

Figure 1. Abuse Invention/Prevention Model (AIM). AIM describes three core intersecting considerations in elder abuse: (1) the vulnerable older adult, (2) the trusted other, and (3) the context in which the abuse occurs. Tailored approaches that consider each of these can be developed to mitigate risks for elder abuse in the coronavirus disease 2019 (COVID-19) era.

encouraged. The ingenuity of developing specific hours for older adult shopping by some commercial stores is a brilliant example of this. Ways to address the potential threat of a trusted other range from increasing penalties for elder abuse at the societal level to the creation of an individualized safety plan that incorporates the wishes and preferences for autonomy and self-reliance of the older adult. Caregivers of older adults with dementia or other medical conditions are under particular strain given their responsibilities and should be offered additional means of support and guidance. To combat rampant and increasing ageism, the perspective of older adults can be elevated by increasing representation on panels with significant decision-making power in public and private sectors during the pandemic. Those who have a substantial social media footprint can be of particular help combating ageist sentiments. Creative community-based resources that address any of these three intersecting domains of elder abuse must be rapidly developed and implemented. Resources such as the National Center on Elder Abuse¹⁰ and local Adult Protective Service entities are actively adapting their services to help protect older adults. Religious and nonprofit organizations can play a key role in the development of programs to further buttress against the rising wave of elder abuse and neglect.

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ACKNOWLEDGMENTS

Financial Disclosure: This work was supported by the National Institute on Aging at the National Institutes of Health grants (R01AG055430 to S.D.H., R01AG060096 to L.M.) and the Administration for Community Living grant (90ABRC0001-02-00 to L.M.), as well as the Department of Family Medicine of the University of Southern California.

Conflict of Interest: The authors declare that they have no conflict of interest.

Author Contributions: S.D.H. and L.M.: conception and design, drafting the article, and final approval.

Sponsor's Role: None.

REFERENCES

- Dong E, Du H, Gardner L. An interactive web-based dashboard to track COVID-19 in real time. Lancet Infect Dis. 2020. https://doi.org/10.1016/ S1473-3099(20)30120-1. [Epub ahead of print].
- https://www.consumer.ftc.gov/blog/2020/02/coronavirus-scammers-followheadlines. Accessed April 15, 2020.
- https://www.americanbar.org/groups/law_aging/resources/coronavirusupdate/coronavirus-and-elder-abuse/. Accessed April 15, 2020.
- Hall JE, Karch DL, Crosby AE. Elder Abuse Surveillance: Uniform Definitions and Recommended Core Data Elements for Use in Elder Abuse Surveillance, Version 1.0. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; 2016.
- Mosqueda L, Burnight K, Gironda MW, Moore AA, Robinson J, Olsen B. The abuse intervention model: a pragmatic approach to intervention for elder mistreatment. J Am Geriatr Soc. 2016;64:1879-1883.
- Ong AD, Uchino BN, Wethington E. Loneliness and health in older adults: a mini-review and synthesis. Gerontology. 2016;62:443-449.
- Weissberger GH, Goodman MC, Mosqueda L, et al. Elder abuse characteristics based on calls to the National Center on Elder Abuse resource line. J Appl Gerontol. 2019. https://doi.org/10.1177/0733464819865685. [Epub ahead of print].
- 8. https://www.who.int/ageing/ageism/en/. Accessed April 15, 2020.
- Chang E-S, Kannoth S, Levy S, Wang S-Y, Lee JE, Levy BR. Global reach of ageism on older persons' health: a systematic review. PLoS One. 2020;15(1): e0220857.
- 10. https://ncea.acl.gov/. Accessed April 15, 2020.

COMMENT

Examining Older Adult Cognitive Status in the Time of COVID-19

To the Editor: The rapid onset of the coronavirus disease 2019 (COVID-19) pandemic has left many providers ill equipped to continue to provide care as usual. As older

DOI: 10.1111/jgs.16514

Table 1 Summary of Telemedicine Cognitive Measures			
Measure	Scores	Recommended Modality	Convergence With In-Person Assessments
Brief Test of Adult Cognition ^a	Six subscale z-scores create composite score	Telephone or video	Convergent validity with neuropsychology assessment ⁹
Cognitive Telephone Screening Instrument	Six weighted subtest scores	Telephone or video	Convergent validity with MMSE ⁸
MMSE	0 to 30	Video	$ICC = 0.91^2$
MoCA-Telehealth	0 to 30	Video	$ICC = 0.93^5$
MoCA-Telephone	0 to 22	Telephone or video	Comparable to TICS ¹⁰
TICS	0 to 41	Telephone or video	Convergent validity with MMSE, with T-scores available for direct comparison ⁷

Abbreviations: ICC, intraclass correlation coefficient; MMSE, Mini-Mental State Examination; MoCA, Montreal Cognitive Assessment; TICS, Telephone Interview for Cognitive Status.

^aThis measure is presently for research purposes only.

adults are particularly at risk for mortality with COVID-19, most providers have rightly pivoted to clinical care via telephone and virtual video visits. Recent research suggests older adults are open to the idea of virtual visits, often preferring them as compared to face-to-face appointments for specialty mental health and dementia care. However, not all clinical services are easily translated into a virtual environment (eg, cognitive assessment), resulting in providers either utilizing creativity or foregoing clinical tools during the health crisis. This letter briefly reviews the current state of remote cognitive assessment, with the goal of outlining appropriate clinical measures for older adults.

The present most popular methods of cognitive assessment often do not lend themselves well to virtual visits, as they require hands-on manipulation of stimuli or carefully standardized administration of visual material. The process of creating psychometrically sound tests or translating a test across modalities is unfortunately a cumbersome process. Several studies have examined intraclass correlation coefficients (ICCs) between virtual and face-to-face visits for select neuropsychological measures, suggesting these measurements are reliable across modalities^{1,2} and show good criterion validity.³ But, teleneuropsychological research has primarily focused on providing services to rural patients via video teleconference from a primary medical center to a rural clinic. Providing services directly to a patient's home introduces multiple latent variables that may be detrimental to construct validity, and makes extrapolating extant research to home-based virtual visits complicated. Adequate internet connection speeds, camera quality, privacy, and access to a distraction-free environment may contribute to variability in assessment when conducted to the home rather than from clinic to clinic. While teleneuropsychological assessment is increasingly showing clinical potential, providers may wish to be mindful of its strengths, limitations, and appropriate uses for brief cognitive assessment.

Traditional cognitive screeners have also shown promise for translation into a video modality. Measures, such as the Mini-Mental State Examination (MMSE) and common mental health questionnaires such as the Geriatric Depression Scale, appear to be diagnostically comparable to in-person clinical visits.⁴ Mildly modified administration of the Montreal Cognitive Assessment (MoCA) has shown high ICC,⁵ and there is an audio-visual version of the MoCA now available online, modified for telehealth administration (Table 1). Versions of the MoCA for older adults with hearing and vision impairment are in development as well.⁶

Beyond cognitive measures modified for video-based administration, telephone-based cognitive assessment has a rich research history and is more likely to be designed initially for the telephone modality, as compared to translated from in-person normative data. The Telephone Interview for Cognitive Status is appropriate for older adults, aged 60 to 98 years, takes approximately 10 minutes, and shows strong correlation with the MMSE.⁷ Another measure, the Cognitive Telephone Screening Instrument, contains six subtests assessing multiple cognitive domains and shows good convergent validity with the MMSE.8 There is also a modified version of the MoCA available that is appropriate for telephone use. The Brief Test of Adult Cognition provides a comparatively more extensive assessment, taking 20 minutes and showing good construct and concurrent validity with traditional neuropsychological measures, but is presently only available for research purposes.⁹ This measure also prompts the assessor to conduct a brief test regarding hearing by repeating a series of five numbers before beginning, which could be adapted for any telephone-based measure.

Despite the limitations of providing healthcare during the COVID-19 pandemic, providers of older adult care have several options for assessing cognitive status to supplement a clinical interview. Extant measures range from modified traditional screeners to neuropsychological batteries assessing multiple cognitive domains, albeit in a limited fashion.

The sudden transition to an entirely telemedicine healthcare system was jarring for most providers, and it appears likely the COVID-19 pandemic will permanently alter healthcare in some capacity. At present, the remote assessment of cognition primarily consists of traditional measures "shoe horned" into a video modality for screening purposes, and not likely to replace more extensive in-person assessment. Yet, the healthcare professionals privileged with providing care to older adults may increasingly be called on to provide telemedicine-based services in the future. Increased competence in technology-mediated healthcare and the construction of telehealth-based cognitive measures will likely become imperative moving forward. Future research designing cognitive measures that utilize and embrace the strengths of telehealth will become vital within the changing landscape of our healthcare systems.

ACKNOWLEDGEMENTS

Views expressed in this article are those of the authors and not necessarily those for the Department of Veterans Affairs or the federal government.

Conflict of Interest: Dr Gould received research support from Meru Health, Inc, for an investigator-initiated trial. Dr Hantke reported no financial relationship with commercial interests. Both authors denied personal conflicts of interest.

Author Contributions: Dr Hantke and Dr Gould both significantly contributed to this submission.

Sponsor's Role: Authors denied any sponsor role in the design, methods, subject recruitment, data collections, analysis, and preparation of this letter.

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REFERENCES

- Brearly TW, Shura RD, Martindale SL, et al. Neuropsychological test administration by videoconference: a systematic review and meta-analysis. Neuropsychol Rev. 2017;27(2):174-186.
- Munro Cullum C, Hynan LS, Grosch M, Parikh M, Weiner MF. Teleneuropsychology: evidence for video teleconference-based neuropsychological assessment. J Int Neuropsychol Soc. 2014;20(10):1028-1033.
- Wadsworth HE, Dhima K, Womack KB, et al. Validity of teleneuropsychological assessment in older patients with cognitive disorders. Arch Clin Neuropsychol. 2018;33(8):1040-1045.
- Loh PK, Donaldson M, Flicker L, Maher S, Goldswain P. Development of a telemedicine protocol for the diagnosis of Alzheimer's disease. J Telemed Telecare. 2007;13(2):90-94.

- Lindauer A, Seelye A, Lyons B, et al. Dementia care comes home: patient and caregiver assessment via telemedicine. Gerontologist. 2017;57(5): e85-e93.
- 6. Wittich W, Phillips N, Nasreddine ZS, Chertkow H. Sensitivity and specificity of the Montreal Cognitive Assessment modified for individuals who are visually impaired. J Vis Impair Blindness. 2010;104(6): 360-368.
- 7. Brandt J, Spencer M, Folstein M. The telephone interview for cognitive status. Neuropsychiatry Neuropsychol Behav Neurol. 1988;1:111-117.
- Kliegel M, Martin M, Jager T. Development and validation of the Cognitive Telephone Screening Instrument (COGTEL) for the assessment of cognitive function across adulthood. J Psychol. 2007;141(2):147-170.
- Lachman ME, Agrigoroaei S, Tun PA, Weaver SL. Monitoring cognitive functioning: psychometric properties of the brief test of adult cognition by telephone. Assessment. 2014;21(4):404-417.
- Pendlebury ST, Welch SJ, Cuthbertson FC, Mariz J, Mehta Z, Rothwell PM. Telephone assessment of cognition after transientischemic attack and stroke: Modified telephone interview of cognitive status and telephone Montreal Cognitive Assessment versus face-to-face Montreal Cognitive Assessment and neuropsychological battery. Stroke. 2013;44(1): 227-229.

First Impressions of Performing Bedside Cognitive Assessment of COVID-19 Inpatients

To the Editor: Natalie Phillips and colleagues very helpfully outline some of the challenges encountered when performing cognitive screening via telemedicine.¹ The authors focus in particular on the use of the Montreal Cognitive Assessment² and the significant obstacles encountered during nonstandardized remote administration of the test. I outline here some of the challenges encountered when performing bedside cognitive assessment of coronavirus disease 2019 (COVID-19) inpatients with acquired brain injury, degenerative conditions, or other neurologic diagnoses.

1. Wearing personal protective equipment (PPE) poses several logistical challenges for performing bedside cognitive assessment. For example, paper-and-pencil tasks cannot be taken into the ward for use during the assessment. For timed tasks, even where permissible to wear a wristwatch, these cannot be seen underneath the PPE. Furthermore, ward wall-mounted clocks may not always be visible for time tasks.

2. Perceptual problems are accentuated by wearing PPE. Speaking through a mask to patients who might have processing or hearing impairment as part of acquired brain injury or other neurologic insult makes bedside cognitive assessment difficult to perform with assured reliability and validity. Conversely, wearing PPE is uncomfortable and hot, and it can make it difficult to observe your patient's performance as well as you would like.

3. Factors related to COVID-19 itself can influence the findings of bedside cognitive assessment. Patients with

See the Reply by Phillips et al. DOI: 10.1111/jgs.16561