

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 to calculate individual measure scores and review where your facility lies within each measure score, domain score, and final score for Star Rating. The tables 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,

$$\text{apply adjustment factor: } 0.72 \times 0.97 = 0.698$$

Your facility's *adjusted* STrR is **0.698**.

Step 2:

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

Standardized measure example:

Use the adjusted measure value calculated in step 1 (0.698) 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 0.698 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 included -> 3.672	-2.58 included -< -2.32
3.671 included -> 3.342	-2.32 included -< -2.06
3.341 included -> 2.696	-2.06 included -< -1.81
2.695 included -> 2.269	-1.81 included -< -1.55
2.268 included -> 1.965	-1.55 included -< -1.29
1.964 included -> 1.687	-1.29 included -< -1.03
1.686 included -> 1.428	-1.03 included -< -0.77
1.427 included -> 1.214	-0.77 included -< -0.52
1.213 included -> 1.016	-0.52 included -< -0.26
1.015 included -> 0.844	-0.26 included -< 0.00
0.843 included -> 0.683	0.00 included -< 0.26
0.682 included -> 0.533	0.26 included -< 0.52
0.532 included -> 0.413	0.52 included -< 0.77
0.412 included -> 0.295	0.77 included -< 1.03
0.294 included -> 0.189	1.03 included -< 1.29
0.188 included -> 0.104	1.29 included -< 1.55
0.103 included -> 0.036	1.55 included -< 1.81
0.035 included -> 0.001	1.81 included -< 2.06
0.001 included ->= 0.000	2.06 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 to < 38.40	-2.58 to < -2.32
38.41 to < 41.16	-2.32 to < -2.06
41.17 to < 43.80	-2.06 to < -1.81
43.81 to < 46.55	-1.81 to < -1.55
46.56 to < 49.31	-1.55 to < -1.29
49.32 to < 52.06	-1.29 to < -1.03
52.07 to < 54.81	-1.03 to < -0.77
54.82 to < 57.45	-0.77 to < -0.52
57.46 to < 60.21	-0.52 to < -0.26
60.22 to < 62.96	-0.26 to < 0.00
62.97 to < 65.71	0.00 to < 0.26
65.72 to < 68.46	0.26 to < 0.52
68.47 to < 71.11	0.52 to < 0.77
71.12 to < 73.86	0.77 to < 1.03
73.87 to < 76.61	1.03 to < 1.29
76.62 to < 79.36	1.29 to < 1.55
79.37 to < 82.11	1.55 to < 1.81
82.12 to < 84.76	1.81 to < 2.06
84.77 to < 87.51	2.06 to < 2.32
87.52 to 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	1.01
SHR	1.02
STrR	0.97
SRR	1.07
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. The values in the tables have been rounded for display purposes.

Measure: STrR^{1,2,3}	
Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 included -> 3.672	-2.58 included -< -2.32
3.671 included -> 3.342	-2.32 included -< -2.06
3.341 included -> 2.696	-2.06 included -< -1.81
2.695 included -> 2.269	-1.81 included -< -1.55
2.268 included -> 1.965	-1.55 included -< -1.29
1.964 included -> 1.687	-1.29 included -< -1.03
1.686 included -> 1.428	-1.03 included -< -0.77
1.427 included -> 1.214	-0.77 included -< -0.52
1.213 included -> 1.016	-0.52 included -< -0.26
1.015 included -> 0.844	-0.26 included -< 0.00
0.843 included -> 0.683	0.00 included -< 0.26
0.682 included -> 0.533	0.26 included -< 0.52
0.532 included -> 0.413	0.52 included -< 0.77
0.412 included -> 0.295	0.77 included -< 1.03
0.294 included -> 0.189	1.03 included -< 1.29
0.188 included -> 0.104	1.29 included -< 1.55
0.103 included -> 0.036	1.55 included -< 1.81
0.035 included -> 0.001	1.81 included -< 2.06
0.001 included ->= 0.00	2.06 included -< 2.58

Measure: SMR^{1,2,3}	
Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 included -> 1.844	-2.58 included -< -2.32
1.843 included -> 1.754	-2.32 included -< -2.06
1.753 included -> 1.551	-2.06 included -< -1.81
1.550 included -> 1.441	-1.81 included -< -1.55
1.440 included -> 1.338	-1.55 included -< -1.29
1.337 included -> 1.252	-1.29 included -< -1.03
1.251 included -> 1.179	-1.03 included -< -0.77
1.178 included -> 1.110	-0.77 included -< -0.52
1.109 included -> 1.044	-0.52 included -< -0.26
1.043 included -> 0.979	-0.26 included -< 0.00
0.978 included -> 0.920	0.00 included -< 0.26
0.919 included -> 0.860	0.26 included -< 0.52
0.859 included -> 0.809	0.52 included -< 0.77
0.808 included -> 0.750	0.77 included -< 1.03
0.749 included -> 0.690	1.03 included -< 1.29
0.689 included -> 0.640	1.29 included -< 1.55
0.639 included -> 0.580	1.55 included -< 1.81
0.579 included -> 0.487	1.81 included -< 2.06
0.486 included -> 0.423	2.06 included -< 2.32
0.422 included ->= 0.00	2.32 included -< 2.58

Measure: SHR^{1,2,3}	
Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 included -> 1.754	-2.58 included -< -2.32
1.753 included -> 1.676	-2.32 included -< -2.06
1.675 included -> 1.529	-2.06 included -< -1.81
1.528 included -> 1.431	-1.81 included -< -1.55
1.430 included -> 1.342	1.55 included -< -1.29
1.341 included -> 1.247	-1.29 included -< -1.03
1.246 included -> 1.168	-1.03 included -< -0.77
1.167 included -> 1.095	-0.77 included -< -0.52
1.094 included -> 1.027	-0.52 included -< -0.26
1.026 included -> 0.963	-0.26 included -< 0.00
0.962 included -> 0.901	0.00 included -< 0.26
0.900 included -> 0.841	0.26 included -< 0.52
0.840 included -> 0.783	0.52 included -< 0.77
0.782 included -> 0.723	0.77 included -< 1.03
0.722 included -> 0.657	1.03 included -< 1.29
0.656 included -> 0.593	1.29 included -< 1.55
0.592 included -> 0.533	1.55 included -< 1.81
0.532 included -> 0.444	1.81 included -< 2.06
0.443 included -> 0.409	2.06 included -< 2.32
0.408 included ->= 0.00	2.32 included -< 2.58

Measure: SRR^{1,2,3}	
Adjusted Measure Value	Measure Score (-2.58, 2.58)
10.00 included -> 1.684	-2.58 included -< -2.32
1.683 included -> 1.635	-2.32 included -< -2.06
1.634 included -> 1.506	-2.06 included -< -1.81
1.505 included -> 1.428	-1.81 included -< -1.55
1.427 included -> 1.347	1.55 included -< -1.29
1.346 included -> 1.271	-1.29 included -< -1.03
1.270 included -> 1.197	-1.03 included -< -0.77
1.196 included -> 1.132	-0.77 included -< -0.52
1.131 included -> 1.064	-0.52 included -< -0.26
1.063 included -> 0.994	-0.26 included -< 0.00
0.993 included -> 0.922	0.00 included -< 0.26
0.921 included -> 0.851	0.26 included -< 0.52
0.850 included -> 0.782	0.52 included -< 0.77
0.781 included -> 0.706	0.77 included -< 1.03
0.705 included -> 0.613	1.03 included -< 1.29
0.612 included -> 0.532	1.29 included -< 1.55
0.531 included -> 0.443	1.55 included -< 1.81
0.442 included -> 0.298	1.81 included -< 2.06
0.297 included -> 0.244	2.06 included -< 2.32
0.243 included ->= 0.00	2.32 included -< 2.58

Measure: SFR^{1,2}	
Measure Value	Measure Score (-2.58, 2.58)
0.00 to < 38.40	-2.58 to < -2.32
38.41 to < 41.16	-2.32 to < -2.06
41.17 to < 43.80	-2.06 to < -1.81
43.81 to < 46.55	-1.81 to < -1.55
46.56 to < 49.31	-1.55 to < -1.29
49.32 to < 52.06	-1.29 to < -1.03
52.07 to < 54.81	-1.03 to < -0.77
54.82 to < 57.45	-0.77 to < -0.52
57.46 to < 60.21	-0.52 to < -0.26
60.22 to < 62.96	-0.26 to < 0.00
62.97 to < 65.71	0.00 to < 0.26
65.72 to < 68.46	0.26 to < 0.52
68.47 to < 71.11	0.52 to < 0.77
71.12 to < 73.86	0.77 to < 1.03
73.87 to < 76.61	1.03 to < 1.29
76.62 to < 79.36	1.29 to < 1.55
79.37 to < 82.11	1.55 to < 1.81
82.12 to < 84.76	1.81 to < 2.06
84.77 to < 87.51	2.06 to < 2.32
87.52 to 100.00	2.32 to < 2.58

Measure: Hypercalcemia^{1,2}	
Measure Value	Measure Score (-2.58, 1.29)
100.0 included -> 7.28	-2.58 included -< -2.32
7.27 included -> 6.72	-2.32 included -< -2.06
6.71 included -> 6.18	-2.06 included -< -1.81
6.17 included -> 5.62	-1.81 included -< -1.55
5.61 included -> 5.06	-1.55 included -< -1.29
5.05 included -> 4.49	-1.29 included -< -1.03
4.48 included -> 3.93	-1.03 included -< -0.77
3.92 included -> 3.39	-0.77 included -< -0.52
3.38 included -> 2.83	-0.52 included -< -0.26
2.82 included -> 0.26	-0.26 included -< 0.00
2.25 included -> 1.70	0.00 included -< 0.26
1.69 included -> 0.14	0.26 included -< 0.52
1.13 included -> 0.60	0.52 included -< 0.77
0.59 included -> 0.03	0.77 included -< 1.03
0.02 included ->= 0.00	1.03 included -< 1.29

Measure: Long Term Catheter^{1,2}	
Measure Value	Measure Score (-2.58, 2.06)
100.0 included -> 26.62	-2.58 included -< -2.32
26.61 included -> 25.01	-2.32 included -< -2.06
25.00 included -> 23.46	-2.06 included -< -1.81
23.45 included -> 21.85	-1.81 included -< -1.55
21.84 included -> 20.24	-1.55 included -< -1.29
20.23 included -> 18.63	-1.29 included -< -1.03
18.62 included -> 17.02	-1.03 included -< -0.77
17.01 included -> 15.47	-0.77 included -< -0.52
15.46 included -> 13.85	-0.52 included -< -0.26
13.84 included -> 12.24	-0.26 included -< 0.00
12.23 included -> 10.63	0.00 included -< 0.26
10.62 included -> 9.02	0.26 included -< 0.52
9.01 included -> 7.47	0.52 included -< 0.77
7.46 included -> 5.86	0.77 included -< 1.03
5.85 included -> 4.25	1.03 included -< 1.29
4.24 included -> 2.64	1.29 included -< 1.55
2.63 included -> 1.03	1.55 included -< 1.81
1.02 included ->= 0.00	1.81 included -< 2.06

Measure: Overall Kt/V^{1,2}	
Measure Value	Measure Score (-2.58, 1.55)
00.00 to < 87.39	-2.58 to < -2.32
87.40 to < 88.28	-2.32 to < -2.06
88.29 to < 89.14	-2.06 to < -1.81
89.15 to < 90.03	-1.81 to < -1.55
90.04 to < 90.93	-1.55 to < -1.29
90.94 to < 91.82	-1.29 to < -1.03
91.83 to < 92.71	-1.03 to < -0.77
92.72 to < 93.57	-0.77 to < -0.52
93.58 to < 94.46	-0.52 to < -0.26
94.47 to < 95.35	-0.26 to < 0.00
95.36 to < 96.25	0.00 to < 0.26
96.26 to < 97.14	0.26 to < 0.52
97.15 to < 98.00	0.52 to < 0.77
98.01 to < 98.89	0.77 to < 1.03
98.90 to < 99.78	1.03 to < 1.29
99.79 to 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).

Summary

As described in Section X of the *Guide to the Dialysis Facility Compare Reports*, measure scores within a domain are averaged to obtain the domain scores for each of the three domains. Then the three domain scores are averaged to obtain the final score. Final scores are then assigned a Star Rating based on cut points from the baseline period (Part 2, Table 2). These tables and measure score ranges can be used as a guide for identifying areas of improvement for future evaluation periods for Star Rating.