

Medicare Hospital Star Rating System - Implications for Rural Hospitals -

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Overview

- In July 2016 the Centers for Medicare and Medicaid Services (CMS) published the first iteration of its Hospital Overall Scoring system results.
- Based upon this scoring system CMS assigns a star-rating grade to scored hospitals, with 1 star representing the lowest overall performance and 5 stars representing the highest overall performance.
- This system generates a simplified grade for scored hospitals that may assist consumers in their hospital care decision-making.
- The hospital overall scores will be recalculated quarterly in 2016 and semi-annually in subsequent years. Recalculation will be based upon the latest hospital operating data.

Scoring Methodology

- A hospital's overall score is derived from a weighted assessment of 64 different hospital performance measures – not all measures are given the same weight.
- These measures are taken from a large dataset used in the Hospital Compare effort.
- The measures fall into 7 Measure Groups:
 - Mortality (outcome measure);
 - Safety of Care (outcome measure);
 - Readmission ((outcome measure);
 - Patient Experience;
 - Effectiveness of Care;
 - Timeliness of Care; and
 - Efficient Use of Medical Imaging.
- Each Measure Group is assigned its own scoring weight.

Number of Measures in Each Group

**Mortality Measures
(N=7)**

**Safety of Care
Measures (N=8)**

**Readmission
Measures (N=8)**

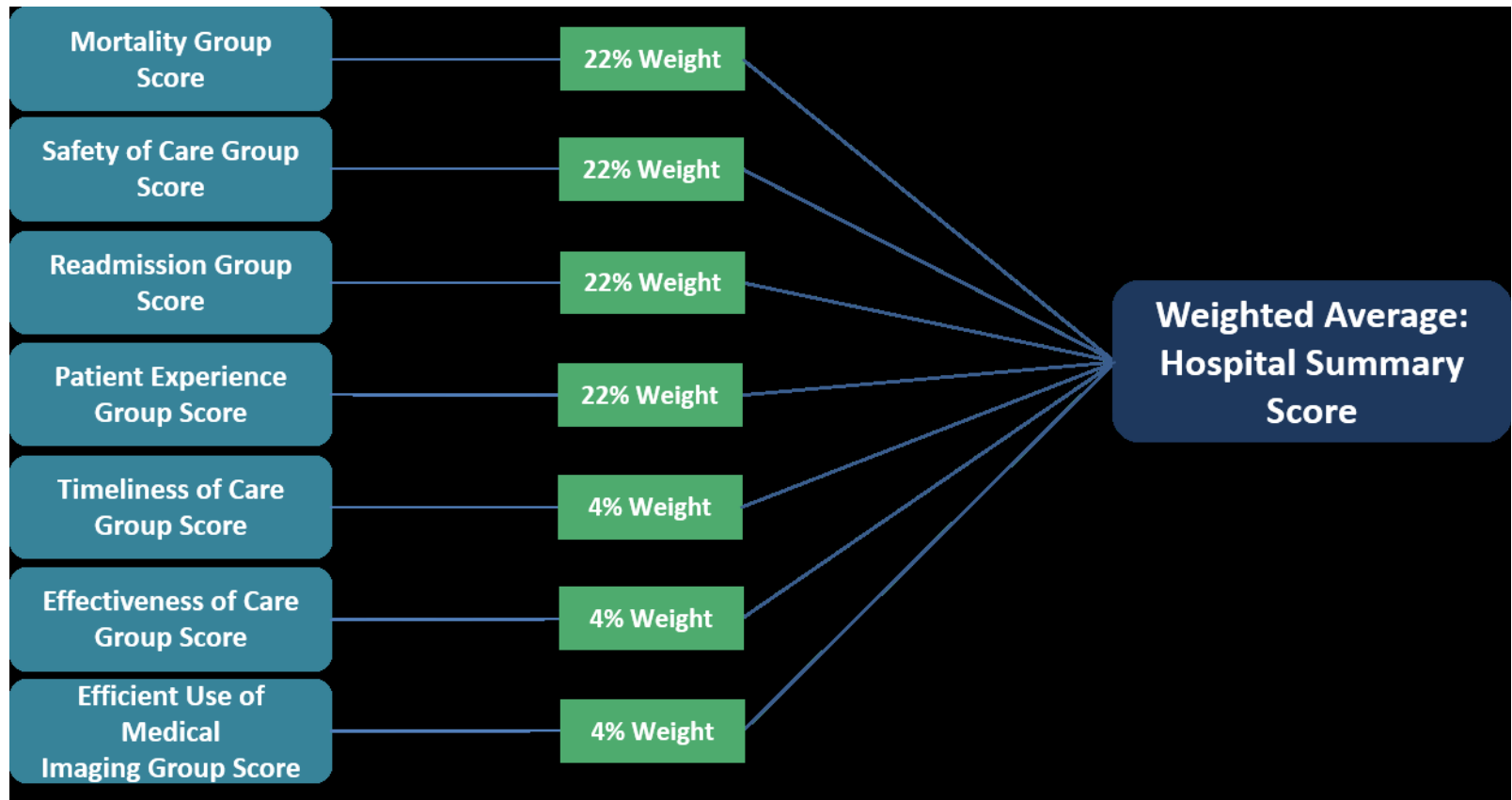
**Patient Experience
(N=11)**

**Effectiveness of Care
(N=18)**

**Timeliness Of Care
(N=7)**

**Efficient Use of
Medical
Imaging Measures
(N=5)**

Measure Group Weights



Scored and Unscored Hospitals - 1

- Sufficient data must be available for a hospital to receive a score. A hospital need not have submitted data on all 64 measures to receive a score.
- On any given measure a hospital must meet a minimum threshold of cases for that measure to be recorded.
- If a hospital does not meet the reporting threshold on any measure, that measure will be excluded and the weights of other measures rebalanced.
- A hospital which does not meet the reporting threshold for at least 1 measure in a Measure Group will have that group excluded from scoring and the weights of other groups will be rebalanced.

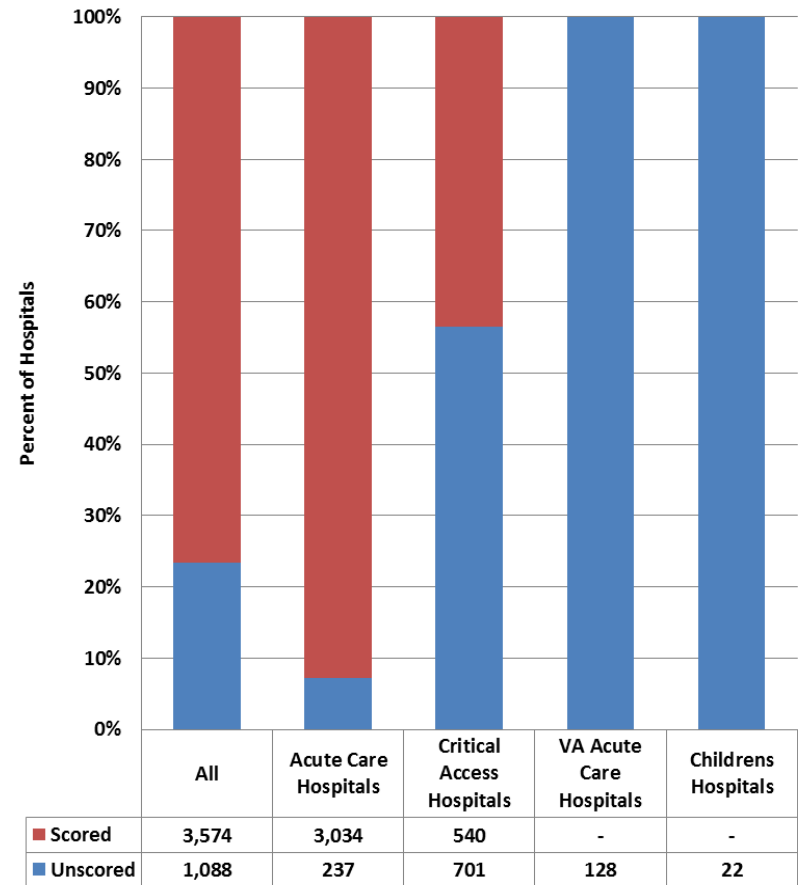
Scored and Unscored Hospitals - 2

- For a hospital to receive an overall score, at least 3 of the 7 Measure Groups – with at least one being an outcome measure group - must be included.
- In addition, for a hospital to receive an overall score, at least 3 of the included Measure Groups must have at least 3 measures reported.
- Failure to meet these thresholds for measures and Measure Groups will lead to a hospital being unscored.
- An analysis was conducted examining the scored/unscored rates for different categories of hospitals – including rural hospitals, urban hospitals and CAHs.
- The results of this analysis are presented on the following slides.

Extent of Hospital Scoring

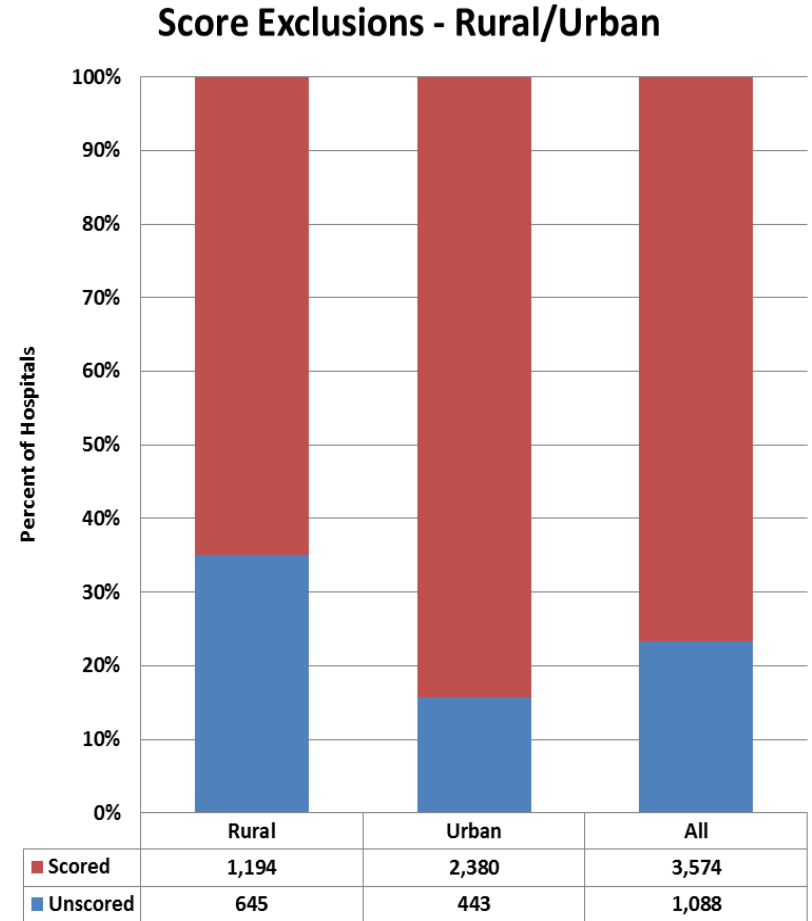
- 4,662 hospitals in the 50 states and District of Columbia were reviewed for scoring purposes. 1,088 of these (23%) were not scored.
- The unscored hospitals include 128 Veterans Administration hospitals and 22 children's hospitals.
- 237 general acute care hospitals were unscored. This represents 7% of all general acute care hospitals.
- 701 Critical Access Hospitals (CAHs) went unscored. This represents more than half (56%) of all CAHs.

Score Exclusions - by Hospital Type



Rural/Urban Hospital Assessment

- Almost three-fifths (59%) of *all unscored hospitals* are in rural areas.
- This is disproportionate to the 39% of all hospitals located in rural areas.
- Of the *rural unscored hospitals*, 89% were CAHs.
- This suggests that the measurement and scoring mechanisms might not work well for rural facilities, and in particular for CAHs.



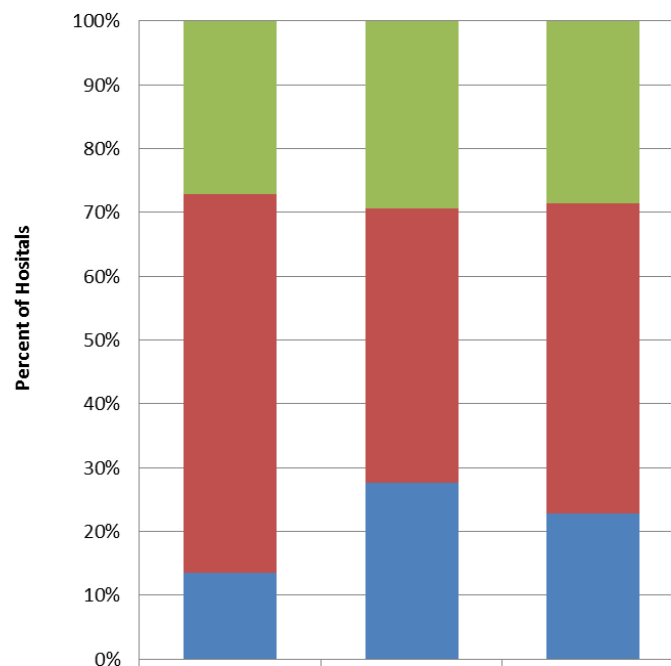
Overall Hospital Scores - Comparisons

- The 3,554 scored hospitals were all assigned a star rating of between 1-5 stars.
- Hospitals receiving 1 or 2 stars were judged to have overall scores *below* the national average.
- Hospitals receiving 4 or 5 stars were judged to have overall scores *above* the national average.
- Hospitals receiving 3 stars were judged to have overall scores in *the same* category as the national average.
- An analysis was conducted comparing the overall scores of different categories of hospitals – including rural hospitals, urban hospitals and CAHs.
- The results of this analysis are presented on the following slides.

Hospital Score – Rural/Urban Comparison

- Only 13% of scored rural hospitals had overall scores lower than the national average.
- By comparison, 28% of urban hospitals had overall scores lower than the national average.
- 59% of scored rural hospitals had overall scores in the same category as the national average.
- Only 43% of scored urban hospitals had overall scores in the same category as the national average.

Hospital Score - Rural/Urban

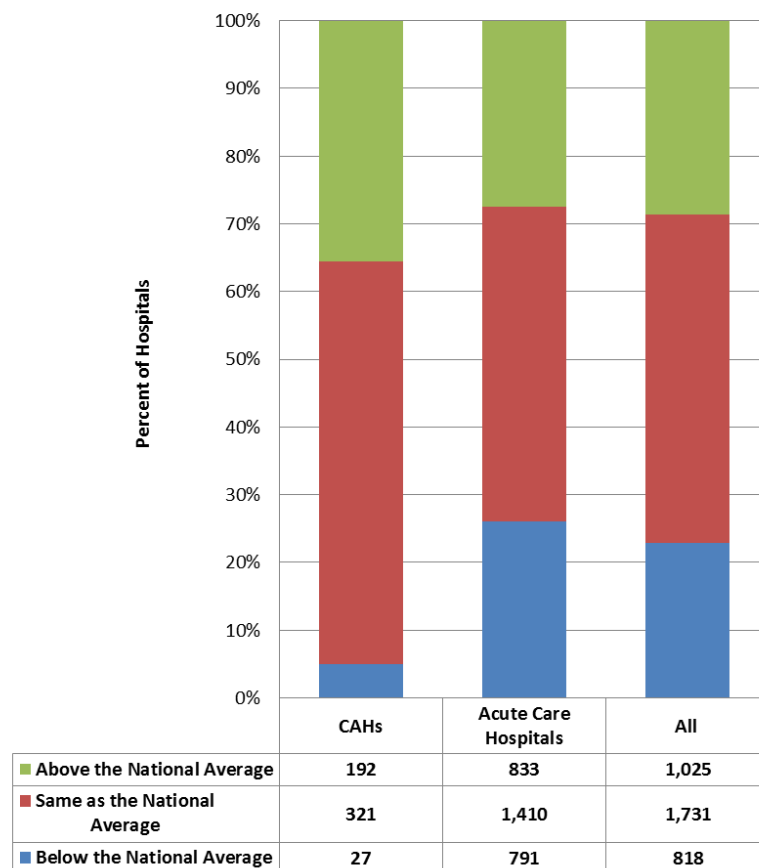


	Rural	Urban	All
Above the National Average	324	701	1,025
Same as the National Average	709	1,022	1,731
Below the National Average	161	657	818

Hospital Score – CAHs and Other Hospitals

- Only 5% of scored CAHs have overall hospital scores below the national average.
- By comparison, 26% of scored acute care hospitals have overall scores below the national average.
- 36% of scored CAHs have overall hospital scores above the national average. 27% of acute care hospitals have overall scores in this category.

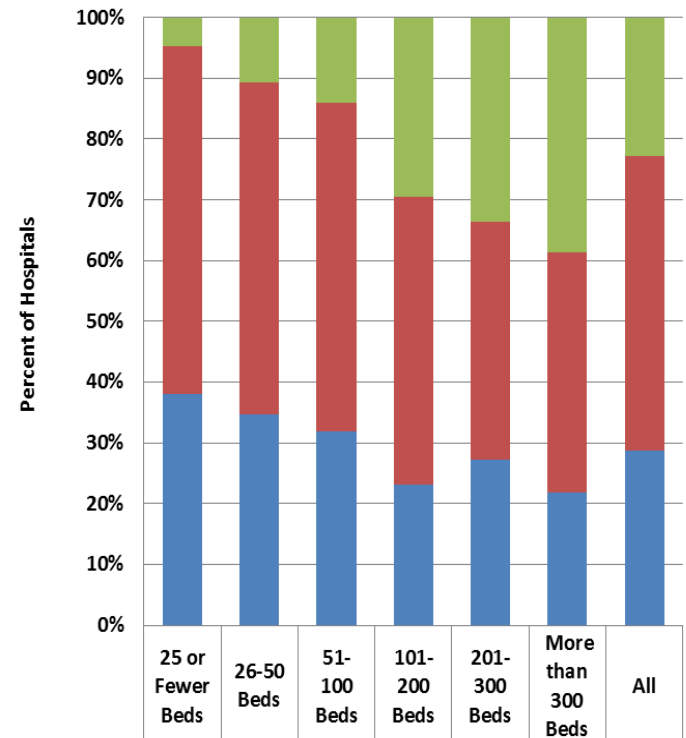
Hospital Score - CAHs and Other Hospitals



Hospital Score – By Hospital Size

- Only 5% of scored hospitals with *25 or fewer beds*, including CAHs, had overall scores lower than the national average.
- Similarly, only 11% of scored small hospitals with *26-50 beds* had overall scores lower than the national average.
- In comparison, 39% of scored hospitals with *more than 300 beds* had overall scores lower than the national average.
- Note also that 38% of scored hospitals with *25 or fewer beds* had overall scores higher than the national average.

Hospital Score - By Hospital Size



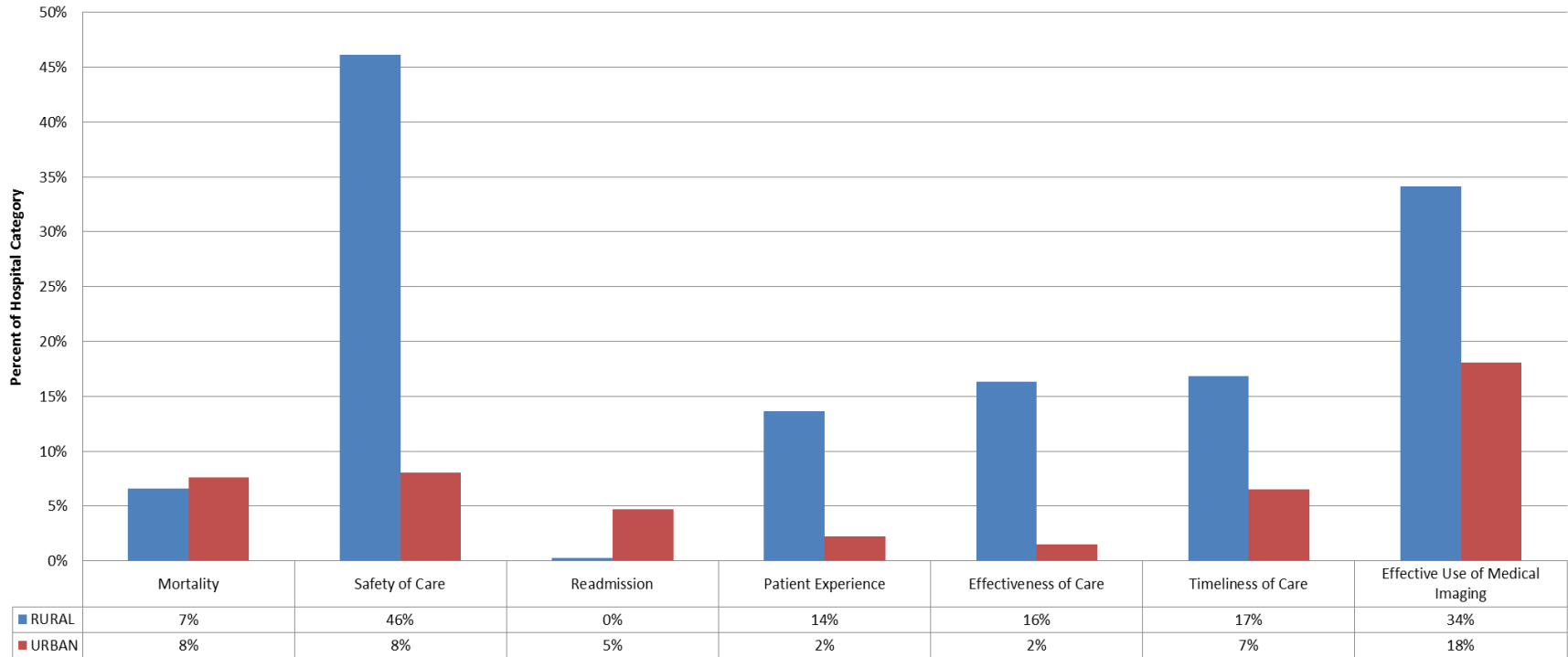
	25 or Fewer Beds	26-50 Beds	51-100 Beds	101-200 Beds	201-300 Beds	More than 300 Beds	All
Below the National Average	29	44	80	259	158	248	818
Same as the National Average	346	224	309	413	185	254	1,731
Above the National Average	230	142	182	203	128	140	1,025

Excluded Measures – Hospital Comparisons

- If a hospital does not reach the minimum reporting threshold for a given measure, that measure is excluded and the weights of remaining measures are re-balanced to calculate an overall score.
- Similarly, a hospital may not reach the minimum threshold for an entire Measure Group. In this situation the entire Measure Group is excluded and the weights of the remaining measure groups are rebalanced in calculating an overall score.
- This means that the overall score for each hospital may be calculated from very different sets of measures and Measure Groups.
- An analysis was conducted examining which Measure Groups were excluded at higher rates for different categories of hospitals – including rural hospitals, urban hospitals and CAHs.
- The results of this analysis are presented on the following slides.

Measure Groups Falling Below Thresholds -1

Exclusion from Measure Groups - Rural/Urban Hospital Comparison

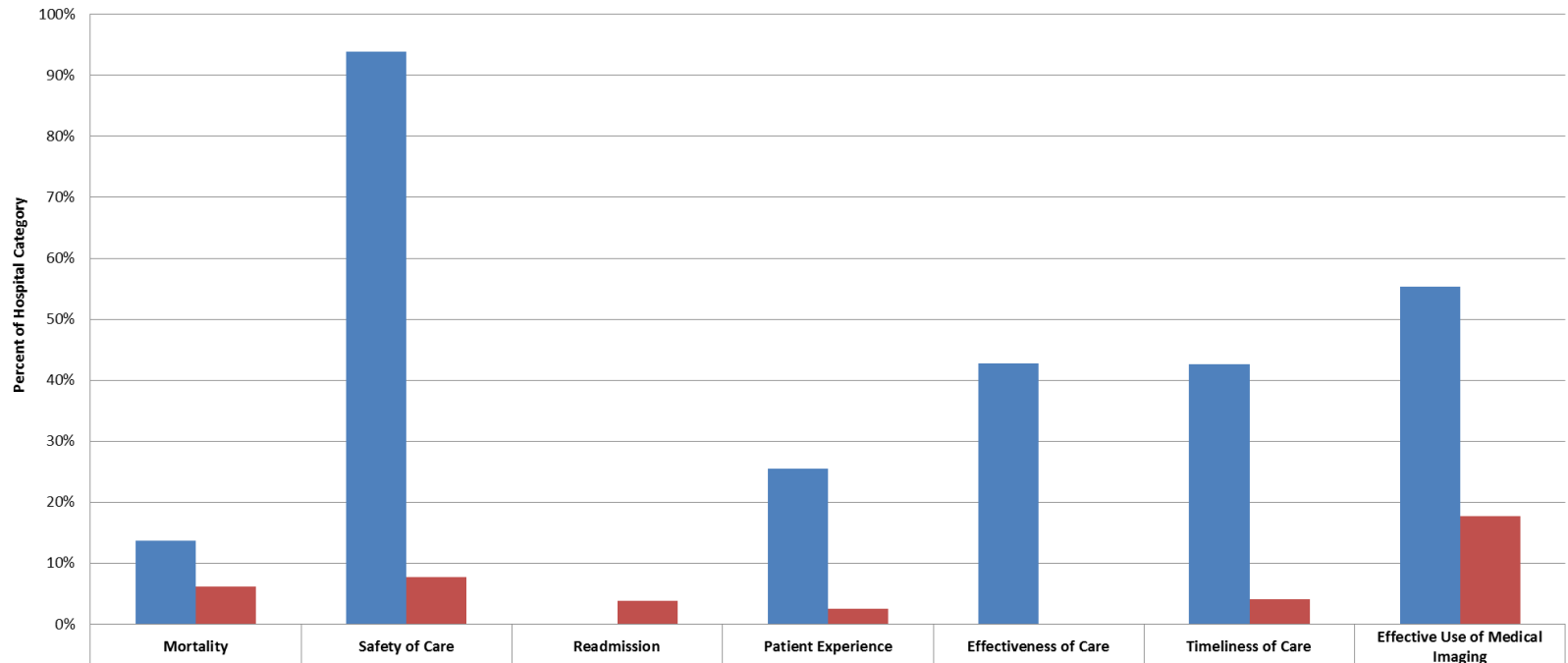


- 46% of scored rural hospitals *did not meet* the minimum group threshold and were not scored on Safety of Care measures.
- 34% of scored rural hospitals *did not meet* the minimum group threshold and were not scored on Effectiveness of Medical Imaging.

- Rural hospitals had substantially *higher* percentages of exclusion than urban hospitals in all measure groups except Mortality.

Measure Groups Falling Below Thresholds - 2

Exclusion from Measure Groups - CAH/Acute Care Hospital Comparison



- 94% of scored CAHs *did not meet* the minimum group threshold and were not scored on Safety of Care measures.
- 43% of scored CAHs *did not meet* the minimum group threshold and were not scored on Effectiveness of Care measures.

- 43% of scored CAHs *did not meet* the minimum group threshold and were not scored on Timeliness of Care measures.
- Scored CAHs had much *higher rates of exclusion* than other hospitals in all but one measure group.

State Hospital Rating Profiles

- Individual State Hospital Rating Profiles are posted to the NOSORH website.
- Each profile provides two state-specific listings of all hospitals – one listing of scored hospitals and another of unscored hospitals.
- The listings are presented in hospital name alphabetical order, but can be filtered by county, rural/urban status, hospital type and star rating level.
- Each listing of rated hospitals indicates the relative rating of the hospital – overall and on each of the seven rating domains. Each hospital is receives one of the following ratings
 - Above national average,
 - Below national average,
 - Same as national average, or
 - Not scored.
- State Profiles Link:

<https://www.dropbox.com/sh/2jzhj4qbocev115/AAC4biB5DzWz84JWkV31lGTga?dl=0>

Scored Hospitals by State Partial Listing

Percent of US Hospitals Unrated Under CMS Star System - 2016

-- State Percentage in Quintile Categories

State	Total Hospitals	Unscored Hospitals	Percent Unscored	Category
MD*	46	46	100.00%	Very High
ND	45	31	68.89%	Very High
SD	54	37	68.52%	Very High
MT	58	34	58.62%	Very High
NE	89	49	55.06%	Very High
AK	20	11	55.00%	Very High
ID	42	22	52.38%	Very High
KS	130	68	52.31%	Very High
MN	132	55	41.67%	Very High
IA	117	47	40.17%	Very High
WY	28	11	39.29%	High
UT	46	18	39.13%	High
CO	79	29	36.71%	High
MS	95	33	34.74%	High
OK	127	41	32.28%	High
AR	77	22	28.57%	High
AZ	77	22	28.57%	High
WA	92	26	28.26%	High
LA	115	32	27.83%	High
HI	18	5	27.78%	High

Scored Rural Hospitals by State - Partial Listing

Percent of US Rural Hospitals Unrated Under CMS Star System - 2016
-- State Percentage in Quintile Categories

State	Rural Hospitals	Unscored Rural	Percent Unscored	Category
MD*	3	3	100.00%	Very High
SD	39	30	77.00%	Very High
ND	37	28	76.00%	Very High
AK	15	11	73.00%	Very High
UT	18	12	67.00%	Very High
NE	65	43	66.00%	Very High
MT	51	33	65.00%	Very High
ID	27	17	63.00%	Very High
KS	94	57	61.00%	Very High
CO	40	22	55.00%	High
NV	11	6	55.00%	High
AZ	13	7	54.00%	High
MN	76	41	54.00%	High
WA	30	15	50.00%	High
IA	82	37	45.00%	High
WY	24	10	42.00%	High
MS	67	27	40.00%	High
AR	48	17	35.00%	High
TX	113	39	35.00%	High
WV	26	9	35.00%	High

Summary - 1

- **Unscored Rural Hospitals:** The scoring methodology excludes more than a third (35%) of rural hospitals. Excluded hospitals did not meet the minimum reporting threshold for measures and Measure Groups. The bulk of excluded rural hospitals (89%) are CAHs.
- **Unscored CAHs:** More than half (56%) of all CAHs nationwide were excluded from scoring.
- **Rural Hospital Scores:** The percentage of scored urban hospitals with scores *below the national average* (28%) is more than twice that of scored rural hospitals (13%). This may reflect better rural hospital performance compared to urban hospitals or may be an anomaly of the scoring process. The majority of scored rural hospitals (59%) rank as the *same as the national average*.

Summary - 2

- **CAH Scores**: 36% of scored CAHs have overall scores higher than the national average. Only 5% of scored CAHs have scores lower than the national average. These percentages are substantially better than other scored acute care hospitals.
- **Smaller Hospital Scores**: Fewer than 10% of scored *hospitals with under 101 beds* score worse than the national average hospital score. This compares well with hospitals with 101-200 beds (32%) and hospitals with more than 300 beds (30%).
- **CAHS and Excluded Measure Groups**: Almost all scored CAHs (94%) were *not* scored on the Safety of Care Measure Group. This may indicate that the measures and thresholds in this Measure Group are inappropriate for low-volume rural facilities.

Recommendations

- Rural and Small Hospital Relevant Measurement: CMS should select measures and measure thresholds which are *more* relevant to rural and low-volume hospitals. This will allow more CAHs and low-volume hospitals to be scored.
- Multiple Rating Categories: CMS should consider creating *separate rating categories* for different types of hospitals.
 - This could be similar to the annual ratings of colleges and universities conducted by several sources. In these approaches there are *separate* rankings of large national universities, regional universities and small liberal arts colleges.
 - A categorized approach for hospitals could establish separate ratings for CAHs, academic hospitals, safety net hospitals, or categories of hospitals based upon size. Relevant sets of measures and minimum thresholds could be established for each hospital category.

References

- **Overall Hospital Star Ratings Overview** - This website provides an introduction to the hospital rating effort:
 - <https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTieR2&cid=1228775183434>
- **Overall Hospital Star Ratings FAQs** – this document provides answers to questions on the hospital rating effort:
 - https://www.qualitynet.org/dcs/BlobServer?blobkey=id&blobnocache=true&blobwhere=1228890602887&blobheader=multipart%2Foctet-stream&blobheadername1=Content-Disposition&blobheadervalue1=attachment%3Bfilename%3DHC_OvrStarRtgExtHosFAQs_072716%2C0.pdf&blobcol=urldata&blobtable=MungoBlobs
- **Overall Hospital Star Rating Methodology Report** – this report provides a detailed outline of the scoring methodology for the hospital rating effort:
 - https://www.qualitynet.org/dcs/BlobServer?blobkey=id&blobnocache=true&blobwhere=1228890577152&blobheader=multipart%2Foctet-stream&blobheadername1=Content-Disposition&blobheadervalue1=attachment%3Bfilename%3DStar_Rtngs_CompMthdlgy_052016.pdf&blobcol=urldata&blobtable=MungoBlobs