Illinois Department of Healthcare and Family Services 2022 (CY 2021) Report Card Methodology

August 2022

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Project Overview

Health Services Advisory Group, Inc. (HSAG) is currently serving as the External Quality Review Organization (EQRO) for the Illinois Department of Healthcare and Family Services (HFS). HSAG is tasked with developing a report card to evaluate the performance of five Illinois Managed Care Organizations (MCOs) serving the Medicaid population. The report card is targeted toward a consumer audience; therefore, it is user friendly, easy to read, and addresses areas of interest for consumers. As part of the EQRO contract, HSAG analyzed measurement year (MY) 2021 Healthcare Effectiveness Data and Information Set (HEDIS®)[1] results, including MY 2021 Consumer Assessment of Healthcare Providers and Systems (CAHPS®)[2] data from five Illinois MCOs.

HSAG created two report cards to evaluate the MCO performance, one for consumers living in Cook County and one for consumers Statewide (i.e., outside Cook County). The Cook County report card included an analysis of the five plans that are available to Medicaid beneficiaries in Cook County. The Statewide report card included an analysis of the four plans that are available statewide to Medicaid beneficiaries (i.e., the one plan that is only available in Cook County was excluded from the analysis). The calendar year (CY) 2021 Report Card analysis helps support HFS' public reporting of MCO performance information.

Data Collection

For this activity, HSAG received the plans' MY 2021 CAHPS member-level data files and HEDIS data from HFS and the plans. The *HEDIS MY 2021 Specifications for Survey Measures, Volume 3* was used to collect and report on the CAHPS measures. The *HEDIS MY 2021 Technical Specifications for Health Plans, Volume 2* was used to collect and report on the HEDIS measures.

Reporting Measures and Categories

MCOs' performance was evaluated in six separate reporting categories, identified as important to consumers.[3] Each reporting category consists of a set of measures that were evaluated together to form a category summary score. The reporting categories and descriptions of the measures they contain are:

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1 HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).
2 CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).
3 National Committee for Quality Assurance. "Ten Steps to a Successful Report Card Project, Producing Comparative Health Plan Reports for Consumers." October 1998.

- **Doctors' Communication**: Includes adult and child CAHPS composites and items on consumer perceptions about how well their doctors communicate and overall ratings of personal doctors. In addition, this category includes a CAHPS measure related to medical assistance with smoking and tobacco use cessation.
- **Access to Care**: Includes adult CAHPS composites on consumer perceptions regarding the ease of obtaining needed care and how quickly they received that care. This category includes HEDIS measures that assess adults' access to care and children's and adolescents' access to dentists.
- **Women's Health**: Includes HEDIS measures that assess how often women-specific services are provided (e.g., breast cancer, cervical cancer, and chlamydia screenings, as well as prenatal and postpartum care).
- **Living With Illness**: Includes HEDIS measures that assess how well MCOs take care of people who have chronic conditions, such as diabetes and hypertension.
- **Behavioral Health**: Includes HEDIS measures that assess if members with behavioral health conditions received appropriate follow-up after hospitalization, emergency department (ED) visit, or high intensity care, as well as measures that assess pharmacotherapy for opioid use disorder and the initiation and engagement of alcohol and other drug (AOD) dependence treatment. In addition, this category includes a HEDIS measure that assesses if children and adolescents using antipsychotic prescriptions receive appropriate metabolic testing.
- **Keeping Kids Healthy**: Includes HEDIS measures that assess how often preventive services are provided (e.g., child and adolescent immunizations, well-child visits, and weight assessment and counseling for children/adolescents).

Measures Used In Analysis

HFS, in collaboration with HSAG, chose measures for the 2022 (CY 2021) Report Card based on a number of factors, such as using measures that best approximate the reporting categories that are useful to consumers; using data that are available; and using nationally recognized, standardized measures of Medicaid and/or managed care.

Table 1, on the next page, lists the 51 measures, 9 CAHPS and 42 HEDIS, and their associated weights.[4] Weights were applied when calculating the category summary scores and the confidence intervals to ensure that all measures contributed equally in the derivation of the final results. Please see the Comparing Plan Performance section for more details.

[4] The following measures have been removed from the 2022 Report Card analysis due to half the MCOs having *Not Applicable* (NA) designations: *Child Medicaid—Getting Needed Care (CAHPS Composite)*, *Child Medicaid—Getting Care Quickly (CAHPS Composite)*.

Table 1—2022 (CY 2021) Report Card Reporting Categories, Measures, and Weighting

Measures	Weighting
Doctors' Communication	
Adult Medicaid—How Well Doctors Communicate (CAHPS Composite)	1
Child Medicaid—How Well Doctors Communicate (CAHPS Composite)	1
Adult Medicaid—Rating of Personal Doctor (CAHPS Global Rating)	1
Child Medicaid—Rating of Personal Doctor (CAHPS Global Rating)	1
Medical Assistance With Smoking and Tobacco Use Cessation	
Advising Smokers and Tobacco Users to Quit	1/3
Discussing Cessation Medications	1/3
Discussing Cessation Strategies	1/3
Access to Care	
Adult Medicaid—Getting Needed Care (CAHPS Composite)	1
Adult Medicaid—Getting Care Quickly (CAHPS Composite)	1
Adults' Access to Preventive/Ambulatory Health Services—Total	1
Annual Dental Visit—Total	1
Women's Health	
Breast Cancer Screening	1
Cervical Cancer Screening	1
Chlamydia Screening in Women—Total	1
Prenatal and Postpartum Care	
Timeliness of Prenatal Care	1/2
Postpartum Care	1/2
Living With Illness	
Comprehensive Diabetes Care	
Hemoglobin A1c (HbA1c) Testing	1/5
Eye Exam (Retinal) Performed	1/5
HbA1c Poor Control (>9.0%)	1/5
HbA1c Control (<8.0%)	1/5
BP Control (<140/90 mm Hg)	1/5
Controlling High Blood Pressure	1

Measures	Weighting
Statin Therapy for Patients With Diabetes	
Received Statin Therapy	1/2
Statin Adherence 80 Percent	1/2
Behavioral Health	
Follow-Up After Hospitalization for Mental Illness	
7-Day Follow-Up—Total	1/2
30-Day Follow-Up—Total	1/2
Initiation and Engagement of AOD Abuse or Dependence Treatment	
Initiation of AOD Treatment—Total	1/2
Engagement of AOD Treatment—Total	1/2
Pharmacotherapy for Opioid Use Disorder	1
Follow-Up After ED Visit for Mental Illness	
7-Day Follow-Up—Total	1/2
30-Day Follow-Up—Total	1/2
Follow-Up After High Intensity Care for Substance Use Disorder	
7-Day Follow-Up—Total	1/2
30-Day Follow-Up—Total	1/2
Follow-Up After ED Visit for AOD Abuse or Dependence	
7-Day Follow-Up—Total	1/2
30-Day Follow-Up—Total	1/2
Metabolic Monitoring for Children and Adolescents on Antipsychotics—Total	
Blood Glucose Testing—Total	1/3
Cholesterol Testing—Total	1/3
Blood Glucose and Cholesterol Testing—Total	1/3
Keeping Kids Healthy	
Child and Adolescent Well-Care Visits	
Ages 3–11 Years	1
Ages 12–17 Years	1
Ages 18–21 Years	1

Measures	Weighting
Well-Child Visits in the First 30 Months of Life	
Well-Child Visits in the First 15 Months—Six or More Well-Child Visits	1
Well-Child Visits for Age 15 Months–30 Months—Two or More Well-Child Visits	1
Childhood Immunization Status	
Combination 3	1
Combination 10	1
Immunizations for Adolescents	
Meningococcal Vaccine	1/3
Tetanus, Diphtheria Toxoids, and Acellular Pertussis (Tdap) Vaccine	1/3
Human Papillomavirus (HPV) Vaccine	1/3
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	
BMI Percentile Documentation—Total	1/3
Counseling for Nutrition—Total	1/3
Counseling for Physical Activity—Total	1/3

Missing Values

In general, HEDIS and CAHPS data contain three classes of missing values:

- *Not Reported (NR)*—MCOs chose not to submit data, even though it was possible for them to do so.
- *Biased Rate (BR)*—MCOs' measure rates were determined to be materially biased in a HEDIS Compliance Audit.™[5]
- *Not Applicable (NA)*—MCOs were unable to provide a sufficient amount of data (e.g., too few members met the eligibility criteria).

In developing scores and ratings for the reporting categories, HSAG handled the missing rates for measures as follows:

- Rates with an *NR* designation were assigned the minimum rate.
- Rates with a *BR* designation were assigned the minimum rate.

[5] NCQA HEDIS Compliance Audit™ is a trademark of NCQA.

- Rates with an *NA* designation were assigned the average value.

For measures with an NA audit result, HSAG used the mean of non-missing observations across all MCOs. For measures with an NR or BR audit result, HSAG used the minimum value of the non-missing observations across all MCOs. This minimizes the disadvantage for MCOs that are willing but unable to report data and ensures that MCOs do not gain advantage from intentionally failing to report complete and accurate data. If more than half of the plans have an NR, BR, or NA for any measure, then the measure was excluded from the analysis.

For MCOs with NR, BR, and NA audit results, HSAG used the average variance of the non-missing observations across all MCOs. This ensures that all rates reflected some level of variability, rather than simply omitting the missing variances in subsequent calculations.

Additionally, HSAG only replaced missing values where an MCO reported data for at least 50 percent of the indicators in a reporting category. If an MCO was missing more than 50 percent of the measures that comprised a reporting category, HSAG gave the MCO a designation of "Insufficient Data" for that category.

Comparing Plan Performance

HSAG computed six summary scores for each MCO, as well as the summary mean values for the MCOs as a group. Each score is a standardized score where higher values represent more favorable performance. Summary scores for the six reporting categories (Doctors' Communication, Access to Care, Women's Health, Living With Illness, Behavioral Health, and Keeping Kids Healthy) were calculated from MCO scores on selected HEDIS measures and CAHPS questions and composites.

1. HEDIS rates were extracted from the auditor-locked IDSS data sets and HSAG calculated the CAHPS rates using the NCQA CAHPS member-level data files. To calculate a rate for a CAHPS measure, HSAG converted each individual question by assigning the top-box responses (i.e., "Usually/Always" and "9/10," where applicable) to a 1 for each individual question, as described in *HEDIS MY 2020 Specifications for Survey Measures, Volume 3*. All other non-missing responses were assigned a value of 0. HSAG then calculated the percentage of respondents with a top-box response (i.e., a 1). For composite measures, HSAG calculated the composite rate by taking the average percentage for each question within the composite.
2. For each HEDIS and CAHPS measure, HSAG calculated the measure variance. Table 2, on the next page, provides an example of how the variance for a HEDIS measure was calculated. The measure variance for HEDIS measures was calculated as follows:

$$\frac{p_k(1-p_k)}{n_k-1}$$

where: p_k = plan k score
n_k = number of members in the measure sample for plan k

Table 2—Calculating Variance
EXAMPLE USING MOCK DATA

Plan	Measure	Denominator from Step 1	Rate from Step 1	Variance
Plan A	Comprehensive Diabetes Care: HbA1c Testing	411	0.8686	(0.8686*(1-0.8686))/(411-1) = 0.00027838
Plan B	Comprehensive Diabetes Care: HbA1c Testing	432	0.8796	(0.8796*(1-0.8796))/(432-1) = 0.00024572
Plan C	Comprehensive Diabetes Care: HbA1c Testing	228	0.9035	(0.9035*(1-0.9035))/(228-1) = 0.00038409

For CAHPS global rating measures, the variance was calculated as follows:

$$\frac{1}{n}\frac{\sum_{i=1}^{n}(x_i-\bar{x})^2}{n-1}$$

where: x_i = response of member i
$\bar{x}$ = the mean score for plan k
n = number of responses in plan k

For CAHPS composite measures, the variance was calculated as follows:

$$\frac{N}{N-1}\sum_{i=1}^{N}\left(\sum_{j=1}^{m}\frac{1}{m}\frac{(x_{ij}-\bar{x}_j)}{n_j}\right)^2$$

where: j = 1,…,m questions in the composite measure
i = 1….,n_j members responding to question j
x_{ij} = response of member i to question j (0 or 1)
$\bar{x}_j$ = plan mean for question j
N = members responding to at least one question in the composite

3. For plans with *NA, BR,* or *NR* audit results, HSAG imputed missing values for the rate and used the average variance of the non-missing rates across all plans. This ensured that all rates reflect some level of variability, rather than simply omitting the missing variances in subsequent calculations. Table 3, on the next page, provides an example of how the variance of missing values was imputed.

Table 3—Imputing Variance
EXAMPLE USING MOCK DATA

Plan	Measure	Denominator from Step 1	Rate before Imputation from Step 1	Rate after Imputation	Variance
Plan A	Comprehensive Diabetes Care: HbA1c Testing	411	0.8686	0.8686	0.00027838
Plan B	Comprehensive Diabetes Care: HbA1c Testing	432	0.8796	0.8796	0.00024572
Plan C	Comprehensive Diabetes Care: HbA1c Testing	228	0.9035	0.9035	0.00038409
Plan D	Comprehensive Diabetes Care: HbA1c Testing	29	NA	Average Rate = 0.8839	Average Variance = 0.00030273
Plan E	Comprehensive Diabetes Care: HbA1c Testing	NR	NR	Minimum Rate = 0.8686	Average Variance = 0.00030273

4. HSAG computed the plan composite mean for each CAHPS and HEDIS measure. Please note, imputed rates from step 3 are not included in the statewide mean and standard deviation calculations. Table 4 displays the plan composite mean from Step 1, along with the statewide mean and standard deviation for some measures in the Access to Care domain.

Table 4—Composite Mean Calculations
EXAMPLE USING MOCK DATA

Measure	Plan A Rate from Step 1	Plan B Rate from Step 1	Plan C Rate from Step 1	Plan D Rate from Step 1	Plan E Rate from Step 1	Statewide Mean	Statewide Standard Deviation
Access to Care							
Adult Medicaid—Getting Needed Care (CAHPS Composite)	0.6597	0.6562	0.5927	0.7308	0.6498	0.6578	0.0491
Adult Medicaid—Getting Care Quickly (CAHPS Composite)	0.7048	0.7001	0.6305	0.7534	0.6964	0.6970	0.0438

Measure	Plan A Rate from Step 1	Plan B Rate from Step 1	Plan C Rate from Step 1	Plan D Rate from Step 1	Plan E Rate from Step 1	Statewide Mean	Statewide Standard Deviation
Adults' Access to Preventive/Ambulatory Health Services (Total Rate)	0.8173	0.8059	0.8792	0.9031	0.7743	0.8360	0.0535

5. Each plan mean (CAHPS or HEDIS) was standardized by subtracting the mean of the plan means and dividing by the standard deviation of the plan means to give each measure equal weight toward the category rating. If the measures were not standardized, a measure with higher variability would have contributed disproportionately toward the category rating. Table 5 displays how the plan's means were standardized. Rates were standardized using the following formula: (Plan Score - Statewide Mean)/(Statewide Standard Deviation).

Table 5—Plan Standardized Means
EXAMPLE USING MOCK DATA

Measure	Measure Weight (wj)	Plan A Rate from Step 1	Statewide Mean from Step 4	Statewide Standard Deviation from Step 4	Plan A Standardized Rate
Access to Care					
Adult Medicaid—Getting Needed Care (CAHPS Composite)	1	0.6597	0.6578	0.0491	(0.6597-0.6578)/0.0491 = 0.03870
Adult Medicaid—Getting Care Quickly (CAHPS Composite)	1	0.7048	0.6970	0.0438	(0.7048-0.6970)/0.0438 = 0.17808
Adults' Access to Preventive/Ambulatory Health Services (Total Rate)	1	0.8173	0.8360	0.0535	(0.8173-0.8360)/0.0535 = -0.34953

6. HSAG summed the standardized plan means, weighted by the individual measure weights, to derive the plan category summary measure score. Table 6, on the next page, displays how the summary measure score were determined from a plan's standardized rate, which was calculated in Step 5 above.

Table 6—Plan Category Summary Score
EXAMPLE USING MOCK DATA

Measure	Measure Weight (wj)	Plan A Standardized Rate from Step 5
Access to Care		
Adult Medicaid—Getting Needed Care (CAHPS Composite)	1	0.03870
Adult Medicaid—Getting Care Quickly (CAHPS Composite)	1	0.17808
Adults' Access to Preventive/Ambulatory Health Services (Total Rate)	1	-0.34953
Access to Care Category Sum Score		**-0.13275**

7. For each plan k, HSAG calculated the category variance, CV_k, as: $CV_k = \sum_{j=1}^{m} \frac{w_j}{c_j^2} V_j$

   where: $j = 1,\ldots,m$ HEDIS or CAHPS measures in the summary
   V_j = variance for measure j
   c_j = group standard deviation for measure j
   w_j = measure weight for measure j

Table 7, on the next page, displays how the sample of measures from the Access to Care domain variance was calculated.

Table 7—Plan Category Summary Score Variance
EXAMPLE USING MOCK DATA

Measure	Measure Weight (wj)	Plan A Measure Variance (Vj) from Step 2	Statewide Standard Deviation (cj) from Step 4	$\frac{w_j}{c_j^2}V_j$
Access to Care				
Adult Medicaid—Getting Needed Care (CAHPS Composite)	1	0.0015	0.0491	(1/(0.0491^2))*0.0015=0.6222
Adult Medicaid—Getting Care Quickly (CAHPS Composite)	1	0.0014	0.0438	(1/(0.0438^2))*0.0014=0.7298
Adults' Access to Preventive/Ambulatory Health Services (Total Rate)	1	0.000010	0.0535	(1/(0.0535^2))*0.00001=0.0035
Access to Care Category Sum Variance (CVk)				**1.3555**

8. The summary scores were used to compute the group mean and the difference scores. The group mean was the average of the plan summary measure scores. The difference score, dk, was calculated as dk = plan k score – group mean. Table 8 displays how the difference score for a sample of plans was calculated for the Access to Care domain.

Table 8—Difference Scores
EXAMPLE USING MOCK DATA

Plan	Domain	Plan Standardized Score	Statewide Standardized Average*	Difference Score (dk)
Plan A	Access to Care	-0.13275	0	-0.13275
Plan B	Access to Care	-0.52504	0	-0.52504
Plan C	Access to Care	-2.03761	0	-2.03761
Plan D	Access to Care	4.028889	0	4.028889
Plan E	Access to Care	-1.33203	0	-1.33203

*Because the Statewide Standardized Average is based on the plans' standardized scores, the Statewide Standardized Average is always zero.

9. For each plan k, HSAG calculated the variance of the difference scores, Var(dk), as:

$$Var(d_k) = \frac{P(P-2)}{P^2}CV_k + \frac{1}{P^2}\sum_{k=1}^{P}CV_k$$

where: P = total number of plans
CV_k = category variance for plan k

Table 9 provides an example of how HSAG calculated the variance of the difference scores for a sample of plans for the Access to Care domain.

Table 9—Variance of the Difference Scores
EXAMPLE USING MOCK DATA

Plan	Domain	Domain Variance (CVk) from Step 7	Number of Plans (P)	$\frac{P(P-2)}{P^2} Cv_k$	$\frac{1}{P^2}\sum_{k=1}^{P} Cv_k$	Var(dk)
Plan A	Access to Care	1.3555	5	(5*(5-2))/(5^2)*1.3555 = 0.8133	(1/5^2)*(1.3555+0.421+0.6+0.3278+0.3354) = 0.121588	0.8133+ 0.121588 = 0.934888
Plan B	Access to Care	0.421	5	(5*(5-2))/(5^2)*0.421 = 0.2526	0.121588	0.2526 + 0.121588 = 0.374188
Plan C	Access to Care	0.6	5	(5*(5-2))/(5^2)*0.6 = 0.36	0.121588	0.36 + 0.121588 = 0.481588
Plan D	Access to Care	0.3278	5	(5*(5-2))/(5^2)*0.3278 = 0.19668	0.121588	0.19668 + 0.121588 = 0.318268
Plan E	Access to Care	0.3354	5	(5*(5-2))/(5^2)*0.3354 = 0.20124	0.121588	0.20124 + 0.121588 = 0.322828

10. The statistical significance of each difference was determined by computing a confidence interval (CI). A 95 percent CI and 68 percent CI was calculated around each difference score to identify plans that were significantly higher than or significantly lower than the mean. Plans with differences significantly above (i.e., 1.96 standard deviations above the mean) or below (i.e., 1.96 standard deviations below the mean) zero at the 95 percent confidence level received the top (Highest Performance) and bottom (Lowest Performance) designations, respectively. Plans with differences significantly above (i.e., between 1 and 1.96 standard deviations above the mean) or below (i.e., between 1 and 1.96 standard deviations below the mean) zero at the 68 percent confidence level, but not at the 95 percent confidence level, received High Performance and Low Performance designations, respectively. A plan was significantly above zero if the lower limit of the CI was

greater than zero; and was significantly below zero if the upper limit of the CI was below zero. Plans that do not fall either above or below zero at the 68 percent confidence level received the middle designation (Average Performance). For a given measure, the formulas for calculating the CIs were:

$$95\%\ \text{CI} = d_k \pm 1.96\sqrt{Var(d_k)}$$

$$68\%\ \text{CI} = d_k \pm \sqrt{Var(d_k)}$$

Table 10 displays the upper and lower confidence intervals for the sample of plans for the Access to Care domain. HSAG calculated the confidence intervals using the 95 Percent CI and 68 Percent CI formulas above.

Table 10—Confidence Interval Calculations
EXAMPLE USING MOCK DATA

Plan	Domain	Difference Score (dk) from Step 8	Var(dk) from Step 9	95% CI Lower Bound	95% CI Upper Bound	68% CI Lower Bound	68% CI Upper Bound
Plan A	Access to Care	-0.13275	0.934888	-2.027866287	1.762366287	-1.099646065	0.834146065
Plan B	Access to Care	-0.52504	0.374188	-1.723989799	0.673909799	-1.136749081	0.086669081
Plan C	Access to Care	-2.03761	0.481588	-3.397782217	-0.677437783	-2.731575417	-1.343644583
Plan D	Access to Care	4.028889	0.318268	2.923150175	5.134627825	3.464736538	4.593041462
Plan E	Access to Care	-1.33203	0.322828	-2.445661916	-0.218398084	-1.900209549	-0.763850451

A five-level rating scale provides consumers with an easy-to-read “picture” of quality performance across plans and presents data in a manner that emphasizes meaningful differences between plans. The 2022 (CY 2021) Report Card uses stars to display results for each plan and displays plan performance as shown in Table 11 on the next page.

Table 11—2022 (CY 2021) Report Card–Performance Ratings

Rating	Plan Performance Compared to Statewide Average	
★★★★★	**Highest Performance**	The plan's performance was 1.96 standard deviations above the Illinois Medicaid Health Plan average.
★★★★	**High Performance**	The plan's performance was 1 standard deviation above the Illinois Medicaid Health Plan average.
★★★	**Average Performance**	The plan's performance was average compared to all Illinois Medicaid Health Plan average.
★★	**Low Performance**	The plan's performance was 1 standard deviation below the Illinois Medicaid Health Plan average.
★	**Lowest Performance**	The plan's performance was 1.96 standard deviations below the Illinois Medicaid Health Plan average.

Comparing Plan Performance to National Benchmarks

HSAG presented measure-level ratings on the selected HEDIS and CAHPS measures based on comparisons to national Medicaid benchmarks. A five-level rating scale was used to report how HEDIS and CAHPS measures compare to the 2021 Quality Compass national Medicaid benchmarks. The 2022 (CY 2021) Report Card includes stars to display measure-level results for each plan as follows:

Table 12—2021 (CY 2020) MCO Report Card–Performance Measure Ratings

Rating	Performance Measure Compared to 2021 Quality Compass National Medicaid Benchmarks	
★★★★★	**Highest Performance**	The performance measure was at or above the 90th percentile.
★★★★	**High Performance**	The performance measure was at or between the 75th and 89th percentiles.
★★★	**Average Performance**	The performance measure was at or between the 50th and 74th percentiles.
★★	**Low Performance**	The performance measure was at or between the 25th and 49th percentiles.
★	**Lowest Performance**	The performance measure was at or below the 25th percentile.

Comparing Plan Category Performance to National Benchmarks

In addition, HSAG provides consumers with category-level trending information for the selected categories (Doctor's Communication, Access to Care, Women's Health, Living With Illness, Behavioral Health, and Keeping Kids Healthy) to indicate whether the MCO's average rating in each category improved, declined, or stayed the same from 2021 to 2022 based on comparisons to national Medicaid benchmarks. HSAG computed six reporting category summary scores for each MCO. HSAG compared each measure to national benchmarks and assigned star ratings for each measure. HSAG used the following methodology to assign a star rating for each individual measure:

★★★★★ = The MCO's measure rate was at or above the national Medicaid 90th percentile.

★★★★ = The MCO's measure rate was between the national Medicaid 75th percentile and 89th percentile.

★★★ = The MCO's measure rate was between the national Medicaid 50th percentile and 74th percentile.

★★ = The MCO's measure rate was between the national Medicaid 25th percentile and 49th percentile.

★ = The MCO's measure rate was below the national Medicaid 25th percentile.

To provide a more accurate rating of each performance measure, HSAG also assigned partial stars based on how close the rating was to the next star. Because a rating of five stars is the maximum star rating possible, partial stars were only calculated for ratings below five stars. To calculate the partial star ratings at the measure level, each MCO's rate was compared to the national Medicaid percentiles to determine the percentile range (i.e., the lower and upper percentile bounds) the rate fell between (e.g., between the 25th and 50th percentiles). For a rating of one star (i.e., below the 25th percentile), the 10th percentile was used as the lower percentile bound. The partial star rating for each measure was derived using the following formula:

$$Partial\ Star\ Rating = Star\ Rating + \left[\frac{(MCO\ Rate - PV_0)}{(PV_1 - PV_0)}\right]$$

Where: PV_0 = the actual rate value for the lower percentile bound

PV_1 = the actual rate value for the upper percentile bound

Star Rating = the star rating assigned for the MCO's rate (i.e., 1, 2, 3, or 4)

MCO Rate = the reported measure rate for the MCO

For example, if the national Medicaid 25th percentile was 40 percent, the national Medicaid 50th percentile was 60 percent and an MCO had a rate of 45 percent for a measure, then the MCO would receive 2 stars for falling between the 25th and 49th percentiles and the partial star rating would be calculated as follows:

$$Partial\ Star\ Rating = 2 + \left[\frac{(45 - 40)}{(60 - 40)}\right] = 2.25$$

Once the partial star rating was calculated for each measure, then summary scores for the six reporting categories (Doctors' Communication, Access to Care, Women's Health, Living With Illness, Behavioral Health, and Keeping Kids Healthy) was calculated by taking the weighted average of all partial star ratings for all measures within the category and then rounding to the nearest star. The plan's unrounded star rating for each category in 2022 was compared to the plan's unrounded star rating for each category in 2021 to determine the change in performance.

The 2022 (CY 2021) Report Card includes the following symbols to display trending results at the category-level for each plan:

Table 13—2022 (CY 2021) Report Card–Trending Ratings

Rating	Category Trending Compared to 2021 Quality Compass National Medicaid Benchmarks	
↑	**Substantial Improvement**	The plan's category rating increased by one star from the prior years' rating.
—	**Sustained Performance**	The plan's category rating either did not change at all or changed only slightly.
↓	**Substantial Decline**	The plan's category rating decreased by one star from the prior years' rating.