplete data capture, benefit differences, data availability, attribution limitations, and factors not observable in administrative data.

Nothing in this document is intended to direct medical decision-making, interfere with the provider-patient relationship, replace independent clinical judgment, or determine medical necessity for a specific service or patient.

Blue Cross NC reserves the right to revise, update, interpret, or discontinue methodology components at its discretion based on operational, regulatory, clinical, or business needs.