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Title: Cardiovascular outcomes in community-dwelling older adults with chronic obstructive pulmonary disease

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Body: Background: The association of chronic obstructive pulmonary disease (COPD) with incident cardiovascular (CV) events remains poorly defined. In the current study, we examined the association of COPD with long-term CV events in older adults. Methods: Of the 5583 community-dwelling adults, age ≥65 years, in the Cardiovascular Health Study (CHS), 741 had COPD at baseline. We assembled three cohorts free of centrally-adjudicated baseline prevalent heart failure (HF; n=5326), acute myocardial infarction (AMI; n=5049) and stroke (n=5343) to estimate, respectively, age-sex-race-adjusted hazard ratios (aHR) and 95% confidence intervals (CI) for centrally-adjudicated incident HF, AMI and stroke over 13 years of follow-up. Multivariable (MV) adjusted HRs were estimated after additional adjustment for smoking, body mass index, prior AMI, hypertension, diabetes, stroke and atrial fibrillation. Results: Participants had a mean age of 73 (±6) years, 57% were women and 15% were African American–all similarly distributed between the two groups. Incident HF occurred in 24% and 20% of participants with and without COPD respectively (aHR=1.37; 95% CI=1.16-1.61; p<0.001 and MV-adjusted HR=1.36; 95% CI=1.15-1.61; p<0.001). COPD was associated with higher incidence of AMI (14% vs. 11% in those without COPD; aHR=1.41; 95% CI=1.13–1.76; p=0.002) but not with stroke (14% each; aHR=1.12; 95% CI=0.91–1.39; p=0.291), with similar MV-adjusted HRs. Conclusions: Community-dwelling older adults with COPD had higher risk for incident HF and AMI but not for stroke.