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Title

Correlation between Social Determinants of Health and Attainment of Quality Metrics in a Rural Wisconsin Clinic

Priority 1 (Research Category)

Social determinants and vulnerable populations

Presenters

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Abstract

Context: Social Determinants of Health (SDOH) contribute significantly to health outcomes such as chronic disease management and screening test completion. Electronic medical record (EMR) data can provide insight into individual-level SDOH factors for a patient population.

Objective: To determine which patient-level SDOH factors are correlated with attainment of quality metrics (diabetes control and colorectal screening) in a rural community

Study Design and Analysis: Cross-sectional analysis assessing patient-entered SDOH questionnaires for patients who do not meet the above quality metrics compared to those who do meet quality metrics

Setting or Dataset: Epic EMR data was collected on Sparta, WI eligible patients from 7/1/2019 to 12/31/2020

Population Studied: Sparta, WI adults age 18-75 with diabetes type 1 or 2 diagnosis (503 patients) and adults age 50-75 eligible for colon cancer screening (2162 patients)

Intervention/Instrument: Chi-square test of Epic EMR patient-entered SDOH data comparing patients not meeting quality metrics to those patients meeting quality metrics, controlling for patient-level variables such as age, sex, race, marital status with logistic regression model.

Outcome Measures: SDOH questionnaires in Epic EMR (tobacco use, alcohol use, stress, transportation concerns, food insecurity, social isolation, intimate partner violence, dental care, diet and exercise). Patient SDOH answers are divided into at-risk and no risk groups.

Results: Patients not meeting diabetes control measures are more likely to give at-risk SDOH responses in the following categories: financial concerns (26.5% vs 14.7%, p-value 0.0134) and food insecurity (18.0% vs 8.0%, p-value 0.0184). Patients not meeting colorectal screening measures are more likely to

give at-risk SDOH answers in the following categories: financial concerns (16.4% vs 9.7%, p-value 0.0034), food insecurity (11.5% vs 4.4%, p-value <0.0001), depression (12.8% vs 7.9%, p-value 0.0114) and transportation concerns (6.6% vs 2.9%, p-value 0.0083).

Conclusions: Patients' high-risk answers to SDOH questions regarding financial concerns, food insecurity, depression and transportation concerns may be correlated with lower attainment of quality outcomes such as diabetes control and/or colorectal screening. Use of individual-level EMR data may be useful to generate local quality improvement initiatives. Further study of different patient populations is warranted.