

Star Rating Measure Scoring Tables and Guide to Using the Measure Scoring Tables

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Purpose of this Guide and the Tables

The guide and tables below provide additional information to support Section X of the *Guide to the Dialysis Facility Compare Report*. Follow the instructions below to calculate individual measure scores based on measure values and review where your facility lies within each measure score. Domain scores can be calculated by averaging the measure scores of the measures within each domain, as described in Section X of the *Guide*. The three domain scores can then be averaged to obtain the final score. Lastly, final scores are assigned a star rating based on the cut points from the baseline period shown in Part 2, below. These calculations can be used to identify areas for improvement for future Star Ratings.

Part 1: Guide to Using the Measure Scoring Tables

Standardized Measures Only:

Step 1:

Multiply your facility's evaluation period measure value by the appropriate adjustment factor (as provided in Part 2 of this document).

$$[\text{facility measure}] \times [\text{adjustment factor}] = \text{adjusted measure value}$$

Standardized measure example:

Your facility's STrR is 0.72,

$$\text{apply adjustment factor: } 0.72 \times 0.95 = 0.684$$

Your facility's *adjusted* STrR is **0.684**.

Step 2:

Use the value calculated in Step 1 (adjusted measure value) to find the corresponding range of measures scores on the Measure Scoring Table in Part 3 of this document.

Standardized measure example:

Use the adjusted measure value calculated in step 1 (0.684) to find the corresponding range of measure scores on the Measure Scoring Table, an example of which is found in Table 2 below.

The adjusted measure value of 0.684 is between 0.843 and 0.683; therefore, it corresponds to a measure score between **0.00 and 0.26**.

Measure Scoring Table (STrR from Part 3)**Measure: STrR**

Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 - 3.672	-2.58 included -< -2.32
3.671 - 3.342	-2.32 included -< -2.06
3.341 - 2.696	-2.06 included -< -1.81
2.695 - 2.269	-1.81 included -< -1.55
2.268 - 1.965	-1.55 included -< -1.29
1.964 - 1.687	-1.29 included -< -1.03
1.686 - 1.428	-1.03 included -< -0.77
1.427 - 1.214	-0.77 included -< -0.52
1.213 - 1.016	-0.52 included -< -0.26
1.015 - 0.844	-0.26 included -< 0.00
0.843 - 0.683	0.00 included -< 0.26
0.682 - 0.533	0.26 included -< 0.52
0.532 - 0.413	0.52 included -< 0.77
0.412 - 0.295	0.77 included -< 1.03
0.294 - 0.189	1.03 included -< 1.29
0.188 - 0.104	1.29 included -< 1.55
0.103 - 0.036	1.55 included -< 1.81
0.035 - 0.000	1.81 included -< 2.58

Percentage Measures Only:

Determine your facility's evaluation measure value and then find the corresponding range of measure scores on the Measure Scoring Table in Part 3 of this document, an example of which is below.

Percentage measure example:

If a facility's Standardized Fistula Rate (SFR) is 54% then the measure value is between 52.07% and 54.81%; therefore, it corresponds to a measure score between **-1.03 and -0.77**.

Measure Scoring Table (SFR from Part 3)**Measure: SFR**

Measure Value (%)	Measure Score (-2.58, 2.58)
0.00 - 38.40	-2.58 to < -2.32
38.41 - 41.16	-2.32 to < -2.06
41.17 - 43.80	-2.06 to < -1.81
43.81 - 46.55	-1.81 to < -1.55
46.56 - 49.31	-1.55 to < -1.29
49.32 - 52.06	-1.29 to < -1.03
52.07 - 54.81	-1.03 to < -0.77
54.82 - 57.45	-0.77 to < -0.52
57.46 - 60.21	-0.52 to < -0.26
60.22 - 62.96	-0.26 to < 0.00
62.97 - 65.71	0.00 to < 0.26
65.72 - 68.46	0.26 to < 0.52
68.47 - 71.11	0.52 to < 0.77
71.12 - 73.86	0.77 to < 1.03
73.87 - 76.61	1.03 to < 1.29
76.62 - 79.36	1.29 to < 1.55
79.37 - 82.11	1.55 to < 1.81
82.12 - 84.76	1.81 to < 2.06
84.77 - 87.51	2.06 to < 2.32
87.52 - 100.00	2.32 to < 2.58

Part 2: Tables to Assist with Understanding the Star Rating Measure Scoring Methods

Table 1: Measure-Specific Adjustment Factors for Evaluation Period Calculation

Measure	Adjustment Factor*
SMR	1.03
SHR	1.03
STrR	0.95
SRR	1.06
SFR	N/A**
LTC	N/A**
Overall Kt/V	N/A**
Hypercalcemia	N/A**

* The adjustment factor is subject to change annually based on ratio of event rates in the evaluation period versus the baseline period. The values listed are rounded.

** N/A: This measure does not have an adjustment factor

Table 2: The Final Score Cutoffs Derived from the Baseline Period (2018 April QDFC) and Applied to the Evaluation Period

Final Score*	Star Rating
Final score less than -1.1385	1 star
Final score greater than or equal to -1.1385 and less than -0.5980	2 stars
Final score greater than or equal to -0.5980 and less than 0.0273	3 stars
Final score greater than or equal to 0.0273 and less than 0.3588	4 stars
Final score greater than or equal to 0.3588	5 stars

* For display purposes, the cutoff values have been truncated at four places after the decimal point.

Please contact us at DialysisData@umich.edu if you have questions about the Star Rating of your facility.

Part 3: Measure Scoring Tables

Objective: These tables provide a range of values and scores so that facilities are able to match their measure value to a set of corresponding measure scores. These scores are derived from the baseline period (2018 April QDFC) and applied to the evaluation period. Measure values in the tables have been truncated for display purposes. Measure values between truncation points may fall in either row. All measure value ranges are inclusive.

Measure: STrR^{1,2,3}

Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 - 3.672	-2.58 included -< -2.32
3.671 - 3.342	-2.32 included -< -2.06
3.341 - 2.696	-2.06 included -< -1.81
2.695 - 2.269	-1.81 included -< -1.55
2.268 - 1.965	-1.55 included -< -1.29
1.964 - 1.687	-1.29 included -< -1.03
1.686 - 1.428	-1.03 included -< -0.77
1.427 - 1.214	-0.77 included -< -0.52
1.213 - 1.016	-0.52 included -< -0.26
1.015 - 0.844	-0.26 included -< 0.00
0.843 - 0.683	0.00 included -< 0.26
0.682 - 0.533	0.26 included -< 0.52
0.532 - 0.413	0.52 included -< 0.77
0.412 - 0.295	0.77 included -< 1.03
0.294 - 0.189	1.03 included -< 1.29
0.188 - 0.104	1.29 included -< 1.55
0.103 - 0.036	1.55 included -< 1.81
0.035 - 0.000	1.81 included - < 2.58

Measure: SMR^{1,2,3}

Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 - 1.844	-2.58 included -< -2.32
1.843 - 1.754	-2.32 included -< -2.06
1.753 - 1.551	-2.06 included -< -1.81
1.550 - 1.441	-1.81 included -< -1.55
1.440 - 1.338	-1.55 included -< -1.29
1.337 - 1.252	-1.29 included -< -1.03
1.251 - 1.179	-1.03 included -< -0.77
1.178 - 1.110	-0.77 included -< -0.52
1.109 - 1.044	-0.52 included -< -0.26
1.043 - 0.979	-0.26 included -< 0.00
0.978 - 0.920	0.00 included -< 0.26
0.919 - 0.860	0.26 included -< 0.52
0.859 - 0.809	0.52 included -< 0.77
0.808 - 0.750	0.77 included -< 1.03
0.749 - 0.690	1.03 included -< 1.29
0.689 - 0.640	1.29 included -< 1.55
0.639 - 0.580	1.55 included -< 1.81
0.579 - 0.487	1.81 included -< 2.06
0.486 - 0.423	2.06 included -< 2.32
0.422 - 0.00	2.32 included -< 2.58

Measure: SHR^{1,2,3}

Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 - 1.754	-2.58 included <- -2.32
1.753 - 1.676	-2.32 included <- -2.06
1.675 - 1.529	-2.06 included <- -1.81
1.528 - 1.431	-1.81 included <- -1.55
1.430 - 1.342	1.55 included <- -1.29
1.341 - 1.247	-1.29 included <- -1.03
1.246 - 1.168	-1.03 included <- -0.77
1.167 - 1.095	-0.77 included <- -0.52
1.094 - 1.027	-0.52 included <- -0.26
1.026 - 0.963	-0.26 included <- 0.00
0.962 - 0.901	0.00 included <- 0.26
0.900 - 0.841	0.26 included <- 0.52
0.840 - 0.783	0.52 included <- 0.77
0.782 - 0.723	0.77 included <- 1.03
0.722 - 0.657	1.03 included <- 1.29
0.656 - 0.593	1.29 included <- 1.55
0.592 - 0.533	1.55 included <- 1.81
0.532 - 0.444	1.81 included <- 2.06
0.443 - 0.409	2.06 included <- 2.32
0.408 - 0.00	2.32 included <- 2.58

Measure: SRR^{1,2,3}

Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 - 1.684	-2.58 included <- -2.32
1.683 - 1.635	-2.32 included <- -2.06
1.634 - 1.506	-2.06 included <- -1.81
1.505 - 1.428	-1.81 included <- -1.55
1.427 - 1.347	1.55 included <- -1.29
1.346 - 1.271	-1.29 included <- -1.03
1.270 - 1.197	-1.03 included <- -0.77
1.196 - 1.132	-0.77 included <- -0.52
1.131 - 1.064	-0.52 included <- -0.26
1.063 - 0.994	-0.26 included <- 0.00
0.993 - 0.922	0.00 included <- 0.26
0.921 - 0.851	0.26 included <- 0.52
0.850 - 0.782	0.52 included <- 0.77
0.781 - 0.706	0.77 included <- 1.03
0.705 - 0.613	1.03 included <- 1.29
0.612 - 0.532	1.29 included <- 1.55
0.531 - 0.443	1.55 included <- 1.81
0.442 - 0.298	1.81 included <- 2.06
0.297 - 0.244	2.06 included <- 2.32
0.243 - 0.00	2.32 included <- 2.58

Measure: SFR^{1,2}

Measure Value (%)	Measure Score (-2.58, 2.58)
0.00 - 38.40	-2.58 to < -2.32
38.41 - 41.16	-2.32 to < -2.06
41.17 - 43.80	-2.06 to < -1.81
43.81 - 46.55	-1.81 to < -1.55
46.56 - 49.31	-1.55 to < -1.29
49.32 - 52.06	-1.29 to < -1.03
52.07 - 54.81	-1.03 to < -0.77
54.82 - 57.45	-0.77 to < -0.52
57.46 - 60.21	-0.52 to < -0.26
60.22 - 62.96	-0.26 to < 0.00
62.97 - 65.71	0.00 to < 0.26
65.72 - 68.46	0.26 to < 0.52
68.47 - 71.11	0.52 to < 0.77
71.12 - 73.86	0.77 to < 1.03
73.87 - 76.61	1.03 to < 1.29
76.62 - 79.36	1.29 to < 1.55
79.37 - 82.11	1.55 to < 1.81
82.12 - 84.76	1.81 to < 2.06
84.77 - 87.51	2.06 to < 2.32
87.52 - 100.00	2.32 to < 2.58

Measure: Hypercalcemia^{1,2}

Measure Value (%)	Measure Score (-2.58, 1.29)
100.0 - 7.28	-2.58 included -< -2.32
7.27 - 6.72	-2.32 included -< -2.06
6.71 - 6.18	-2.06 included -< -1.81
6.17 - 5.62	-1.81 included -< -1.55
5.61 - 5.06	-1.55 included -< -1.29
5.05 - 4.49	-1.29 included -< -1.03
4.48 - 3.93	-1.03 included -< -0.77
3.92 - 3.39	-0.77 included -< -0.52
3.38 - 2.83	-0.52 included -< -0.26
2.82 - 0.26	-0.26 included -< 0.00
2.25 - 1.70	0.00 included -< 0.26
1.69 - 0.14	0.26 included -< 0.52
1.13 - 0.60	0.52 included -< 0.77
0.59 - 0.03	0.77 included -< 1.03
0.02 - 0.00	1.03 included -< 1.29

Measure: Long Term Catheter^{1,2}

Measure Value (%)	Measure Score (-2.58, 2.06)
100.0 - 26.62	-2.58 included < -2.32
26.61 - 25.01	-2.32 included < -2.06
25.00 - 23.46	-2.06 included < -1.81
23.45 - 21.85	-1.81 included < -1.55
21.84 - 20.24	-1.55 included < -1.29
20.23 - 18.63	-1.29 included < -1.03
18.62 - 17.02	-1.03 included < -0.77
17.01 - 15.47	-0.77 included < -0.52
15.46 - 13.85	-0.52 included < -0.26
13.84 - 12.24	-0.26 included < 0.00
12.23 - 10.63	0.00 included < 0.26
10.62 - 9.02	0.26 included < 0.52
9.01 - 7.47	0.52 included < 0.77
7.46 - 5.86	0.77 included < 1.03
5.85 - 4.25	1.03 included < 1.29
4.24 - 2.64	1.29 included < 1.55
2.63 - 1.03	1.55 included < 1.81
1.02 - 0.00	1.81 included < 2.06

Measure: Overall Kt/V^{1,2}

Measure Value (%)	Measure Score (-2.58, 1.55)
00.00 - 87.39	-2.58 to < -2.32
87.40 - 88.28	-2.32 to < -2.06
88.29 - 89.14	-2.06 to < -1.81
89.15 - 90.03	-1.81 to < -1.55
90.04 - 90.93	-1.55 to < -1.29
90.94 - 91.82	-1.29 to < -1.03
91.83 - 92.71	-1.03 to < -0.77
92.72 - 93.57	-0.77 to < -0.52
93.58 - 94.46	-0.52 to < -0.26
94.47 - 95.35	-0.26 to < 0.00
95.36 - 96.25	0.00 to < 0.26
96.26 - 97.14	0.26 to < 0.52
97.15 - 98.00	0.52 to < 0.77
98.01 - 98.89	0.77 to < 1.03
98.90 - 99.78	1.03 to < 1.29
99.79 - 100.00	1.29 to < 1.55

Footnote 1: All scores derived from measure values based on analysis of baseline period.

Footnote 2: Score ranges are cut off at -2.58 and 2.58. However, if the mean in the baseline period is too close to the upper or lower measure bound, a z-score cannot realize a value this extreme and the lower or upper bound may not reach to -2.58 or 2.58, respectively.

Footnote 3: When using the table for evaluation period values of a standardized ratio measure, the evaluation period measure specific adjustment factor needs to be multiplied to the measure values before using this table (see Part I of this document).