Representation of Women in the Leadership Structure of the US Health Care System

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Introduction

The US health care system serves a heterogeneous population with varied health care needs,1 which underscores the importance of diverse perspectives in health care leadership. However, few contemporary studies have assessed gender diversity in the leadership structure of organizations (health systems and health insurance groups) that form the US health care system. Consequently, this study evaluated the representation of women among the highest-ranking executives in the US health care system.

Methods

This cross-sectional study was deemed exempt from review by The Ohio State University Institutional Review Board, which waived the informed consent requirement because the data were publicly available. We followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline.

For this analysis, we identified the following health care organizations: health systems with a minimum of 5 affiliated hospitals,2 health insurance groups with at least 0.09% of the US health insurance market share,3 and the US Department of Health and Human Services. We collected information on executives from each organization’s website. Between April 1 and May 31, 2021, we collected data on the gender of members of the senior executive leadership teams and/or boards of directors (BODs) of the selected organizations. Each executive was assigned to binary categories of gender (man or woman), and gender was identified by reviewing a combination of gender identifiers, names, and corresponding photographs. Organizations without available online data on their executives and individuals for whom gender could not be determined were excluded from the study.

Descriptive statistics were used to define the distributions of continuous variables. One-sided binomial testing was used to compare the gender representation within individual positions, with the

| Group                | Variable                                      | OR (95% CI)       | P value |
|----------------------|-----------------------------------------------|-------------------|---------|
| Health systems       | No. of physicians in health care system       | 0.99 (0.99-1.00)  | .93     |
|                      | No. of hospitals in health care system        | 0.97 (0.89-1.01)  | .26     |
|                      | Size of BODs                                  | 0.96 (0.86-1.05)  | .40     |
|                      | Proportion of women on BODs                  | 1.09 (1.01-1.18)  | .03     |
|                      | Presence of a woman as chairperson on BODs   | 0.33 (0.06-1.34)  | .15     |
|                      | No. of senior health system executives       | 0.96 (0.89-1.02)  | .24     |
|                      | Proportion of women among health system execs | 1.06 (1.02-1.11)  | .008    |
| Health insurance     | Size of BODs                                  | 1.01 (1.04-1.18)  | .89     |
| groups               | Proportion of women on BODs                  | 0.99 (0.91-1.05)  | .66     |
|                      | Presence of a woman as chairperson on BODs   | 4.29 (0.71-29.2)  | .12     |
|                      | No. of senior health insurance executives    | 0.79 (0.56-1.10)  | .05     |
|                      | Proportion of women among health insurance execs | 1.06 (1.01-1.12)  | .02     |

Abbreviations: BODs, boards of directors; OR, odds ratio.

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null hypothesis that gender distribution was equally men and women at all positions (p = 0.5; 
q = 0.5). Multiple binary logistic regression modeling was performed to identify the factors 
associated with having a woman as chief executive officer (CEO) using all of the variables shown in 
the Table.

Statistical analyses were conducted using R, version 4.0.3 (R Foundation for Statistical 
Computing). P < .05 indicated statistical significance. We used unpaired binomial testing, with a 
1-sided P value, and binary logistic regression, with a 2-sided P value.

Results

A total of 3911 senior executives (2608 [66.7%] from health systems, and 1303 [33.3%] from health 
insurance groups) and 3462 BODs (2319 [67.0%] from health systems, and 1143 [33.0%] from health 
insurance groups) were examined, representing 161 health systems and 108 health insurance groups. 
We also assessed 31 leadership positions within the US Department of Health and Human Services. 
Of these executives, 13 were men (41.9%) and 18 were women (58.1%). 

The median (IQR) size of the executive teams was 14 (11-20) members for health systems and 11 
(9-15) members for health insurance groups. Among BODs, the median (IQR) size was 15 (11-19) 
members for health systems and 13 (10-14) members for health insurance groups.

![Figure. Representation of Women in Executive Positions in the US Health Care System](https://jamanetwork.com/...)

BOD indicates board of directors; CEO, chief executive officer; CFO, chief financial officer; CIO, chief information officer; CMO, chief medical officer; COO, chief operating officer; CSO, 
chief strategy officer; HHR, human resources officer; HHS, US Department of Health and Human Services; MCO, marketing/communications officer.
The proportion of BOD chairpersons who were women was 17.5% in health systems and 21.3% in health insurance groups. Only 15.3% of the CEO roles in health systems and only 15.8% of the CEO positions in health insurance groups were held by women (Figure, A). Among BODs and senior executive teams in both health systems and health insurance groups, we found that approximately 20% to 50% of leadership positions were filled by women (Figure, B and C).

In the health systems, a woman as CEO was associated with a higher proportion of women either on the BODs (odds ratio [OR], 1.09; 5%-95% CI, 1.01-1.18; \( P = .03 \)) or in senior executive positions (OR, 1.06; 5%-95% CI, 1.02-1.11; \( P = .008 \)). Similarly, a higher proportion of women on senior executive teams of health insurance groups was associated with increased representation of women as CEOs (OR, 1.06; 5%-95% CI, 1.01-1.12; \( P = .02 \)).

Discussion

Although women currently represent a slight majority of the US population and a large majority of the US health care workforce,\(^4\) they are generally underrepresented on leadership teams, which likely diminishes their role in policy decisions that affect population and women's health. In addition, a recent study reported an association between gender diversity in organizational leadership and improved organizational performance,\(^5\) suggesting the loss of cognitive capital with the underrepresentation of women on executive teams.

Women held only approximately 15% of the CEO positions in health care organizations. Members of the BOD, whose primary responsibility includes choosing a CEO, appeared to have a role in increasing the representation of women as CEOs in health systems when the BODs had a more gender-diverse composition. It also appeared that organizations with senior leadership with gender diversity were more likely to have a woman as CEO.

In this study, the factors associated with the representation of women may have been limited in scope. Furthermore, assigning gender to binary categories was a limitation. The findings support the increased prioritization of gender diversity\(^6\) at all hierarchical areas in the US health care system.
Conflict of Interest Disclosures: Dr Seldon reported receiving personal fees from Elekta for participation in Championing Women and Diversity in Radiation Oncology: A Panel Discussion outside the submitted work. No other disclosures were reported.

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