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# How telehealth can work best for our patients

A hybrid model of care embracing office visits and remote consultations may provide the benefits and curtail the disadvantages of both.

## PRACTICE RECOMMENDATIONS

› Consider using telehealth encounters for diagnosing and treating infectious diseases and for monitoring stable chronic conditions. **C**

› Consider telehealth “check-ins” to encourage patients working on behavioral change, such as smoking cessation. **C**

### Strength of recommendation (SOR)

- A** Good-quality patient-oriented evidence
- B** Inconsistent or limited-quality patient-oriented evidence
- C** Consensus, usual practice, opinion, disease-oriented evidence, case series

Social distancing measures instituted during the COVID-19 pandemic challenged the usual way of operating in primary care. To continue delivering medical services, physicians had to transition quickly to forms of remote interaction with patients. Use of technology appeared to be the answer. And it gave clinicians the ability to do what many had long hoped for: offer patients the option of telehealth.

The terms *telemedicine* and *telehealth* have similar definitions and are commonly used interchangeably. We think most practices probably would have adopted telehealth earlier were it not for reimbursement barriers. In this article, we adopt the World Health Organization’s definition of telemedicine as: “The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for the diagnosis, treatment, and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities.”<sup>1</sup>

To provide family medicine clinicians with evidence-based recommendations about telehealth, we conducted a critical review of the literature published through April 30, 2021. The scope of this review includes studies found using the PubMed and Google Scholar databases. In addition, we used the keywords “telehealth,” “telemedicine,” “family medicine,” and “primary care.” We divided this review into 6 sections, including focus areas on implementation in primary care, remote diagnostic accuracy, conditions lending themselves to telehealth, physician and patient perceptions, disparities in telehealth, and finally, the conclusions.

## Telehealth implementation in primary care

Telehealth in various forms had been around for years before the pandemic, mainly in the form of commercial telehealth

businesses. Telehealth was being used in rural and remote areas where it could be difficult to see a primary care provider—let alone a specialist. The family medicine department of the University of Colorado was an early adopter of telehealth and had navigated this transition since 2017, with clinical champions guiding the process. By 2019, 54% of their clinicians were conducting telehealth encounters.<sup>2</sup>

However, telehealth implementation elsewhere was not accepted so readily. Before the pandemic, a cross-sectional study of more than 1.1 million patients in Northern California showed that 86% preferred in-person care over video.<sup>3</sup> Even as the pandemic began and social distancing measures were implemented, a quality improvement project at a family medicine residency clinic in Florida documented that clinicians still preferred telephone interviews despite the capacity for video visits.<sup>4</sup> And many primary care systems were simply unprepared to adopt telehealth technologies.

With time, however, family physicians began to improvise using popular videoconferencing technologies (eg, Zoom) that were readily available and familiar to patients, and medical centers began to repurpose their existing videoconferencing systems.<sup>5</sup> The Ohio State University Wexner Medical Center launched a virtual health initiative just before the pandemic struck, at which time fewer than 5% of patient visits were conducted through telehealth. Weeks later, nearly 93% of patient visits were offered through telehealth.<sup>6</sup>

**■ Reimbursement.** Another significant impediment to early telehealth uptake was the late reaction by the Centers for Medicare and Medicaid Services (CMS) in changing the payment system. Hectic expansion of telehealth in response to the crisis pointed to the lack of policies that supported primary care with payments based on outcomes rather than fee-for-service models.<sup>7</sup> By the end of April 2020, CMS finally announced that video visits would be reimbursed at the same rate as in-person visits. However, telephone-only visits are still very limited in coverage, and appropriate codes should be verified with payers.

## Remote diagnosis comes with a caveat

Some primary care practices have found that images of skin lesions submitted by patients (usually by cell phone) suffice for accurate diagnosis in lieu of office visits.<sup>8</sup> With chronic conditions, home-based remote monitoring of vital signs may assist in diagnosing and managing acute issues. More efficient triage of patients is increasingly possible with the receipt of still images or video files of concerning lesions (eg, burns, rash, chronic wounds) sent from smartphones alone<sup>9,10</sup> or with devices attached to smartphones (eg, parent-managed otoscopes).<sup>11,12</sup>

Family physicians historically have relied on in-person visits for holistic assessment and diagnosis. Telehealth video visits have the potential to assist with this goal, but there are risks. For example, one patient cut her foot while swimming and the wound became infected. In a video telehealth visit with a physician assistant, the patient was prescribed an oral antibiotic for cellulitis. However, redness and swelling of the wound continued to increase. Subsequent messages left by the patient went unheeded, and she then visited her local emergency department where she received intravenous antibiotics.<sup>13</sup> Another patient, who had cervical neck discomfort, had a video visit with an urgent care clinic. The initial diagnosis was sciatica; however, the pain continued with the addition of chills, sweats, and subjective fever.<sup>14</sup> Physical examination at the hospital and lab tests revealed endocarditis. These case reports show the limitations of video visits.

## Specific conditions usually suitable for telehealth evaluation

The pandemic helped us understand that some situations and conditions are better suited than others to coverage by telehealth. The National Ambulatory Medical Care Survey examined 850 million patient-physician encounters and found that 66% of all ambulatory primary care visits required in-office care,<sup>15</sup> suggesting that about one-third of patient encounters could be treated via telehealth.

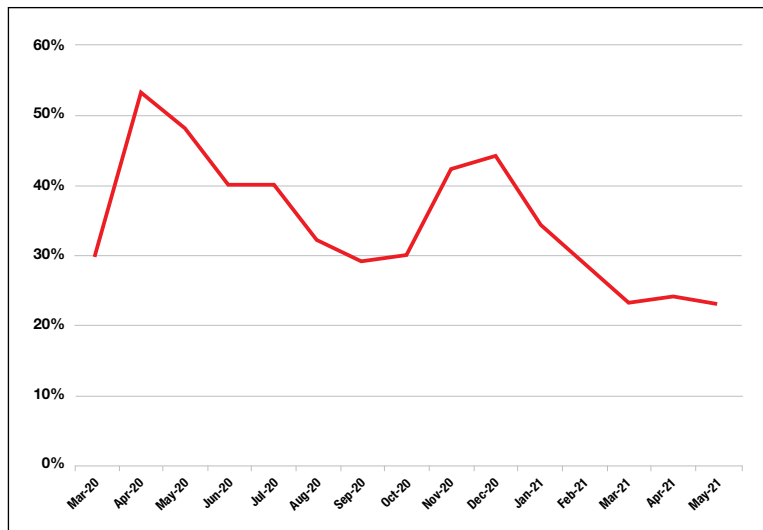
As an example, our southeastern Wis-



**CMS reimburses for video visits at the same rate it does for in-person visits, but telephone-only visits are still limited in coverage.**

FIGURE

Telehealth<sup>a</sup> usage in a Wisconsin practice<sup>b</sup> during the COVID-19 pandemic



<sup>a</sup> Telehealth included telephone and video visits during the pandemic.

<sup>b</sup> Usage as a percentage of all visits at All Saints Clinic, Milwaukee, WI.

consin urban clinic has about 20,000 office visits per year. We launched telehealth in March 2020 in direct response to the pandemic. Telehealth usage peaked at the beginning of the pandemic (FIGURE), fell gradually, hit a lower peak in November and December as COVID case counts increased, and then decreased again as our community changed from a “quarantine/lockdown” mentality to “opening up/back to new normal.”

Some conditions can be managed favorably with the telehealth format:

■ **Infectious diseases** may be treatable remotely.<sup>16,17</sup> Following an initial telehealth visit, the physician can evaluate and recommend further care.

■ **Stable, chronic conditions.** Telehealth can be used for stable, chronic conditions such as diabetes, chronic obstructive pulmonary disease, and heart failure when lab or imaging studies are not needed.<sup>18</sup>

■ **Mental health.** Telehealth can be useful in counseling and providing mental health and social support.<sup>18</sup> Safeguards can be put in place to protect patient privacy in this setting.<sup>19</sup>

■ **Behavioral change.** Telehealth can be effective in providing support for patients actively trying to quit smoking or lose weight,

and for caregivers. A physician who “checks in” can be a positive motivator and can promote a patient’s continued success.<sup>20</sup>

Telehealth is less beneficial when a physical exam is needed to assess pain, tenderness, strength, or other sensations. Office visits also are required for lab assays and imaging, as in periodic checks of A1C levels in patients with diabetes. As technology advances, home-based laboratory kits and sensors likely will change this picture. New patients may be better served through an initial office visit to develop the patient-physician relationship.

Visual assessment of conditions may be limited by telehealth depending on the quality of the devices used. For example, rashes may be difficult to assess given the clarity of the picture on the device and the ability to see only in 2D. There is still a need for more controlled trials to clarify which conditions can be evaluated and managed by telehealth and which ones need in-person care.<sup>21</sup>

**Physician and patient perceptions of telehealth encounters**

Research into family physicians’ perceptions of telehealth is scant. However, 3 studies published in 2021 reveal some advantages and challenges for telehealth adoption.

- A qualitative study found that physicians valued the increased access to care for some patients, changes to reimbursement practices not covered before, and the opportunity to see patients’ home environments.<sup>22</sup> Disadvantages included an inability to examine the patient, problems with diagnostic accuracy, hindrances to developing personal connections, and the potential for burnout with on-demand care.<sup>22</sup> The researchers suggested that telehealth might better serve to augment in-person care.
- A second study found that clinicians are satisfied with the use of telehealth in general. However, it also noted that the lack of physical examination could hinder accurate diagnosis and treatment.<sup>23</sup>

- A third study surveyed 109 family physicians, reinforcing the importance of physical exams and highlighting the lack of body language as another barrier.<sup>24</sup>

In addition, all 3 studies noted that video visits are typically briefer than in-person visits. Previous research predominantly done in specialty and mental health care showed that the benefits of telehealth for physicians include an increase in efficiency, reduced commute time, and improved work-life balance.<sup>25</sup>

■ **Patient perspectives.** Many patients have reported that they prefer telehealth because of lower costs, decreased travel time, and faster health care access.<sup>26,27</sup> However, patients also have expressed concerns that the telehealth environment may reduce physician attention, can limit personal interaction (and impart a sense of being rushed), and lacks the physical examination that may be key to an adequate diagnosis.<sup>28</sup>

A survey of 223 patients showed that sicker patients choose in-person care because they want more in-depth visits with more attention to detail than healthier patients do.<sup>29</sup> In a Veterans Affairs health care system qualitative study, patients voiced concerns about communicating with physicians via telehealth, including the potential for errors, less attention paid to their needs, audio difficulties, and challenges to establishing a physician-patient relationship.<sup>30</sup> Some patients thought telehealth inhibited their personal expression or that the clinician was not attentive enough. These patient reports underscore the importance of patient-clinician relationships developed in person.<sup>31</sup> The perceived level of complexity involved in a visit appears to be an essential factor in a patient opting for telehealth—or not.

In light of these known physician and patient perspectives, it seems wise to develop a hybrid model approach in which visits alternate between telehealth and office.

### Patient disparities that may limit the use of telehealth

■ **Race and ethnicity** is a major factor in telehealth use. Patients who are Black or

Hispanic use telehealth services less often than patients who are White.<sup>32,33</sup> A study that looked at patients with chronic conditions—hypertension and diabetes—that disproportionately affect Black and Hispanic patients found that patients in these populations with either of these conditions had a lower prevalence of Internet use when compared with White patients.<sup>34</sup> However, subpopulations can vary in their usage. For example, a study in East Harlem, New York, found that Hispanic pregnant women used telehealth frequently for prenatal care and perceived the care as satisfactory.<sup>35</sup>

■ **Age** is also a significant variable in the adoption of telehealth, with pre-COVID-19 studies finding lower use of technology among older adults. However, a study performed at the University of Missouri during the first months of the pandemic found an increase in telehealth use in seniors,<sup>32</sup> although the increase was in telephone use and not full video sessions.

■ **Many patients** in need of health care services may have older devices and/or low-speed or no Internet access; they also may lack the technical know-how to conduct a telehealth visit.<sup>4,36</sup> For example, regardless of race or ethnicity, patients on government insurance (Medicaid and Medicare) have been shown to complete more telephone than video visits,<sup>37</sup> underscoring the importance of telehealth practice flexibility and the need for increased technology support to decrease the digital divide. Even with adequate technological support and patient training, telehealth may be more complicated if patients have such comorbidities as hearing, visual, or cognitive impairment.<sup>31</sup> Patients from a lower socioeconomic status may feel uncomfortable with providers seeing their home environment on video.<sup>38</sup>

Overall, incorporating telehealth for the care of older and/or vulnerable patients will present a unique set of challenges that organizations must address. Efforts must be made to understand the available technologies and patients' comfort in using them. A hybrid model offering telehealth and in-office encounters may be the best solution. **JFP**

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Efficient triage of patients is increasingly possible with still images or videos sent from smartphones.

**Patients from a lower socioeconomic status may feel uncomfortable with providers seeing their home environment on video.**

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