

Supplemental Material S10. Multivariable-adjusted associations of pure-tone average (PTA) with speech-in-noise performance, ACHIEVE baseline (2018–20) and ARIC-NCS Visit 6/7 (2016–17/2018–19).

Worse PTA, per SD ^a	Model 1: Covariates (N=602) ^b		Model 2: Covariates + Other Predictors (N=584) ^c	
	PR (95% CI)	P-value	PR (95% CI)	P-value
PTA <33 dB HL (Standardized PTA <0)	1.45 (0.92, 2.28)	0.11	1.51 (0.96, 2.36)	0.07
PTA ≥33 dB HL (Standardized PTA ≥0)	2.38 (1.94, 2.93)	<0.001	2.34 (1.88, 2.90)	<0.001

Abbreviations: ACHIEVE: Aging and Cognitive Health Evaluation in Elders; ARIC-NCS: Atherosclerosis Risk in Communities Neurocognitive Study; PR: prevalence ratio; CI: confidence interval; SD: standard deviation; dB HL: decibels hearing level.

^a Multivariable-adjusted Poisson regression with robust standard errors, with spline term at mean pure-tone average, which is 33 dB HL (standardized pure-tone average = 0), to estimate prevalence ratio of being in the lowest quartile of quick speech-in-noise score associated with every SD worse in pure-tone average when PTA <33 dB HL and PTA ≥33 dB HL respectively.

^b Model 1 adjusted for age, sex, race, field center, education, body mass index, smoking, hypertension, diabetes, and stroke.

^c Model 2 adjusted for age, sex, race, field center, education, body mass index, smoking, hypertension, diabetes, stroke, intracranial volume, global cognitive performance, total brain volume, fractional anisotropy, mean diffusivity, and white matter hyperintensities volume.