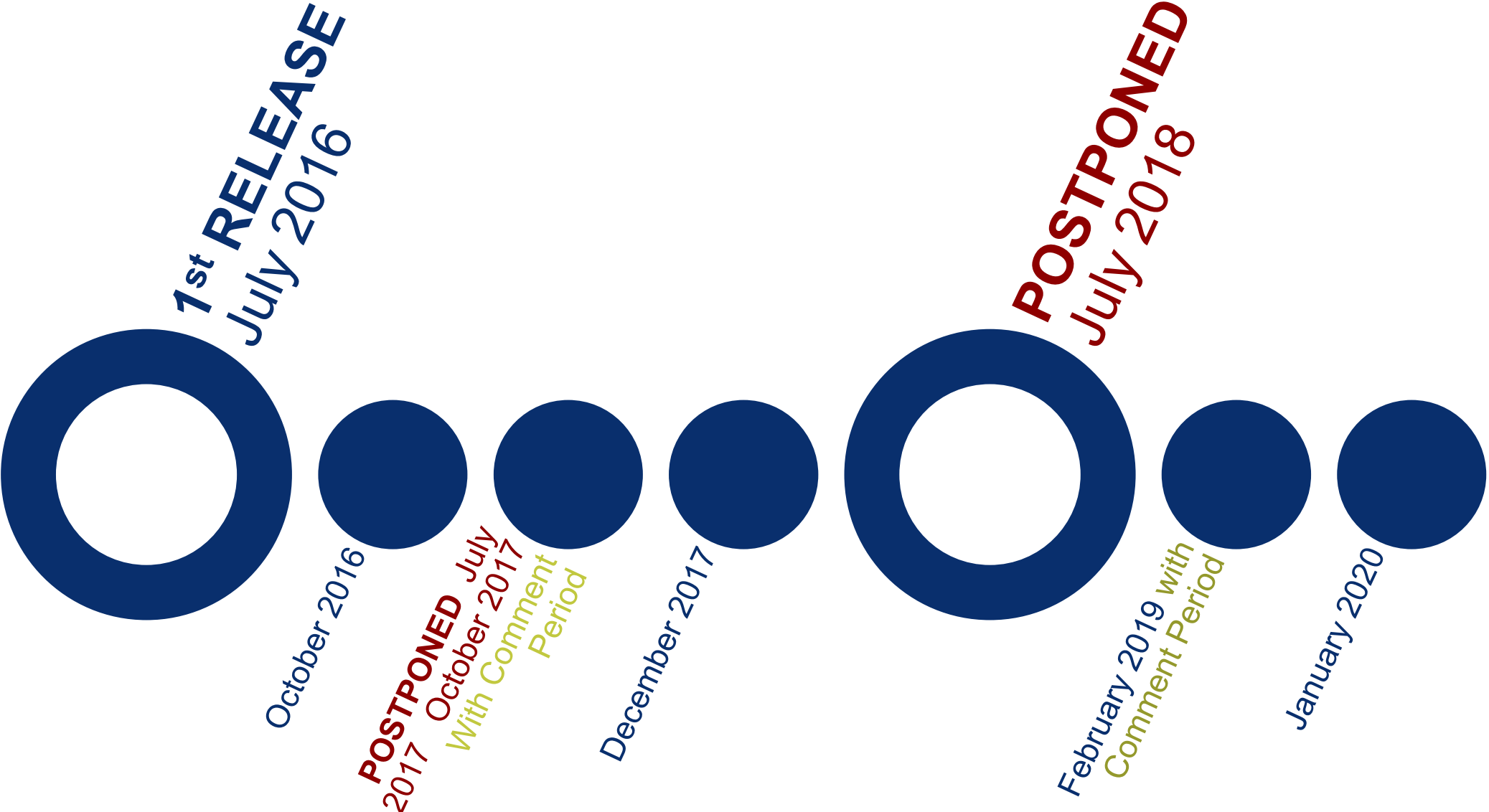
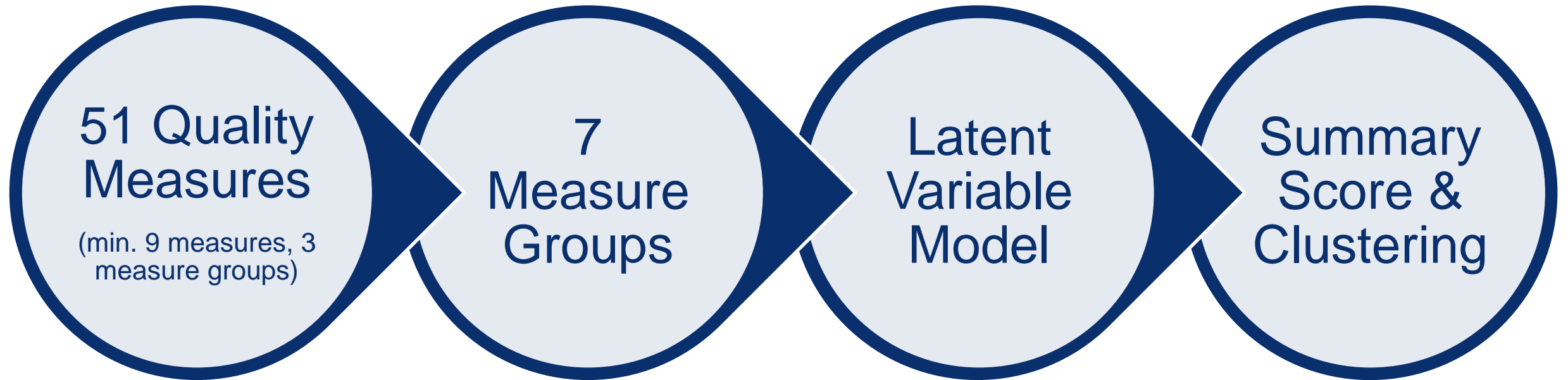


Overall Hospital Quality Star Rating Methodology for Public Release in CY 2021 and Subsequent Years

Hospital Star Ratings: Where We've Been



Overview of Ratings Methodology Thru 2020



Measure Groups (group's weight towards overall summary score):

Mortality (22%), Safety of Care (22%), Readmission (22%), Patient Experience (22%), Effectiveness of Care (4%), Timeliness of Care (4%), Efficient Use of Medical Imaging (4%)

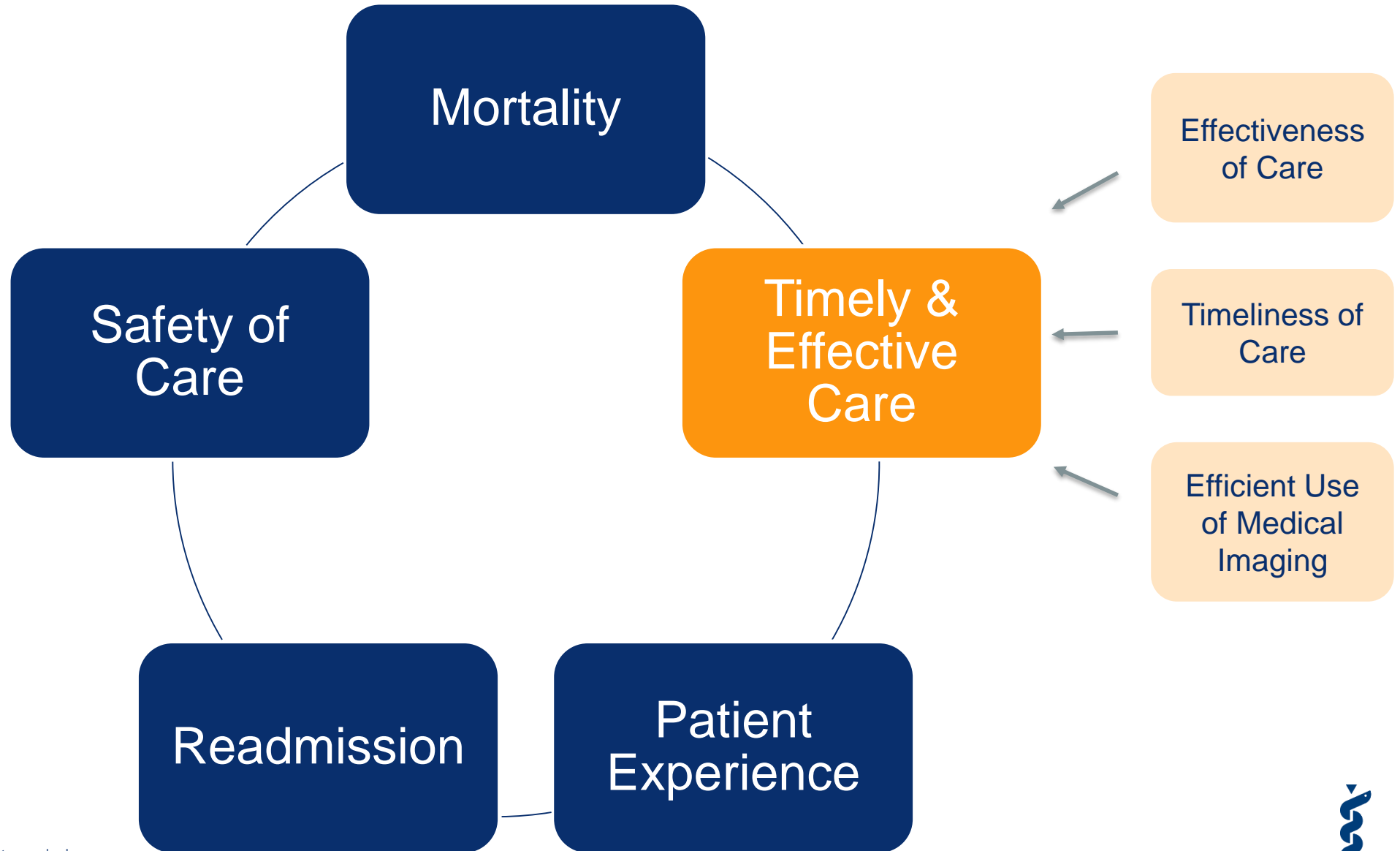
Overview of Changes to Star Ratings

- Codify Star Ratings in regulation (42 CFR 412.190)
- Continue to include Critical Access Hospitals (CAHs) who voluntarily report data and begin to include Veterans Health Administration (VHA) Hospitals beginning in CY 2023 (*details in future rulemaking*)
- Continue hospital preview before public release
- Suppression policy for Ratings
 - Extenuating circumstances that affect numerous hospitals, or
 - CMS fault: (1) calculation error by CMS, (2) systemic error at CMS quality program level, and (3) Public Health Emergency
 - Note: Separate suppression policy for CAHs
- Methodology Changes (*step-by-step review next!*)

Step 1: Selection and Standardization of Measures

- Timeframe
 - Retains **annual update** to Ratings; based upon underlying measure data on *Care Compare* website refreshed **within the prior year**.
- Measure Selection
 - Retains use of measures reported publicly through CMS quality programs
- Measure Exclusion
 - Retains exclusions for (1) low-reported measures (less than 100 hospitals), (2) structural measures, (3) non-directional measures, (4) measures not required for public reporting, and (5) overlapping measures
 - **Eliminates** exclusion for measures with statistically significant negative loading factors (LVM)
- Measure Score Standardization
 - Retains z-scoring method to standardize scoring to similar scale (units and direction)
 - **Eliminates** Winsorization method for outlier performance

Step 2: Assignment of Measures to Groups

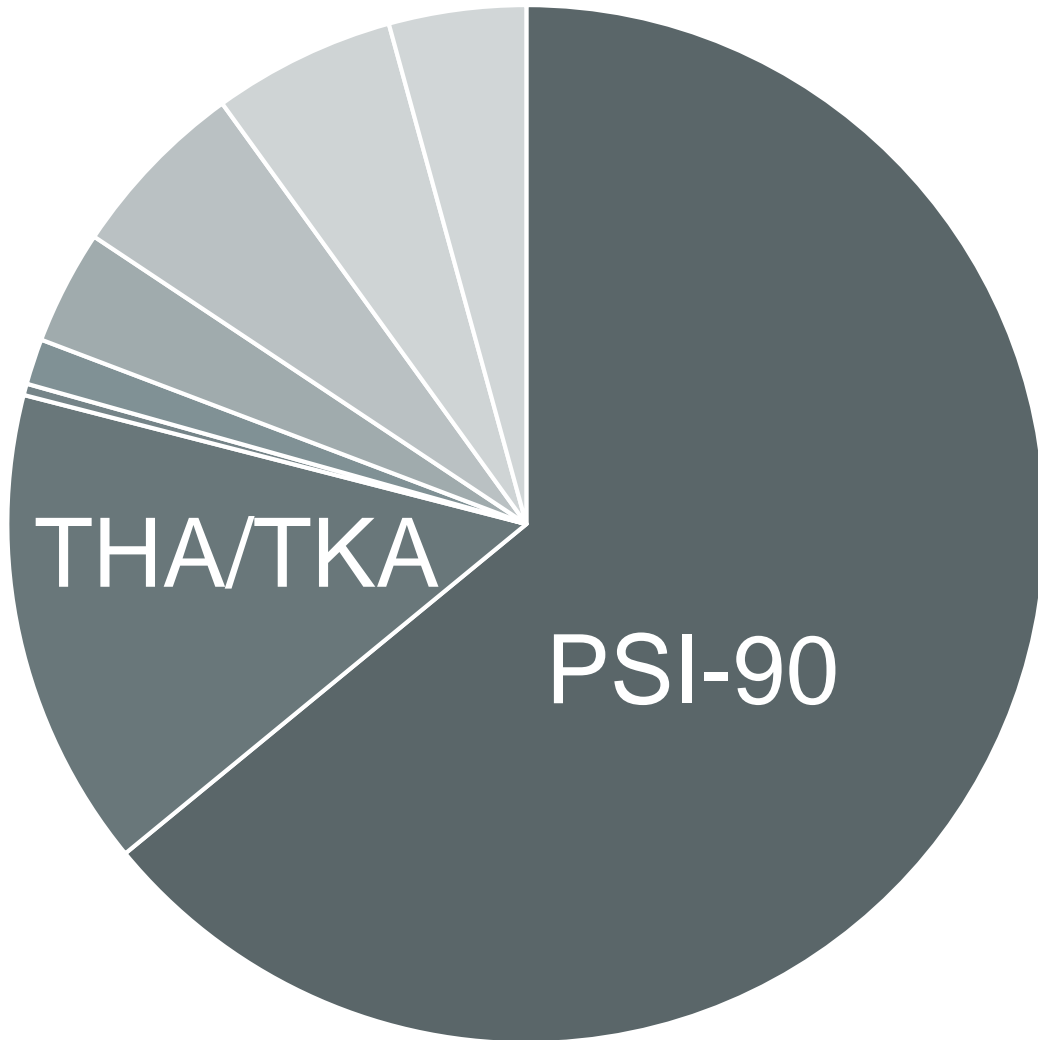


Step 3: Calculation of Measure Group Score

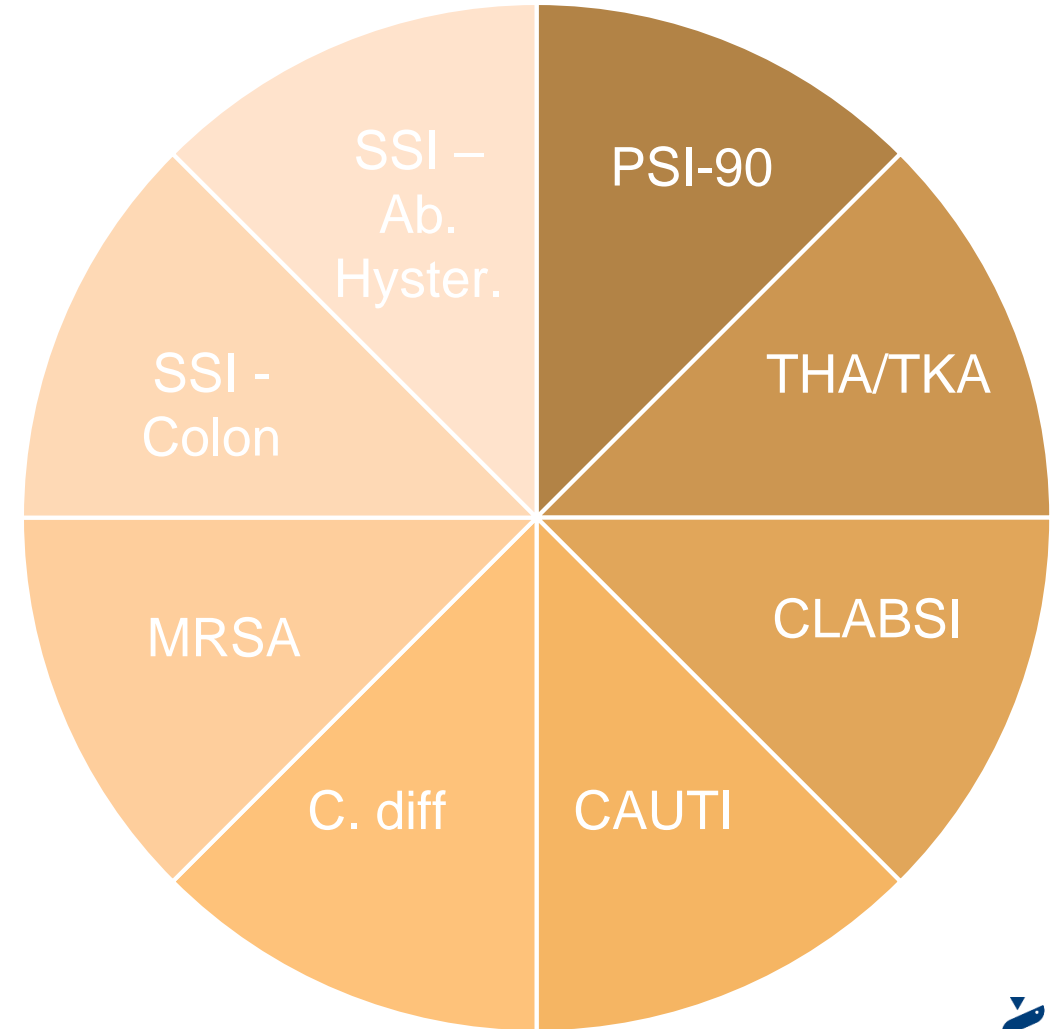
- **Discontinue** Use of the Latent Variable Model Method
 - Challenge to understand
 - Lack of predictability of measure loading factors for group scores
- **Instead** Use a Simple Average Method
 - Equal measure weights within measure group (measure weights within a group dependent on # of measure scores within that group for which a hospital has)
 - Standardize measure group scores using Z-score method
- **Did NOT finalize** Stratify Readmission Measure Group Scoring
 - Proposal to stratify readmission measure group by proportion of dual-eligible patients, similar to stratification in Hospital Readmissions Reduction Program
 - Cites a 2020 ASPE report recommending CMS not adjust publicly reported quality measures and composite scores for social risk.

Step 3: Example of LVM vs. Simple Averages

LVM - Safety

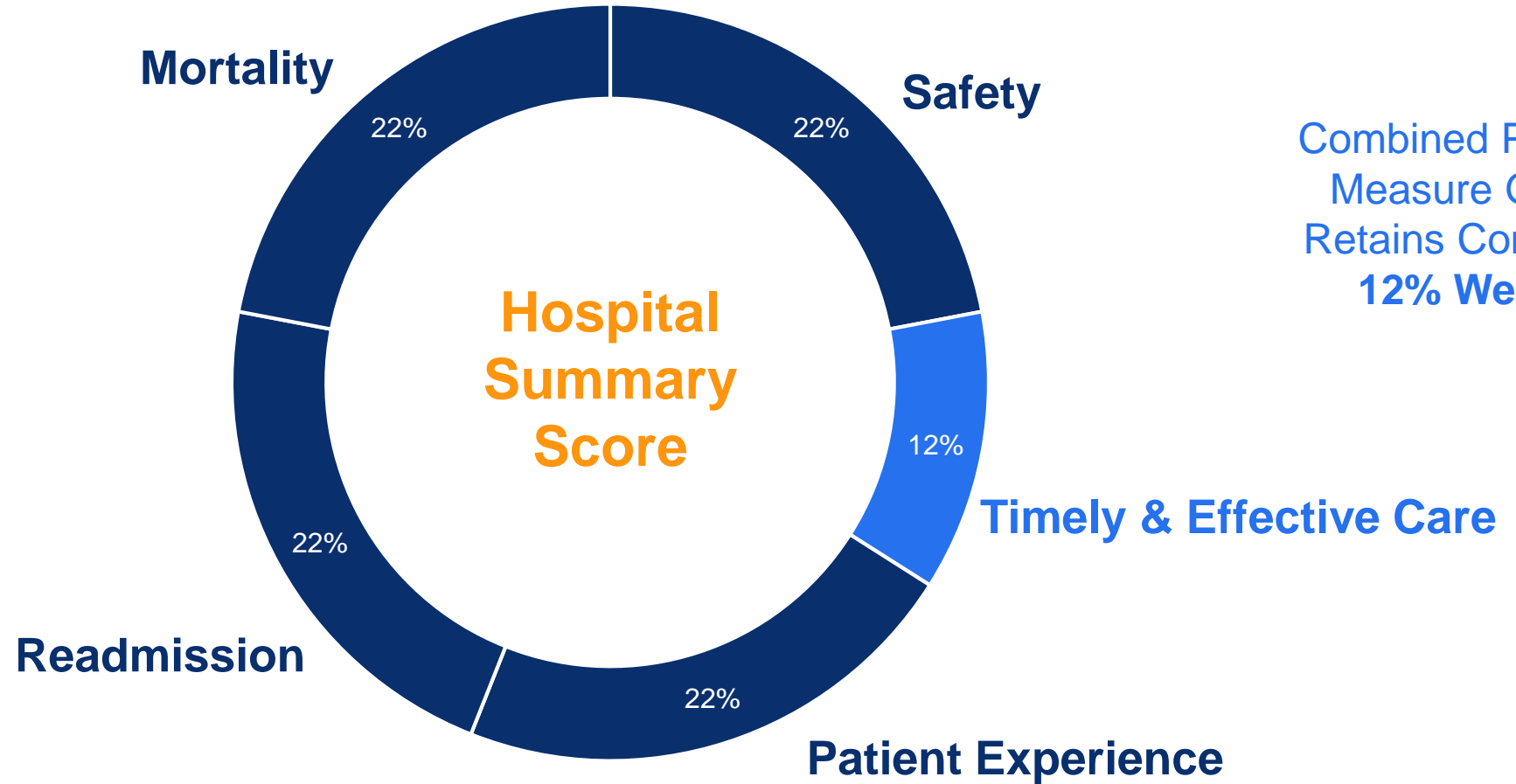


Simple Averages - Safety



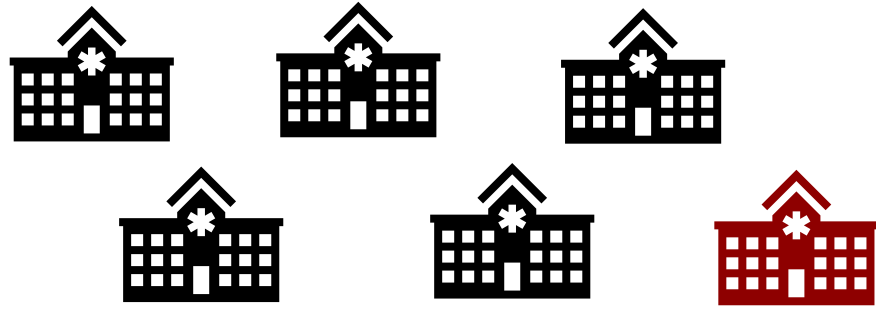
Step 4: Calculation of Hospital Summary Score

Outcomes & Patient Experience Measure Groups Retain **22% Weights**

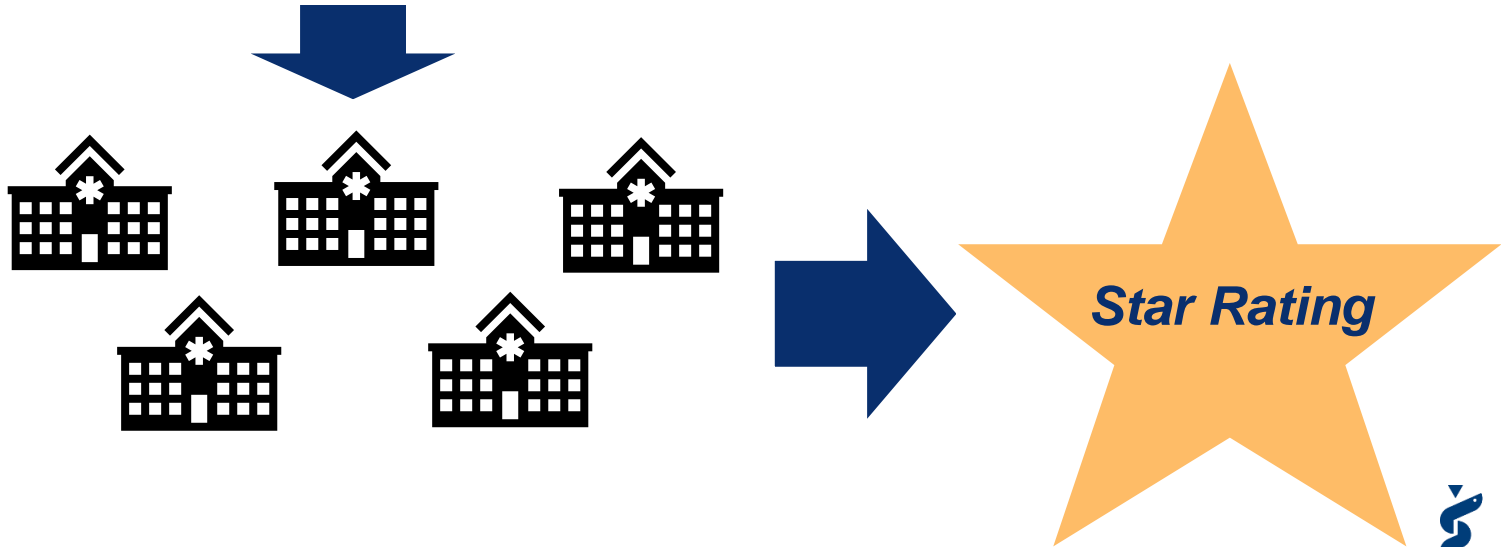


Combined Process Measure Group Retains Combined **12% Weight**

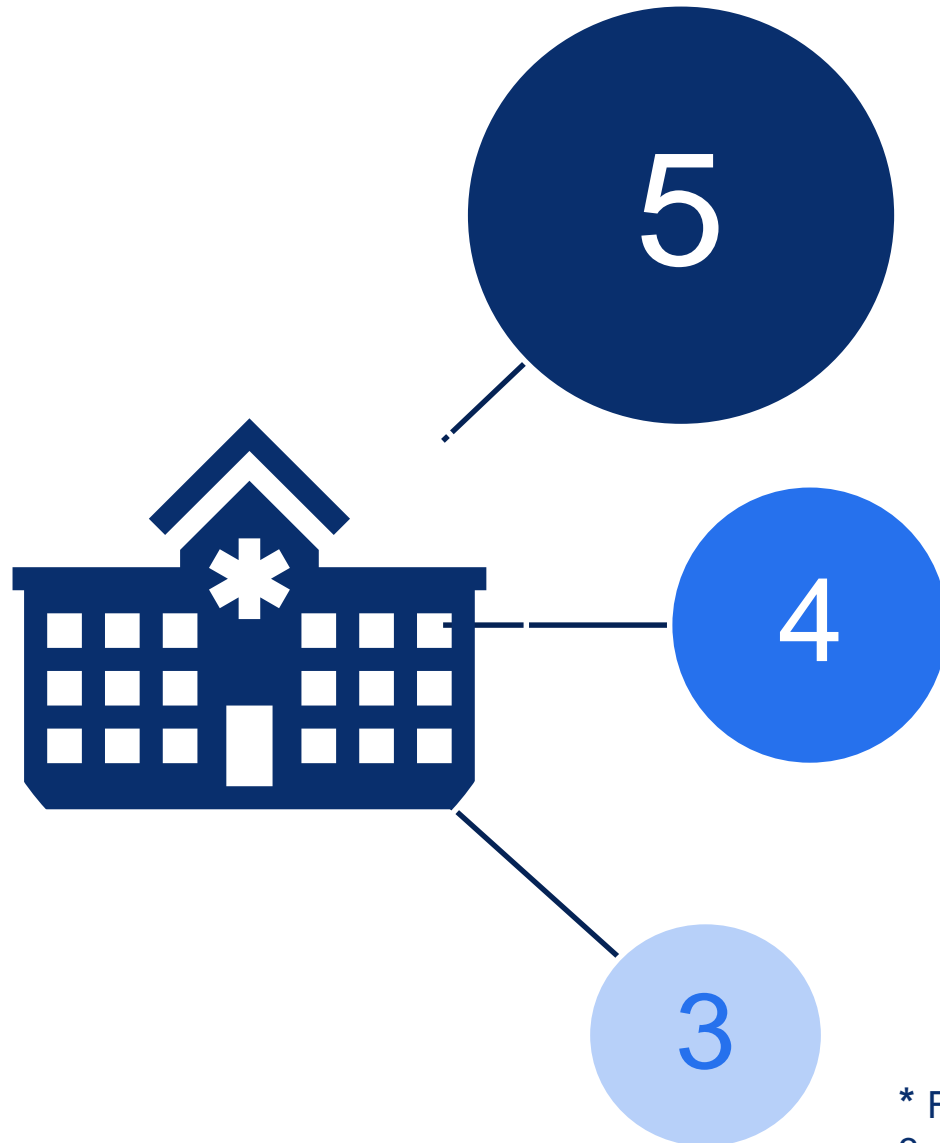
Step 5: Application of Min. Threshold for Rating



Hospital must have a minimum of 3 measures in 3 Measure Groups, one of which must be Mortality or Safety



Step 5: Peer Grouping (By # of Measure Groups)

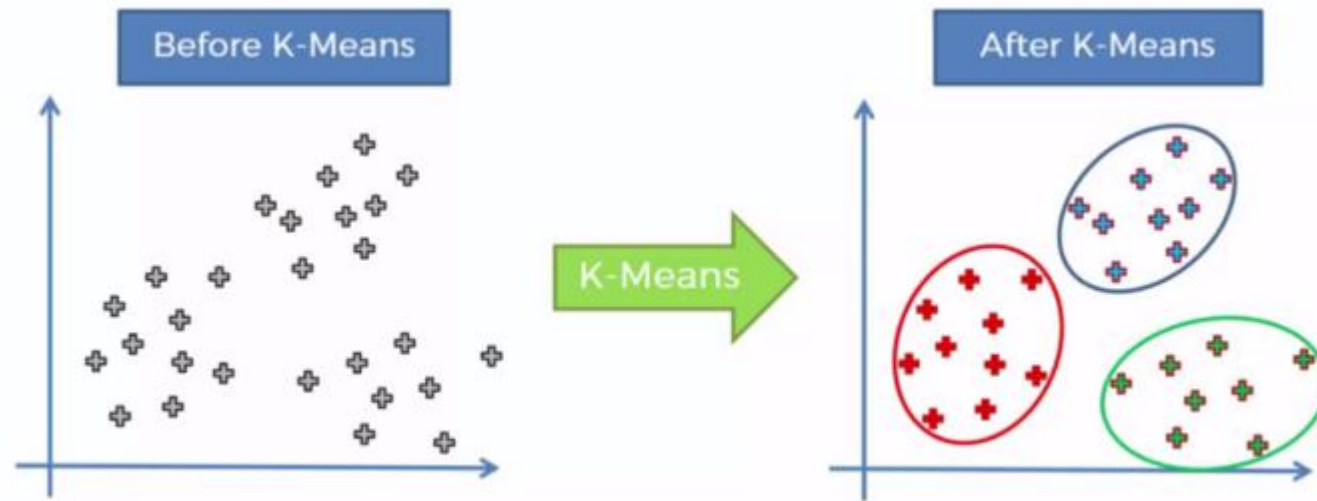


CMS's simulation:

- 73% of hospitals would be in the 5 Measure Group (MG)* peer group
- 17% of hospitals would be in the 4 MG peer group
- 10% of hospitals would be in the 3 MG peer group

* For peer grouping purposes hospital must have a minimum of 3 measures scores in the MG to count towards peer group qualification

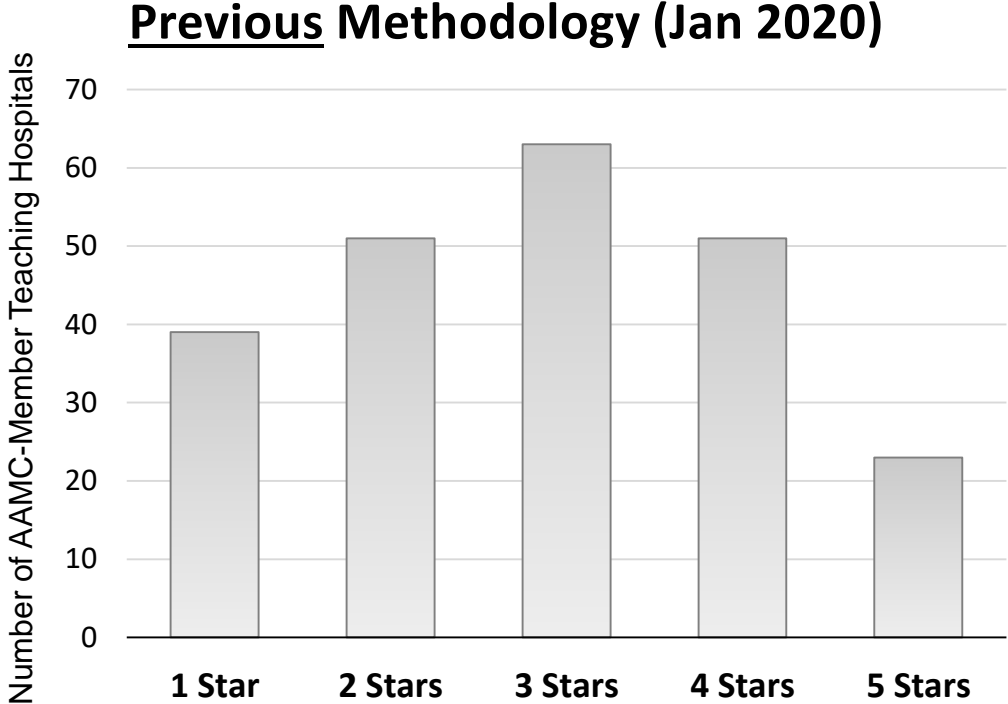
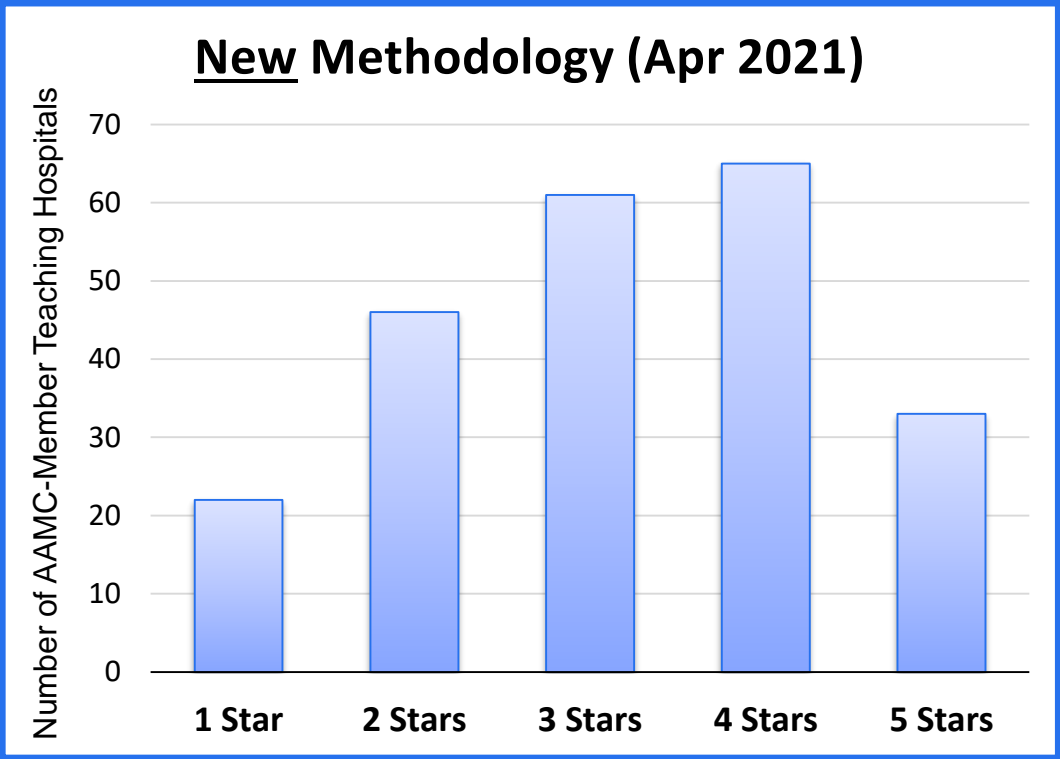
Step 6: Application of Clustering to Assign Rating



Google image search result

Continue to use k-means clustering approach to assign ratings to hospitals, **except now within each peer group**

Distribution of Overall Hospital Star Ratings for AAMC-Member Teaching Hospitals



Overall, the new methodology helps AAMC-member teaching hospitals, resulting in more 4- and 5-star hospitals and fewer 1-, 2-, and 3-star hospitals. At the hospital level, 84 members (37%) will gain one, two, or three stars, while 23 members (10%) will lose one or two stars.

Source: AAMC analysis of April 2021 Hospital Compare and January 2020 Hospital Compare data.

© 2021 AAMC. May not be reproduced without permission.

