Uptake of Virtual Visits in A Geriatric Primary Care Clinic During the COVID-19 Pandemic

To the Editor: The novel coronavirus or severe acute respiratory syndrome coronavirus 2 pandemic called for a rapid adoption of telehealth service across all health systems in the United States to limit virus exposure to patients and health providers. As our colleagues at other institutions are also transforming the traditional in-person visits to virtual visits, we would like to share our experience and begin a national dialogue for what a high-quality virtual visit would entail. Herein, we share our experience in providing telehealth for patients in a geriatric primary care clinic. We provide an overview of features we implemented to enhance the visit experience.

Our multisite geriatric clinic, which provides more than 300 primary and geriatric specialty visits weekly within an academic healthcare system, moved quickly to transform most of in-person clinical appointments to virtual care format. In the course of 5 weeks, by eliminating nonurgent in-person visits and rapid implementation of virtual care, we ramped up from zero to 91% of total geriatric primary and outpatient specialty care visits (Figure 1).

Virtual care transformation was made possible by institutional commitment, as well as efforts by individual physicians, office staff, information technology specialist, and patients and caregivers. First, within geriatrics, we identified videoconferencing platforms available to our providers. Before the coronavirus disease 2019 (COVID-19) epidemic, our healthcare system had adopted Epic as its electronic health record (EHR) system, which allows for Health Insurance Portability and Accountability Act (HIPAA) compliant video visits. The Epic integrated video visits involve several requirements: (1) providers must set up specific applications on Apple branded smartphone or tablets and (2) patients are required to have online patient portal account through Epic and download the health patient portal application; many patients had not completed either one or both of these steps. To address these limitations, the healthcare system quickly deployed Epic “superusers” to help physicians set up the application for video visits. Each physician reviewed his/her patients scheduled for clinic visits 2 to 3 weeks in advance and designated the need for each visit as nonurgent (reschedule), urgent virtual, or urgent in-person visit. The initial goal in the third week of March was to eliminate in-person visits simply by rescheduling. But by April, we encouraged providers to convert to virtual visits and clinic staff contacted all the patients to offer virtual visits. We quickly learned ways to telecommunicate with staff in real-time for scheduling virtual visits, and physicians were able to self-schedule virtual visits due to a newly upgraded feature in the EHR. By mid-April, the Epic platform enabled providers to launch virtual care even from non-Apple devices. For patients, we have expanded to a HIPAA-compliant chatroom format, Zoom Health, which entails only clicking on a web link and can accommodate multiple family members joining from remote locations. Our administrative staff and medical assistants shared responsibility to assist patients with the technology and to collect previsit clinical information.

Initially, most of our patients were reluctant to install video-capable applications onto their smartphones and tablets; thus, our patients’ preference of telephone visits over video visits is not surprising, given that nearly 50% of adults aged 50 to 80 years surveyed in a national sample expressed concern for difficulty using the technology for telehealth. Anecdotally, the chatroom format facilitated family and caregivers to help the patients log on at the designated time.

We recognized that the leading concern about telehealth visits among older adults is that healthcare providers would not be able to do a system-based physical examination (71% in a national survey). We have summarized our adaptation of the virtual examination (Table 1), using the four basic components: inspection, palpation, percussion, and auscultation.

Several strategies facilitated our visits: (1) Patient or caregiver involvement. Before the visit, our staff asked if patients could self-measure home blood pressure (BP), pulse, body weight, temperature, and fingerstick glucose, if appropriate. With virtual visits scaling up, the health system...
realized the importance of BP monitoring and has adopted BP drive-through visits. For telephone visits, patients who have skin lesions were prompted to send images via the patient portal if enrolled. During the visit, caregivers can hold the camera to help perform inspection and/or palpation of the concerned areas. (2) Previsit medication review. Our pharmacy technologist or medical assistant performed medication reconciliation with patients before the virtual visit via telephone calls. Alternatively, the physician can perform medication reconciliation during the visit if patients have their medications readily available. (3) Previsit distribution of forms. Patient Health Questionnaire-9,5 fall screening, social history, and physical and cognitive functional assessment. (4) Detailed history taking. This results in over 80% of the diagnostic yield in outpatient clinic visits (ie, without examination, laboratory tests, or studies).6 (5) Cognitive assessment. Montreal Cognitive Assessment (MoCA) has issued recommendations on how to use abbreviated or full version of MoCA for telephone visits or audiovisual visits.3

We are grateful for the close collaboration and generous spirit among the healthcare providers, staff, medical assistants, information technology specialists, and our patients and their caregivers. In the future, we will obtain quality of care data, which is a leading concern of older adults on telehealth.2 Michigan Medicine has developed infrastructure to monitor our performance in virtual care.

### Table 1 Physical Examination for Telephone and Video Visits

| Variable                        | Description                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vital signs (per patient self-report) | BP and heart rate by home BP monitor, bathroom scale for weight, home pulse oximeter                                                                                                                                                                                                                                                        |
| **Telephone Visit**             |                                                                                                                                                                                                                                                                                                                                                                                                       |
| General                         | Alert or lethargic in answering questions, cooperative or noncooperative, presence or absence of distress from conversation                                                                                                                                                                                                               |
| HEENT                           | Voice clear without hoarseness, hearing impairment                                                                                                                                                                                                                                                                                         |
| Respiratory                     | Presence or absence of cough or sneezing                                                                                                                                                                                                                                                                                                 |
| Neurologic                      | Comment on speech: speech smooth, normal cadence, without tremor/stutter. Preserved attention. Full sentences. Cognition: using tools for assessing blind patients or telephone cognitive tools3                                                                                                                                                       |
| Mood                            | Anxious/irritable/sad/happy, based on conversation                                                                                                                                                                                                                                                                                         |
| Psychologic                     | No agitation, organized and logical, normal content; assess suicidal or homicidal ideation if appropriate.                                                                                                                                                                                                                                     |
| **Video Visit**                 |                                                                                                                                                                                                                                                                                                                                                                                                       |
| General                         | Alert or lethargic, cooperative or noncooperative, presence or absence of distress, well groomed and nourished or not                                                                                                                                                                                                                       |
| HEENT                           | Extraocular eye movements; voice clear without hoarseness; presence or absence of hearing aids (can ask to see them); assess dentition (ask patient to open mouth)                                                                                                                                                                                  |
| Cardiovascular                  | Grading/presence of edema                                                                                                                                                                                                                                                                                                              |
| Respiratory                     | Respiratory effort, presence of wheezing                                                                                                                                                                                                                                                                                                      |
| Gastrointestinal                | Distension; pain (patient or caregiver palpate)                                                                                                                                                                                                                                                                                           |
| Neurologic                      | Facial symmetry, tongue centered or not, slurred speech, turning head and shoulder shrugs, movement of the extremities, gait, tremors Mental status: Alertness, orientation, recent events, recognition of objects, following commands, hallucinations; modified MoCA3 or concentration (“WORLD” backwards), immediate and delayed recall of three items. Language: aphasia vs dysarthria, word finding, fluency |
| Musculoskeletal                 | Joint deformities, posture, gait, and potentially timed up-and-go test4 (if patient is felt to be safe to perform the test, ie, with appropriate environment and necessary devices, caregiver support).                                                                                                                                                      |
| Skin and nail                   | Rashes, wounds, inflammatory or vascular skin color changes. Patient can be directed to palpate the skin for warmth; fingernail and toenail findings                                                                                                                                                                                              |
| Psychologic                     | Appearance (grooming, hygiene), psychomotor retardation (flat affect), agitation, restless, speech (normal, pressured, content disorganized, racing thoughts); assess suicidal or homicidal ideation if appropriate.                                                                                                                                                         |
| Additional information          |                                                                                                                                                                                                                                                                                                                                                                                                       |
| Fingerstick glucose             | Using home glucometer                                                                                                                                                                                                                                                                                                                    |
| One-lead EKG or rhythm analysis | Can be performed by smart watches or other personal health devices                                                                                                                                                                                                                                                                      |
| Ambulatory O₂ saturation        | Using home pulse oximeter, using approximate distance by pacing in the house (if safe to do so).                                                                                                                                                                                                                                               |

Abbreviations: BP, blood pressure; EKG, electrocardiogram; HEENT, Head, Eyes, Ears, Nose and Throat; MoCA, Montreal Cognitive Assessment.
For example, we can track the volume of virtual visits related to distance in miles saved. In the first 5 weeks, over 1,135 travel miles have been saved, with an average of 24 miles per virtual visit. Such information will help optimization of care delivery in the future. During this extraordinary period of social isolation and loneliness, it gave us a tremendous opportunity to provide virtual care widely, even among patients whom we doubted would adapt to the change. Our clinicians have turned their skepticism over the feasibility of providing virtual visits to older adults, embracing the emerging healthcare technology. Future studies will need to assess how this change in healthcare delivery affects patient care, outcomes, patient satisfaction, and clinician’s sense of completeness in caring for the geriatric patients.

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REFERENCES

1. Centers for Medicare and Medicaid Services. Medicare Teled medicine Health Care Provider Fact Sheet. 2020. https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet. Accessed April 16, 2020.

2. Kurlander J, Kullgren J, Singer D, Solway E, Malani P, Kirch M, Saini S. Virtual Visits: Telehealth and Older Adults. University of Michigan National Poll on Healthy Aging; 2019. http://bdl.handle.net/2027.42/151376. Accessed April 16, 2020.

3. Nasreddine Z. 2020. MoCA Montreal Cognitive Assessment. https://mailchi.mp/mocatest/remote-moca-testing?e=b79913d97c. Accessed March 20, 2020.

4. Centers for Disease Control and Prevention. Timed Up & Go (TUG), STEADIL. 2017. https://www.cdc.gov/steadi/pdf/TUG_Test-print.pdf. Accessed April 16, 2020.

5. Pinto-Meza A, Serrano-Blanco A, Penarrubia MT, Blanco E, Haro JM. Assessing depression in primary care with the PHQ-9: can it be carried out over the telephone? J Gen Intern Med. 2005;20(8):738-742.

6. Hampton JR, Harrison MJ, Mitchell JR, Pritchard JS, Seymour C. Relative contributions of history-taking, physical examination, and laboratory investigation to diagnosis and management of medical outpatients. Br Med J. 1975;2(5969):486-489.

Intergenerational Digital Engagement: A Way to Prevent Social Isolation During the COVID-19 Crisis

To the Editor: Social isolation through home quarantine is the most effective strategy to prevent the spread of the severe acute respiratory syndrome coronavirus 2 and related complications; this is especially true for adults who are older than 80 years, are older than 60 years with multiple morbidities (more than two chronic diseases, like diabetes mellitus, type II, hypertension, or coronary artery disease), or have geriatric syndromes (like falls, frailty, or dementia) that put them at the highest risk of mortality related to the coronavirus disease 2019 (COVID-19) pandemic.1,2

However, evidence shows social isolation has many implications for older adults, including depression, generalized anxiety disorders, decreased sleep, and functional impairment.3 In the long run, if the isolation continues chronically (>6 months), it may accelerate cardiovascular and brain aging and dementia.4 The government of India, following the experiences of other countries, like China, has imposed a total lockdown for 21 days (starting on the night of March 23, 2020) and it may be extended further; this has left many older adults facing social isolation and its related complications. Recently, soldiers in Spain found several older adults dead in their beds while disinfecting residential homes.5

On the other hand, students are at home due to school lockdowns. They are bored, frustrated, and irritable due to a lack of meaningful indoor activities. The prolonged stay at home is likely to prompt the habit of excessive cell phone usage and its related mental health complications.6

We would like to suggest to both India and other countries that the COVID-19 crisis can be considered as an opportunity to revive the age-old connection between the youth and older adults with a multitude of positive implications.

There is evidence suggesting that a digital learning platform for children and older adults, including adults with dementia, has a positive impact on both generations by improving social interactions through intergenerational experience sharing.7 One study showed that older adults who provided internet-based tutoring to fifth-grade students became comfortable using computers, had improvements in mood, and had an enhanced quality of life from the interactions.8

In a correspondence with R. Armitage in Lancet,4 the author suggested online technology, telephone calls with family members, and volunteer community outreach programs

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