

# Video visits go viral

## COVID-19 sparks growth in video doctor's visits

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**O**F ALL THE activities that COVID-19 brought online, video doctor's visits may be the one that caused the most personal trepidation. After all, how can a doctor take your blood pressure, examine your throat, or evaluate a skin tumor over Zoom or Skype? But as it turns out, many consumers (and doctors) have been quick to change their minds about video visits' efficacy and appeal, and they are now prepared to do it that way for the long term.

We predict that the percentage of total visits to doctors that are done virtually via video will rise to 5% globally in 2021, up from an estimated 1% in 2019.<sup>1</sup> While 5% may not sound like much, consider that 8.5 billion doctor's visits, worth a total of approximately US\$500 billion, took place in the Organisation for Economic Co-operation and Development (OECD) 36 countries in 2019 alone. Five percent of that would translate into more than 400 million video visits and about US\$25 billion in value, depending on how much doctors are paid (either directly by a patient, by insurance, or by national health insurance) for video visits compared to in-person ones.

The relationship of this growth to COVID-19 is clear. In April 2020, 43.5% of all US Medicare primary care visits were via telehealth; prepandemic, this figure stood at just 0.1%.<sup>2</sup> While telehealth also includes phone calls, emails, and nonvideo software solutions, the number of visits by video rose greatly. The number of people using the Department of Veteran's Affairs Video Connect system rose to 120,000 per week, compared to 10,000 per week in

the same period in 2019.<sup>3</sup> Meanwhile, in the spring of 2020, video consultation services in France rose by 40%–100%.<sup>4</sup> And in a May 2020 survey, 14% of Canadians said they would choose a video doctor's visit where possible going forward.<sup>5</sup>

More video and other types of virtual visits mean more business for the companies providing the technologies to support them. We predict that the market for pure-play telehealth virtual visit solutions will reach US\$8 billion in 2021.<sup>6</sup> Partially driven by the growth in virtual visits, we also expect that more than US\$33 billion of medical-grade home health care technology (mainly therapeutic and monitoring solutions, which can include medically approved consumer products such as smart watches) will be sold in 2021, up almost 20% over 2019.<sup>7</sup>

### What happened?

The technology for video visits has been around for years. However, several factors—COVID-19 foremost among them—are converging today to drive higher usage.

COVID-19 LEFT PEOPLE NO CHOICE, AND REGULATORY BARRIERS WERE LOWERED. In March 2020 alone, authorities in the United Kingdom, United States, and Germany loosened regulatory barriers, modified rules around privacy, and endorsed telemedicine, including video visits.<sup>8</sup> To quote one UK doctor: "We're basically witnessing 10 years of change in one week."<sup>9</sup>

COVID-19 also forced people to learn how to use the software. During the pandemic, literally hundreds of millions of people who had never used video calling software and hardware before used it for the first time as they worked from home during lockdowns. Even before the pandemic, video calling was relatively easy to use ... but many people hadn't. Postpandemic, almost everyone is now a veteran at setting it up, getting lighting levels right, muting and unmuting themselves, and so on.

Importantly, the newly skilled at video calling includes tens of millions of people over age 65, who visit doctors more frequently than younger individuals. Although only 17% of the population, the 65-plus demographic accounts for more than 30% of all doctor's visits in the United States;<sup>10</sup> in 2016, people age 65 and up made 80% more office visits than the average number of visits among the general US population. Historically, research has shown that elderly users, even when they have the right tools and connections, are still less likely to

use digital applications, in part due to unfamiliarity.<sup>11</sup> COVID-19 provided the impetus for them to change that. To stay in touch with children, grandchildren, and friends, the 65+ population underwent a rapid and forced training on video hardware and software. For them to be able to use it for virtual video visits with physicians is a fringe benefit that can drive substantial growth in the video visit market.

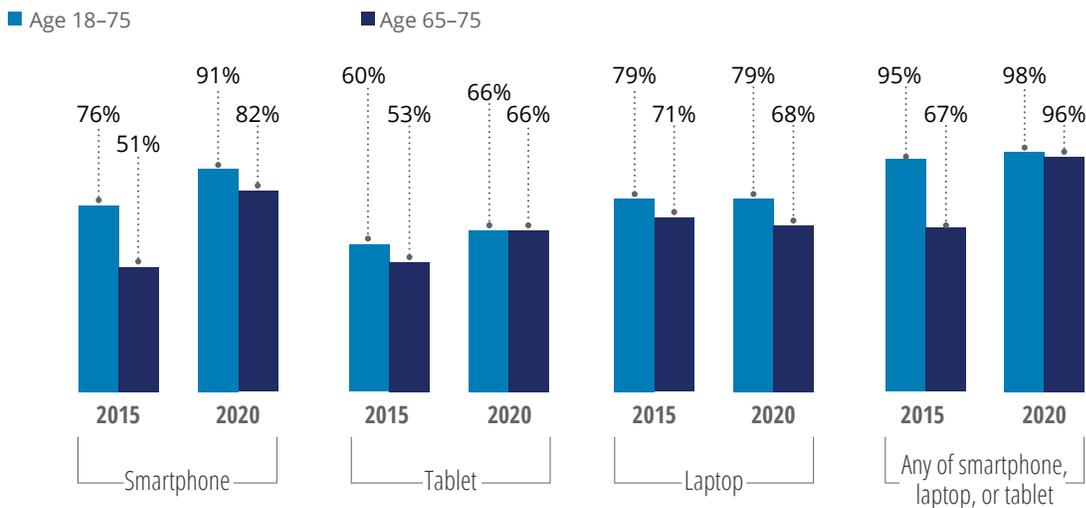
**DEVICES AND CONNECTIONS ARE REACHING CRITICAL MASS, ESPECIALLY AMONG THE ELDERLY**

The generational divide in digital device ownership has been rapidly narrowing in the last five years. As more older people become equipped to come online, their ability to engage in virtual visits will increase—an important consideration for those with limited mobility or other constraints that make it difficult to go to the doctor in person.

FIGURE 1

**The ownership generation gap is narrowing in the United Kingdom for devices other than laptops**

UK device ownership by age



Sources: Deloitte UK Global Mobile Consumer Survey, 2015 and 2020 editions.

Historically, although the devices needed for video calls (laptops, smartphones, and tablets) have been broadly ubiquitous, their ownership has been much less widespread among those over 65. However, as figure 1 illustrates, this has begun to change. In 2015, one in three Britons age 65 to 75 did not own a device capable of supporting a medical video call. By 2020 that figure had fallen to 1 in 25 as more older adults bought tablets and especially smartphones.

Of course, devices that are not connected are not useful, but here again the picture for those over 65 has markedly improved. In the five years between 2014 and 2019, overall internet usage in the United States rose six percentage points, but internet usage for people over 65 rose 16 percentage points. Although not all senior Americans were connected in 2019, based on the growth rate in penetration and the pandemic likely over three out of four were by mid-2020, which is likely a critical mass for

enabling widespread medical video visits among the 65-plus population.<sup>12</sup>

### CONNECTIVITY'S REACH AND SPEED ARE IMPROVING

Virtual visits' growth will depend partly on the extent to which more of the world's population becomes connected. As of 2017, about 12% of rural residents in the United States lacked access to fixed internet service of up to 10 megabits per second (Mbps) download and 1 Mbps upload.<sup>13</sup>

Furthermore, these speeds are maximum speeds: During periods of heavy use, when they are shared by multiple users in a home, speeds can be much slower. Most virtual video visit applications require at least 0.5 Mbps upload speeds, meaning that at times when connectivity is slower than the maximum for these users, their connections would not be able to support a video doctor's visit.

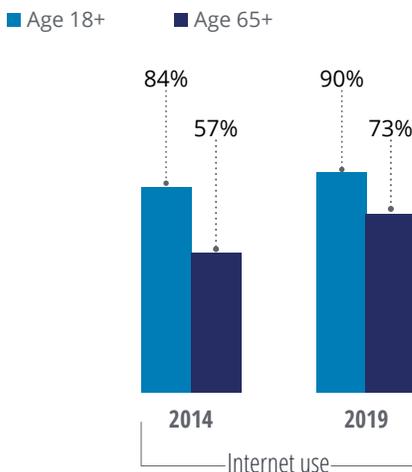
It is also worth noting that access to connectivity is lower among certain populations besides those in rural areas. "Digital exclusion" is higher for those living in social housing, from lower-income groups, with visual and other disabilities, who are homeless or unemployed, who have lower levels of education, and whose first language is not the country's native language(s).<sup>14</sup> Because of this, these populations will likely be slower to adopt telemedicine in general and video visits specifically.

The connectivity situation, however, is slowly improving. Governments around the world, working with network operators, are trying to get more citizens connected to the internet, and at higher speeds, especially in rural areas. As telemedicine becomes increasingly important in delivering health care (once again, especially in rural areas), we can expect those initiatives to accelerate.<sup>15</sup> It is also possible that low Earth orbit satellite constellations may be able to provide high enough speeds for ubiquitous global coverage,

FIGURE 2

### The internet generation gap is narrowing in the United States

US internet usage by age



Source: Pew Research Center, "Internet/broadband fact sheet," 2019.

though these networks are not yet in full service, and many questions about them remain, especially around affordability.<sup>16</sup>

5G will further accelerate telemedicine, as it allows for faster transmission of large image and high-quality video files, better augmented reality/virtual reality and spatial computing, and more reliable connections with guaranteed quality of service. In some cases, 5G could even allow telemedicine to move beyond diagnosis and monitoring, enabling doctors to perform actual procedures and surgeries using ultra-low latency (under 10 millisecond) virtual technology.<sup>17</sup>

### COVID-19 MAY MAKE VIDEO CALLING THE DEFAULT

Historically, most electronic communications for consumers and businesses have been email/messaging or voice-only calls, with video only used when absolutely required. Although we don't have hard data for how that may be changing now, we see signs that, as one commentator has observed, "Video calling is the new normal, and it's all because of coronavirus."<sup>18</sup> Some of video calling's appeal may be due to the medium's novelty, but if a preference for video over nonvideo methods is indeed rising, it has two critical implications for medical video visits. First, if we see a permanent shift to video over email and voice calls, then our prediction of 5% of all visits being video will likely be much too low. Second, video may make virtual visits much more medically effective. Obviously, a video call helps a health professional assess a laceration or rash, but it also has the benefit of showing the patient's and health professional's faces. A seminal 1979 study, long before video

calling was widespread, concluded that "Effective nonverbal communication—facial expression, voice tone, etc.—is essential for successful patient-practitioner interaction."<sup>19</sup>

## Sizing the global doctor visit market

Let's return to our prediction for the revenue generated by video doctor's visits. Why do we believe that video visits will be worth about US\$25 billion in 2021?

The market for physical visits with doctors is very large, but although there are some sources that give the number of annual visits for a given country, no single source tallying global visits exists. Using two different approaches to size the market, we believe that patient visits to doctors (both physical and virtual) are likely to generate more than US\$700 billion globally in 2021. OECD member states will account for more than half a trillion dollars of this figure in 2021; if 5% of these are virtual, that works out to about US\$25 billion for video visits.

### METHODOLOGY 1: ADDING UP PER-COUNTRY COST PER VISIT

The OECD publishes data on annual per capita doctor consultations by country.<sup>20</sup> We multiplied the latest available data by each country's estimated 2020 population to determine the number of annual doctor visits per country (figure 3). This analysis suggests that across the 36 OECD countries, with a total population of 1.31 billion people, more than 8.7 billion visits take place every year.

FIGURE 3

## More than 8.7 billion physical and virtual doctor's visits globally take place each year

Total number of annual doctor's visits by country, 2019 or latest available data

Country	Annual visits (millions)
Japan	1594
United States	930
South Korea	866
Germany	829
Turkey	801
Italy	411
France	385
Mexico	361
Spain	341
United Kingdom	340
Poland	288
Canada	253
Australia	199
Netherlands	154
Hungary	103
Colombia	94
Czech Republic	88
Belgium	83
Chile	73
Portugal	71
Slovak Republic	60
Austria	59
Israel	54
Switzerland	37
Greece	34
Sweden	27
Lithuania	27
Ireland	25
Finland	24
Norway	24
Denmark	22
New Zealand	18
Slovenia	14
Latvia	11
Estonia	7
Luxembourg	4

Source: OECD health care data, with Deloitte research data for missing countries.

In some countries, patients, insurers, or both pay specific prices for doctor's visits. In other countries with state medical care, where the average patient pays nothing or very little, we assumed an average visit cost of what would be paid by a noncovered visitor for a 15-minute consultation with a general practitioner (GP). This cost number is almost certainly a minimum: Specialist visits would cost much more.

Based on a variety of sources for the 36 OECD countries, we believe the weighted average per-visit cost is about US\$61, although it varies widely between countries.<sup>21</sup> Multiplying each country's number of visits by the cost per visit for that country yields a total of about \$520 billion.

#### METHODOLOGY 2: CALCULATING VISIT REVENUE AS A PERCENTAGE OF GDP

Our second methodology for estimating the market size for doctor's visits used the top-down approach of calculating doctor's visit revenue as a percentage of GDP.

The OECD 36 members' nominal GDP in 2018 was cumulatively US\$53 trillion.<sup>22</sup> In that same year, OECD members spent an average of 8.8% of their GDP on health care.<sup>23</sup> However, expenditure varies by country. Applying each country's health care expenditure percentage to its GDP yields a total health care spend of US\$6.6 trillion across all 36 OECD countries.

OECD does have data for spending on general primary care (which excludes all hospital care as well as other primary care services such as dental, preventive, and home-based curative care), but only for 22 of the 36 countries, and only for 2016. For those countries and that year, general primary

care (aka doctor's visits) represented an average of 6.8% of total health care spending.<sup>24</sup>

Assuming that the rate is approximately at that level across all 36 countries, general primary care spending totaled approximately US\$450 billion for OECD members in 2016. If we include spending on specialist visits, it seems likely that total OECD spending on all doctor's visits was more than US\$500 billion, or more or less in line with the number produced using methodology 1.

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Annual patient visit data also is available for some non-OECD countries. For example, in Brazil, the average person went to the doctor 2.8 times per year in 2017; with a population of over 212 million, that means that Brazilian doctors had nearly 600 million visits.<sup>25</sup> Even assuming a cost of only US\$25 per visit, that would add another US\$15 billion to the total. And although we lack data for very large markets such as Russia, China, and India, at even one or two annual visits per person in these countries, the market would be billions of visits larger. In sum, the global market for doctor's visits could approach more than 12 billion visits per year, to the tune of US\$700 billion.

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## THE BOTTOM LINE

Although we do not expect video visits to stay at pandemic levels, they will almost certainly not return to the prepandemic rate of about 1%. Evidence suggests that many caregivers agree: A summer 2020 webinar survey of US health care professionals found that only 5% anticipated virtual visits to return to prepandemic levels.<sup>26</sup>

One big reason that virtual visits are likely to persist is that patients like them. In a recent survey, nearly half of Americans said they prefer health care professionals who offer phone- or web conference-based consultations.<sup>27</sup> Virtual visits tend to be more efficient, reducing visit time by 20%.<sup>28</sup> They reduce the wait time for seeing a specialist (pre-COVID-19 studies show that median wait times for specialist consultations were down 50% in New York City and 75% in San Francisco following virtual consultations).<sup>29</sup> They eliminate the need to travel to and from a doctor's office. They are also seen as safer.<sup>30</sup> Further, having video visits offer value beyond just convenience will likely enhance adoption over time.

That said, there are still some patients who do not see video visits as equal to physical ones. In an April 2020 survey, 66% of respondents believe that a doctor or nurse needs to physically examine them to understand their health needs, and 56% don't think they get the same quality of care/value from a virtual visit as from an in-person visit.<sup>31</sup>

More broadly, although many patients, health professionals, insurers, and regulators already like video visits, driving adoption higher than pandemic levels will require buy-in from not just some, but many or all of these stakeholders. Health care providers and the health care ecosystem have considered video visits and other kinds of virtual health as a substitutive channel for in-person care delivery. "Next reality" transformation requires capabilities to position video visits as an integral channel for care management and as a way to drive reduction in the total cost of care.

Doctors and medical professionals are still learning how to optimize video technology and their own behavior for new models of care. As just one example, health care professionals should adapt their learning and training to go from a bedside manner to a "websiteside" manner. They also should look strongly at more proactive care with wearable and "nearables" (smart objects: everyday items with small, wireless computing devices attached to them) and more ubiquitous team-based solutions that also support caregivers.

Whether insurers and governments continue to reimburse for virtual video visits will matter a great deal in markets where insurers play a key role. Historically, many insurers have not paid for virtual visits at the same rate (or at all) as in-person visits. Once again, however, COVID-19 has prompted the situation to change. Many US insurers and the US Center for Medicare and Medicaid Services (CMS) relaxed rules around virtual visit reimbursement due to the pandemic. According to one US analysis, only 0.2% of the medical claims filed in March 2019 were telehealth-related; in March 2020, that number had risen to 7.5%.<sup>32</sup> Two-thirds of health professionals surveyed in a pre-COVID-19 2020 survey said that "top accelerators [for virtual health adoption] included overcoming regulatory barriers such as licensing restrictions and restrictions on allowing for site-neutral payments, along with implementing payment methods that reward better health outcomes."<sup>33</sup>

Investors and companies should expect higher levels of investment in areas related to virtual health, as well as merger and acquisition (M&A) activity. In the first two quarters of 2020, health innovation funding globally was up by 19% compared to the same period in 2019, reaching a new record of US\$9.1 billion.<sup>34</sup> And in August of 2020, two telemedicine industry leaders became one, as Teladoc spent US\$18.5 billion to purchase Livongo.<sup>35</sup> Although they won't all be megadeals of that magnitude, more telemedicine M&A deals are probable.

The growth of video visits will likely have implications for other industries as well. The telecom industry, for instance, will have a large role to play in making virtual health care as widely available as possible. Although 90% of adult Americans and 73% of Americans over the age of 65 are connected to the internet, both numbers should be higher in order to make universal access to video visits possible. The numbers are roughly similar in other developed countries, but they are lower in developing countries and in rural areas globally.

In addition, sectors that produce technology that can be used for medical monitoring will likely benefit from video visits' growth. For instance, although smart watch sales declined to US\$25 billion in 2020, we anticipate that they will reach US\$64 billion by 2024, in part due to their use in medical applications.<sup>36</sup> This in turn will drive change in the health care industry: Wearables such as smart watches have the potential to reduce hospital costs by 16% over the next five years.<sup>37</sup> But wearables also need to be used appropriately. As an example, the US Food and Drug Administration–approved Apple Watch wrist wearable device is a very useful tool for monitoring those who have been diagnosed with atrial fibrillation, but are much less useful at screening populations of presumed healthy people for the condition due to their high false positive rate.<sup>38</sup>

No one today expects a doctor, black bag in hand, to make house calls. But thanks to video visits, it's now possible for patients to receive medical care at home once again. While video visits may never completely replace in-person consultations, we expect that over time, for those visits where they are appropriate, they will become as ordinary and acceptable an option as going to a doctor's office is today.

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