

Impact of Multi-variable Social Vulnerability on Cervical Cancer Prevention in Hispanic Women

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Topic: Financial Toxicity and Disparities

Objectives

To explore social vulnerability as a predictor of cervical cancer screening (CCS) and determine variables for an aggregate risk calculator to better understand those at risk for not receiving CCS.

Methods

Using the All of Us database we selected for variables that capture social vulnerability and grouped them into six domains. The All of Us research program is supported and overseen by the National Institute of Health with the aim to create a diverse database of one million people across the U.S. and to use precision medicine to better understand, prevent, and treat disease processes. We conducted bivariate analyses of each covariate accounting for social vulnerability with our outcome of interest, receipt of CCS. A multi-variate model was built for logistic regression analysis.

Results

Of the 58,860 women eligible for this study, 26.4% received CCS. Hispanic women had the lowest rates of CCS compared to any other race/ethnicity subgroup with their non-Hispanic White counterparts having the highest odds of screening [OR 1.473, (CI 1.386 - 1.566, $p < 0.01$)]. Hispanic race/ethnicity, high school or lower education level, non-private insurance, age younger than 30, low income, and single relationship status were all independently, and statistically significant, associated with lower odds of receiving CCS. Individuals living with a disability had lower odds of receiving cervical cancer screening by 21% compared to those without a disability. Those with higher healthcare discrimination scores had 14.2% lower odds of receiving CCS for every one-point increase in their discrimination score. Individuals had 12.6% higher odds of receiving CCS for every one-point increase in their neighborhood cohesion score.

Conclusions

This study identifies social vulnerability variables that predict lack of CCS. Our novel approach expands the variables in the causative pathway to lack of CCS with social determinants of health and community characteristic variables. This provides not only a better understanding for this disparity, but it informs targeted interventions, and lays the foundation for the generation of an aggregate risk calculator that outputs an index score for CCS.

Abstract Table or Graph

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