# MEDICARE-MEDICAID
# CAPITATED FINANCIAL ALIGNMENT MODEL
# QUALITY WITHHOLD TECHNICAL NOTES (DY 2 – 10)

Effective as of January 1, 2015; Issued April 29, 2016;
Updated November 22, 2022

**Introduction**

The Medicare-Medicaid Financial Alignment Initiative seeks to better serve people who are dually eligible for Medicare and Medicaid by testing person-centered, integrated care models that provide a more easily navigable and seamless path to all Medicare and Medicaid services. In order to ensure that dually eligible individuals receive high quality care and to incent quality improvement (both primary goals of the overall Initiative as well as the capitated model), both Medicare and Medicaid withhold a percentage of their respective components of the capitation rate. The withheld amounts will be repaid retrospectively subject to participating Medicare-Medicaid Plan (MMP) performance consistent with established quality requirements that include a combination of certain CMS core quality withhold measures (across all demonstrations), as well as state-specific quality withhold measures. Note that this methodology and related measures are separate and distinct from those used to determine a plan's Star Rating under Medicare Advantage; MMPs are not eligible for Quality Bonus Payments under Medicare.

The purpose of this document is to provide MMPs with additional detail regarding the methodology for the quality withhold analysis associated with the CMS core and state-specific withhold measures in Demonstration Years (DY) 2 through 10. The quality withhold measures are a subset of a larger and more comprehensive set of quality and reporting requirements that MMPs must adhere to under the demonstrations—more detail on the broader set of CMS core and state-specific reporting requirements can be found on the MMP Reporting Requirements webpage.

The overall methodology is described below and is applicable to both the CMS core and state-specific measures for DY 2 through 10. Details and benchmarks for CMS core measures are in Attachment A; these are applicable to all MMPs unless otherwise noted in state-specific attachments. Details and benchmarks regarding state-specific measures can also be found in the state-specific attachments.

Please note that the applicability and timing of DY 2 through 10 vary by state and are defined in each state's three-way contract and referenced in the state-specific attachments. Also note that the quality withhold analysis will be conducted separately for each DY (i.e., an MMP will be evaluated to determine whether it has met quality withhold requirements for each year and the withheld amounts will be repaid separately).

**Methodology**

MMPs will receive a "met" or "not met" designation for each withhold measure. For DY 2 through 10, MMPs have two ways to earn a "met" designation for a particular CMS core measure:

1. If the MMP meets the established benchmark for the measure, or
2. If the MMP meets the established goal for closing the gap between its performance in the calendar year prior to the performance period and the established benchmark by a stipulated percentage.[1]

If the MMP meets the established benchmark or the gap closure target, it will receive a "met" for that core measure. If the MMP does not meet the benchmark or the gap closure target, it will receive a "not met" for that core measure. For state-specific measures, states have the discretion to determine whether the gap closure target methodology applies. Refer to the state-specific attachments for more information.

Quality withhold payments will be determined based on the percentage of all withhold measures, including CMS core and state-specific measures, each MMP meets. All measures will be weighted equally, with no distinction made between measures that earned a "met" designation by meeting the benchmark and measures that earned a "met" designation by meeting the gap closure target. If one or more measures cannot be calculated for the MMP because of timing constraints or enrollment/denominator requirements

[1] The gap closure target methodology does not apply to CMS core measures CW6 and CW13.

(e.g., the reporting period does not fall during the applicable demonstration year, an MMP does not have sufficient enrollment to report the measure as detailed in the technical notes), it will be removed from the total number of withhold measures on which an MMP will be evaluated. In circumstances where the removal of measures results in fewer than three measures that are eligible for inclusion, alternative measures will be added to the quality withhold analysis (for more information, see the "Minimum Number of Measures" section on the following page).

The amount of the quality withhold payment will be based on a tiered scale using the following bands:

| Percent of Measures Met | Percent of Withhold MMP Receives |
|---|---|
| 0-19% | 0% |
| 20-39% | 25% |
| 40-59% | 50% |
| 60-79% | 75% |
| 80-100% | 100% |

**Benchmarks**

Benchmarks for individual measures are determined through an analysis of national or state-specific data depending upon the data available for each measure. In general, benchmarks for CMS core measures are established using national data such that all MMPs across demonstrations are held to a consistent level of performance. For state-specific measures, benchmarks are developed by states using state-specific data, as well as national data when available/appropriate.

Technical notes, including required benchmarks for DY 2 through 10, can be found in Attachment A for CMS core measures and in separate attachments for state-specific measures. For any DY, CMS may elect to adjust the benchmarks or other details included in Attachment A based on additional analysis or changes in specifications. Stakeholders will have the opportunity to comment on any substantive changes prior to finalization.

**Gap Closure Targets**

As indicated on the previous page, MMPs also have the opportunity to meet a measure if the MMP closes the gap between its performance in the calendar year prior to the performance period and the benchmark by a stipulated improvement percentage. For most MMPs, a standard improvement percentage of 10 percent (10%) will be used when determining the gap closure target; however, CMS may adjust this percentage in exceptional circumstances.

The gap closure target for each measure will be set at as follows:

1. Calculate the difference between the MMP's performance rate in the prior calendar year and the established benchmark level;
2. Multiply the difference identified in Step 1 by the improvement percentage (e.g., 10%);
3. Add the result from Step 2 to the MMP's performance rate in the prior calendar year and round to one decimal place.

For example, if an MMP's performance rate in Calendar Year (CY) 2022 is 78.2 and the benchmark is 92, then the gap closure target for CY 2023 would be 79.6 (based on a 10% improvement percentage). In other words, the MMP would need to achieve a minimum rate of 79.6 in order to meet the measure for CY 2023.

When this calculation results in improvement of less than one percentage point, the gap closure target will instead be set at the MMP's performance rate in the prior calendar year plus one percentage point.

If an MMP was unable to report a particular measure for the prior calendar year due to timing constraints or enrollment/denominator requirements, the gap closure target for that MMP will be set at the average gap closure target for other MMPs operating in the state. If an MMP failed to accurately report a measure for the prior calendar year without appropriate justification, then the MMP's performance for the current calendar year will be evaluated against the benchmark only. If the majority (i.e., more than 50 percent) of MMPs in a given state were unable to report a measure for the prior calendar year and the majority are able to report for the current calendar year, the gap closure target will not be used for that measure (i.e., all MMPs in the state will be evaluated against the benchmark only for the current calendar year). MMPs will be notified in writing of the applicability of the gap closure target for each measure included in the quality withhold analysis.

**Minimum Number of Measures**

As noted on the prior page, MMPs will be evaluated on no fewer than three quality withhold measures for each performance year. If an MMP is unable to report at least three quality withhold measures (either CMS core or state-specific) for a given year due to low enrollment or inability to meet other reporting criteria, alternative measures will be used in the quality withhold analysis. These alternative measures are aligned with measures that were previously included in the quality withhold analysis for DY 1. The alternative measures and corresponding benchmarks are listed in Attachment B.

**Measure Data Integrity**

The measure data used in the quality withhold analysis must be accurate and reliable. For HEDIS[2] data, if the HEDIS audit results in a designation of "NR" (Not Reported) or "BR" (Biased Rate), the MMP will automatically receive a "not met" designation for the applicable measure(s). For CAHPS[3] data, if an approved CAHPS vendor does not submit the MMP's data by the submission deadline, the MMP will automatically receive a "not met" designation for the applicable measure(s).

Note that MMPs may also be required to participate in performance measure validation for other CMS core and/or state-specific quality withhold measures. If issues are identified that impact the accuracy of the data reported by the MMP, CMS and the state may request that the MMP resubmit the measure and/or determine that the MMP did not meet the measure for purposes of the quality withhold analysis. Additional information regarding performance measure validation will be provided separately. Note that any such validation would only apply to measures that do not already have a data accuracy process incorporated into the reporting protocol (e.g., HEDIS and CAHPS measures would not be subject to this additional validation).

**Rounding Rules for Measure Scores**

For measures that are subject to the gap closure methodology, scores are generally rounded to one decimal place. For measures that are not subject to the gap closure methodology, scores are generally rounded to a whole number (i.e., no decimal place). These rules apply unless a measure's benchmark indicates a different level of precision, in which case scores are rounded to the same level of precision as the benchmark (e.g., CMS core measure CW6 is rounded to two decimal places).

In all cases, measure scores are rounded using standard "round to nearest" rules consistent with the approach in Medicare Part C and D Star Ratings. To obtain a value to the specified level of precision, the single digit following the level of precision will be rounded. If the digit to be rounded is 0, 1, 2, 3 or 4, the

[2] Healthcare Effectiveness Data and Information Set (HEDIS)® is a registered trademark of the National Committee for Quality Assurance (NCQA).

[3] Consumer Assessment of Healthcare Providers and Systems (CAHPS)® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).

value is rounded down, with no adjustment to the preceding digit. If the digit to be rounded is 5, 6, 7, 8 or 9, the value is rounded up, and a value of one is added to the preceding digit. For example, a gap closure measure that has a value of 83.449 rounds down to 83.4, while a gap closure measure that has a value of 83.451 rounds up to 83.5.

**Adjustment for Extreme and Uncontrollable Circumstances**

For MMPs that are affected by extreme and uncontrollable circumstances, such as major natural disasters, CMS and the state will remit the full quality withhold payment for the year in which the extreme and uncontrollable circumstance occurred, provided that the MMP fully reports all applicable quality withhold measures. Affected MMPs will continue to be evaluated on the quality withhold measures for informational purposes as appropriate; however, the affected MMPs will receive the full withheld amount irrespective of measure performance.

Affected MMPs will be identified according to the methodology utilized for Medicare Part C and D Star Ratings for the applicable measurement year, as articulated in the Medicare Part C and D Star Ratings Technical Notes and codified at 42 CFR §§ 422.166(i) and 423.186(i). Note that we will use 25 percent (25%) for the minimum percentage of members that must reside in a Federal Emergency Management Agency (FEMA)-designated Individual Assistance area at the time of the extreme and uncontrollable circumstance.

**Accommodating Reporting Changes for CY 2019**

Due to impacts from the Coronavirus Disease 2019 (COVID-19) public health emergency, MMPs were not required to submit HEDIS 2020 data covering the 2019 measurement year. To account for this change, MMPs automatically received a "met" designation for the unreported HEDIS measures included in the CY 2019 quality withhold analysis.[4] For all other CY 2019 measures that were reportable, we evaluated MMPs on their performance per usual (i.e., we compared MMP performance rates to benchmarks and gap closure targets as applicable in order to determine if the MMP met the minimum performance threshold for the measure).

[4] For Michigan MMPs, two additional state-specific quality withhold measures were also deemed unreportable. Michigan MMPs automatically received a "met" designation for those measures as well.

**Attachment A**
**CMS Core Withhold Measure Technical Notes: Demonstration Years 2 through 10**

**Measure: CW6 – Plan All-Cause Readmissions**

| | |
|---|---|
| Description: | The ratio of the plan's observed readmission rate to the plan's expected readmission rate. The readmission rate is based on the percent of plan members discharged from a hospital stay who were readmitted to a hospital within 30 days, either for the same condition as their recent hospital stay or for a different reason. |
| Measure Steward/ Data Source: | NCQA/HEDIS (MMPs should follow the version of the HEDIS Technical Specifications that is referenced in the HEDIS Reporting Requirements HPMS memorandum issued for the relevant reporting year) |
| HEDIS Label: | Plan All-Cause Readmissions (PCR) |
| NQF #: | 1768 |
| Applicable Years: | DY 2 through 10 |
| Utilizes Gap Closure: | No |
| Benchmark: | 1.00 |
| Notes: | The analysis for this measure is based on the MMP's observed-to-expected (O/E) ratio, which compares the actual readmission rate to the readmission rate that the MMP is expected to have given its case mix. The observed rate and expected rate are calculated as follows:<br>1. The observed readmission rate equals the sum of the count of 30-day readmissions across all age bands divided by the sum of the count of index stays across all age bands.<br>2. The expected readmission rate equals the sum of the expected readmissions rates across all age bands, weighted by the percentage of index stays in each age band.<br>See Attachment C for more information about the full calculation. Note that a lower O/E ratio is better (i.e., the MMP's O/E ratio must be less than or equal to the benchmark to receive a "met" designation).<br>This measure will be removed from the quality withhold analysis if the MMP has fewer than 1,000 enrollees as of July of the measurement year. It will also be removed if the MMP's total number of index stays is 150 or fewer. |

**Measure: CW7 – Annual Flu Vaccine**

| | |
|---|---|
| Description: | Percent of plan members who got a vaccine (flu shot). |
| Measure Steward/ Data Source: | CAHPS (Medicare CAHPS – Current Version) |
| NQF #: | N/A |
| Minimum Enrollment: | 600 |

| | |
|---|---|
| Continuous Enrollment Requirement: | Yes, 6 months |
| Applicable Years: | DY 2 through 10 |
| Utilizes Gap Closure: | Yes[5] |
| Benchmark: | 69% |
| Notes: | If an MMP's score for this measure has very low reliability (as defined by CMS and its contractor in the MMP CAHPS report), this measure will be removed from the quality withhold analysis. |

**Measure: CW8 – Follow-Up After Hospitalization for Mental Illness**

| | |
|---|---|
| Description: | Percent of discharges for plan members 6 years of age and older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health provider within 30 days after discharge. |
| Measure Steward/ Data Source: | NCQA/HEDIS (MMPs should follow the version of the HEDIS Technical Specifications that is referenced in the HEDIS Reporting Requirements HPMS memorandum issued for the relevant reporting year) |
| HEDIS Label: | Follow-Up After Hospitalization for Mental Illness (FUH) |
| NQF #: | 0576 |
| Applicable Years: | DY 2 through 10 |
| Utilizes Gap Closure: | Yes |
| Benchmark: | 56% |
| Notes: | This measure will be removed from the quality withhold analysis if the MMP has fewer than 1,000 enrollees as of July of the measurement year. It will also be removed if the MMP's HEDIS audit designation is "NA", which indicates that the denominator is too small (<30) to report a valid rate. |

**Measure: CW9 – Screening for Clinical Depression and Follow-Up Care**

| | |
|---|---|
| Description: | Percent of plan members ages 18 years and older screened for clinical depression using a standardized tool and follow-up plan documented. |
| Metric: | Measure 6.1 of the Medicare-Medicaid Capitated Financial Alignment Model Reporting Requirements |
| Measure Steward/ Data Source: | CMS-defined process measure |
| NQF #: | Modified from 0418 |
| Applicable Years: | N/A |

[5] Due to the COVID-19 public health emergency, MMPs did not submit 2020 CAHPS survey data. Consequently, for the CY 2021 quality withhold analysis, gap closure targets for the Annual Flu Vaccine measure will be calculated using measure scores from CY 2019 as the "prior calendar year."

| | |
|---|---|
| Utilizes Gap Closure: | N/A |
| Benchmark: | N/A |
| Notes: | This measure was retired, and therefore will not be included in the quality withhold analysis. |

**Measure: CW10 – Reducing the Risk of Falling**

| | |
|---|---|
| Description: | Percent of plan members with a problem falling, walking or balancing who discussed it with their doctor and received a recommendation for how to prevent falls during the year. |
| Measure Steward/ Data Source: | NCQA/HEDIS (Collected in HOS – MMPs should follow the NCQA HEDIS Specifications for the Medicare Health Outcomes Survey for the relevant reporting year) |
| HEDIS Label: | Fall Risk Management (FRM) |
| NQF #: | N/A |
| Applicable Years: | N/A |
| Utilizes Gap Closure: | N/A |
| Benchmark: | N/A |
| Notes: | As noted in the CY 2018 Medicare Advantage Call Letter, NCQA made changes to this measure that require revisions to the underlying survey questions in HOS. As a result, this measure will not be included in the quality withhold analysis until further notice. |

**Measure: CW11 – Controlling Blood Pressure**

| | |
|---|---|
| Description: | Percent of plan members 18-85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90 mm Hg) during the measurement year. |
| Measure Steward/ Data Source: | NCQA/HEDIS (MMPs should follow the version of the HEDIS Technical Specifications that is referenced in the HEDIS Reporting Requirements HPMS memorandum issued for the relevant reporting year) |
| HEDIS Label: | Controlling High Blood Pressure (CBP) |
| NQF #: | 0018 |
| Applicable Years: | DY 2 through 10, excluding CY 2018 and CY 2019[6] |
| Utilizes Gap Closure: | Yes |
| Benchmarks: | CY 2015 through CY 2017: 56%<br>CY 2018 and CY 2019: N/A<br>CY 2020 and Beyond: 71% |

[6] As noted, this measure was suspended for CY 2018 and CY 2019, which align with different demonstration years depending on the start date of each demonstration.

Notes: Due to significant changes to the measure specifications as of the CY 2018 measurement year, this measure was suspended from the CY 2018 and CY 2019 quality withhold analyses. It was reinstated as of CY 2020.

For years in which this measure applies, it will be removed from the quality withhold analysis if the MMP has fewer than 1,000 enrollees as of July of the measurement year. It will also be removed if the MMP's HEDIS audit designation is "NA", which indicates that the denominator is too small (<30) to report a valid rate.

**Measure: CW12 – Medication Adherence for Diabetes Medications**

Description: Percent of plan members with a prescription for diabetes medication who fill their prescription often enough to cover 80% or more of the time they are supposed to be taking the medication.

Measure Steward/ Data Source: CMS Prescription Drug Event (PDE) Data (This measure will be calculated according to the Medicare Part C & D Star Ratings Technical Notes for the relevant reporting year)

NQF #: 0541

Applicable Years: DY 2 through 10

Utilizes Gap Closure: Yes

Benchmarks: CY 2015 through CY 2019: 73%
CY 2020 and Beyond: 80%

Notes: This measure will be removed from the quality withhold analysis if the MMP has 30 or fewer enrolled member-years in the denominator.

**Measure: CW13 – Encounter Data**

Description: Encounter data for all services covered under the demonstration, with the exception of Prescription Drug Event (PDE) data, submitted in compliance with demonstration requirements.

Metric: MMPs will be required to submit encounter data at the frequency specified according to the following tiered scale (as determined by the number of enrollees per Contract ID), with the exception of PDE data (see Notes section below):

| Plan Enrollment | Data Submission |
|---|---|
| Greater than 100,000 | Weekly |
| 50,000-100,000 | Bi-Weekly |
| Less than 50,000 | Monthly |

| | |
|---|---|
| | Additional criteria:<br>• Frequency: All requisite encounter files must be submitted at least monthly, consistent with the above schedule.[7]<br>• Timeliness: All encounters must be submitted within 180 days of the ending date of service.[8] |
| Measure Steward/ Data Source: | MMP Encounter Data |
| NQF #: | N/A |
| Applicable Years: | DY 2 through 10 |
| Utilizes Gap Closure: | No |
| Benchmark: | 80% of encounters are submitted according to the frequency and timeliness criteria identified above, unless otherwise specified in the three-way contract and state-specific attachment. |
| Notes: | This metric excludes PDE data. MMPs are responsible for following existing PDE submission requirements.<br><br>The frequency component is calculated by dividing the total number of requisite files submitted by the total number of requisite files expected during the calendar year. The timeliness component is calculated by dividing the total number of encounters submitted within 180 days by the total number of encounters submitted during the calendar year. The final score is the average of the frequency and timeliness components.<br><br>If the submission standards cited in an MMP's three-way contract are more stringent than those described in the schedule/criteria above, MMPs will be required to adhere to their contract's standards. This will be noted in the state specific attachments, if applicable. |

[7] On at least a monthly basis, MMPs are required to submit all applicable encounter files, including Medicare Professional, Medicaid Professional, Medicare Institutional, Medicaid Institutional, Medicare DME, Medicaid DME, Medicaid NCPDP, and (if covered) Medicaid Dental. However, for purposes of the quality withhold analysis, CMS may elect to narrow the frequency component to a subset of the files (e.g., Medicare Professional, Medicaid Professional, Medicare Institutional, and Medicaid Institutional). In such cases, the timeliness component (i.e., submission within 180 days of the date of service) will continue to apply to all encounters, irrespective of the file type.

[8] As communicated in the March 25, 2016 HPMS memo titled "Completing Submission of CY 2014-15 Encounter Data by Medicare-Medicaid Plans (MMPs)," the CY 2016 encounter analysis did not include the 180-day timeliness requirement for submission of encounters with dates of service on or before September 30, 2015. This modification impacted the DY 1, DY 2, or DY 3 encounter analysis depending on the start date of each demonstration.

**Attachment B**
**Alternative Withhold Measure Technical Notes: Demonstration Years 2 through 10**

The following measures will be included in the quality withhold analysis only if an MMP is unable to report at least three of the standard quality withhold measures (either CMS core or state-specific) for a given year. The alternative measures will be added to the analysis in the order in which they are listed below (unless low enrollment prevents reporting of the alternative measure). If a third alternative measure is required, it will be selected by CMS and the state from a DY 1 state-specific quality withhold measure and communicated to the MMPs in separate guidance.

**Measure: AW1 – Annual Reassessment**

| | |
|---|---|
| Description: | Percent of plan members who received a reassessment within 365 days of the most recent assessment completed. |
| Metric: | Measure 2.3 of the Medicare-Medicaid Capitated Financial Alignment Model Reporting Requirements |
| Measure Steward/ Data Source: | CMS-defined process measure |
| NQF #: | N/A |
| Applicable Years: | Varies by MMP |
| Utilizes Gap Closure: | Yes |
| Benchmark: | 65% |
| Notes: | For quality withhold purposes, this measure will be calculated as follows:<br>Denominator: Total number of members who had an assessment completed during the previous reporting period (Data Element B).<br>Numerator: Total number of members with a reassessment completed within 365 days of the most recent assessment completed (Data Element D). |

**Measure: AW2 – Consumer Governance Board**

| | |
|---|---|
| Description: | Establishment of a consumer advisory board or inclusion of consumers on a governance board consistent with contract requirements. |
| Metric: | Measure 5.3 of the Medicare-Medicaid Capitated Financial Alignment Model Reporting Requirements |
| Measure Steward/ Data Source: | CMS-defined process measure |
| NQF #: | N/A |
| Applicable Years: | Varies by MMP |
| Utilizes Gap Closure: | No |
| Benchmark: | 100% compliance |

**Attachment C**
**Plan All-Cause Readmissions Measure Calculation**

The following fields and formulas will be used to calculate the MMP's performance rate for the Plan All-Cause Readmissions (PCR) measure. For MMPs in demonstrations that target populations either over or under age 65, the formulas will be modified to use only the applicable age bands.

| Formula Value | PCR Field | Field Description |
|---|---|---|
| A | is1844 | Count of Index Stays (Denominator) Age 18-44 |
| G | r1844 | Count of 30-Day Readmissions (Numerator) Age 18-44 |
| M | err1844 | Expected Readmissions Rate (Expected Readmissions/Den) Age 18-44 |
| B | is4554 | Count of Index Stays (Denominator) Age 45-54 |
| H | r4554 | Count of 30-Day Readmissions (Numerator) Age 45-54 |
| N | err4554 | Expected Readmissions Rate (Expected Readmissions/Den) Age 45-54 |
| C | is5564 | Count of Index Stays (Denominator) Age 55-64 |
| I | r5564 | Count of 30-Day Readmissions (Numerator) Age 55-64 |
| O | err5564 | Expected Readmissions Rate (Expected Readmissions/Den) Age 55-64 |
| D | is6574 | Count of Index Stays (Denominator) Age 65-74 |
| J | r6574 | Count of 30-Day Readmissions (Numerator) Age 65-74 |
| P | err6574 | Expected Readmissions Rate (Expected Readmissions/Den) Age 65-74 |
| E | is7584 | Count of Index Stays (Denominator) Age 75-84 |
| K | r7584 | Count of 30-Day Readmissions (Numerator) Age 75-84 |
| Q | err7584 | Expected Readmissions Rate (Expected Readmissions/Den) Age 75-84 |
| F | is85 | Count of Index Stays (Denominator) Age 85+ |
| L | r85 | Count of 30-Day readmissions (Numerator) Age 85+ |
| R | err85 | Expected Readmissions Rate (Expected Readmissions/Den) Age 85+ |

$$\text{Observed} = \frac{G+H+I+J+K+L}{A+B+C+D+E+F}$$

$$\text{Expected} = \left(\left(\frac{A}{A+B+C+D+E+F}\right) \times M\right) + \left(\left(\frac{B}{A+B+C+D+E+F}\right) \times N\right) + \left(\left(\frac{C}{A+B+C+D+E+F}\right) \times O\right) + \left(\left(\frac{D}{A+B+C+D+E+F}\right) \times P\right) + \left(\left(\frac{E}{A+B+C+D+E+F}\right) \times Q\right) + \left(\left(\frac{F}{A+B+C+D+E+F}\right) \times R\right)$$

$$\text{Final Rate} = \frac{\text{Observed}}{\text{Expected}}$$