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A survey of Massachusetts primary care physicians' experience with telemedicine in older adults

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INTRODUCTION

Adults ≥65 account for 45% of all primary care visits and 86% of adults ≥65 have ≥1 chronic condition.[1] During the pandemic, primary care physicians (PCPs) have increasingly offered care via telemedicine but older adults are known to have lower digital literacy and greater functional limitations which may limit the quality of these visits.[2] Because little is known about telemedicine primary care for older adults, we aimed to learn from PCPs their perspectives on providing telemedicine primary care to adults ≥65 since the pandemic.

METHODS

Between September 2020 and January 2021, we emailed (up to 5 attempts) all PCPs affiliated with one large Boston-area health system (includes community-based and academic primary care practices affiliated with three large medical institutions) to complete a voluntary, web-based survey (available in Table S1) about providing care via telemedicine to older adults since March 2020. The survey asked PCPs about their self-efficacy and attitudes about using telemedicine for adults ≥65; items were scored on a 7-point scale (strongly disagree [1] to strongly agree [7]; scores >4 were categorized as agreeing with

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AUTHOR CONTRIBUTIONS

Roma Bhatia and Mara A. Schonberg conceptualized the study and developed the survey questionnaire. Roma Bhatia, Elizabeth Gilliam, and Diane Brockmeyer implemented the electronic survey for PCP participants. Roma Bhatia, Elizabeth Gilliam, Mara A. Schonberg, Laura DesRochers, Gianna Aliberti analyzed the data. Roger B. Davis provided statistical support and supervised the data analysis. Roma Bhatia and Mara A. Schonberg wrote the manuscript, and all authors provided key feedback and review of the manuscript.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

the statement). We used Fisher exact tests to compare differences in PCPs agreement about different aspects of telemedicine.

RESULTS

Of 393 eligible PCPs contacted, 181 (47%) participated. Table 1 lists the demographic characteristics of participants. Participants were similar to non-participants based on practice site and sex but were more likely to be ≥50 years than non-participants. Overall, 79.8% of PCPs agreed that they could deliver high quality care to older adults via telemedicine (Table 2). However, only 64.8% were satisfied by the quality of care they provided virtually to older adults and few (26.1%) agreed that the quality of care delivered via telemedicine was equivalent to in-person care for older adults. PCPs were more confident in their ability to use telemedicine to manage chronic diseases than to diagnose a new medical problem (80.9% vs. 57.7%, $p < 0.001$) or to conduct urgent care (80.9% vs. 60.9%, $p < 0.001$). When conducting telemedicine, PCPs reported greater confidence in providing care via video versus telephone (78.6% vs. 62.5%, $p < 0.001$).

Most PCPs (74.8%) agreed that telemedicine was more difficult with adults ≥65 years than with younger adults and most preferred in-person care for adults ≥65 (73.8%) and for patients regardless of their age (66.0%). Yet, 86.9% intended to continue providing telemedicine to older adults after the pandemic.

DISCUSSION

The majority of the 181 PCPs that participated in our study preferred in-person care, felt that the quality of care was higher in-person, and found telemedicine more challenging with older adults. Yet, 86.9% planned to continue providing telemedicine care after the pandemic and most felt that high quality care could be delivered via telemedicine especially for chronic disease management. Multisite trials are needed to test the effectiveness of telemedicine versus in-person care especially for chronic disease management in older adults because PCPs intend to continue delivering care via telemedicine.

In qualitative studies conducted since the pandemic, PCPs have described both the advantages and disadvantages of telemedicine. Advantages include the convenience, improved access, and the ability to visualize patients' home lives. Yet, PCPs worry about missed diagnoses due to limited physical examination ability using telemedicine, weaker relationships with patients due to lack of touch, greater workload,[3,4] and wider disparities due to the digital divide.[5]

Recently, Medicare announced plans to end coverage for non-behavioral telemedicine phone visits in 2022.[6] Although PCPs in our study and others preferred video to phone telemedicine, this policy change could reduce access further to vulnerable older adults with decreased mobility, functional limitations, and low digital literacy.[7] Innovative interventions are needed to facilitate video telemedicine with older adults particularly the most vulnerable, especially because transportation to visits for vulnerable older adults is a known challenge.

Limitations to our study include our response rate (47%), which is, however, comparable to other voluntary PCP surveys.[8] Generalizability may be limited because participants practiced in one geographic region, most had been in practice >20 years and most were non-Hispanic white. However, older PCPs tend to be less diverse and to see older patients.

Our results suggest that perceived high quality telemedicine may require additional PCP tools and training and show that telemedicine should not be viewed as a strict substitute for in-person care, but rather, as an additional avenue for reaching the right patients at the right time. Additional research should focus on elucidating determinants that impact PCP experience with telemedicine visits with older adults, and how to improve them.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

SPONSOR'S ROLE

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TABLE 1

Baseline characteristics of primary care physician (PCP) respondents (n = 181)

Characteristics	Overall PCPs (n = 181)
Gender	
Female	59.1%
Race/Ethnicity	
Non-Hispanic White	82.6%
Black/Other	17.3%
Hispanic	5.0%
PCP age (years)	
30–39	17.9%
40–49	13.6%
50–59	33.9%
60–69	26.5%
≥70	8.0%
PCP role	
Physician	96.9%
Nurse practitioner	3.0%
Years out of school	
<5 years	11.8%
5 years–<10 years	8.1%
≥10 years–<20 years	14.9%
≥20 years–<30 years	36.7%
≥30 years	28.5%
Specialty	
Internal medicine	60.9%
Family medicine	26.1%
Geriatrics	4.3%
Other	8.7%

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Characteristics	Overall PCPs (n = 181)
Community versus Academic primary care practice	
Community	74.7%
Beth Israel Deaconess community practices (20 practices)	30.2%
Lahey Health/Lahey community practice (15 practices)	30.8%
Mount Auburn Health (MAPS) (8 practices)	13.2%
Academic	25.3%
Beth Israel Deaconess internal medicine and geriatrics	25.2%
Panel size	
<1000 patients	30.6%
≥1000 patients	69.4%
Proportion of patients ≥65 years old in panel	
≤20%	20.7%
21%–30%	28.6%
31%–40%	22.7%
41%–74%	25.2%

TABLE 2

Mean overall primary care physician (PCP) score and proportion of PCPs who agree with self-efficacy, attitude, and perceived norms statements about telemedicine use

Each outcome scored on a Likert Scale from 1–7, (strongly disagree [1]-strongly agree [7]; 4 is neutral)	Mean overall score (Score ± SD)	% agree overall (score 5–7)
Self-efficacy outcomes; (*I am confident that I can*:)		
Engage older adults in a high quality telemedicine visit (*n* = 171)	5.3 ± 1.4	79.8
Engage older adults in a high-quality urgent care visit via telemedicine (*n* = 171)	4.8 ± 1.5	60.7
Diagnose a new medical problem in older adults via telemedicine (*n* = 171)	4.7 ± 1.3	57.7
Manage chronic medical problems in older adults via telemedicine (*n* = 171)	5.3 ± 1.3	80.9
Use telephone to provide care to older adults (*n* = 171)	4.8 ± 1.5	62.5
Use video to provide care to older adults (*n* = 171)	5.2 ± 1.4	78.6
Attitude outcomes:		
High quality primary care may be delivered to older adults via telemedicine (*n* = 176)	5.5 ± 1.4	83.1
The quality of telemedicine visit is equivalent to an in person visit for older adults (*n* = 176)	3.4 ± 1.5	26.1
Quality of care delivered through telephone is equivalent to that of video visit for older adults (*n* = 172)	3.2 ± 1.6	24.5
Quality of care delivered through telephone is equivalent to that of video regardless of patient age (*n* = 173)	3.1 ± 1.7	23.3
Video provides adequate visualization to diagnose new medical problems (*n* = 173)	3.8 ± 1.6	40.1
I am satisfied with the quality of care provided by telemedicine for older adults (*n* = 165)	4.7 ± 1.5	64.8
I am pleased with providing telemedicine for older adults (*n* = 164)	5.8 ± 1.4	84.5
I enjoy providing telemedicine as much as in person care for older adults (*n* = 165)	3.7 ± 1.8	32.7
I prefer to provide primary care in person rather than via telemedicine for older adults (*n* = 165)	5.2 ± 1.5	73.8
I prefer to provide primary care in person rather than via telemedicine regardless of patient age (*n* = 165)	5.0 ± 1.5	66.0
Telemedicine with adults 65+ is more challenging than with adults <65 years old (*n* = 172)	4.9 ± 1.5	74.8
Telemedicine with adults 75+ is more challenging than with adults <75 years old (*n* = 173)	5.3 ± 1.6	81.9
I am worried that Telemedicine will add to workload after the pandemic (*n* = 164)	3.4 ± 1.7	24.8
Reimbursement for Telemedicine should continue to be the same as in person visits post-pandemic (*n* = 163)	6.1 ± 1.4	88.1
Telemedicine helps adults ≥65 avoid delays in care (*n* = 165)	5.9 ± 1.2	89.5
I intend to continue to use telemedicine to provide care for older adults even after the pandemic (*n* = 163)	5.7 ± 1.4	86.9

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