

90093**Validation of the virtual measurement of the Essential Frailty Toolset**

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Background: The Essential Frailty Toolset (EFT) is a valid measurement of frailty in people with heart valve disease. COVID-19 has prompted the transition to virtual health consultations and necessitates the validation of the virtual assessment of frailty.

Methods: We conducted a prospective observational cohort study to compare the measurement of EFT in person and virtual format within a maximum 2-week window of repeated measurement. The weighted Kappa tests was used to measure the agreement of EFT scores between assessments; we explored the effect of the sequence of measurement using the Cochran-Mantel-Haenszel statistic to test the general association between the timing of measurement and differences of EFT score.

Results: We recruited a sample of 49 patients, with a mean age of 81 ± 7 years, including 29 men (59.2%); the primary valvular heart diseases were aortic stenosis (n=40, 81.6%), mitral regurgitation (n=2, 4.1%) and tricuspid regurgitation (n=7, 14.3%). The virtual measurement of frailty was conducted using a standardised protocol. The platform for virtual connection selected by patients was FaceTime (n=20, 40.8%) and Zoom (n=29, 59.2%); the median (IQR) number of days between the in-person and the virtual assessment was 5 (3,10). The weighted Kappa estimate was 0.69 (95% CI 0.55, 0.82), illustrating a strong agreement between the separate scores obtained. The test for the general association was non-significant ($p=0.82$), indicating a lack of evidence for detecting an association between EFT scores and chronological order of assessment.

Conclusion: The EFT can be reliably measured virtual in older patients with valvular heart disease to inform clinical care.