At-home visual acuity tests valid versus in-office testing

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Measurements for three at-home self-administered visual acuity (VA)

tests were within one line of Snellen acuity compared within-office VA measurements, according to a study published online March 31 in *JAMA Ophthalmology*.

Kellyn N. Bellsmith, M.D., from the Casey Eye Institute at the Oregon Health & Science University in Portland, and colleagues validated three at-home visual acuity tests (printed chart, mobile phone app, and website) compared with in-office visual acuity among eligible participants with VA of 20/200 or better, recruited from four ophthalmology clinics. Participants were randomly assigned to self-administer two of three at-home tests within three days before their clinic visit.

One hundred twenty-one participants completed the study. The researchers found that the mean in-office VA was 0.11 logMAR (Snellen equivalent, 20/25). The mean difference between the at-home and in-office VA was −0.07, −0.12, and −0.13 for the printed test, mobile phone app, and website, respectively. The Pearson correlation coefficient was 0.72, 0.58, and 0.64 for the printed test, mobile phone app, and website, respectively.

"The COVID-19 pandemic has created an opportunity for expansion of teleophthalmology services due to the necessity of limiting in-person exposures," the authors write. "Validated at-home tests provide an important first step in the expansion of teleophthalmology."

More information: Kellyn N. Bellsmith et al, Validation of Home Visual Acuity Tests for Telehealth in the COVID-19 Era, *JAMA Ophthalmology* (2022). DOI: 10.1001/jamaophthalmol.2022.0396

Ji-Peng Olivia Li et al, Valid but Undervalued, *JAMA Ophthalmology* (2022). DOI: 10.1001/jamaophthalmol.2022.0549

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