Strategies to Ensure Continuity of Care Using Telemedicine with Older Adults during COVID-19: A Qualitative Study of Physicians in Primary Care and Geriatrics

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Abstract

Objectives: Our objective was to interview primary care physicians (PCPs) and geriatricians on their experiences using telemedicine during the COVID-19 pandemic to examine strategies used to maintain continuity of care with their patients, ages 65 and older. **Methods:** Using purposive sampling, we selected physicians based on community size (metro/suburban/rural) and practice setting (academic/community) and conducted semi-structured interviews via Zoom (mean: 30 minutes). Interviews were recorded, transcribed, coded, and analyzed using framework analysis. **Results:** We enrolled 33 physicians (15 PCPs and 18 geriatricians) from July to November 2020. Findings indicate that many physicians successfully bridged the digital divide by: assessing patients' technological readiness in advance, being flexible with telehealth modes, using available home or facility-based staff, educating patients on telehealth privacy and usefulness, making accommodations for disabilities, and involving caregivers. **Discussion:** These findings can inform future policy and practice and assist physicians in resolving addressable barriers to telehealth use among older patients.

Keywords

primary care, telehealth, telemedicine, COVID-19, geriatrics

What this paper adds
- Primary care physicians (PCPs) and geriatricians described organizational and physician-level changes that allowed for the continuity of older adult healthcare using telehealth during the COVID-19 pandemic.
- Our study includes perspectives from a geographically diverse group of PCPs and geriatricians practicing in both academic and community settings.
- Our work corroborates existing literature on the barriers and facilitators of telehealth adoption among older patients.

Applications of study findings
- Our findings can inform physician training on optimal usage of telehealth with older patients.
- Future work on telehealth use with older adults can include the perspectives of patients, caregivers, advanced practice providers, and other stakeholders.
- Physicians can incorporate our findings into educational discussions with their older patients who may be hesitant about using telehealth for their care.

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Introduction

Prior to the COVID-19 pandemic, telehealth uptake was limited, with only 0.3% of traditional Medicare beneficiaries across the United States (US) using telehealth services in 2016 (Koma et al., 2021). A cross-sectional study of community-dwelling older Americans (not residing in nursing homes or other institutionalized settings) revealed that 38% of older adults were unready to participate in a telemedical visit due to disability, lack of devices, or inexperience in 2018 (Lam et al., 2020). In the oldest age group, 85 years and older, 72% met criteria for unreadiness (Lam et al., 2020). Only 64% of older adults in America have access to broadband internet connection at home (Pew Research Center, 2021). Access to internet connectivity at home in the US is dependent on socioeconomic and health factors: older adults with lower income, lower educational attainment, who are Black or Hispanic, or have cognitive or functional impairment more often lack internet connectivity (Hunsaker & Hargittai, 2018). Older Americans also report being less comfortable engaging with digital technologies and less willing to use digital health tools compared to their younger counterparts (Gordon & Hornbrook, 2018). Additionally, impairments in vision, hearing, and dexterity may impede successful use of telehealth devices and platforms (Narasimha et al., 2017). As such, the reliance on telehealth during the COVID-19 pandemic may have prevented older Americans from receiving the health care they need (Ryskina et al., 2021).

While many of these barriers are well-documented, recent analyses suggest that there has been a massive uptake in telehealth use, even by older Americans. Between the summer and fall of 2020, 44% of Medicare beneficiaries reported a telehealth visit (Koma et al., 2021). Additionally, state and federal officials enacted policies such as payment parity between in-person and telehealth visits (American Medical Association, 2020; Department of Health and Human Services Office for Civil Rights, 2020), and Medicare permitted reimbursement for telehealth for adults in non-rural and home settings to encourage the adoption of telehealth (Koma et al., 2021), leading to a surge in its usage: 95% of federally funded health centers reported using telehealth during the pandemic, up from 43% capable of providing telehealth care in 2019 (Demeke et al., 2021). What remains unknown is how individual physician practices and health systems have been able to bridge the digital gap in these older patients. Studies to elicit physicians' strategies to address these challenges are lacking, and dissemination of these practices are necessary to ensure older Americans benefit from this innovation.

Thus, our primary objective was to explore physician experiences providing telehealth to older adults during the COVID-19 pandemic and identify concrete strategies primary care physicians (PCPs) and geriatricians employed to overcome barriers to using telehealth to provide medical care to older adult patients. Over 90% of older Americans have a wellness visit each year (National Center for Health Statistics, 2019), and nearly half of all physician visits made by older Americans are to PCPs and geriatricians (Cherry et al., 2010), emphasizing the importance of focusing on this subset of physicians. Understanding their front-line experiences will inform future clinician training, policy, and practice around telehealth and the use of technology for remote primary care visits.

Methods

Study Design

In this descriptive qualitative study, we conducted semi-structured audiovisual interviews with PCPs and geriatricians. A descriptive qualitative study design was employed, as the purpose of this study was to describe the experiences of physicians caring for older adults via telehealth in an outpatient setting, summarizing the barriers they faced and successful strategies they used (Sandelowski, 2000).

Data for this study were collected as part of a larger study which included PCPs, geriatricians, and emergency medicine physicians. In previously published manuscripts (Goldberg et al., 2021), we reported overall findings from the larger study on physicians' experiences using telehealth to care for older adults during the COVID-19 pandemic, as well as findings specific to emergency medicine physicians (Davoodi et al., 2021). Here, we focus on experiences in primary care and geriatrics, as these office-based staff had unique experiences from hospital-based clinicians. We present physician-identified barriers to telehealth use and identify specific solutions employed to address challenges for older adults. Study methods and results are presented according to the consolidated criteria for reporting qualitative research (COREQ) (Tong et al., 2007).

Ethics

This study was approved by the Rhode Island Hospital institutional review board (1598592) on August 20, 2020. The IRB deemed the study as minimal risk and waived documentation of signed consent. We obtained verbal consent from all participants before beginning the interview. Prior to beginning the interview and giving verbal consent, participants were told that participation was voluntary, that they could stop the interview at any time or refuse to answer any questions, all benefits and risks of participating, as well as assurance that their information would stay confidential. They were also debriefed on the purpose of the study and received the study principal investigator's (PI) contact

information in case they had concerns after the interview. To ensure confidentiality, we used unique study numbers to identify participants' data. All confidential information (e.g., email addresses, audio-recordings of interviews) was kept in a secure server and identified by a study number only. Access to this information was only allowed under the direction of the PI or her designate. The audio-recordings were destroyed after the PI and research team completed review of the recordings and the recordings were professionally transcribed, cleaned, and PHI redacted.

Study Setting and Population

We utilized purposive sampling to recruit a cross-section of US-based PCPs and geriatricians who practiced in (1) academic versus community settings, and (2) rural, suburban, or urban areas. We used US Department of Agriculture Rural-Urban Continuum Codes to group practice settings into rural, suburban, or urban/metropolitan categories (U.S. Department of Agriculture Economic Research Service, 2020). Eligible physicians were licensed to practice in the US and reported caring for patients 65 years of age and older (with or without COVID-19) in-person, over the phone, or virtually during the pandemic.

Recruitment

We used social media platforms, specifically the study PI's Twitter page and the COVID-19 USA Physicians Facebook group (~150,500 members) to reach potential participants. Additionally, we posted study flyers on the American Geriatrics Society Member Forum (~7600 members) to capture physicians who do not use social media for professional purposes. Participants were provided with compensation ($50 gift card) after they completed the interview. We recruited participants based on physician specialty, practice setting type, and rurality of the practice community. We planned to recruit 12–18 physicians per specialty (primary care and geriatrics) with 2–3 physicians per practice type/rurality combination, as previous research suggests 12 interviews are adequate to achieve thematic saturation (no new themes emerge) (Guest et al., 2006). Table 1 breaks down our recruitment strategy.

Study Protocol

We developed a semi-structured interview guide with *a priori* questions and prompts based on recent literature, as well as content knowledge and clinical experience of the study authors. The interview guide included a brief description of the virtual interview process, the study objectives, and semi-structured questions with follow-up questions and probes to further explore participants' responses. The research team pilot tested the interview guide with one another prior to its implementation, which led to minor changes. The interview

Table 1. Proposed Purposive Sample.

	Metro		Suburban		Rural		
	Acad.	*Comm.*	*Acad.*	*Comm.*	*Acad.*	*Comm.*	
Geriatricians	2–3	2–3	2–3	2–3	2–3	2–3	12–18
Primary Care	2–3	2–3	2–3	2–3	2–3	2–3	12–18
Total	8–12		8–12		8–12		24–36

guide covered the following topics: workflow adaptations to facilitate telehealth, practice changes brought upon by COVID-19, perceived patient receptivity to telehealth, and adaptations used for older patients. Questions focused broadly on adoption and use of telehealth during COVID-19, as well as challenges and lessons learned related to caring for older adults via telehealth. Interviewers were trained in qualitative in-depth interview facilitation and followed standard practices for open-ended inquiry with follow-up questions and probes for clarification and to pursue greater depth as relevant. The interview guide is available as supplementary material accompanying the online article (see Online Appendix).

Procedures

Prior to interviews, participants provided verbal consent to the virtual interview and its audio-recording. Study personnel with formal qualitative research training and experience (EG and FJ) conducted the interviews. EG is a female emergency physician with postdoctoral training in qualitative methods, and FJ is a female graduate student research coordinator who has three years of work experience with qualitative research. Interviews, as designed, were expected to last approximately 20–40 minutes. The interviewers collected demographic information at the start of the interview and recorded notes on a debrief form immediately after each interview. Interviews were audio-recorded and transcribed verbatim by professional transcriptionists. Unique identifiers were assigned to each participant for referencing purposes, to protect participant confidentiality, and to convey the inclusion of views from numerous participants in the results presentations. Transcripts were reviewed by the research team and corrected against the audio recordings for accuracy. Audio recordings were subsequently discarded to protect confidentiality.

Data Analysis

Applied thematic analysis was used to identify salient content and identify relevant themes (Curry et al., 2006). First, we familiarized ourselves with the data through reading and re-reading the transcripts and noting initial observations. FJ developed a coding structure based on our

interview questions and study protocol, which was then refined through discussion with the full research team. Major topics and sub-topics were coded independently by the 10 members of the research team and then reconciled through group discussion. All transcripts were double-coded, with two members of the research team independently coding each transcript and meeting to reconcile their codes; disagreements between coders were resolved through discussion. Team members double-coded transcripts in rotating pairs to ensure consistency across coders. As transcripts were coded, an inductive approach was taken in which codes were added or modified based on the data. Coded transcripts, using codes agreed upon by the paired coders, and the finalized coding schema were entered into an NVivo (version 12) database (QSR International Pty Ltd., 2018). We used a framework matrix approach to summarize content after coding, identify illustrative quotes, and ultimately organize the data into themes and relationships (Smith & Firth, 2011; Ward et al., 2013). Themes were identified by the lead author, reviewed by co-authors, and finalized by the senior author. Coding definitions and decisions, as well as ideas about emerging themes, were recorded in an audit trail to facilitate analytic rigor. We prepared the analytic narrative and contextualized it using the existing literature.

Results

Fifteen PCPs and 18 geriatricians ($N = 33$) participated in interviews from July to November 2020 (Table 2). Interviews lasted an average of 30 minutes (range: 18–44 minutes). The median age was 39, median years in practice eight (8), and 61% ($n = 20$) were women. Nineteen practiced in community settings (58%) and in metro areas (58%). Nineteen (58%) used some mode of telehealth (e.g., telephone calls, video visits) prior to the pandemic. No participants reported seeing patients only in-person during the pandemic. Although we targeted 8–12 rural physicians, we only interviewed two (Table 3). We opted to include rural voices where we could to provide a full illustration of the data.

We identified six major themes, divided into physician-driven (Table 4) and patient-centered (Table 5) categories.

Theme 1: Advanced preparation for telehealth visits

Physicians employed a variety of methods to assess the suitability of telehealth for their individual patients and help them prepare prior to the first virtual visit. For instance, some physicians stated that clinical staff members were enlisted to speak with older patients in advance to determine the appropriateness of telehealth for individual patients based on their access to and comfort with technology.

"One of the things that we did is we went through our panel of 180 patients and asked them and their family members, 'Who has the technology to allow that?' It's a minority of people in this underserved, poor population that have smartphones and/or minutes to use smartphones for calls. That's been a big challenge." (Participant 7, Geriatrician, South, Community)

Some academic physicians described that they enlisted medical students to assist with training patients in telehealth.

"I'm a clinician educator, so I got some very passionate first, second, third year medical students to volunteer, and they did a lot of outreach to our patients. Spent hours with them at a one-on-one over the phone to teach them how to use video or Zoom" (Participant 22, Geriatrician, West, Academic)

One staff physician at a Programs of All-Inclusive Care for the Elderly (PACE) clinic shared that their clinic hired new staff to assist their patients with accessing their virtual appointments. Additionally, physicians shared that training at both the clinician-level and patient-level were critical strategies for successful telehealth visits with older adults. While physicians appreciated receiving training from experienced telehealth users on how to use the telehealth technology themselves, most shared that they became proficient using the platforms rather quickly and that training for the patients themselves was more beneficial.

Theme 2: Meeting patient needs by using multiple modalities of telehealth

Physicians often used several different telehealth modes and platforms to facilitate a visit. They described having one go-to platform but acknowledged that having fallback options proved invaluable when they were unable to connect with their patients via the default one.

"Our Epic is connected to Zoom, so typically the patients are waiting in a Zoom room and then we just pop in. Then if the patients can't work out the Zoom, then I'll use the Doximity as kind of my backup rather than go to the phone call as the backup. Because I think that's what a lot of people are doing, but like I said, I just don't think it's as good a care when you're only on the phone." (Participant 4, Geriatrician, South, Academic)

To streamline the patient experience, many physicians described that their practices utilized "one-click" interfaces. Patients could log in to their virtual visits through prominent buttons in patient portals (e.g., MyChart). Physicians found that even their oldest patients could use these interfaces, with one PCP stating,

"We have the MyChart app, and then within that, they press the button, apparently, that says join video visit. And so it's been

Table 2. Interviewee Demographic Characteristics and Telehealth Use Prior to and During COVID-19 Pandemic, for Total Sample and by Specialty.

	Total (N = 33)		Geriatrics[a] (N = 18)		Primary Care[b] (N = 15)	
	N	%	N	%	N	%
Age						
25–44	24	72.7	11	61.1	13	86.7
45–64	4	12.1	3	16.7	1	6.7
65 and over	5	15.2	4	22.2	1	6.7
Median (IQR)	39	(35–45)	40	(35–63)	35	(34–43)
Sex						
Male	13	39.4	10	55.6	3	20.0
Female	20	60.6	8	44.4	12	80.0
Years in practice						
0–10	21	63.6	10	55.6	11	73.3
11–21	5	15.2	2	11.1	3	20.0
22–32	3	9.1	2	11.1	1	6.7
33 years or more	4	12.1	4	22.2	0	0.0
Median (IQR)	8	(4–14)	9	(4–27)	6	(3.5–11)
Region						
Northeast	10	30.3	6	33.3	4	26.7
Midwest	6	18.2	3	16.7	3	20.0
South	8	24.2	5	27.8	3	20.0
West	9	27.3	4	22.2	5	20.0
Practice setting						
Metro	19	57.6	12	66.7	7	46.7
Suburban	12	36.4	4	22.2	8	53.3
Rural	2	6.1	2	11.1	0	0.0
Practice type						
Academic	14	42.4	9	50.0	5	33.3
Community	19	57.6	9	50.0	10	66.7
Prior telehealth use						
Video-visit only	5	15.2	2	11.1	3	16.7
Non-video visit only	11	33.3	5	27.8	6	40
Video and non-video visits	3	9.1	2	11.1	1	6.7
No telehealth	14	42.4	9	50	5	33.3
Telehealth patients seen[c]						
Median (IQR)	320	(131–720)	250	(64–640)	500	(200–960)
Missing data	5		3		2	

Note. IQR, interquartile range.
[a]Some geriatricians reported a secondary specialty: Hospice and Palliative Medicine (*n* = 1); Sleep Medicine (*n* = 1).
[b]PCPs were boarded in Internal Medicine (*n* = 12) or Family Medicine (*n* = 3). Some PCPs reported a secondary specialty: Clinical Information (*n* = 1); Geriatrics (*n* = 2); Pediatrics (*n* = 1); Sports Medicine (*n* = 1).
[c]Estimated pandemic period was 32 weeks between March 13 and October 16, 2020.

Table 3. Actual Purposive Sample.

	Metro		Suburban		Rural		
	Acad.	Comm.	Acad.	Comm.	Acad.	Comm.	
Geriatricians	8	4	1	3	0	2	18
Primary Care	5	2	0	8	0	0	15
Total		19		12		2	33

really easy. I mean, I've even had some of my 80–90-year-old patients do it without problem. And then they can see me, and we talk, and then it just ends. It's pretty user-friendly" (Participant 30, PCP, Midwest, Community).

Another alternative was for patients to connect through links sent via text or email; however, some physicians recognized that their patients sometimes struggled with accessing their email accounts.

Table 4. Summary of Themes and Illustrative Quotes: Physician-Driven Strategies.

Themes/Subthemes	Example Quotes
Theme 1: Advanced preparation for telehealth visits	
1A. Pre-determine which patients should be seen via telehealth vs. in-person	"To summarize, my default is phone for all of my patients. I asked my staff to check with them if they want to change their visit to phone visit. We do pre-visit huddles, [there we discuss which] patient must be seen in the clinic." (Participant 13, Geriatrician, Midwest, Academic)
1B. Survey patients in advance to determine if they would be able to do telehealth visits	"A staff member does some initial intake and make sure that the person is in Ohio because of the laws that they have to be seen in Ohio. They check a couple of boxes like that, maybe run through the medications, ask if they have video on their phone and can get a text message and kind of prep them a little bit. So, that may help some people." (Participant 16, PCP, Midwest, Academic)
1C. Call patients before appointments to ready technology for telehealth visits	"Our staff calls patients a week ahead of time to make sure that they have the Zoom link [and] to help troubleshoot patients." (Participant 32, PCP, South, Academic)
1D. Provide patients with technology training	"[W]e have fantastic receptionists…we weren't seeing a lot of people in the office at the time, so…they were working as my people to troubleshoot. They would actually call my patients and walk them through how to get in. So we had these sheets…that had just…really clear steps on what to do. And they would basically read them off and help the patients troubleshoot…if they were having issues." (Participant 10, PCP, Midwest, Community)
1E. Physician technology training	"I received a little bit of training with the HIPAA compliant one. You have to go through a training on how to use Zoom. Every month we have a provider meeting where we learn tricks about…Zoom. It's recurrent, recurrent updates." (Participant 25, Geriatrician, West, Academic)
Theme 2: Meeting patient needs by using multiple modalities of telehealth	
2A. Have backup telehealth platforms	"So I use Doximity as my backup. I'd say the Zoom platform does not work a hundred percent of the time…I don't know if it's a computer issue on my end or sometimes it's the patient's end or they don't always know how to allow it to use their microphone and things like that, and I don't really know how to troubleshoot them. So that's sort of the problem, but Doximity works pretty consistently. So if I try for a minute or two and we can't get them on the Zoom, we just switch to that." (Participant 31, PCP, Northeast, Academic)
2B. Use one-click platforms to simply patient experience	"First, they had the iPad and then they got an email that had a link. They had to have email and then be able to get to their email on the iPad or whatever device they had, their own phone or their computer. Then they had to click the link. I think there was maybe one other step that they had to do to then get in. There were a lot of issues…a lot of people didn't have emails or didn't have emails that they regularly logged on to and so they had trouble getting emails and following those steps." (Participant 24, Geriatrician, South, Community)
2C. Switch to telephone calls when necessary	"I usually will try the video first, but I can usually tell who's going to have problems. If it doesn't work, I just switch to phone. Sometimes it's using Zoom, and then I still call them because the phone sounds better or they can't figure out how to turn on the sound on their computer." (Participant 22, Geriatrician, West, Academic)
2D. Decide on appropriate mix of telehealth and in-person visits	"In general use, I think you'd have to develop your own comfort with different situations, in which it would be helpful. And get on the learning curve of when it's best to use telehealth and when not to…I think at this point it comes down to your personal experience." (Participant 21, Geriatrician, Northeast, Community)
Theme 3: Ancillary services and home and facility-based staff supported telehealth visits	
3A. Home health aides, nurses, and other staff take vital signs and perform tests outside of telehealth appointments	"Especially, if we were planning blood work, our med tech would go in…to draw blood and then initiate the telehealth visit. And she would take blood pressure and the pulse ox. Get all the vital signs of that." (Participant 21, Geriatrician, Northeast, Community)

Table 4. (continued)

Themes/Subthemes	Example Quotes
3B. Social workers can perform cognitive assessments and provide older adults with any needed resources and assistance	"If there are concerns about memory, I send them right to our social workers, and our social workers do something like the SLUMS…or the MoCA…the social worker meets with them and…does more in-depth screening. So I'm just kind of doing a preliminary kind of screening." (Participant 6, PCP, West, Community)
3C. Use of medication delivery services	"I also utilize a lot of home delivery of medications…So the patients…don't have to go and pick medicine from their pharmacy. There are a lot of vendors that currently are doing home delivery of medications…without additional cost." (Participant 13, Geriatrician, Midwest, Academic)
3D. Drive-through vaccinations, COVID testing, and walk-in clinics	"Given that there's already influenza cases here in Columbus, which is the closest big city, because those usually we see here in the office and we swab in the office. And as of our protocols right now, we'd be doing that through telemedicine then just ordering testing. Because we have drive up sites that will do testing." (Participant 10, PCP, Midwest, Community)

Note. Minor editing of quotes has been done to improve readers' understanding of participants' statements using ellipses to indicate where words have been removed and text in square brackets to indicate where clarifying words have been added. Labels defining participants' specialty and practice setting (collected before interviews) and US region (collected during interviews) have been added after each quote. Although we did not identify differences in the data based on these labels, we include them here to contextualize the results.

Table 5. Summary of Themes and Illustrative Quotes: Patient-Centered Strategies.

Themes/Subthemes	Example Quotes
Theme 4: Patient need for reassurance and education on telehealth privacy and benefits	
4A. Patient reception of and comfort with telehealth can change	"The older folks, I think they just have to get used to it a little bit, and in the beginning, they were like, 'Oh, this is weird. I'm out in my backyard.' But now, yeah, I think now they've accepted it as everyone has accepted COVID and all the change that comes with it." (Participant 30, PCP, Midwest, Community)
4B. Patient belief that telehealth visits are not "real visits" / lack of physical exams	"They don't have the technology to do the video visits, but most of them don't believe in either a telephone or video visit….they didn't grow up with this. They grew up with in-person visits. And that's the only thing they consider a visit." (Participant 8, Geriatrician, Midwest, Academic)
4C. Patient confusion surrounding different telehealth modalities (e.g., difference between telephone visits and video visits)	"It's hard to explain why we prioritize the video versus telephonic [be]cause even though there's pay parity, it's still not exactly the same. And I think seniors overall just appreciate that being able to sit in front of you says 'interaction.' They didn't really grow up looking at screens and talking to people [on] the screen. So yeah, trying to make it as interactive as possible, I think is important." (Participant 5, Geriatrician, West, Community)
4D. Privacy concerns surrounding telehealth	"[In the beginning] there was questions about privacy and Zoom bombings, some of our patients were like, 'I don't want to deal with any of that. It's suspicious, I don't trust it, who knows who else is watching over on the other end?' We had a few patients who were really adamant about, 'No, not doing it. We're doing it by phone,' but I think a few of them have changed [their] minds afterwards." (Participant 22, Geriatrician, West, Academic)
Theme 5: Addressing disabilities using technology and other accommodations	
5A. Speech alterations: enunciating more, speaking slower and louder, taking longer pauses	"Perhaps the same thing that I would do in person: speak slowly, enunciate clearly, make sure they can hear me and…I can hear them." (Participant 3, Geriatrician, Northeast, Community)
5B. Address hearing issues: headphones, volume control, Bluetooth hearing aids, use of signs	"The hearing impairment has been really hard. My patients are older adults. A lot of them are hearing impaired. I have one patient whose hearing aid went out and can barely hear…she's got a caption phone. So, I had to use the call in, and use the caption phone. But that was one work around. Or typing, we've tried chatting on the Zoom chat. I had to do that in person, but not on the video call yet." (Participant 14, Geriatrician, West, Academic)
5C. Provide after-visit summaries to patients	"I guess from a logistics standpoint, it's even more important to have the after-visit summary ready….because we talked about so much, I always try to write the bullet points in the after-visit summary so they can refer back to that." (Participant 5, Geriatrician, West, Community)
5D. Try out different assessments to determine which work best via telehealth	"You can generally do a Mini-Cog using telehealth without too much trouble. The SLUMS, which is our standard cognitive assessment, is a little bit more challenging to do over the phone…it's a little bit…patient-dependent upon whether that's going to work. We've ended up doing more of those in-person, but we generally haven't had a problem doing a Mini-Cog over the phone." (Participant 26, Geriatrician, South, Community)
Theme 6: Involvement of family members and other caregivers	
6A. Caregivers can help older adults use the telehealth technology	"I have some older patients who are very tech savvy and are right on board with it. I have other elderly people who barely know how to use a cell phone, let alone, start a video. I rely a lot on their family members or if we can coordinate, if they have home services and we can coordinate with the visiting nurse, for instance, to help us with that." (Participant 31, PCP, Northeast, Academic)

(continued)

Table 5. (continued)

Themes/Subthemes	Example Quotes
6B. Caregivers can provide physicians additional information (e.g., history)	"Now, if you've got a really good caregiver, the caregiver can supplement a lot of that information, you still don't get a physical exam. But not everybody has a really good caregiver and you're also having to take their word for things, because not everybody's got a trustworthy caregiver. So, that's part of the trouble." (Participant 19, Geriatrician, South, Academic)
6C. Caregivers are instrumental for telehealth uptake by older adults who are cognitively impaired	"[F]or the patients I see, there's a technology hurdle and because most of the patients I'm seeing are cognitively impaired, there was…this extra hoop to jump through to do telehealth, but they weren't even the ones doing it. It was sort of incumbent upon the caregiver or the family member to have to jump through that hoop." (Participant 15, Geriatrician, Northeast, Academic)
	"Well we also have demented patients, who have a designated caregiver, a surrogate, like an adult child, or a spouse, or a grandchild. Grandchildren are great. And they actually run the whole visit. We can accomplish a lot, I think, if we have somebody." (Participant 6, PCP, West, Community)
6D. Approach telehealth visits like home visits	"For older adults with multiple problems, the med rec pre-work section is kind of helpful because you can actually tell them to go to their pill cabinet and they grab it and see it. Being able to see into their home, it's…like a home visit kind of thing. So you can see their living situation and stuff. That part's helpful too." (Participant 2, PCP, West, Community)

Note. Minor editing of quotes has been done to improve readers' understanding of participants' statements using ellipses to indicate where words have been removed and text in square brackets to indicate where clarifying words have been added. Labels defining participants' specialty and practice setting (collected before interviews) and US region (collected during interviews) have been added after each quote. Although we did not identify differences in the data based on these labels, we include them here to contextualize the results.

Theme 3: Ancillary services and home and facility-based staff supported telehealth visits

To augment their provision of care through telehealth, physicians relied on a variety of ancillary services and staff to provide continuity of care. Physicians reported using a variety of means to collect clinical data on patients. For instance, home health aides or medical technicians obtained vital signs and serum blood tests. Although this allowed patients to stay home for their appointments, some patients were uncomfortable with interacting with these staff members outside the clinical setting. Other physicians used remote monitoring devices and follow-up calls from nurses to obtain their patients' vital signs.

> "[We] contracted with an in-home lab draw service. That turned out to be a really good thing. We're using it less and less now that certain people are more and more comfortable with going out, like come to the clinic, come to go to the lab. But early on, we did a lot of lab ordering through this service." (Participant 19, Geriatrician, South, Academic)

Additionally, physicians highlighted that social workers helped older adults by performing cognitive assessments and addressing unmet health needs remotely.

> "I'm really privileged to have a social worker in my team who does the comprehensive social assessments and they'll be able to connect to various agencies in the community." (Participant 13, Geriatrician, Midwest, Academic)

Some physicians described partnering with medical delivery services to reduce the need for patients to visit pharmacies. Physicians noted that their practices established walk-in or drive-through clinics to provide vaccinations, COVID-testing, and follow-up care. Many noted that these efforts were meant to strike a balance between keeping patients safe and providing care that would not be possible remotely.

Theme 4: Patient need for reassurance and education on telehealth privacy and benefits

Physicians reported the primary barriers to the adoption of video visits among their older patients were the initial learning curve, fears and biases about telehealth, and patients' perceived self-efficacy to use it. However, physicians noted that if they reassured and supported their older patients through their first visit, their patients became more accepting of telehealth and appreciated the utility of it.

> "I think patients are more comfortable now…before, they wouldn't even open a message, or an email, or even open a discussion about using the computer to check on their results or communicate to me…I'm glad that they are able to do that and they open themselves to being more savvy." (Participant 1, PCP, West, Community)

Some physicians described that their older adult patients perceived that telehealth visits were not "real" visits. They reported that some older adults were alarmed to learn that they would not be physically examined during virtual visits, even if their physicians had explained why a physical exam was unnecessary.

> "[W]hen I'm seeing these people for follow up visits and chronic conditions and whatnot, and when things came about with the Medicare [Annual] Wellness Visits and the fact that there should not be an exam…people were appalled by this. 'What do you mean you're not going to touch me?'" (Participant 11, Geriatrician, Northeast, Community)

Physicians noted that their older patients were indifferent to whether their telehealth visits were conducted via telephone or video. Some visually impaired patients believed that because they could not see their physician during video visits, a video visit was useless. However, physicians expressed that their observation of the patient did reveal important clues to the condition. Other patients preferred telephone visits over video visits because they wanted to avoid learning how to do audiovisual visits. However, physicians emphasized that making video visits as interactive as possible could counteract their patients' hesitancy to replace face-to-face visits with televisits.

Physicians shared that many of their patients had privacy and safety concerns surrounding telemedicine and noted that education efforts were needed to address these apprehensions.

> "I had a patient who was having belly pain, who was at home, didn't want to come in, and she didn't want to lie down and do an exam by video. She thought someone was going to be observing or watching us, even though I told her that this wasn't recorded, that we have a special Zoom platform that's for institutions, not for private use, which has added security measures." (Participant 32, PCP, South, Academic)

Theme 5: Addressing disabilities using technology and other accommodations

Physicians reported using several strategies to enhance understanding, including enunciating more clearly, speaking more slowly, and using a louder voice. In particular, several physicians noted that pausing between sentences was especially effective to avoid interrupting older adult patients.

> "I'm mindful of pausing after I speak with patients because I find otherwise, especially with older patients, we will interrupt each other." (Participant 32, PCP, South, Academic)

To address hearing issues, a variety of methods were used, including signs, headphones, caption phones, Bluetooth

hearing aids, and the involvement of caregivers to help with volume control and relaying messages. Additionally, participants noted that it was helpful to provide after-visit summaries for patients to read a synopsis of the visit and recommendations.

Furthermore, physicians reported experimenting with different cognitive assessments to see which worked best via telemedicine. Some reported the Mini-Cog could be easily done, whereas more complex assessments, such as the Montreal Cognitive Assessment (MoCA) or the Saint Louis University Mental Status (SLUMS) examination could be more difficult to complete, necessitating an in-person visit.

Theme 6: Involvement of family members and other caregivers

Physicians stated that involving caregivers and family members in telehealth visits was particularly useful. They often helped set up the telehealth platform and provided assistance during the visit. Additionally, they reported on how the patient was doing around the home, which allowed for a more thorough and holistic approach to care.

> "I had a couple, maybe, patients in their 90s, and we would set up the telehealth and it would just go to their daughter's phone. And they were there in-person, so they could also offer the collateral of how the patient's doing." (Participant 16, PCP, Midwest, Academic)

Many physicians reported that caregiver presence was essential for older adults with cognitive impairment. Physicians noted that interacting through a screen was especially disorienting for persons with cognitive impairment. However, some physicians cautioned that involvement of caregivers, while necessary, would occasionally result in a visit solely with the caretakers rather than the patient.

> "When I'm on a telemedicine visit, I'm talking but the daughter's doing all the talking and the patient's kind of sitting there." (Participant 14, Geriatrician, West, Academic)

Physicians noted that the home setting of telehealth visits was especially helpful during the pandemic, as older patients would often have caregivers around to help with the visit. Telehealth also removed the need for caregivers to go through the distressing process of taking their loved ones with dementia outside during the pandemic and making sure they were wearing their masks properly.

Discussion

In our interviews with US PCPs and geriatricians, we identified several strategies physicians used to overcome barriers encountered in telehealth use with older adults. These included changes both at an organizational level and an individual, physician level. Practice-wide changes included utilizing volunteers and non-clinical staff to complete pre-visit assessments, telehealth "dry runs," and education surrounding privacy concerns and benefits of telehealth. Physicians employed multiple telehealth platforms to enhance access to a workable means of communicating for patients' different needs, internet connectivity, and devices in addition to arranging home-based and mobile staff members to collect vital signs and labs, deliver medication, and offer vaccinations and COVID-testing. Additionally, physicians adjusted their individual practice to account for sensory and cognitive impairments, and partnered with family members and caregivers to set up the technology and receive direct support and information on patients' clinical status. These thematic findings are key strategies that can be adopted and modified to suit context and practice-dependent telehealth needs beyond the pandemic.

Unlike previous research on the topic (Franzosa et al., 2021; Kalicki et al., 2021), the present study includes perspectives from a geographically diverse group of PCPs and geriatricians in both academic and community settings. As such, the themes revealed were expressed by physicians caring for a geographically and socio-economically diverse group of older adults. Consistent with existing research on barriers and facilitators of telehealth adoption among older adults, we found that using devices with fewer buttons and low-tech platforms, providing audio and visual guidance (Foster & Sethares, 2014), maintaining platform flexibility to ensure patient access (Franzosa et al., 2021), using staff to reach out to patients to set up telehealth visits, using medication delivery services, and involving caregivers or other health professionals in telehealth visits increased uptake of telehealth in older adults (Kalicki et al., 2021; Tan et al., 2020).

While our findings reveal several strategies that outpatient physicians adopted to accommodate older patients during the COVID-19 pandemic, our data also reveals patient-level barriers that will require additional resources to overcome. In line with other studies (Kalicki et al., 2021), physicians in our sample reported having patients who struggled to use telehealth due to limited internet connectivity or access to video-enabled devices due to structural and economic barriers. Some patients were resistant to video visits out of privacy and safety concerns as well as a belief that telehealth was not equivalent to an in-person visit. However, patient trainings designed to address patient-perceived barriers to telehealth, such as interest, access, and confidence, were successful in reducing older adults' hesitancy in participating in telehealth visits and in building technology-related self-efficacy (Hawley et al., 2020).

Our data revealed that physicians used a variety of different platforms to make video visits successful and the majority only resorted to phone calls when necessary. However, Medicare data shows that the majority of

beneficiaries who had a telehealth visit since July 2020 had an audio-only visit (Koma et al., 2021). A multisite geriatric clinic in Michigan found that older adults initially preferred telephone visits between the two options (Dewar et al., 2020). One effective strategy not mentioned in interviews but highlighted in models with patients with neurodegenerative disorders is beginning with phone calls and then transitioning to video visits (Weiss et al., 2021). Overall, there remains a non-uniformity of approaches to telehealth care delivery in older adults, and our interviews highlight that an individualized technique is necessary based on ability and access to devices and internet.

Older adults may benefit greatly from a tailored implementation of telehealth. Based on our participants' experiences, telehealth is well-suited for certain patient concerns in the primary care setting. Although our participants acknowledged some of the shortcomings associated with providing care via telehealth, such as the inability to physically examine patients and limited digital literacy among older patients, telehealth was useful for many common patient concerns and brief, routine check-ins. Much of the Medicare Annual Wellness Visit (Centers for Medicare & Medicaid Services, 2020), such as medication reconciliation (Lancaster et al., 2018; Shafiee Hanjani et al., 2020) and preventive health screenings (Gao et al., 2019), do not require in-person interactions and can be completed remotely. Existing work suggests that highly integrated primary care for older adults can be successfully delivered via telehealth (Abrashkin et al., 2021).

As telehealth will likely continue to play an important role in the care of many older Americans, further research on patient-centered design and clinician and patient training in telehealth is warranted. Many of our physicians emphasized the importance of tailoring their telehealth practice to the needs of older adults, yet they also reported receiving limited to no training on how to optimally use telehealth with older patients. Present findings can be incorporated into future training of physicians as strategies and tips for improving care before, during, and after patient appointments. The National Geriatric Research Education and Clinical Centers piloted a multi-component telehealth training curriculum for geriatrics trainees that can serve as a model for clinicians who require training on adapting telehealth visits for older adults (Nearing et al., 2020). Additionally, although recent research demonstrates that telehealth may be a promising avenue to reduce health disparities among older and minority patients (Ryskina et al., 2021), further population-level evaluation of longer-term health outcomes of older patients seen via telehealth is clearly necessary.

Study Considerations

There are several strengths of this study. Through purposive sampling, we were able to recruit a diverse sample of physicians who were experienced in caring for older adults during the pandemic, and thus offer valuable insight into strategies to facilitate telehealth visits with the geriatric patient population, an under-studied area of telehealth. Additionally, through in-depth qualitative interviews and thematic analysis, we were able to identify detailed and nuanced strategies to inform future telehealth policy and improved practice.

Our sample was composed entirely of physicians, but many other stakeholders such as patients, caregivers, advanced practice providers, and staff can make valuable observations on telehealth and should be included in future studies. Without patient perspectives, findings lack the lived experiences of older adults receiving care. However, the physicians we interviewed were candid about their experiences and their struggles with getting telehealth to work with older adult patients and their strategies—if employed broadly—could help other clinicians and health system leaders increase telehealth uptake among older adults. Additionally, our sample of physicians skewed toward younger physicians, which may be attributed to recruitment in part via social media. Additionally, our findings may not be generalizable to rural physicians or those treating older adults in other specialties. This work is formative and captures perspectives not heavily represented in the literature. Nevertheless, our work provides valuable insights into a time when telehealth use was rapidly accelerating and closely examines a population—older adults—that has been understudied previously.

Conclusions

Primary care physicians and geriatricians employed various strategies to overcome barriers to delivering medical care to older adults via telehealth during the COVID-19 pandemic. Successful strategies included preparing for visits in advance, adapting to sensory needs, including caregivers, and providing additional educational and supportive resources. Our results highlight strategies that physicians and their practices can employ to make telehealth more accessible to older adults. These findings can inform future training of practicing physicians, practice, and policy as telehealth continues to shape care delivery beyond the COVID-19 pandemic.

Abbreviation

PCPs   primary care physicians.

Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

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