

# Annual Report: Trends in Utilization of Urgent Care and Telehealth Services

by Healthforce Center at UCSF

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## Abstract / Overview

This brief report synthesizes literature on utilization of two of the most notable innovations in health care delivery: urgent care centers (UCCs) and telehealth. UCCs are facilities that provide health care on a walk-in basis for acute illnesses or injuries that are not sufficiently severe to necessitate treatment in an emergency department (ED). Telehealth encompasses multiple modalities by which health care services are delivered remotely and is increasingly used by primary care physicians to provide care that does not need to be delivered in person. Findings from the small number of studies that have been conducted on UCCs suggest that their use has increased substantially over the past decade but has not led to a commensurate decrease in ED visits. Use of telehealth increased dramatically during the early months of the COVID-19 pandemic but varied substantially across medical specialties, with the lowest rates of use in specialties in which physicians often perform procedures and the highest rates among physicians who primarily counsel patients and prescribe medications. UCC and telehealth utilization rates are highest in affluent urban areas.

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## Key Findings

The health care landscape in the United States has changed substantially over the past several decades. New types of health care facilities have emerged along with new modalities for providing care. This report synthesizes literature on utilization of two of the most notable innovations in health care delivery: urgent care centers (UCCs) and telehealth. UCCs are facilities that provide health care for acute illness or injury on a walk-in basis. They typically provide care to persons who have an urgent need but whose illnesses or injuries are not sufficiently severe to necessitate treatment in an emergency department (ED). Telehealth encompasses multiple modalities by which health care services are delivered remotely and is increasingly used by primary care physicians to provide care that does not need to be delivered in person.

### Urgent Care Centers

Findings from the small number of published studies involving UCCs suggest that:

- The number of visits to UCCs grew substantially between the late 2000s and late 2010s.
- In communities where UCCs are located, the number of ED visits decreased but the reduction in ED visits was offset by a larger increase in visits to UCCs.
- Communities that have UCCs are more urban, have younger and wealthier populations, and have more primary care physicians per capita than communities that do not have UCCs.

### Telehealth

Findings from multiple studies of the impact of the COVID-19 pandemic on the use of telehealth services indicate that:

- Nationwide there was a very large increase in use of telehealth services during the early months of the COVID-19 pandemic (March through June 2020) but that this increase was not large enough to fully offset reductions in in-person visits.
- Telehealth utilization rates increased across all specialties, but there were smaller increases in specialties in which health professionals often perform procedures (e.g., cardiology) than in specialties in which health professionals primarily counsel patients and prescribe medication (e.g., behavioral health).
- Trends in California were similar to trends in the U.S. overall.
- In safety net settings, telehealth visits were more likely to be provided by telephone than by video.
- Telehealth utilization rates were higher among persons living in urban areas and affluent areas.

## Introduction

California's physician workforce challenges are occurring within a changing health care landscape. Demand for health care services has also changed. Californians are older, more racially/ethnically and linguistically diverse, and more likely to have chronic health conditions. The settings and modalities through which health care services are delivered have also changed. Over the past decade, the number of urgent care centers (UCCs) has grown in response to efforts to reduce emergency department (ED) visits for conditions that can be managed safely and effectively in lower cost settings. The COVID-19 pandemic rapidly accelerated growth in the use of telehealth to provide health care services, creating challenges for health professionals and consumers who did not have previous experience with this technology.

This report synthesizes literature on utilization of two of the most notable innovations in health care delivery: UCCs and telehealth. UCCs are facilities that provide health care for acute illness or injury on a walk-in basis to people who might otherwise seek treatment in an ED. Telehealth encompasses multiple modalities by which health care services are delivered remotely by physicians in multiple specialties, including primary care physicians. The growth of UCCs and telehealth has important implications for where physicians practice and the manner in which they provide care.

This report is a companion to the annual review on the physician workforce and medical education as required by Proposition 56. Proposition 56, which was approved by voters in 2016, increased California's state tobacco tax and allocated a portion of revenue (\$40 million annually) to the University of California (UC) to "sustain, retain, and expand" California's graduate medical education (GME) programs, which are often referred to as residency training programs. UC contracted with Physicians for a Healthy California to administer a statewide GME grant program, known as CalMedForce under which grants are provided to residency programs in five specialties (emergency medicine, family medicine, general internal medicine, general pediatrics, and obstetrics/gynecology) and combined residency programs (e.g., medicine-pediatrics). CalMedForce is also authorized to fund residency programs in other specialties in which shortages exist, should additional funding become available.

## Utilization of Urgent Care Services

Studies of emergency department (ED) visits have found that many of these visits are for urgent, low-acuity conditions, such as acute respiratory infections, urinary tract infections, and musculoskeletal strains, that could be treated in other settings at lower cost (Weinick et al., 2010). Findings such as these have stimulated the development of alternatives to EDs for treatment of these types of conditions. These alternatives include urgent care centers (UCCs), which the Urgent Care Association, a trade association for urgent care centers, broadly defines as facilities that provide health care for acute illness or injury on a walk-in basis and are not EDs, and which have onsite X-ray machines and the ability to provide casting and suturing (Allen et al., 2021; Le and Hsia, 2016). UCCs also serve as an alternative to primary care practices for people who are unable to obtain a same day appointment with their primary care provider. There are more than 9,200 UCCs in operation across the United States (Allen et al., 2021).

A search of the PubMed index of peer-reviewed journals in the health care field was conducted to identify literature on trends in utilization of UCCs, their impact on ED utilization, and the populations they serve. The search was limited to articles published within the past 10 years. Three national studies and one study of six states (AZ, FL, NE, NJ, NY, RI) were identified and their findings are summarized below. Other studies were identified but were excluded because they were limited to small numbers of UCCs and EDs in states other than California.

Findings from the studies included in this literature review indicate that UCC visits increased substantially from the late 2000s to the late 2010s. The increase in UCC visits is associated with a decrease in ED visits but has not yielded savings for the health care system because total visits for lower-acuity conditions across all settings have increased and because the price of ED visits has increased. In addition, UCCs are located in communities that are wealthier, younger, and more urban than communities that do not have UCCs and have more abundant supplies of primary care physicians.

### Trend in Utilization of UCCs

One national study examined trends in utilization of UCCs, retail clinics<sup>1</sup> and telehealth. Poon and colleagues (2018) analyzed claims and enrollment data from a large national commercial health plan during the time period from 2008 to 2015. They concluded that UCCs have surpassed EDs to become the most common setting where people obtain care for urgent, low-acuity conditions. As the data in Table 1 illustrate, the study found that utilization of UCCs for low-acuity conditions increased by 119 percent between 2008 and 2015. Visits to retail clinics and telemedicine visits for low-acuity conditions also increased during this period, but they accounted for a lower share of total low-acuity visits than UCCs.

<sup>1</sup> Retail clinics are medical clinics located in pharmacies, grocery stores, and large, general retail stores (e.g., Target, Walmart) that offer walk-in appointments, are open evenings and weekends, and usually have shorter wait times than EDs (Rand, 2016).

**Table 1.**  
**Trends in Utilization for Low-Acuity Conditions by Facility Type/Modality, 2008 to 2015**

Facility Type/Modality	Visits per 1,000 Members		
	2008	2015	% Change
Emergency Department	89	57	-36%
Retail Clinics	7	22	214%
Urgent Care Centers	47	103	+119%
Telehealth	0	6	+600%

Source: Poon et al., 2018.

### Impact of UCCs on ED Visits for Low-acuity Conditions

Three studies assessed the impact of UCCs on numbers of ED visits for low-acuity conditions. All three studies found that UCCs are associated with a decrease in ED visits for low-acuity conditions but the size of the effect varied. Poon and colleagues (2018) found that the number of visits to EDs for low-acuity conditions decreased by 36 percent from 89 visits per 1,000 enrollees in 2008 to 57 visits per 1,000 enrollees in 2015, whereas UCC visits per 1,000 enrollees increased by 119 percent during this period. The percentage of all visits for lower-acuity conditions that occurred in an ED fell from 62 percent of visits in 2008 to 30 percent in 2015.

In contrast to Poon and colleagues (2018), who examined trends at the national level, another study analyzed zip code-level insurance claims and enrollment data for non-elderly persons from a national managed care plan (Wang et al., 2021). The authors found that between 2008 and 2019, ED visits among non-elderly persons for lower-acuity conditions decreased and that the opening of a UCC in a zip code led to a small decrease in the number of ED visits in that zip code. An increase of 1,000 lower-acuity UCC visits was associated with a decrease of 27 lower-acuity ED visits. This association was strongest in more urban zip codes, higher-income zip codes and zip codes with higher baseline ED visits.

A third study combined data from state ED databases and a database of the locations and operating hours of UCCs. Comparing zip codes with UCCs to zip codes without, Allen and colleagues (2021) found that zip codes that had a UCC experienced a reduction in the total number of ED visits among persons living in that zip code and that this decrease was largely due to a decrease in ED visits for low-acuity conditions. On average, people who lived in the zip codes included in this study visited the ED 161 times per hour over the course of a year. During hours that UCCs were open, ED visits were reduced by 17.2 percent (27.7 visits) in zip codes with a UCC. The largest reductions occurred for non-urgent visits (27.0 percent) and at EDs with the longest wait times (mean wait time = 68 minutes) for care (76.3 percent).

### Impact of UCCs on Overall Health Care Utilization and Spending

Two studies analyzed the impact of UCCs on overall health care utilization and spending. Both found that the growth of UCCs has been associated with an increase in spending for urgent, low-acuity conditions. Poon and colleagues (2018) found that across all settings, visits for low-acuity conditions increased by 31 percent between 2008 and 2015, from 143 to 188 visits per 1,000 enrollees, and that total spending per enrollee for these conditions increased by 14 percent, from \$70 to \$80 per member. Their study concluded that the increase in spending was due primarily to a 79 percent increase in the average price per ED visit for low-acuity conditions. Wang and colleagues (2021) reported that combined costs for ED and UCC visits for lower-acuity conditions increased by 64 percent between 2010 and 2019. They concluded that the opening of a UCC was associated with an increase in overall spending in that zip code, even though UCCs charged much less than EDs for treatment of

low-acuity conditions (\$178 vs. \$1,716 in 2019). This is because the small decrease in ED visits for lower-acuity conditions in zip codes where UCCs opened was offset by a larger increase in visits to UCCs for these conditions.

### **Characteristics of People Who Obtain Care at UCCs**

One study described the characteristics of people who obtain care at UCCs. Poon and colleagues (2018) found that patients who used UCCs and other non-ED acute care venues, such as retail clinics, for treatment of low-acuity conditions were more likely to be female and in better health than people who sought care for these conditions in an ED. People living in rural areas and who had lower household incomes were less likely to use UCCs and other non-ED acute care venues.

### **Characteristics of Communities Where UCCs are Located**

Studies have also examined the characteristics of communities where UCCs are located, and have found that they are wealthier, younger, and more urban than communities without UCCs and have more abundant supplies of primary care physicians. Le and Hsia (2016) reported that zip codes that are rural or designated by the federal government as Health Professional Shortage Areas were less likely to have a UCC and that zip codes that have higher incomes or have a higher percentage of residents who have private health insurance are more likely to have a UCC. Allen et al. (2021) found that zip codes that have one or more UCCs had larger, younger, and more racially/ethnically diverse populations, higher percentages of the population who were uninsured, higher median household incomes and lower percentages of adults without a high school degree. Wang et al. (2021) reported that zip codes that never had a UCC during the period from 2008 to 2019 were more likely to be rural, had fewer primary care physicians per 100,000 population, and had populations in which more people had an income below the poverty level, were age 65 years or older, and had disabilities.

An important limitation of these studies is that all of them analyzed data on UCC and ED utilization prior to the COVID-19 pandemic. During the early months of the pandemic, health systems sharply curtailed the provision of in-person visits. Changes in reimbursement policy resulted in a large increase in the number of telehealth visits for a wide range of conditions, including some lower acuity conditions that are often treated in UCCs and EDs. (See the following section for additional detail.) Use of telehealth has decreased over the course of the pandemic but remains at a higher level than before the pandemic. The long-term impact of this increase in telehealth use on UCC and ED visits is unknown at this time.

## Utilization of Telehealth Services

Before the COVID-19 pandemic, most health care organizations did not offer telehealth visits for primary care or behavioral health, in large part because of health plan reimbursement policies. When the pandemic first emerged in early 2020, social distancing was the primary strategy for reducing the risk of exposure to COVID-19. Public and private health plans responded by changing reimbursement policies (in some cases temporarily) to remove many of the restrictions on telehealth delivery. Health care providers responded by rapidly expanding and adopting telehealth as an alternative to in-person care. These actions led to a large reduction in in-person visits at physician offices, clinics, and hospitals for non-urgent conditions.

The rapid growth in use of telehealth services prompted multiple researchers to conduct studies to document trends in growth over time and assess whether trends vary by telehealth modality (e.g., video vs. telephone) and whether use of telehealth varies by age, income, race/ethnicity or other socio-economic characteristics. This section summarizes findings from a review of literature published in peer-reviewed journals from April 2020 through May 2022 regarding the impact of the COVID-19 pandemic on use of telehealth services in the United States and California. For purposes of this report, telehealth is defined broadly to encompass multiple modalities for delivering care remotely, including video visits and telephone visits (i.e., audio only).

Collectively, findings from these studies indicate that there was a large increase in use of telehealth services nationwide during the early months of the COVID-19 pandemic (March through June 2020), but that this increase was not large enough to fully offset reductions in in-person visits (Alexander et al., 2020; Cantor et al., 2021; Patel et al., 2021a; Whaley et al., 2020). Rates of use of telehealth services increased across all specialties, including primary care specialties, but varied across specialties with smaller increases in specialties in which health professionals often perform procedures (e.g., cardiology) than in specialties in which health professionals primarily counsel patients and prescribe medication (e.g., behavioral health). Trends in California were similar to trends in the U.S. overall, although providers in California used telehealth more frequently prior to the pandemic. In safety net settings, telehealth visits were more likely to be provided by telephone than by video. Studies have also found that older persons, persons living in rural areas and persons living in lower income zip codes were less likely to use telehealth services. Findings regarding racial/ethnic disparities in telehealth use were mixed. These findings suggest that CalMedForce should consider tracking the extent to which the residency programs it funds are training physicians to provide patient care via telehealth.

## National Trends in Use of Telehealth Services

The literature review identified four studies that analyzed national data on telehealth use collected between January 2018 and December 2020. Major findings from each study are described in Table 2 below. All four studies documented substantial increases in the use of telehealth services but concluded that these increases were not large enough to fully offset large reductions in office visits.

**Table 2.**  
**Findings from Studies of National Trends in Use of Telehealth Services during the COVID-19 Pandemic**

Study	Time Period(s)	Study Population	Telehealth Modalities	Findings
Alexander et al., 2020	January 2018 to June 2020	Office-based and telehealth visits with 40,000 primary care physicians <sup>2</sup> measured over a two-day period	Not stated	Compared to the second quarters of 2018 and 2019, total outpatient visits for primary care decreased by 21.4 percent in the second quarter of 2020. The number of office-based outpatient visits decreased by 50.2 percent and the number of telehealth visits increased by 35.3 percent.
Patel et al., 2021b	January to June 2020	16.7 million people enrolled in commercial or Medicare Advantage plans	Videoconferencing and telephone	Between the first and second quarters of 2020, the overall volume of office and telehealth visits combined decreased by 35 percent. The weekly number of office visits decreased by 30 percent and the number of telehealth visits increased by 2,013 percent.
Weiner et al., 2021	March to June 2019 vs. March to June 2020	36.5 million people with commercial health insurance	Video, telephone, asynchronous or synchronous text or email transmission, or other similar technology	Between 2019 and 2020, total outpatient encounters decreased by 18 percent. The percentage of outpatient encounters provided via telehealth increased from 0.3 percent in the second quarter of 2019 to 23.6 percent in the second quarter of 2020.
Whaley et al., 2020	March and April 2019 vs. March and April 2020	6.8 million people with employer-sponsored health insurance	Videoconferencing and telephone	Compared to March 2019, the number of telehealth visits per 10,000 enrollees in March 2020 was 1,270 percent larger. Compared to April 2019, the number of telehealth visits per 10,000 enrollees in April 2020 was 4,081 percent larger. These large increases in telehealth visits offset only 40 percent and 42 percent of the reduction in office visits during the same period.

<sup>2</sup> This study defined primary care physicians as encompassing internists, pediatricians, geriatricians, general practitioners and family physicians.

### Use of Telehealth Services by Physician Specialty

One national study assessed variation in telehealth use across physician specialties. Patel and colleagues' (2021b) analysis of telehealth use among persons with commercial or Medicare Advantage health plans found that the percentage of visits provided via telehealth ranged from a low of 9 percent among ophthalmologists to a high of 68 percent among endocrinologists. Primary care physicians fell midway between the two extremes.

### Use of Telehealth Services by Condition

Three studies examined variation in use of telehealth services across diseases and conditions. Patel and colleagues (2021b) found that over 50 percent of encounters for anxiety, depression, and bipolar disorder were provided via telehealth. For conditions that are frequently treated by primary care physicians, the percentage of visits provided via telehealth ranged from 33.9 percent (diabetes without complications) to 43.9 percent (sinusitis). Weiner and colleagues (2021) reported that visits for behavioral health needs were substantially more likely to be conducted via telehealth than visits for medical needs (46.1 percent vs. 22.1 percent). They also found that telehealth was more likely to be used during visits for chronic conditions than visits for acute conditions (21.5 percent vs. 14.1 percent). Jaffe and colleagues' (2020) analysis of private insurance claims for 35,376 adults submitted between March 2019 and March 2020 found that patients who self-reported ever receiving a medical diagnosis of anxiety or depression were 91.9 percent more likely to have a telehealth encounter (for any condition) compared with those who were not diagnosed with these conditions. Patients with cardiovascular or metabolic diseases had fewer telehealth encounters compared to in-person encounters (42.9 percent vs. 50.8 percent, respectively).

### Use of Telehealth Services in California

Studies conducted exclusively in California indicate that use of telehealth was more common in California prior to the COVID-19 pandemic than in the U.S. overall but that the pandemic was associated with a similar rate of increase in the number of telehealth visits. A survey of 1,200 physicians, physician assistants, nurse practitioners, registered nurses and behavioral health professionals in California found that 30 percent of respondents used telehealth for patient visits and appointments prior to the pandemic. By September 2020, that proportion had increased by more than two-fold to 79 percent (California Health Care Foundation, 2020a).

Three studies have described trends in telehealth use among persons who obtained care from physicians in multiple specialties, including primary care physicians, who practiced in large health care organizations in California (Kakani et al., 2021; Nouri et al., 2020; Xu et al., 2021). Findings from these studies are summarized in Table 3.

Six studies reported on trends in telehealth use in specialties that CalMedForce does not currently fund: pediatric subspecialties (Uscher-Pines et al., 2022), pediatric orthopedics (Parisien et al., 2021), psychiatry (Ridout et al., 2021), cardiology (Yuan et al., 2021), and hematology and oncology (Lonergan et al., 2020; Neeman et al., 2022).

**Table 3.**  
**Findings from Studies of Trends in Use of Telehealth Services in Large Health Care Organizations in California during the COVID-19 Pandemic**

Study	Time Period(s)	Study Population	Telehealth Modalities	Findings
Kakani et al., 2021	December 1, 2019 to March 18, 2020 vs. March 19, 2020 to June 30, 2020	All adults who had non-surgical or surgical ambulatory visits at the University of California, Los Angeles Health System	Videoconferencing and telephone	Total outpatient visits decreased by 29 percent; the percentage of visits provided via telehealth increased from 0.5 percent to 41.2 percent of visits.
Nouri et al., 2020	February 17 to February 28, 2020 and March 23 to April 3, 2020	Adults who received care at general internal medicine clinics at the University of California, San Francisco and Zuckerberg San Francisco General Hospital	Videoconferencing and telephone	Videoconference visits increased from 3 percent to 80 percent of visits; telephone visits increased from 0 percent to 16 percent of visits.
Xu et al., 2021	January 5 to November 2, 2020	4.5 million people enrolled in Kaiser Permanente Southern California	Videoconferencing and telephone	Between February 23 and March 22, total outpatient visits (office-based and telehealth) decreased by 28.1 percent but in late June reverted to a number similar to the number that occurred during the same time period in 2019. Between February 23 and March 22, telehealth visits increased by 272.9 visits per 100 person-years.

### Use of Telephone vs. Video Telehealth Visits in Safety Net Settings in California

Low-income patients face barriers to accessing video visits, such as not owning a computer or not being able to afford a cell phone with video capability. In addition, clinics that provide primary care to low-income persons, which are often referred to as “safety net clinics,” may lack resources to develop the necessary infrastructure to provide video visits. Two studies conducted in California have confirmed this hypothesis. A 2020 survey of California health professionals’ experience with telehealth during the COVID-19 pandemic found that health professionals practicing in safety-net settings<sup>3</sup>) used the telephone for 53 percent of their telehealth appointments on average, compared to a 41 percent of health professionals practicing in non-safety-net settings (California Health Care Foundation, 2020a).

These findings were consistent with findings from an evaluation of 41 community health centers’ experience with telehealth from March 2020 to August 2020 (Uscher-Pines et al., 2021). The evaluation found that use of

<sup>3</sup> Defined as health professionals with 30 percent or more patients who are covered by Medi-Cal or who are uninsured

telehealth was minimal prior to the pandemic and that audio was the most-utilized telehealth modality for both primary care and behavioral health during the pandemic. Between March 2020 and August 2020, 48.1 percent of total visits for primary care were conducted in person, 48.5 percent via telephone and 3.4 percent via video. For behavioral health, telephone-only visits exceeded in-person visits and were the dominant modality of care delivery, with 22.8 percent of behavioral health visits conducted in person, 63.3 percent via telephone and 13.9 percent via video. The share of visits provided via telephone was greatest in April 2020, comprising 65.4 percent of primary care visits and 71.6 percent of behavioral health visits.

### **Disparities in Use of Telehealth Services**

Disparities in health care access and utilization related to geography, income, age, race/ethnicity, English proficiency and health literacy have long persisted in the U.S. The rapid growth in telehealth visits during the COVID-19 pandemic has raised questions about whether telehealth attenuates or exacerbates disparities in access and utilization. While telehealth services can expand health care access for patients facing barriers to in-person care, they may also inadvertently widen existing disparities for people who have limited digital literacy or limited access to cell phones or computers.

Findings from studies that have examined disparities in use of telehealth during the COVID-19 pandemic are summarized below.

#### **Geographic Disparities**

Two studies that examined use of telehealth during the COVID-19 pandemic concluded that people who live in rural areas are less likely to use telehealth. Jaffe and colleagues (2020) found that respondents living in urban areas were 54.3 percent more likely to have a telehealth encounter compared with respondents living in rural areas. Another study that reviewed private insurance claims data for over six million people enrolled in employer-based health plans during 2019 and 2020 found that between March and July 2021, the increase in use of telehealth was greater among patients in metropolitan areas than in non-metropolitan areas (Cantor et al., 2021).

#### **Socioeconomic Disparities**

Two national studies that analyzed the same dataset found socioeconomic disparities in telehealth utilization. One of these studies analyzed county level data and found that the largest increase in telehealth utilization during the early months of the pandemic occurred among persons in counties with low poverty levels (Cantor et al., 2021). Another study examined zip code-level data and concluded that persons living in zip codes in which a high percentage of the population had an income below 200 percent of the federal poverty level experienced smaller reductions in in-person visits during the COVID-19 pandemic and also had lower rates of adoption of telemedicine (Whaley et al., 2020).

A study of persons enrolled in Kaiser Permanente's Northern California region (Hsueh et al., 2021) concluded that persons living in neighborhoods with low socio-economic status were less likely to have video visits (versus telephone visits).

#### **Age Disparities**

Jaffe and colleagues (2020) and Cantor and colleagues (2021) also found differences in utilization of telehealth by age. Cantor and colleagues (2021) concluded that the increase in telehealth utilization during the onset of the

COVID-19 pandemic was greater among adults than among children under 12 years. Jaffe and colleagues (2020) reported that during March 2020, adults aged 18-44 years were more likely to have a telehealth visit than adults aged 45 years or older, and that the percentage of total health care encounters provided via telehealth decreased as patient age increased.

### **Linguistic Disparities**

One study of persons enrolled in Kaiser Permanente's Northern California region assessed whether having limited English proficiency (LEP) affected use of telephone versus video for telehealth visits (Hsueh et al., 2021). The authors found that people with LEP, who were defined as people who needed an interpreter, used video visits less frequently than people who were proficient in English but that this association depended on previous experience with video visits. People with LEP who had not previously had a video visit were less likely to have one, whereas people with LEP who had previously had a video visit were as likely to schedule a video visit as people who did not have LEP.

### **Race/Ethnic Disparities**

Evidence is mixed regarding racial/ethnic differences in use of telehealth services during the COVID-19 pandemic. Four studies using national data reached different conclusions about the relationship between race/ethnicity and telehealth use, as indicated in Table 4. All of these studies analyzed data regarding use of telehealth for a wide range of diseases and conditions. Three of these studies examined person-level data and one assessed zip code-level data. Most notably, the studies of person-level data reached opposite conclusions about whether Blacks were more likely to use telehealth services than whites.

The literature review identified two studies conducted in California on racial/ethnic differences in telehealth use among persons living throughout the state who sought care for a wide range of diseases and conditions. A survey of low-income non-elderly adults in California found that during the early months of the COVID-19 pandemic, persons of color who had a visit with a health professional were more likely to receive a video or telephone visit than whites (California Health Care Foundation, 2020). A study of people enrolled in Kaiser Permanente's Northern California region concluded that Blacks and Hispanics/Latinos were less likely to have a video visit (versus a telephone visit) than whites and that Asians were more likely to have a video visit (Hsueh et al. 2021). Other California studies were limited to persons who had visits with cardiologists (Yuan et al., 2021) or hematologists/oncologists (Neeman et al., 2022).

**Table 4.**  
**Findings from National Studies Regarding Racial/Ethnic Differences in Use of Telehealth Services during the COVID-19 Pandemic**

Study	Time Period(s)	Study Population	Telehealth Modalities	Findings
Alexander et al., 2020	January 2018 to June 2020	Office-based and telehealth visits with 40,000 primary care physicians <sup>4</sup> measured over a two-day period	Not stated	No statistical significance in use of telehealth by Blacks and whites
Campos-Castillo and Anthony, 2021	March 2020	10,624 internet users	Internet or email	Blacks were more likely to use telehealth than whites; no statistically significant difference between Latinos and whites
Jaffe et al., 2020	March 2019 and March 2020	35,376 adults who responded to a national internet-based survey	Not stated	Asians had lower odds of using telehealth services than whites; no statistically significant difference between Blacks and whites or between Hispanics and non-Hispanics
Whaley et al., 2020	March and April 2019 vs. March and April 2020	6.8 million people with employer-sponsored health insurance	Video-conferencing and telephone	Zip codes in which 80% or more of the population consisted of members of racial/ethnic minorities had lower rates of increase in use of telehealth services

## Conclusion and Recommendations

Utilization of urgent care centers (UCCs) and telehealth has substantially increased in recent years. The small number of studies of UCCs suggest that the increase in UCC utilization has not been offset by a commensurate decrease in emergency department (ED) visits, leading to an increase in total visits for urgent, low-acuity conditions. Studies of the early months of the COVID-19 pandemic have documented large increases in the proportion of outpatient visits provided via telehealth. Findings from studies of both UCCs and telehealth suggest that these innovations may exacerbate disparities in access to care. People who live in rural areas and in low-income areas are less likely to use UCCs and telehealth services than people who live in urban areas and high-income areas.

Further research is needed to better understand the impact of UCCs and telehealth in California. The all-payer claims database that the California Department of Health Care Access and Information plans to release in 2023 will provide data from multiple private and public health plans on the use of all types of health care settings and modalities, including UCCs and telehealth. These data should be analyzed to monitor trends in the use of UCCs and telehealth.

<sup>4</sup> This study defined primary care physicians as encompassing internists, pediatricians, geriatricians, general practitioners and family physicians.

Although there is no longer as pressing a need to limit in-person visits for non-urgent conditions as there was during the early days of the COVID-19 pandemic, use of telehealth is likely to remain above levels seen prior to the pandemic because many people appreciate the convenience. The growth in use of telehealth raises questions about how well prepared physicians are to provide care using this modality. CalMedForce may wish to consider collecting information from residency programs that apply for funding about the training residents receive regarding the delivery of care via telehealth.

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