



Trends Shaping the Health Economy:

TELEHEALTH

STUDYING TELEHEALTH WITH THE LAWS OF ECONOMICS

The drastic increase in telehealth utilization during the peak of the COVID-19 pandemic led health systems, payers, employers, policymakers, and private equity investors to rapidly pursue telehealth expansion strategies, without having a clear picture of *what* future demand will be, *who* utilizes telehealth, *where* utilization is concentrated, and *how* patients prefer to access healthcare services.

While several data points have been put forth over the last two years, most conclusions are grounded in small sample surveys, analyses of a limited population segment (e.g., Medicare beneficiaries, single health plan) and conflated calculation methodologies that do not account for the mid-pandemic changes in telehealth definitions and reimbursement criteria. CMS data provide one aspect of the story; commercial provide another; but neither provides a comprehensive picture. **As a result, an increasing number of headlines amplifying many of these incomplete data stories have led industry stakeholders to extrapolate discrete data points about telehealth to the entire U.S. population.**

As a health economist, I am often reminded of how the Pareto Principle, which states that 80% of consequences are attributed to 20% of the causes, defines so many challenges facing the health economy. There are countless examples, including but not limited to: 80% of [healthcare expenditures](#) are attributed to patients with at least one chronic condition; the share of Medicare [costs attributed to end-of-life care](#); and social determinants of health driving [80% of health outcomes](#).

Using an economic framework to analyze national telehealth data, our team found that the **trends in telehealth similarly follow the Pareto Principle**. Under the broadest definition of telehealth, **only 25.6% of Americans used telehealth during the two years of the pandemic**. Said another way, investments in the telehealth market have been made on the thesis that telehealth is preferred among most Americans. But the reality is that all these efforts are being dedicated to only a *subset* of the U.S. population.

As we move closer toward a post-pandemic era, we **must consider the extent to which the "forced adoption" of telehealth has changed patient and provider behaviors. This study intends to provide a data-driven foundation for every stakeholder to think about the demand, supply, and yield influencing the telehealth economy.**

I hope that you will use this study as a compass in guiding your strategic approach to telehealth. I encourage you to read the report in order. While each data story stands on its own, the connectedness between the stories provides greater context. Each story will resonate differently based on your respective vantage point, but there is something in here for everyone that seeks to discern the signal from the noise as it relates to the future of this virtual care modality.



Sanjula

Sanjula Jain, Ph.D.
SVP, Market Strategy & Chief Research Officer, Trilliant Health

Table of Contents

<u>INTRODUCTION</u>	<u>4</u>
Executive Summary	7
<u>DEMAND</u>	<u>8</u>
Volume	9
Consumer Attributes	19
Key Insights	30
<u>SUPPLY</u>	<u>31</u>
Providers	32
Key Insights	42
<u>YIELD</u>	<u>43</u>
Policy	44
Price	53
Key Insights	59
<u>CONCLUSION</u>	<u>60</u>
<u>METHODOLOGY</u>	<u>65</u>

INTRODUCTION

Examining the Extent to Which Telehealth Is a Substitute Good

It is well established that telehealth utilization increased exponentially in the face of the COVID-19 pandemic. **Yet, as a health economy we have yet to distinguish between which telehealth trends are a temporary function of “forced adoption” versus those that will influence longer-term behaviors.**

To date, most of the research conducted on the topic of telehealth has been limited to what *has* happened, rather than understanding the factors that will inform what *will* happen.

As a result of the unprecedented increase in demand and, more importantly, a tendency to extrapolate the “what” without the “why,” we have seen health systems, payers, employers, policymakers, and investors aggressively pursue telehealth expansion strategies based on (1) a belief that crisis accelerates existing trends, and (2) *surveys* indicating that both physicians and individuals who used telehealth during the pandemic are more likely to continue to use it.

Did the COVID-19 pandemic accelerate the adoption of telehealth? Yes, but that growth is largely attributable to the law of small numbers, and utilization has already begun to taper. Did more individuals experience telehealth? Yes. **But just because you used the service during the pandemic, does it mean you will continue to use the technology? Not exactly.**

Thus, to more precisely understand the post-pandemic market for telehealth, this study **applies the laws of economics to a longitudinal analysis of the ways in which Americans utilized telehealth** from March 1, 2020, through November 30, 2021, using a variety of *national* claims and consumer datasets.



INTRODUCTION CONTINUED









Many have attempted to quantify and characterize the magnitude of the telehealth spike, thus creating several “single sources of truth.” The challenge, however, is that each study leverages a different calculation methodology, which makes it difficult to reconcile the numbers in the context of constantly changing criteria for what constitutes a telehealth visit. Prior to COVID-19, Medicare’s coverage of telehealth modalities was generally restricted to two-way audio/video, with audio-only communications only permitted for a limited set of services in rural areas.

	MEDICARE COVERAGE REQUIREMENTS AND LIMITATIONS			MEDICARE TELEHEALTH PATIENTS	
	JANUARY 2020 (PRE-PANDEMIC)	MARCH 2020	JANUARY 2022	MAR 1, 2019-FEB 28, 2020	MAR 1, 2020-FEB 28, 2021
AUDIO-VIDEO	Allowed for Category 1 and 2 services <ul style="list-style-type: none"> limited to rural beneficiaries limited to services rendered in a healthcare facility limited set of provider types limited to interactions with established provider relationship 	Allowed for Category 1 and 2 services and an additional, temporary Category 3 <ul style="list-style-type: none"> rural and urban in patient’s home (temporary) expanded types of providers (temporary) with new or established providers 	Allowed, for Category 1 and 2 services and an additional, temporary Category 3, which will be available through 2023, or later if PHE extends beyond 2023	910, 490	27,691,878
AUDIO ONLY	Not allowed	Allowed temporarily for a limited set of services	Allowed, for the diagnosis, evaluation, and treatment of a mental health disorder Also, temporarily for a limited set of services through 2023, or later if PHE extends beyond 2023		
E-VISIT	Allowed at limited capacity, and separately from Medicare’s coverage of telehealth services	Allowed, but only for visits with an established provider, with standard Part B cost-sharing applied	Allowed, but only for visits with an established provider, with standard Part B cost-sharing applied	5,220	367,467
VIRTUAL CHECK-IN	Allowed at a very limited capacity, and separately from Medicare’s coverage of telehealth services	Allowed, but only for visits with an established provider, with standard Part B cost-sharing applied	Allowed, but only for visits with an established provider, with Standard Part B cost-sharing applied	14,088	1,601,033

Source: Centers for Medicare and Medicaid Services, *Medicare Telemedicine Snapshot*. March 2020 – February 2021.

INTRODUCTION CONTINUED

Parsing out the data by type (or modality) of telehealth amid constant classification changes is the only way to differentiate the signal from the noise. For example, the American Telemedicine Association defines telehealth as the use of **medical information exchanged** from one site to another via electronic communications to improve a patient’s clinical health status. For the purposes of this study, we define telehealth as the *use of digital information and communication technologies to **access healthcare services** remotely, either synchronously or asynchronously*. The three core categories included in the analysis are: synchronous audio/video, synchronous audio-only, and asynchronous interactions (e.g., email with a clinician).

TELEHEALTH						OTHER DIGITAL HEALTH	
SYNCHRONOUS			ASYNCHRONOUS				
MODALITIES INCLUDED IN REPORT ANALYSIS							
							
Audio-Video	Audio Only	Chat-Based	Store & Forward	Interprofessional Consultation/ eConsult	Remote Patient Monitoring	Mobile or Connected Health	Digital Therapeutics & E-Prescribing
Synchronous two-way live audio-visual telecommunication (e.g., computer, smartphone) between a patient and provider	Synchronous two-way live audio communication (e.g., telephone) between a patient and provider	Synchronous or asynchronous brief technology-based communications between a patient and provider through secure email, messaging, or patient portal	Transmission of videos, images, or recorded health history through a secure electronic communication system, patient to provider and provider to provider	Diagnosis or management service provided by a consulting provider to a requesting provider	The use of connected electronic tools to record personal health and medical data in one location for review by a provider in another location at a different time	Recording or monitoring personal health aimed at encouraging health behaviors using smartphone applications, personal devices, and wearables	Non-invasive technology and software tools that allow 24/7 treatment availability prevention, management, and treatment of certain conditions

To evaluate the telehealth market accurately, it is essential to define a “visit.” A provider-to-provider interaction via “telehealth” is very different from a provider-to-patient interaction. With this foundation, this study intends to answer the following key questions:

- Was the pandemic a catalyst to accelerate telehealth adoption as what economists define as a substitute good for in-person care, or do patients view telehealth as inferior to in-person care?
- Or is telehealth a commodity good, as Amazon and Walmart’s entry into telehealth might suggest?

Source: Office of the National Coordinator for Health Information Technology; American Telemedicine Association; Centers for Medicare and Medicaid Services.

EXECUTIVE SUMMARY

**When given a choice,
the vast majority of patients prefer in-person care.**



DEMAND

As defined by the laws of economics, telehealth is only a “substitute good” for Behavioral Health.



SUPPLY

Traditional providers are not motivated to adopt telehealth and are not equipped to compete with retail suppliers.



YIELD

The marginal cost of delivering a telehealth visit is effectively **\$0.**

**The total addressable market for telehealth is <1%
of the health economy...and declining.**



DEMAND

Demand refers to both the **exogenous** and **endogenous** factors that influence consumer preferences (e.g., location, price) and need for services (e.g., genetic predisposition).

DEMAND

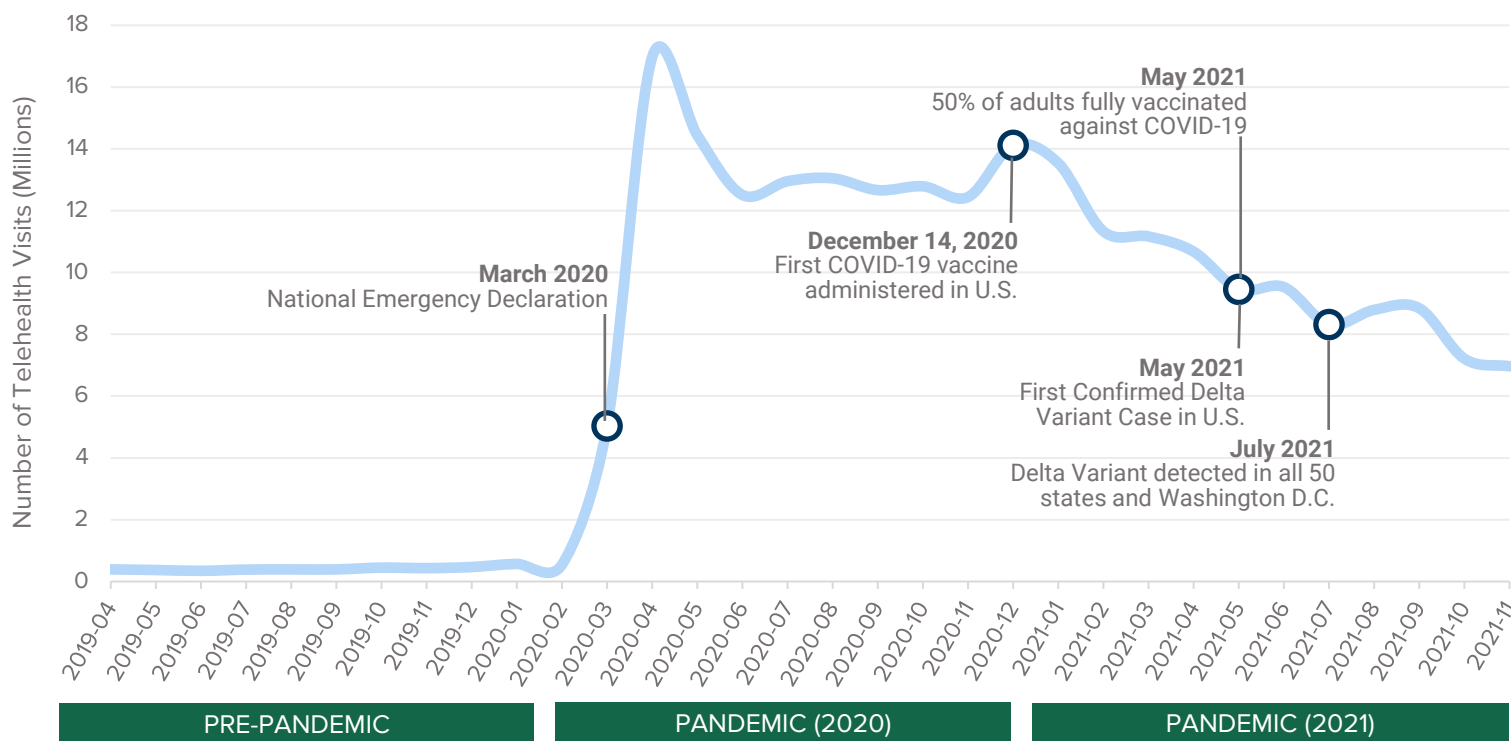
VOLUME

DEMAND: VOLUME

Telehealth Use Continued to Taper in 2021

Approximately 30M Americans (excluding self pay and traditional Medicare) generated approximately 106M telehealth visits between January and November 2021. During the same months in 2020, approximately 38M Americans generated 114M telehealth visits. Across 2020 and 2021 (through November), approximately 56M Americans used telehealth.

TELEHEALTH UTILIZATION BY PANDEMIC STAGE, APRIL 2019-NOVEMBER 2021



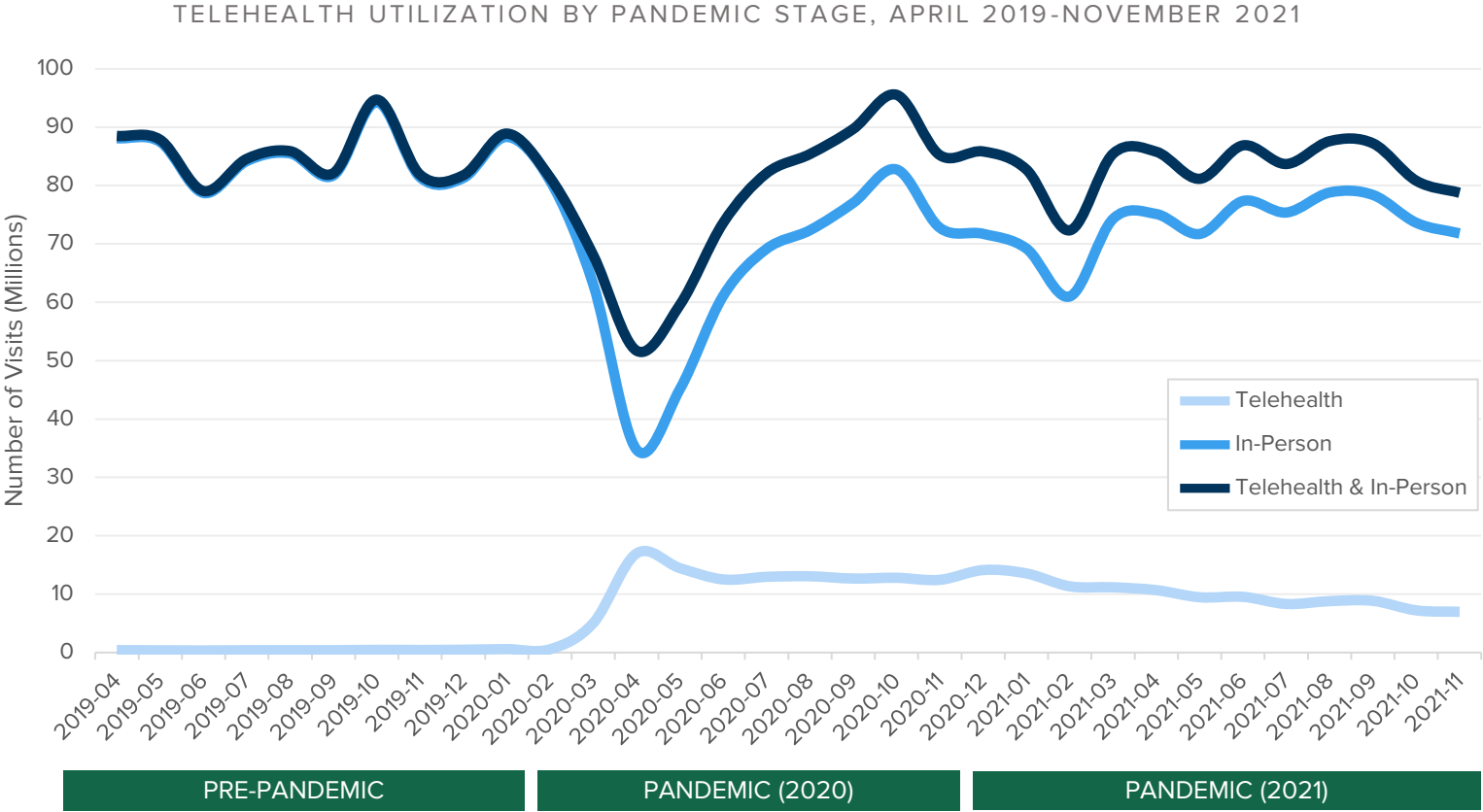
Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare. Data released by the Centers for Medicare and Medicaid Services shows that approximately 27M Medicare beneficiaries utilized an audio/video or audio-only telehealth visit between March 1, 2020, and February 28, 2021.

Source: Trilliant Health national all-payer claims database, Centers for Medicare and Medicaid Services.

DEMAND: VOLUME

Telehealth and In-Person Visits Have an Inverse Relationship

In April 2021, in-person visits and total visits were 14.8% and 3.1% lower, respectively, than in April 2019. Telehealth visits in April 2021 declined 37% from April 2020.

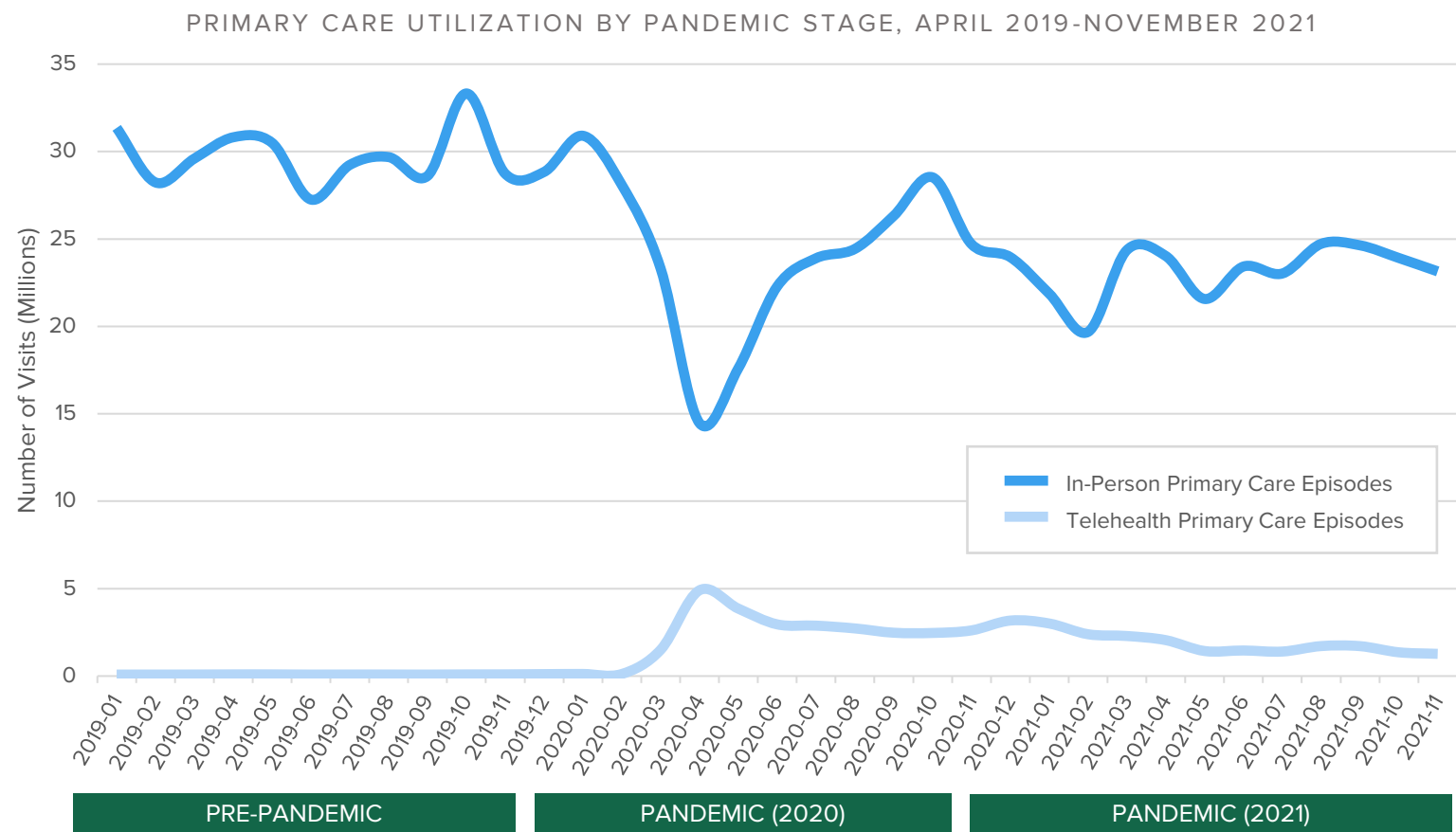


Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare. Source: Trilliant Health national all-payer claims database.

DEMAND: VOLUME

Telehealth Is Not Bridging the Gap in Lost Primary Care

Even though more Primary Care is being delivered via telehealth than prior to the pandemic, that increase is insufficient to make up for declining Primary Care volumes. Aggregate visit volumes for telehealth and in-person Primary Care visits in October 2020 were 7% lower than the volume of solely in-person Primary Care visits for October 2019.

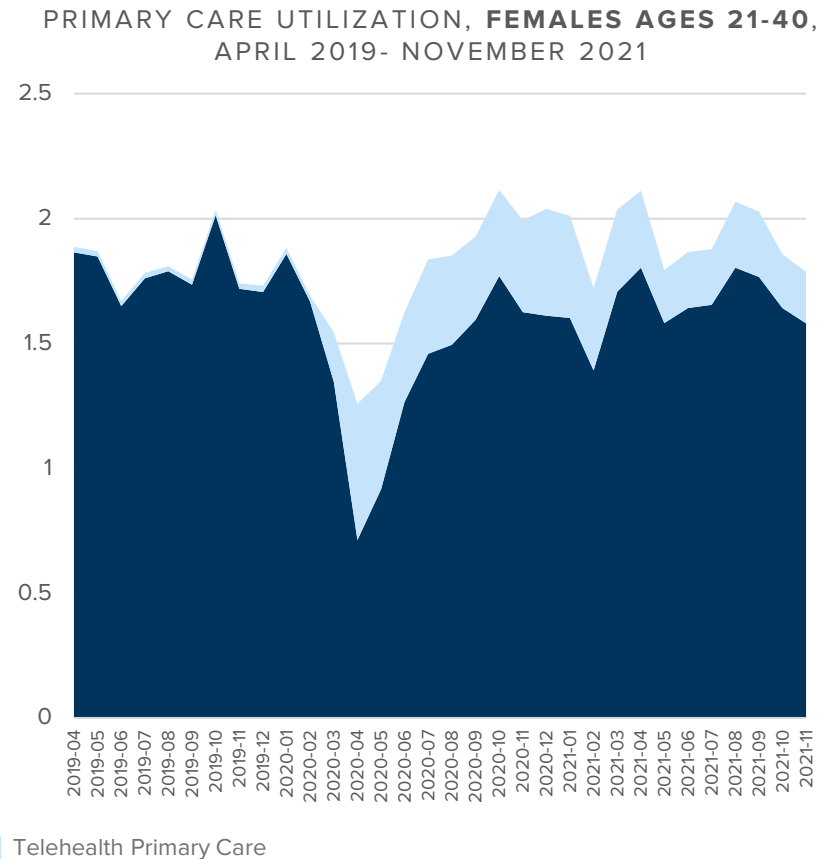
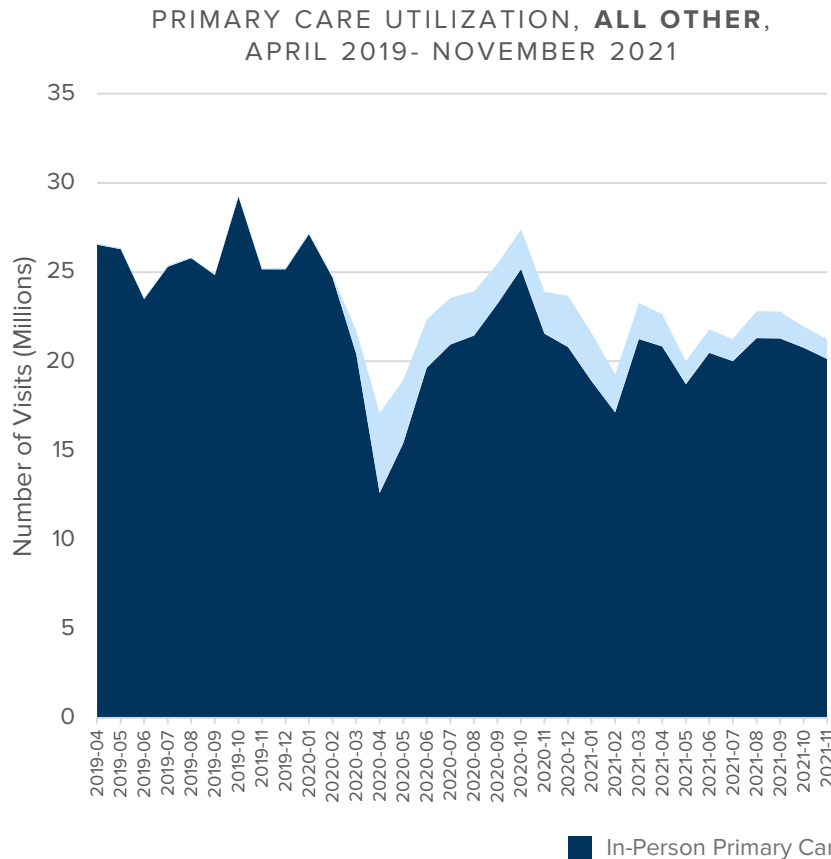


Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare. Source: Trilliant Health national all-payer claims database.

DEMAND: VOLUME

Females 21-40 Is the Only Cohort Utilizing More Primary Care Post-Pandemic

Primary Care visits for females aged 21-40 now exceed pre-pandemic levels, in part attributable to increased and sustained telehealth utilization. For the remainder of the population, Primary Care volumes remain below pre-pandemic levels with telehealth playing a minimal part in accounting for lost care.

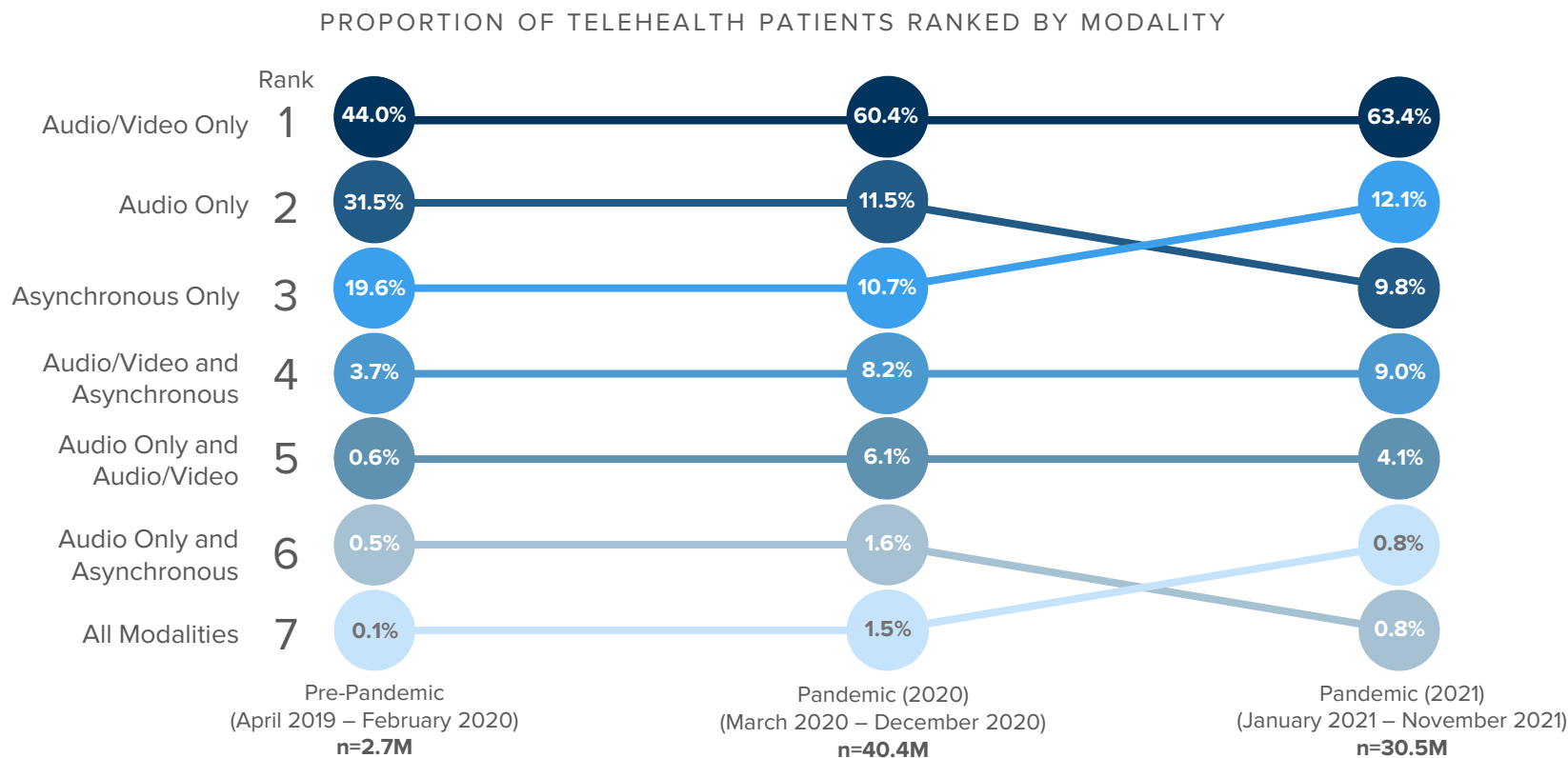


Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare.
Source: Trilliant Health national all-payer claims database.

DEMAND: VOLUME

Pandemic Minimally Changed *How* Patients Access Telehealth

Although a higher volume of patients accessed telehealth at the onset of the pandemic, a smaller share of patients (11.5%) are using audio-only services, and over 60% of patients used only audio/video telehealth in the 2020 and 2021 pandemic timeframes.



Note: **Audio/Video:** Synchronous two-way live audio-visual telecommunication (e.g., computer, smartphone) between a patient and provider. **Audio-Only:** Synchronous two-way live audio communication (e.g., telephone) between a patient and provider. **Asynchronous:** Acquiring medical data, then transmitting this data to a doctor or medical specialist at a convenient time for assessment offline.

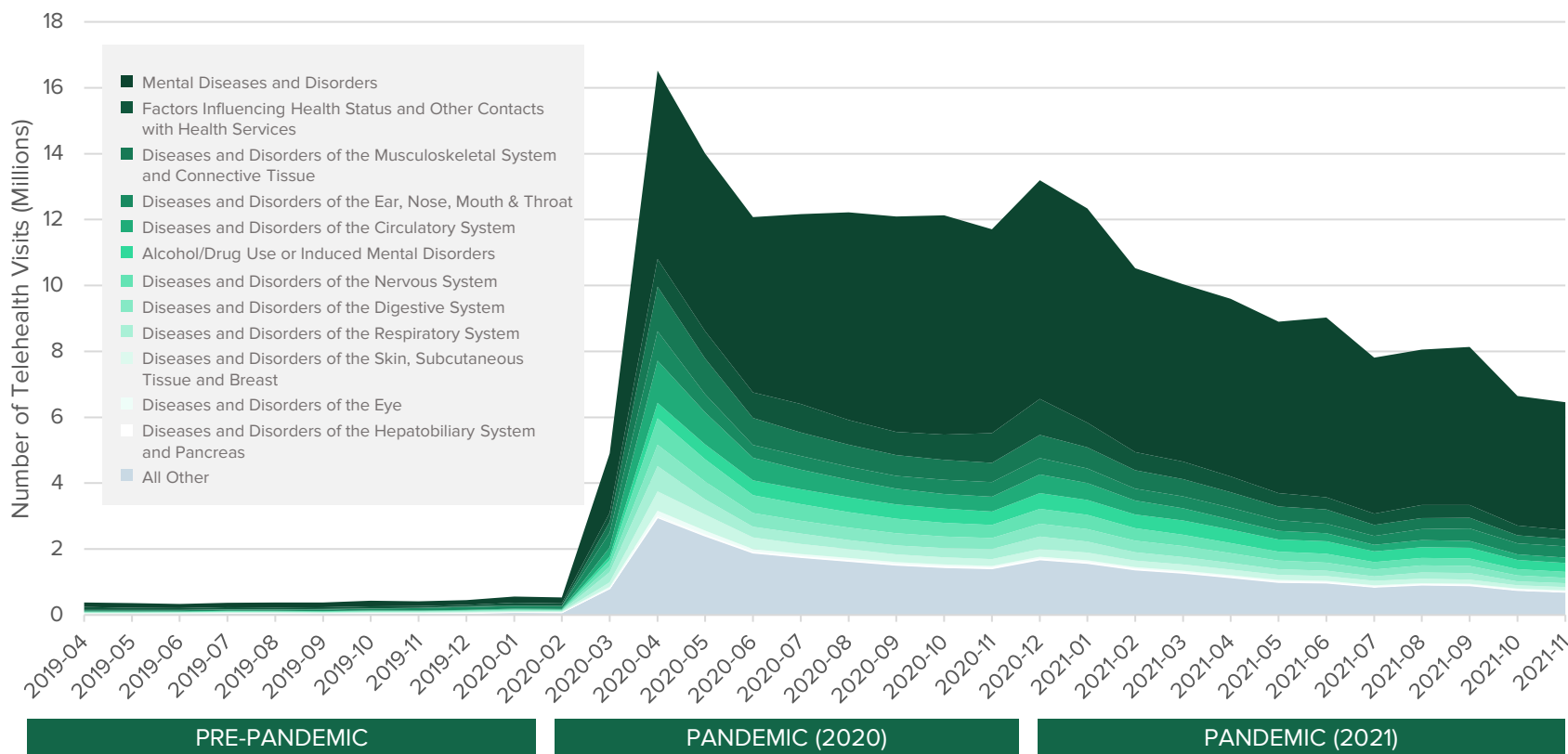
Source: Trilliant Health national all-payer claims database.

DEMAND: VOLUME

Behavioral Health Accounts for Greatest Share of Telehealth Volume

Both before and after the onset of the COVID-19 pandemic, Behavioral Health accounted for the greatest share of telehealth visits. On average in 2021, 57.9% of telehealth visits were attributed to Behavioral Health diagnoses.

TELEHEALTH UTILIZATION BY MAJOR DIAGNOSTIC CATEGORY,
APRIL 2019-NOVEMBER 2021

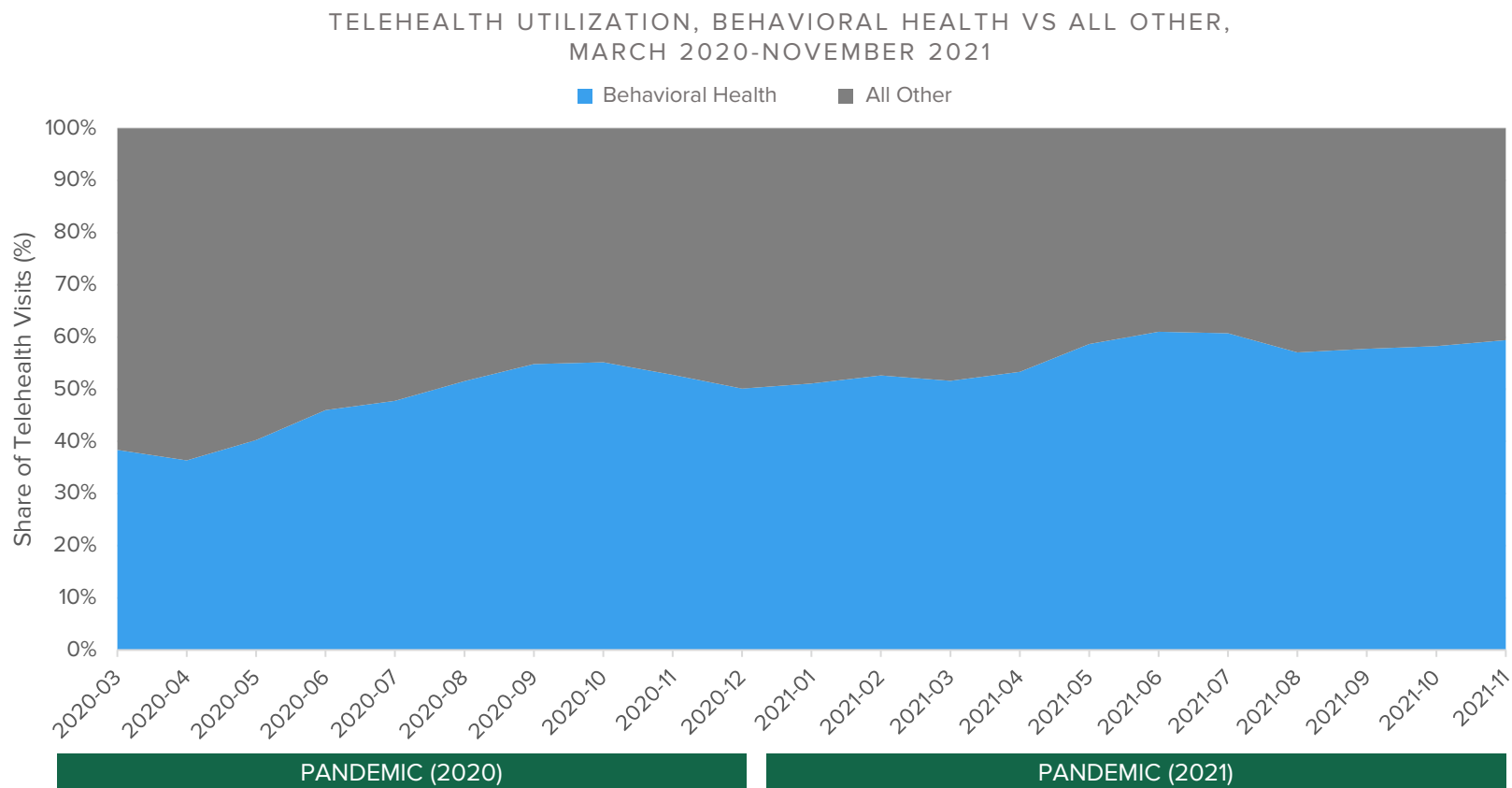


Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare. Source: Trilliant Health national all-payer claims database.

DEMAND: VOLUME

Behavioral Health Is Growing as a Share of All Telehealth Volume

In a declining telehealth market, Behavioral Health accounts for a greater share of a smaller number of visits over time. From March 2020 to November 2021, Behavioral Health telehealth utilization as a proportion of the total increased by 55%.



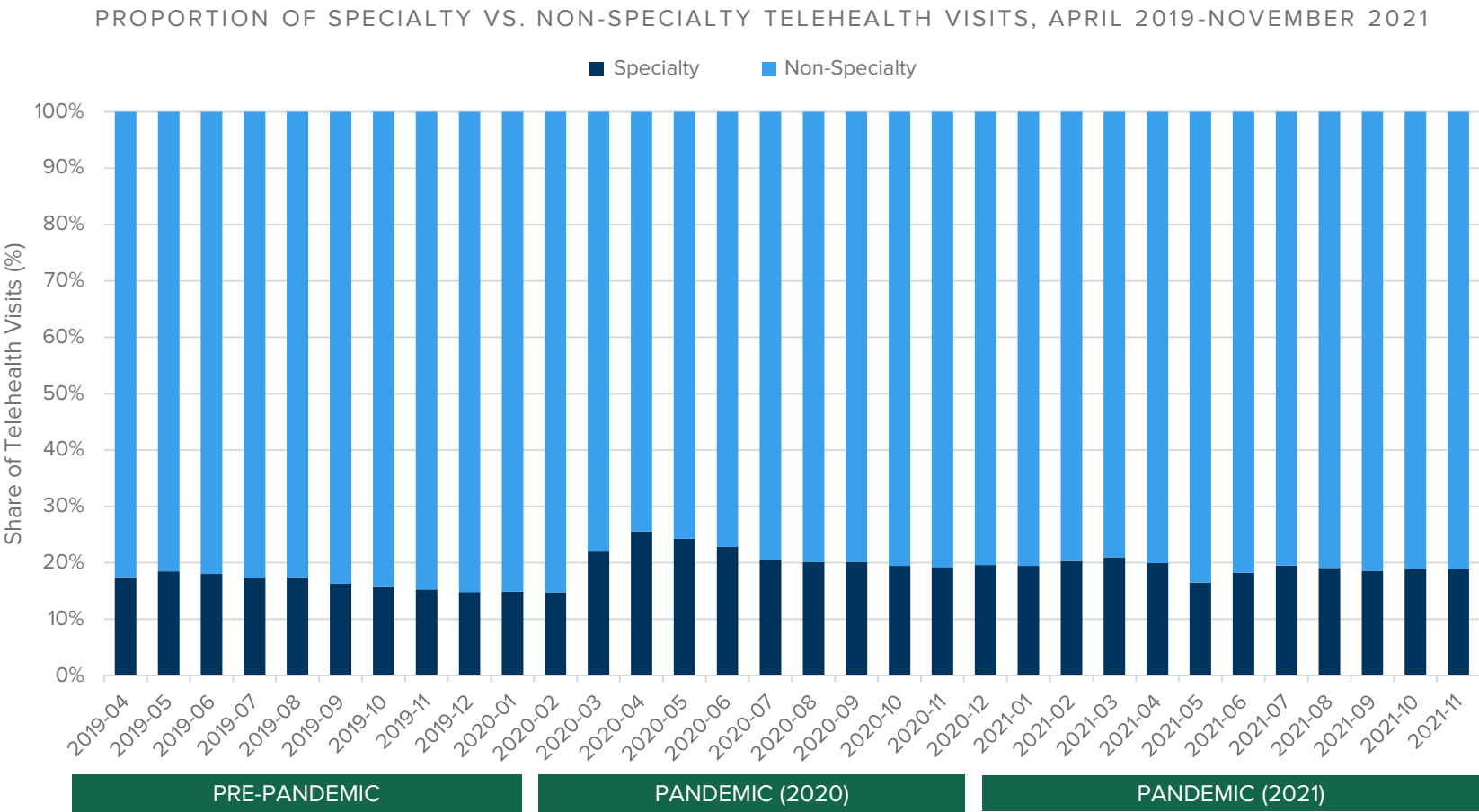
Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare. Behavioral Health includes Major Diagnostic Categories 19 and 20 (Mental Diseases and Disorders, Alcohol/Drug Use or Induced Mental Disorders)

Source: Trilliant Health national all-payer claims database.

DEMAND: VOLUME

Specialty Telehealth Accounts for Small Share of Overall Volume

Month to month, about 80% of telehealth visits are for non-Specialty purposes (e.g., Primary Care, Behavioral Health). The COVID-19 pandemic had a nominal impact on the distribution of Specialty telehealth visits.



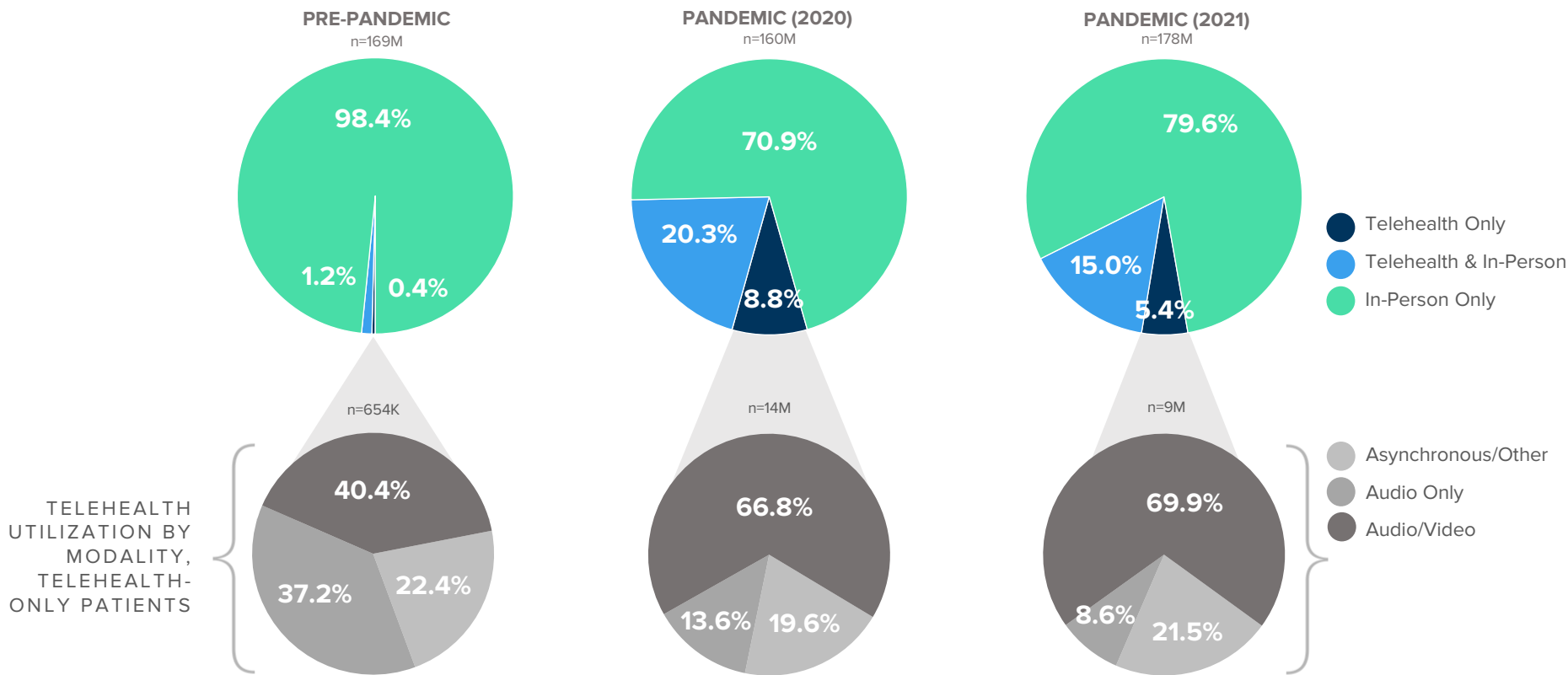
Note: Our estimates do not account for self-pay telehealth encounters, telehealth encounters at no cost through commercial insurers, nor from a representative sample of traditional Medicare. Source: Trilliant Health national all-payer claims database and proprietary provider directory.

DEMAND: VOLUME

Patients Returning to In-Person Care; More Hybrid Models Than Before the COVID-19 Pandemic

The pandemic revealed patient preferences for omni-channel care. Compared to the 2020 peak of the pandemic, the proportion of patients in virtual-only or hybrid arrangements is declining.

RATIO OF IN-PERSON, TELEHEALTH & IN-PERSON, AND TELEHEALTH-ONLY PATIENTS, BY PANDEMIC STAGE



Note: Pre-Pandemic spans April 2019 through February 2020; Pandemic (2020) spans March 2020 through December 2020; Pandemic (2021) spans January 2021 through November 2021
Source: Trilliant Health national all-payer claims database.

DEMAND

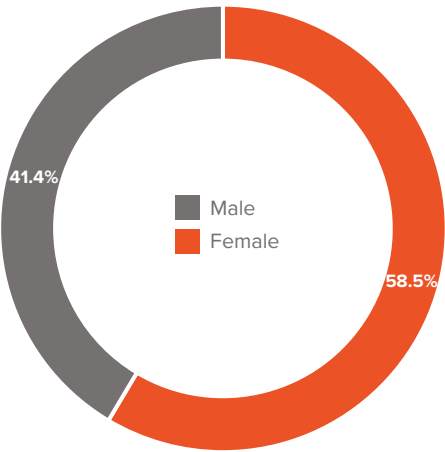
CONSUMER ATTRIBUTES

DEMAND: CONSUMER ATTRIBUTES

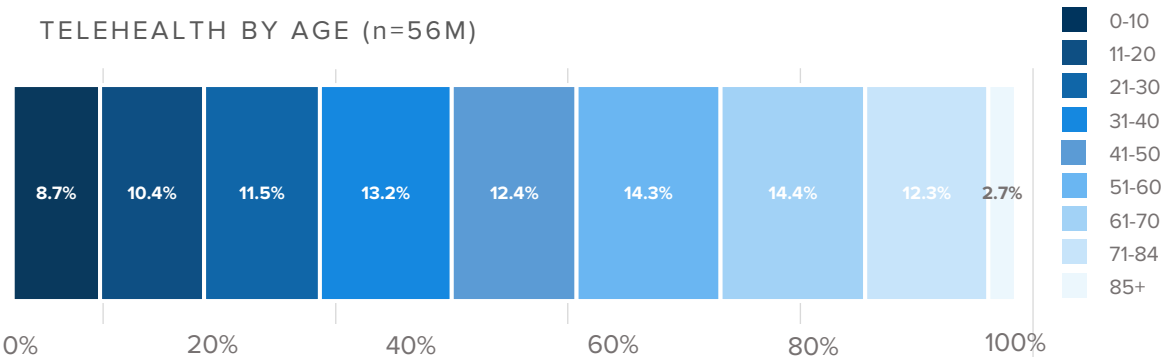
Females Are Driving Most of the Telehealth Utilization

Females accounted for a higher proportion of telehealth (58.5%) patients than males (41.4%) in 2020 and 2021.

TELEHEALTH BY GENDER (n=56M)



TELEHEALTH BY AGE (n=56M)



TELEHEALTH BY RACE* (n=24M)

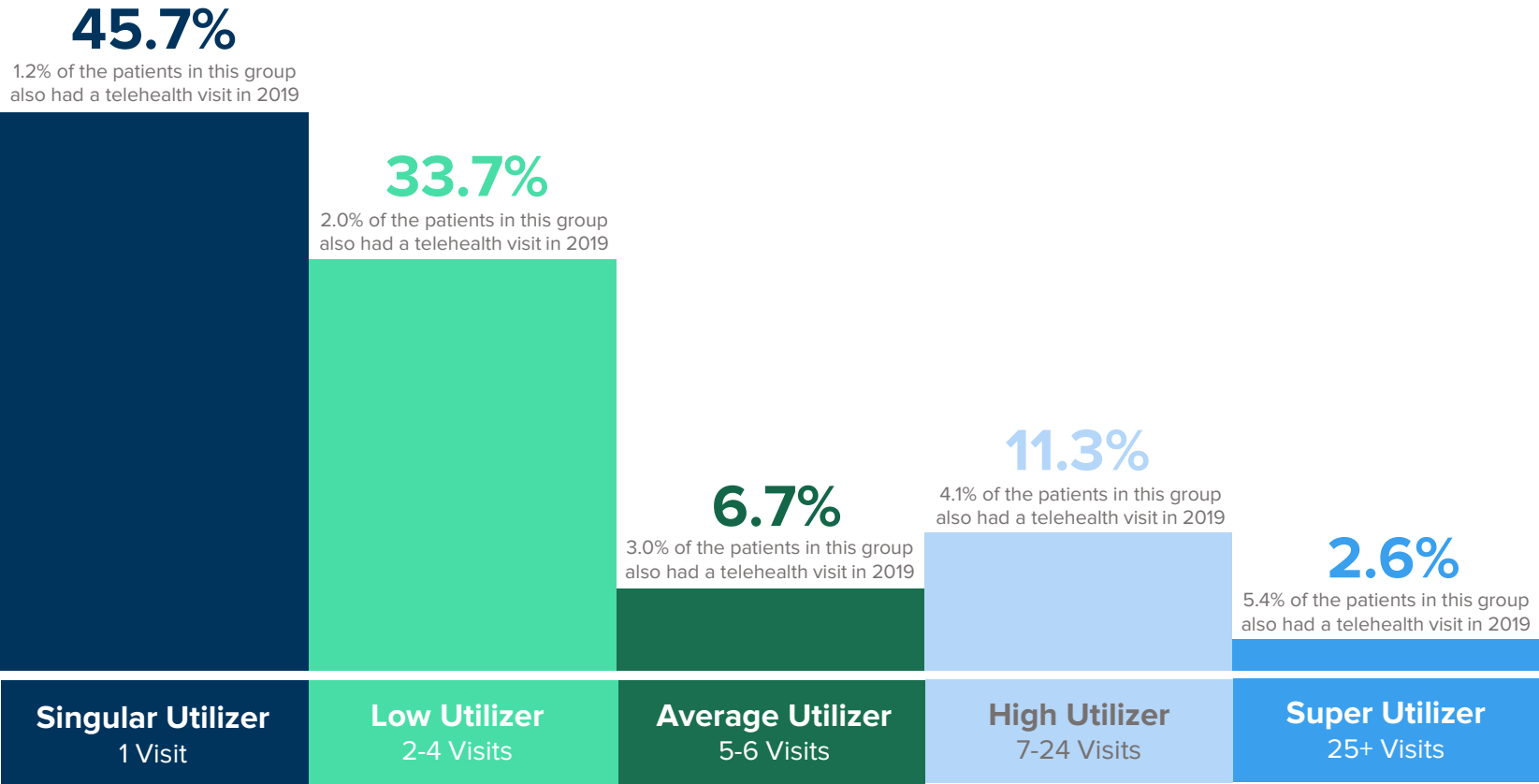


Note: Patient volumes differ for race given the data was sourced from a dataset linking the all-payer claims and consumer databases. Years reflected include 2020 and 2021.
Source: Trilliant Health national all-payer claims and consumer database.

DEMAND: CONSUMER ATTRIBUTES

Most Telehealth Patients Only Had One Virtual Visit

79% of telehealth patients had between one and four visits between 2020 and 2021, with less than 3% of telehealth patients falling into the “Super Utilizer Category” of having 25 or more telehealth visits in the same timeframe.



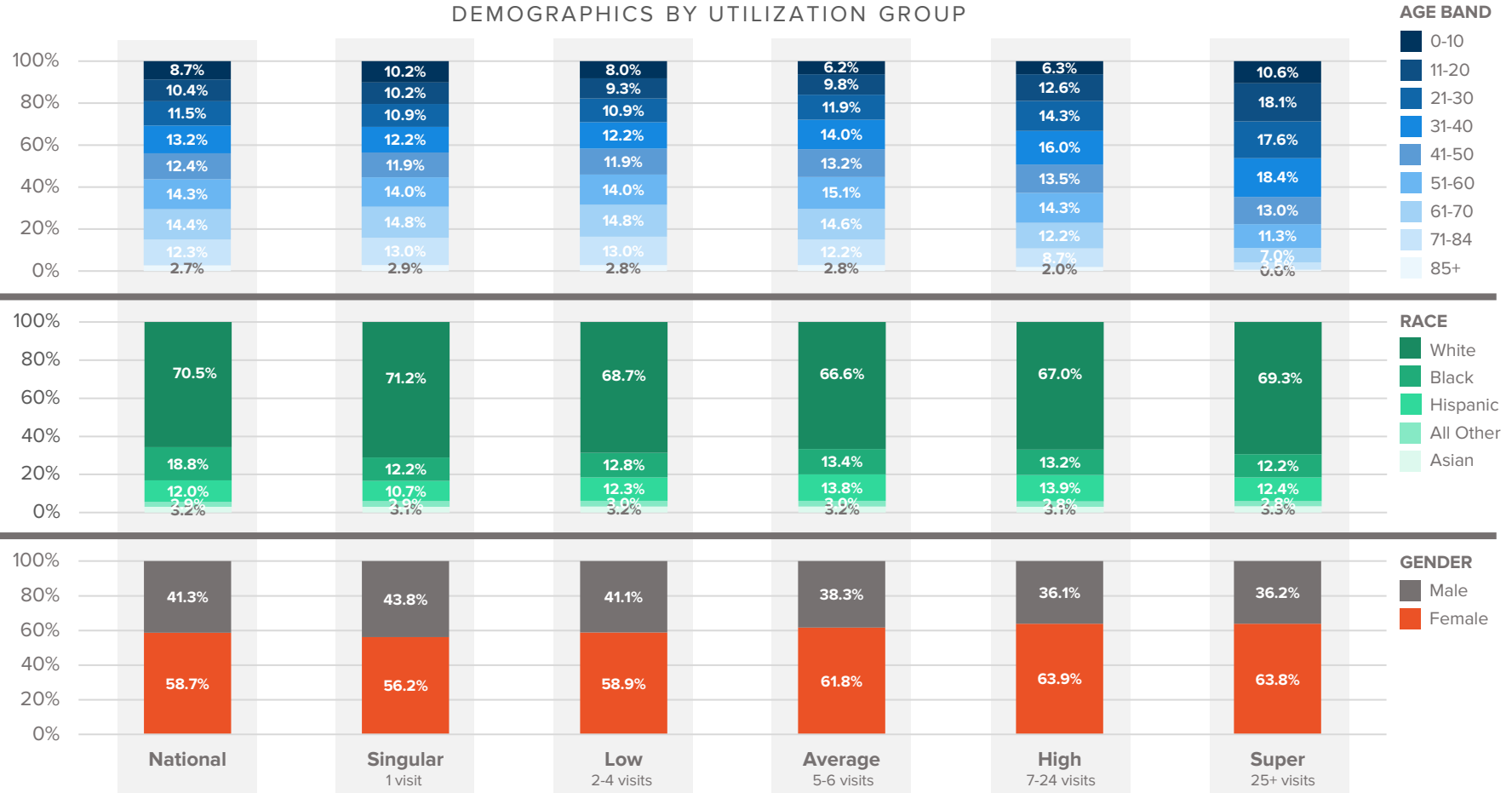
Note: Does not include whether these individuals are supplementing telehealth visits with no-cost insurance-provided telehealth offerings and self pay options, nor Traditional Medicare beneficiaries.
Source: Trilliant Health national all-payer claims database.

DEMAND: CONSUMER ATTRIBUTES

Super Utilizers Are Typically Younger Than Most Telehealth Patients

As number of visits per patient increases, patients tend to skew younger and female. Notably, 64% of Super Utilizers are female, and 36% are between ages 21-40.

DEMOGRAPHICS BY UTILIZATION GROUP



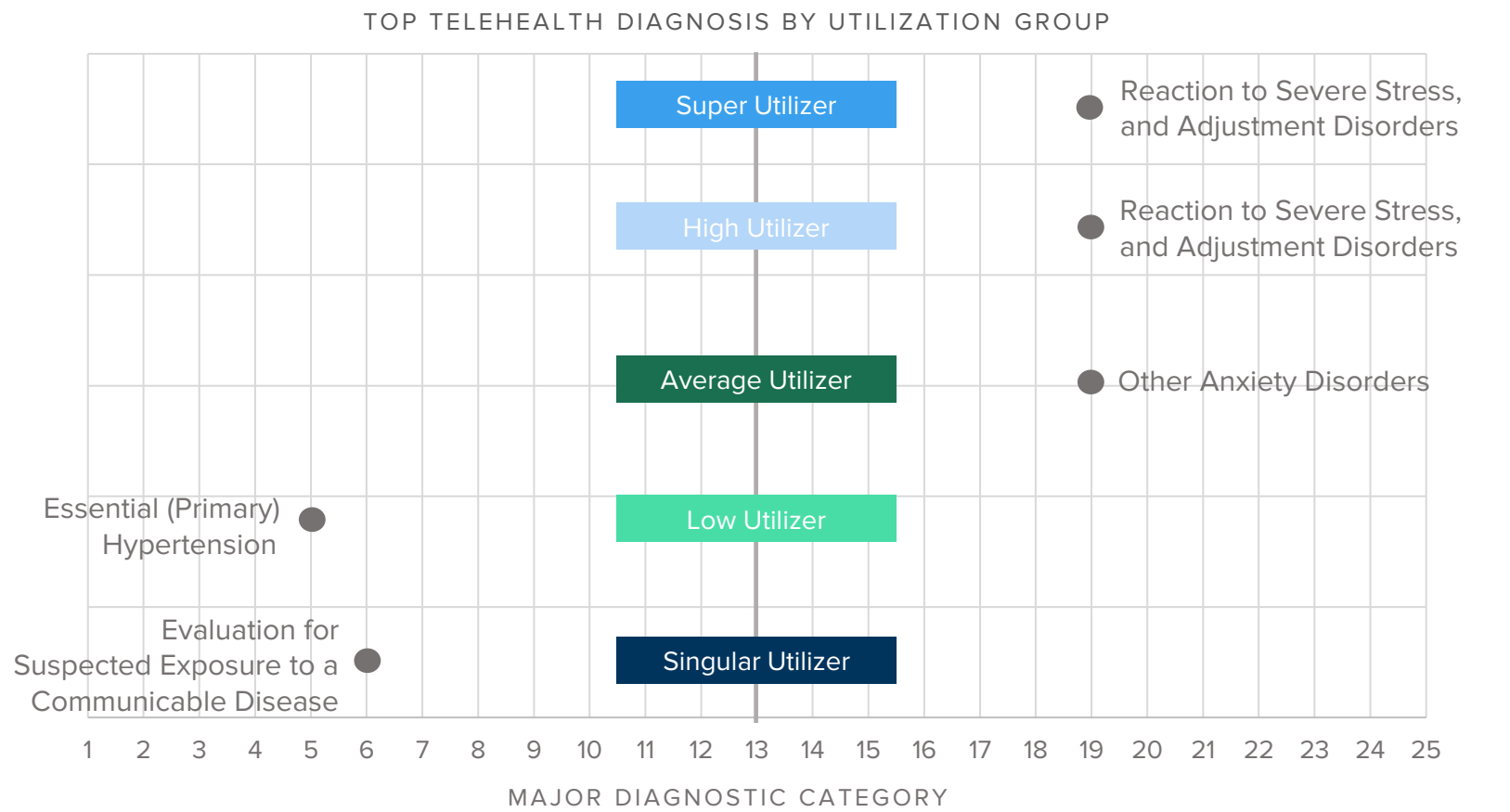
Note: Reference p.21 for the definitions of each telehealth utilization profile.

Source: Trilliant Health national all-payer claims and consumer database.

DEMAND: CONSUMER ATTRIBUTES

Patients With Five or More Visits Mostly Use Behavioral Health

Singular Utilizers’ most common reason for their telehealth visit was “Evaluation for Suspected Exposure to a Communicable Disease,” which is primarily attributed to COVID-19. Behavioral Health visits are the most common visit type (e.g., anxiety and adjustment disorders) for Average, High, and Super High Utilizers.

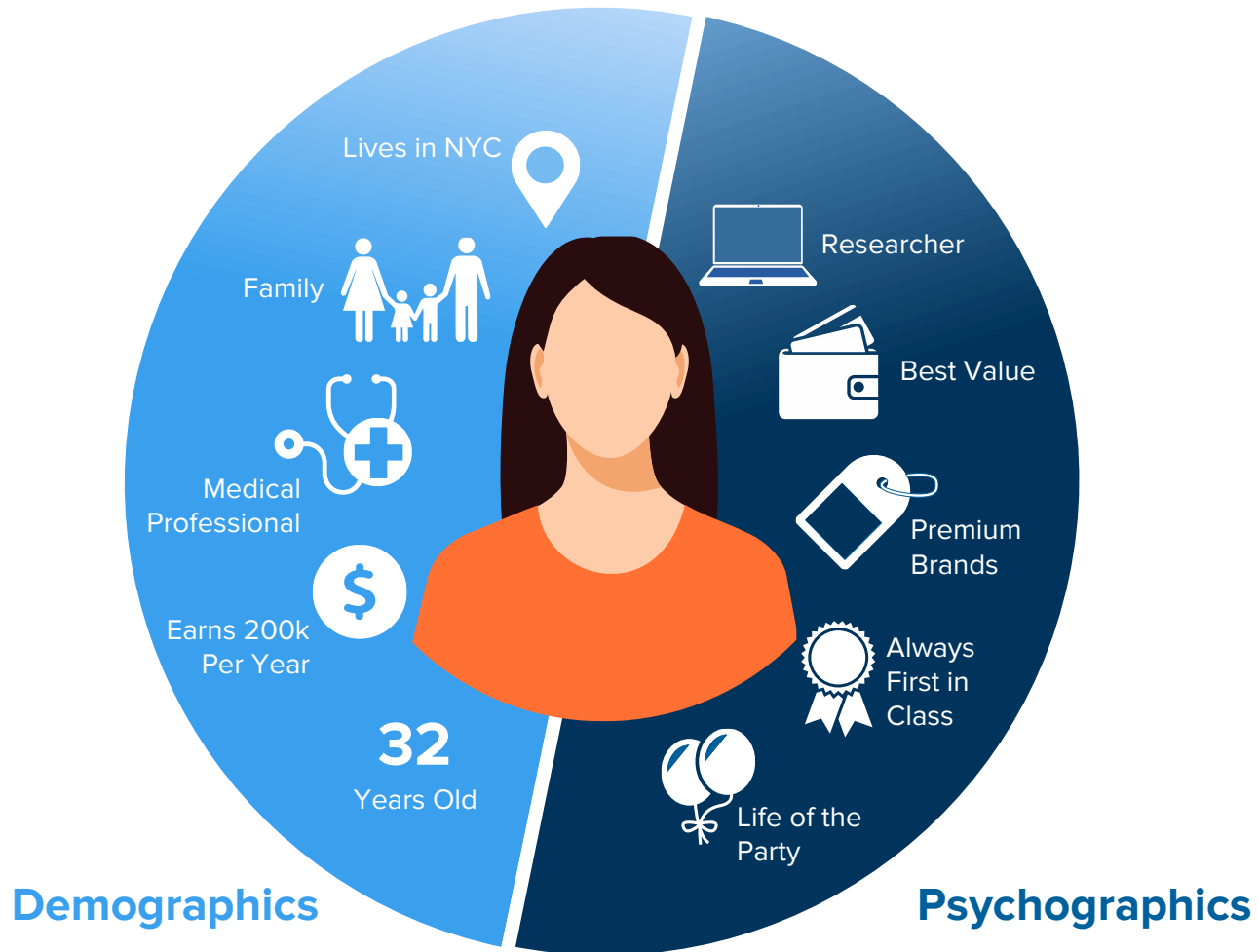


Note: Reference p.21 for the definitions of each telehealth utilization profile.
Source: Trilliant Health national all-payer claims and consumer database.

DEMAND: CONSUMER ATTRIBUTES

Demographics and Psychographics Are Distinctly Different

Demographics describe facts about a person in this moment and vary over time. Psychographics describe why a person makes the decisions they do and persist over time.

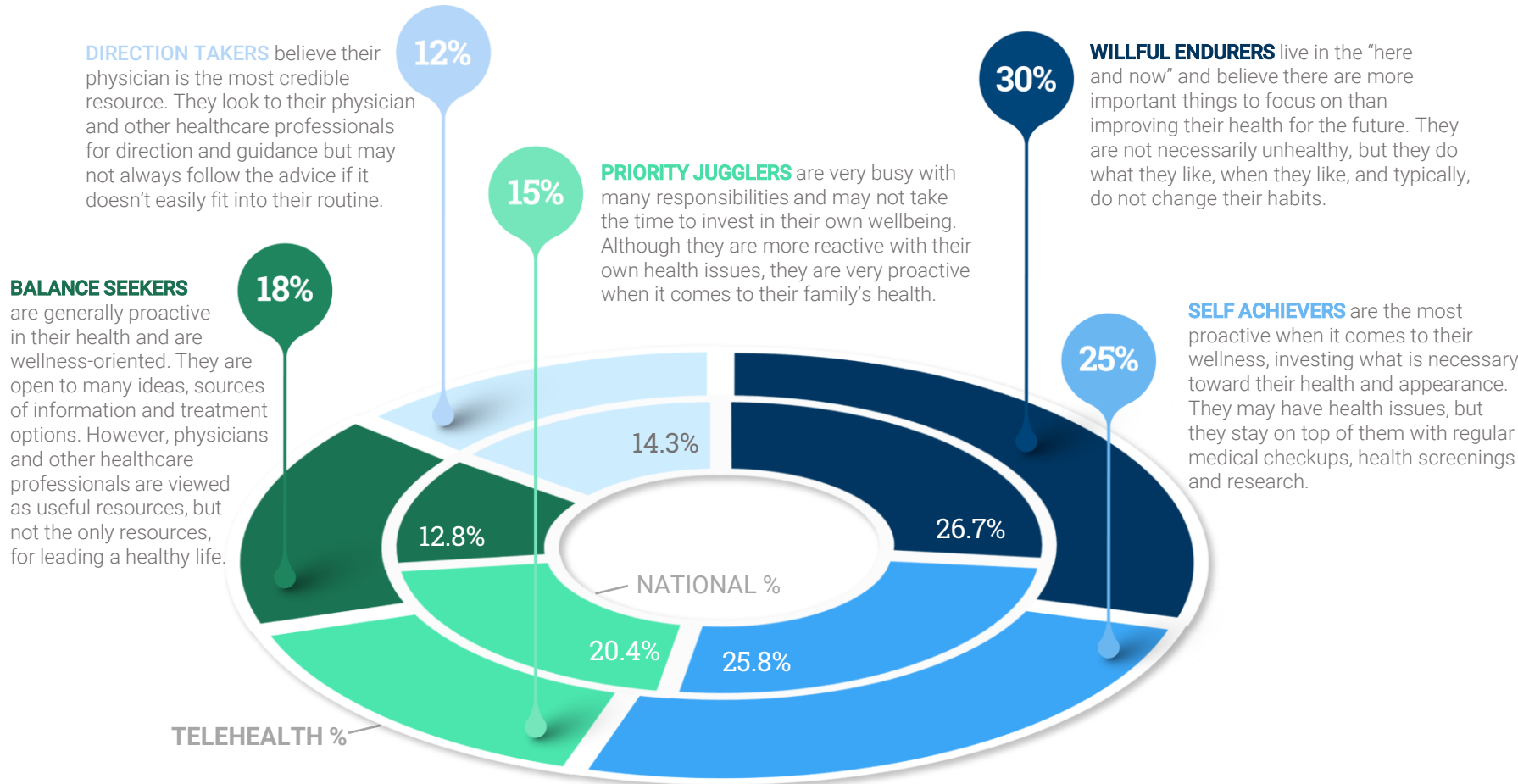


DEMAND: CONSUMER ATTRIBUTES

Psychographics Are Predictive of Telehealth Utilization

Psychographics provide insight into the “why” behind consumer choices. Willful Endurers and Self Achievers are more likely to utilize telehealth services.

DISTRIBUTION OF HEALTHCARE CONSUMERS BY PSYCHOGRAPHIC PROFILE







DEMAND: CONSUMER ATTRIBUTES

Consumer Profiles Vary by Telehealth Utilization Segment

High Utilizer and Super Utilizer segments skew younger and almost exclusively female compared to lower utilization groups.

THREE MOST COMMON **COMMERCIALLY INSURED** CONSUMER PROFILES,
BY UTILIZATION SEGMENT

		Singular			Low			Average			High			Super		
		RANK 1	RANK 2	RANK 3	RANK 1	RANK 2	RANK 3	RANK 1	RANK 2	RANK 3	RANK 1	RANK 2	RANK 3	RANK 1	RANK 2	RANK 3
PSYCHOGRAPHIC PROFILE	GENDER															
		Balance Seeker	Priority Juggler	Willful Endurer	Balance Seeker	Priority Juggler	Willful Endurer	Balance Seeker	Willful Endurer	Willful Endurer	Willful Endurer	Balance Seeker	Willful Endurer	Willful Endurer	Willful Endurer	Balance Seeker
	AGE BAND	51-60	51-60	51-60	51-60	51-60	51-60	51-60	41-50	51-60	31-40	51-60	21-30	21-30	31-40	31-40
	RACE	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White

Note: Reference p.21 for the definitions of each telehealth utilization profile and p.25 for psychographic definitions.
Source: Trilliant Health national all-payer claims and consumer database.

DEMAND: CONSUMER ATTRIBUTES

Super Utilizers Are Typically Geographically Concentrated in Higher Income Areas

In the 372 counties where Super Utilizers are concentrated, the average median household income is \$71,814, compared to the national average of \$67,521.

TOP 25 COUNTIES WITH POPULATIONS GREATER THAN OR EQUAL TO 100K

COUNTY, STATE	SUPER UTILIZERS PER 100,000	COUNTY MEDIAN HOUSEHOLD INCOME
Hampshire, MA	2,721	\$69,781
Chittenden, VT	2,461	\$78,314
New York, NY	2,175	\$104,034
Norfolk, MA	2,150	\$118,306
Washtenaw, MI	1,998	\$73,743
Middlesex, MA	1,821	\$120,017
Kent, MI	1,610	\$67,058
Hennepin, MN	1,571	\$84,530
Mohave, AZ	1,559	\$41,910
Albany, NY	1,550	\$68,518
Kent, RI	1,540	\$83,576
Essex, MA	1,538	\$90,167
Hampden, MA	1,477	\$61,259
Providence, RI	1,458	\$69,555
Multnomah, OR	1,427	\$68,077
Queens, NY	1,393	\$70,677
Suffolk, MA	1,392	\$72,850
Kings, NY	1,358	\$63,654
Bronx, NY	1,334	\$44,154
Frederick, MD	1,307	\$97,024
Saratoga, NY	1,271	\$79,680
Denver, CO	1,251	\$73,919
Ramsey, MN	1,234	\$64,480
Lane, OR	1,221	\$55,257
Norfolk, VA	1,218	\$52,178

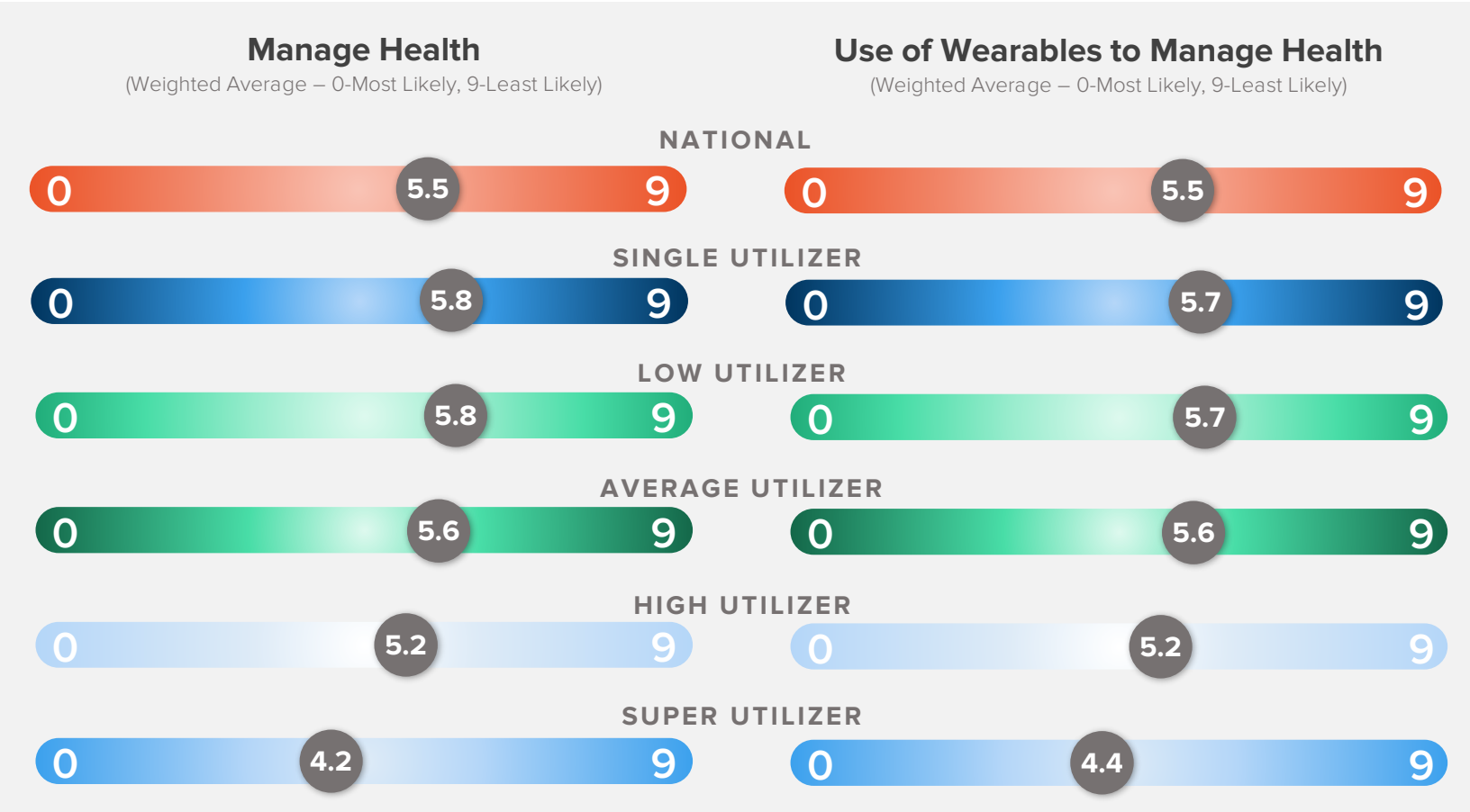
Note: Counties with fewer than 500 patients were excluded, as were Opioid Dependence-related visits due to episode skewing. Reference p.21 for the definitions of each telehealth utilization profile.

Source: Trilliant Health national all-payer claims and consumer database.

DEMAND: CONSUMER ATTRIBUTES

Consistent Telehealth Utilizers Are Typically More Proactive With Health

High and Super Utilizers are more likely to manage their health in general *and* manage their health through the use of a wearable than the national population. Singular, Low, and Average Utilizers are less likely to.



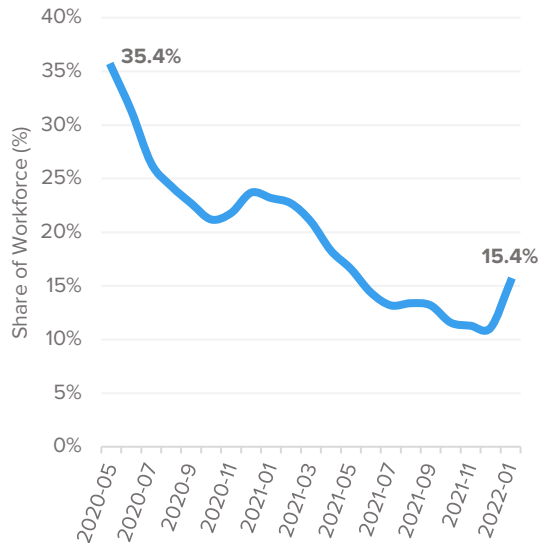
Note: Reference p.21 for the definitions of each telehealth utilization profile.
Source: Trilliant Health national consumer database.

DEMAND: CONSUMER ATTRIBUTES

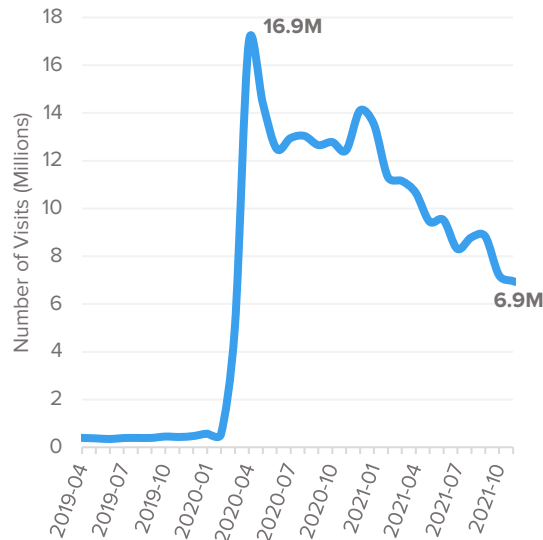
When Choices Are Not Constrained, the Ratio of In-Person to Virtual Behaviors Begins to Shift

As the country returns to pre-pandemic norms (e.g., in-person work) to varying degrees, many individuals will choose to replace their use of certain goods/services via virtual modalities with in-person “equivalents.”

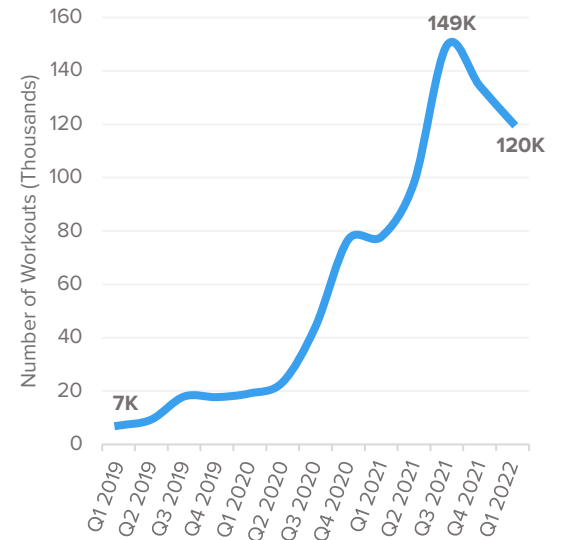
MONTHLY SHARE OF U.S. WORKERS WHO
WORKED REMOTELY DUE TO COVID-19,
MAY 2020-JANUARY 2022



TELEHEALTH UTILIZATION,
APRIL 2019-NOVEMBER 2021



QUARTERLY PELOTON CONNECTED
WORKOUTS, 2019-2021



Source: U.S. Bureau of Labor Statistics; Trilliant Health national all-payer claims database; Peloton financial statements.

DEMAND: KEY INSIGHTS

As Defined by the Laws of Economics, Telehealth Is Only a “Substitute Good” for Behavioral Health

1

Despite numerous incentives for increased utilization, patient use of telehealth is declining.

- Nearly two years into the pandemic, only 25.6% of Americans have used telehealth.
- 46% of telehealth patients used it only once.
- Despite an expanded definition of “telehealth,” patients still prefer audio/video over other modalities (e.g., audio-only).

2

A unique and discrete population is driving most telehealth utilization.

- Females are the primary users of telehealth (59%).
- White females in their 20s and 30s are consistently the highest telehealth utilizers, primarily for the purposes of accessing Behavioral Health services.
- Most Super Utilizers (25+ visits) are concentrated in metropolitan areas.

3

Telehealth is a preferred clinical substitute for Behavioral Health.

- Behavioral Health visits continue to account for the greatest share of telehealth (47.5% of all telehealth visits between April 2019 and November 2021).
- In an overall declining telehealth market, Behavioral Health is the only growing clinical application.
- Patients engaged in “hybrid” care represented 20% of the population in 2020, but that has since receded to 15% in 2021 (~25% decrease).



SUPPLY

Supply refers to the various providers of health services ranging from hospitals and physician practices to retail pharmacies, new entrants (e.g., Walmart, Amazon), and virtual care platforms.

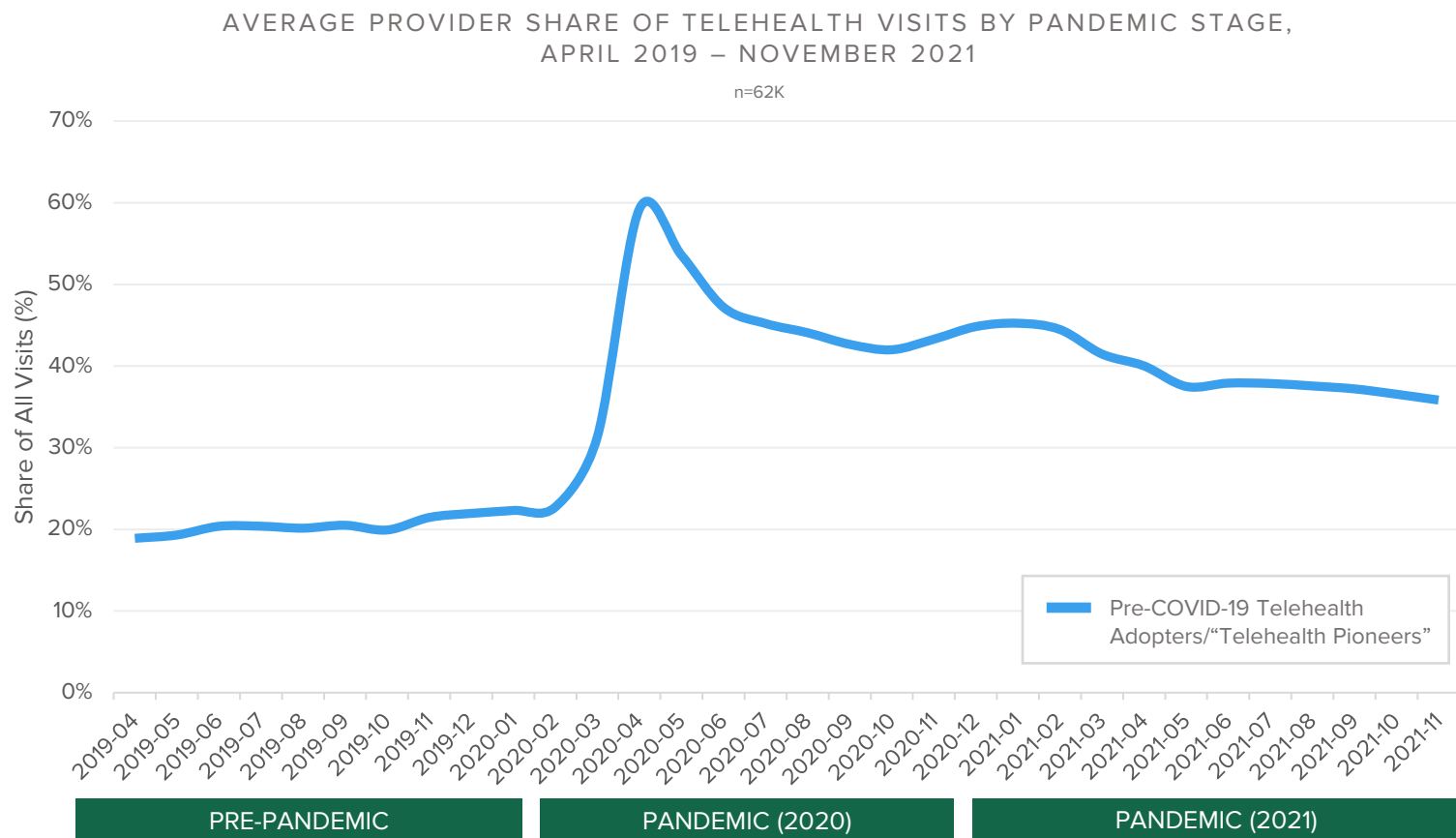
SUPPLY

PROVIDERS

SUPPLY: PROVIDERS

Telehealth Provider “Pioneers” Are Regressing to the Mean

In April 2020, telehealth visits accounted for 59% of Pre-COVID-19 Telehealth Adopters’ care portfolios. By November 2021, the share of telehealth visits had dropped to 36%.



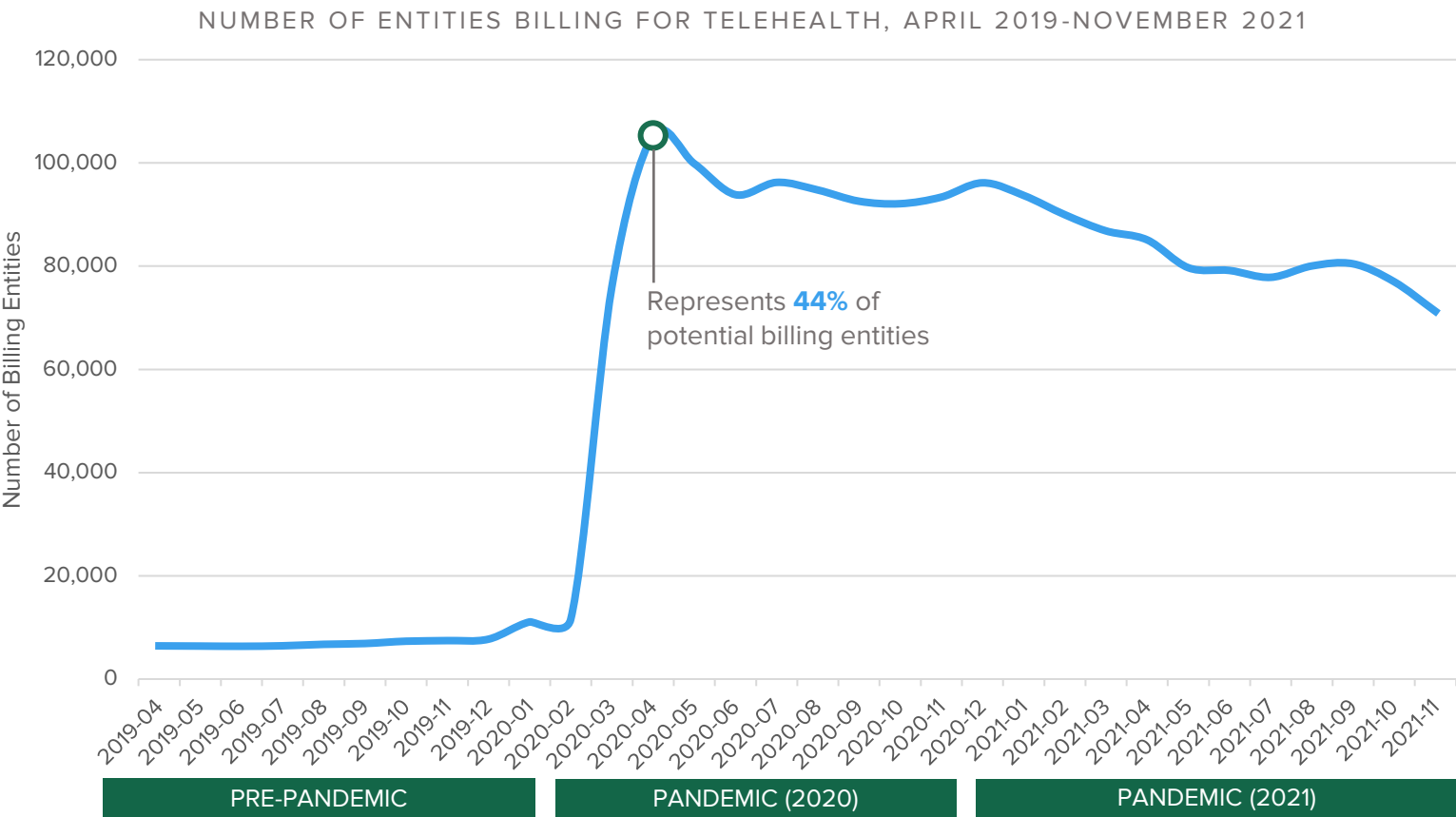
Note: COVID-19 Telehealth Adopters are defined as providers that did not render telehealth services prior to 2020 and Pre-COVID-19 Telehealth Adopters are defined as providers that rendered telehealth services in 2019, 2020, and 2021.

Source: Trilliant Health national all-payer claims database and proprietary provider directory.

SUPPLY: PROVIDERS

Less Than Half of Entities Billed for Telehealth During the Pandemic

In response to the pandemic, the number of provider entities billing for telehealth services skyrocketed. Since then, the number of billing entities has been declining. Notably, the number of entities billing for telehealth dropped 5.2% from April 2020 to May 2020.



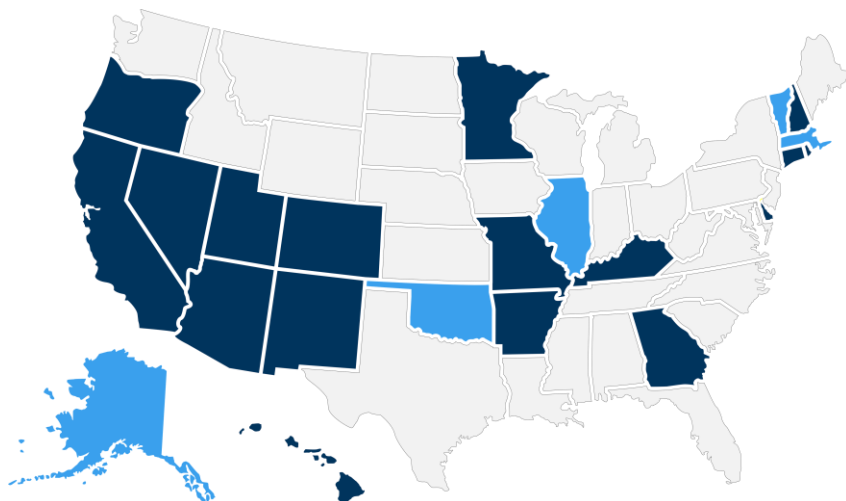
Source: Trilliant Health national all-payer claims database and provider directory.

SUPPLY: PROVIDERS

Payment Parity Requirements Do Not Appear to Correlate to Provider Use of Telehealth

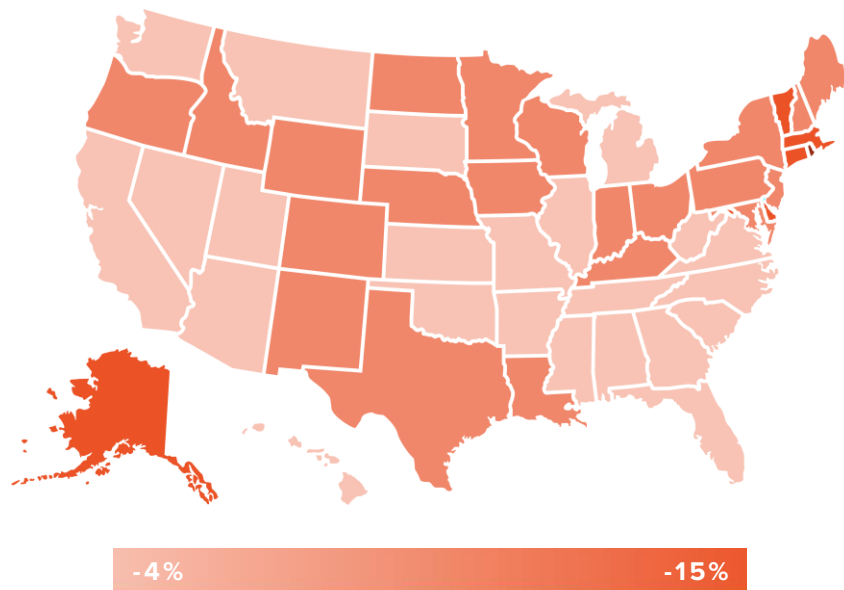
While payment parity for telehealth services are intended to incentivize enhanced provider delivery of telehealth, consumer preferences and changes in demand will determine long-term use from the supply side.

STATES WITH TELEHEALTH PAYMENT PARITY REQUIREMENTS, AS OF JANUARY 2022



- Alaska: Payment parity for mental health services, only
- Illinois: Sunsetting January 1, 2028; except for mental health and substance use disorder services
- Massachusetts: Payment parity for mental health services, only
- Oklahoma: Effective January 1, 2022
- Vermont: Sunsetting January 1, 2026

AVERAGE DECLINE IN PERCENT OF TELEHEALTH VISITS BY PROVIDER, 2020 TO 2021



Source: Manatt Telehealth Response Tracking; Trilliant Health national all-payer claims database and proprietary provider directory.

SUPPLY: PROVIDERS

Reimbursement for In-Office Visits Is Significantly Higher Than Comparable Telehealth Visits

While reimbursement rates increased for *both* in-person and telehealth in 2020, in-person reimbursement was still 65% higher given the higher E&M reimbursement amounts and associated ancillary services.

BLEND **COMMERCIAL** RATES FOR TELEHEALTH AND
IN-OFFICE EVALUATION AND MANAGEMENT (E&M) VISITS, 2019-2021

		Average Provider Reimbursement for <u>Established</u> Patients			Average Provider Reimbursement for <u>New</u> Patients		
		2019	2020	2021	2019	2020	2021
In-Person Office Visits	(E&M Only)	\$127	\$134	\$141	\$188	\$194	\$211
	(Ancillary)	\$27	\$35	\$33	\$43	\$49	\$49
	Total	\$154	\$169	\$174	\$231	\$243	\$260
		Average In-Person Reimbursement Amount					
Telehealth	E&M	\$84	\$104	\$119	\$65	\$147	\$194
		Average Telehealth Reimbursement Amount					

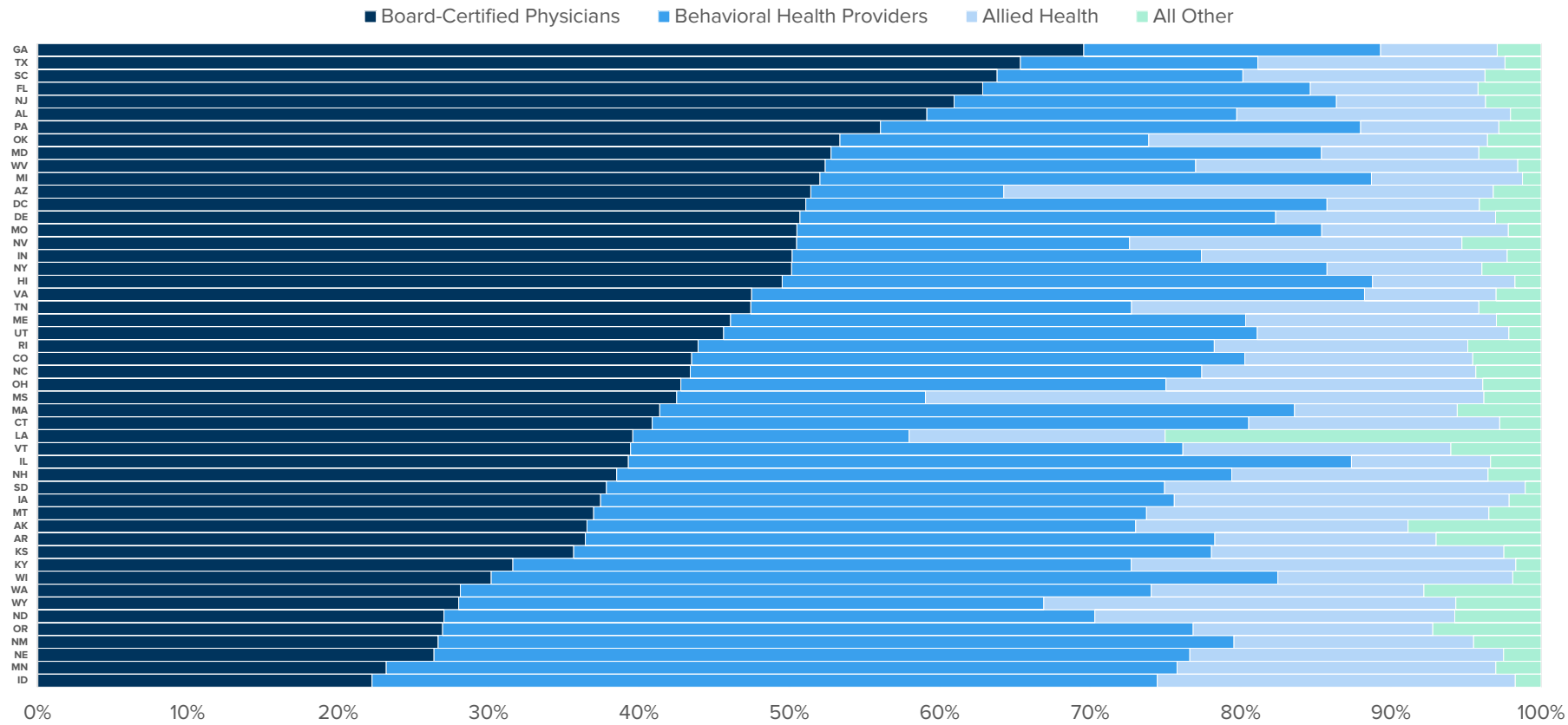
Note: Average reimbursement amounts are inclusive of plan responsibility and patient responsibility for each claim.
Source: Trilliant Health national all-payer claims database.

SUPPLY: PROVIDERS

Physicians Are the Most Common Provider Type Rendering Telehealth Services

Physicians are the most common provider type billing for telehealth services in 35 states, while Behavioral Health providers are the most common in 16 states.

DISTRIBUTION OF PROVIDER TYPES RENDERING TELEHEALTH SERVICES, BY STATE

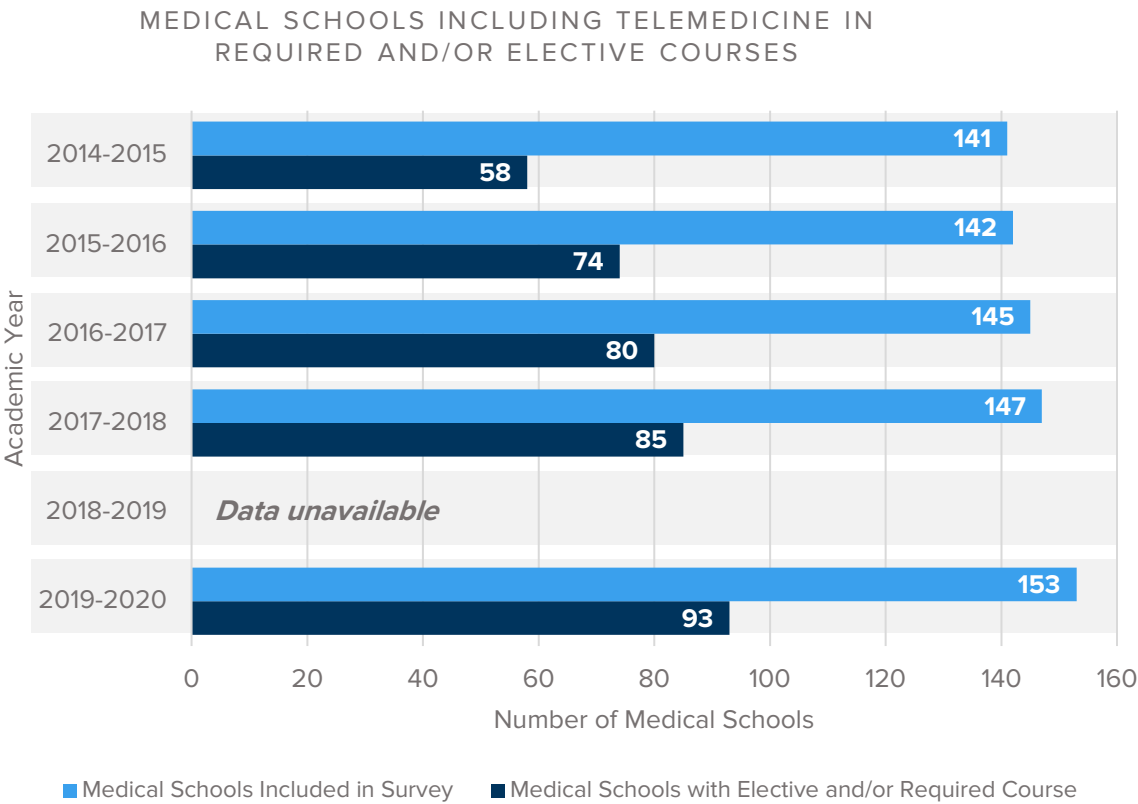


Note: Allied Health providers include physician assistants and advanced-practice nurses. Behavioral Health providers include counselors, social workers, licensed therapists, etc. Examples of All Other providers include physical therapists, speech language pathologists, and acupuncturists. Source: Trilliant Health national all-payer claims database and provider directory.

SUPPLY: PROVIDERS

Telehealth Increasingly Being Included in Graduate Medical Education Curricula

Since the 2014-2015 academic year, 35 additional medical schools included in the annual AAMC training have introduced either required or elective telehealth training into the pre-clerkship or clerkship medical education curriculum.



EXAMPLE MEDICAL SCHOOLS WITH TELEHEALTH CURRICULA



Note: 2018-2019 survey data was not available from American Medical Colleges (AAMC).
Source: AAMC Annual Curriculum Reports.

SUPPLY: PROVIDERS

The Number of Tech-Enabled Providers Continues to Grow

Where telehealth volumes spiked in 2021, many operators have been in the ecosystem for years; more are projected to come.

TIMELINE OF SELECT SUPPLIERS OFFERING TELE-CAPABILITIES








Note: Dates denote when company began offering telehealth services.
Source: Publicly available company information.

SUPPLY: PROVIDERS

Many Early Market Entrants Did Not Go Public Until Pandemic Telehealth Surge

Aside from Teladoc, the remaining companies profiled did not go public until 2020 and 2021 amid the pandemic-induced spike in telehealth utilization.

TELEHEALTH COMPANIES FOUNDED BEFORE 2007

COMPANY	FOUNDING YEAR	TOTAL FUNDING	NUMBER OF FUNDING ROUNDS	FUNDING DURATION (COMPANY FOUNDED TO IPO OR ACQUISITION)	IPO OR ACQUISITION ACTIVITY (YEAR)
 TELADOC®	2002	\$172.9M	6	13 years	\$19 per share; Valuation at IPO: \$703.9M (2015)
 InTouch Health	2002	\$49.2M	6	18 years	Acquired by Teladoc for \$600M (2020)
 CLOUDBREAK	2003	\$25M	3	18 years	SPAC transaction and merger with UpHealth (2021); Valuation at IPO: \$1.4B
 SOC Telemed™	2004	\$633M	15	16 years	SPAC transaction (2020); taken private at \$3/share by a PE firm (2022) Valuation at IPO: \$720M
 amwell®	2006	\$866M	10	14 years	\$18 per share; Valuation at IPO: \$4B (2020)









Source: Publicly available company information.

SUPPLY: PROVIDERS

Niche Telehealth Entrants Targeting Same Discrete Market Segments

Many of these companies will be competing for the small and discrete patient population that will continue to utilize telehealth.

COMPANIES OFFERING TELEHEALTH WITH 2021 FUNDING

COMPANY	FUNDING AMOUNT (2021)	DIRECT-TO-CONSUMER (DTC) OR EMPLOYER PARTNERSHIPS	TARGET CONDITIONS	TARGET MARKETS/ GEOGRAPHIC FOOTPRINT	PHYSICIAN STRATEGY
 Tia	\$100M	DTC B2C and B2C2B	Women's health	Women/3 U.S. states (CA, NY, AZ)	Health system partnerships and employs providers directly
 crossover	\$168M	DTC and Employer Partnerships	Primary Care, physical medicine, mental health	U.S Adults/Total U.S. online, in-person care in 5 states (TX, CO, NJ, NY, WA)	Employs providers directly
 Spora Health	\$3M	DTC and Employer Partnerships	Primary Care	People of color/5 U.S. states (FL, PA, TN, TX, VA)	Employs providers directly
 twin	\$14M	DTC and Employer Partnerships	Chronic metabolic conditions	Highly personalized care/ 13 U.S. states and India	Employ a care team that function as "trainers" that communicate with the user's existing physician
Clearing	\$2M	DTC	Chronic pain	U.S Adults/Total U.S.	Medical advisory board and partnerships with clinicians
 100plus	\$2M	Marketed for use to hospitals and home health/ skilled nursing professionals	Chronic home care	Clinicians for senior patient monitoring/Total U.S.	Partnerships with health companies to access practitioners
 MedArrive	\$25M	Healthcare provider or health plan	Home care	U.S. Adults/Not all states, but unclear which ones	Partnerships with health companies and health systems
Brightside	\$24M	DTC and Employer Partnerships	Mental health	Younger U.S. Adults/ 46 U.S. states	Employs providers directly
 SWORD HEALTH	\$25M	DTC and Employer Partnerships	Musculoskeletal pain	U.S. adults with chronic pain/parts of U.S., Europe, and Australia	Employs physical therapists directly
 SWIFT	\$35M	Marketed for use to hospitals and home health/skilled nursing professionals	Wound Care	N/A	Created to be used by at-home providers and can connect them to employed specialists

Source: Publicly available company information.

SUPPLY: KEY INSIGHTS

Traditional Providers Are Not Motivated to Adopt Telehealth and Are Not Equipped to Compete With Retail Suppliers

1

Provider use of telehealth has consistently declined since April 2020.

- Providers that delivered care via telehealth are incrementally delivering a smaller share of telehealth as a proportion of all visits.
- While the pandemic catalyzed the utilization of telehealth by more providers, the number of entities billing for telehealth services dropped 5.2% from April 2020 to May 2020.
- Use of telehealth by “early adopters” is regressing to pre-pandemic means.

2

“Payment parity” is not economically neutral to most providers.

- Payment parity is not directly correlated with increased telehealth adoption.
- While reimbursement rates increased for both in-person and telehealth in 2020, reimbursement for in-office visits was still 65% higher.
- Payment parity is more relevant for Behavioral Health given the lack of related ancillary services.

3

Telehealth supply continues to exceed demand.

- Investments in tele-enabled companies continues to grow.
- There are numerous niche telehealth players focused on discrete areas of telehealth with small overall market sizes.
- New retail entrants (e.g., Walmart, Amazon) have a greater scale advantage and an established membership (loyalty) base compared to other suppliers.



YIELD

Yield refers to the intersection of demand and supply, which is also influenced by market factors such as policy regulations and reimbursement incentives.

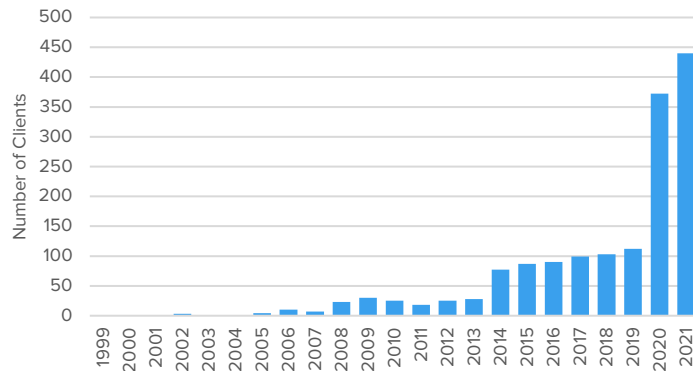
YIELD

POLICY

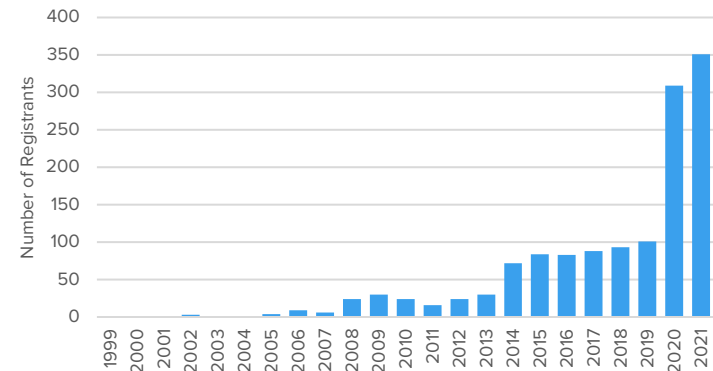
Advocacy Levels for Telehealth Were Low Prior to 2020

Until 2013, fewer than 30 lobbying clients and registrants listed telehealth as an issue of interest in required quarterly disclosures. The number of lobbying reports listing telehealth as an issue area increased 201% from 2019 to 2020, and 43% from 2020 to 2021.

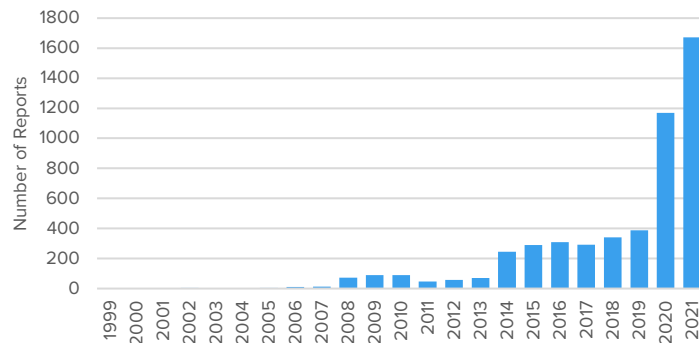
ANNUAL NUMBER OF CLIENTS LOBBYING ON TELEHEALTH ISSUES



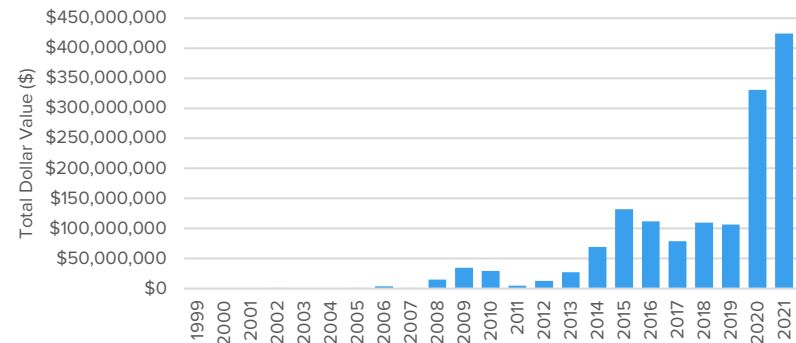
ANNUAL NUMBER OF REGISTRANTS LOBBYING ON TELEHEALTH ISSUES



ANNUAL NUMBER OF REPORTS LISTING TELEHEALTH AS AN ISSUE AREA



ANNUAL TOTAL DOLLAR VALUE OF QUARTERLY DISCLOSURES*



*Funds not allocated to telehealth issues specifically. They represent a total of all lobbying activity disclosures across clients and registrants with telehealth lobbying activities.
Source: The Senate Office of Public Records Lobbying Disclosure Act (LDA) Reports.

Expansion Proposals Are Misaligned With Utilization Data

Even under the broadest definition (due to temporary regulatory changes) of telehealth, *only* 25.6% of Americans used telehealth during the pandemic. While telehealth expansion is largely a bipartisan issue, rationales behind major legislation to expand access to telehealth across public and private insurance have been largely inconsistent with national utilization data.

“ The COVID-19 pandemic has spurred the growing use of telehealth services in Nevada and across the country, and this is especially important in our state's **rural and underserved areas** where it's already much harder to access in-person medical care.”

—Sen. Jacky Rosen (D-NV)

Reference p.49 for data-driven context

“ As we continue to unlock the potential of telehealth, I'm pleased to introduce this sensible legislation to **expand the list of eligible providers** that can seek Medicare reimbursement for providing care to seniors.”

—Sen. Jerry Moran (R-KS)

Reference p.37 for data-driven context

“ Thankfully, telehealth is transforming how folks receive care. Particularly in our rural communities, telehealth is no longer just an innovative option for accessing services, **it has become a vital lifeline to care.**”

—Sen. Steve Daines (R-MT)

Reference p.27 for data-driven context

“ As Americans overcome Zoom fatigue and vaccinations enable many to return to the office and classroom, **one aspect of virtual life is here to stay.** Expanded access to telehealth, permitted by emergency waivers, has transformed health care delivery—helping patients connect easily and safely with their physicians in a timely manner.”

—Rep. Lloyd Doggett (D-TX)

Reference p.29 for data-driven context

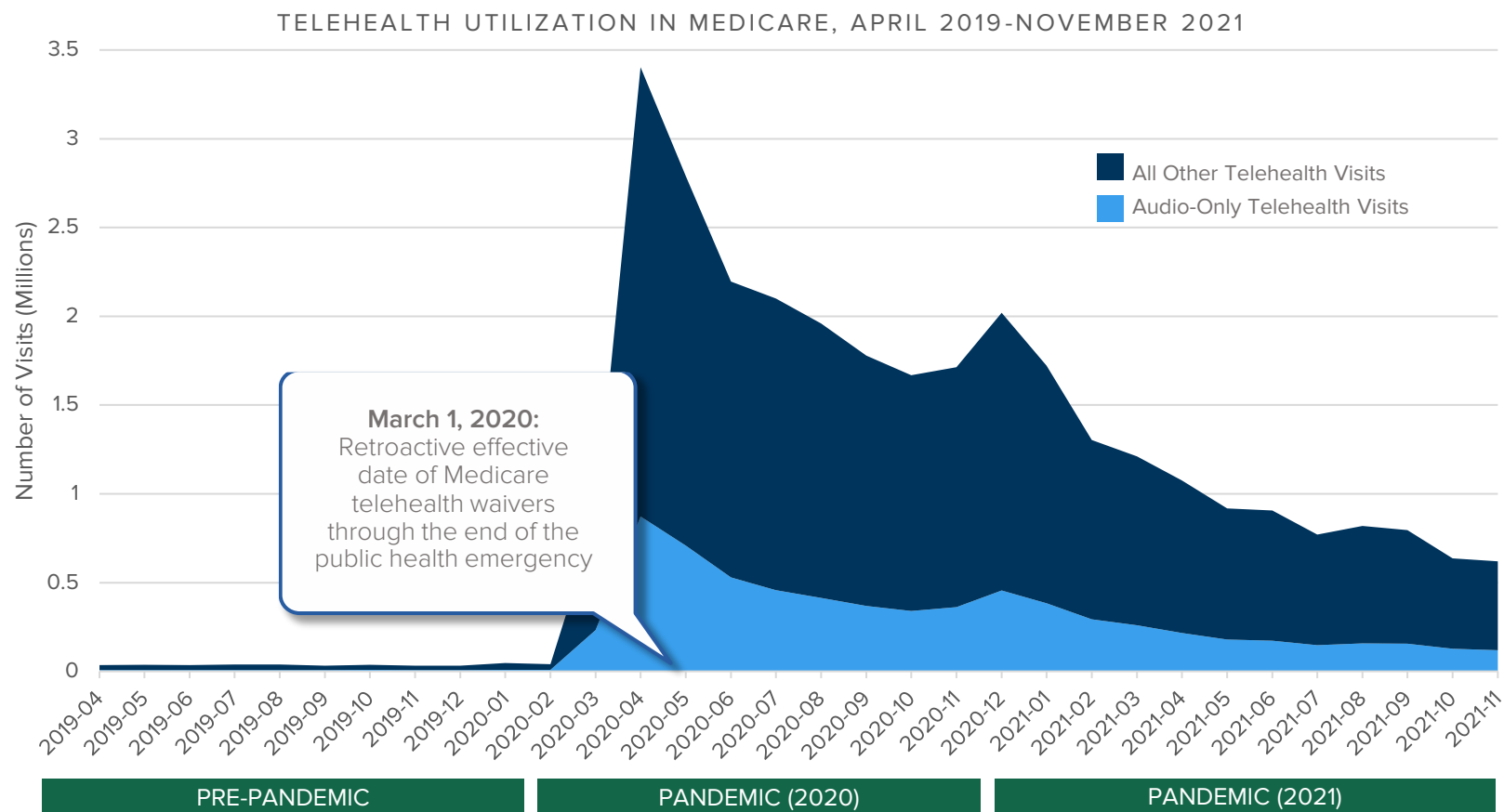
“ Telehealth is **not a COVID-19 novelty**, and the regulatory flexibilities granted by Congress must not be viewed solely as pandemic response measures. **Patient satisfaction surveys and claims data from CMS and private health plans** tell a compelling story of the large-scale transformation of our nation's health care system over the past year and, importantly, demonstrate **strong patient interest and demand** for telehealth access post-pandemic:

- **Telehealth is ubiquitous...**
- Telehealth is popular....
- Telehealth is efficient...
- Telehealth can help address existing health disparities...”

— **430 groups** including Amazon, American Medical Association, Change Healthcare, Google, HCA, One Medical, and Teladoc in a July 2021 Letter to Congressional Leadership

Audio-Only Constitutes Small Share of Medicare Utilization

While reimbursement for audio-only telehealth services are *temporarily* allowed by CMS for the duration of the public health emergency (or through 2023), CMS finalized changes allowing long-term reimbursement for audio-only Behavioral Health telehealth services in the CY 2022 Medicare Physician Fee Schedule final rule, which is consistent with utilization data.



Note: Analysis does not reflect all Medicare Advantage and traditional Medicare visits

Source: Trilliant Health national all-payer claims database; Centers for Medicare and Medicaid Services.

Enhanced Medicaid Benefits Enable Beneficiaries to Use Telehealth

In response to the COVID-19 pandemic, most states responded by broadening telehealth flexibilities in Medicaid. Notably, most non-expansion states did not broadly expand access to telehealth services as a covered Medicaid benefit.

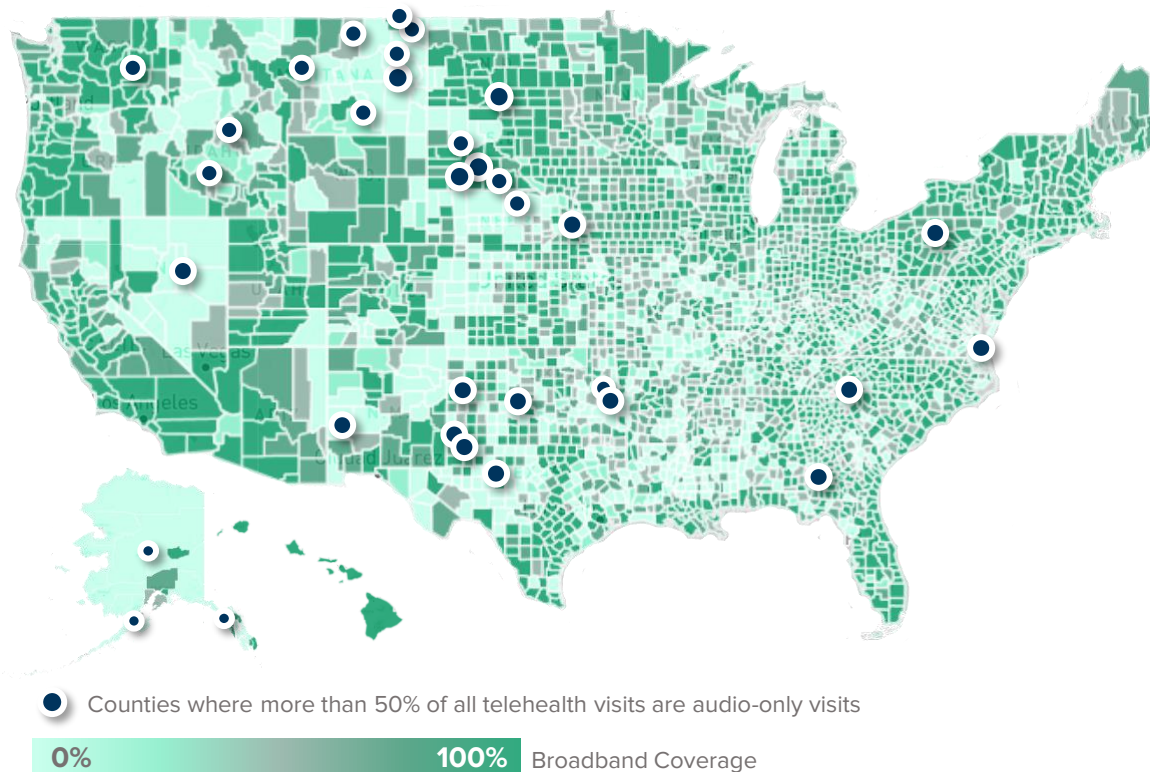
STATE	MEDICAID EXPANSION	LIVE VIDEO	STORE & FORWARD	ORIGINATING SITE RESTRICTIONS	TELEPHONE EXPANSION
Iowa, Michigan, Minnesota, Nevada, Washington	X	X	X	X	X
Hawaii, Maryland, West Virginia	X	X	X	X	
Arizona, California, Maine, Ohio, Oregon	X	X	X		X
Tennessee		X	X	X	X
Arkansas, Colorado, Connecticut, Indiana, Louisiana, North Dakota, Utah	X	X			X
Delaware, Washington D.C.	X	X		X	
Alaska, Kentucky, Missouri, New Mexico, New York, Vermont, Virginia	X	X	X		
North Carolina, Texas		X	X		X
South Carolina		X		X	X
Idaho, Illinois, Massachusetts, Montana, Nebraska, New Hampshire, New Jersey, Oklahoma, Pennsylvania, Rhode Island	X	X			
Georgia		X	X		
Wyoming		X		X	
South Dakota		X			X
Alabama, Florida, Kansas, Mississippi, Wisconsin		X			

Source: Center for Connected Health Policy.

Broadband Access Is Only One Component Influencing Telehealth Adoption

Low access to broadband is a shared characteristic of the few counties nationally where audio-only visits account for over half of all telehealth visits.

COUNTIES WITH MAJORITY AUDIO-ONLY VISITS, NATIONAL BROADBAND ACCESS

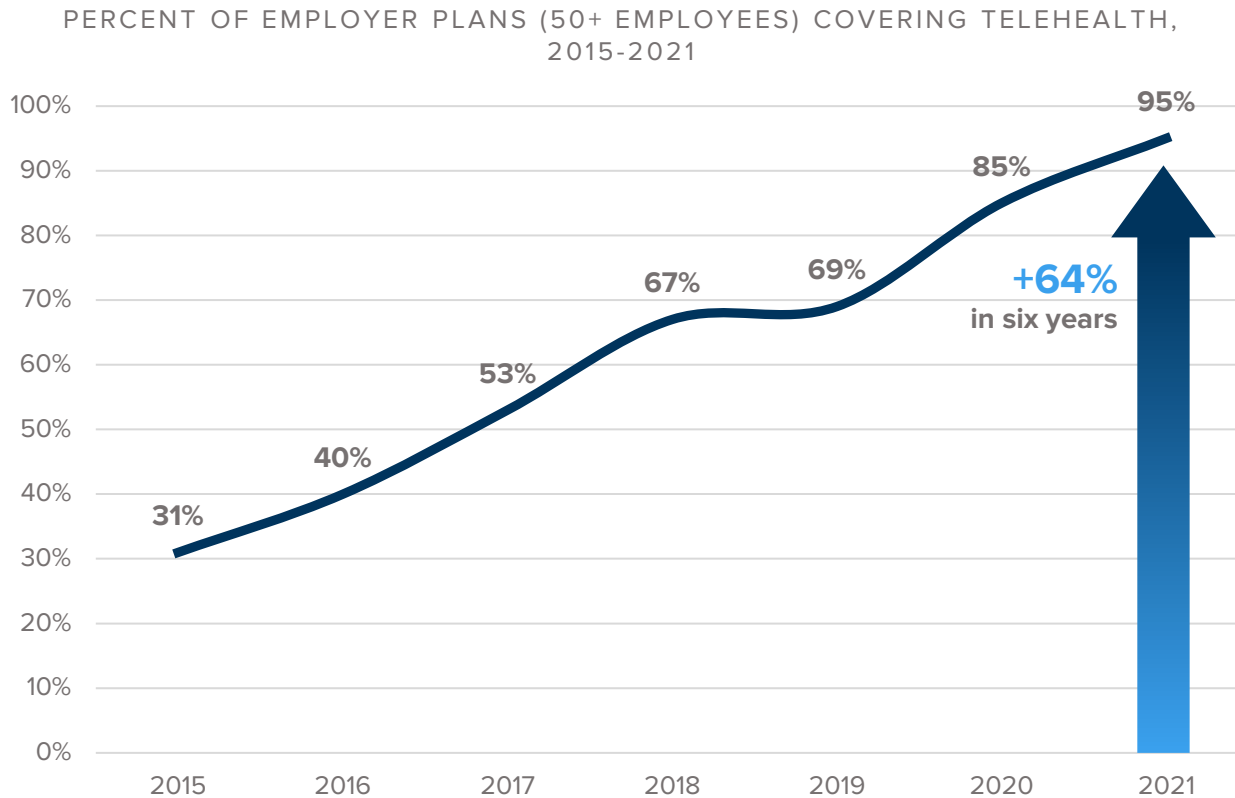


97%
of Americans
Own Cellphones

85%
Own Smartphones

Most Employers Expanded Employee Telehealth Benefits During the COVID-19 Pandemic

Due to the pandemic, 65% of employers with 50 or more employees expanded their health benefits for telehealth services.







Overall, larger employers were more generous in changing telehealth offerings during the COVID-19 pandemic (**79%**) than small employers (**61%**).

Despite the influx of new telehealth service providers entering the market in 2020 and 2021, only **5% of employers overall contracted with a new service provider**.

In order to accommodate certain individuals, **36%** of large employers and **31%** of small employers **expanded telehealth coverage of additional modalities** (e.g., audio-only telehealth and remote patient monitoring).

Commercial Coverage of Telehealth Temporarily Expanded

To align with federal guidance following the onset of the COVID-19 pandemic, major insurers temporarily relaxed telehealth coverage and cost-sharing restrictions through waivers. While many insurers are designing commercial virtual-first plans, broader policies and reimbursement strategies do not incentivize telehealth use.

INSURANCE CARRIER	TELEHEALTH POLICY CHANGES POST-COVID-19
	<ul style="list-style-type: none"> • Waived cost sharing for covered in-network telemedicine visits for outpatient Behavioral and Mental Health counseling services for commercial members through January 31, 2021 • Waived out-of-pocket costs for in-network Primary Care and Specialty telehealth visits for all Individual and Group Medicare Advantage plan members through September 30, 2020 • Reimbursed all providers for telemedicine at the same rate as in-person visits for applicable telehealth codes, including for Behavioral Health services
	<ul style="list-style-type: none"> • Launched Cigna Dental Virtual Care • Launched virtual-first health plans to select employers, which include \$0 copays with MDLIVE Primary Care providers, comprehensive chronic condition management and care navigation, and no referral requirements for in-person visits with in-network health care providers • One of first major insurers to introduce minor medical/urgent virtual visits (2014) • Waived all cost sharing for in-network medical or Behavioral Health telehealth visits for Medicare Advantage and Individual and Family Plan customers
	<ul style="list-style-type: none"> • Waived cost sharing for all telehealth visits, Primary Care and Specialty, including Behavioral Health, for in-network providers through 2020 • Waived member cost sharing for all telehealth services delivered by participating/in-network providers delivered through Doctor on Demand to commercial members • Waived telemedicine costs for all Urgent Care
	<ul style="list-style-type: none"> • Debuted a virtual Primary Care service in partnership with Amwell available in certain states • In select markets, offered a virtual-first health plan no-cost virtual and in-person Primary Care and Behavioral Health visits, virtual Urgent Care and most generic medications, with unlimited chat, online scheduling • Adopted a permanent telehealth policy that includes physical therapists • Expanded provider telehealth access during the COVID-19 pandemic

Source: Analysis of AETNA, Cigna, Humana, and United Healthcare's websites.

Will Measuring Quality of Care Be Equally Important for Telehealth as In-Person Care?

Approaches and measures for in-person services cannot be applied 1:1 when delivered via telehealth.

NQF Releases Recommendations to Advance Field in Measuring the Quality of Care Provided by Telehealth

FOR IMMEDIATE RELEASE
DEC 01, 2021

CONTACT: 202-478-9326
press@qualityforum.org

NQF Releases Recommendations to Advance Field in Measuring the Quality of Care Provided by Telehealth
Report emphasizes the need to develop novel measures that assess the quality of care delivered through telehealth

Washington, DC - A [report](#) from National Quality Forum's (NQF) Rural Telehealth and Healthcare System Readiness Committee is now available. It outlines a framework and a list of related measures for use to assess the impact that telehealth has on healthcare system readiness and health outcomes during emergencies such as pandemics, natural disasters, mass violence, and other public health events, specifically for rural areas. These measures can be used to guide quality improvement efforts, as well as inform the development of new measures in identified gap areas.

COVID-Driven Telehealth Surge Triggers Changes to Quality Measures

Revisions reinforce the use of telehealth during the pandemic and after.

JUNE 5, 2020

Changes to all NCQA programs resulting from the pandemic are summarized [here](#).

The Board of Directors of the National Committee for Quality Assurance (NCQA) approved a sweeping set of adjustments to 40 of its widely-used Healthcare Effectiveness Data and Information Set (HEDIS) measures – in support of health plans, clinicians and patients who rely on telehealth services in record numbers as a result of the disruption brought on by the COVID-19 pandemic.

The changes will apply to the measurement of health care quality starting this year. They align with recent telehealth guidance from the Centers for Medicare & Medicaid Services and other federal and state regulators.

“

You cannot drive quality improvement if your measures don't take into account what has quickly become the fastest growing modality for providing health care services.”

–NCQA President Margaret (Peggy) O'Kane

YIELD

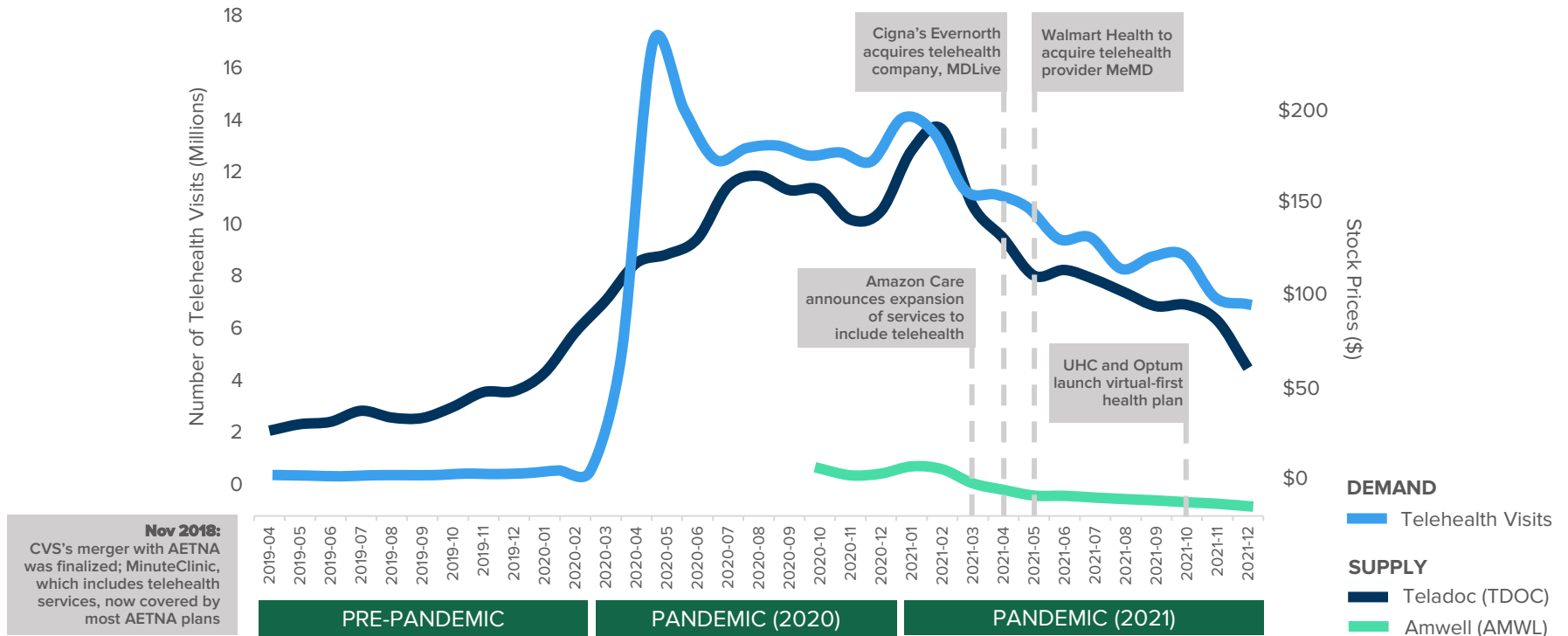
PRICE

YIELD: PRICE

Wall Street Is Not Convinced Telehealth Is a Substitute Good

An already competitive telehealth market continues to add suppliers while patient demand declines from COVID-19 highs. Major telehealth providers' stock prices have dipped as more suppliers enter and patients return to office visits.

TELEHEALTH DEMAND VS. SUPPLIER STOCKS BY PANDEMIC STAGE, APRIL 2019-DECEMBER 2021



Note: Our estimates do not account for any self-pay telehealth visits or traditional Medicare. Data released by the Centers for Medicare and Medicaid Services shows that approximately 28M Medicare beneficiaries utilized an audio/video or audio-only telehealth visit between March 1, 2020, and February 28, 2021. American Well Corp (AMWL), also known as Amwell, went public on September 17, 2020.

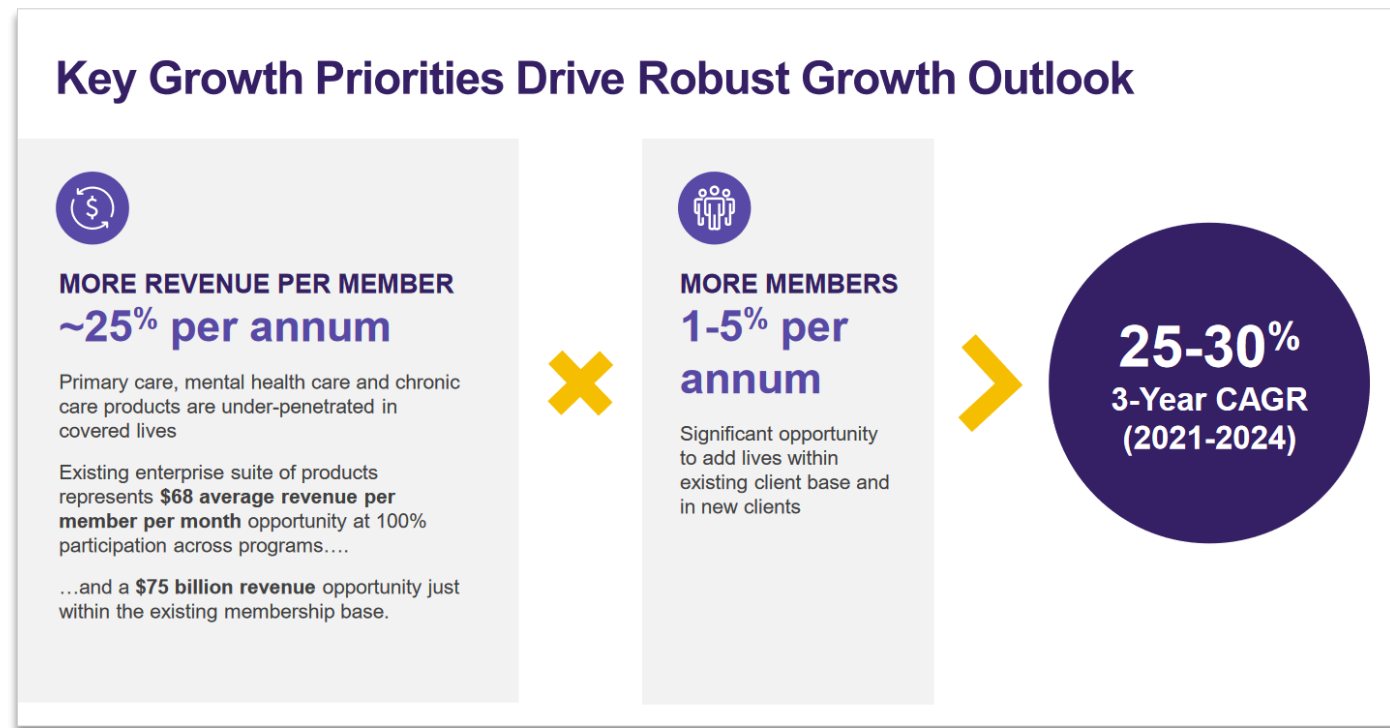
Source: Trilliant Health national all-payer claims database; Stock trends obtained from publicly available data via Yahoo Finance.

YIELD: PRICE

Established Telehealth Providers More Focused on Increasing Share of Wallet Than Users

In the absence of meaningful growth at the consumer (or patient) level, employer benefit plans offer telehealth suppliers the most compelling growth opportunity.

EXCERPT FROM TELADOC HEALTH'S 2022 J.P. MORGAN HEALTHCARE CONFERENCE PRESENTATION









Source: Teladoc January 2022 J.P. Morgan Healthcare Conference Presentation.

YIELD: PRICE

Blended Commercial Rates for Telehealth Below DTC Brands

The retail price for telehealth currently averages between \$59-75, while the average commercial cost in 2021 was \$48. However, the marginal cost of delivering telehealth for large suppliers is effectively \$0, which will impact patient responsibility for the commercially insured. As the cost of telehealth for the commercially insured approaches \$0, retail prices will inevitably decline.

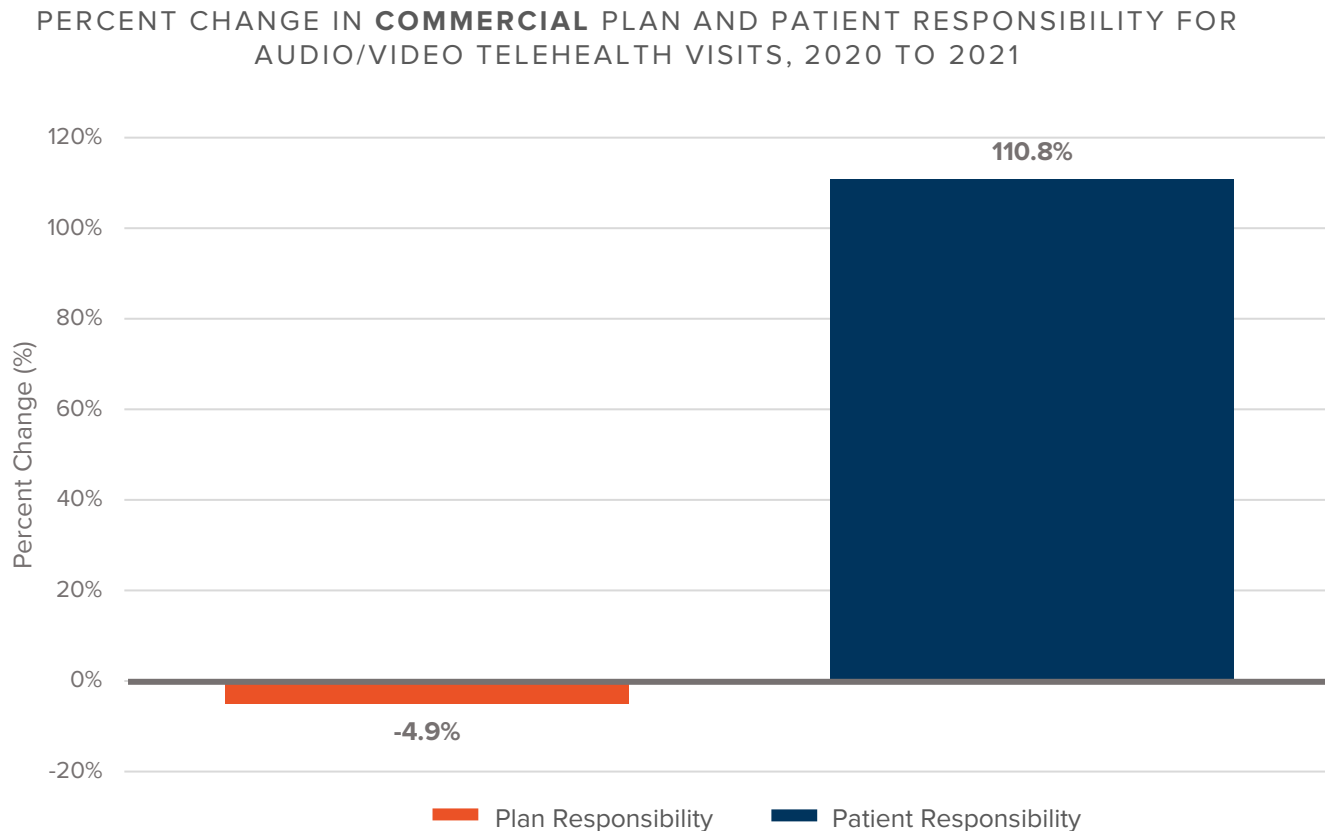
COST COMPARISON FOR AUDIO-VIDEO TELEHEALTH VISITS

TODAY						TOMORROW?
Commercial Insurance (Allowed Amount)						
2020: \$40	\$59	\$75	\$75	\$75	\$67	\$0
2021: \$48						
	Available for the uninsured	Unavailable for the uninsured	Unavailable for the uninsured	Unavailable for the uninsured	Available for the uninsured	Unavailable for the uninsured

Note: Commercial blended rates are inclusive of plan responsibility and patient responsibility for each telehealth claim. DTC refers to Direct to Consumer.
Source: CVS, Teladoc, Amwell, and Dr. On Demand's website; Trilliant Health all-payer claims database.

Commercial Patients Responsible for Higher Share of Telehealth Visit Costs in 2021 Than 2020

The average commercial cost of an audio/video telehealth visit in 2020 was \$40 and \$48 in 2021. Despite the overall cost increasing, commercial plans are responsible for 4.9% less and patients are responsible for 110.8% more in 2021.



Note: Commercial blended rates are inclusive of plan responsibility and patient responsibility for each claim.
Source: Trilliant Health all-payer claims database.

YIELD: PRICE

Average Telehealth Visit Costs Increased From 2020 to 2021

As expanded coverage of telehealth incrementally is rolled back, patient responsibility for telehealth visits is likely to increase. Notably, allowed amounts for in-person visits are traditionally higher, due in part to the ancillary services associated with office visits, but not with telehealth visits.

COMPARISON OF AVERAGE **COMMERCIAL** BLENDED RATES FOR TELEHEALTH AND IN-PERSON EVALUATION AND MANAGEMENT (E&M) VISITS ACROSS MAJOR PAYERS, 2020 & 2021

Insurance Carrier	Synchronous Audio-Video		Synchronous Audio-Only		Comparable E&M Visits	
	2020	2021	2020	2021	2020	2021
AETNA	\$44	\$44	\$39	\$46	\$113	\$131
Anthem	\$28	\$35	\$33	\$39	\$115	\$122
BlueCross BlueShield	\$40	\$58	\$38	\$54	\$105	\$113
Humana	\$41	\$51	\$47	\$44	\$95	\$94
United Healthcare	\$40	\$55	\$35	\$50	\$121	\$140
Regional Plans	\$34	\$60	\$36	\$57	\$82	\$97

Note: Commercial blended rates are inclusive of plan responsibility and patient responsibility for each claim.
Source: Trilliant Health all-payer claims database.

The *Marginal Cost* of Delivering a Telehealth Visit Is Effectively \$0

1

The *price* of telehealth will decline as supply increases and demand decreases.

- While total claim payments increased between 2020 and 2021, plan responsibility declined, on average.
- Given the effective marginal cost of telehealth is \$0, suppliers charging \$50-\$75 for telehealth visits will not be viable competitors long-term, especially as no-cost options provided by health insurers become more prevalent.

2

Changes in *reimbursement* incorrectly suggest that telehealth is a luxury good.

- The average allowed amounts for a synchronous audio-video telehealth visit among five of the largest health insurers increased by 26% between 2020 and 2021.
- Even as demand declines, health insurers have increased allowable amounts. However, the plans are paying less in 2021 (-4.9%) and patients are paying more (+110.8%).

3

Sustained adoption telehealth must be both economically neutral to traditional providers and preferred by the patient.

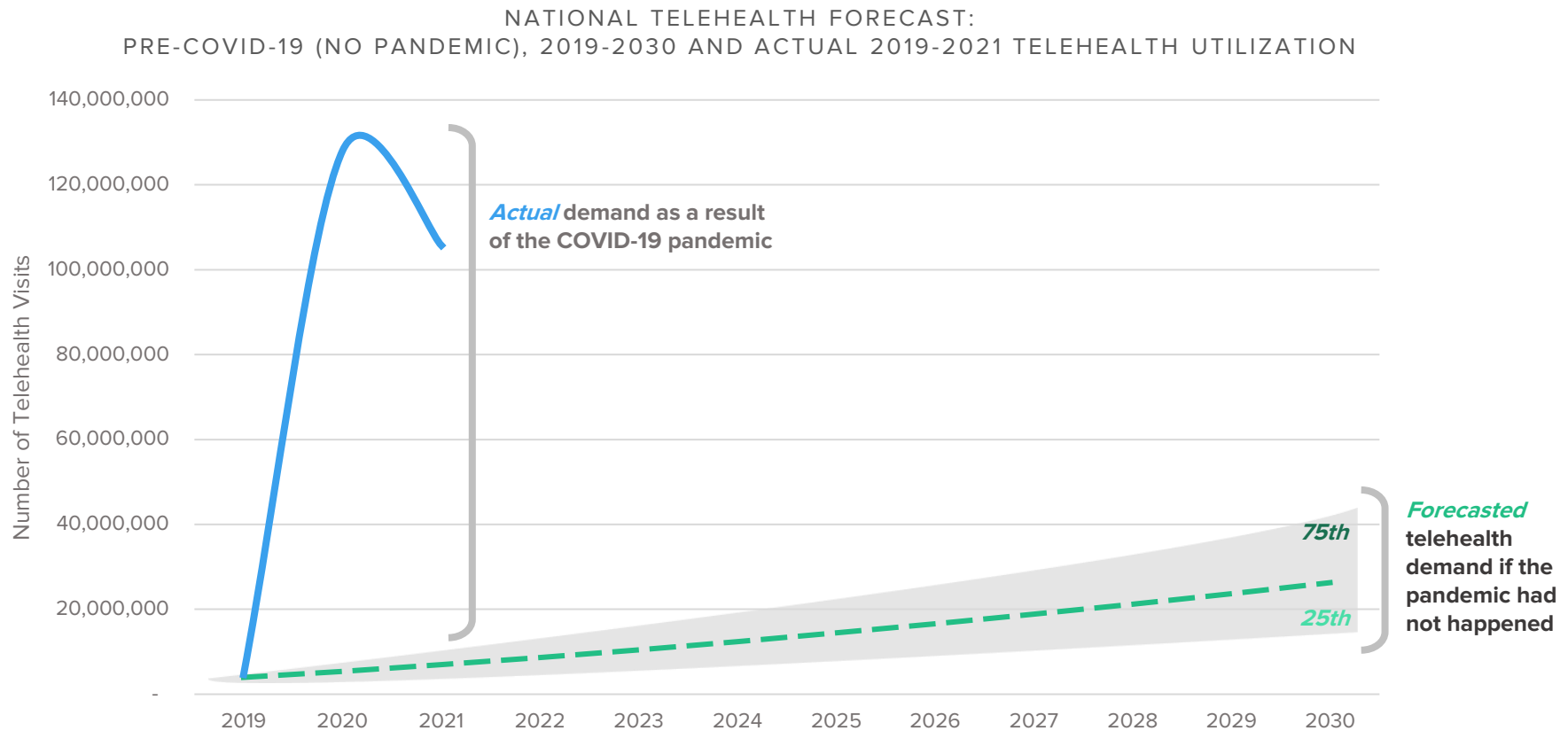
- Facilitating access to telehealth does not guarantee adoption.
- Patients will not view telehealth as a substitute good if the perceived quality is not aligned with comparable in-person care.
- The “acceptable” yield from delivering telehealth services is fundamentally different for traditional providers as compared to new retail entrants.

CONCLUSION

CONCLUSION

Will the Trajectory of Future Demand Regress to the Pre-Pandemic Mean?

National volume of telehealth services were projected to be 3.6M before the onset of the pandemic; actual volumes in 2020 exceeded 120M visits.



Note: CAGR denotes Compound Annual Growth Rate.

Source: Trilliant Health's proprietary demand forecast model, all-payer claims database.

CONCLUSION

Telehealth TAM Will Be Increasingly Constrained by the Impact of Increasing Supply, Decreasing Demand, and Decreasing Marginal Cost of Delivery

Considering economic principles, the price of a telehealth visit should decline given supply exceeds demand.

SCENARIO	PATIENT VISIT COST	TELEHEALTH PATIENTS	TOTAL ADDRESSABLE MARKET FOR TELEHEALTH
1 The current price-setter in a market where all 2020 and 2021 telehealth patients continue telehealth use	\$67	77M	$\$67 \times 77\text{M} \times 5 \text{ visits} =$ \$25.75B
2 Walmart is the price-setter in a market where only Average, High, and Super Utilizers continue telehealth use	\$67	12M	$\$67 \times 12\text{M} \times 5 \text{ visits} =$ \$4B
3 Access to telehealth services becomes part of an Amazon Prime membership (hypothetical)	\$15/month	148M	$\$15 \times 148\text{M} =$ \$2.2B
4 Commercial health plans (e.g., United Healthcare) offer telehealth for enrollees at no cost, bringing the effective marginal cost down to \$0 in a market where all commercially insured individuals could use that benefit	~\$0*	252M**	$\$0 \times 252\text{M} \times 5 \text{ visits} =$ \$0

*Not accounting for monthly enrollee premiums

**Combination of privately insured Americans (228.6M) and Medicare Advantage beneficiaries (24M)

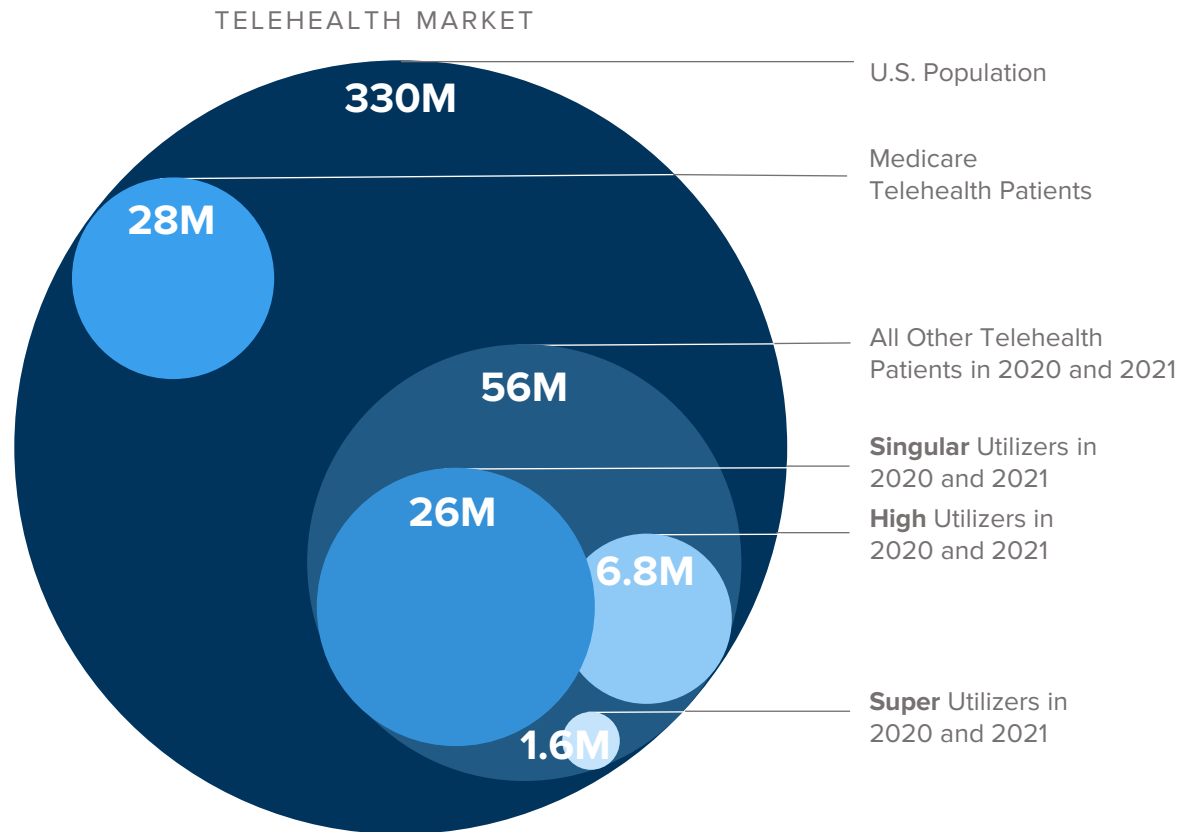


Note: Reference p.21 for the definitions of each telehealth utilization profile. TAM represents Total Addressable Market.

CONCLUSION

The TAM for Telehealth Parallels Luxury Good Markets...But Is Telehealth a Luxury Good?

The post-pandemic market of telehealth consumers will be concentrated to a small segment of the population. Considering COVID's "forced adoption" among singular utilizers, the most conservative estimates of the future telehealth market is <10M consumers.



BRANDS WITH <10M CONSUMER MARKETS

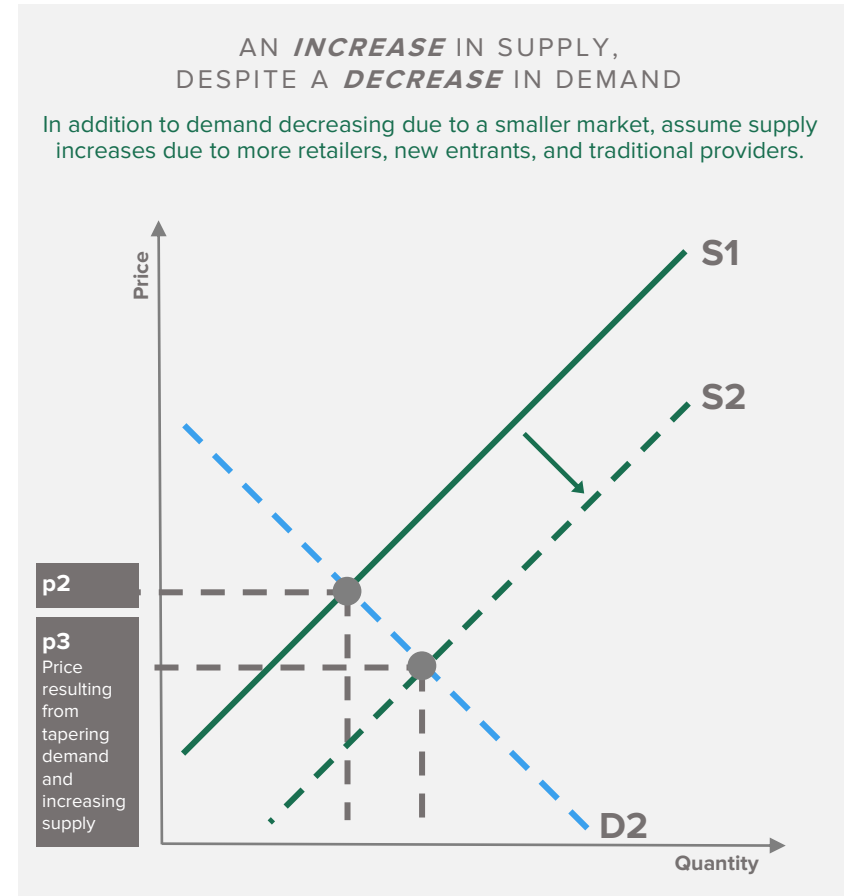
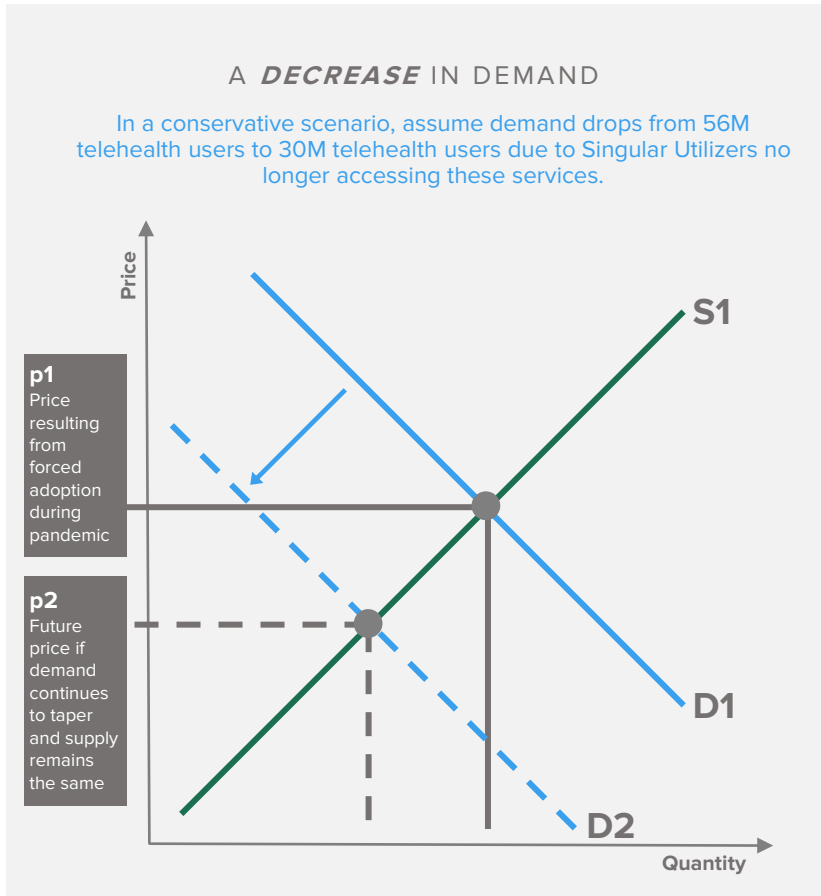


Note: TAM represents Total Addressable Market. In 2020 and 2021, there were 56M observed telehealth patients sourced from Trilliant Health's all-payer claims database; the Medicare totals were sourced from CMS data encompassing March 1, 2020, and February 28, 2021. Due to CMS data limitations, the utilizer segmentation methodology was not applied to the full set of Medicare telehealth patients. Also, there is likely overrepresentation of traditional Medicare and Medicare Advantage between CMS data and Trilliant Health's all-payer claims database. Luxury brand market sizes were determined for U.S. segments to be comparable to telehealth consumers. Reference p.21 for the definitions of each telehealth utilization profile. Source: Trilliant Health national all-payer claims and consumer datasets; publicly available company data.

CONCLUSION

Post-Pandemic Telehealth Supply Exceeds Consumer Demand

As demand tapers and supply remains stable, yield (in the form of price) will also periodically move lower and lower.



— Supply — Demand — Yield — Future — Present

Note: Between 2020 and 2021, we observed 752K unique providers rendering at least one telehealth encounter. Singular Utilizers are defined as telehealth users with only one observed telehealth visit between 2020 and 2021. The market is already oversupplied: 752K Providers / 56M Telehealth Patients = ~74 Patients Per Provider.

METHODOLOGY

METHODOLOGY

Study Data

A variety of data sources were leveraged as part of this research, with most insights gleaned from Trilliant Health's proprietary datasets with visibility into patients and providers across the country. Trilliant Health's national all-payer claims dataset combines commercial, Medicare Advantage, traditional Medicare, and Medicaid claims, which provides a nationally representative and statistically significant sample accounting for more than 300M American lives on a deidentified basis (i.e., there is no single repository of *all* healthcare encounters in the U.S.). Trilliant Health's consumer dataset includes a range of psychographic (e.g., behaviors, preferences), demographic, social determinants (e.g., broadband), and lifestyle (e.g., wearable) data, inclusive of variables sourced from Choreograph, Patient Bond, and ESRI. Trilliant Health's proprietary Provider Directory enabled direct view into providers and their practice patterns nationally.

Certain trends exclude traditional Medicare claims due to limitations in time period alignment attributed to data release schedules from the Centers for Medicare and Medicaid Services (CMS). Additional data were obtained from a variety of publicly available sources (and are noted in respective source notes), including individual health plan and company financial statements, Census Bureau, Kaiser Family Foundation, National Committee for Quality Assurance (NCQA), and the American Association of Medical Colleges (AAMC).

Most data are presented with a national view, while some were exclusively focused on counties or the largest markets – defined as the Core-Based Statistical Areas (CBSAs) – as representative and illustrative of overarching national trends. This research does not include data from self-pay telehealth encounters or telehealth encounters provided at no cost through commercial insurers. Throughout the report, the pandemic timeframes are defined as Pre-Pandemic: (April 2019 – February 2020), Pandemic (2020): (March 2020 – December 2020), and Pandemic (2021): (January 2021 – November 2021). Data for December 2021 was excluded due to lack of claims completeness at the time of analysis.

When referring to Behavioral Health encounters, visits were categorized into the Major Diagnostic Categories 19 (Mental Diseases and Disorders) and 20 (Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders).

METHODOLOGY

Analytic Approach

Consumer attributes were matched to deidentified patient tokens to develop telehealth utilizer profiles. Using the distribution of all telehealth visits, we created a segmentation framework building on the average number of visits per patient (5-6 visits).

Building on our initial analysis of telehealth utilization featured in our [2021 Trends Shaping the Health Economy Report](#), we examined the data longitudinally to account for the ongoing changes attributed to the COVID-19 pandemic. We added an additional eight months of pandemic-era claims data from March 2021 to November 2021 to account for vaccinations and authorization of new COVID-19 therapies, spread of two new COVID-19 variants, and an influx of data and definition changes released by HHS and CMS. Due to the significant changes in how telehealth was both defined and used with the additional pandemic year (2021), we updated our approach (as summarized in Table 1) for this study accordingly.

To establish a baseline for telehealth utilization under non-pandemic circumstances, we applied Trilliant Health's proprietary Demand Forecast model to project future telehealth demand (with 25th, 50th and 75th percentile outputs). Forecasts were created using machine learning methods and do not account for actual telehealth utilization during the COVID-19 pandemic, but rather the drivers of demand (e.g., population shifts, disease burden, care patterns) that were taking hold before the pandemic.

Table 1.
Summary of Analytic Methods Leveraged to Measure Telehealth Utilization During the COVID-19 Pandemic

	<i>2021 TRENDS SHAPING THE HEALTH ECONOMY</i>	<i>2022 TELEHEALTH TRENDS</i>
Months of pandemic-era claims data	12 months (March 2020 – March 2021)	20 months (March 2020 – November 2021)
Scope of telehealth	Narrow (synchronous audio-video only)	Broad (audio/video, audio-only, & asynchronous)
Pandemic timeframe	Beginning in April 2020	Beginning in March 2020
Observed visits in April 2020	>12M (narrow definition)	>16M (expanded definition)

Note: The pandemic timeframe was adjusted to March 2020 to account for new observations that overall healthcare visit volumes began to decline in February 2020.

Acknowledgements

Study Authors

- Sanjula Jain, Ph.D., Senior Vice President of Market Strategy & Chief Research Officer
- Katie Patton, Research Analyst
- Kelly Boyce, M.S., Senior Data Analyst
- Maggie Jackson, Director of Data Visualization
- Nancy Organ, Data Visualization Developer

From whiteboarding the initial concepts to artfully articulating the intricacies of each data story, this study would not have been possible without the significant contributions of our Trilliant Health colleagues. The tremendous efforts of our colleagues in data engineering built the foundation upon which we could conduct an analysis of this scale with ease and speed.

Many thanks to David Taylor, Jason Nardella, Chris Pearcey, Lindsey Swearingen, Jim Browne, Jason Esau, and Dean McKee for their data science and analytics support. We are grateful to Hannah Pike, Kendra Rodgers, Timothy Nobles, Kelsey Thomas, Anna Jordan, and Hal Andrews for their detailed and thoughtful review from the content to copy edits.

Disclaimer

This presentation and the information contained herein is provided "AS IS", and Trilliant Health hereby disclaims any and all warranties, whether express or implied, statutory or otherwise, and Trilliant Health specifically disclaims all implied warranties of fitness for a particular purpose, title and non-infringement. In addition, this presentation includes information prepared by third parties that Trilliant Health cannot independently verify.

The information contained herein based upon what Trilliant Health believes are reasonable assumptions, but there can be no assurance that forward-looking statements or predictions will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Trilliant Health undertakes no obligation to update forward-looking statements if circumstances or management's estimates or opinions should change.

**To access more research from our
Trends Shaping the Health Economy Series,
visit:**

trillianthealth.com/insights/the-compass

