

# Health Equity Confidential Feedback Reports Post-Acute Care Quality Report Programs (PAC QRPs)

## Methodology Report

January 2024

**Prepared By:**

**Acumen LLC**

500 Airport Blvd., Suite 365

Burlingame, CA 94010

CMS Contract No. 75FCMC18D0015

**Abt Associates Inc.**

6130 Executive Boulevard

Rockville, MD 20852

CMS Contract No. 75FCMC18D0014

**Prepared For:**

**The Division of Chronic and Post-Acute Care (DCPAC)**

**Centers for Medicare & Medicaid Services**

7500 Security Boulevard

Baltimore, MD 21244-1850

# Table of Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>5</b>
<b>2.0</b>	<b>Outcome Measures Included in the Health Equity Confidential Feedback Reports.....</b>	<b>6</b>
<b>2.1</b>	<b>DTC-PAC Measure.....</b>	<b>6</b>
2.1.1	DTC-PAC Measure Calculation for the Health Equity Confidential Feedback Reports .	6
2.1.2	Difference in DTC-PAC Calculation from the Publicly Reported DTC-PAC Measure....	7
<b>2.2</b>	<b>MSPB-PAC Measure.....</b>	<b>8</b>
2.2.1	MSPB-PAC Calculation for the Health Equity Confidential Feedback Reports .....	8
<b>3.0</b>	<b>Stratification Methods .....</b>	<b>9</b>
<b>3.1</b>	<b>Patient Populations .....</b>	<b>9</b>
<b>3.2</b>	<b>Comparison Methods.....</b>	<b>10</b>
3.2.1	Across-Provider Comparisons .....	10
3.2.1.1	Across-Provider Comparisons to the National Performance Among All Patients ...	10
3.2.1.2	Across-Provider Comparisons to the National Performance Among the Same Population .....	10
3.2.2	Within-Provider Comparison .....	10
<b>4.0</b>	<b>Performance Category Assignment.....</b>	<b>11</b>
<b>4.1</b>	<b>Across-Provider Comparison to National Performance Among All Patients .....</b>	<b>11</b>
<b>4.2</b>	<b>Across-Provider Comparison to National Performance Among Same Population. ....</b>	<b>12</b>
<b>4.3</b>	<b>Within-Provider Comparison.....</b>	<b>12</b>
<b>5.0</b>	<b>Patient Outcomes among Facilities/Agencies with Similar Geographic Locations and Patient Composition.....</b>	<b>14</b>
<b>5.1</b>	<b>Facilities/Agencies with Similar Geographic Locations .....</b>	<b>14</b>
<b>5.2</b>	<b>Facilities/Agencies with Similar Patient Composition .....</b>	<b>14</b>
<b>6.0</b>	<b>Thresholds for Reporting Each Stratification and Comparison .....</b>	<b>16</b>
<b>6.1</b>	<b>Across- and Within-Provider Comparison Thresholds.....</b>	<b>16</b>
<b>6.2</b>	<b>Group Reportability Requirement.....</b>	<b>17</b>
<b>6.3</b>	<b>Rurality and CBSA Additional Reportability Requirement .....</b>	<b>18</b>
<b>7.0</b>	<b>User Guide .....</b>	<b>20</b>
<b>7.1</b>	<b>Across-Provider Comparison Against All Patients- Summary .....</b>	<b>20</b>
<b>7.2</b>	<b>Patient Composition at Your Facility/Agency and Similar Geographic Locations..</b>	<b>20</b>
<b>7.3</b>	<b>Across-Provider Comparison Against All Patients – Detail .....</b>	<b>21</b>
<b>7.4</b>	<b>Across-Provider Comparison Against Patients of the Same Population.....</b>	<b>24</b>
<b>7.5</b>	<b>Within-Provider Comparison .....</b>	<b>27</b>
<b>7.6</b>	<b>Patient Outcomes among Facilities/Agencies in Similar Geographic Location.....</b>	<b>33</b>
<b>7.7</b>	<b>Patient Outcomes among Facilities/Agencies with Similar Patient Composition...</b>	<b>34</b>
<b>Appendix A: DTC-PAC Measure Calculation for the Health Equity Confidential Feedback Reports .....</b>		<b>36</b>
<b>Appendix B: MSPB-PAC Measure Calculation for the Health Equity Confidential Feedback Reports .....</b>		<b>37</b>

## List of Tables

<b>Table 1. Across- and Within- Provider Comparison Reportability Requirements .....</b>	<b>16</b>
<b>Table 2. Group Comparison Reportability Requirement .....</b>	<b>18</b>
<b>Table 3. Rurality and CBSA Cell Reportability Requirement .....</b>	<b>18</b>
<b>Table 4: DTC Rates/MSPB Amount for Patients at Your Facility/Agency, Compared to All Patients (Table 1 in the Health Equity Confidential Feedback Reports).....</b>	<b>20</b>
<b>Table 5: Patients at Your Facility/Agency and in Similar Geographic Locations (Table 2 in the Health Equity Confidential Feedback Reports) .....</b>	<b>20</b>
<b>Table 6: DTC Rates/MSPB Amount for Patients at Your Facility/Agency, Compared to All Patients Nationwide (Table 3 in the Health Equity Confidential Feedback Reports) .....</b>	<b>22</b>
<b>Table 7: DTC Rates/MSPB Amount for Patients at Your Facility/Agency, Compared to the Same Populations Nationwide (Table 4 in the Health Equity Confidential Feedback Reports) .....</b>	<b>25</b>
<b>Table 8: Differences in DTC Rates/MSPB Amount Within Your Facility/Agency (Dual Status) (Table 5 in the Health Equity Confidential Feedback Reports) .....</b>	<b>28</b>
<b>Table 9: Differences in DTC Rates/MSPB Amount Within Your Facility/Agency (Race/Ethnicity) (Table 6 in the Health Equity Confidential Feedback Reports) .....</b>	<b>31</b>
<b>Table 10: DTC Rates/MSPB Amount for Patients at Your Facility/Agency and for Patients in Similar Geographic Locations (Table 7 in the Health Equity Confidential Feedback Reports) .....</b>	<b>34</b>
<b>Table 11: DTC Rates/MSPB Amount for Patients at Your Facility/Agency and for Patients at Facilities with Similar Patient Composition (Table 8 in the Health Equity Confidential Feedback Reports) .....</b>	<b>35</b>

## 1.0 Introduction

The Centers for Medicare & Medicaid Services (CMS) Division of Chronic and Post-Acute Care (DCPAC) developed new Health Equity Confidential Feedback Reports that were distributed to Post-Acute Care (PAC) providers in October, 2023. To provide insight on outcome differences across social risk factors, the Health Equity Confidential Feedback Reports stratify PAC Quality Reporting Program (QRP) measure outcomes by Medicare-Medicaid dual-enrollment status (duals and non-duals), as well as patient race/ethnicity (Non-White and White patients).

This Methodology Report elaborates on the key concepts in the Health Equity Confidential Feedback Reports and describes the underlying analytical methodology. It also contains a User Guide section ([User Guide](#)), which describes how providers can review and interpret each table of the Health Equity Confidential Feedback Report.

## 2.0 Outcome Measures Included in the Health Equity Confidential Feedback Reports

The Fall 2023 Health Equity Confidential Feedback Reports include stratified results for two PAC QRP measures: The Discharge to Community (DTC) and Medicare Spending per Beneficiary (MSPB) measures. The DTC-PAC and MSPB-PAC measures were chosen because they are important, valid, and reliable cross-setting PAC QRP measures. Specifically, the DTC-PAC measure captures an important patient outcome: successful discharge to community. Similarly, the MSPB-PAC measure captures the efficiency of care, e.g., care used to achieve successful discharge, as well as costs of negative events, such as emergency room or hospital admissions. All calculations are performed separately for each PAC setting.

For more information about the DTC-PAC measure, please refer to the QRP measure specifications documents for each PAC setting:

- [Home Health \(HH\) specifications](#)
- [Inpatient Rehabilitation Facility \(IRF\) specifications](#)
- [Long-Term Care Hospital \(LTCH\) specifications](#)
- [Skilled Nursing Facility \(SNF\) specifications](#)

For more information about the MSPB-PAC measure please refer to the QRP measure specifications documents for each PAC setting:

- [MSPB HH specifications](#)
- [MSPB IRF, LTCH, and SNF specifications](#)

The rest of this section elaborates on the how the DTC-PAC ([2.1](#)) and MSPB-PAC ([2.2](#)) measures were calculated in the Fall 2023 Health Equity Confidential Feedback Reports.

### 2.1 DTC-PAC Measure

This section explains the PAC-DTC measure calculation used in the Fall 2023 Health Equity Confidential Feedback Reports ([2.1.1](#)) and how it differs from the PAC-DTC measure calculation used for public reporting ([2.1.2](#)).

#### 2.1.1 DTC-PAC Measure Calculation for the Health Equity Confidential Feedback Reports

Below we first describe what the DTC-PAC measure is measuring, followed by the three separate calculations that make up the DTC-PAC calculation: the observed rate, the expected rate, and the risk standardized DTC rate.

##### **The DTC-PAC Measure**

The DTC-PAC measure is calculated as the risk-adjusted rate of successful discharges to community for a given PAC provider. This rate is determined by taking the observed DTC rate at the given PAC provider (DTC rate numerator), and dividing it by the expected DTC rate for that specific PAC provider (DTC rate denominator).

##### **Observed DTC Rate:**

The observed DTC rate is the number of successful discharges occurring in the relevant population (before

any risk-adjustment is applied) divided by the number of eligible stays<sup>1</sup> in the same population.

$$\text{Observed DTC Rate} = \frac{\text{Provider A's Successful Discharges}}{\text{Total Number of Eligible Stays at Provider A}}$$

### **Expected DTC Rate:**

The expected DTC rate is the number of successful discharges that would be expected given the clinical risk factors for each patient, divided by the number of eligible stays. The expected DTC rates are estimated based on the clinical patient risk factors alone, with no explicitly estimated provider-specific effects (see [Appendix A](#) for additional details).

$$\text{Expected DTC Rate} = \frac{\text{Expected Successful Discharges for Provider A}}{\text{Total Number of Eligible Stays at Provider A}}$$

### **Risk-Standardized DTC Rate:**

The provider's observed rate is divided by the expected rate to get the standardized risk ratio (SRR), which is then multiplied by the national observed DTC rate (calculated across all eligible stays in the same PAC setting) to create the Risk-Standardized DTC Rate (RSDTCR). The RSDTCRs take values from 0% to 100%; a lower percentage value indicates a lower risk-adjusted rate of successful discharge to community (worse performance).

$$\text{Standardized Risk Ratio (SRR)} = \left( \frac{\text{Provider A's Observed DTC Rate}}{\text{Provider A's Expected DTC Rate}} \right)$$

$$\text{Risk-Standardized DTC Rate (RSDTCR)} = \text{Provider A's SRR} \times \left( \frac{\text{National Successful Discharges}}{\text{National Number of Eligible Stays}} \right)$$

## **2.1.2 Difference in DTC-PAC Calculation from the Publicly Reported DTC-PAC Measure**

The DTC-PAC measure calculation used for public reporting differs from the one used in the Health Equity Confidential Feedback Reports. Specifically, in public reporting, a “predicted” DTC rate is used to calculate a provider's DTC rate, instead of using that provider's observed DTC rate.

### **Publicly Reported DTC-PAC Calculation:**

$$\text{Risk-Adjusted DTC Rate} = \left( \frac{\text{Risk-Adjusted Estimate of Provider A's DTC Rate}}{\text{Risk-Adjusted Expected DTC Rate}} \right)$$

The risk-adjusted estimate (numerator) uses a statistical estimate of the provider's effect, beyond the patient case mix. This estimate assumes that a facility/agency is most likely to have an effect that is close to the national average for that PAC setting, and moves away from this assumption only if there is sufficient evidence from the data to suggest otherwise. This leads to providers with less data performing closer to the national average. The Health Equity Confidential Feedback Reports do not use the risk-adjusted estimated DTC rate because the above assumptions would make interpretations of difference between groups (e.g., dual and non-dual enrollees) more difficult.

---

<sup>1</sup> For a list of DTC exclusions, please refer to the DTC-PAC QRP measure specifications documents for each PAC setting.

## 2.2 MSPB-PAC Measure

The MSPB-PAC measure represents Medicare spending during a PAC treatment period and 30 days after. It evaluates a given PAC facility/agency's Medicare spending relative to that of the national median PAC facility/agency in the same setting during an MSPB-PAC episode. The calculation of the MSPB-PAC measure in the Health Equity Confidential Feedback Reports is described below.

### 2.2.1 MSPB-PAC Calculation for the Health Equity Confidential Feedback Reports

For the Health Equity Confidential Feedback Reports, the MSPB-PAC measure outcome for each provider is the average MSPB Amount, which is measured in dollars. This is different from the MSPB-PAC measure score that is used for public reporting. The publicly reported MSPB-PAC measure score takes the average MSPB Amount for each provider and divides it by the national median MSPB-PAC Amount for the same setting. In other words, the MSPB-PAC measure score is measured as a ratio relative to the median provider, whereas the average MSPB Amount is the risk-adjusted Medicare spending measured in dollars.

The average MSPB Amount is calculated in three parts. First, for each provider, we calculate the ratio of observed spending for a single beneficiary's episode over the expected spending for that episode (Risk-Adjusted MSPB Ratio). Second, we calculate the average Risk-Adjusted MSPB Ratio across all eligible episodes at a provider (Average Risk-Adjusted MSPB Ratio). Finally, this average is multiplied by the national average spending calculated over all episodes in the setting to obtain the average MSPB Amount for each provider. Please refer to [Appendix B](#) for additional details.

## 3.0 Stratification Methods

The goal of releasing the Health Equity Confidential Feedback Reports is to provide data on whether differences in measure outcomes for patients with SRFs are occurring at PAC facilities and agencies. The reports use stratification to calculate measure outcomes separately for different populations.

This section defines the specific populations included in both stratifications (3.1) and describes the different comparison methods included in the Health Equity Confidential Feedback Reports (3.2).

### 3.1 Patient Populations

The Health Equity Confidential Feedback Reports stratify the DTC-PAC and MSPB-PAC measures by dual-enrollment status and separately by patients' race/ethnicity.

For a patient to be considered dually-enrolled in Medicare-Medicaid, they must be enrolled in both Fee-for-Service Medicare (Part A and/or Part B) and receive Medicaid coverage ("full" or "partial") at any point during their DTC-PAC stay or MSPB-PAC episode. Medicare-Medicaid enrollment information is obtained from the Medicare Enrollment Database (EDB).

To identify patient race/ethnicity information, the Health Equity Confidential Feedback Reports utilize an indirect estimation method to better align administrative data on race/ethnicity with what beneficiaries themselves choose. This estimation is done through the Medicare Bayesian Improved Surname Geocoding Version 2.1.1 (MBISG 2.1.1), which was designed for CMS by the RAND Corporation to indirectly estimate race and ethnicity. MBISG uses EDB data on race and ethnicity<sup>2</sup> and supplements it by taking into consideration a beneficiary's neighborhood racial and ethnic composition and other information supplied by beneficiaries. MBISG supplements EDB data by using Census information on race and ethnicity by both surname and Census block group of residence to produce a set of racial and ethnic probabilities for each person, as well as race/ethnicity classification based on these probabilities.<sup>3</sup>

The gold standard for measuring data on race and ethnicity is data that patients self-report. However, studies have shown that existing Medicare administrative race and ethnicity data are often inaccurate. The original CMS administrative data on race and ethnicity are based on information reported to the Social Security Administration (SSA), using a form that required most patients enrolled in Medicare (those whose SSA information was provided prior to 1980) to choose "Black," "White," or "Other" as their race/ethnicity designation. For this reason, these data often misclassify Asian American and Native Hawaiian or other Pacific Islander, Native American, and Hispanic patients. In the absence of accurate self-reported race and ethnicity data on individuals, alternative approaches are often used, such as the method of indirect estimation.

Therefore, for the PAC Health Equity Confidential Feedback Reports, CMS is using MBISG imputation method to indirectly estimate racial and ethnic disparities. The race/ethnicity categories shown in the reports are: Asian American/Native Hawaiian/Pacific Islander, Black, Hispanic, White, and Non-White. The "Non-White" group consists of American Indian/Alaska Native, Asian American/Native Hawaiian/Pacific Islander, Black, and Hispanic populations. Results for American Indian/Alaska Native patients are not shown separately because of limited sample size and accuracy concerns during testing.

---

<sup>2</sup> The EDB obtains beneficiary race and ethnicity information from the Social Security Administration (SSA) Race Code.

<sup>3</sup> See, for example, Sorbero, Melony E., Roald Euller, Aaron Kofner, and Marc N. Elliott, Imputation of Race and Ethnicity in Health Insurance Marketplace Enrollment Data, 2015–2022 Open Enrollment Periods, RAND Corporation, RR-A1853-1, 2022. As of August 30, 2023: [https://www.rand.org/pubs/research\\_reports/RRA1853-1.html](https://www.rand.org/pubs/research_reports/RRA1853-1.html)



## 3.2 Comparison Methods

The Health Equity Confidential Feedback Reports include three main types of comparisons: 1) Across-provider comparison to national performance among all patients, 2) Across-provider comparison to national performance among same population, and 3) Within-provider comparison of outcomes between populations in a given facility/agency. The subsequent sections describe these comparisons in detail.

### 3.2.1 Across-Provider Comparisons

The Health Equity Confidential Feedback Reports include two different types of across-provider comparisons. The first is a comparison to the national performance among all patients and the second is a comparison to national performance among the same population. Both across-provider comparisons have similar underlying methodology, where a given facility/agency's measure outcome among a patient population (e.g., duals) is compared to outcomes from patients across all facilities/agencies in the same setting.

#### 3.2.1.1 Across-Provider Comparisons to the National Performance Among All Patients

The first across-provider comparison is calculated as a facility/agency's specific patient population's performance minus the national performance (e.g., an LTCH's duals' DTC rate minus the national DTC rate across all LTCH patients). For the DTC-PAC measure, this is calculated as the national DTC rate among all stays in the care setting subtracted from the facility/agency's DTC rate among the specific patient population (e.g., duals). For the MSPB-PAC measure outcome, this is calculated as the national average MSPB-PAC Amount among all patients in the care setting subtracted from the facility/agency's average MSPB-PAC Amount among the specific patient population (e.g., duals).

#### 3.2.1.2 Across-Provider Comparisons to the National Performance Among the Same Population

This second across-provider comparison is calculated as a facility/agency's specific patient population's performance minus the national performance among same patient population (e.g., an LTCH's duals' DTC rate minus the national DTC rate among all duals in LTCHs nationwide). For the DTC-PAC measure, this is calculated as the national DTC rate among all stays for the specific patient population (e.g., duals) subtracted from the facility/agency's DTC rate among all stays for the same patient population (e.g., duals) nationwide. For the MSPB-PAC measure, this is calculated as the national average MSPB-PAC Amount among the specific patient population (e.g., duals) subtracted from the facility/agency's average MSPB-PAC Amount among the same patient population (e.g., duals).

### 3.2.2 Within-Provider Comparison

The within-provider comparison method compares measure outcomes between patient populations within the same facility/agency. The within-provider difference is calculated as a given facility/agency's patients' performance for a given population minus their patients' performance for the comparison population (e.g., an LTCH's duals' DTC rate minus the LTCH's non-duals' DTC rate). For the DTC-PAC measure, this is calculated as a facility/agency's DTC rate among the specific patient population (dual or Non-White patients) minus the same facility/agency's DTC rate among the comparison group (non-dual or White patients, respectively). For the MSPB-PAC measure, this is calculated as a facility/agency's average MSPB Amount among the specific patient population (dual or Non-White patients) minus the same facility/agency's average MSPB Amount among the comparison group (non-dual or White patients, respectively).

## 4.0 Performance Category Assignment

For each of the across-provider and within-provider differences described above, each facility/agency receives a categorization to describe whether their facility/agency's patient populations are performing statistically significantly "Better than," "Worse than," or "No Different from," the comparison group. These categorizations are based on the 95% confidence intervals of the differences, which are derived using the delta method.<sup>4</sup> The subsequent sections describe the category assignment methodology for the three comparison methods.

### 4.1 Across-Provider Comparison to National Performance Among All Patients

To determine the statistical significance of a facility/agency's across-provider comparison to the national performance among all patients, CMS uses the upper and lower bounds of the 95% confidence interval of the difference. These values determine whether the facility/agency's patient populations are performing statistically significantly ( $p < 0.05$ ) better, worse, or no different than the national performance. Specifically:

- If the lower bound of the confidence interval is greater than zero, then the category of the difference is:
  - For DTC: "Better Outcome than National Rate," indicating that a facility/agency's RSDTCR for the patient population is statistically significantly higher than the national rate.
  - For MSPB: "Worse Outcome than National Average," indicating that a facility/agency's average MSPB-PAC Amount for the patient population is statistically significantly higher than the national average MSPB-PAC Amount.
- If the upper bound of the confidence interval is smaller than zero, then the category of the difference is:
  - For DTC: "Worse Outcome than National Rate," indicating that a facility/agency's RSDTCR for the patient population is statistically significantly lower than the national rate.
  - For MSPB: "Better Outcome than National Average," indicating that a facility/agency's average MSPB-PAC Amount for the patient population is statistically significantly lower than the national average MSPB-PAC Amount.
- If the confidence interval range contains zero between the lower and upper bounds, then the category of the difference is:
  - For DTC: "Outcome is No Different than National Rate," indicating that a facility/agency's RSDTCR for the patient population is not statistically significantly different from the national rate.
  - For MSPB: "Outcome is No Different than National Average," indicating that a facility/agency's average MSPB-PAC Amount for the patient population is not statistically significantly different from the national average MSPB-PAC Amount.
- If a facility/agency has an observed DTC rate of 0% or 100% for the patient population, indicating no variation in observed outcomes, confidence intervals and statistical significance are not

---

<sup>4</sup> Given that the reported risk-adjusted within- and across-provider differences are complex functions of estimators and observed outcomes, the distribution of these statistics are not easily calculated directly. Instead, they can be closely approximated by linearizing the function around estimated parameters, and applying the central limit theorem to derive an asymptotic normal distribution for both the DTC-PAC and MSPB-PAC measure outcomes. See, for example, Wooldridge, Jeffrey M. *Econometric analysis of cross section and panel data*. MIT press, 2010, for additional discussion of the delta method.

calculated.

- If a facility/agency does not meet the minimum required case count for the specific patient population at their facility/agency (see [6.0](#) for minimum required case counts), then the confidence interval is not calculated or shown in the report.

## 4.2 Across-Provider Comparison to National Performance Among Same Population

The statistical significance of a facility/agency's across-provider comparison to the national performance among the same population of patients is similarly based on the upper and lower bounds of the 95% confidence interval of the difference. Specifically:

- If the lower bound of the confidence interval is greater than zero, then the category of the difference is
  - For DTC: "Better Outcome than National Rate for the [Patient Population]," indicating that a facility/agency's RSDTCR for the specific patient population is statistically significantly higher than the national rate for the same population.
  - For MSPB: "Worse Outcome than National Average for [Patient Population]," indicating that a facility/agency's average MSPB Amount for the specific population is statistically significantly higher than the national average for the same population.
- If the upper bound is smaller than zero, then the category of the difference is:
  - For DTC: "Worse Outcome than National Rate for the [Patient Population]," indicating that a facility/agency's RSDTCR for the specific patient population is statistically significantly lower than the national rate for the same population.
  - For MSPB: "Better Outcome than National Average for [Patient Population]," indicating that a facility/agency's average MSPB Amount for the specific population is statistically significantly lower than the national average for the same population.
- If the confidence interval range contains zero between the lower and upper bounds, then the category of the difference is:
  - For DTC: "Outcome is no different than national rate for [Patient Population]," indicating that a facility/agency's RSDTCR for the specific population is not statistically significantly different from the national rate for the same population.
  - For MSPB: "Outcome is No Different than National Average for [Patient Population]," indicating that a facility/agency's average MSPB Amount for the specific population is not statistically significantly different from the national average for the same population.
- If a facility/agency has an observed DTC rate of 0% or 100% for the patient population, indicating no variation in observed outcomes, confidence intervals and statistical significance are not calculated.
- If a facility/agency does not meet the minimum required case count for the specific patient population at their facility/agency (see [6.0](#) for minimum required case counts), the confidence interval is not shown in the report.

## 4.3 Within-Provider Comparison

Similar to above, the within-provider comparison uses the upper and lower bounds of the 95% confidence

interval of the difference to determine the statistical significance of the difference. Specifically:

- If the lower bound of the confidence interval is greater than zero, then the category of the difference is:
  - For DTC: “Better Outcome” than the comparison group, indicating that a facility/agency’s RSDTCR for dual or Non-White patients is statistically significantly higher than the facility/agency’s RSDTCR for the comparison population (non-dual or White patients, respectively) within the stratification.
  - For MSPB: “Worse Outcome” than the comparison group, indicating that a facility/agency’s average MSPB Amount for dual or Non-White patients is statistically significantly higher than the facility/agency’s average MSPB Amount for the comparison group.
- If the upper bound is smaller than zero, then the category of the difference is:
  - For DTC: “Worse Outcome” than the comparison group, indicating that a facility/agency’s RSDTCR for dual or Non-White patients is statistically significantly lower than the facility/agency’s RSDTCR for the comparison group (non-dual or White patients) within the stratification.
  - For MSPB: “Better Outcome” than the comparison group, indicating that a facility/agency’s average MSPB Amount for dual or Non-White patients is statistically significantly lower than the facility/agency’s average MSPB Amount for the comparison group.
- If the Confidence Interval range contains zero between the lower and upper bounds, then the category of the difference is:
  - For DTC: “Outcome is No Different” than the comparison group, indicating that a facility/agency’s RSDTCR for dual or Non-White patients is not statistically significantly different from the facility/agency’s RSDTCR for the comparison group (non-dual or White patients) within the stratification.
  - For MSPB: “Outcome is No Different” than the comparison group, indicating that a facility/agency’s average MSPB Amount for dual or Non-White patients is not statistically significantly different from the facility/agency’s average MSPB Amount for the comparison group.
- If a facility/agency has an observed DTC rate of 0% or 100% for either the patient population or the comparison group, confidence intervals and statistical significance are not calculated.
- If a facility/agency does not meet the minimum required case count for the patient population (dual or Non-White patients) or the comparison group (non-dual or White patients) at their facility/agency (see [6.0](#) for minimum required case counts), the confidence interval is not shown in the report.

## 5.0 Patient Outcomes among Facilities/Agencies with Similar Geographic Locations and Patient Composition

The Health Equity Confidential Feedback Reports provide patient outcomes among facilities/agencies with similar characteristics. Specifically, a given facility/agency is provided with information summarized across patients in similar geographic locations (e.g., same State) and in facilities/agencies with similar patient composition (e.g., proportion of dual patients). The following sections describe these comparisons in detail.

### 5.1 Facilities/Agencies with Similar Geographic Locations

The geographic locations included in the reports are as follows: Rural or Urban, Core-Based Statistical Area (CBSA), State, and Region. A facility/agency's rurality and CBSA information are obtained from the "Provider of Services (POS) File - Hospital & Non-Hospital Facilities" dataset, which is a publicly available source of provider certification, termination, accreditation, ownership, name, location, and other characteristics organized by CMS Certification Number.<sup>5</sup> The POS files contain variables to indicate whether a facility/agency is located in a county that is defined as rural or urban. The POS files also includes variables to indicate if a facility/agency is located in a CBSA, as defined by the U.S. Office of Management and Budget (OMB).<sup>6</sup> Since a CBSA must contain at least one urban area with a population of 10,000 or more<sup>7</sup>, there are some facilities/agencies that are located outside of a CBSA and are, therefore, not given a CBSA in the POS dataset.

State and Region data are obtained from the facility/agency's CMS Certification number (CCN). First, CMS uses the first two digits of the facility/agency's CCN to identify the State in which the facility/agency is located. Then, CMS maps the facility/agency's State to the nine Region Divisions indicated by the U.S. Census Bureau.<sup>8</sup> The Region Divisions include the following: New England, Middle Atlantic, East North Central, West North, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

### 5.2 Facilities/Agencies with Similar Patient Composition

The reports also provide information on summarized measure outcomes across patients in facilities/agencies with similar patient composition based on three characteristics: average clinical complexity, or "risk," of their patients; proportion of dual patients; and proportion of Non-White patients.

A facility/agency's risk bracket includes facilities/agencies that have a similar average risk score. Risk brackets are constructed similarly for each measure outcome, as follows.

- For the DTC-PAC measure, the risk bracket is created by calculating a risk score for each stay that indicates the complexity of a facility/agency's patient. It is calculated as the stay's expected DTC rate, as predicted through risk adjustment. A higher value indicates that the patient is more likely to have a successful discharge to community, based on the patient characteristics in the risk adjustment model. This risk brackets are calculated by taking a facility/agency's average risk score,

---

<sup>5</sup> More information on the POS dataset can be found here: <https://data.cms.gov/provider-characteristics/hospitals-and-other-facilities/provider-of-services-file-hospital-non-hospital-facilities>

<sup>6</sup> For more information on how the OMB defines CBSAs please see: <https://www.federalregister.gov/documents/2021/07/16/2021-15159/2020-standards-for-delineating-core-based-statistical-areas>

<sup>7</sup> For more information on how the U.S. Census Bureau defines CBSAs please see: <https://www.census.gov/programs-surveys/metro-micro/about.html>

<sup>8</sup> For more information on which States are included in each Region Division please see: [https://www.census.gov/programs-surveys/economic-census/guidance-geographies/levels.html#par\\_textimage\\_34](https://www.census.gov/programs-surveys/economic-census/guidance-geographies/levels.html#par_textimage_34)

which is the average of the risk scores for all stays at a facility/agency. Next, CMS creates a distribution for the average risk scores across all facilities/agencies in the same care setting with the required number of stays.<sup>9</sup> Finally, the distribution is divided into deciles to create risk brackets. Risk Bracket 10 has the highest average risk, while Risk Bracket 1 has the lowest.

- For the MSPB-PAC measure, the risk bracket calculation is similar to that for DTC-PAC. First, a risk score for each episode is set to the episode's expected cost, as predicted through risk adjustment. A higher value indicates that the episode is expected to be costlier, based on the patient characteristics in the risk adjustment model. Then, the facility/agency's average risk score is computed across all episodes for the facility/agency. Finally, the distribution of average risk scores across all facilities/agencies in the same care setting with at least 20 episodes is divided into deciles to create risk brackets. Risk Bracket 10 has the highest average risk, while Risk Bracket 1 has the lowest.

To determine the facilities/agencies with similar proportions of dual and Non-White patients, CMS grouped each facility/agency into dual and Non-White quintiles, as follows:

- A facility/agency's dual quintile is determined by first calculating the proportion of stays/episodes that belong to patients identified as dually-enrolled at their facility/agency. This is calculated as the number of dual stays/episodes at a facility/agency divided by the total number of stays/episodes at the facility/agency. This calculation is then repeated for each facility/agency in the same PAC setting with the required number of stays/episodes.<sup>10</sup> CMS then divides the distribution of each facility/agency's dual proportion in the same PAC setting into quintiles to create five groups of facilities/agencies with a similar proportion of dual patients. Facilities/agencies in Dual Quintile 5 have the highest proportion of dual stays/episodes, while Quintile 1 has the lowest.
- A facility/agency's Non-White quintile is determined analogously. Facilities/agencies in Non-White Quintile 5 have the highest proportion of Non-White stays/episodes, while Quintile 1 has the lowest.

---

<sup>9</sup> For DTC-PAC measure outcomes, HH agencies must have at least 20 stays. IRF, LTCH, and SNF facilities must have at least 25 stays.

<sup>10</sup> For DTC-PAC measure outcomes, HH agencies must have at least 20 stays. IRF, LTCH, and SNF facilities must have at least 25 stays. For the MSPB-PAC measure outcomes, facilities/agencies must have at least 20 episodes.

## 6.0 Thresholds for Reporting Each Stratification and Comparison

For each stratification group and comparison described above (3.2, 5.0), a facility/agency has to meet specific reportability thresholds to receive certain results in their report. These requirements are described in detail below.

Additionally, a facility/agency must meet the across-provider comparison reportability threshold (see Table 1 for details) for at least one race/ethnicity or dual-status population, to ensure that all providers that receive the Health Equity Confidential Feedback Report have at least one comparison result populated in their report. If a provider does not meet this requirement, they do not receive a Health Equity Confidential Feedback Report.

### 6.1 Across- and Within-Provider Comparison Thresholds

For a facility/agency to receive an across- or within-provider comparison in their Health Equity Confidential Feedback Report, they must meet requirements described in Table 1 below. Applicable tables in the Health Equity Confidential Report where the thresholds are applied are noted for each threshold.

**Table 1. Across- and Within- Provider Comparison Reportability Requirements**

Threshold	Applicable Tables	Requirements
Across-Provider Comparisons	Tables 1, 3, 4, 7, and 8 (Results for “Your Facility/Agency”)	<p>1. Facility/Agency must meet the following minimum threshold:</p> <ul style="list-style-type: none"> <li>• DTC: HH agency must have at least 20 stays. IRF, LTCH, and SNF facility must have at least 25 stays.</li> <li>• MSPB: Facility/Agency must have at least 20 episodes (does not vary by PAC setting).</li> </ul> <p style="text-align: center;"><b>AND</b></p> <p>2. Facility/agency must meet the following stay/episode threshold for the specific race/ethnicity or dual-status population included in the comparison:</p> <ul style="list-style-type: none"> <li>• 10+ stays for DTC HH;</li> <li>• 12+ stays for DTC IRF/SNF/LTCH;</li> <li>• 10+ episodes for MSPB.</li> </ul> <p>If a facility/agency does not meet this requirement for a given comparison, all “Your Facility/Agency” cells in the row for that comparison are set to “N/A.”</p> <p>Example: For an LTCH provider to receive a result on their Across-Provider MSPB comparisons for Dual patients, they must have 20+ episodes overall and 10+ episodes associated with Dual patients.</p>

Threshold	Applicable Tables	Requirements
Within-Provider Comparisons	Tables 5 and 6 (Results for “Your Facility/Agency”)	<p>1. Facility/agency must meet the following minimum threshold:</p> <ul style="list-style-type: none"> <li>• DTC: HH agency must have at least 20 stays. IRF, LTCH, and SNF facility must have at least 25 stays.</li> <li>• MSPB: Facility/Agency must have at least 20 episodes (does not vary by PAC setting).</li> </ul> <p style="text-align: center;"><b>AND</b></p> <p>2. Facility/agency must meet the following stay/episode threshold for each of the two race/ethnicity or dual-status populations included in the comparison:</p> <ul style="list-style-type: none"> <li>• 10+ stays for DTC HH.</li> <li>• 12+ stays for DTC IRF/SNF/LTCH;</li> <li>• 10+ episodes for MSPB;</li> </ul> <p>If a facility/agency does not meet this requirement for a given comparison, all “Your Facility/Agency” cells in the row for that comparison are set to “N/A.”</p> <p>Example: For an LTCH facility to receive a result on their dual Within-Provider DTC comparison, they must have 25+ stays overall, 12+ dual stays, and 12+ non-dual stays.</p>

Note: The “Applicable Tables” column in the tables of this memo list the applicable table numbers of the October 2023 Health Equity Confidential Feedback Reports.

## 6.2 Group Reportability Requirement

This section summarizes the additional reportability requirements that are applied to each group-level result in similar geographic locations (e.g., State, CBSA) and similar patient compositions (e.g., Risk Decile, Dual Quintile) to ensure the confidentiality of providers’ results in cases when there are too few providers in a given group. [Table 2](#) summarizes the requirement for a provider to receive a given group comparison result.



**Table 2. Group Comparison Reportability Requirement**

Threshold	Applicable Tables	Requirement
Group Comparison	Table 2, Table 7 (Similar Geographic Locations columns), and Table 8 (Same/Similar Patient Composition columns) <sup>11</sup>	<p>Each group, (e.g., Facility/agency’s geographic location, such as “Your State”) must have at least 10 facilities/agencies that meet the Across-Provider Comparison threshold (see <a href="#">Table 1</a>, Across- and Within-Provider Comparison Reportability Requirements) for a given population (e.g., duals).</p> <p>If the group does not meet this requirement, the applicable cell for the combination of group (e.g., “Your State”) and population (e.g., duals) is set to “N/A.”</p> <p>Example: For an LTCH provider to receive a value in the “Duals” row of the “Your State” column, the State in which the provider is located must have 10+ providers that meet the Across-Provider Comparison threshold for duals.</p>

Note: The “Applicable Tables” column in the tables of this memo list the applicable table numbers of the October 2023 Health Equity Confidential Feedback Reports.

### 6.3 Rurality and CBSA Additional Reportability Requirement

As described above, if a facility/agency does not have enough stays/episodes for a given comparison, then that comparison result is reported as “N/A.” Additionally, if a facility/agency’s Rural/Urban category or CBSA code is missing from the POS file, the report shows “N/A” for the applicable columns.

[Table 3](#) below outlines the requirements for a facility/agency to see rurality and CBSA measure outcomes in their Health Equity Confidential Feedback Report, which are applied in addition to the group comparison requirements listed above.

**Table 3. Rurality and CBSA Cell Reportability Requirement**

Threshold	Applicable Tables	Requirement
Rurality	Table 2, Table 7 (Columns for Your Rural/Urban category)	<p>Provider’s “Same Rural/Urban Category” results are populated if the provider has a Rural/Urban Category in the data source (‘CBSA Urban Rural Indicator’ variable in the Provider of Services [POS] file).</p> <p>If the provider does not have a Rural/Urban Category, then the “Same Rural/Urban Category” columns show “N/A” for the provider.</p>

<sup>11</sup> National-level group comparisons (e.g., “National” column in Tables 2, 7, and 8) also must meet the group comparison reportability requirement for facilities/agencies to receive results. Example: For an LTCH provider to receive a value in the “Duals” row of the “National” column, there needs to be at least 10+ LTCHs in the nation that meet the Across-Provider Comparison threshold for duals.

Threshold	Applicable Tables	Requirement
CBSA	Table 2, Table 7 (Columns Your CBSA)	<p>Provider's "Your CBSA" results are populated if the provider has a valid CBSA code in the data source (POS file).</p> <p>If the provider does not have a valid CBSA code (i.e., the CBSA code is not found, is blank, or begins with "999"<sup>12</sup>), then the "Your CBSA" columns show "N/A" for the provider.</p> <p>In some cases, a provider has a valid CBSA code but no valid CBSA title corresponding to the CBSA code. In these cases, the column sub-header in the "Your CBSA" column of the report Table 2 is displayed as "N/A."</p>

---

<sup>12</sup> According to the Office of Management and Budget (OMB), a valid CBSA code is assigned to providers located in a Metropolitan Statistical Area (urban core of 50,000 or more people). Rural providers are not located within a CBSA and instead receive a CBSA code that follows the convention: "999[State Code]." A small number of such providers may have a 'CBSA Urban Rural Indicator' = Urban in the POS file, and vice versa.

## 7.0 User Guide

This section describes the information contained in each table of the Health Equity Confidential Feedback Reports. The Tables in this section describe each column in each table of the Health Equity Confidential Feedback Reports.

### 7.1 Across-Provider Comparison Against All Patients- Summary

Below in [Table 4](#), we describe the columns in Table 1 of the Health Equity Confidential Feedback Reports: DTC Rates/Average MSPB Amount for Patients at Your Facility/Agency, Compared to All Patients Nationwide. This table in the report shows results from the Across-provider comparison against the national performance for all patients (summary table).

**Table 4: DTC Rates/MSPB Amount for Patients at Your Facility/Agency, Compared to All Patients (Table 1 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Population	Specifies the patient population being examined in each row.
Column 2	Difference from National Performance	Indicates whether the specific patient population’s measure outcome at your facility/agency is statistically significantly better, worse, or no different than the national measure outcome for all patients.  The value is N/A if the confidence interval value in the corresponding row of Table 3 of the report is N/A.

### 7.2 Patient Composition at Your Facility/Agency and Similar Geographic Locations

Below in [Table 5](#), we describe the columns in Table 2 of the Health Equity Confidential Feedback Reports: Patients at Your Facility/Agency and in Similar Geographic Locations. This table in the report shows results on the patient composition at your facility/agency and among facilities/agencies in similar geographic locations.

**Table 5: Patients at Your Facility/Agency and in Similar Geographic Locations (Table 2 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Population	Specifies the patient population being examined in each row.
Column 2	Your Facility/Agency	Indicates the percent of DTC stays or MSPB episodes attributed to each patient population at your facility/agency. For example, the “Dual” row of this column indicates the percent of DTC stays/MSPB episodes at your facility/agency that are attributed to dual patients.

Column	Column Name	Description
Column 3	Same Rural/Urban Location	<p>Indicates the percent of DTC stays or MSPB episodes attributed to each patient population for the same rural/urban designation (Rural or Urban) as your facility/agency. For example, for a rural provider the “Dual” row of this column indicates the percent of DTC stays/MSPB episodes attributed to dual patients among all rural providers in the same setting.</p> <p>If a value is N/A, your facility/agency is (i) located in a rural/urban designation that did not meet the reporting threshold for a given population or (ii) your facility/agency’s rural/urban designation is not available in the POS file.</p>
Column 4	Your CBSA	<p>Indicates the percent of DTC stays or MSPB episodes attributed to each patient population among all facilities/agencies in the same CBSA as your facility/agency. For example, the “Dual” row of this column indicates the percent of DTC stays/MSPB episodes in your CBSA that are attributed to dual patients.</p> <p>If a value is N/A, your facility/agency is (i) located in a CBSA that did not meet the reporting threshold or (ii) your facility/agency does not have a valid CBSA in the POS file.</p>
Column 5	Your State	<p>Indicates the percent of DTC stays or MSPB episodes attributed to each patient population among all facilities/agencies in the same State as your facility/agency. For example, the “Dual” row of this column indicates the percent of DTC stays/MSPB episodes in your State that are attributed to dual patients.</p> <p>If a value is N/A, your facility/agency is located in a State that did not meet the reporting threshold for a given population.</p>
Column 6	Your Region	<p>Indicates the percent of DTC stays or MSPB episodes attributed to each patient population among all facilities/agencies in the same Region as your facility/agency. For example, the “Dual” row of this column indicates the percent of DTC stays/MSPB episodes in your Region that are attributed to dual patients.</p> <p>If a value is N/A, your facility/agency is located in a Region that did not meet the reporting threshold for a given population.</p>
Column 7	National	<p>Indicates the percent of DTC stays or MSPB episodes attributed to each patient population nationally. For example, the “Dual” row of this column indicates the percent of DTC stays/MSPB episodes nationwide that are attributed to dual patients.</p>

### 7.3 Across-Provider Comparison Against All Patients – Detail

Below in [Table 6](#), we describe the columns in Table 3 of the Health Equity Confidential Feedback Reports: DTC Rates/Average MSPB Amount for Patients at Your Facility/Agency, Compared to All Patients Nationwide. This table in the report shows results from the Across-provider comparison against the national performance for all patients (detailed table).

**Table 6: DTC Rates/MSPB Amount for Patients at Your Facility/Agency, Compared to All Patients Nationwide (Table 3 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Population: Comparison Points (All Patients)	<p>Indicates two separate benchmarks: national measure outcome and 90<sup>th</sup> percentile rate (DTC) or 10<sup>th</sup> percentile amount (MSPB).</p> <p>The first row indicates the national performance among all patients for the measure outcome, which is used to compare against the measure outcome for each patient population for your facility/agency. For facility/agency reference, the second row indicates the DTC measure outcome for the 90<sup>th</sup> percentile facility/agency or the MSPB measure outcome for the 10<sup>th</sup> percentile facility/agency in the same setting.</p>
Column 1	Population: Your Facility/ Agency	<p>“Your Facility/Agency” rows specify the patient population being examined in each row.</p>
Column 2	DTC Rate/Average MSPB Amount	<p>Indicates the measure outcome among the patient population at your facility/agency, nationally, and among the 10<sup>th</sup>/90<sup>th</sup> percentile facility/agency as specified in Column 1.</p> <p>For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 3	Difference (Your Facility/Agency - National Performance)	<p>Indicates the difference between your facility/agency’s measure outcome for the patient population and the national measure outcome among all patients (e.g., your duals’ RSDTCR minus the national RSDTCR for your facility/agency-type, or your duals’ average MSPB Amount minus the national average MSPB Amount). Note that this column is only populated for the “Your Facility/Agency” rows.</p> <p>For the DTC measure, a negative difference means that the RSDTCR at your facility/agency is lower (worse) than the national RSDTCR. A positive difference means that the RSDTCR at your facility/agency is higher (better) than the national RSDTCR.</p> <p>For the MSPB measure, a negative difference means that the MSPB outcome (Average MSPB Amount), measured in dollars, is better (lower) at your facility/agency than the national average. A positive difference means that the average MSPB Amount, measured in dollars, is worse (higher) at your facility/agency than the national average.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>

Column	Column Name	Description
Column 4	Confidence Interval	<p>Indicates the 95% confidence interval for the difference between your facility/agency's measure outcome for the patient population and the national measure outcome among all patients.</p> <p>Displayed as the lower bound of the confidence interval, followed by the upper bound. Values are rounded to two decimal places for DTC and to whole numbers for MSPB.</p> <p>DTC confidence intervals are set to be consistent with DTC rates that fall between 0% and 100%.<sup>13</sup></p> <p>If a value is N/A in the DTC report, your facility/agency (i) did not meet the minimum required case count for the specific population or (ii) has an observed DTC rate of 0% or 100%. If a value is N/A in the MSPB report, your facility/agency did not meet the minimum required case count for the specific population.</p>

---

<sup>13</sup> For the DTC measures, the lower bounds are capped from below at 0% minus national RSDTCR; the upper bound is capped from above at 100% minus national RSDTCR.

Column	Column Name	Description
Column 5	Category of the Difference	<p>Indicates whether the difference between your facility/agency's measure outcome for the patient population and the national measure outcome among all patients is statistically significant, according to the confidence interval of the difference.</p> <p>For DTC:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is "Better Outcome than National Rate," indicating that your facility/agency's RSDTCR for the patient population is statistically significantly higher than the national RSDTCR.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is "Worse Outcome than National Rate," indicating that your facility/agency's RSDTCR for the patient population is statistically significantly lower than the national RSDTCR.</li> <li>• If the Confidence Interval range contains zero between the lower and upper bounds (without rounding), then the category of the difference is "Outcome is No Different than National Rate," indicating that your facility's/agency's RSDTCR for the specific population is not statistically significantly different from the national RSDTCR.</li> </ul> <p>For MSPB:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is "Worse Outcome than National Average," indicating that your facility/agency's average MSPB Amount for the specific population is statistically significantly higher than the national average.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is "Better Outcome than National Average," indicating that your facility/agency's average MSPB Amount for the specific population is statistically significantly lower than the national average.</li> <li>• If the confidence interval range contains zero between the lower and upper bounds (without rounding), then the category of the difference is "Outcome is No Different than National Average," indicating that your facility/agency's average MSPB Amount for the specific population is not statistically significantly different from the national average.</li> </ul> <p>The category of the difference is N/A if the confidence interval is N/A.</p>

## 7.4 Across-Provider Comparison Against Patients of the Same Population

Below in [Table 7](#), we describe the columns in Table 4 of the Health Equity Confidential Feedback Reports: DTC Rates/Average MSPB Amount for Patients at Your Facility/Agency, Compared to

the Same Populations Nationwide. This table in the report shows results from the Across-provider comparison against the national performance among patients in the same population.

**Table 7: DTC Rates/MSPB Amount for Patients at Your Facility/Agency, Compared to the Same Populations Nationwide (Table 4 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Population	Specifies the patient population being examined in each row.
Column 2	DTC Rate/Average MSPB Amount for Your Facility/Agency	<p>Indicates the measure outcome among the patient population at your facility/agency as specified in Column 1.</p> <p>For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 3	DTC Rate/Average MSPB Amount for the National Performance	Indicates the national measure outcome for the patient population specified in Column 1.
Column 4	Difference (Your Facility/Agency - National Performance)	<p>Indicates the difference between your facility/agency’s measure outcome for the patient population and the national measure outcome among the same population (e.g., your duals’ RSDTCR minus the national RSDTCR for duals at your facility/agency-type, or your duals’ average MSPB Amount minus the national average MSPB Amount for duals).</p> <p>For the DTC measure, a negative difference means that the RSDTCR at your facility/agency for the patient population is lower (worse) than the national RSDTCR for the same patient population. A positive difference would mean that the RSDTCR at your facility/agency for the patient population is higher (better) than the national RSDTCR for the same patient population.</p> <p>For the MSPB measure, a negative difference means that the MSPB outcome (average MSPB Amount), measured in dollars, is better (lower) at your facility/agency for the patient population than the national average for the same patient population. A positive difference means that the average MSPB Amount, measured in dollars, is worse (higher) at your facility/agency for the patient population than the national average for the same patient population.</p>



Column	Column Name	Description
Column 5	Confidence Interval	<p>Indicates the 95% confidence interval for the difference between your facility/agency's measure outcome of the patient population and the national measure outcome among the same patient population.</p> <p>Displayed as the lower bound of the confidence interval, followed by the upper bound. Values are rounded to two decimal places for DTC and to whole numbers for MSPB.</p> <p>DTC confidence intervals are set to be consistent with DTC rates that fall between 0% and 100%.<sup>14</sup></p> <p>If a value is N/A in the DTC report, your facility/agency (i) did not meet the minimum required case count for the specific population or (ii) has an observed DTC rate of 0% or 100%. If a value is N/A in the MSPB report, your facility/agency did not meet the minimum required case count for the specific population.</p>

---

<sup>14</sup> For the DTC measures, the lower bounds are capped from below at 0% minus national RSDTCR for the population; the upper bound is capped from above at 100% minus national RSDTCR for the population.

Column	Column Name	Description
Column 6	Category of the Difference	<p>Indicates whether the difference between the measure outcome of a given patient population at your facility/agency and the measure outcome among the same patient population nationwide is statistically significant, according to the confidence interval of the difference.</p> <p>For DTC:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is “Better Outcome than National Rate” for the comparison group, indicating that your facility/agency’s RSDTCR for the specific population is statistically significantly higher than the national RSDTCR for the same population.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is “Worse Outcome than National Rate” for the comparison group, indicating that your facility/agency’s RSDTCR for the specific population is statistically significantly lower than the national RSDTCR for the same population.</li> <li>• If the Confidence Interval range contains zero between the lower and upper bounds (without rounding), then the category of the difference is “Outcome is No Different than National Rate” for the comparison group, indicating that your facility’s/agency’s RSDTCR for the specific population is not statistically significantly different from the national RSDTCR for the same population.</li> </ul> <p>For MSPB:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is “Worse Outcome than National Average” for the comparison group, indicating that your facility/agency’s average MSPB Amount for the specific population is statistically significantly higher than the national average for the same population.</li> <li>• If the upper bound is smaller than zero, (without rounding) then the category of the difference is “Better Outcome than National Average” for the comparison group, indicating that your facility/agency’s average MSPB Amount for the specific population is statistically significantly lower than the national average for the same population.</li> <li>• If the confidence interval range between the lower and upper bounds (without rounding) contains zero, then the category of the difference is “Outcome is No Different than National Average” for the comparison group, indicating that your facility/agency’s average MSPB Amount for the specific population is not statistically significantly different from the national average for the same population.</li> </ul> <p>The category of the difference is N/A if the confidence interval is N/A.</p>

### 7.5 Within-Provider Comparison

Below in [Table 8](#), we describe the columns in Table 5 of the Health Equity Confidential Feedback Reports: Differences in DTC Rates/Average MSPB Amount Within Your Facility/Agency (Dual Status). This table in the report shows results from the Within-provider comparison between dually enrolled patients and patient who are not dually enrolled.

**Table 8: Differences in DTC Rates/MSPB Amount Within Your Facility/Agency (Dual Status) (Table 5 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Unlabeled (first column)	Indicates whether the measure outcomes examined in subsequent columns are among patients at your facility/agency or patients nationwide.
Column 2	DTC Rate/Average MSPB Amount for Duals	<p>Specifies that results in this column focus on dual patients.</p> <p>Indicates the measure outcome among dual patients at your facility/agency or nationally as specified in Column 1.</p> <p>For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 3	DTC Rate/Average MSPB Amount for Non-Duals	<p>Specifies that results in this column focus on non-dual patients.</p> <p>Indicates the measure outcome among non-dual patients at your facility/agency or nationally as specified in Column 1.</p> <p>For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 4	Difference (Duals – Non-Duals)	<p>Indicates the difference between your facility/agency’s measure outcome for duals and non-duals (e.g. your duals’ RSDTCR minus your non-duals’ RSDTCR or your duals’ average MSPB Amount minus your non-duals’ average MSPB Amount).</p> <p>For the DTC measure, a negative difference means that the RSDTCR at your facility/agency for duals is lower (worse) than the RSDTCR for non-duals at your facility/agency. A positive difference would mean that the RSDTCR for duals at your facility/agency is higher (better) than the RSDTCR for non-duals at your facility/agency.</p> <p>For the MSPB measure, a negative difference means that MSPB outcome (average MSPB Amount), measured in dollars, is better (lower) at your facility/agency than the average MSPB Amount for non-duals at your facility/agency. A positive difference means that the average MSPB Amount for duals, measured in dollars, is worse (higher) at your facility/agency than the average MSPB Amount among non-duals at your facility/agency.</p>

Column	Column Name	Description
Column 5	Confidence Interval	<p>Indicates the 95% confidence interval for the difference between your facility/agency's measure outcome for duals and non-duals. Note that this column is only populated for the "Your Facility/Agency" row.</p> <p>Displayed as the lower bound of the confidence interval, followed by the upper bound. Values are rounded to two decimal places for DTC and to whole numbers for MSPB.</p> <p>If a value is N/A in the DTC report, your facility/agency (i) did not meet the minimum required case count for duals or non-duals; or (ii) has an observed DTC rate of 0% or 100% for either duals or non-duals. If a value is N/A in the MSPB report, your facility/agency did not meet the minimum required case count for dual or non-dual patients.</p>

Column	Column Name	Description
Column 6	Category of the Difference	<p>Indicates whether the difference between your facility/agency’s measure outcome for duals and non-duals is statistically significant, according to the confidence interval of the difference. Note that this column is only populated for the “Your Facility/Agency” row.</p> <p>For DTC:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is “Better Outcome for Dual Patients at Your Facility/Agency,” indicating that your facility/agency’s RSDTCR for duals is statistically significantly higher than your facility/agency’s RSDTCR for non-duals.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is “Worse Outcome for Dual Patients at Your Facility/Agency,” indicating that your facility/agency’s RSDTCR for duals is statistically significantly lower than your facility/agency’s RSDTCR for non-duals.</li> <li>• If the confidence interval range contains zero between the lower and upper bounds (without rounding), then the category of the difference is “Outcomes are No Different for Dual and Non-Dual Patients at Your Facility/Agency,” indicating that your facility’s/agency’s RSDTCR for duals is not statistically significantly different from your facility/agency’s RSDTCR for non-duals.</li> </ul> <p>For MSPB:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is “Worse Outcome for Dual Patients at Your Facility/Agency,” indicating that your facility/agency’s average MSPB Amount for duals is statistically significantly higher than your facility/agency’s average MSPB amount for non-duals.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is “Better Outcome for Dual Patients at Your Facility/Agency,” indicating that your facility/agency’s average MSPB Amount for duals is statistically significantly lower than your facility/agency’s average MSPB amount for non-duals.</li> <li>• If the confidence interval range between the lower and upper bounds contains zero (without rounding), then the category of the difference is “Outcomes are No Different for Dual and Non-Dual Patients at Your Facility/Agency,” indicating that your facility/agency’s average MSPB Amount for duals is not statistically significantly different your average MSPB Amount for non-duals.</li> </ul> <p>The category of the difference is N/A if the confidence interval is N/A.</p>

Below in [Table 9](#), we describe the columns in Table 6 of the Health Equity Confidential Feedback Reports: Differences in DTC Rates/Average MSPB Amount Within Your Facility/Agency (Race/Ethnicity). This table in the report shows results from the Within-provider comparisons between Non-White and White patients.

**Table 9: Differences in DTC Rates/MSPB Amount Within Your Facility/Agency (Race/Ethnicity) (Table 6 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Unlabeled (first column)	Indicates whether the measure outcomes examined in subsequent columns are among patients at your facility/agency or patients nationwide.
Column 2	DTC Rate/Average MSPB Amount for Non-White Patients	<p>Specifies that results in this column focus on Non-White patients.</p> <p>Indicates the measure outcome among Non-White patients at your facility/agency or nationally as specified in Column 1.</p> <p>For the DTC measure report, this is RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 3	DTC Rate/Average MSPB Amount for White Patients	<p>Specifies that results in this column focus on White patients.</p> <p>Indicates the measure outcome among White patients at your facility/agency or nationally as specified in Column 1.</p> <p>For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 4	Difference (Non-White – White)	<p>Indicates the difference in measure outcome between Non-White and White patients (e.g., your Non-White RSDTCR /average MSPB Amount minus your White patient RSDTCR /average MSPB Amount).</p> <p>For the DTC measure, a negative difference at your facility/agency means that the RSDTCR for Non-White patients at your facility/agency is lower (worse) than the RSDTCR for White patients at your facility/agency. A positive difference means that the RSDTCR at your facility/agency is higher (better) for Non-White patients than the RSDTCR for White patients at your facility/agency. Interpretation is similar for outcome at the national level.</p> <p>For the MSPB measure, a negative difference at your facility/agency means that the average MSPB Amount for Non-White patients, measured in dollars, is better (lower) at your facility/agency than the average MSPB Amount for White patients at your facility/agency. A positive difference means that the average MSPB Amount for Non-White patients, measured in dollars, is worse (higher) at your facility/agency than the average MSPB amount for White patients at your facility/agency. Interpretation is similar for outcome at the national level.</p>

Column	Column Name	Description
Column 5	Confidence Interval	<p>Indicates the 95% confidence interval for the difference between your facility/agency's measure outcome for Non-White and White patients. Note that this column is only populated for the "Your Facility/Agency" row.</p> <p>Displayed as the lower bound of the confidence interval, followed by the upper bound. Values are rounded to two decimal places for DTC and to whole numbers for MSPB.</p> <p>If a value is N/A in the DTC report, your facility/agency (i) did not meet the minimum required case count for Non-White or White patients; or (ii) has an observed DTC rate of 0% or 100% for either Non-White or White patients. If a value is N/A in the MSPB report, your facility/agency did not meet the minimum required case count for Non-White or White patients.</p>

Column	Column Name	Description
Column 6	Category of the Difference	<p>Indicates whether the measure outcome difference between Non-White and White patients at your facility/agency is statistically significant, according to the confidence interval of the difference. Note that this column is only populated for the “Your Facility/Agency” row.</p> <p>For DTC:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is “Better Outcome for Non-White Patients at Your Facility/Agency,” indicating that your facility/agency’s RSDTCR for Non-White patients is statistically significantly higher than your facility/agency’s RSDTCR for White patients.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is “Worse Outcome for Non-White Patients at Your Facility/Agency,” indicating that your facility/agency’s RSDTCR for Non-White patients is statistically significantly lower than your facility/agency’s RSDTCR for White patients.</li> <li>• If the Confidence Interval range contains zero between the lower and upper bounds (without rounding), then the Category of the Difference is “Outcomes are No Different for Non-White and White Patients at Your Facility/Agency,” indicating that your facility’s/agency’s RSDTCR for Non-White patients is not statistically significantly different from your facility/agency’s RSDTCR for White patients.</li> </ul> <p>For MSPB:</p> <ul style="list-style-type: none"> <li>• If the lower bound of the confidence interval is greater than zero (without rounding), then the category of the difference is “Worse Outcomes for Non-White Patients at Your Facility/Agency,” indicating that your facility/agency’s average MSPB Amount for Non-White patients is statistically significantly higher than average MSPB Amount for White patients at your facility/agency.</li> <li>• If the upper bound is smaller than zero (without rounding), then the category of the difference is “Better Outcome for Non-White Patients at Your Facility/Agency,” indicating that your facility/agency’s average MSPB Amount for Non-White patients is statistically significantly lower than average MSPB Amount for White patients at your facility/agency.</li> <li>• If the confidence interval range contains zero between the lower and upper bounds (without rounding), then the category of the difference is “Outcomes are No Different for Non-White and White Patients at Your Facility/Agency,” indicating that your facility/agency’s average MSPB Amount for Non-White patients is not statistically significantly different from the average MSPB Amount for White patients at your facility/agency.</li> </ul> <p>The category of the difference is N/A if the confidence interval is N/A.</p>

## 7.6 Patient Outcomes among Facilities/Agencies in Similar Geographic Location

Below in [Table 10](#), we describe the columns in Table 7 of the in the Health Equity Confidential



Feedback Reports: DTC Rates/Average MSPB Amount for Patients at Your Facility/Agency and for Patients in Similar Geographic Locations. This table in the report shows the measure outcomes for each patient population in your facility/agency and among facilities/agencies in similar geographic locations.

**Table 10: DTC Rates/MSPB Amount for Patients at Your Facility/Agency and for Patients in Similar Geographic Locations (Table 7 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Population	Specifies the patient population being examined in each row.
Column 2	Your Facility/Agency	Indicates the measure outcome at your facility/agency among the patient population specified in Column 1.  For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.  If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.
Column 3	Your Rural/Urban Location Category	Indicates the measure outcome among the patient population at facilities/agencies in the same rurality designation as your facility/agency (Rural or Urban).  If a value is N/A, your facility/agency is located in a rural/urban designation that did not meet the reporting threshold for a given population.
Column 4	Your CBSA	Indicates the measure outcome among the patient population at facilities/agencies in the same CBSA as your facility/agency.  If a value is N/A, then your facility/agency does not have a valid CBSA code (i.e., the CBSA code is not found, is blank, or begins with "999"), or your facility/agency has a valid CBSA code but no valid CBSA title corresponding to the CBSA code.
Column 5	Your State	Indicates the measure outcome among the patient population at facilities/agencies in the same State as your facility/agency.  If a value is N/A, your facility/agency is located in a State that did not meet the reporting threshold for a given population.
Column 6	Your Region	Indicates the measure outcome among the patient population at facilities/agencies in the same Region as your facility/agency.  If a value is N/A, your facility/agency is located in a Region that did not meet the reporting threshold for a given population.
Column 7	National	Indicates the national performance among all patients for the measure outcome.

**7.7 Patient Outcomes among Facilities/Agencies with Similar Patient Composition**

Below in [Table 11](#), we describe the columns in Table 8 of the Health Equity Confidential Feedback Reports: DTC Rates/Average MSPB Amount for Patients at Your Facility/Agency and for Patients at Facilities/Agencies with Similar Patient Composition. This table in the report shows measure

outcomes for each patient population in your facility/agency and among facilities/agencies with similar patient composition.

**Table 11: DTC Rates/MSPB Amount for Patients at Your Facility/Agency and for Patients at Facilities with Similar Patient Composition (Table 8 in the Health Equity Confidential Feedback Reports)**

Column	Column Name	Description
Column 1	Population	Specifies the patient population being examined in each row.
Column 2	Your Facility/Agency	<p>Indicates the measure outcome at your facility/agency among the patient population specified in Column 1.</p> <p>For the DTC measure report, this is the RSDTCR, rounded to two decimal places and capped at 100%. For the MSPB measure report, this is the MSPB-PAC Amount, rounded to the whole number.</p> <p>If a value is N/A, your facility/agency did not meet the minimum required case count for the specific population.</p>
Column 3	Facilities with Same Risk Bracket (See <a href="#">5.2</a> )	<p>Indicates the measure outcome among the patient population at facilities/agencies with the same patient risk bracket designation as your facility/agency.</p> <p>Risk bracket 10 includes facilities/agencies with the highest average risk, while Risk Bracket 1 includes facilities/agencies with the lowest average risk.</p>
Column 4	Facilities with Similar Proportion of Duals (See <a href="#">5.2</a> )	<p>Indicates the measure outcome among the patient population at facilities/agencies with the same proportion of dual patients as your facility/agency.</p> <p>Dual Quintile 1 includes facilities/agencies with the lowest proportion of duals, while Dual Quintile 5 includes facilities/agencies with the highest proportion of duals.</p>
Column 5	Facilities with Similar Proportion of Non-White Patients (See <a href="#">5.2</a> )	<p>Indicates the measure outcome among the patient population at facilities/agencies with the same proportion of Non-White patients as your facility/agency.</p> <p>Non-White Quintile 1 includes facilities/agencies with the lowest proportion of Non-White patients, while Non-White Quintile 5 includes facilities/agencies with the highest proportion of Non-White patients.</p>
Column 6	National	Indicates the national performance among all patients for the measure outcome.

# Appendix A: DTC-PAC Measure Calculation for the Health Equity Confidential Feedback Reports

The RSDTCRs reported in the Health Equity Confidential Feedback Reports are calculated using the equations described below.

The probability of a successful discharge outcome is assumed to be related to the covariates via a logit function:

$$\text{Prob}(Y_{ij} = 1 | Z_{ij}) = \text{logit}^{-1}(\beta * Z_{ij})$$

Where:

- $Y_{ij}$  denotes the outcome (equal to 1 if patient  $i$  experiences a successful DTC, 0 otherwise) for a patient  $i$  at provider  $j$ , and
- $Z_{ij} = (Z_1, Z_2, \dots, Z_k)$  denotes a set of  $k$  risk adjustment variables.

The RSDTCR for provider  $j$  among its patients belonging to patient population  $d$  (e.g., duals) is then calculated as follows:

$$\frac{\sum_{i \in j,d} Y_{ij}}{\sum_{i \in j,d} \text{logit}^{-1}(\hat{\beta} * Z_{ij})} * \bar{Y}$$

Where:

- $\sum_{i \in j,d}$  denotes taking the sum over all stays at the  $j$ th provider among its patients belonging to patient population  $d$ ,
- $\hat{\beta}$  denotes the coefficients of the clinical risk factors, using a logistic regression model, and
- $\bar{Y}$  denotes the national observed DTC rate calculated over all stays.

# Appendix B: MSPB-PAC Measure Calculation for the Health Equity Confidential Feedback Reports

The average MSPB Amount reported in the Health Equity Confidential Feedback Reports are calculated using the equation described below.

The MSPB-PAC Amount is the average risk-adjusted episode spending across episodes attributed to that provider. The MSPB-PAC Amount for provider  $j$  among its patients belonging to patient population  $d$  (e.g., duals) is then calculated as follows:

$$MSPB-PAC Amount_{jd} = \left( \frac{1}{n_{jd}} \sum_{i \in j,d} \frac{Y_{ij}}{\widehat{Y}_{ij}} \right) \bar{Y}$$

Where:

- $Y_{ij}$  is the attributed standardized spending for episode  $i$  and provider  $j$ ,
- $\widehat{Y}_{ij}$  is the expected standardized spending for episode  $i$  and provider  $j$ , as predicted from risk adjustment,
- $n_{jd}$  is the number of episodes for provider  $j$  belonging to patients in population  $d$ ,
- $\sum_{i \in j,d}$  denotes taking the sum over all stays at the  $j$ th provider among its patients belonging to patient population  $d$ , and
- $\bar{Y}$  denotes the national average standardized spending calculated over all episodes.