



Overall Hospital Quality Star Ratings: July 2023 Refresh

April 24, 2023

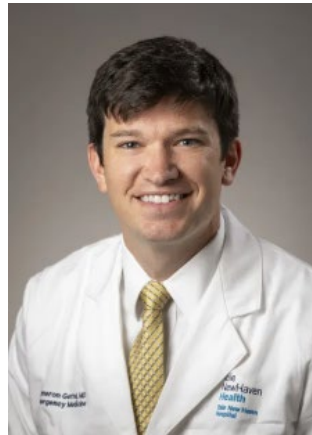
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Agenda

- **Introduction** [*Michelle Schreiber*]
- **Overall Star Ratings Background** [*Arjun Venkatesh*]
- **2023 Star Ratings** [*Cameron Gettel*]
- **Clarifications About Star Ratings** [*Kyle Bagshaw*]
- **2023 Implementation** [*Dawn Beard*]

Acronyms and Abbreviations

AMI	Acute Myocardial Infarction	HCP	Health Care Provider
CABG	Coronary Artery Bypass Graft	HF	Heart Failure
CAH	Critical Access Hospitals	N/A	Not Applicable
CCSQ	Center for Clinical Standards and Quality	OP	Outpatient
CE	Continuing Education	PN	Pneumonia
COPD	Chronic Obstructive Pulmonary Disease	PSI	Patient Safety Indicators
CMS	Centers for Medicare & Medicaid Services	Q	Quarter
DSH	Disproportionate Share Hospitals	VHA	Veterans Health Affairs
ECE	Extraordinary Circumstance Exception	vs	versus
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems Survey	YNHHS/ CORE	Yale New Haven Health Services Corporation/ Center for Outcome Research and Evaluation

Overall Hospital Quality Star Ratings:
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Overall Star Ratings Background

Project Overview and History

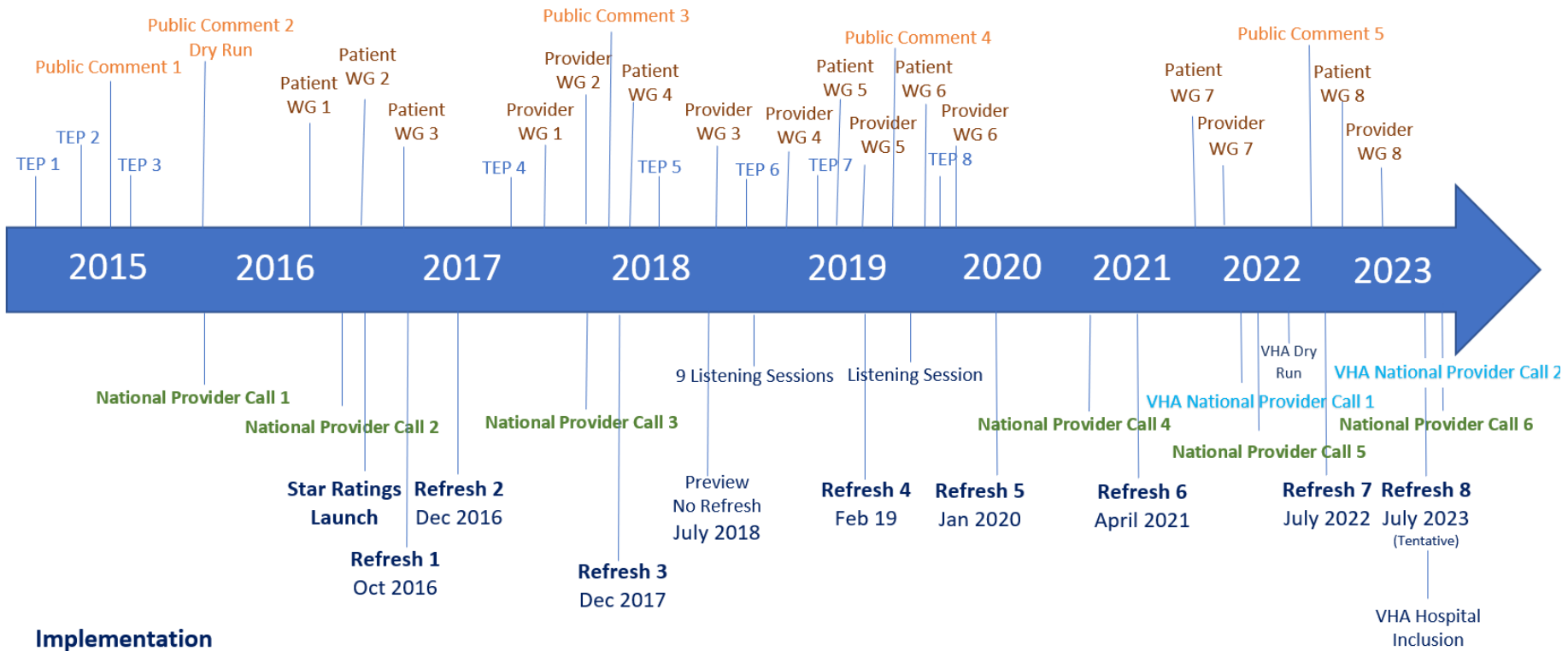
- **Objective:**
Develop a methodology to summarize measure information on Care Compare in a way that is useful and easy to interpret for patients/caregivers.
- **History:**
 - 2015 - Star Ratings Dry Run (v1.0)
 - 2016 - Star Rating officially launched (v2.0)
 - 2017 - Star Ratings methods updated (v3.0)
 - 2021 - Star Ratings methods updated (v4.1)
 - 2022 - First Star Ratings refresh impacted by CMS COVID-19 exception (v4.1)

Guiding Principles

- Use methods that:
 - Are scientifically valid.
 - Are inclusive of hospitals and measure information.
 - Account for heterogeneity of available measures and hospital reporting.
 - Accommodate changes in the underlying measures.
- Aim to fulfill:
 - Alignment with Care Compare and other CMS programs.
 - Transparency of methods.
 - Responsiveness to stakeholder input.

Historical Timeline

Development and Stakeholder Engagement



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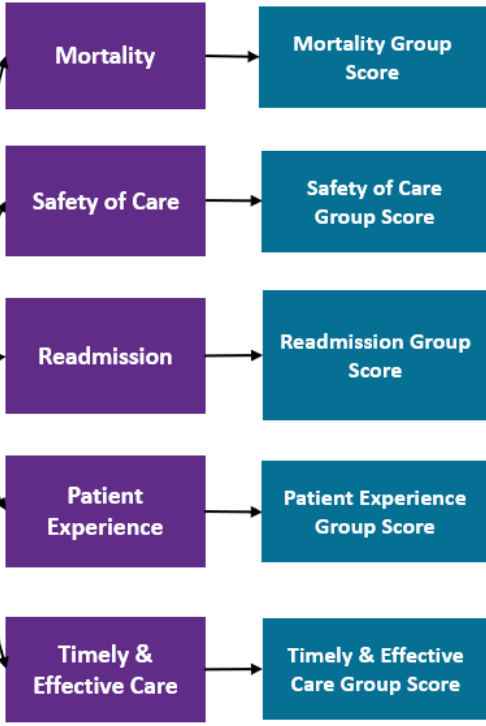
Current Star Ratings Methodology

Current Overall Star Rating Methodology

Step 1: Select Measures
Apply measure selection criteria each refresh and standardize scores

Step 2: Group Measures
Similar to HVBP and existing Care Compare display

Step 3: Calculate Group Score
Simple average of available measure scores, then standardized for combination



Step 4: Generate Summary Score
Policy-based weighted average of available hospital group scores



Step 5: Apply Reporting Thresholds
Hospitals must report 3 measures in at least 3 groups (one of which must be Mortality or Safety)

Step 6: Apply Peer Grouping
Group hospitals by number of measure groups with at least 3 measures



Step 7: Calculating Star Ratings
Use k-means clustering within each peer group to categorize summary scores into 5 star ratings



2023 Star Ratings Methodology Highlights

- Same methodology as 2021 and 2022 Star Ratings, which was vetted and approved in rulemaking.
- Veterans Health Administration (VHA) hospitals are now eligible to receive Star Ratings.
- 1 Timely + Effective Care measure retired:
 - OP-33 (retired January 2022)
- 1 Timely + Effective Care measure added:
 - HCP COVID-19

<https://www.federalregister.gov/documents/2020/12/29/2020-26819/medicare-program-hospital-outpatient-prospective-payment-and-ambulatory-surgical-center-payment>

CORE's Star Ratings Team



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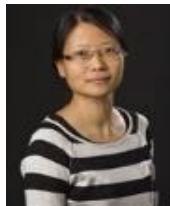
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Overall Hospital Quality Star Ratings:
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2023 Star Ratings

Differences Between 2022 and 2023 Star Ratings

Same in 2023

- Overall methodology (v4.1)
- All measure groups still contain many measures without major retirement.

Different in 2023

- CMS has reevaluated and respecified individual measures if necessary due to COVID-19.
- Greater data availability compared to 2022, given the Extraordinary Circumstance Exception (ECE).
- Veterans Health Administration (VHA) hospitals now eligible to receive Overall Star Rating.

ECE Impact

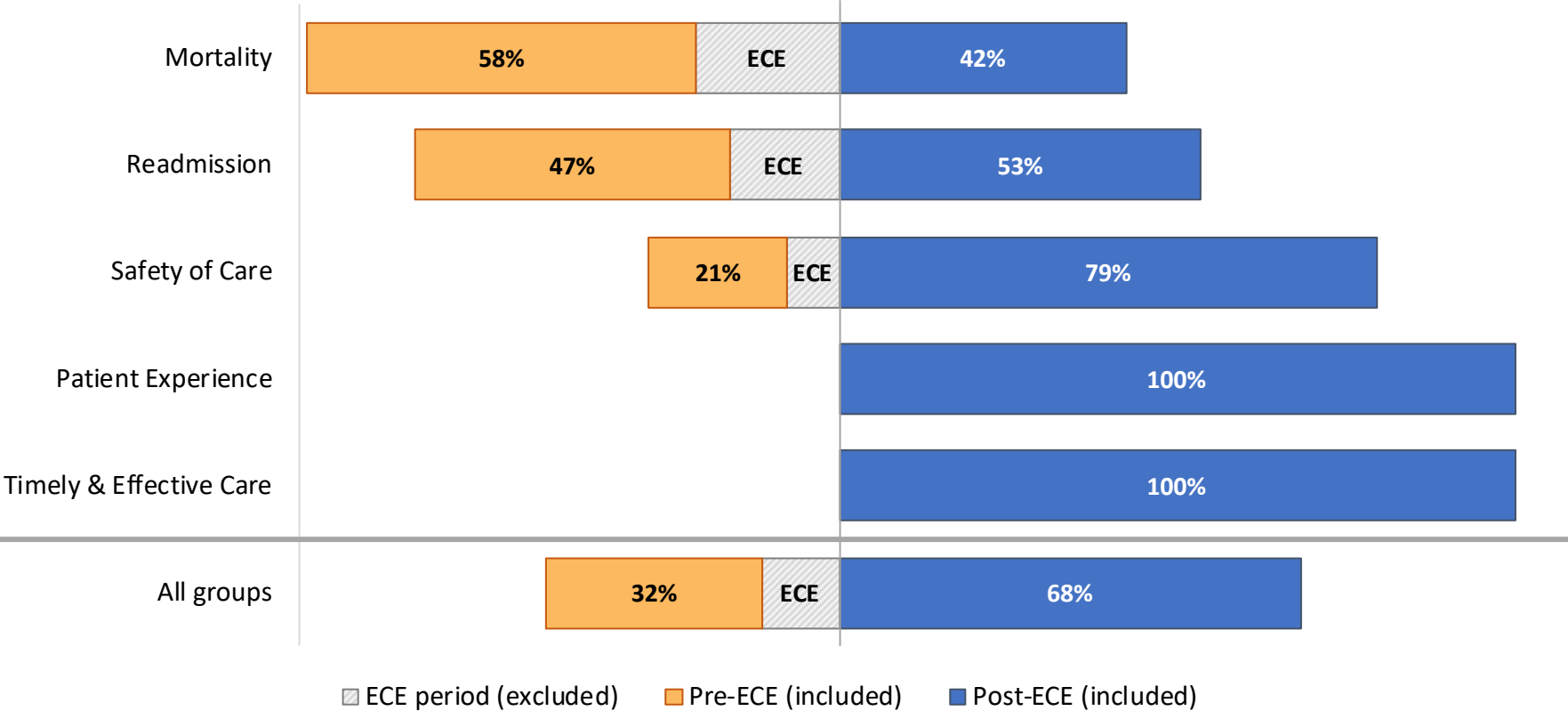
- The percentage of included data-months in each measure group that was collected after June 30, 2020 (the ECE period was January 1, 2020 – June 30, 2020):

Measure Group	2022	2023
Mortality	0%	42%
Readmission	0%	53%
Safety of Care	15%	79%
Patient Experience	0%	100%
Timely and Effective Care	23%	100%

- 68% of all data-months included in 2023 Star Ratings were collected after June 30, 2020.

Measure Data Availability in 2023

Measure Data Availability by measure group (% of included months)



Star Ratings in the COVID World

- As of January 2023 Care Compare data, most Star Rating measures have data periods entirely post-June 2020.
- July 2023 release may represent a “new normal” for Star Ratings.

Number of Hospitals with a Star Rating

2022 Star Ratings:
3,122 Hospitals

2023 Star Ratings:
3076 Hospitals

- Compared to 2022 Star Ratings, a net of just 46 fewer hospitals receive a Star Rating using January 2023 data:
 - 236 hospitals no longer meet criteria to have a Star Rating
 - 27 hospitals no longer included in dataset
 - 209 hospitals have data but no longer meet Star Rating criteria
 - 190 hospitals newly meet criteria for Star Rating

Number of Hospitals with a Star Rating by Peer Group

- Compared to 2022 Star Ratings, slightly fewer hospitals in the 3- and 4-group peer groups have a 2023 Star Rating.

	2022 Star Ratings (July 2021 Data)			2023 Star Ratings (January 2023 data)		
Peer group	3	4	5	3	4	5
Total	227 (7.3%)	490 (15.7%)	2,405 (77.0%)	194 (6.3%)	462 (15.0%)	2420 (78.7%)

Overall Star Ratings Distribution

- Distributions of Star Ratings across all hospitals are very similar across 2022 and 2023 Star Ratings.

	2022 Star Ratings (July 2021 Data)	2023 Star Ratings (January 2023 Data)
1	197 (6.3%)	250 (8.1%)
2	698 (22.4%)	668 (21.7%)
3	911 (29.2%)	872 (28.3%)
4	888 (28.4%)	803 (26.1%)
5	428 (13.7%)	483 (15.7%)
Total	3122	3076

Star Ratings Distributions by Peer Group

- Distributions of Star Ratings across peer groups are quite similar across 2022 and 2023 Star Ratings, especially for 2- and 3-star hospitals.

	2022 Star Ratings (July 2021 Data)			2023 Star Ratings (January 2023)		
Peer group:	3 (N=227)	4 (N=490)	5 (N=2,405)	3 (N=194)	4 (N=462)	5 (N=2,420)
1-star	17 (7.5%)	14 (2.9%)	166 (6.9%)	22 (11.3%)	25 (5.4%)	203 (8.4%)
2-star	64 (28.2%)	83 (16.9%)	551 (22.9%)	40 (20.6%)	84 (18.2%)	544 (22.5%)
3-star	66 (29.1%)	132 (26.9%)	713 (29.6%)	73 (37.6%)	128 (27.7%)	671 (27.7%)
4-star	62 (27.3%)	164 (33.5%)	662 (27.5%)	37 (19.1%)	130 (28.1%)	636 (26.3%)
5-star	18 (7.9%)	97 (19.8%)	313 (13.0%)	22 (11.3%)	95 (20.6%)	366 (15.1%)

Why did hospitals drop out of 2023 Star Ratings?

- 209 hospitals with January 2023 data do not get a Star Rating but did have a 2022 Star Rating.
- These hospitals were less likely to report at least 3 mortality measures or HCAHPS measures.

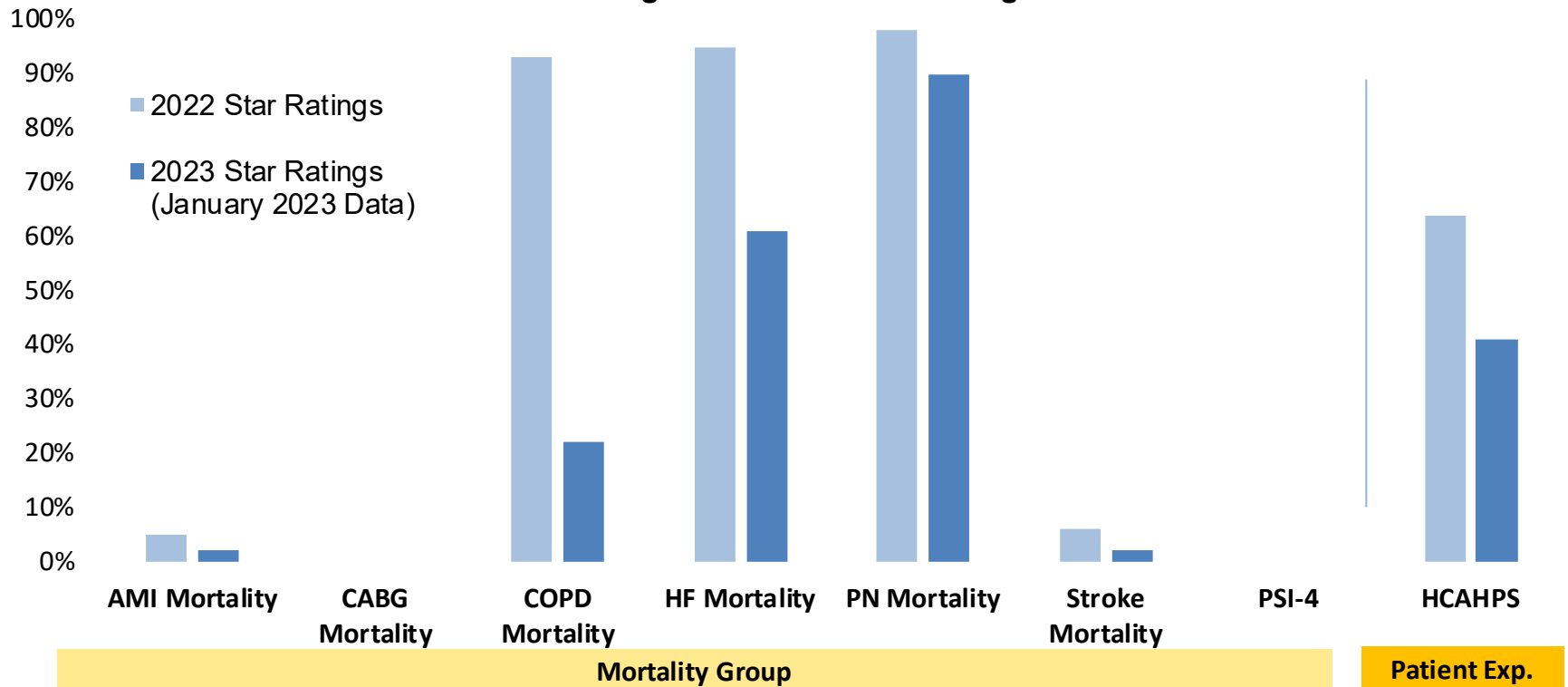
of Measures by Measure Group for Hospitals with Star Rating in 2022 and not 2023 (N=209)

Measure Group	2022 (July 2021 Data)					2023 (January 2023 Data)				
	Min	25 th Pct	Median	75 th Pct	Max	Min	25 th Pct	Median	75 th Pct	Max
Mortality	0	3	3	3	5	0	2	2	2	5
Safety	0	1	1	2	6	0	0	1	2	4
Patient Experience	0	0	8	8	8	0	0	0	8	8
Readmission	1	5	5	6	10	1	3	4	5	8
Timely/Effective Care	0	3	4	5	9	0	4	6	7	12

Largest Drops for COPD Mortality, HF Mortality, and HCAHPS

- Most hospitals with 2022 Star Ratings but no 2023 Star Ratings only had 3 mortality measures in 2022.
- Drop in reporting for COPD Mortality likely causing most of these hospitals to drop out of Star Ratings.

2022 and 2023 Star Ratings Measure Reporting Rates for 209 Hospitals with a 2022 Star Rating but no 2023 Star Rating



Shifts in Peer Grouping between 2022 and 2023 Star Ratings

- Most hospitals, 2647 (86%) remain in the same peer group in 2023 as 2022.
- Peer Group 3 most affected: of 227 hospitals in group in 2022, only 79 (34.8%) remain in 2023.
- Peer Group 4 also affected: of 490 hospitals, 280 (57%) remain in group in 2023.

2022 Stars Peer Group	2023 Stars Peer Group				Total
	3	4	5	N/A	
3	79 (34.8%)	42 (18.5%)	2 (0.9%)	104 (45.8%)	227
4	60 (12.2%)	280 (57.1%)	43 (8.8%)	107 (21.8%)	490
5	6 (0.2%)	86 (3.6%)	2288 (95.1%)	25 (1.0%)	2405
N/A	49 (3.1%)	54 (3.4%)	87 (5.5%)	1402 (88.1%)	1592
Total	194	462	2420	1638	4714

Stayed in same peer group (2,647)	Went down 1 or more peer groups (152)	Went up 1 or more peer groups (87)	No longer received Star Rating (236)	Newly received Star Rating (190)
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Shifts in Star Ratings Between 2022 and 2023 Star Ratings

2022 Star Rating	2023 Star Rating						Total
	1	2	3	4	5	N/A	
1	116 (58.9%)	58 (29.4%)	9 (4.6%)	0 (0.0%)	0 (0.0%)	14 (7.1%)	197
2	85 (12.2%)	314 (45.0%)	198 (28.4%)	40 (5.7%)	9 (1.3%)	52 (7.4%)	698
3	25 (2.7%)	204 (22.4%)	364 (40.0%)	214 (23.5%)	34 (3.7%)	70 (7.7%)	911
4	8 (0.9%)	63 (7.1%)	235 (26.5%)	341 (38.4%)	165 (18.6%)	76 (8.6%)	888
5	0 (0.0%)	4 (0.9%)	30 (7.0%)	147 (34.3%)	223 (52.1%)	24 (5.6%)	428
N/A	16 (1.0%)	25 (1.6%)	36 (2.3%)	61 (3.8%)	52 (3.3%)	1402 (88.1%)	1592
Total	250	668	872	803	483	1638	4714

Maintained same Star Rating (1,358)

Went down 1 or more stars (801)

Went up 1 or more stars (727)

No longer received Star Rating (236)

Newly received Star Rating (190)

Summary

- Only 46 net fewer hospitals will receive an Overall Star Rating in 2023 than in 2022, which is a smaller decrease than seen between previous year-to-year Star Rating refreshes.
- The decrease in COPD cohort size is the main reason for hospitals dropping out of Star Ratings and shifts in peer grouping.
- We anticipate that results reflect a new baseline for Star Ratings moving forward given the ongoing impact of COVID-19.

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Clarifications About Star Ratings

Clarification #1

Why are Star Ratings not released the same month each year?

The Timing of Star Ratings

- CMS has selected refresh criteria within the bounds of rulemaking that maximize available information consistent with principles.

Peer Group	2022 Star Ratings (July 2021 Data)	2023 Star Ratings (July 2022 Data)	2023 Star Ratings (Jan 2023 Data)
3 measure groups	227 (7.3%)	60 (2.5%)	194 (6.3%)
4 measure groups	490 (15.7%)	351 (14.4%)	462 (15.0%)
5 measure groups	2,405 (77.0%)	2,025 (83.1%)	2420 (78.7%)
Total	3,122	2,436	3,076

- Compared to 2022 Star Ratings, the number of hospitals with a Star Rating across peer groups is more similar for January 2023 than July 2022 data would have been, primarily due to suppression of PN and PSI measures for July 2022 data.

Clarification #2

Why are Star Ratings peer grouped based on the number of measure groups rather than any other hospital characteristics?

Peer Grouping

- Peer grouping was introduced to the Star Ratings methodology in 2021 with the goal of making like-to-like comparisons among hospitals in the program.
 - Peer measure groups correspond to hospital differences (e.g., size, volume, case and service mixes).
- Hospitals by peer measure group:
 - 3 measure peer group – 194 (6.3%)
 - 4 measure peer group – 462 (15.0%)
 - 5 measure peer group – 2,420 (78.7%)

Peer Grouping

- Compared to the 5-measure peer group, fewer hospitals in the 4-measure peer group have at least 3 measures in either Mortality or Safety of Care.
- Compared to the 4-measure peer group, fewer hospitals in the 3-measure peer group have at least 3 measures in either Readmission or Timely & Effective Care.

Peer Group	% of Hospitals Reporting Group for July 2023 Star Ratings (January 2023 data)				
	Mortality	Safety of Care	Readmission	Timely & Effective Care	Patient Experience
3 Measure Groups (N=194)	142 (73.2%)	54 (27.8%)	150 (77.3%)	55 (28.4%)	181 (93.3%)
4 Measure Groups (N=462)	338 (73.2%)	141 (30.5%)	462 (100.0%)	448 (97.0%)	459 (99.4%)
5 Measure Groups (N=2420)	2420 (100.0%)	2420 (100.0%)	2420 (100.0%)	2420 (100.0%)	2420 (100.0%)

Peer Grouping

- Hospitals in the 5-measure peer group are more likely to be larger teaching hospitals, DSH payment eligible, non-CAH's and non-safety net compared to hospitals in the 3-measure and 4-measure peer groups.

	Total Number of Hospitals (N=4654)	3 Measure Peer Group (N=194)	4 Measure Peer Group (N=462)	5 Measure Peer Group (N=2420)	N (%): Unrated
Non-CAH	3324	127 (65.5%)	295 (63.9%)	2404 (99.3%)	498 (31.6%)
Non-Safety Net	3117	93 (47.9%)	208 (45.0%)	2110 (87.2%)	265 (16.8%)
DSH Payment Eligible	2676	124 (63.9%)	309 (66.9%)	1893 (78.2%)	791 (50.1%)
Teaching (>=100) residents	260	1 (0.5%)	7 (1.5%)	251 (10.4%)	1 (0.1%)

Clarification #3

Do Hospitals influence Star Ratings by choosing which measures to report?

Public Reporting

- Hospitals participating in CMS programs are required to collect data for measures reported on Care Compare.
- Each underlying measure has established thresholds (such as minimum case count) for a hospital's score to be publicly reported to ensure reliable measurement.
- If a hospital does not meet threshold for a measure, its score is not reported publicly and does not factor into Star Ratings.
- However, in general, hospitals do not have a choice in measures for which their data is collected.

2023 Implementation

- Hospital-Specific Reports scheduled to be available on 5/2.
- Preview period is scheduled for 5/3-6/1.
- 2023 Star Ratings go live scheduled for 7/26.

Thank You

- For more information regarding Star Ratings, visit <https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings>.
- Please submit additional questions to the [QualityNet Question and Answer Tool](https://cmsqualitysupport.servicenowservices.com/qnet_qa):
https://cmsqualitysupport.servicenowservices.com/qnet_qa

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Questions

Continuing Education Approval

This program has been approved for [continuing education credit](#) for the following boards:

- **National credit**
 - Board of Registered Nursing (Provider #16578)
- **Florida-only credit**
 - Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling
 - Board of Registered Nursing
 - Board of Nursing Home Administrators
 - Board of Dietetics and Nutrition Practice Council
 - Board of Pharmacy

Note: To verify CE approval for any other state, license, or certification, please check with your licensing or certification board.

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