Academy Health Abstract ARM June 4th 2022

Deadline: January 18th 5PM ET

Theme: Structural racism, disparities, and equity in health

Title: Exploring How Consumer Reviews and Traditional Hospital Performance Metrics Inform Consumers on the Presence of Discrimination in Hospitals

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Research Objective:

Evolving work has demonstrated crowd-sourced consumers reviews' potential to highlight experiences of discrimination not otherwise captured in traditional performance metrics. To better understand consumer reviews' potential role in highlighting discrimination in healthcare, we sought to 1) explore the presence and distribution of reported experiences of discrimination within hospitals throughout the U.S., and 2) explore whether traditional hospital performance metrics can predict the presence of discrimination reported within consumer reviews.

Study Design:

We first purposively sampled all hospitals named by the USNWR "Top 20" ranking between 2011 and 2020. We then identified an additional 100 random hospitals on Yelp not ranked as a "Top20" hospital. All associated consumer reviews published between January 2011 and December 2020 were collected. Hospital characteristics of facilities were abstracted using the 2019 American Hospital Association Annual Survey dataset. Publicly reported average Yelp star ratings and HCAHPS composite scores were abstracted for each study hospital. We applied a modified grounded theory approach to abstract 31 keywords from the Everyday Discrimination Scale as a word filter to identify reviews most likely related to discrimination including racism, sexism/genderism, xenophobia, religious discrimination, discrimination against sexual orientation, ageism, lack of diverse/inclusive environment. Thematic content coding of filtered reviews was performed to identify reported experiences of discrimination. Multivariable logistic regression was used to assess whether Yelp star rating, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), or U.S. News and World Report (USNWR) top-ranking status was associated with a hospital having a ratio of discriminatory reports to overall reports greater than the study sample mean. Model covariates included hospital geographic region, bed size, teaching status, ownership, and urban versus rural status.

Population Studied:

Representative sample of acute-care hospitals located within the continental United States (n=129).

Principal Findings:

The final sample included 15,356 reviews from hospitals located across 31 states. Our keyword filter identified 3,819 reviews likely to be associated with discrimination. Thematic content coding identified 288 reviews that described experiences of discrimination. Table 1 demonstrates the distribution of reviews across geographic regions by average number of total reviews, filtered reviews, and coded reviews per hospital. Multivariable regression modelling of hospital characteristics demonstrated mixed associations between traditional hospital performance metrics and higher-than-average presence of reported discrimination. Hospitals not ranked in the USNWR Top 20 had nearly five times the odds (OR=4.87, p=.040) of having increased reports of discrimination. Other metrics were not significant predictors of the presence of reviews about discrimination, such as HCAHPS (OR=1.10, p=.663) and Yelp star rating (OR=1.42, p=.256).

Conclusions:

Consumer reviews provide information on discrimination in hospitals with a greater likelihood of discrimination in hospitals that fail to achieve USNWR Top 20 ratings when compared to Top 20-rated hospitals. Publicly available

performance metrics in their aggregated form, such as HCAHPS scores or Yelp star ratings, do not provide meaningful insight into the presence of reported discrimination within hospitals.

Implications for Policy or Practice:

Consumer reviews can serve as a valuable emerging tool to characterize and target the presence of discrimination within healthcare.

Table 1:

Region	Number of Hospitals	Average Total Reviews Per Hospital Mean, (SD)	Average Filtered Reviews Per Hospital Mean, (SD)	Average Coded Discrimination Reviews Per Hospital Mean, (SD)
Northeast	28	98, (79.4)	21, (17.9)	1, (1.6)
Midwest	16	89, (100.8)	16, (17.4)	1, (1.5)
West	48	191, (138.2)	47, (33.5)	3, (3.7)
South	37	79, (57.9)	19, (16.5)	1, (1.2)