

Predictive value of a financial strain question to pre-screen individuals for social risks

Background: Social risks are linked to poor health outcomes and increased healthcare utilization and costs. Therefore, health systems and policymakers increasingly emphasize social risk screening and related interventions. However, the healthcare system faces challenges with universal implementation stemming from clinician burnout, lack of evidence, and financial trade-offs. One proposal to decrease implementation burdens involves a two-step social risk screening system where individuals screened positive for financial strain are then screened for other social risks.

Objective: We analyzed the predictive value of a single question about financial strain as a pre-screener for food insecurity, housing instability, and/or transportation barriers.

Methods: Longitudinal cohort study evaluating the proportion of participants that endorsed financial strain and food insecurity, housing instability, and transportation barriers. The analytic sample was from survey and encounter data for patients with information available from all four social domains. Data were obtained from the Oregon Community Health Information Network (OCHIN) network (2019-2023), Humana (2019-2020), and Kaiser Permanente (KP) (2020). We assessed the predictive value (e.g., sensitivity, specificity, positive and negative predictive value, and area under the receiver operating characteristic curve) of using financial strain as a pre-screener for the other three social risks.

Results: The final sample included 252,845 adults with complete social risk data (63.7% from OCHIN, 32.2% from Humana, 4.1% from KP). 38% of the OCHIN sample, 41% of the Humana sample, and 28% of the KP sample experienced financial strain. Across samples, using the financial strain item in an initial pre-screening would fail to identify 14.6% to 25.0% of individuals who reported food insecurity, 24.1% to 38.1% who reported housing instability, 27.2% to 37.0% who reported transportation barriers, and 27.2% to 39.8% who reported all three risks.

Conclusion: A single financial strain question would cause the health system to miss >20% of people who report other social risks.