

inclusion of social risk factors into risk assessment

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New Prediction Model To Guide Prevention Of Heart Disease
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A University of Rochester Medical Center researcher has been awarded a National Institutes of Health grant to study whether accounting for social risk factors, in addition to traditional predictors, can be useful in assessing patients' risk and ultimately preventing coronary heart disease.

Kevin A. Fiscella, M.D., M.P.H., associate professor in the Department of Family Medicine, was awarded \$823,199 by the National Heart, Lung and Blood Institute, part of the NIH, to demonstrate that inclusion of social risk factors — socioeconomic status, race, ethnicity and marital status — into overall risk assessment and preventive treatment guidelines offers the potential for reducing disparities in coronary heart disease (CHD).

Traditional tools to make predictions — indicators such as age and gender, whether a patient is a smoker, diabetic or has high blood pressure — have been used for decades by health care professionals to calculate a patient's risk of heart disease, Fiscella said. Such predictions ultimately drive treatment.

A large body of research shows that a socioeconomic component also predicts risk in determining heart disease. Disparities in coronary heart disease mortality by socioeconomic status, race and ethnicity, have been extensively documented, but translating them into clinical practice to reduce CHD disparities has proven challenging and the data is not yet incorporated into formal health assessments, Fiscella said.

"We're proposing to modify the risk tools to include socioeconomic factors and calculate the impact on prediction. If you're less educated or make less money, you have a much higher risk of heart disease. An inaccurate estimate impacts what tests and therapies a patient receives, and when." As a result, more intensive behavioral interventions focusing on diet, exercise, smoking cessation and medical adherence may be implemented.

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Fiscella's three-year study will use a database containing more than 30,000 adult patient cases representative of the nation's population. It will compare the performance of predicting risk using only existing tools, to a formula that incorporates socioeconomic factors with conventional tools. His team will determine whether persons of lower economic position could be more appropriately treated using an updated, supplemented risk model.

Risk scoring using traditional criteria is currently available electronically. When a physician sees a patient, their risk factor is determined with just a few clicks.

"If we're successful in validating our prediction model, in the future physicians may see it available through a paper version or through a handheld device," Fiscella said.

A handful of studies have been done in Europe regarding the issue of social risk factors. Findings show that adding social class into the equation of risk prediction models does help to identify those in a lower social class who are at higher risk of CHD, even in the UK, where there is universal health care access.

"We know intuitively that social risk factors have a significant impact on the care of a patient but no one has said how can we apply this to decision-making at the bedside."

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