**Research Objective & Study Design**

**Research Objective:** Star ratings are graphical representations of health care quality based on one or more measures. The Centers for Medicare & Medicaid Services (CMS) uses star ratings of health care providers on the Medicare “Compare” websites to facilitate consumer decision making. This method for these star ratings differ on several dimensions. This study assesses the similarities and differences in star rating methodologies and outcomes across the Medicare “Compare” websites.

**Study Design:** Descriptive review of star rating methodologies; quantitative analysis of star ratings using data from the first quarter of 2016.

**Population Studied:** The Medicare “Compare” websites: Dialysis Facility Compare (DFC), Home Health Compare (HHC), Hospital Compare (HC), Nursing Home Compare (NHC) and Physician Compare (PC).

**Key Findings:***

- Both HHC and HC have multiple star ratings for patient experience (Exhibit 2).
- The debut of star ratings was in 2014 (Exhibit 1).
- NHC has an “overall” star rating which summarizes the individual patient experience star ratings (11 for HC and 4 for HHC) as one star rating.
- DFC, HC and NHC all have an “overall star rating type” (Exhibit 2), but each site has a different definition of “overall”.
- DFC uses the term “overall” to mean a combination of nine clinical quality measures.
- HC will be rolling out NHC:
  - When a consumer visits a “Compare” website, they can encounter between one and 13 stars.
- The DFC: facility elected to suppress data for 20% is two stars, etc.
- The overall hospital quality star rating is tightly clustered around three stars.
- NHC has the most even distribution compared to other websites.

**Elements of Star Ratings:**

- Number and Types:
  - When a consumer visits a “Compare” website, they can encounter between one and 13 star ratings (Exhibit 2).
  - The only star rating to use half stars (vs. whole stars) is HHC’s “quality of patient care” star rating.
- Differences and Similarities in Star Rating Methods and Outcomes among the Medicare Compare Websites: DFC had a fixed distribution which reflects their methodology for calculating star ratings.
  - HHCAHPS survey is assigned star ratings by linearizing survey responses (0-100 scale).
  - A statistical clustering technique is applied to maximize differences between groups and minimize differences within groups. A summary star rating is determined by averaging information from measure-specific star ratings.
  - HCStar ratings are an important tool in communicating provider quality of care to help patients/cases.
  - NHCStar ratings are used to communicate how facilities differ on specific measures.

**Implications:**

- Ongoing alignment efforts are important for achieving a common objective for “Compare” websites.
- Many consumers increasingly see multiple types of facilities for their health care needs, requiring them to reference different websites for information.
- Variations in star rating methodologies may pose challenges to healthcare consumers in fully understanding and integrating star ratings in their health care decision-making.

**Conclusions:**

- Star ratings are an important tool in communicating provider-level quality information to consumers. There are important differences on a number of star rating characteristics across the Medicare “Compare” websites, including:
  - Both HHC and HC have multiple star ratings for patient experience (Exhibit 2).
  - NHC has an “overall star rating type” which includes clinical, staffing and inspection measures.
  - Other sites may have specific reasons include:
    - Faculty elected to suppress data for 20%.
    - Facility does not have a star rating.

**Data Sources:**

- Hospital Compare [http://www.hospitalcompare.gov](http://www.hospitalcompare.gov)
- Physician Compare Website [data.medicare.gov]

**Distribution of Star Ratings**

- Methodological differences across websites affect star rating distributions (Exhibit 3).
- DFC had a fixed distribution which reflects their methodology for calculating star ratings.
  - HHCAHPS survey is assigned star ratings by linearizing survey responses (0-100 scale).
  - A statistical clustering technique is applied to maximize differences between groups and minimize differences within groups. A summary star rating is determined by averaging information from measure-specific star ratings.
  - HCStar ratings are an important tool in communicating provider quality of care to help patients/cases.
  - NHCStar ratings are used to communicate how facilities differ on specific measures.

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