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.[1] 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.[2] 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
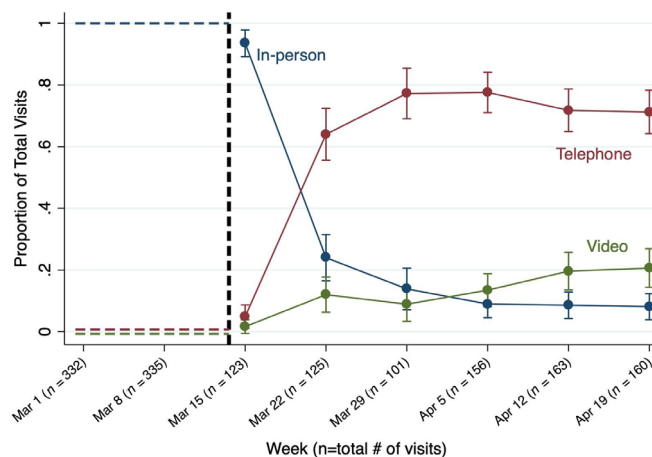

Figure 1 Increasing use of telephone and video virtual care after Michigan shelter-in-place order. Weekly trends in geriatric outpatient visits, by in-person vs virtual formats, showing a steep increase in telephone virtual care vs a slower uptake in video visits. The baseline proportion before the Michigan state order to shelter in place on March 13, 2020 (black vertical dashed line), is indicated by the blue horizontal line at 100% for in-person visits, and maroon and green dashed lines for virtual formats at 0%. The x axis indicates the week (beginning date) and the total number of visits in parentheses. The 95% confidence intervals are indicated around each proportion and were obtained using the three-part categorical outcome for type of visit with week as the only categorical predictor (Stata 14.2).

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 tools[3]
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 MoCA[3] 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 test[4] (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 O_2 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.

providers would not be able to do a system-based physical examination (71% in a national survey).[2] 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. 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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