

*Nursing Home Compare*  
**Five-Star Quality Rating System:  
Technical Users' Guide**

**State-Level Cut Point Tables**

**April 2009**



## Introduction

The Centers for Medicare & Medicaid Services (CMS) has enhanced its *Nursing Home Compare* public reporting site to include a set of quality ratings for each nursing home that participates in Medicare or Medicaid. The ratings take the form of several “star” ratings for each nursing home. The primary goal in launching this rating system is to provide residents and their families with an easy way to understand assessment of nursing home quality, making meaningful distinctions between high and low performing nursing homes.

The rating system features an overall five-star rating based on facility performance for three types of performance measures, each of which has its own associated five-star rating. These domains are: Health Inspections (measures based on outcomes from State health inspection surveys), Staffing (measures based on nursing home staffing levels reported at the time of State health inspection), and Quality Measures (measures based on the CMS Minimum Data Set (MDS)). The Five Star Quality Rating System: Technical Users’ Guide provides detailed information about the content and scoring of each domain, as well as the overall star rating.

This document - Five Star Quality Rating System Technical Users’ Guide: State Level Cut Point Tables - provides the data for the state-level cut points for the star ratings included in the health inspection and the quality measure domains. Cut points for the staffing ratings and for the non-ADL QM ratings have been fixed and do not vary monthly. Data tables giving the cut points for those ratings are included in the Five Star Quality Rating System: Technical Users’ Guide.

## Health Inspection Domain

CMS’ Five-Star quality ratings for the health inspection domain are based on the relative performance of facilities within a State. This approach helps to control for variation between States. Facility ratings are determined using these criteria:

- The top 10 percent (lowest 10 percent in terms of health inspection deficiency score) in each State receive a five-star rating.
- The middle 70 percent of facilities receive a rating of two, three, or four stars, with an equal number (approximately 23.33 percent) in each rating category.
- The bottom 20 percent receive a one-star rating.

This distribution is based on CMS experience and input from the Project’s TEP. The cut points are recalibrated each month so that the distribution of star ratings within States remains fixed over time in an effort to reduce the likelihood that the rating process affects the health inspection process. In the rare case that a State or territory has fewer than 5 facilities upon which to generate the cut points, the national distribution is used. Cut points for the health inspection ratings by state for the month of April 2009 are shown in Cut Point Table 1 (CP Table 1).

## Quality Measure Domain

A set of quality measures has been developed from Minimum Data Set (MDS)-based indicators to describe the quality of care provided in nursing homes. The facility rating for the QM domain is based on performance on a subset of 10 (out of 19) of the QMs currently posted on Nursing Home Compare.

Ratings for the QM domain are calculated using the three most recent quarters for which data are available. For each measure, points are assigned based on the facility percentile. The percentiles are based on the national distribution for all of the QMs except for the two Activities of Daily Living (ADL) measures. For these two measures, percentiles are set on a State -specific basis using the State distribution. The two ADL measures are based on within-State quintile distributions because these two measures appear to be more affected by case-mix variation, particularly influenced by differences in State Medicaid policies governing long term care.

Cut points for the two ADL QMs are reset with each quarterly update of the QM data based on the State -specific distribution of these measures. Cut points for the other QMs will remain fixed at the baseline national values for a period of two years, and cut points are included in the Five Star Quality Rating System: Technical Users' Guide.

Cut points for the two ADL QMs by state for the month of April 2009 are shown in Cut Point Table 2 (CP Table 2) for Late Loss ADL Worsening and in Cut Point Table 3 (CP Table 3) for Worsening Locomotion.

**Cut Point Table 1**  
**Star Cut Points for Health Inspection Scores - by State - (04-01-2009)**

State	Number of facilities	Health Inspection Score							
		1 star	2 stars		3 stars		4 stars		5 stars
			Upper	Lower	Upper	Lower	Upper	Lower	
Alabama	232	>75.333	≤75.333	>40.000	≤40.000	>25.333	≤25.333	>10.667	≤10.667
Alaska	15	>86.000	≤86.000	>61.833	≤61.833	>33.333	≤33.333	>29.333	≤29.333
Arizona	132	>97.167	≤97.167	>57.333	≤57.333	>38.667	≤38.667	>20.000	≤20.000
Arkansas	229	>174.000	≤174.000	>108.333	≤108.333	>73.667	≤73.667	>40.333	≤40.333
California	1,247	>96.333	≤96.333	>60.667	≤60.667	>40.667	≤40.667	>20.667	≤20.667
Colorado	210	>125.667	≤125.667	>86.000	≤86.000	>52.667	≤52.667	>24.667	≤24.667
Connecticut	240	>81.333	≤81.333	>52.000	≤52.000	>35.000	≤35.000	>19.333	≤19.333
D. C.	18	>265.833	≤265.833	>160.333	≤160.333	>67.333	≤67.333	>32.000	≤32.000
Delaware	45	>137.667	≤137.667	>89.333	≤89.333	>62.000	≤62.000	>32.000	≤32.000
Florida	674	>84.000	≤84.000	>56.333	≤56.333	>39.333	≤39.333	>20.000	≤20.000
Georgia	355	>72.417	≤72.417	>38.667	≤38.667	>22.667	≤22.667	>10.000	≤10.000
Guam	1	>90.667	≤90.667	>50.000	≤50.000	>28.667	≤28.667	>10.667	≤10.667
Hawaii	47	>64.667	≤64.667	>35.200	≤35.200	>26.000	≤26.000	>12.000	≤12.000
Idaho	76	>108.667	≤108.667	>76.000	≤76.000	>46.667	≤46.667	>24.000	≤24.000
Illinois	784	>101.167	≤101.167	>47.000	≤47.000	>26.000	≤26.000	>8.667	≤8.667
Indiana	505	>130.000	≤130.000	>81.333	≤81.333	>46.667	≤46.667	>16.000	≤16.000
Iowa	445	>68.167	≤68.167	>38.667	≤38.667	>23.333	≤23.333	>7.333	≤7.333
Kansas	334	>136.667	≤136.667	>84.667	≤84.667	>50.167	≤50.167	>21.333	≤21.333
Kentucky	286	>86.667	≤86.667	>38.000	≤38.000	>21.333	≤21.333	>8.667	≤8.667
Louisiana	283	>124.000	≤124.000	>69.333	≤69.333	>42.667	≤42.667	>16.000	≤16.000
Maine	109	>82.333	≤82.333	>47.667	≤47.667	>28.667	≤28.667	>10.000	≤10.000
Maryland	228	>99.167	≤99.167	>62.000	≤62.000	>40.000	≤40.000	>17.333	≤17.333
Massachusetts	433	>60.667	≤60.667	>34.000	≤34.000	>20.000	≤20.000	>6.000	≤6.000
Michigan	418	>126.167	≤126.167	>81.333	≤81.333	>57.000	≤57.000	>26.667	≤26.667
Minnesota	387	>81.333	≤81.333	>56.333	≤56.333	>39.333	≤39.333	>20.667	≤20.667
Mississippi	200	>82.433	≤82.433	>40.000	≤40.000	>22.000	≤22.000	>8.000	≤8.000
Missouri	506	>115.667	≤115.667	>61.333	≤61.333	>35.167	≤35.167	>13.333	≤13.333
Montana	90	>82.500	≤82.500	>52.667	≤52.667	>27.333	≤27.333	>13.333	≤13.333
Nebraska	222	>78.000	≤78.000	>50.667	≤50.667	>31.333	≤31.333	>14.000	≤14.000
Nevada	48	>71.333	≤71.333	>53.333	≤53.333	>34.667	≤34.667	>16.000	≤16.000
New Hampshire	78	>55.333	≤55.333	>34.667	≤34.667	>15.333	≤15.333	>4.667	≤4.667

<b>New Jersey</b>	359	>71.333	≤71.333	>38.167	≤38.167	>23.333	≤23.333	>8.667	≤8.667
<b>New Mexico</b>	68	>139.667	≤139.667	>71.000	≤71.000	>38.667	≤38.667	>12.667	≤12.667
<b>New York</b>	646	>58.167	≤58.167	>28.000	≤28.000	>16.000	≤16.000	>7.333	≤7.333
<b>North Carolina</b>	419	>48.000	≤48.000	>26.000	≤26.000	>14.333	≤14.333	>6.000	≤6.000
<b>North Dakota</b>	83	>31.333	≤31.333	>19.333	≤19.333	>13.333	≤13.333	>7.333	≤7.333
<b>Ohio</b>	946	>64.667	≤64.667	>37.333	≤37.333	>21.333	≤21.333	>7.200	≤7.200
<b>Oklahoma</b>	312	>159.000	≤159.000	>89.333	≤89.333	>59.333	≤59.333	>32.667	≤32.667
<b>Oregon</b>	138	>81.667	≤81.667	>45.333	≤45.333	>24.000	≤24.000	>9.333	≤9.333
<b>Pennsylvania</b>	709	>57.333	≤57.333	>32.000	≤32.000	>17.333	≤17.333	>7.333	≤7.333
<b>Puerto Rico</b>	7	>375.167	≤375.167	>287.667	≤287.667	>213.667	≤213.667	>128.000	≤128.000
<b>Rhode Island</b>	85	>44.667	≤44.667	>24.000	≤24.000	>12.667	≤12.667	>3.333	≤3.333
<b>South Carolina</b>	175	>88.667	≤88.667	>44.000	≤44.000	>23.333	≤23.333	>10.667	≤10.667
<b>South Dakota</b>	109	>42.000	≤42.000	>27.333	≤27.333	>16.000	≤16.000	>9.333	≤9.333
<b>Tennessee</b>	316	>70.667	≤70.667	>40.667	≤40.667	>24.667	≤24.667	>13.333	≤13.333
<b>Texas</b>	1,112	>96.000	≤96.000	>49.333	≤49.333	>28.800	≤28.800	>11.333	≤11.333
<b>Utah</b>	91	>44.667	≤44.667	>32.667	≤32.667	>16.000	≤16.000	>5.333	≤5.333
<b>Vermont</b>	40	>97.500	≤97.500	>67.000	≤67.000	>51.667	≤51.667	>18.333	≤18.333
<b>Virgin Islands</b>	1	>90.667	≤90.667	>50.000	≤50.000	>28.667	≤28.667	>10.667	≤10.667
<b>Virginia</b>	275	>73.667	≤73.667	>46.000	≤46.000	>27.000	≤27.000	>10.667	≤10.667
<b>Washington</b>	237	>101.500	≤101.500	>57.333	≤57.333	>28.667	≤28.667	>13.333	≤13.333
<b>West Virginia</b>	130	>102.417	≤102.417	>69.333	≤69.333	>40.000	≤40.000	>17.333	≤17.333
<b>Wisconsin</b>	390	>89.750	≤89.750	>41.333	≤41.333	>24.000	≤24.000	>8.667	≤8.667
<b>Wyoming</b>	39	>119.333	≤119.333	>97.667	≤97.667	>52.667	≤52.667	>31.667	≤31.667

Notes: A higher score indicates worse performance on health inspections. The cut points are based on facility health inspection scores and are set separately for each state to achieve this distribution:

- 5 stars: ≤10<sup>th</sup> percentile
- 4 stars: >10<sup>th</sup> percentile and ≤ 33.33<sup>rd</sup> percentile
- 3 stars: >33.33<sup>rd</sup> percentile and ≤ 56.667<sup>th</sup> percentile
- 2 stars: >56.667<sup>th</sup> percentile and ≤ 80<sup>th</sup> percentile
- 1 star: >80<sup>th</sup> percentile

Due to the small number of facilities, the cut points for Guam and the Virgin Islands are based on the national distribution of health inspection scores.

**Cut Point Table 2**  
**Quintile Cut points for ADL QM Late Loss ADL Worsening (04-01-2009)**

State	Number of Facilities	20 <sup>th</sup> percentile	40 <sup>th</sup> percentile	60 <sup>th</sup> percentile	80 <sup>th</sup> percentile
Alabama	224	0.07267	0.09091	0.11877	0.15789
Alaska	12	0.08442	0.09524	0.11864	0.15385
Arizona	121	0.08125	0.11927	0.14286	0.19828
Arkansas	221	0.08667	0.11852	0.14354	0.18957
California	1,119	0.05485	0.08333	0.11475	0.15976
Colorado	197	0.08504	0.13333	0.16602	0.20567
Connecticut	235	0.11232	0.14047	0.17752	0.21845
D. C.	17	0.09402	0.11111	0.14448	0.21036
Delaware	41	0.11538	0.13855	0.17424	0.22660
Florida	657	0.08170	0.10949	0.13636	0.17089
Georgia	342	0.08867	0.11765	0.15409	0.19467
Guam	0	0.08824	0.12313	0.15909	0.20833
Hawaii	38	0.07704	0.10667	0.13978	0.19780
Idaho	70	0.09890	0.13174	0.15752	0.19538
Illinois	717	0.08257	0.11927	0.15337	0.20106
Indiana	478	0.15481	0.19417	0.23188	0.27391
Iowa	425	0.08702	0.11175	0.14094	0.18085
Kansas	321	0.08333	0.11905	0.14815	0.19658
Kentucky	265	0.10063	0.13884	0.18035	0.23555
Louisiana	266	0.14535	0.18579	0.21951	0.25818
Maine	107	0.10309	0.13706	0.16915	0.20588
Maryland	217	0.09428	0.12062	0.14963	0.19022
Massachusetts	420	0.09886	0.12529	0.15009	0.18082
Michigan	401	0.08025	0.11017	0.14286	0.18667
Minnesota	378	0.10429	0.13043	0.16129	0.19459
Mississippi	191	0.08986	0.12950	0.16190	0.21429
Missouri	481	0.06977	0.09924	0.13122	0.18121
Montana	84	0.09722	0.13235	0.15957	0.20000
Nebraska	215	0.10557	0.12952	0.15281	0.19720
Nevada	43	0.14634	0.19130	0.21811	0.26061
New Hampshire	75	0.12760	0.16520	0.18424	0.21595

**Cut Point Table 2**  
**Quintile Cut points for ADL QM Late Loss ADL Worsening (04-01-2009)**

State	Number of Facilities	20 <sup>th</sup> percentile	40 <sup>th</sup> percentile	60 <sup>th</sup> percentile	80 <sup>th</sup> percentile
New Jersey	340	0.07971	0.09787	0.11858	0.14583
New Mexico	64	0.09544	0.14953	0.19780	0.24272
New York	637	0.08764	0.11429	0.14208	0.18513
North Carolina	393	0.16760	0.20202	0.23810	0.27753
North Dakota	80	0.13018	0.15292	0.18606	0.22027
Ohio	911	0.08187	0.11290	0.14474	0.18443
Oklahoma	297	0.06494	0.09211	0.11765	0.15122
Oregon	135	0.05750	0.07822	0.10637	0.14875
Pennsylvania	658	0.14229	0.18000	0.21198	0.25263
Puerto Rico	0	0.08824	0.12313	0.15909	0.20833
Rhode Island	85	0.08481	0.11600	0.13759	0.17679
South Carolina	164	0.07742	0.10000	0.13871	0.18224
South Dakota	109	0.11684	0.15254	0.17544	0.20833
Tennessee	298	0.08904	0.11348	0.13618	0.18147
Texas	1,057	0.11000	0.15041	0.18947	0.23762
Utah	79	0.08571	0.10588	0.14894	0.17647
Vermont	40	0.14171	0.19032	0.21565	0.25107
Virgin Islands	1	0.08824	0.12313	0.15909	0.20833
Virginia	259	0.12409	0.15929	0.19068	0.22989
Washington	226	0.08000	0.10366	0.13772	0.18009
West Virginia	117	0.12593	0.16149	0.20253	0.23932
Wisconsin	377	0.10119	0.12952	0.16741	0.20245
Wyoming	35	0.10824	0.13254	0.17089	0.21260

Due to the small number of facilities, the cut points for Guam, Puerto Rico, and the Virgin Islands are based on the national distribution of the ADL quality measure score.

Quintiles for these cut points are used to assign points towards the QM summary score as follows:

- 20 points:  $\leq 20^{\text{th}}$  percentile
- 15 points:  $> 20^{\text{th}}$  percentile and  $\leq 40^{\text{th}}$  percentile
- 10 points:  $> 40^{\text{th}}$  percentile and  $\leq 60^{\text{th}}$  percentile
- 5 points:  $> 60^{\text{th}}$  percentile and  $\leq 80^{\text{th}}$  percentile
- 0 points:  $> 80^{\text{th}}$  percentile.

**Cut Point Table 3****Quintile Cut points for ADL QM Worsening Locomotion (04-01-2009)**

<b>State</b>	<b>Number of Facilities</b>	<b>20<sup>th</sup> percentile</b>	<b>40<sup>th</sup> percentile</b>	<b>60<sup>th</sup> percentile</b>	<b>80<sup>th</sup> percentile</b>
Alabama	222	0.05952	0.07671	0.09859	0.13635
Alaska	8	0.04806	0.11414	0.12739	0.13493
Arizona	114	0.06098	0.08156	0.11838	0.16111
Arkansas	219	0.06330	0.09142	0.11406	0.15147
California	1,070	0.04948	0.07582	0.09924	0.13814
Colorado	195	0.06162	0.08923	0.12554	0.17408
Connecticut	235	0.08349	0.10999	0.14228	0.17852
D. C.	16	0.07795	0.08388	0.09149	0.16680
Delaware	41	0.08892	0.11550	0.15488	0.21305
Florida	644	0.05729	0.08061	0.10144	0.13341
Georgia	339	0.06406	0.08947	0.11247	0.14723
Guam	0	0.06622	0.09302	0.12244	0.16451
Hawaii	34	0.05878	0.09483	0.13957	0.18155
Idaho	70	0.06762	0.10478	0.12358	0.15776
Illinois	709	0.06447	0.09669	0.12771	0.16396
Indiana	475	0.07491	0.10332	0.14040	0.18650
Iowa	422	0.06393	0.08421	0.11092	0.14142
Kansas	319	0.06439	0.09060	0.11900	0.16296
Kentucky	258	0.06163	0.08762	0.13142	0.17221
Louisiana	266	0.05593	0.07857	0.10038	0.13225
Maine	105	0.10823	0.13629	0.17090	0.21172
Maryland	212	0.08005	0.10461	0.12867	0.17005
Massachusetts	415	0.08291	0.11288	0.13675	0.16710
Michigan	393	0.06242	0.08891	0.11859	0.15721
Minnesota	378	0.07165	0.09869	0.12428	0.16422
Mississippi	191	0.05990	0.09012	0.11486	0.15519
Missouri	479	0.05104	0.07395	0.09865	0.13283
Montana	83	0.07735	0.10448	0.11912	0.16907
Nebraska	211	0.08233	0.11006	0.13453	0.16734
Nevada	42	0.10165	0.13175	0.18632	0.20237
New Hampshire	74	0.09375	0.11749	0.16215	0.18438
New Jersey	334	0.06441	0.08451	0.10264	0.12977
New Mexico	63	0.06948	0.11291	0.14691	0.18211



**Cut Point Table 3**  
**Quintile Cut points for ADL QM Worsening Locomotion (04-01-2009)**

State	Number of Facilities	20 <sup>th</sup> percentile	40 <sup>th</sup> percentile	60 <sup>th</sup> percentile	80 <sup>th</sup> percentile
New York	628	0.07985	0.10312	0.12731	0.16174
North Carolina	390	0.06832	0.10024	0.14124	0.19237
North Dakota	79	0.08968	0.11252	0.13543	0.17089
Ohio	903	0.06586	0.08935	0.11683	0.15576
Oklahoma	294	0.04164	0.06105	0.07661	0.11010
Oregon	132	0.04973	0.07323	0.09493	0.12403
Pennsylvania	650	0.12802	0.16532	0.19488	0.23651
Puerto Rico	0	0.06622	0.09302	0.12244	0.16451
Rhode Island	83	0.07635	0.09911	0.12335	0.14628
South Carolina	157	0.06154	0.07911	0.10739	0.14682
South Dakota	109	0.08420	0.11133	0.13579	0.16246
Tennessee	294	0.06478	0.08284	0.10109	0.13793
Texas	1,047	0.06242	0.09399	0.12370	0.16508
Utah	79	0.05775	0.08533	0.11116	0.15047
Vermont	40	0.12729	0.16092	0.19302	0.23799
Virgin Islands	1	0.06622	0.09302	0.12244	0.16451
Virginia	254	0.08631	0.12476	0.15317	0.19759
Washington	223	0.07017	0.09489	0.12360	0.16052
West Virginia	114	0.07636	0.10524	0.13587	0.16631
Wisconsin	375	0.07812	0.09881	0.12430	0.15362
Wyoming	35	0.07615	0.09117	0.12447	0.15903

Due to the small number of facilities, the cut points for Guam, Puerto Rico, and the Virgin Islands are based on the national distribution of the Locomotion Worsening quality measure score.

Quintiles for these cut points are used to assign points towards the QM summary score as follows:

- 20 points:  $\leq 20^{\text{th}}$  percentile
- 15 points:  $> 20^{\text{th}}$  percentile and  $\leq 40^{\text{th}}$  percentile
- 10 points:  $> 40^{\text{th}}$  percentile and  $\leq 60^{\text{th}}$  percentile
- 5 points:  $> 60^{\text{th}}$  percentile and  $\leq 80^{\text{th}}$  percentile
- 0 points:  $> 80^{\text{th}}$  percentile.