

Researchers find that certain social factors can predict early death in older adults

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Social factors affect an individual's future health, but there's currently no practical way to summarize their prognostic impact.

Investigators at Massachusetts General Hospital (MGH) and the University of California, San Francisco recently took a comprehensive inventory of older adults' social attributes and distilled it into a short survey that can predict longevity.

The work, which is published in *Proceedings of the National Academy of Sciences*, will have applications in clinical, population health, and research settings.

For the study, the team analyzed information from 8,250 adults aged ≥ 65 years. Within four years of a baseline interview, 22% had died. Prediction methods with a [machine learning tool](#) called LASSO drew from 183 possible social predictors to reveal eight that predicted death within four years: poor neighborhood cleanliness, low perceived control over [financial situation](#), meeting with children less than yearly, not working for pay, not active with children, not volunteering, feeling isolated, and being treated with less courtesy or respect.

"We often overemphasize the importance of medical conditions when thinking about longevity. This research demonstrates that our social lives are as important as [medical conditions](#)," says lead author Sachin J. Shah, MD, MPH, a physician-scientist at MGH and Harvard Medical School.

"From our data, we developed a 10-question survey that uses age, gender, and social characteristics to predict longevity. This survey also predicts other outcomes important to older adults, like living independently."

"Failing to account for social risks can further social inequities," said senior author Kenneth E. Covinsky, MD, MPH, a clinician-researcher in the Division of Geriatrics at UC San Francisco.

"Medicare penalizes hospitals for excess readmissions, as determined by

a risk adjustment model. By ignoring [social factors](#), Medicare penalizes those hospitals serving socially marginalized communities."

Shah and his colleagues are currently working to validate their findings through additional studies and to incorporate their survey—which they call the Social Frailty Index—in medical research.

They have also made the [Social Frailty Index](#) available online for others to use. Clinicians can use the index to supplement commonly used [prediction tools](#) to help older adults engage in advanced care planning and weigh medical interventions; however, they should avoid using the index to limit the care of higher-than-average-risk [older adults](#) because a patient is "socially frail."

Instead, the tool should be used to identify at-risk individuals who could benefit from measures that address the social issues affecting their health. Also, researchers and policymakers who work in fields related to health and aging may find multiple uses for the index.

More information: Sachin J. Shah et al, Social Frailty Index: Development and validation of an index of social attributes predictive of mortality in older adults, *Proceedings of the National Academy of Sciences* (2023). [DOI: 10.1073/pnas.2209414120](https://doi.org/10.1073/pnas.2209414120)

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