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In-hospital Depression Predicts Early Hospital Readmission after an Acute Coronary Syndrome: Preliminary Data from TRACE-CORE

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Background: Hospital systems, patients and providers seek to avert rehospitalizations within 30 days for patients admitted with an acute coronary syndrome (ACS). Rehospitalizations within 30 days of discharge are often considered preventable and to reflect poor in-hospital management or discharge practices. However, independent associations of psychosocial factors with early rehospitalization in patients admitted with an ACS have not been examined.

Methods: A multi-racial cohort of 1,540 patients admitted with an ACS reported psychosocial factors via standardized questionnaires in an in-hospital interview. One month following discharge, patients were interviewed via phone and

reported hospital readmissions. We used logistic regression models to estimate odds ratios (ORs) and 95% confidence intervals (CIs) of the association between in-hospital psychosocial characteristics (depression, anxiety, and perceived stress), health literacy and numeracy, and cognitive status, with self-reported readmission within 30 days.

Results: Participants were 34% female and 17% non-white, with a mean age of 62 years and a mean length of stay of 4.1 days. Rehospitalization was reported for 14% (n=208) of participants, 77% of which were due to CVD. In univariate analyses, in-hospital severe depression, anxiety, and high stress were associated with higher odds of early readmission, whereas low health numeracy was associated with lower odds of early readmission. Severe depression remained associated with higher odds and low health numeracy remained associated with lower odds of early readmission in a multivariable model including covariates associated on univariate testing with rehospitalization.

Conclusions: Early readmission after hospitalization for an ACS was common and associated with in-hospital depression and health numeracy. Notably, depression and health numeracy were the only predictors independently associated with readmission in multivariable analyses. We speculate that the lower likelihood of readmission for those with low numeracy may be related to less engagement with the healthcare system. In-hospital screening for depression and characterization of health numeracy may help stratify risk for early rehospitalization after an ACS.