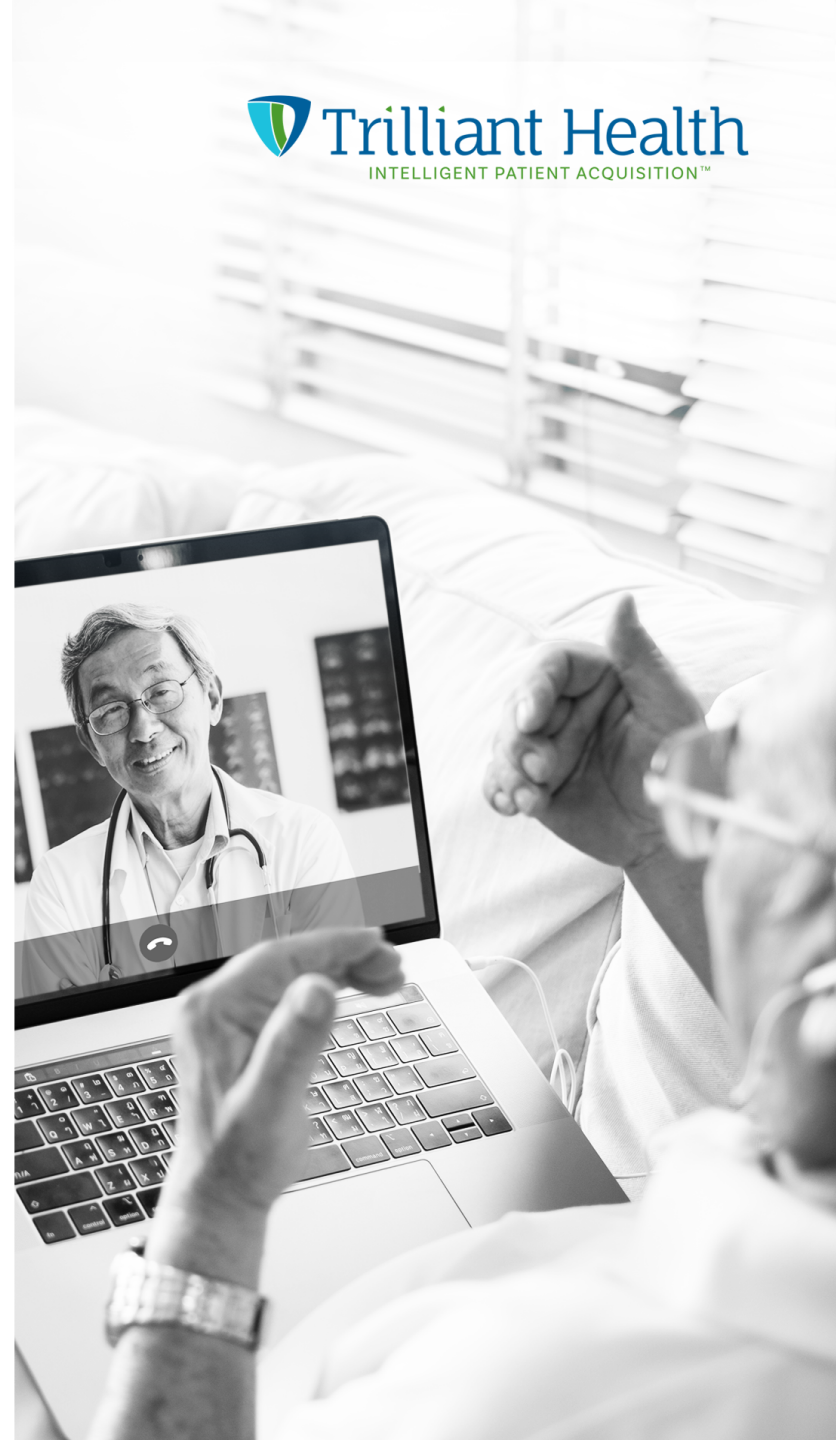


# 2021

Trends Shaping the  
**Post-Pandemic**  
Health Economy



# Data Stories as a Guide to the Post-Pandemic Health Economy

Healthcare plays a massive societal role. It is complex and represents a growing economy. Defining trends of the last decade – from consumer expectations for Amazon-like services to “non-traditional” provider entrants– will continue to accelerate in the years ahead. **Improving the speed and quality of decision making among every healthcare stakeholder has never been more critical.** But in an economy defined by constant change, the challenges of effective decision making placed on healthcare executives, from hospital operators to the policymakers, are even more acute. In my experience working with senior executives and board members of the nation’s largest health systems, health services and supplier organizations, and Fortune 500 healthcare companies, I have seen **organizations lack the appropriate information needed to make effective decisions.**

**The health economy creates more data than any other part of the economy,** but healthcare has historically been challenged to gather, distill and analyze the data in a way that allows healthcare executives to operationalize it as meaningful information. As an industry:

- We are prone to gather and analyze data in silos - EMRs vs ERPs, trends in Medicare vs trends in digital health, etc.
- We are satisfied with data that is **"directionally correct"** instead of demanding data that is **"statistically valid"** leading us to make go-forward decisions rooted in historical trends that assume status quo.
- We extrapolate a discrete data point, something that is true of 5% or 10% of the population, to 100% of the population

Executive teams don't have the luxury of **time to collect, filter, synthesize and interpret the wealth of critical insights needed to inform their strategies.** With this inaugural data trends report, I intend to offer all of us in the industry a foundational framework.

**Data tells a story,** sometimes good and sometimes bad. There are an endless number of stories I could have shared, but this year we start with 120+ all grounded in facts about the past and sophisticated machine learning models about the future, with minimal reliance on survey data. Armed with these trends that integrate data stories across the health economy, I hope this report will cause you to reflect on the future of the U.S. health economy, and the role your organization is best suited to play. I hope that you will use this report as a compass in developing and implementing the strategic solutions the U.S. healthcare so desperately needs. I encourage you to read this report in order. Each story stands on its own, but additional context comes from the connectivity between these stories. Each story will resonate differently based on your respective vantage point, but **there is something in here for everyone that touches the nearly \$4T health economy.**

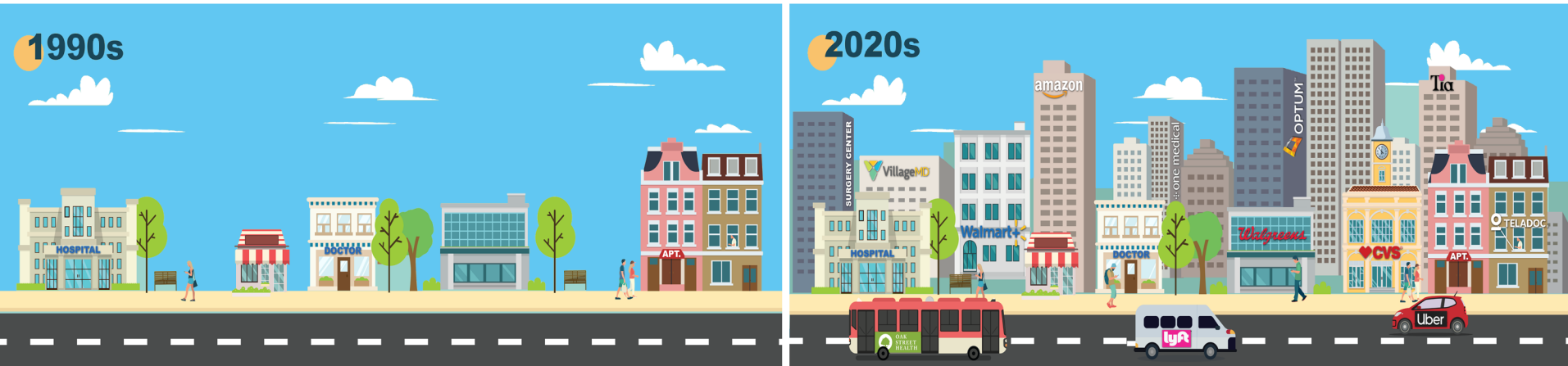
**–Sanjula**

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

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# The Health Economy



**The U.S. health economy is the largest sector of the largest global economy.** Hospitals constitute the largest segment of the U.S. health economy, serving both as the provider of last resort and a vital part of the local economy in every community, as the COVID-19 pandemic painfully reminded us.

For decades, the U.S. health economy has operated as if the fundamental rules of economics – **demand, supply, and yield** – do not apply. Our thesis is that this is not sustainable, particularly for hospitals and health systems that operate in what game theorists call a “negative-sum game” which has several immutable economic rules.

In this inaugural report, we hope to persuade longstanding players in the health economy to re-examine their longstanding assumptions about the basic economics of their business. Of note, is Peter Drucker’s observation that the hospital is **“altogether the most complex human organization ever devised.”** Simply said, delivering healthcare efficiently is more challenging for a hospital than any other provider...and there are more providers competing for the consumer’s loyalty than anyone realizes in today’s health economy.

## INTRODUCTION CONTINUED...

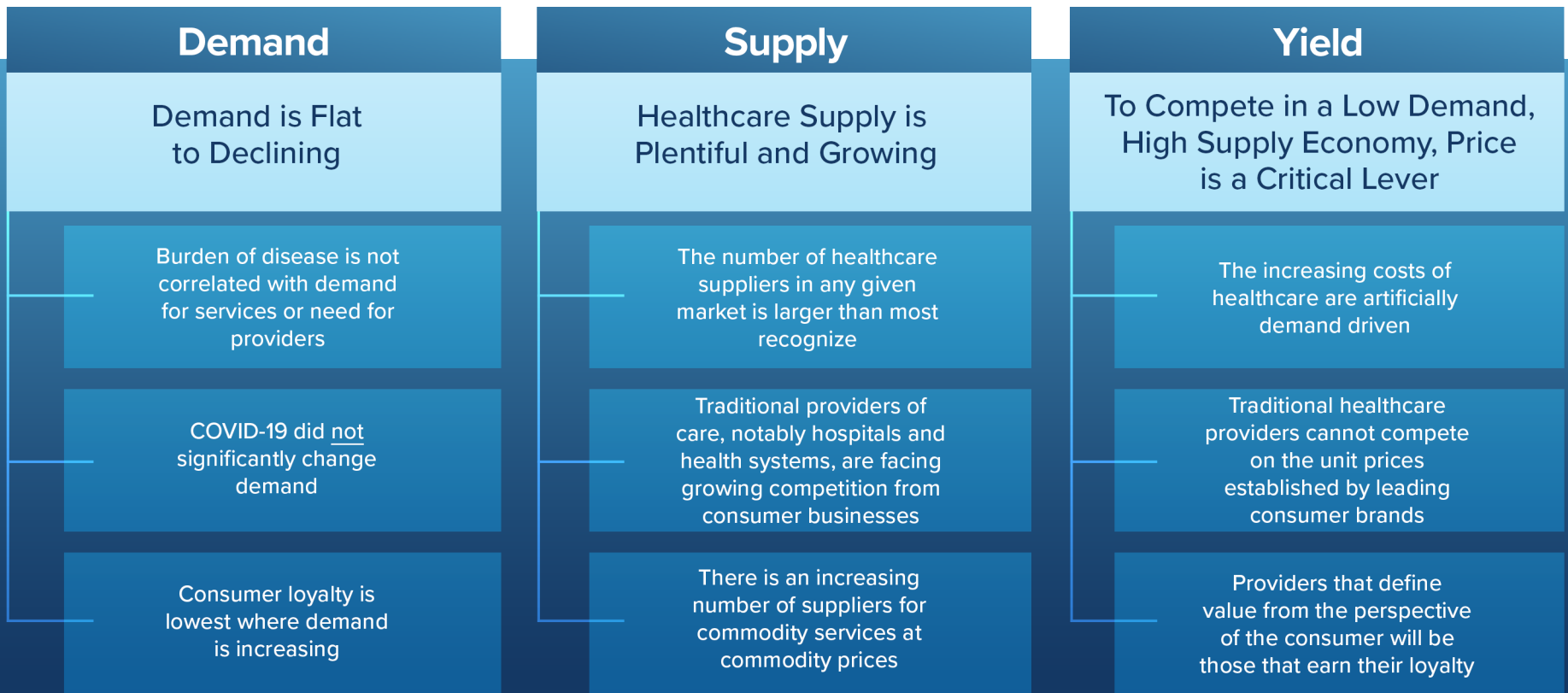
If hospitals are required to play by different rules than the competition, then it is critical that they play by the one rule that applies to all market participants: the **basic rules of economics**. Doing so requires an accurate and continuous understanding of consumer **demand and supply** for healthcare services, which **ultimately determines yield**.

As healthcare executives begin developing strategies to guide their organizations in a health economy recovering from the global **COVID-19 pandemic**, insight into the demand, supply and yield equation will help us distinguish between commonly held anecdotes and the data-informed truths. **For example:**

<i>The Anecdote</i>	<i>The Fact</i>
Patients are loyal	Patients are consumers, and consumers are <b>not</b> loyal
Everyone loves telehealth	Less than <b>15%</b> of the U.S. population used telehealth in 2020
Surgeons are splitters	<b>PCPs</b> are splitters
If we win the hearts of Mom, we win the family	Women are <b>less loyal</b> to a system than men
If you build it, they will come	Consumer preference is based on <b>psychology</b> , not “location, location, location”
Demand is derivative of burden of disease	Demand is flat to declining <b>despite</b> increasing burden of disease
<i>Not much changes much in healthcare</i>	<b>Everything changes</b>

**What follows is a fact-based, data-driven analysis of the trends that will define the landscape, and subsequent challenges, for all players in the post-pandemic health economy.**

# Winning Strategies in the Health Economy Require Data-Driven Insight into Demand, Supply and Yield





# DEMAND

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

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# DEMAND

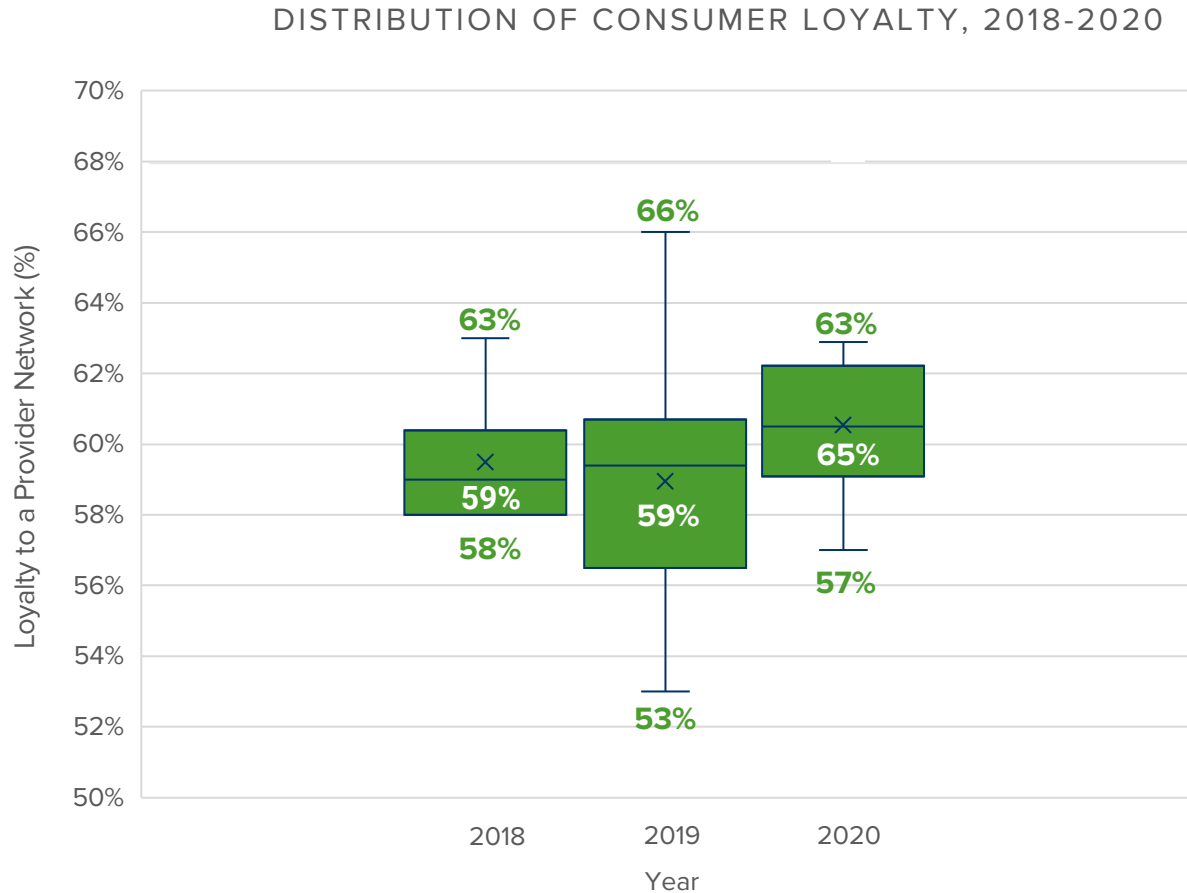
*Consumer Loyalty*



## DEMAND: CONSUMER LOYALTY

# Healthcare Consumers are Not Loyal

On average, consumers in the top ten CBSAs are 61% loyal to a provider network.



Note: Consumer loyalty is a measure that reflects the percent of a patient's total care that was received in a single provider network (or brand). Loyalty was calculated using claims for all patients with at least five healthcare provider visits in a year.

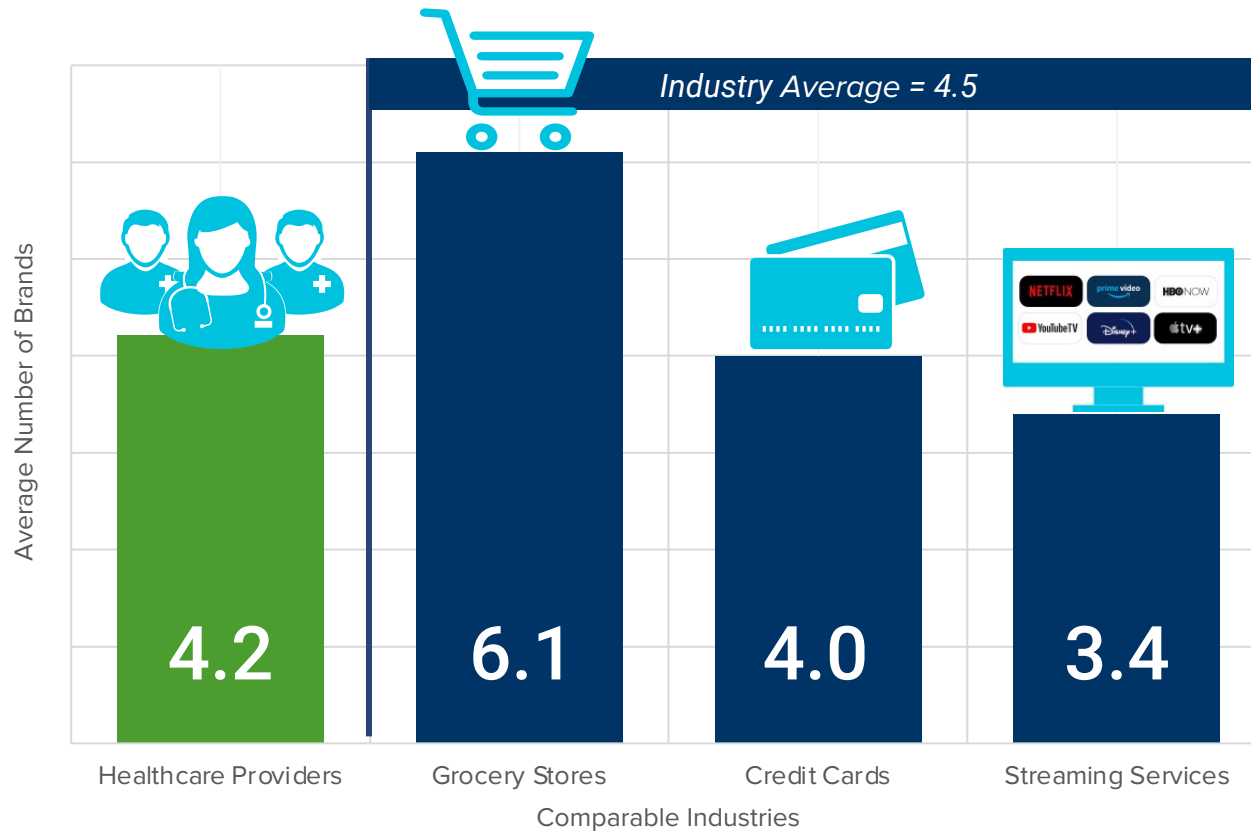
Source: Trilliant Health national all-payer claims database.

## DEMAND: CONSUMER LOYALTY

# Loyalty in Healthcare is Comparable to Other Industries

Consumers split their healthcare spending across an average of 4.2 provider brands, similar to consumer behavior in other industries with abundant choice.

NUMBER OF BRANDS AFFILIATED WITH CONSUMERS BY INDUSTRY



Note: Consumer loyalty to healthcare providers is a measure that reflects the percent of a patient's total care that was received in a single provider network (or brand). Loyalty was calculated using claims for all patients with at least five healthcare provider visits in a year.

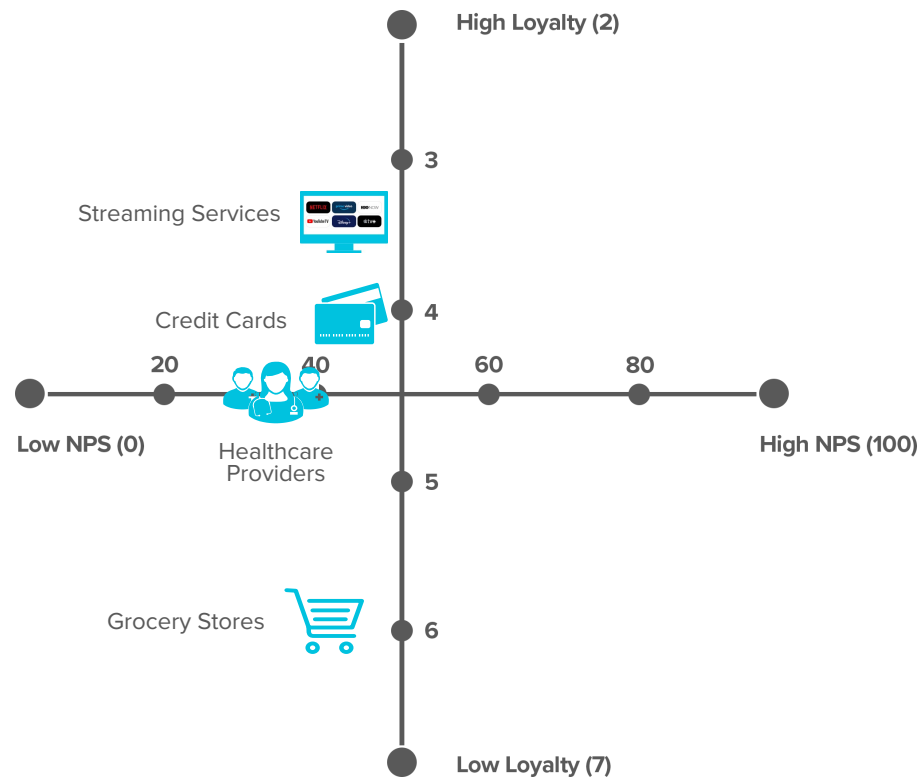
Source: Analysis of publicly available consumer purchase trend datasets; 2018-2020 and Trilliant Health national all-payer claims database, 2020.

## DEMAND: CONSUMER LOYALTY

# Consumer “Satisfaction” is Not Correlated with Loyalty

Where consumers spend their dollars is a more precise measure of loyalty than self-reported satisfaction (i.e., NPS).

LOYALTY TO BRANDS VS. NET PROMOTER SCORES (NPS)  
IN SELECT INDUSTRIES, 2018-2020

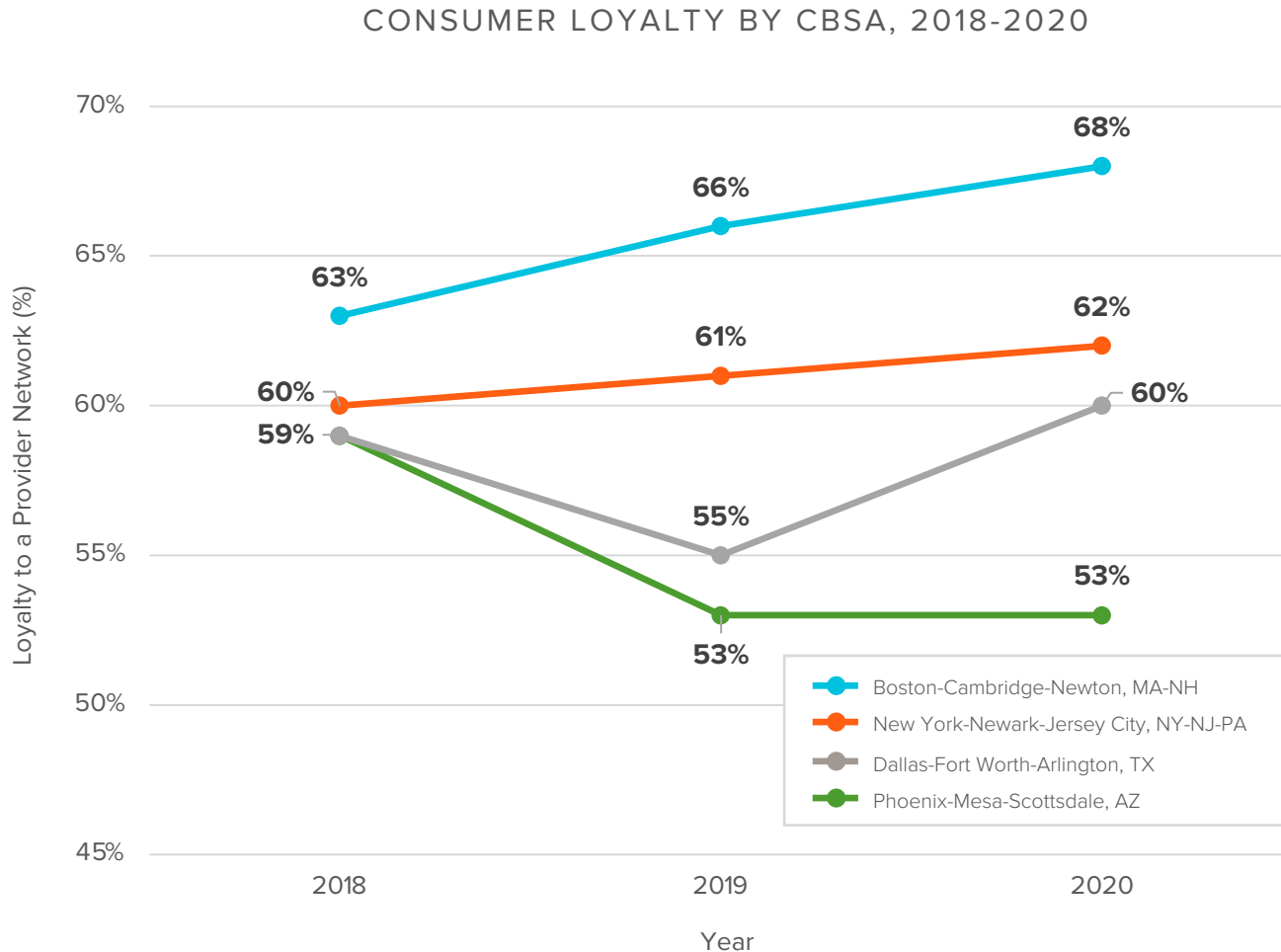


Note: Loyalty is a measure of the number of brands where consumers “split” or spend their dollars. Splitting across fewer brands denotes higher loyalty.  
Source: Analysis of publicly available Net Promoter Score (NPS) data; 2018-2020.

## DEMAND: CONSUMER LOYALTY

# Loyalty to Provider Networks Varies by CBSA

Consumer loyalty is affected by numerous factors and can vary over time.



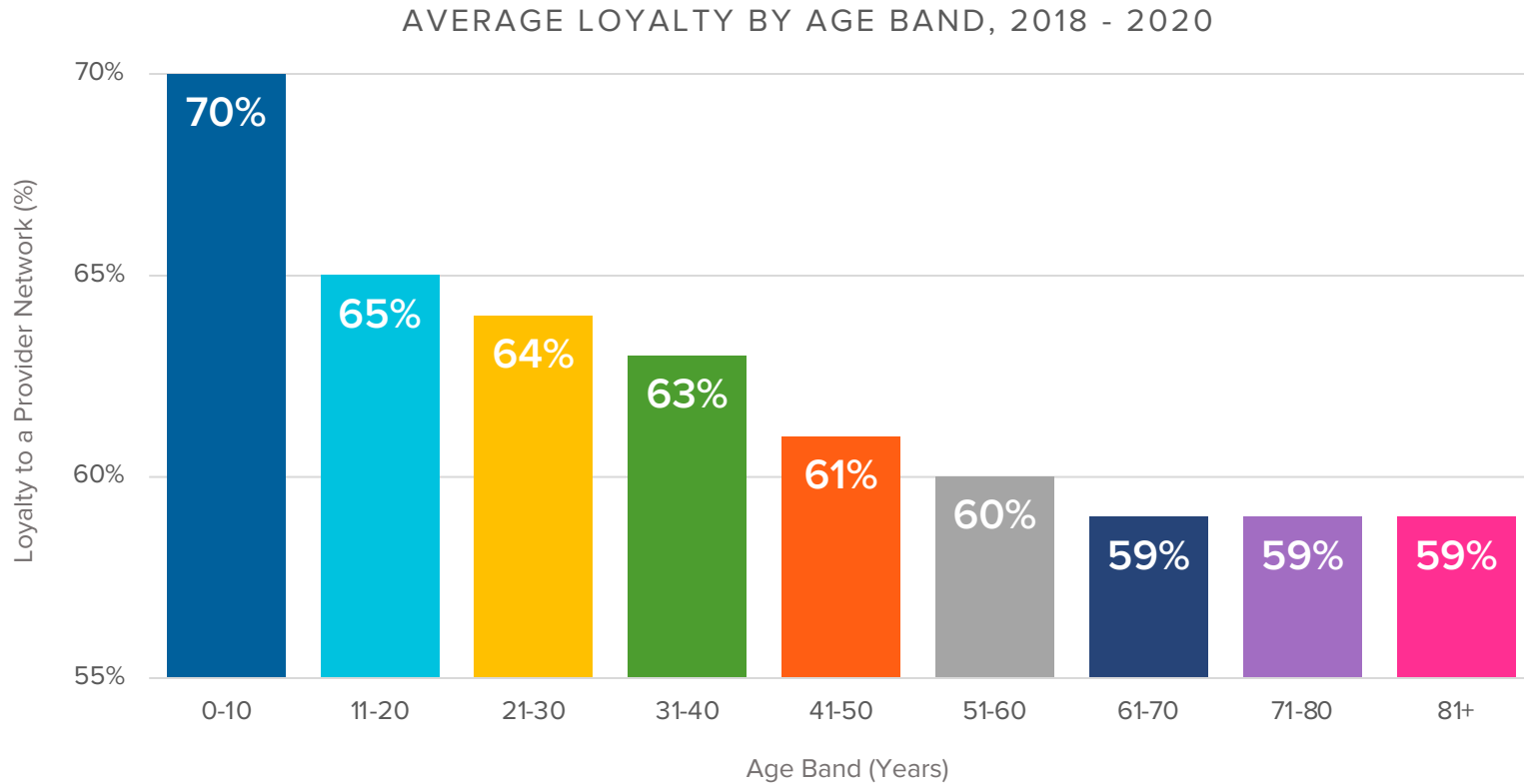
Note: Consumer loyalty is a measure that reflects the percent of a patient's total care that was received in a single provider network (or brand). Loyalty was calculated using claims for all patients with at least five healthcare provider visits in a year.

Source: Trilliant Health national all-payer claims database.

## DEMAND: CONSUMER LOYALTY

# Loyalty to Provider Networks Declines With Age

Growth in demand for healthcare services is greater in the Medicare population, which is less loyal than any other age cohort.



Note: Consumer loyalty is a measure that reflects the percent of a patient's total care that was received in a single provider network (or brand). Loyalty was calculated using claims for all patients with at least five healthcare provider visits in a year.

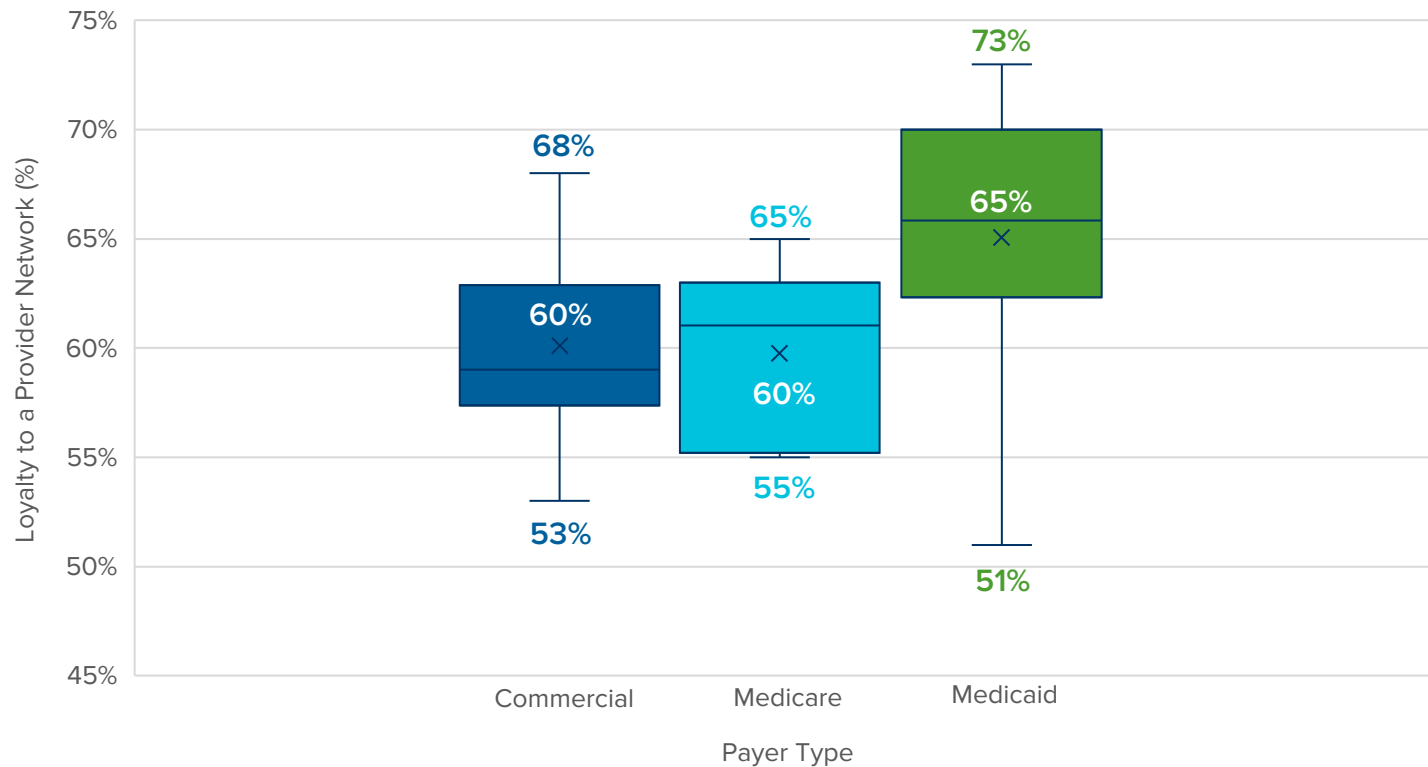
Source: Trilliant Health national all-payer claims database.

## DEMAND: CONSUMER LOYALTY

# Medicaid Patients are the Most Loyal to Provider Networks

On average, commercially insured and Medicare populations are notably less loyal to provider networks.

AVERAGE LOYALTY TO PROVIDER NETWORKS BY PAYER TYPE, 2018 - 2020



Note: Consumer loyalty is a measure that reflects the percent of a patient's total care that was received in a single provider network (or brand). Loyalty was calculated using claims for all patients with at least five healthcare provider visits in a year.

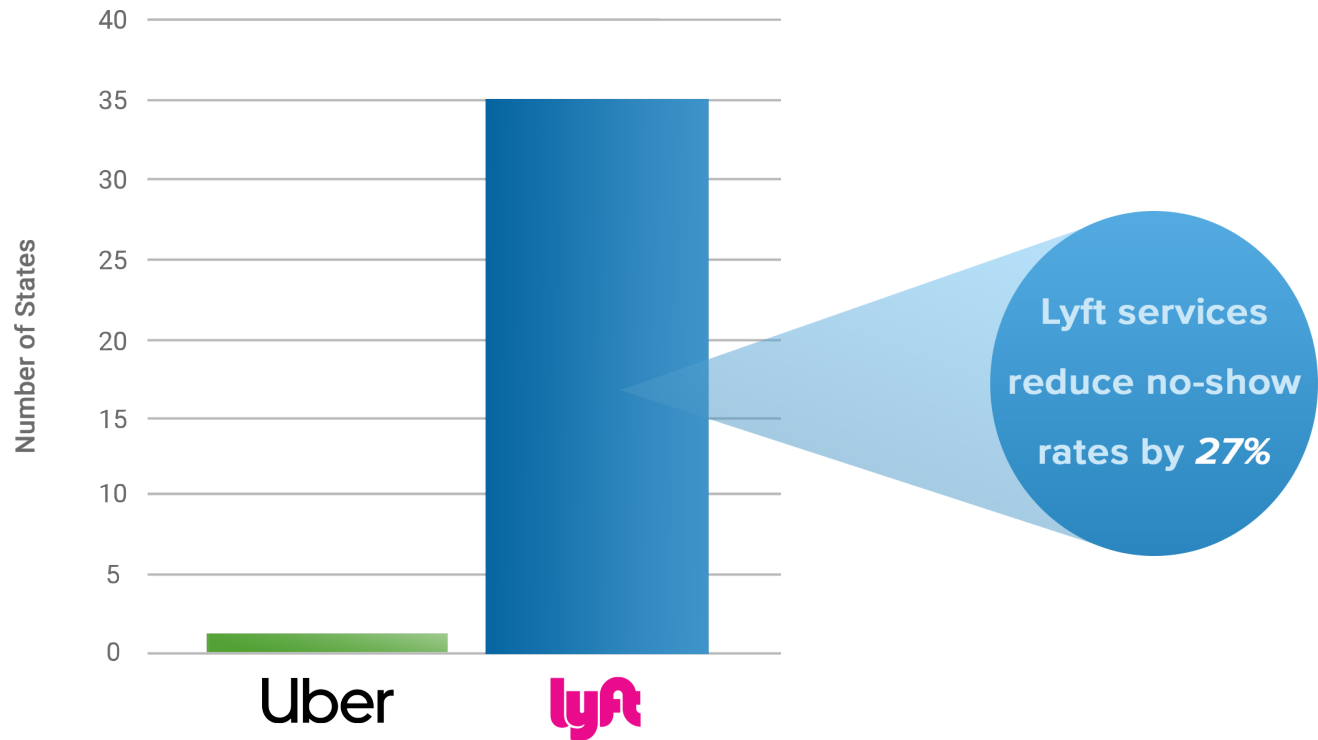
Source: Trilliant Health national all-payer claims database.

## DEMAND: CONSUMER LOYALTY

# Ride-Sharing Services Expand Access to Care Providers

Lyft's transportation services supports 22M Americans, primarily Medicaid patients, in traveling to and from appointments and broadening access to care services.

NUMBER OF STATE MEDICAID PARTNERSHIPS WITH RIDE-SHARING COMPANIES, 2020

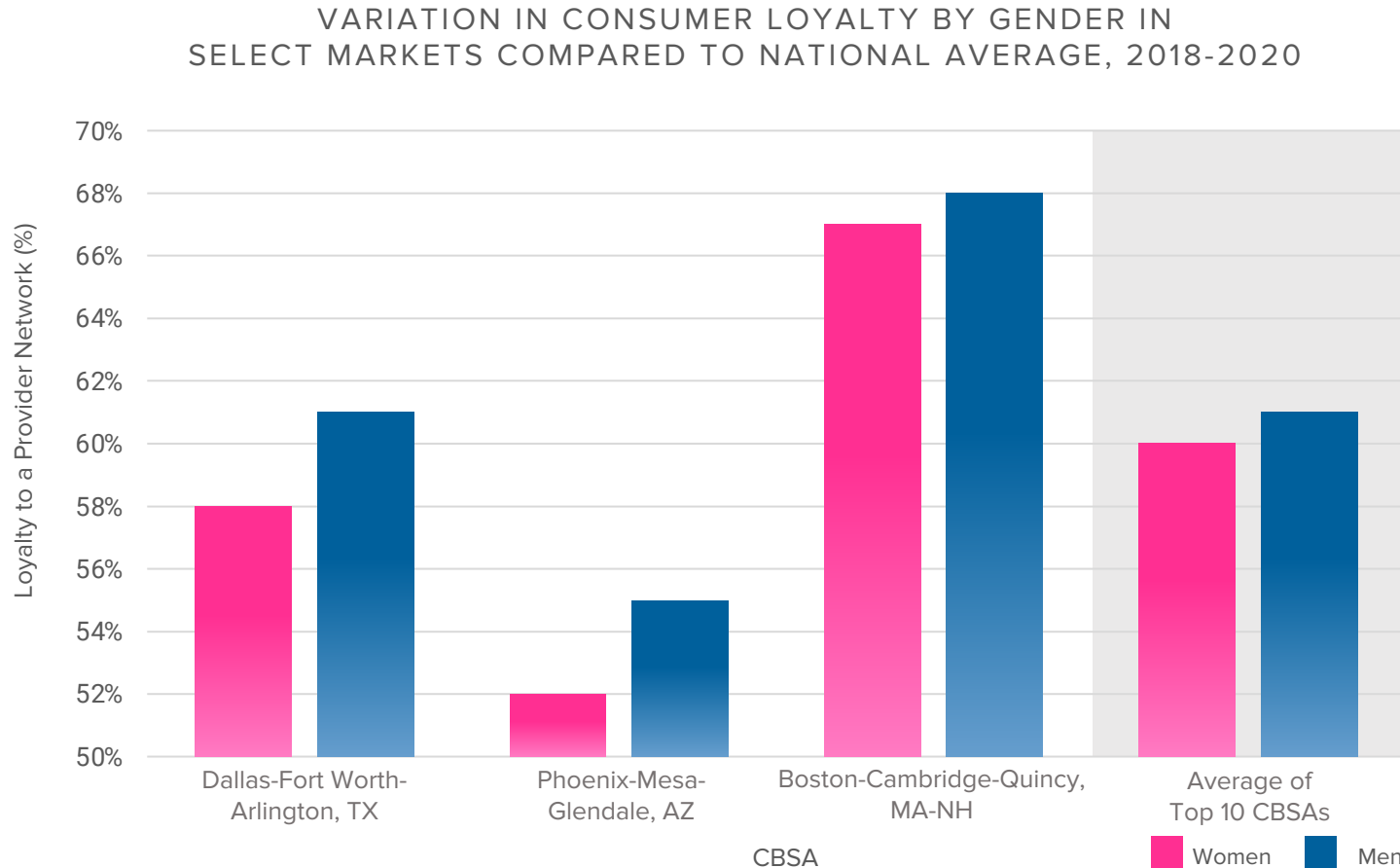


Source: Analysis of publicly reported data on Lyft website (April 2020) and Uber press releases.

## DEMAND: CONSUMER LOYALTY

# Women are Less Loyal to Provider Networks than Men

Women seek out a broader number of providers for their healthcare services than men. This is consistent across markets and over time.



Note: Consumer loyalty is a measure that reflects the percent of a patient's total care that was received in a single provider network (or brand). Loyalty was calculated using claims for all patients with at least five healthcare provider visits in a year.

Source: Trilliant Health national all-payer claims database.



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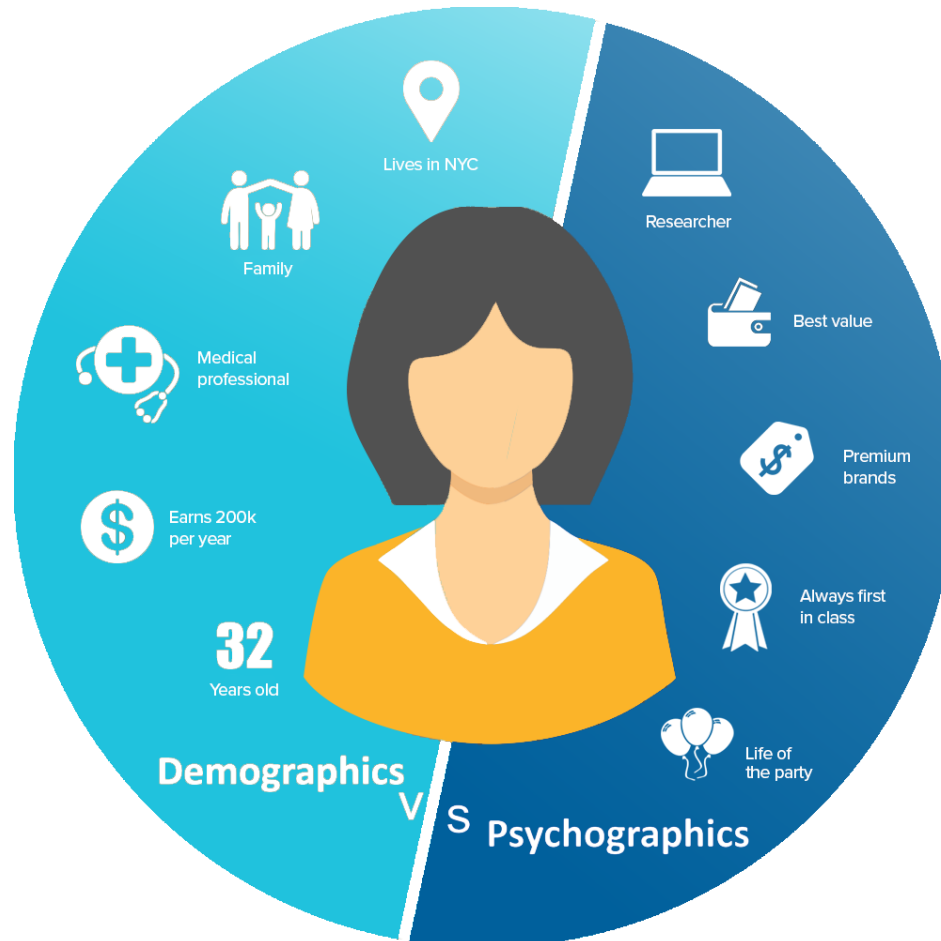
# DEMAND

*Psychographics*

## DEMAND: PSYCHOGRAPHICS

# 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.

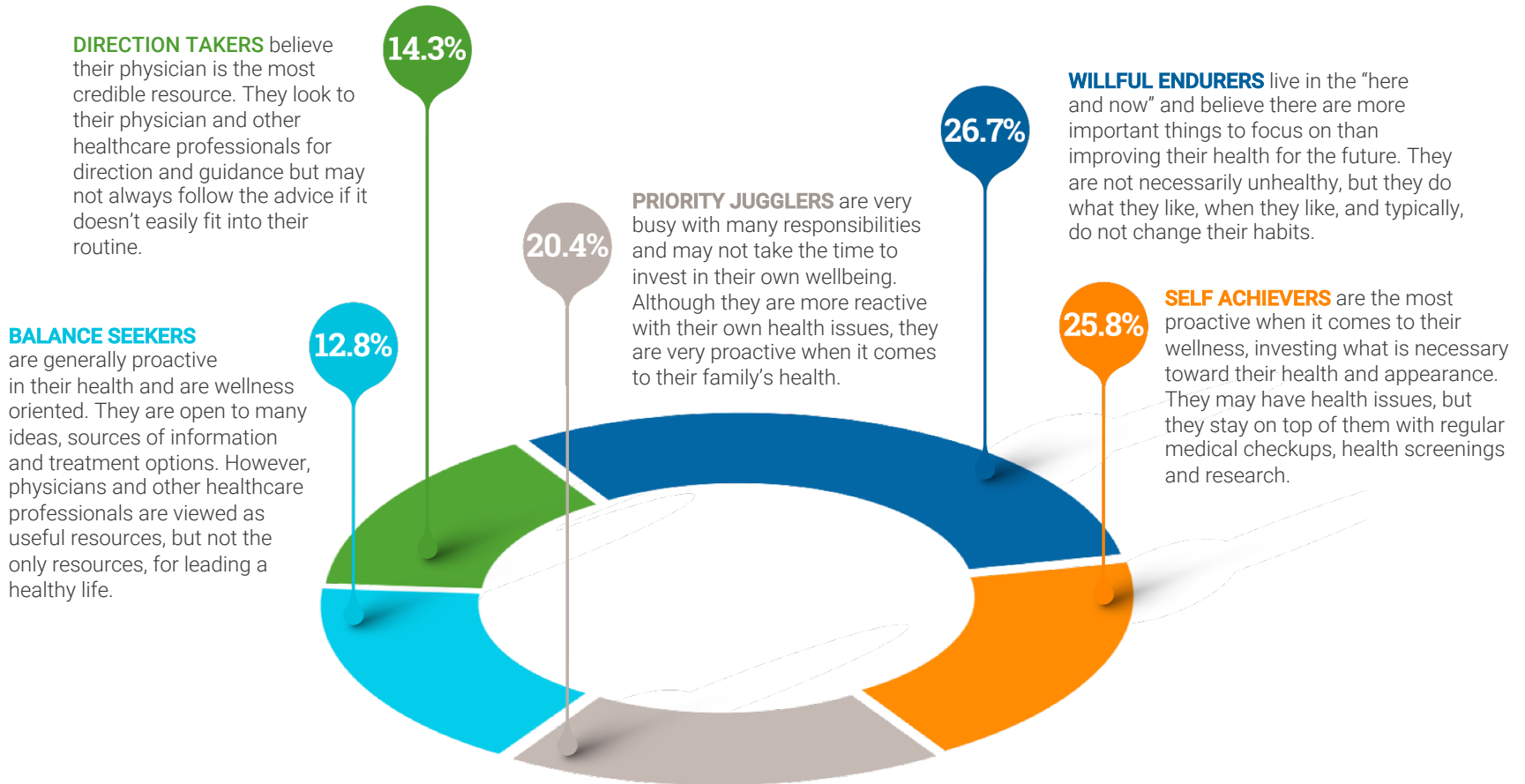


## DEMAND: PSYCHOGRAPHICS

# Consumers are Classified into 1 of 5 Psychographic Profiles

Psychographics provide insight into the “why” behind consumer choices.

### DISTRIBUTION OF HEALTHCARE CONSUMERS BY PSYCHOGRAPHIC PROFILE



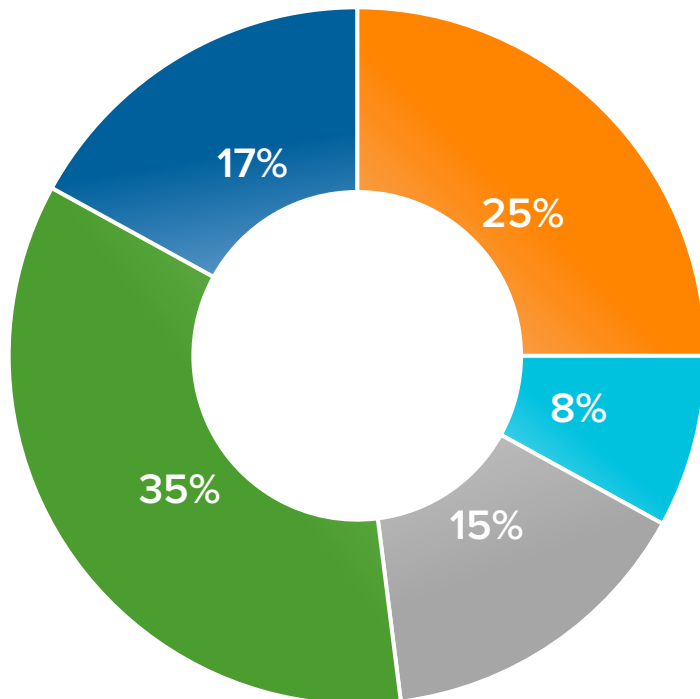
Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## DEMAND: PSYCHOGRAPHICS

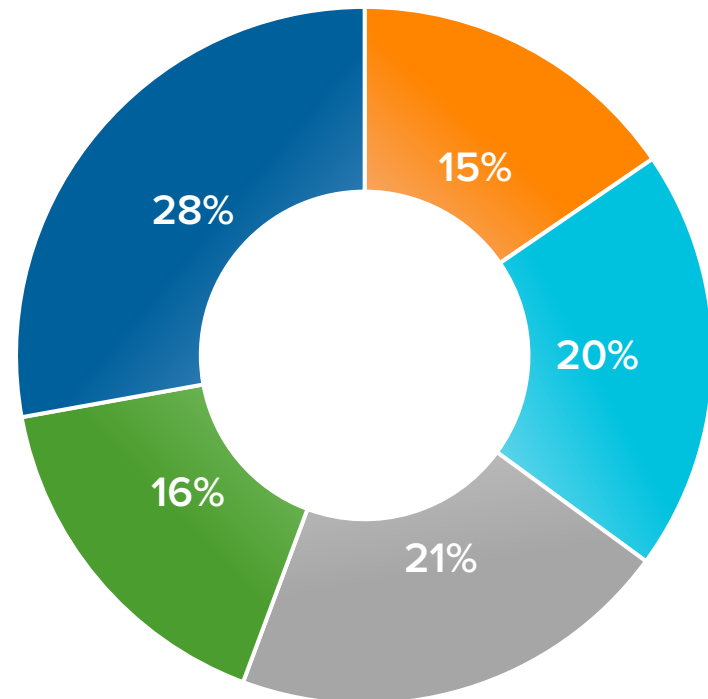
# Psychographic Profile Distributions Vary by Disease Type

A consumer's psychographic profile influences his/her compliance with care pathways. For example, diet improvement strategies that include content from branded experts will be most effective for Direction Takers.

PROPORTION OF INDIVIDUALS WITH TYPE 2 DIABETES BY PSYCHOGRAPHIC PROFILE



PROPORTION OF OBESE INDIVIDUALS BY PSYCHOGRAPHIC PROFILE



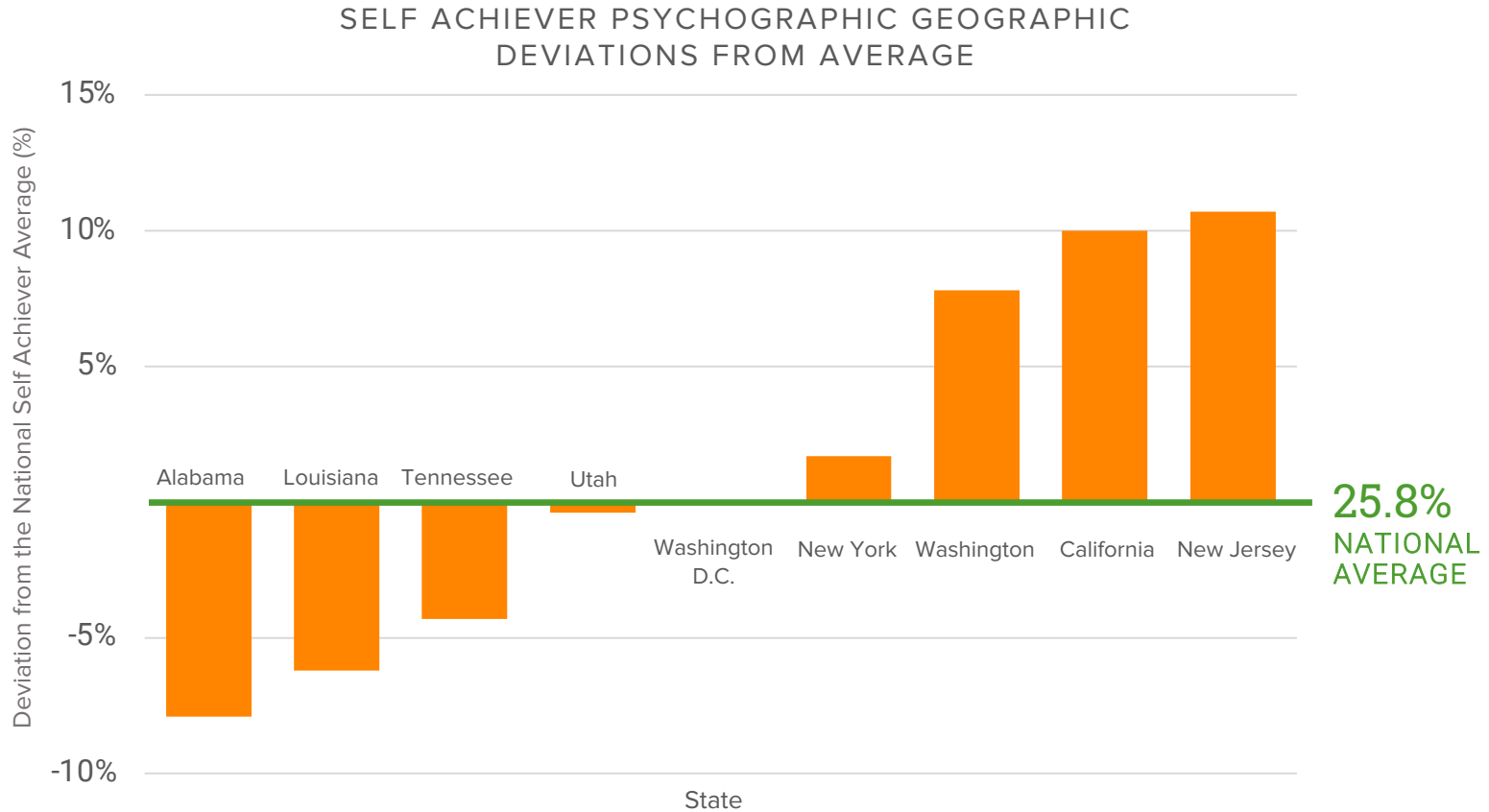
Self Achievers    Balance Seekers    Direction Takers    Priority Jugglers    Willful Endurers

Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## DEMAND: PSYCHOGRAPHICS

# Alabama and New Jersey are Outliers for Self Achievers

Self Achievers are the most proactive when it comes to their wellness, investing what is necessary toward their health and appearance. They may have health issues, but they stay on top of them with regular medical checkups, research, etc.

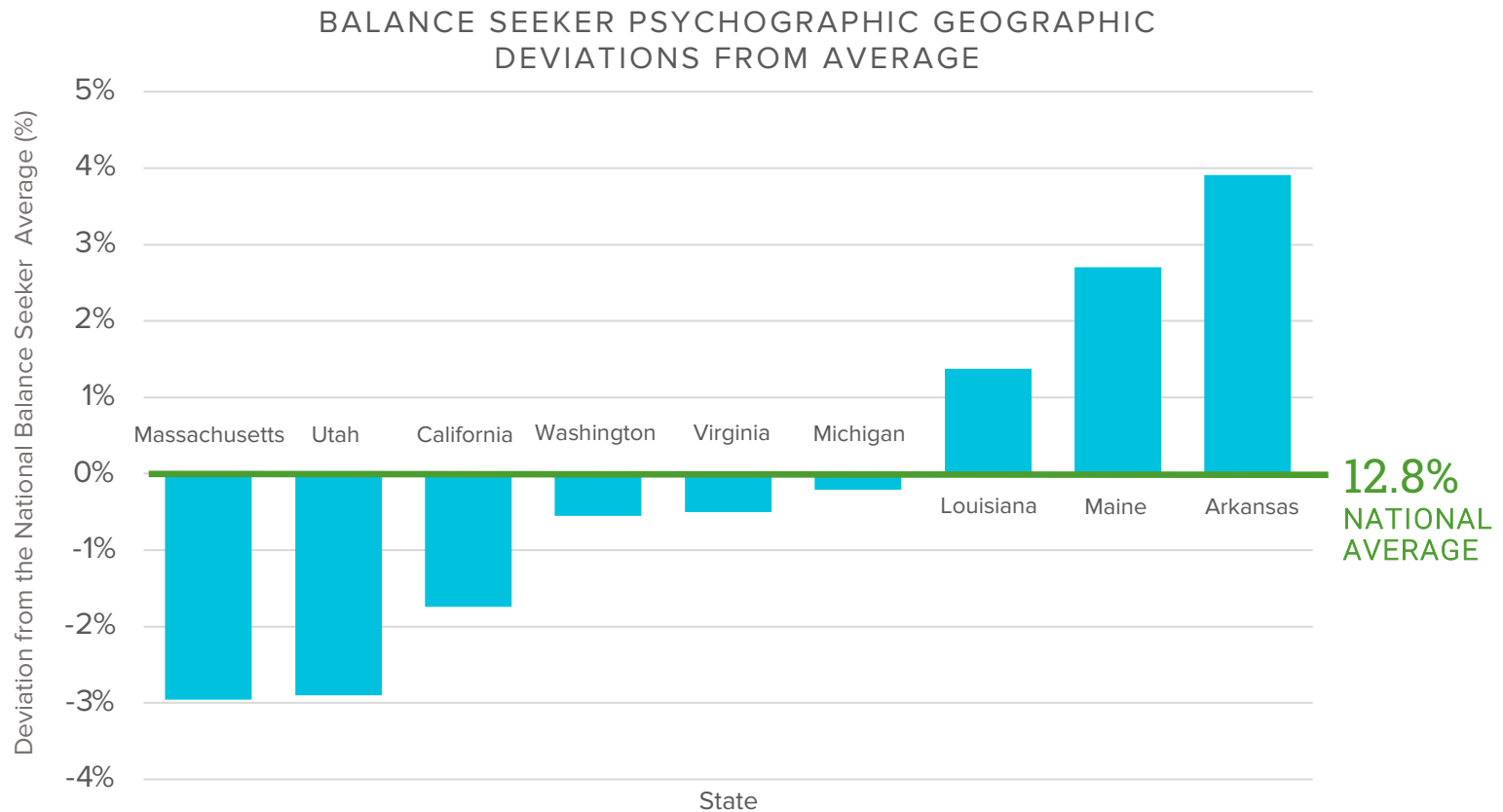


Note: Variation calculated as the percentage point difference between the proportion of Self Achiever consumers (by state) and the national average (for all states, equal to 25.8%). Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## DEMAND: PSYCHOGRAPHICS

# Massachusetts and Arkansas are Outliers for Balance Seekers

Balance Seekers are generally proactive in their health and are wellness oriented. They are open to many ideas, sources of information and treatment options. However, physicians and other healthcare professionals are viewed as useful resources, but not the only resources, for leading a healthy life.

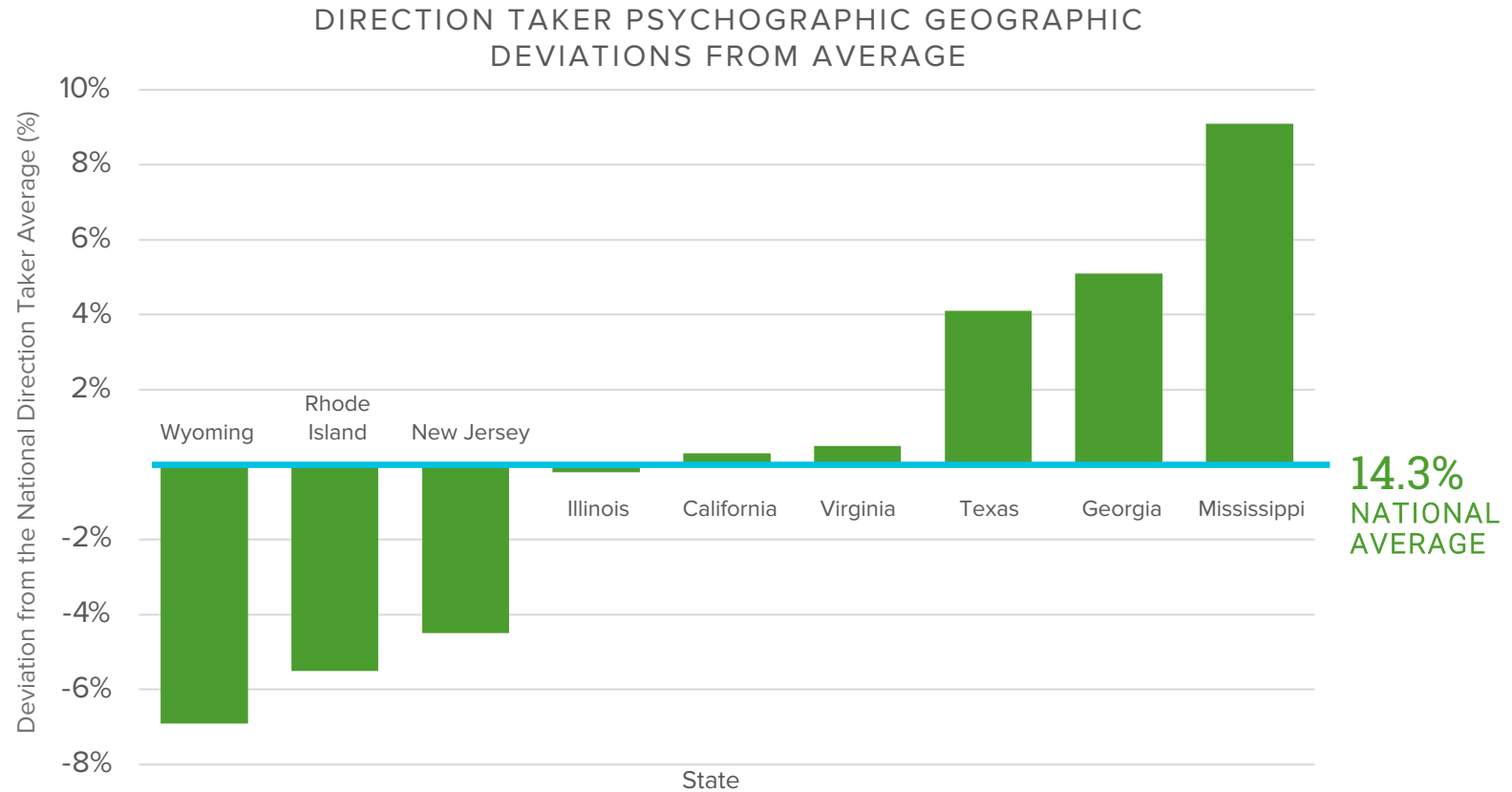


Note: Variation calculated as the percentage point difference between the proportion of Balance Seeker consumers (by state) and the national average (for all states, equal to 12.8%)  
Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020..

## DEMAND: PSYCHOGRAPHICS

# Wyoming and Mississippi are Outliers for Direction Takers

Direction Takers believe their physician is the most credible resource. They look to their physician and other healthcare professionals for direction and guidance but may not always follow the advice if it doesn't easily fit into their routine.

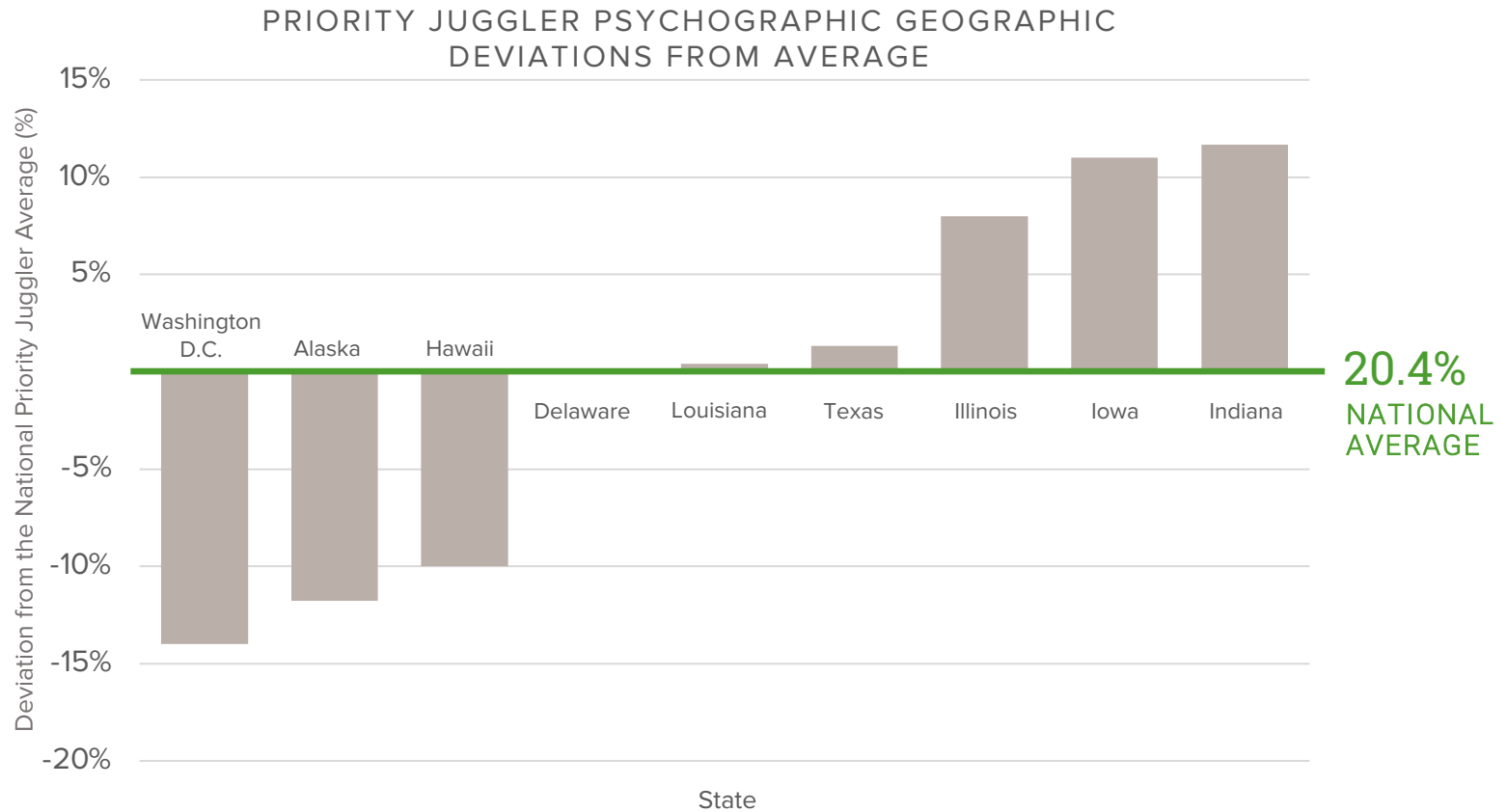


Note: Variation calculated as the percentage point difference between the proportion of Direction Taker consumers (by state) and the national average (for all states, equal to 14.3%).  
Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## DEMAND: PSYCHOGRAPHICS

# D.C. and Indiana are Outliers for Priority Jugglers

Priority Jugglers are very busy with many responsibilities and may not take the time to invest in their own wellbeing. Although they are more reactive with their own health issues, they are very proactive when it comes to their family's health.



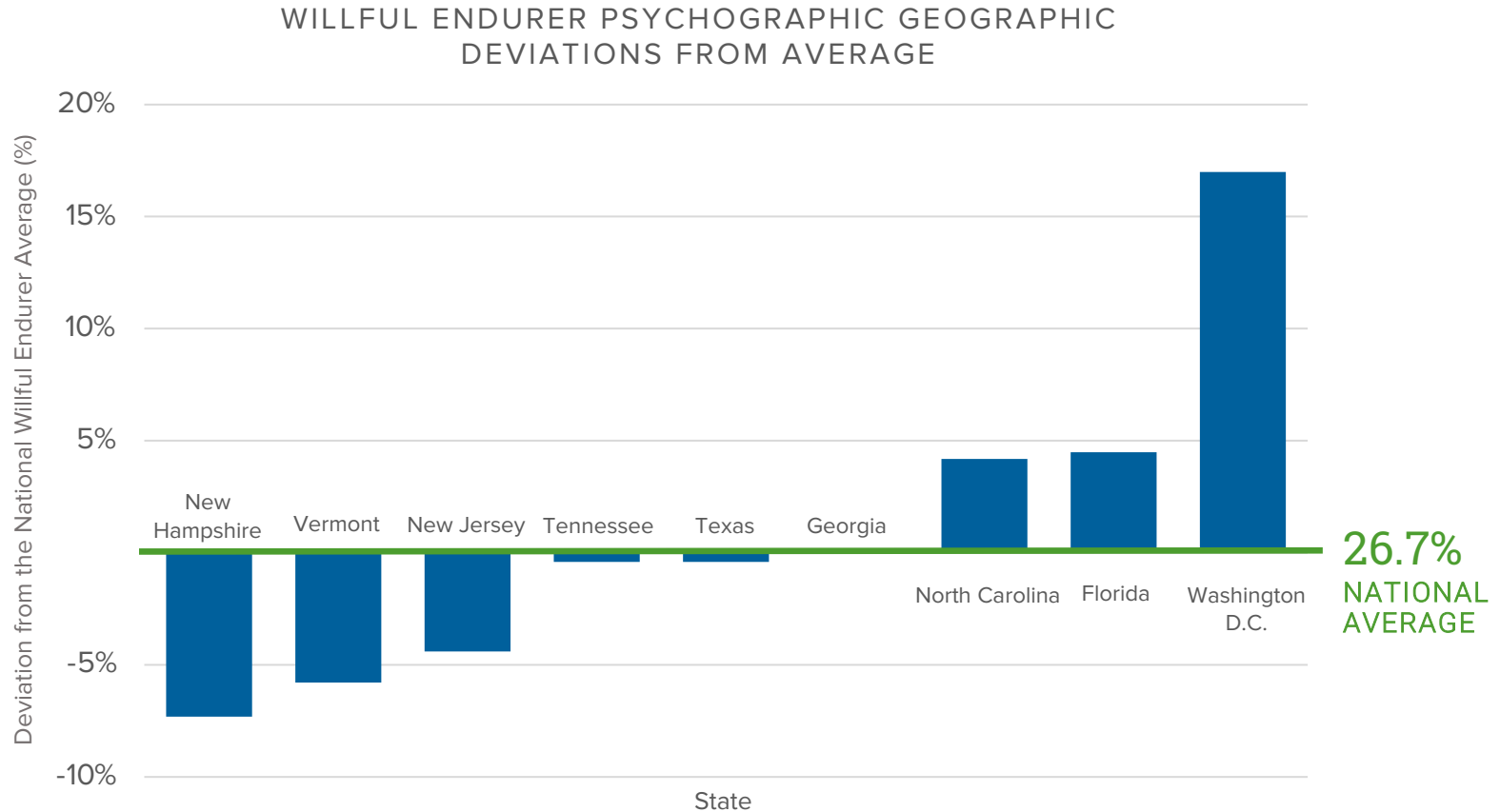
Note: Variation calculated as the percentage point differential between the proportion of Priority Juggler consumers (by state) and the national average (for all states, equal to 20.4%).  
Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.



## DEMAND: PSYCHOGRAPHICS

# New Hampshire and D.C. are Outliers for Willful Endurers

Willful Endurers live in the “here and now” and believe there are more important things to focus on than improving their health. They are not necessarily unhealthy, but they do what they like, when they like, and typically, don’t change habits.



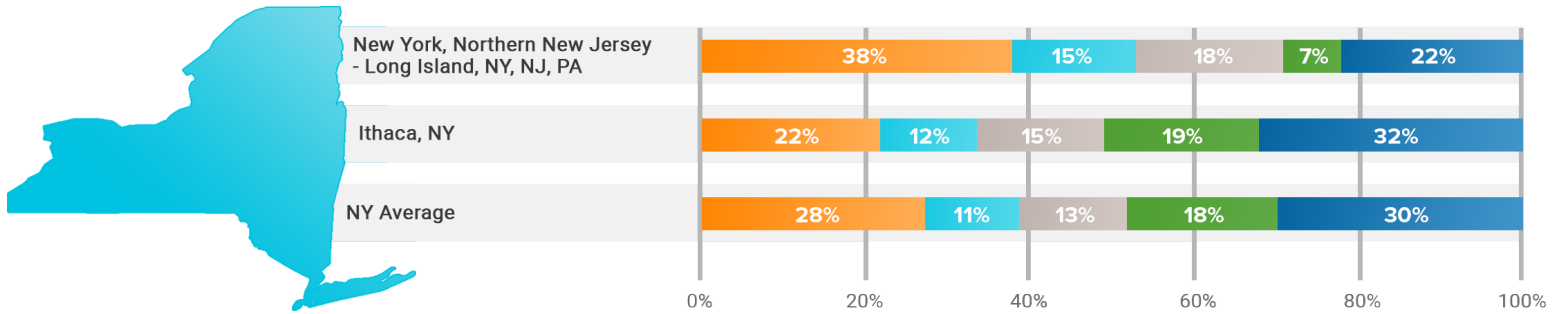
Note: Variation calculated as the percentage point differential between the proportion of Willful Endurer consumers (by state) and the national average (for all states, equal to 26.7%).  
Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## DEMAND: PSYCHOGRAPHICS

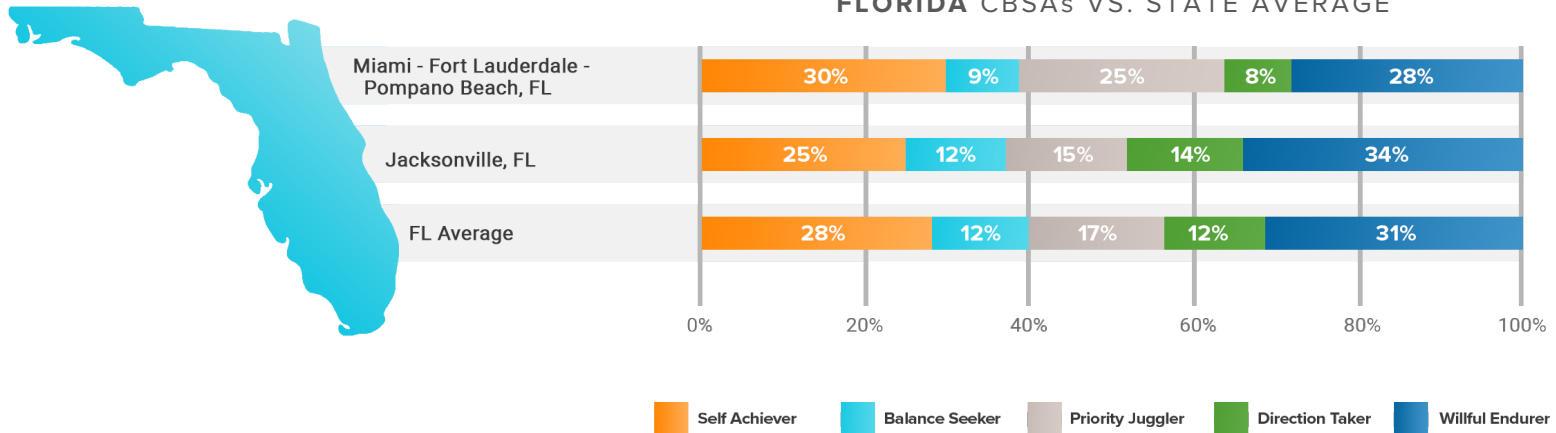
# Psychographics Vary Not Only by State but by CBSA

Psychographics are why the adage "healthcare is local" is true.

DISTRIBUTION OF PSYCHOGRAPHIC PROFILES OF SELECT NEW YORK CBSAs VS. STATE AVERAGE



DISTRIBUTION OF PSYCHOGRAPHIC PROFILES OF SELECT FLORIDA CBSAs VS. STATE AVERAGE

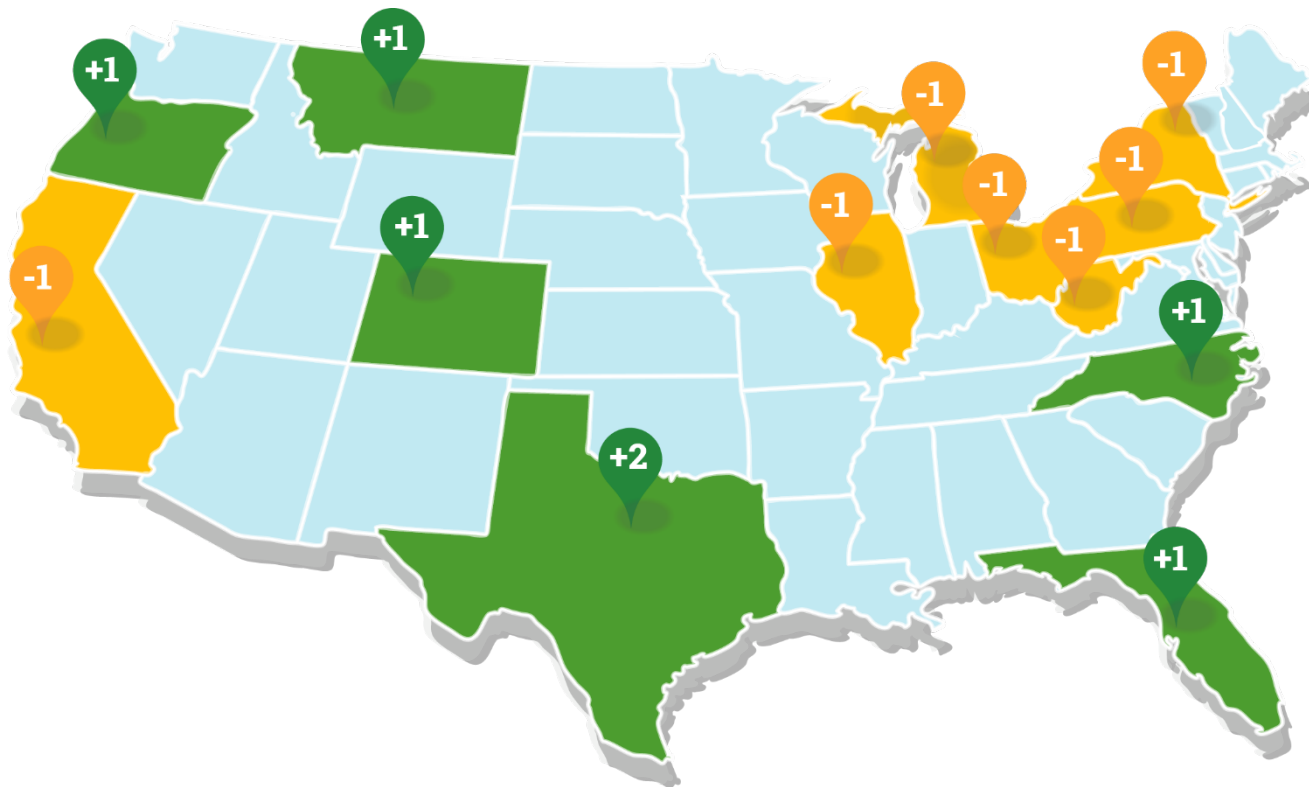


Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## 2020 Census Reveals Notable Migration Trends

States that are expected to either gain or lose a Congressional seat will see significant changes in the profile and preferences of its constituents, subsequently influencing healthcare demand.

EXPECTED CHANGES IN NUMBER OF CONGRESSIONAL SEATS



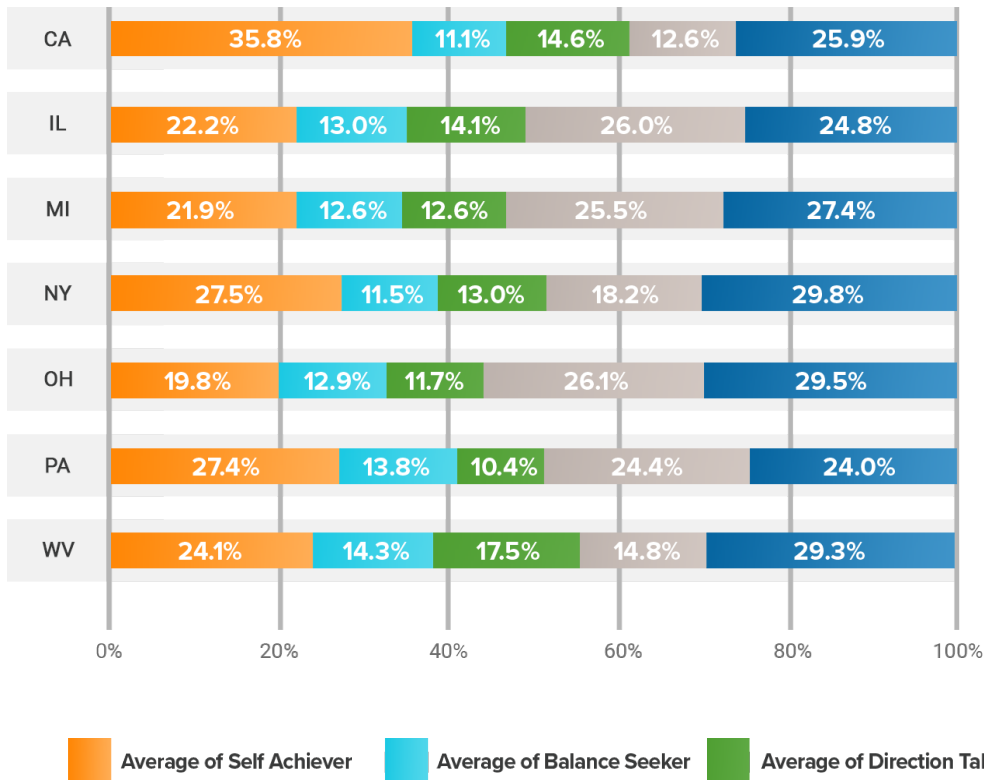
Note: The number of Congressional seats are apportioned to states as a function of its respective share of aggregate population.  
Source: 2020 U.S. Census Bureau; [Which States Will Gain or Lose Seats in the Next Congress - The New York Times \(nytimes.com\)](#).

## DEMAND: PSYCHOGRAPHICS

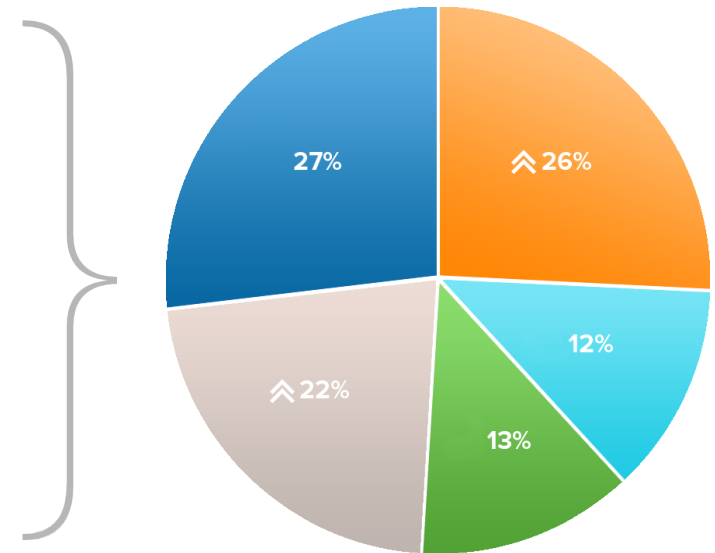
# Population Migration Will Impact Consumer Preferences

States that are expected to gain Congressional seats are likely to see a greater influx of Self Achievers and Priority Jugglers, which will inevitably impact consumer preferences for healthcare in those regions.

STATES **LOSING** CONGRESSIONAL SEATS



AVERAGE FOR STATES **GAINING** CONGRESSIONAL SEATS



CO - FL - MT - NC - OR - TX

Note: The number of Congressional seats are apportioned to states as a function of its respective share of aggregate population.  
Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

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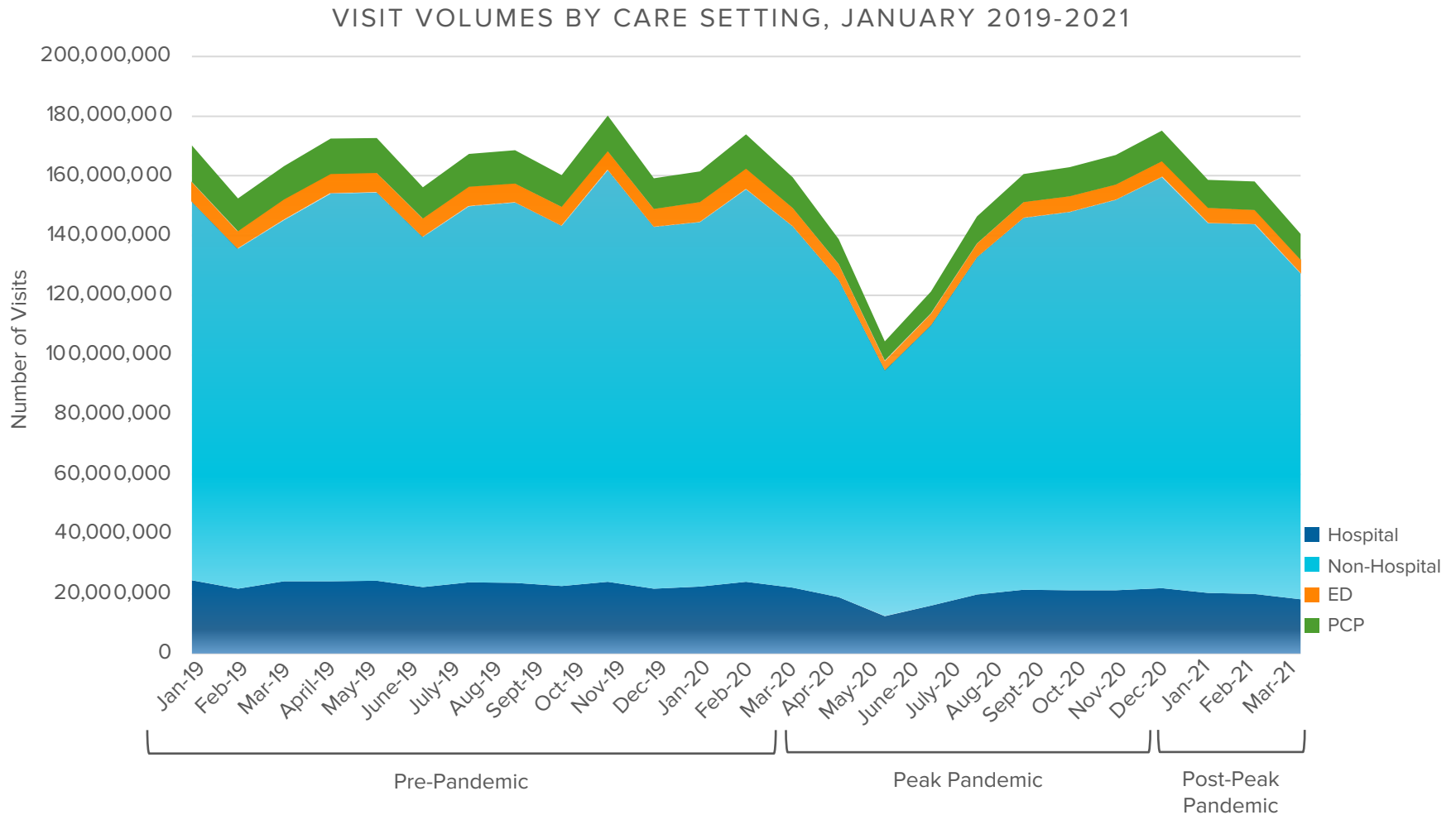
# DEMAND

*Volume*

## DEMAND: VOLUME

# Volume Declines Attributed to Pandemic Are Lost, Not Delayed

Emergency department visits, a key source of inpatient admissions, are 33% lower in January 2021 from January 2020.



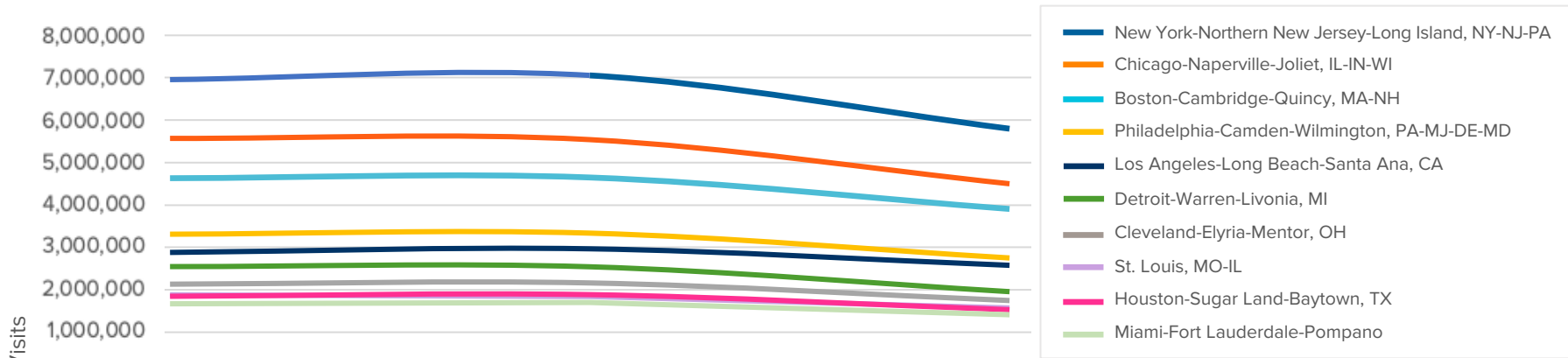
Source: Trilliant Health national all-payer claims database.

## DEMAND: VOLUME

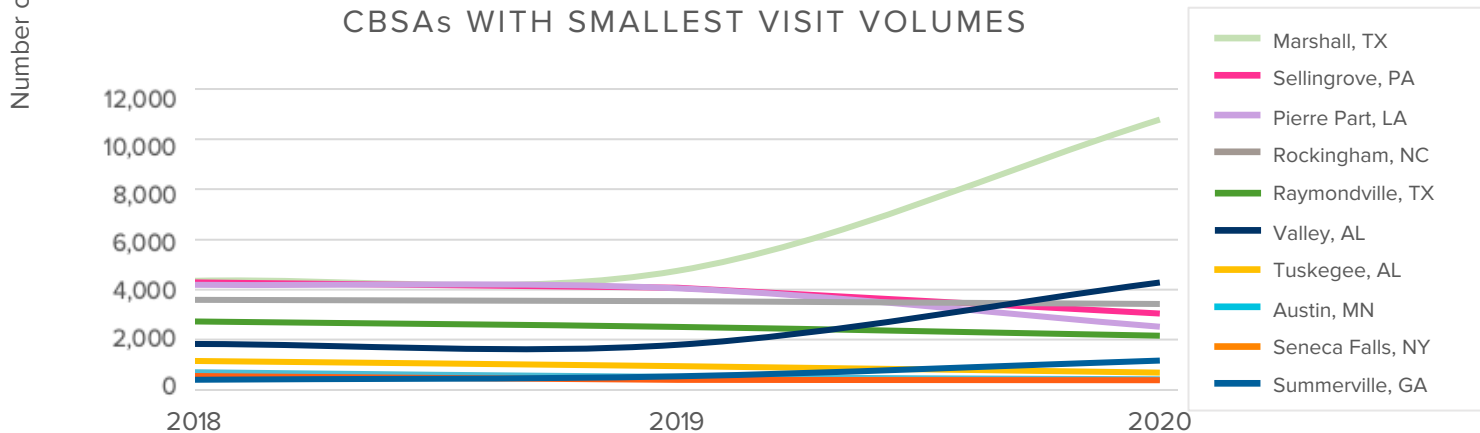
# Trends in Medicare Utilization Vary by CBSA

Major metropolitan CBSAs experienced a much larger decline in hospital visits by traditional Medicare beneficiaries than rural CBSAs.

CBSAs WITH LARGEST VISIT VOLUMES



CBSAs WITH SMALLEST VISIT VOLUMES



Source: Centers for Medicare and Medicaid Services (CMS) IPPS and OPDS data.

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# DEMAND

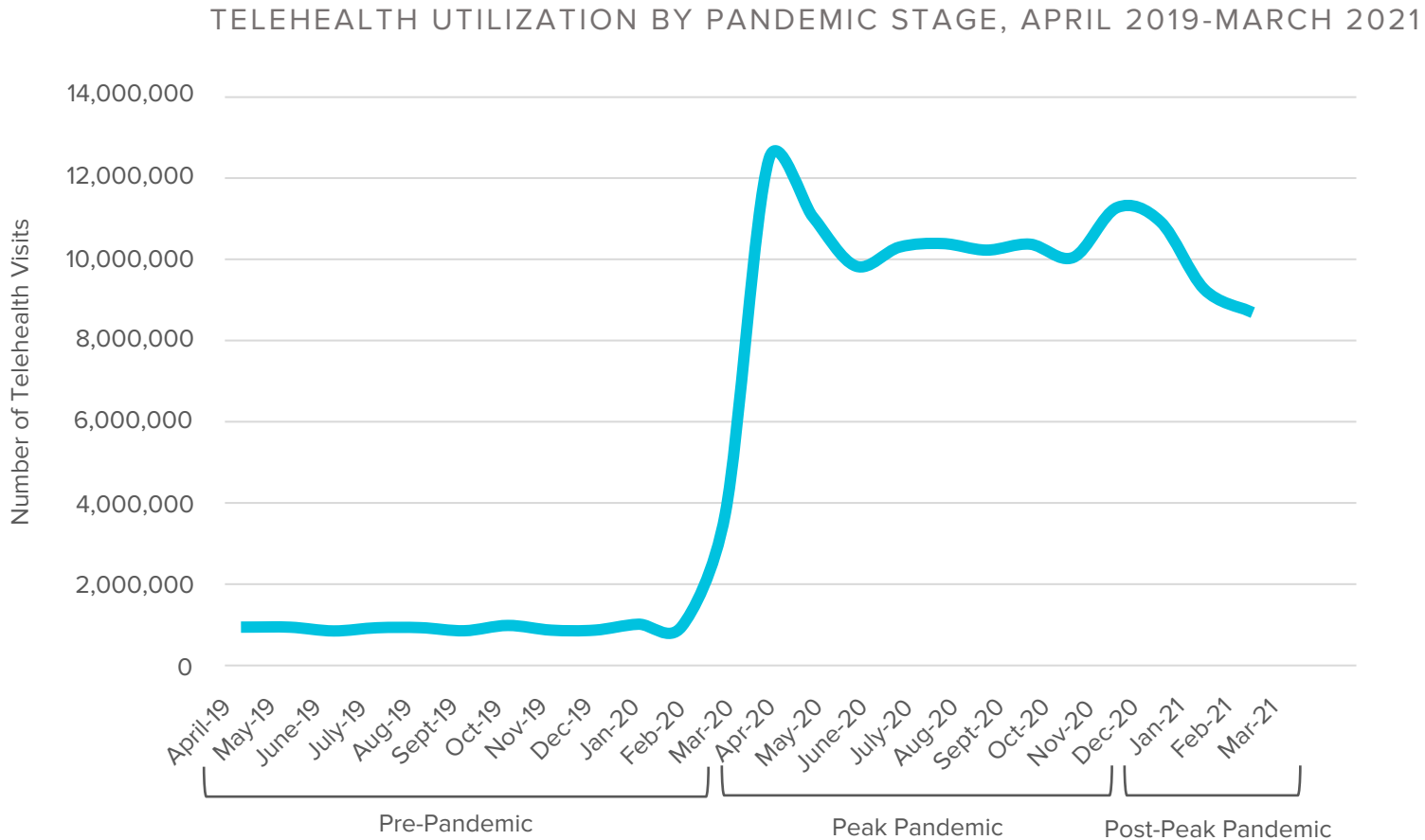
*Telehealth*



## DEMAND: TELEHEALTH

# Telehealth Use Beginning to Taper Post-Pandemic

Approximately 38M Americans (excluding traditional Medicare) generated approximately 96M telehealth visits during COVID-19.



Note: Telehealth visit volumes reflect video-only encounters for all payers excluding traditional Medicare. Survey data released from The Kaiser Family Foundation (May 2021) suggests that approximately 6.6M Medicare beneficiaries utilized a video telehealth visit. The chart above includes utilization by 3.8M Medicare Advantage enrollees. Our estimates do not account for any self-pay telehealth visits.

Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# Teladoc Projects 2021 Visit Volume to be Less than 4% of U.S. Population

Telehealth services are increasingly being commoditized as a “membership” good that will be adopted by a small segment of Americans.

Exhibit 99.1



### Teladoc Health Reports Fourth-Quarter and Full-Year 2020 Results

*Q4 revenue grows 145% year-over-year to \$383.3 million and total visits increase 139% to 3.0 million*

*Full year revenue grows 98% year-over-year to \$1,094.0 million and total visits increase 156% to 10.6 million*

*Issues 2021 first-quarter and full-year guidance*

**PURCHASE, NY, February 24, 2021**— Teladoc Health, Inc. (NYSE: TDOC), the global leader in whole-person virtual care, today reported strong financial results for the fourth quarter and full year ended December 31, 2020.

“As virtual care shifted to become a consumer expectation in 2020, Teladoc Health not only met the rapidly growing demand, but we transformed our company to define a new category of whole-person virtual care,” said Jason Gorevic, chief executive officer of Teladoc Health. “By accelerating our mission to transform the health care experience, we exceeded our fourth-quarter and full-year 2020 expectations and see strong momentum across our global business in 2021 as the market embraces the breadth and depth of our unique capabilities.”

## TELADOC’S REPORTED EXPECTATIONS FOR FY 2021

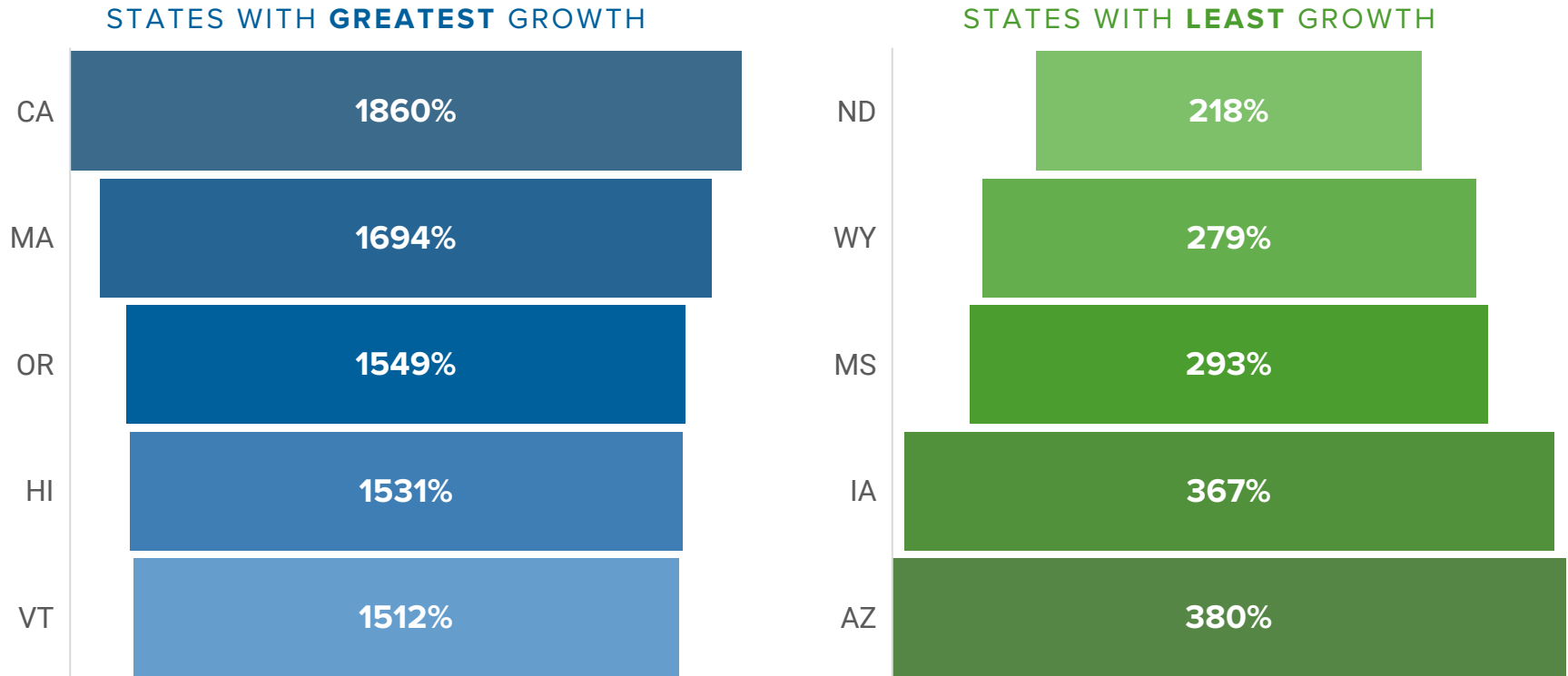
- Total U.S. **paid membership to be in the range of 52 to 54 million members** and visit fee only access to be available to 22 to 23 million individuals, including 2 to 3 million individuals on a temporary basis.
- **Total telehealth visits to be between 12 and 13 million.**

## DEMAND: TELEHEALTH

# Growth in Telehealth at Pandemic Peak Varied Regionally

California experienced the greatest percentage growth (1860%) in telehealth utilization at the peak of the pandemic, while North Dakota experienced the smallest percentage growth (218%).

PERCENT CHANGE IN TELEHEALTH UTILIZATION FROM PRE-PANDEMIC TO PEAK PANDEMIC



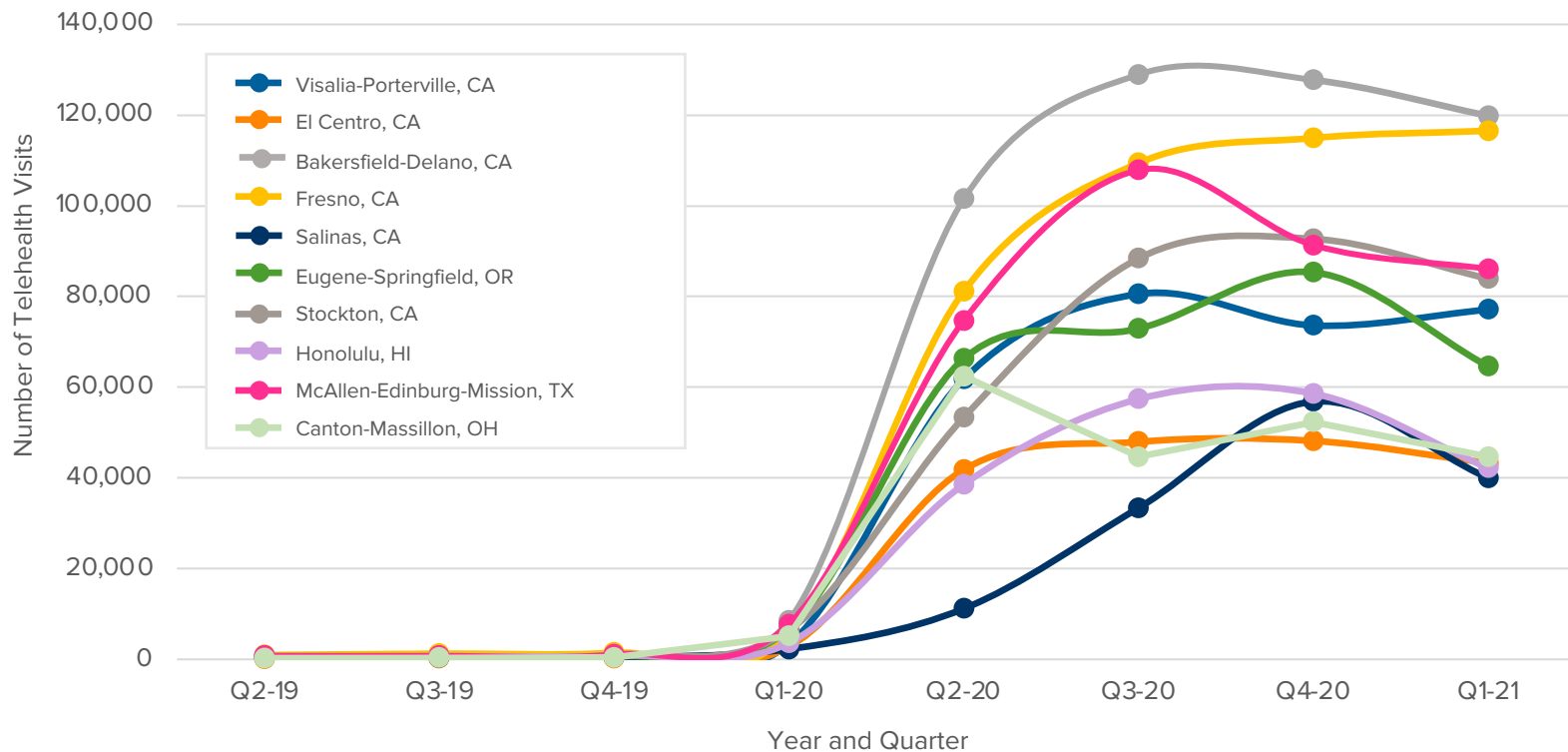
Note: Pre-Pandemic and Peak Pandemic date ranges are 2019-2020 Q1 and 2020 Q2-2020 Q4, respectively.  
Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# Five Markets with Highest Percentage Growth in Telehealth Utilization During Pandemic Were in California

Telehealth utilization has remained near peak pandemic volumes for markets with highest percentage growth in telehealth utilization during the pandemic.

TELEHEALTH UTILIZATION AMONG CBSAs WITH *GREATEST* PERCENTAGE VOLUME GROWTH DURING THE PANDEMIC



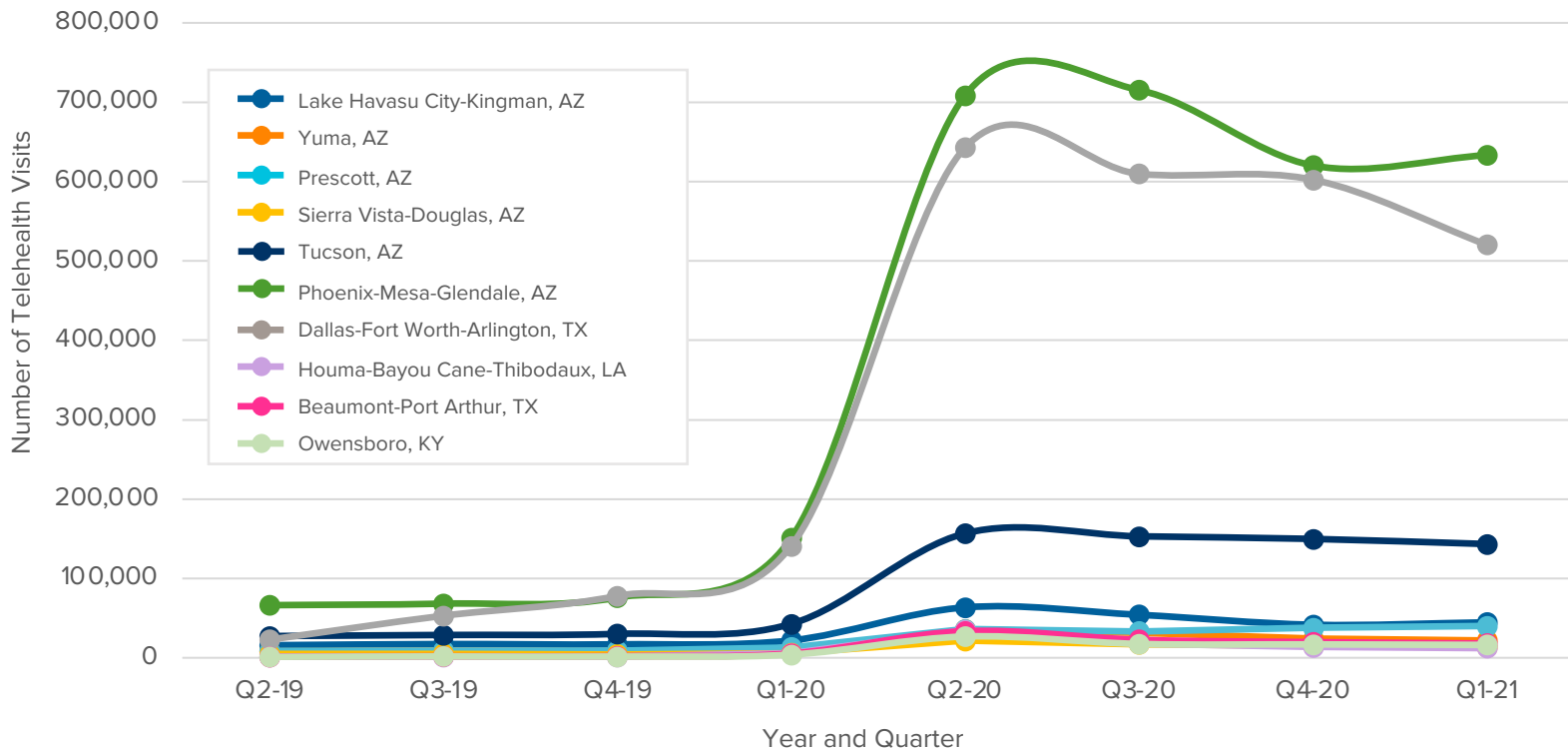
Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# Six of Top 10 Markets with Lowest Percentage Growth in Telehealth Utilization During Pandemic Were in Arizona

The Phoenix and Dallas CBSAs had higher telehealth utilization pre-pandemic than the other top 10 CBSAs.

TELEHEALTH UTILIZATION AMONG CBSAs WITH LOWEST PERCENTAGE VOLUME GROWTH DURING THE PANDEMIC



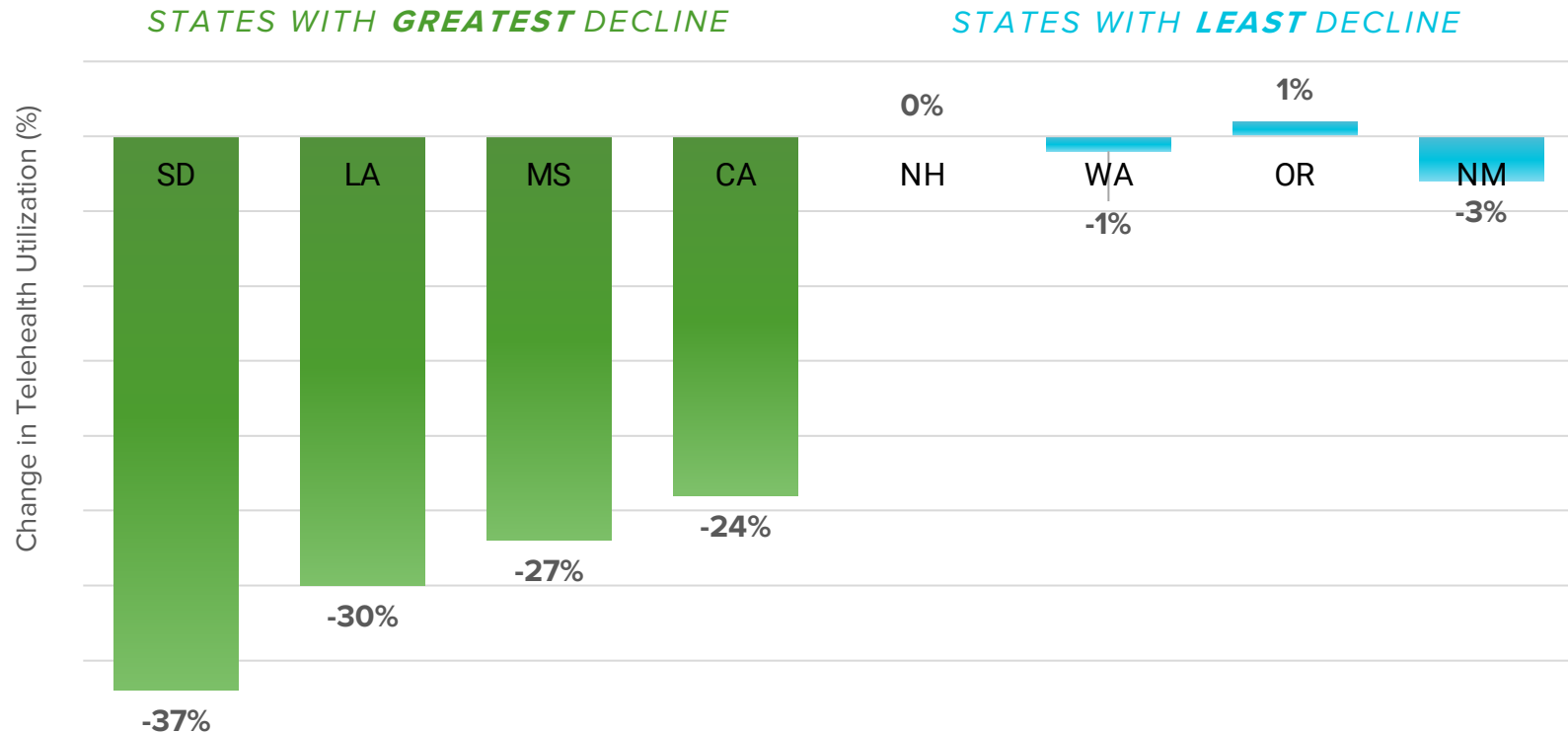
Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# Telehealth Utilization is Declining in Most States Post-Pandemic

California experienced both the highest absolute and percentage increase in telehealth utilization during the peak pandemic period.

PERCENT CHANGE IN TELEHEALTH UTILIZATION FROM PEAK PANDEMIC TO POST-PEAK

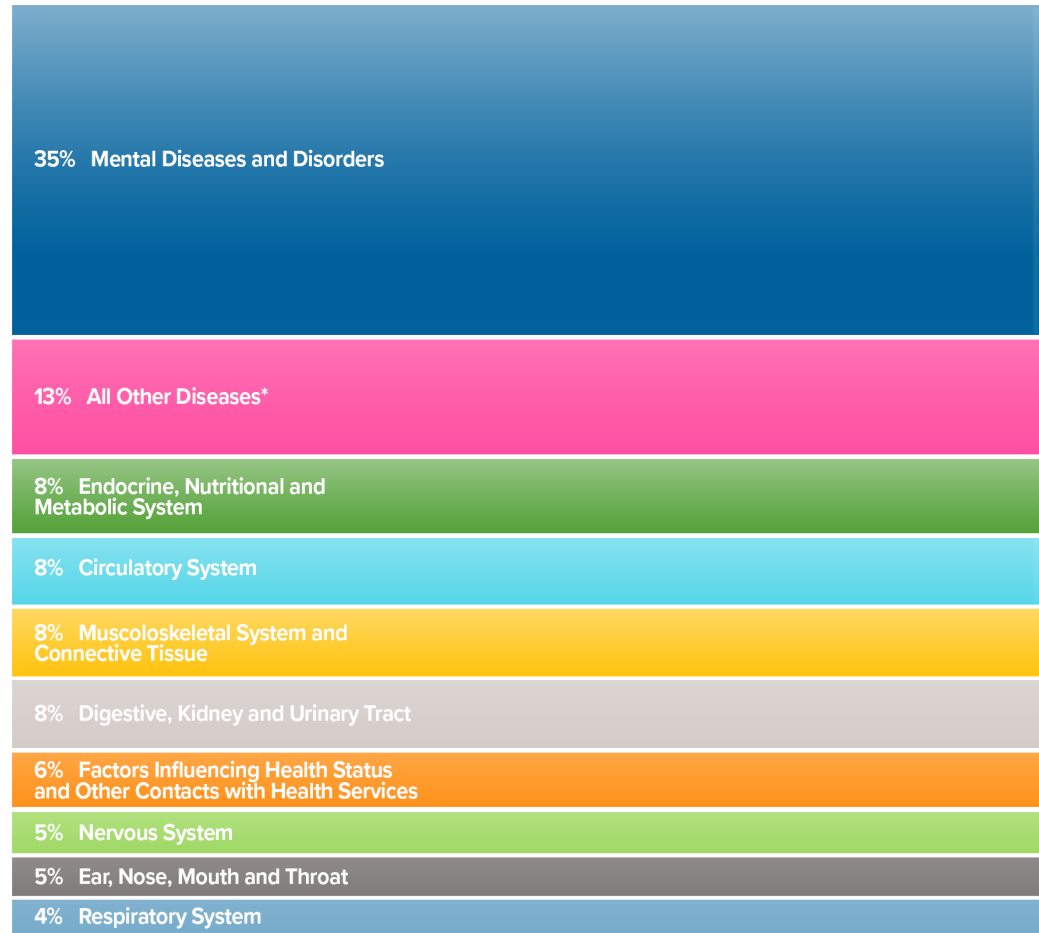


Note: Peak Pandemic, and Post-Peak Pandemic date ranges are 2020 Q2-2020 Q4, and 2021 Q1, respectively.  
Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# Behavioral Health was a Key Driver of Telehealth Demand During the Peak of the Pandemic

PROPORTION OF  
TELEHEALTH VISITS  
BY MAJOR DIAGNOSTIC  
CATEGORY



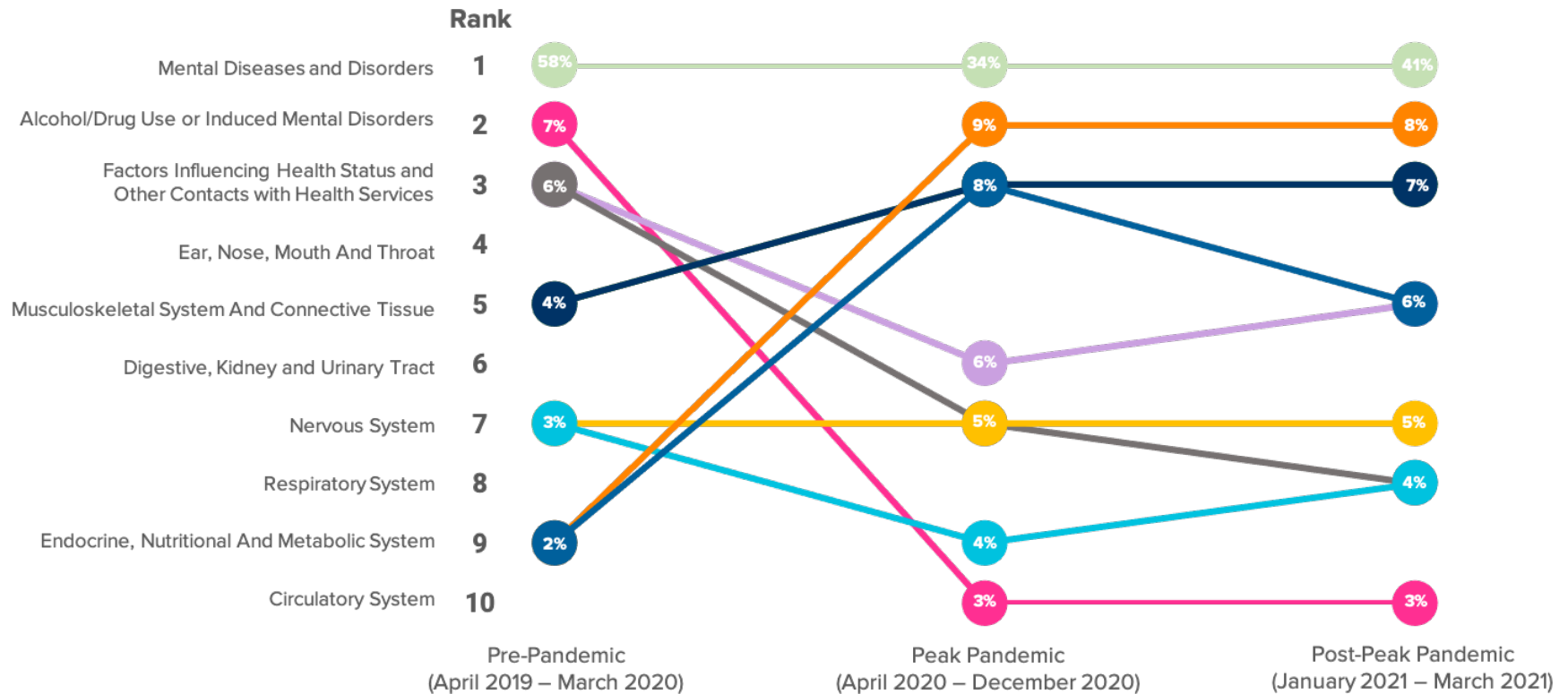
Note: \*\*Other Diseases" refers to all other Major Diagnostic Categories (MDCs) with proportion of telehealth visits for any given MDC <3%. Peak pandemic defined as April to December 2020.  
Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# Behavioral Health is Consistently the Key Driver of Telehealth Utilization

Even prior to COVID-19, telehealth was utilized primarily for treating behavioral health.

PROPORTION OF TELEHEALTH VISITS RANKED BY MAJOR DISEASE CLASSIFICATION, APRIL 2019 - MARCH 2021



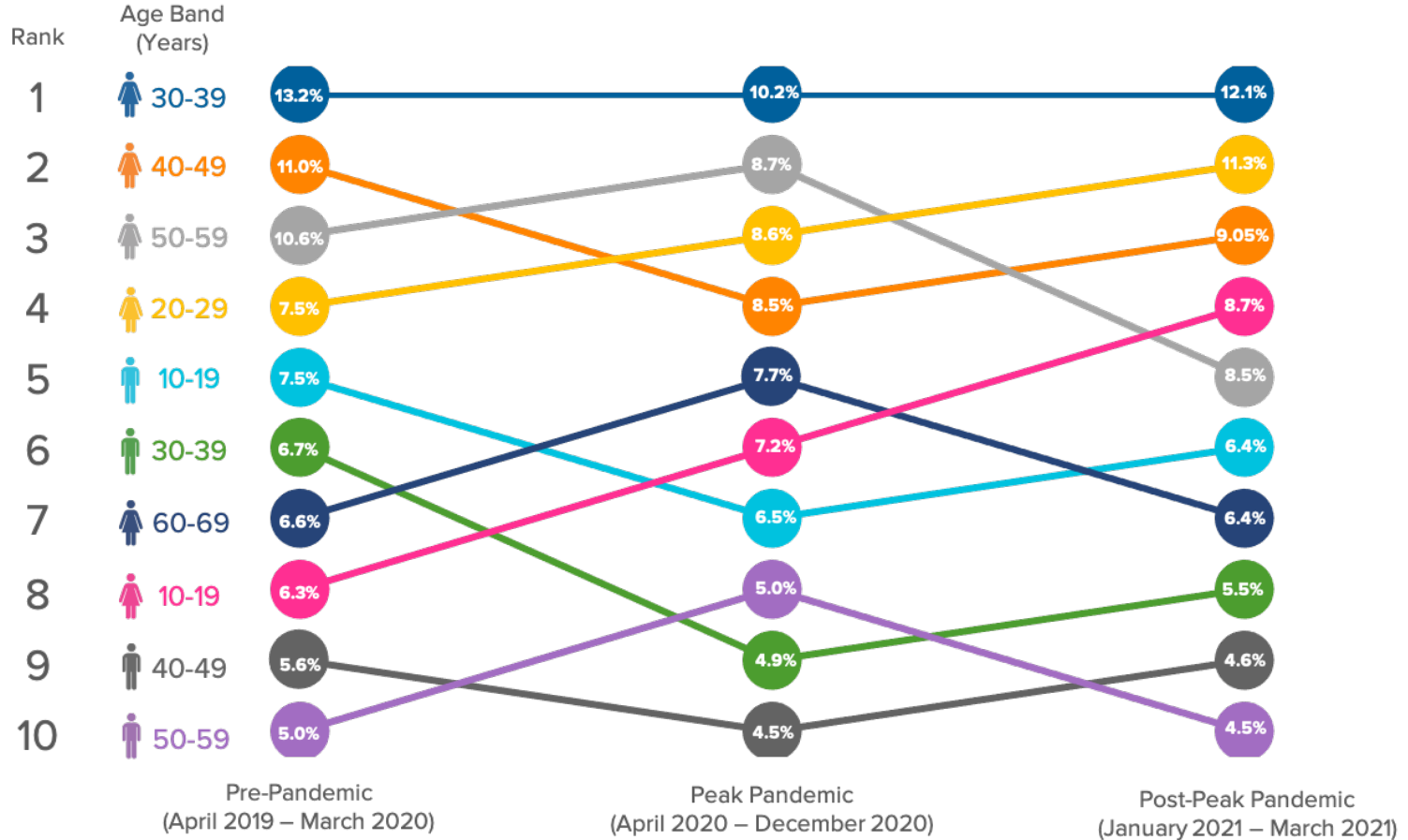
Note: Total percentages by column do not sum to 100% since the ranks shown were capped at the top ten use cases.  
 Source: Trilliant Health national consumer and all-payer claims database.



## DEMAND: TELEHEALTH

# Women Ages 30-39 Are the Most Consistent Users of Telehealth Before, During and After the Pandemic

The fastest growing utilizers of telehealth are women ages 20-29.



Note: Total percentages by column do not sum to 100% since the ranks shown were capped at the top ten use cases.  
 Source: Trilliant Health national consumer and all-payer claims database.

## DEMAND: TELEHEALTH

# Anxiety and Depression are the Most Frequent Diagnoses Among the Highest Users of Telehealth

Over the past 24 months, telehealth has consistently been utilized for behavioral health diagnoses more than medical diagnoses, particularly by commercially insured patients.



Women  
20-29

ANXIETY DISORDER

17.40%

MAJOR DEPRESSIVE DISORDER

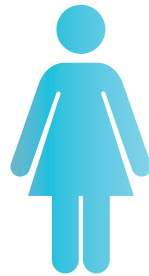
14.07%

PTSD

2.76%

BIPOLAR II DISORDER

1.99%



Women  
30-39

ANXIETY DISORDER

13.19%

MAJOR DEPRESSIVE DISORDER

11.03%

PTSD

2.66%

OPIOID DEPENDENCE

1.71%



Women  
40-49

PTSD

8.93%

ESSENTIAL (PRIMARY) HYPERTENSION

8.08%

MAJOR DEPRESSIVE DISORDER

2.65%

ANXIETY DISORDER

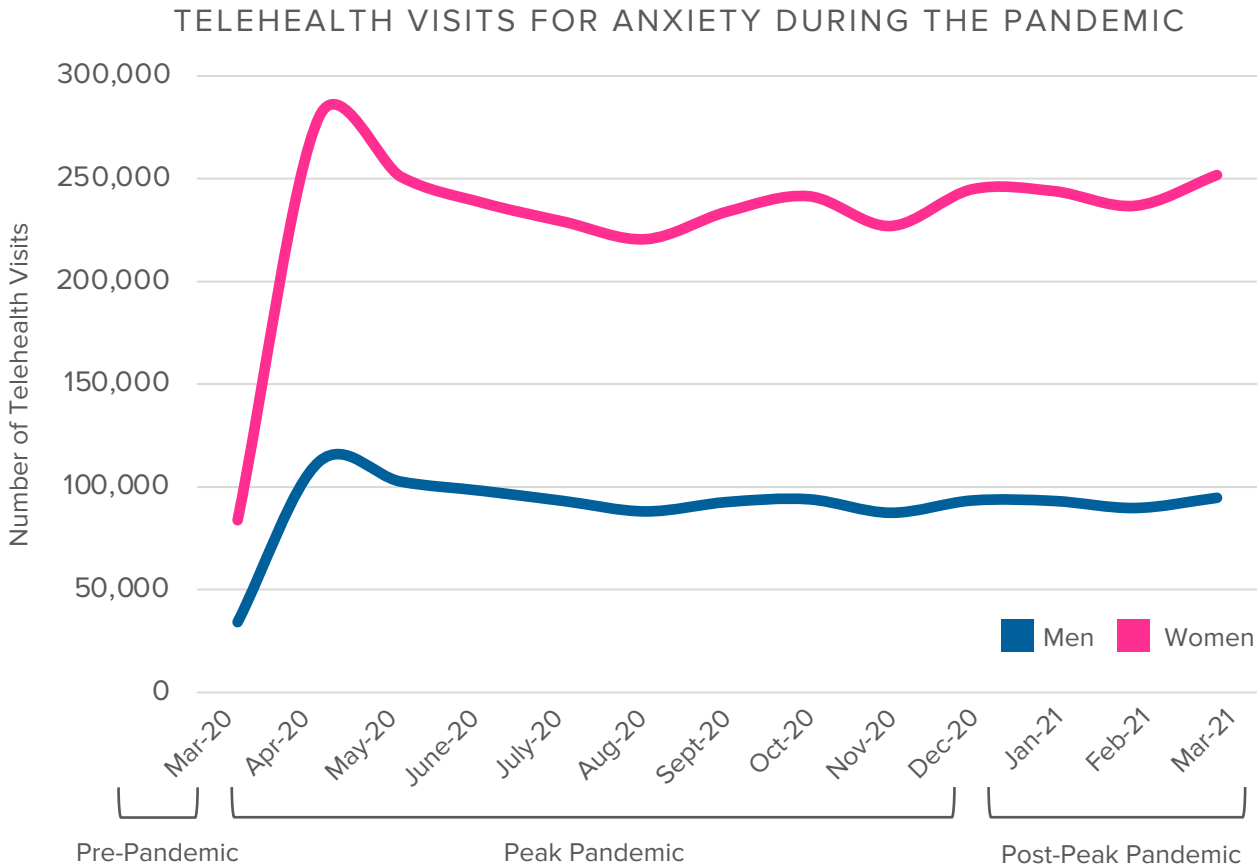
2.16%

Note: Percentages reflect utilization trends during peak and post-peak pandemic (April 2019-March 2021).  
Source: Trilliant Health national all-payer claims database.

## DEMAND: TELEHEALTH

# The Vast Majority of Telehealth Patients Citing Anxiety Were Commercially Insured Women

Women used telehealth for anxiety more than men during the pandemic.



Among Individuals Who Had a Telehealth Visit for Anxiety:

- 71.2% women
- 83.3% commercially insured
- 44% between ages 20-39

Source: Trilliant Health national all-payer claims database.

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# DEMAND

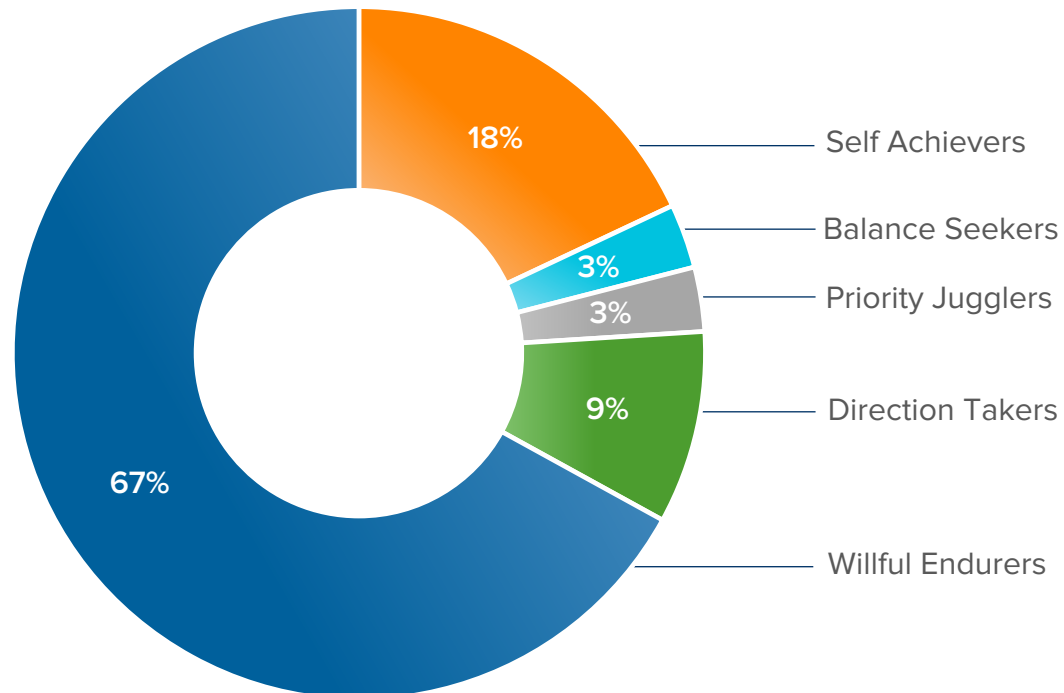
*Urgent Care*

## DEMAND: URGENT CARE

# Willful Endurers are Twice as Likely to Utilize Urgent Care Than All Other Psychographic Groups Combined

Willful Endurers comprise 67% of individuals who visit urgent care every 1-3 months.

PERCENT OF ALL PEOPLE WHO VISIT URGENT CARE EVERY 1-3 MONTHS



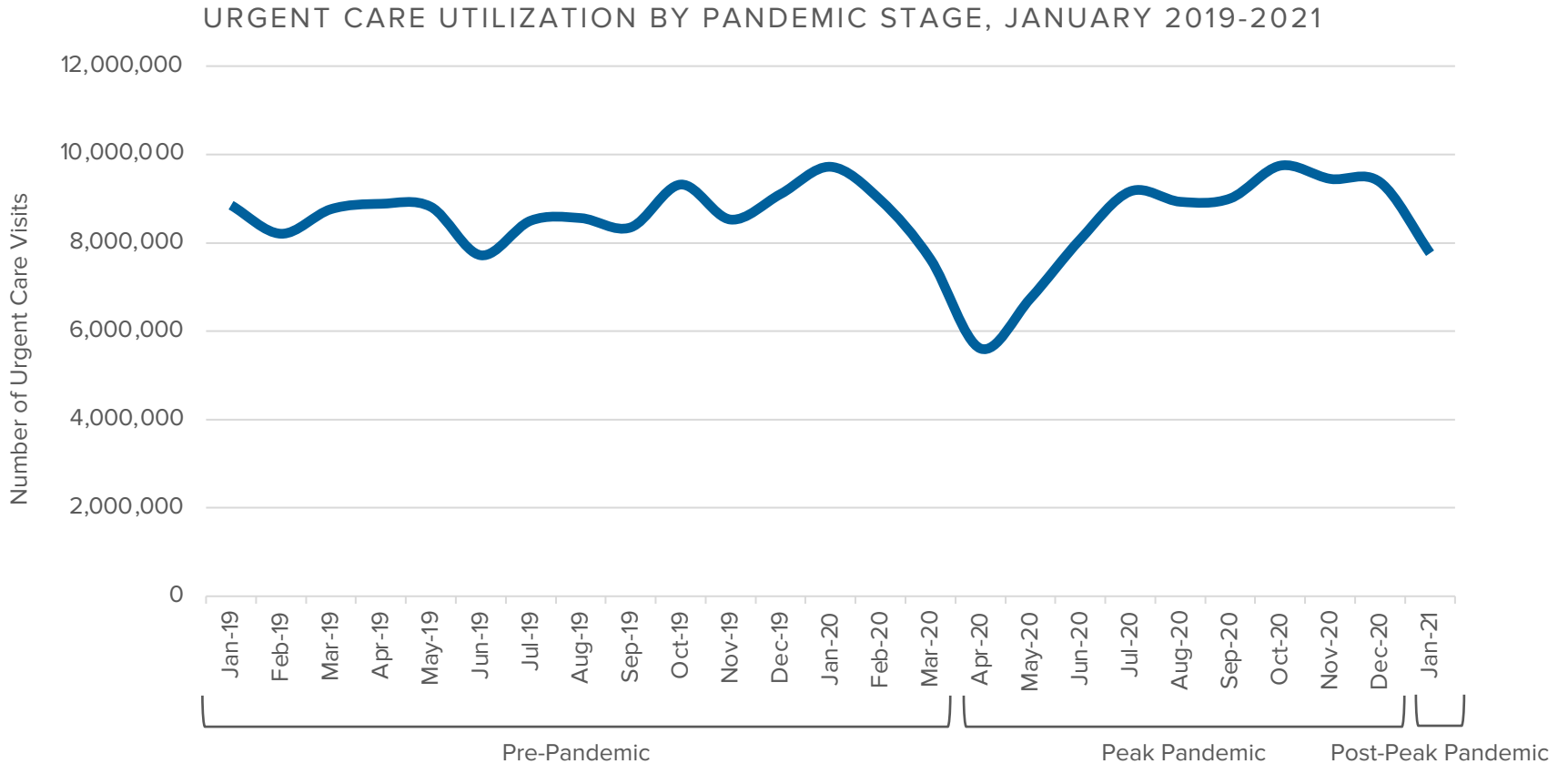
Note: Willful Endurers live in the “here and now” and believe there are more important things to focus on than improving their health for the future. They are not necessarily unhealthy, but they do what they like, when they like, and typically, do not change their habits. Distribution of psychographics remain constant over time.

Source: Trilliant Health consumer database inclusive of psychographic data for all 50 states and Washington, D.C.; 2020.

## DEMAND: URGENT CARE

# Urgent Care Volumes Have Returned to Pre-Pandemic Levels

Urgent care volumes rebounded to pre-pandemic levels by June 2020 but have not yet exceeded them.



Note: February-March 2021 was excluded due to claims limitations at the time of analysis.  
Source: Trilliant Health national all-payer claims database.

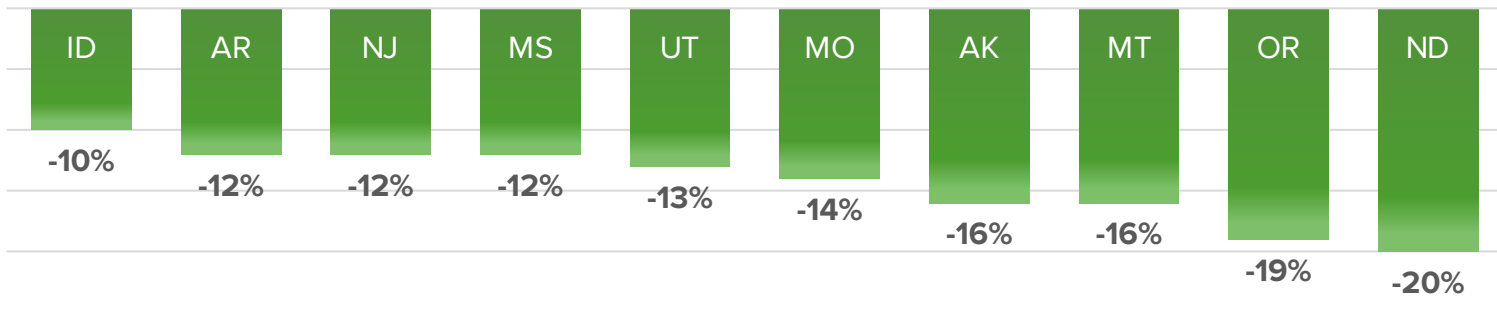
## DEMAND: URGENT CARE

# Magnitude of Decline in Urgent Care Utilization Varied Regionally During COVID-19

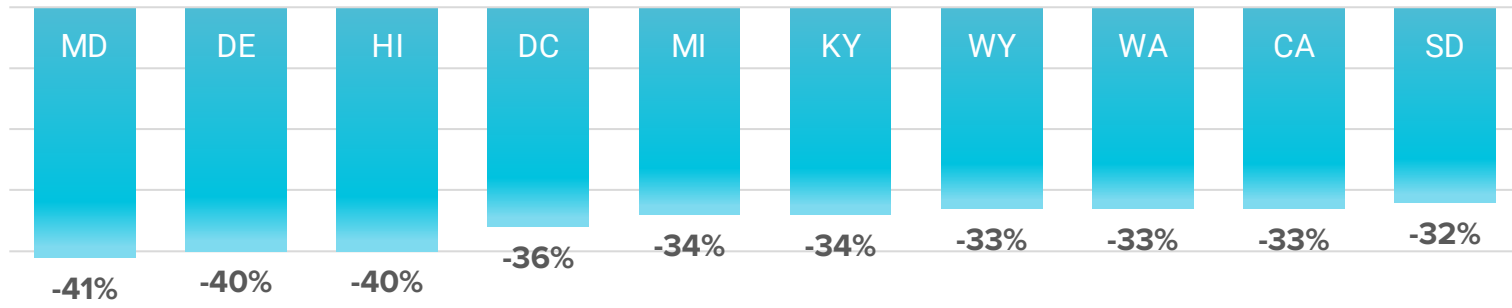
Maryland experienced the greatest decline (-41.2%) in utilization, and Idaho experienced the least (-10%).

PERCENT CHANGE IN URGENT CARE UTILIZATION FROM Q1 2020 TO PEAK PANDEMIC

STATES WITH LOWEST PERCENTAGE CHANGE FROM PRE- TO PEAK PANDEMIC



STATES WITH HIGHEST PERCENTAGE CHANGE FROM PRE- TO PEAK PANDEMIC

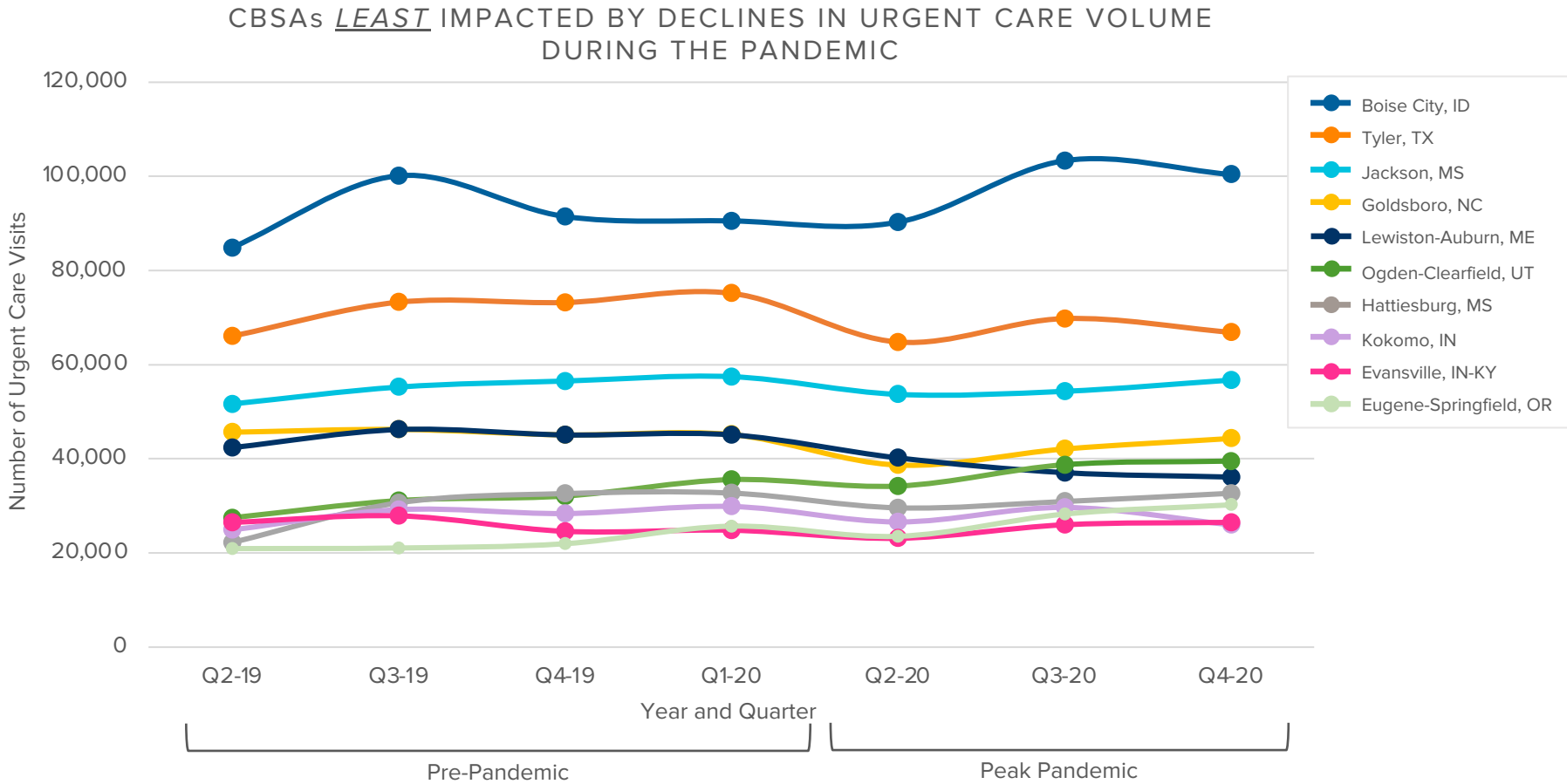


Note: Data comparison of Q1 2020 (Pre-Pandemic) to Q2 2020 (Peak Pandemic).  
Source: Trilliant Health national all-payer claims database

DEMAND: URGENT CARE

# Many Smaller CBSAs Saw Relatively Smaller Declines in Urgent Care Volume

Most urgent care centers saw a volume dip at the onset of COVID-19, and certain markets were impacted by less than 8%.



Source: Trilliant Health national all-payer claims database.

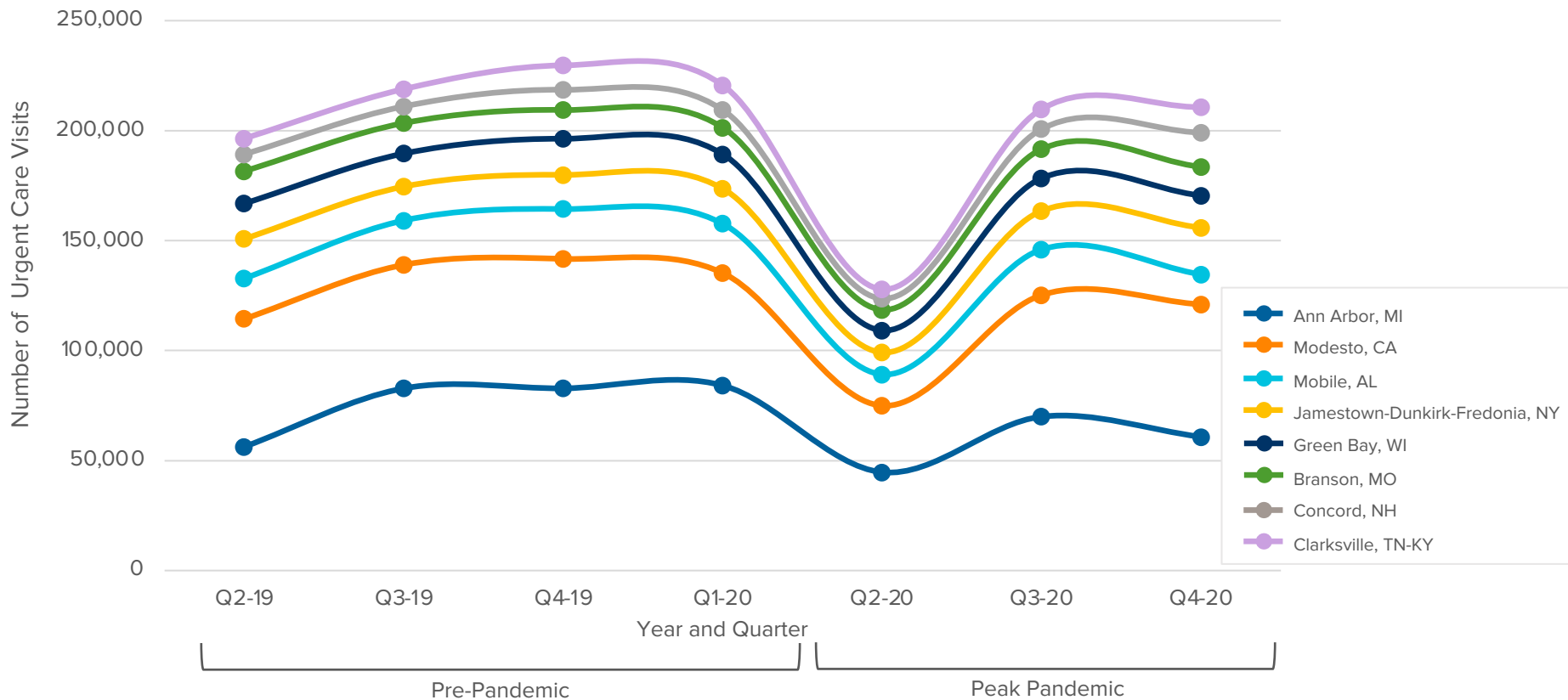


## DEMAND: URGENT CARE

# CBSAs with Varied Characteristics Experienced Nearly Identical Reductions in Urgent Care Volume

CBSAs most impacted by declines in urgent care visits during COVID-19 saw an average of 42% reduction in volumes.

CBSAs MOST IMPACTED BY DECLINES IN URGENT CARE VOLUME DURING PANDEMIC



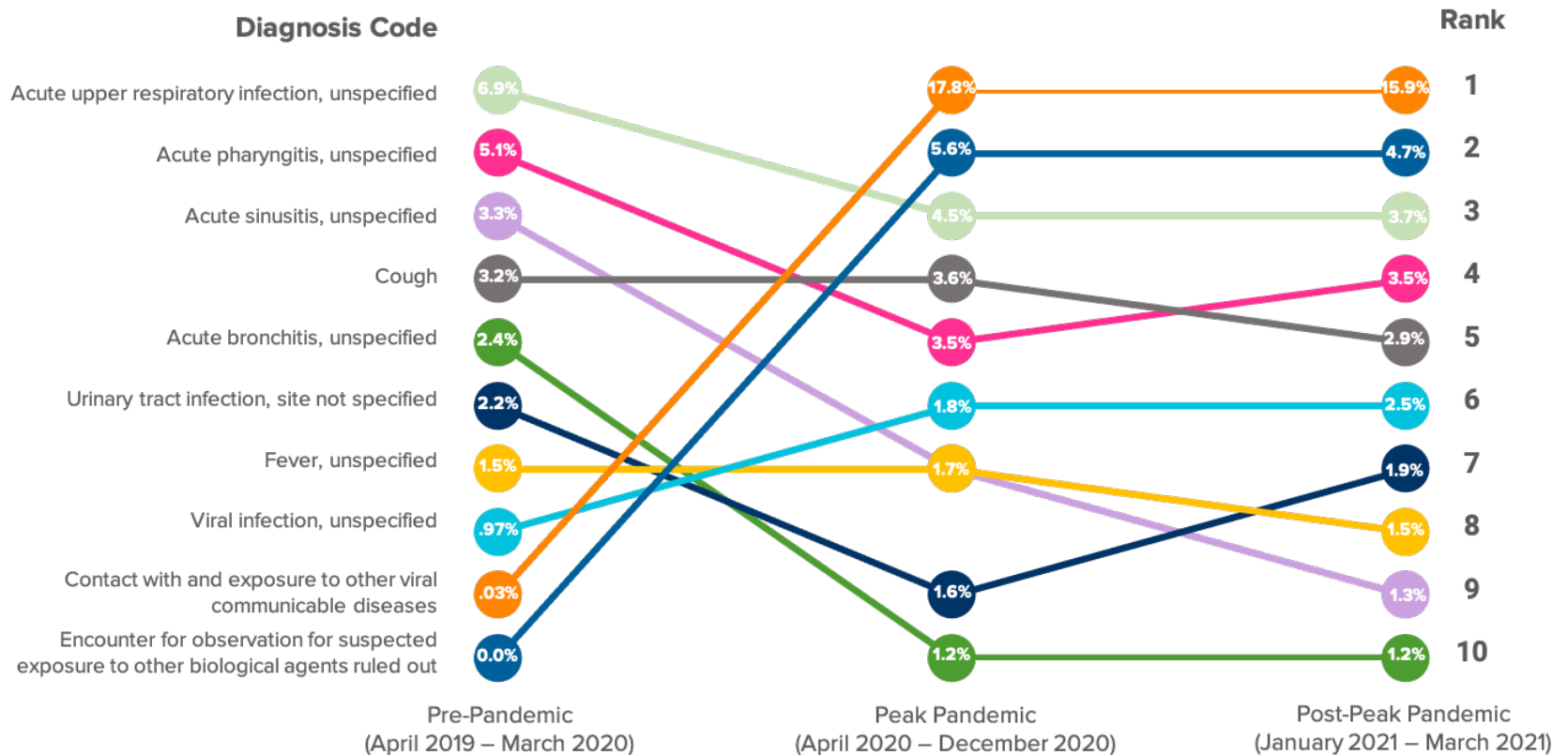
Source: Trilliant Health national all-payer claims database.

## DEMAND: URGENT CARE

# COVID-19 Testing Caused Spike in Urgent Care Volumes

Return to pre-pandemic volumes is artificially inflated by continuing COVID-19 testing.

PROPORTION OF URGENT CARE VISITS RANKED BY DIAGNOSIS



Note: Total percentages by column do not sum to 100% since the ranks shown were capped at the top ten use cases. Ranks are based on the top ten diagnoses during the post-peak pandemic (January – March 2021) time period.

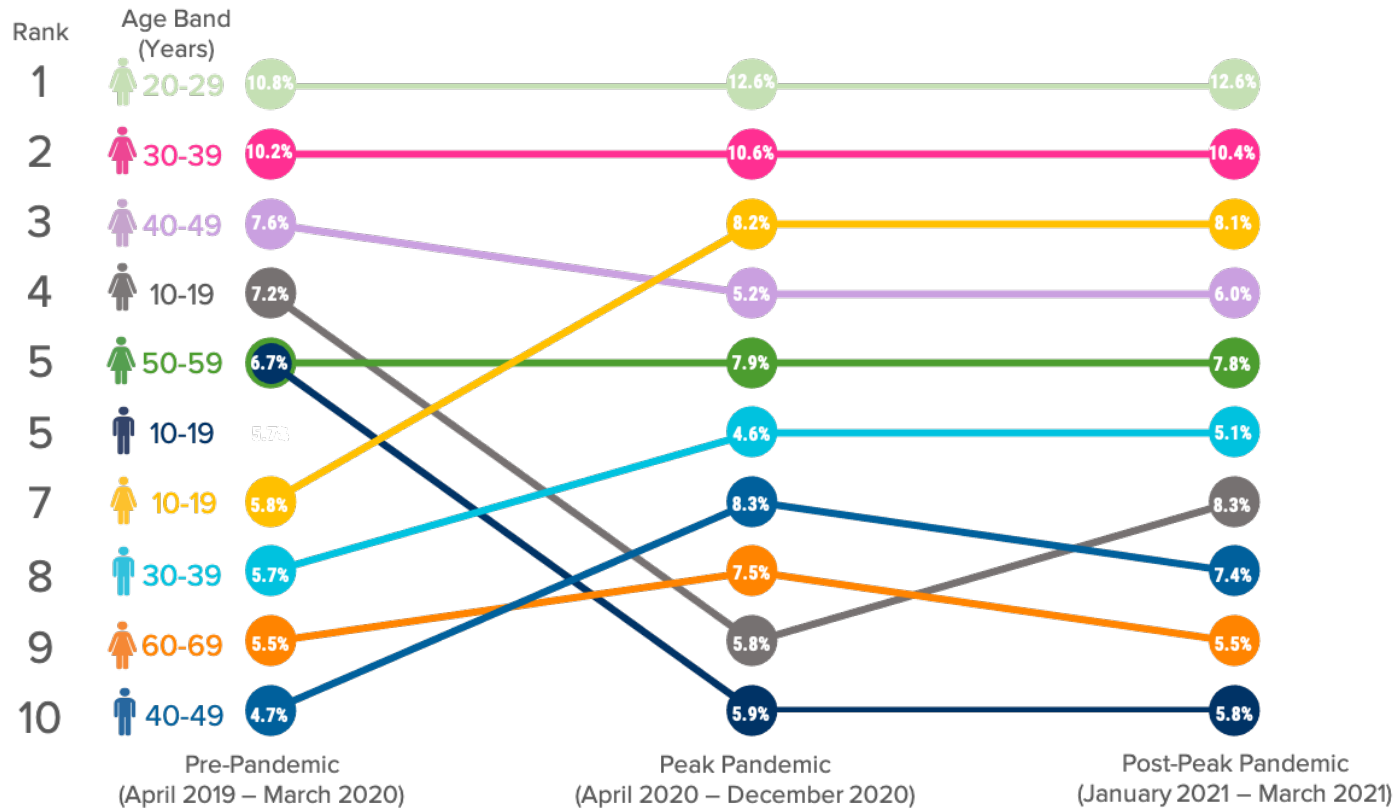
Source: Trilliant Health national all-payer claims database.

## DEMAND: URGENT CARE

# Most Common Users of Urgent Care are Same as Telehealth Users

Commercially insured women ages 20-49 account for disproportionate utilization of both urgent care and telehealth.

PROPORTION OF URGENT CARE VISITS BY AGE & GENDER



Note: Women ages 50-59 and men ages 10-19 were tied for rank #5 pre-pandemic. Total percentages by column do not sum to 100% since the ranks shown were capped at the top ten use cases.

Source: Trilliant Health national all-payer claims database.

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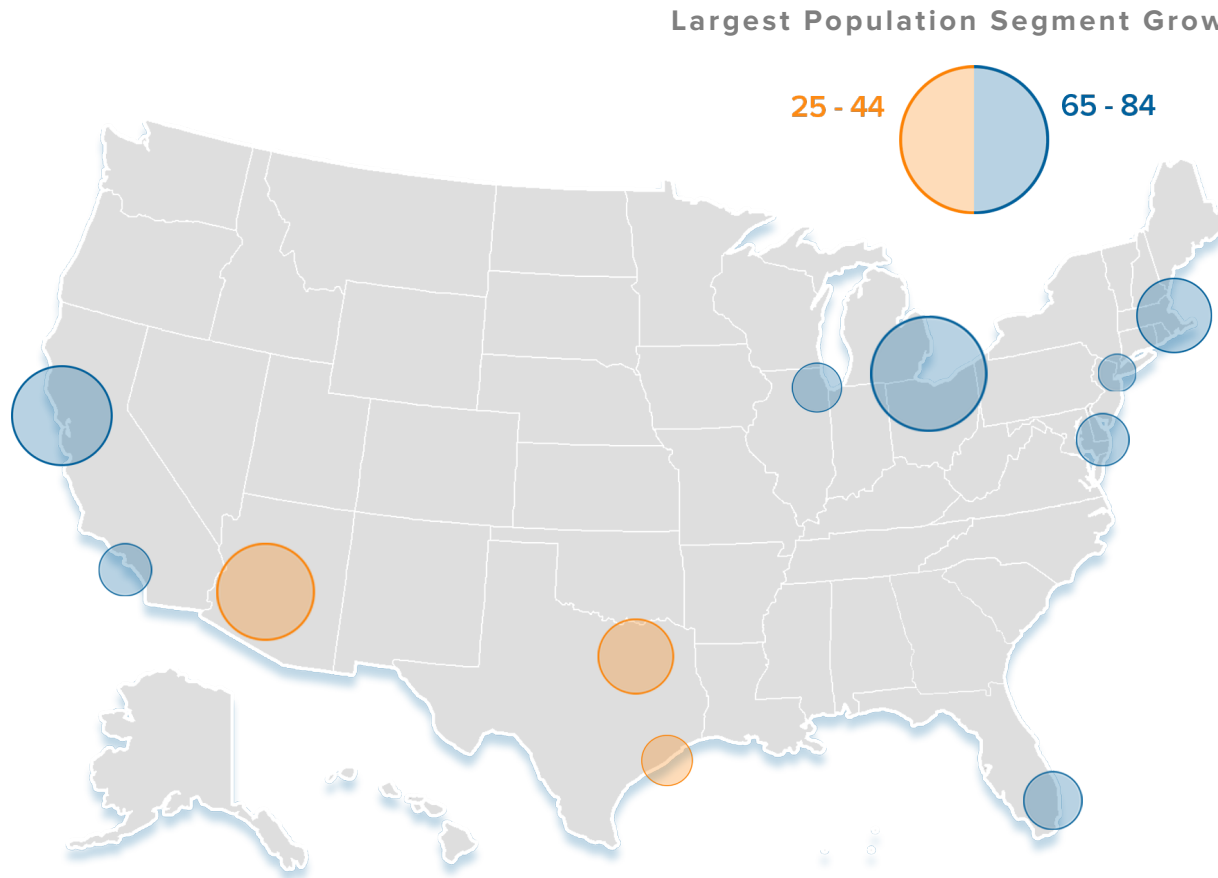
# DEMAND

*Forecast Overview*

## DEMAND: FORECAST OVERVIEW

# Americans are “Graying” Except in Sunbelt CBSAs

Members of the Baby Boomer generation will age into Medicare at a rate of 10,000 people per day until 2030. The 65-84 age cohort is the fastest growing demographic in most Top 10 CBSAs.

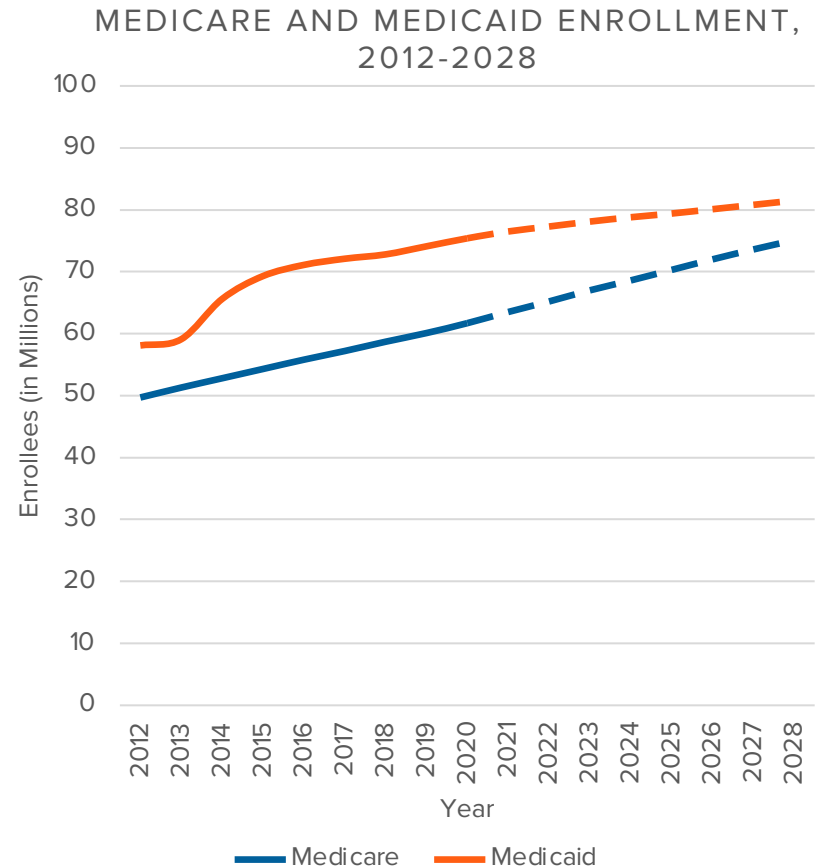
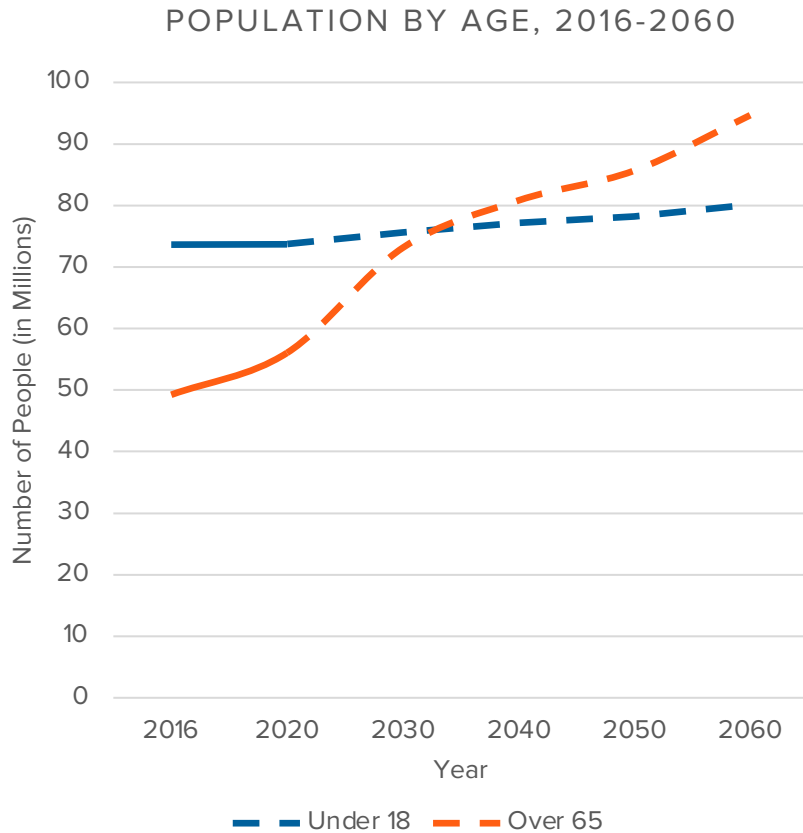


Source: Medicare Payment Advisory Commission (MedPAC) and Census Bureau.

## DEMAND: FORECAST OVERVIEW

# Increasing Medicare Enrollment Continues to Reduce the Commercially Insured Population

Projected births are insufficient to offset the accelerating Medicare enrollment from the Baby Boomers, leading to inevitable decline in the commercially insured population.

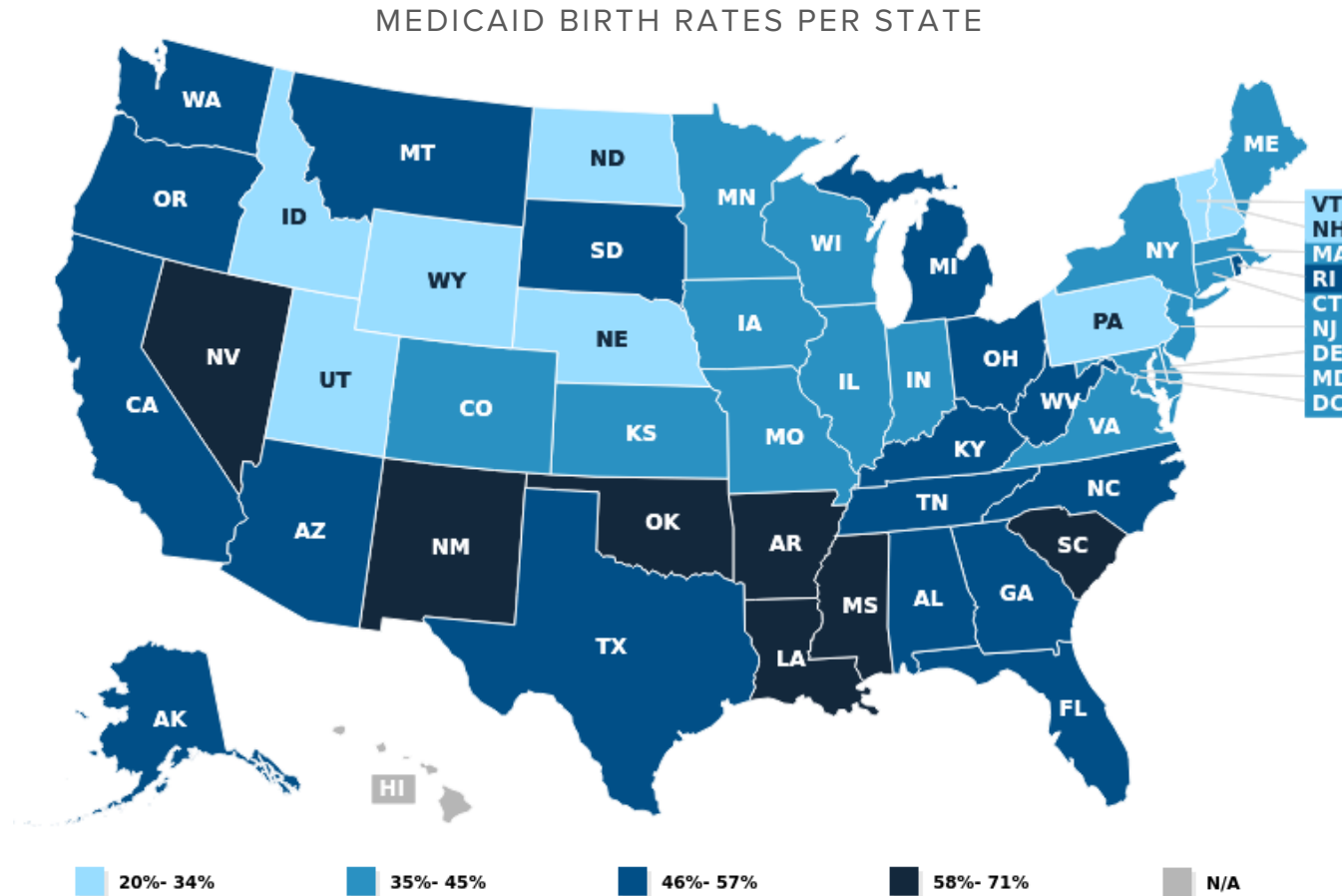


Source: Centers for Medicare and Medicaid Services (CMS) National Health Expenditures Projections, 2019-28.

## DEMAND: FORECAST OVERVIEW

# Almost Half of All Births are Financed by Medicaid

The fastest growing states (the Sunbelt) have above average Medicaid birth rates.



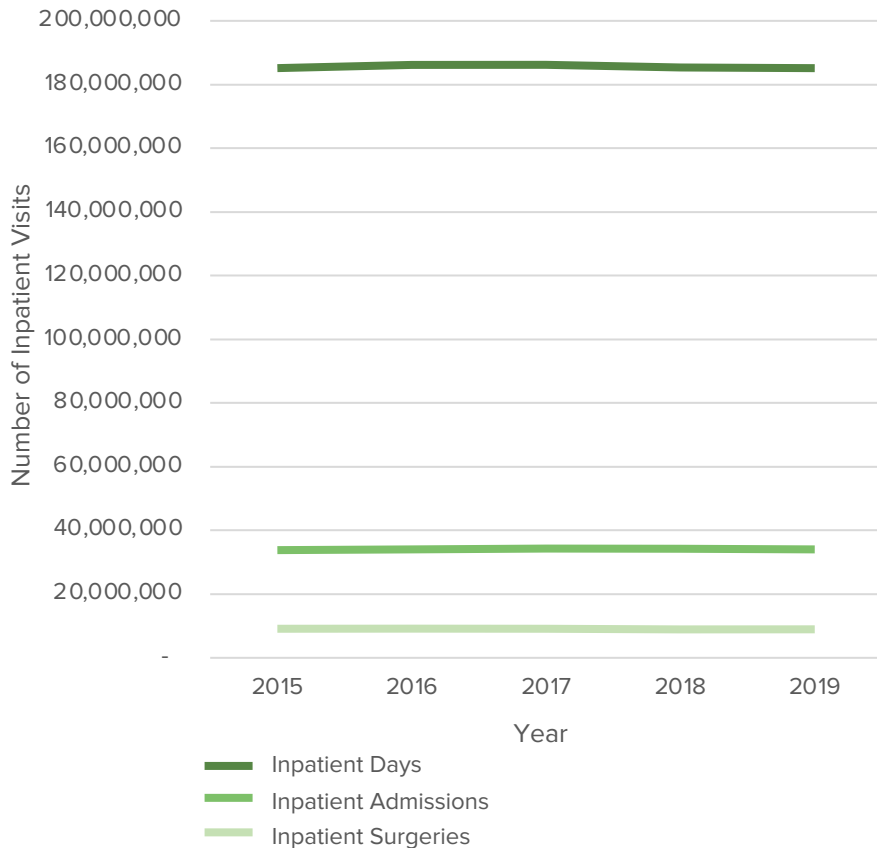
Sources: Kaiser Family Foundation's State Health Facts, National Center for Health Statistics.

## DEMAND: FORECAST OVERVIEW

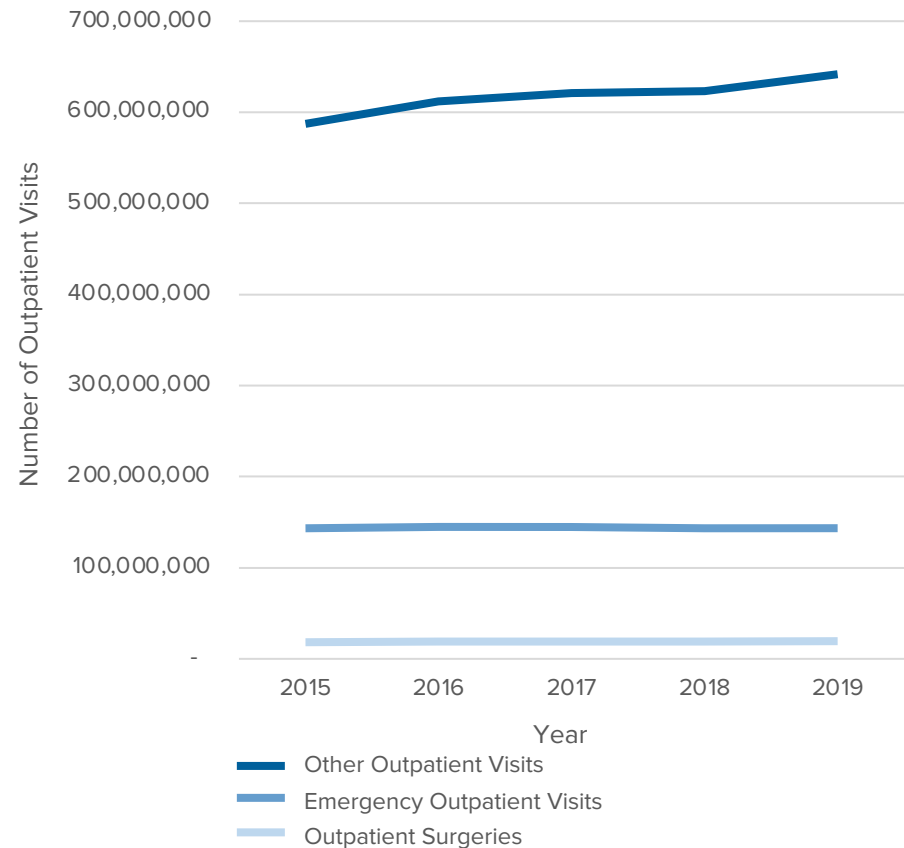
# Aggregate Inpatient and Outpatient Demand Have Been Relatively Flat for Years

Inpatient hospital admissions have been flat to declining since 2008.

### INPATIENT VISITS, 2015-2019



### OUTPATIENT VISITS, 2015-2019



Source: Analysis of 2021 American Hospital Association data.

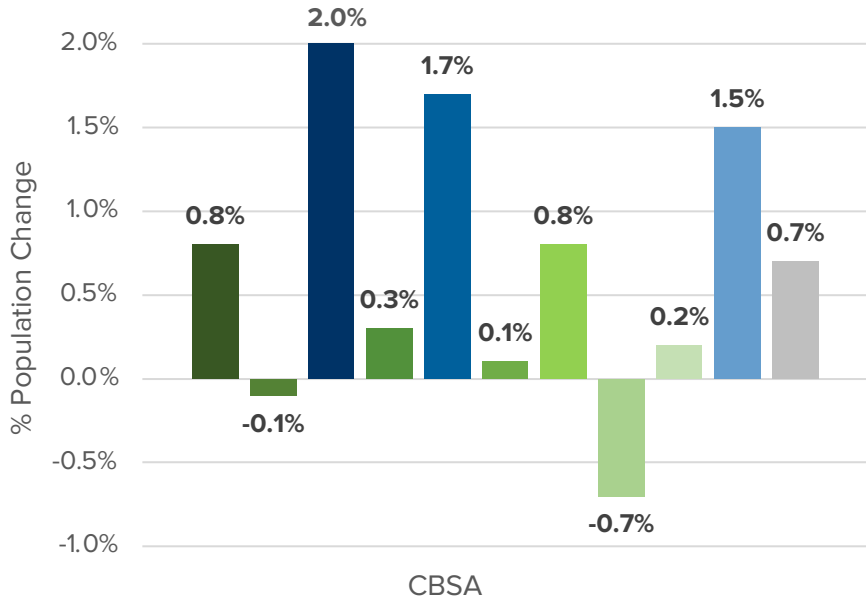


## DEMAND: FORECAST OVERVIEW

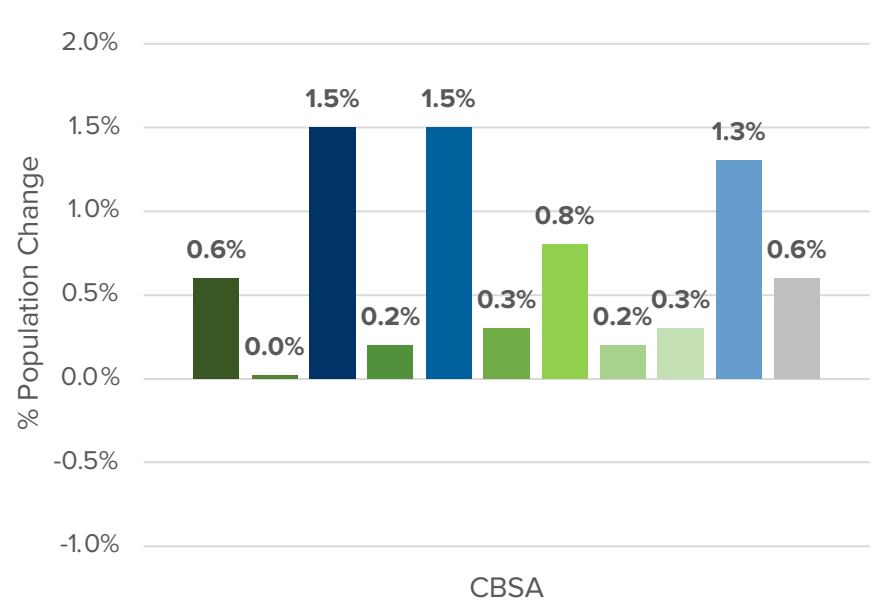
# Population Growth in Sunbelt CBSAs Will Outpace Other CBSAs

Large Sunbelt metropolitan areas (Dallas, Houston, Phoenix) will experience largest population growth of Top 10 CBSAs. Northern and Midwest cities are expected to grow at a slower pace than the nation overall.

ANNUAL GROWTH, 2016-2020



ANNUAL GROWTH, 2021-2025



- Boston-Cambridge-Newton, MA-NH
- Chicago-Naperville-Joliet, IL-IN-WI
- Dallas-Fort Worth-Arlington, TX
- Detroit-Warren-Livonia, MI
- Houston-Sugar Land-Baytown, TX
- Los Angeles-Long Beach-Santa Ana, CA
- Miami-Fort Lauderdale-Pompano Beach, FL
- New York-Northern New Jersey-Long Island, NY-NJ-PA
- Philadelphia-Camden-Wilmington, PA-NJ-DE-MD
- Phoenix-Mesa-Glendale, AZ
- United States

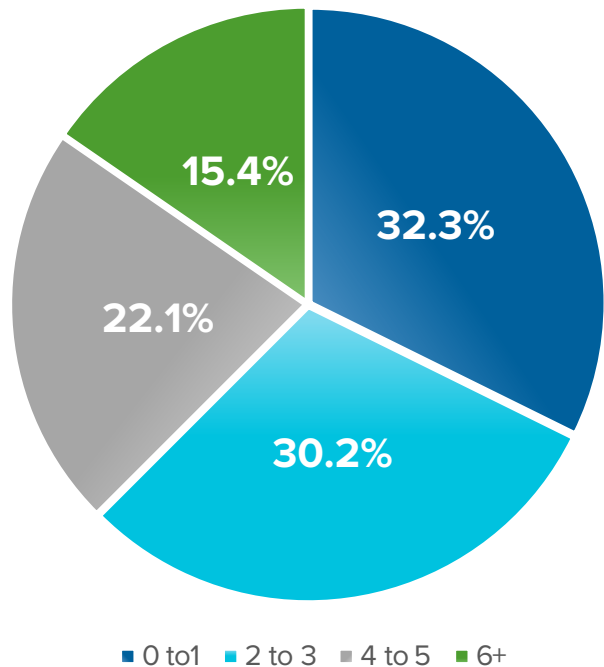
Source: Trilliant Health national all-payer claims database and proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

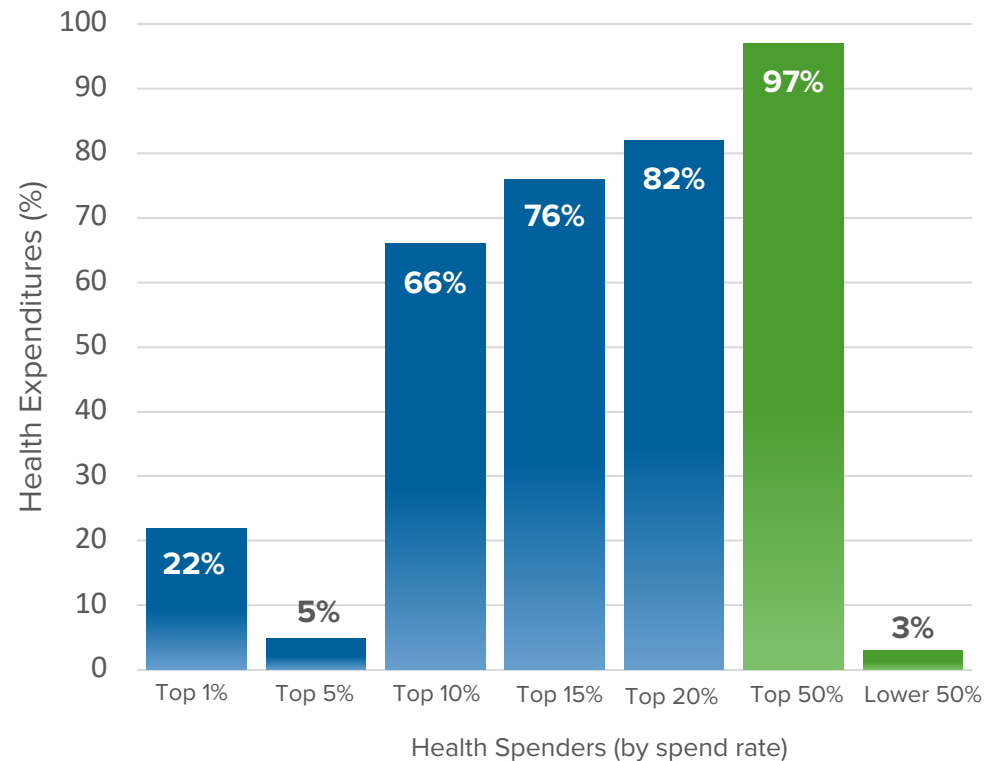
# Ratio of Cost to Burden of Disease Follows the Pareto Principle

However, providers do not treat, and payers do not reimburse for, all conditions equally.

NUMBER OF COMORBID CONDITIONS AMONG MEDICARE BENEFICIARIES



CONTRIBUTION TO TOTAL HEALTH EXPENDITURES BY INDIVIDUALS



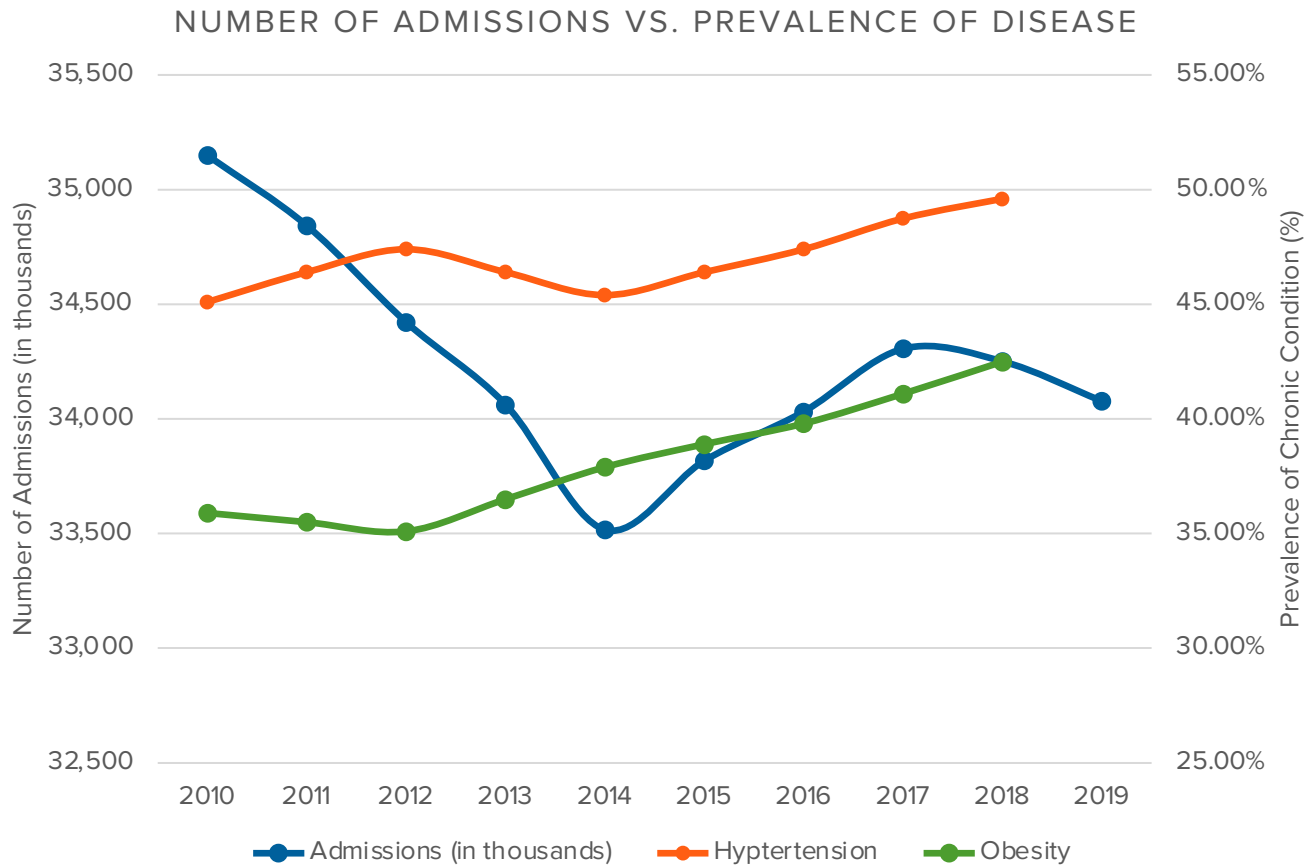
Note: The Pareto principle states that approximately 80% of the outcomes are attributed to 20% of the causes/drivers.

Source: Centers for Medicare and Medicaid Services (CMS), 2018. Kaiser Family Foundation of Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services.

## DEMAND: FORECAST OVERVIEW

# Burden of Disease ≠ Demand for Service

While burden of disease has grown over the last ten years, hospital admissions peaked in 2008.

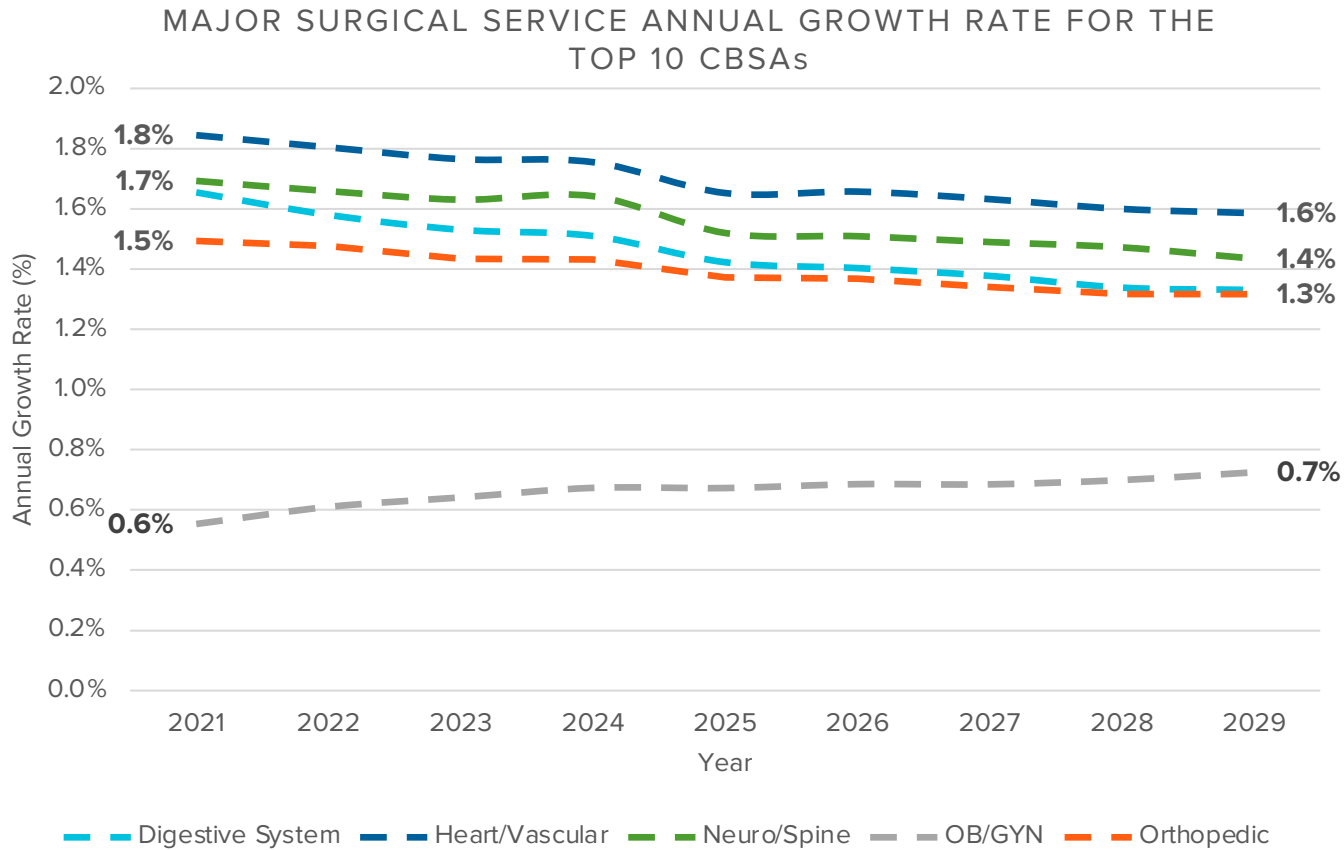


Source: American Hospital Association Statistics, 2021; Centers for Disease Control and Prevention/National Center for Health Statistics, 2019.

## DEMAND: FORECAST OVERVIEW

# Surgical Demand Growth Forecasted to Decline

Forecasted median year-over-year growth rate of major surgical service lines not expected to exceed 2%.



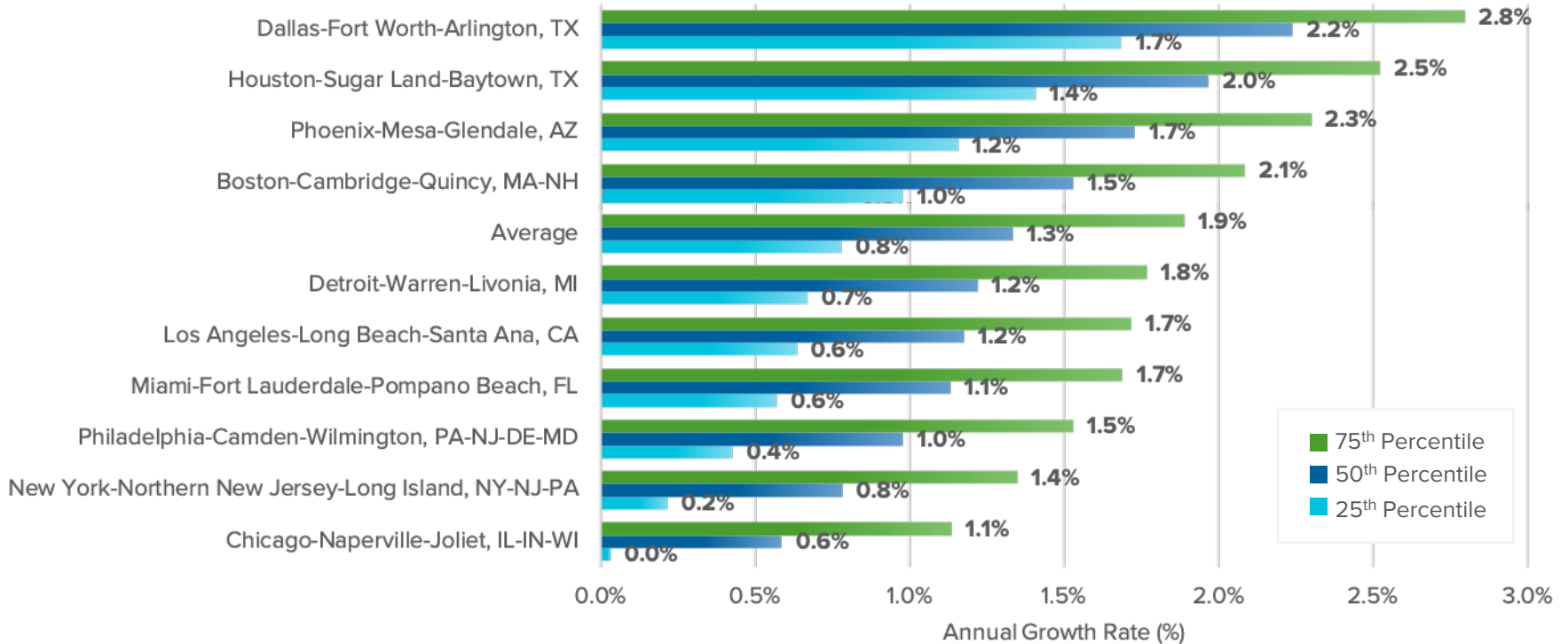
Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

# Pre-COVID-19 Projections Suggest Varying Growth for Surgical Services Lines in the Largest CBSAs

Average rate of growth was forecasted between 0.8% to 1.9% year over year pre-COVID-19.

PRE-COVID-19 PROJECTIONS FOR DIGESTIVE, HEART VASCULAR, NEURO/SPINE, OB/GYN, AND ORTHOPEDICS SURGICAL GROWTH, 2021-25



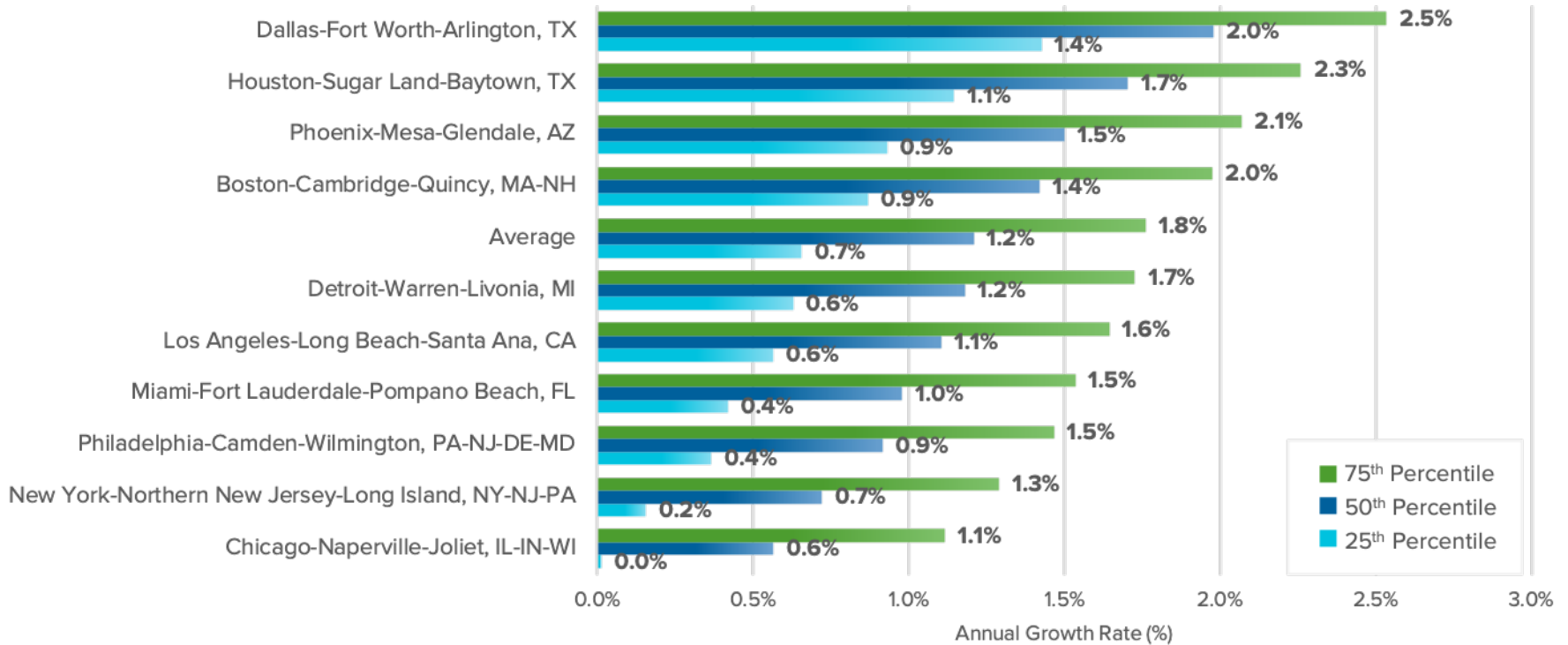
Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

# ...And COVID-19 Did Not Significantly Change Future Demand

Average growth is now forecasted between 0.7% to 1.9% year over year (only 0.1% decrease from pre-COVID-19 forecast projections).

POST-COVID PROJECTIONS FOR DIGESTIVE, HEART VASCULAR, NEURO/SPINE, OB/GYN, AND ORTHOPEDICS SURGICAL GROWTH 2021-25

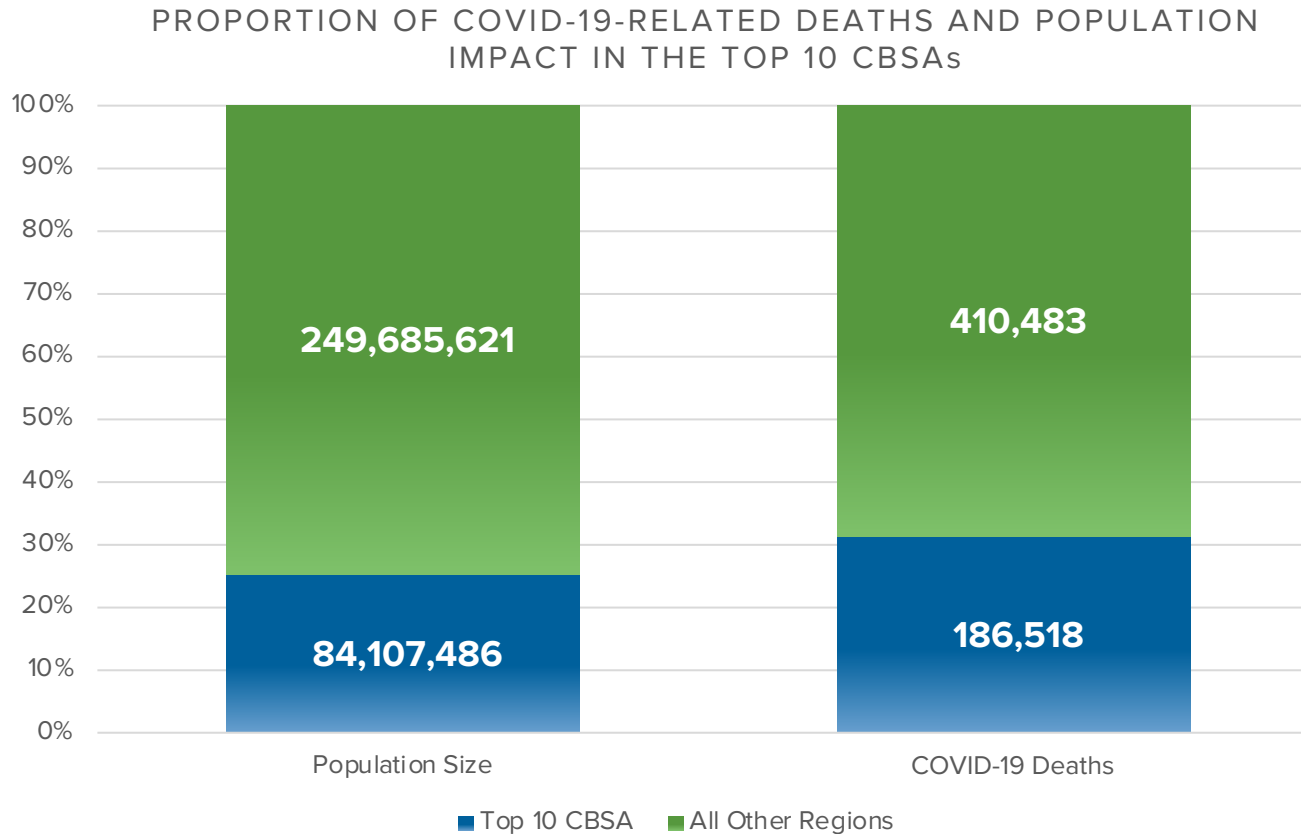


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

# 31% of U.S. COVID-19 Deaths Occurred in 10 CBSAs

Impact of COVID-19 on future demand is minimal, but larger in the Top 10 CBSAs, which account for 25% of the U.S. population.

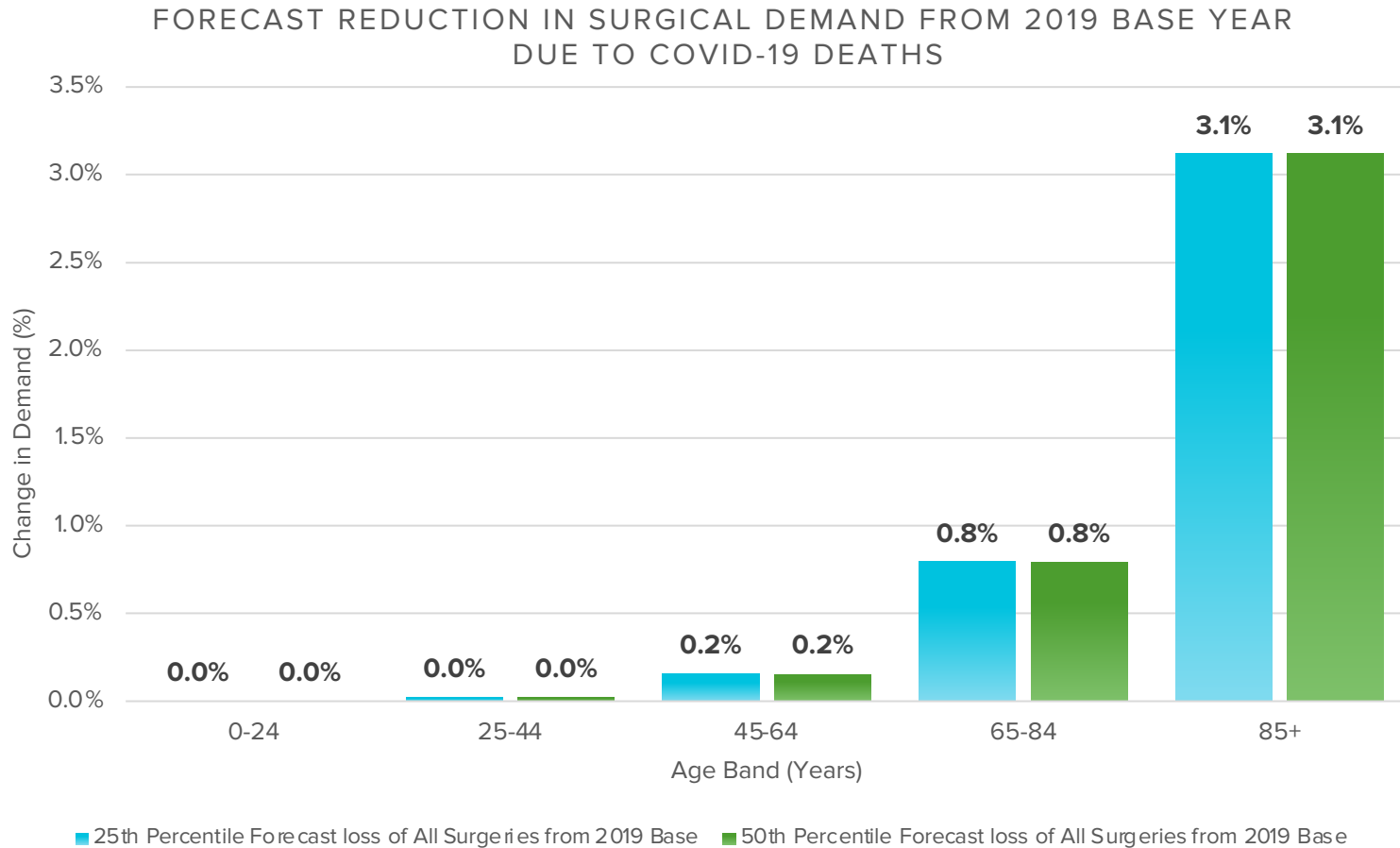


Source: Johns Hopkins University COVID-19 Tracking. Data as of May 19, 2021.

## DEMAND: FORECAST OVERVIEW

# Impact of COVID-19 Mortality on Future Surgical Demand

Deaths due to COVID-19 reduced the 2021 baseline surgical demand in the 65–84 age cohort by 0.8% and 85+ age cohort by 3.1%.



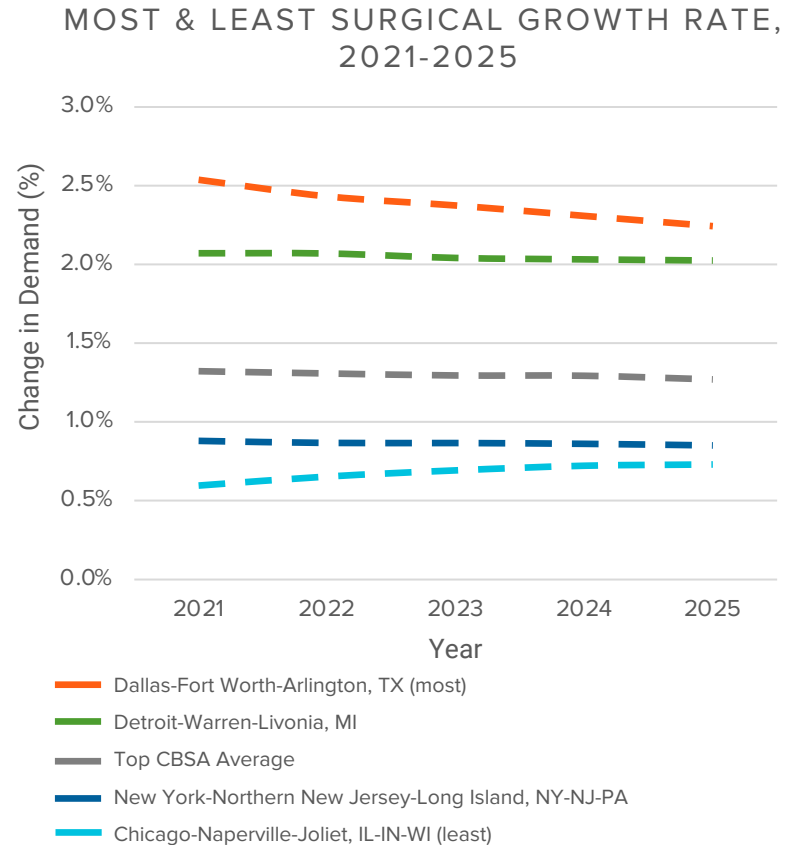
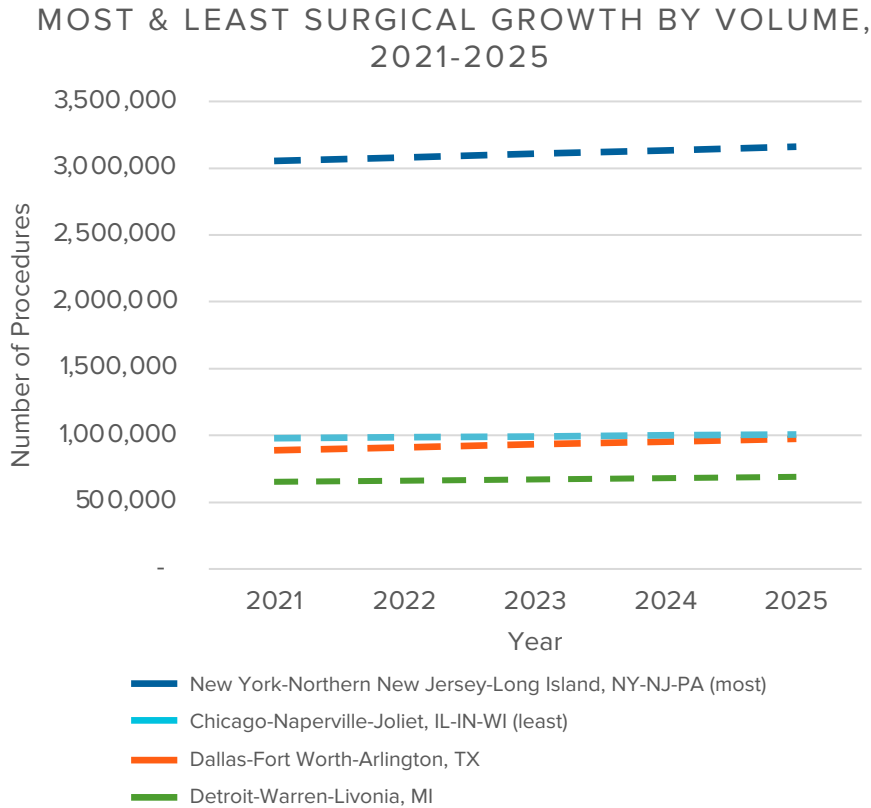
Source: Trilliant Health's proprietary demand forecast model. Johns Hopkins University COVID-19 Tracking; CDC.



## DEMAND: FORECAST OVERVIEW

# Projected Five-Year Surgical Demand is Slowing with Notable CBSAs Projected to Have Flat Growth

Projected growth rates are all well below the common industry assumption of approximately 3% annual growth.



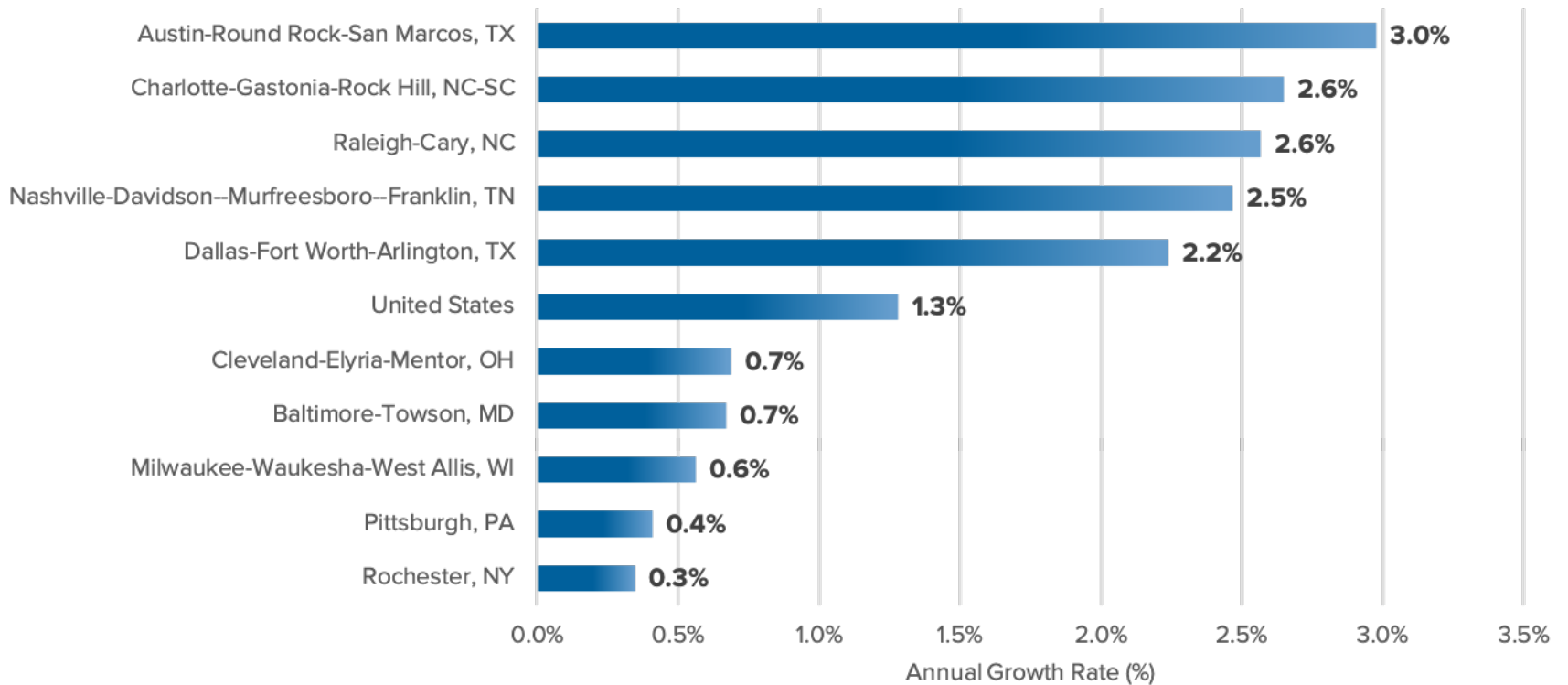
Note: Analysis includes aggregate of Digestive, Heart/Vascular Neuro/Spine, OB/GYN, and Orthopedic surgical services as a proxy for overall surgical demand.  
Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

# National Migration Patterns Foreshadow Changes in Demand

Of CBSAs with more than one million people, the five cities with the slowest healthcare growth are in the North, while Sunbelt CBSAs encompass the top five fastest growing markets for healthcare demand.

ANNUAL GROWTH RATE, 2020-2025

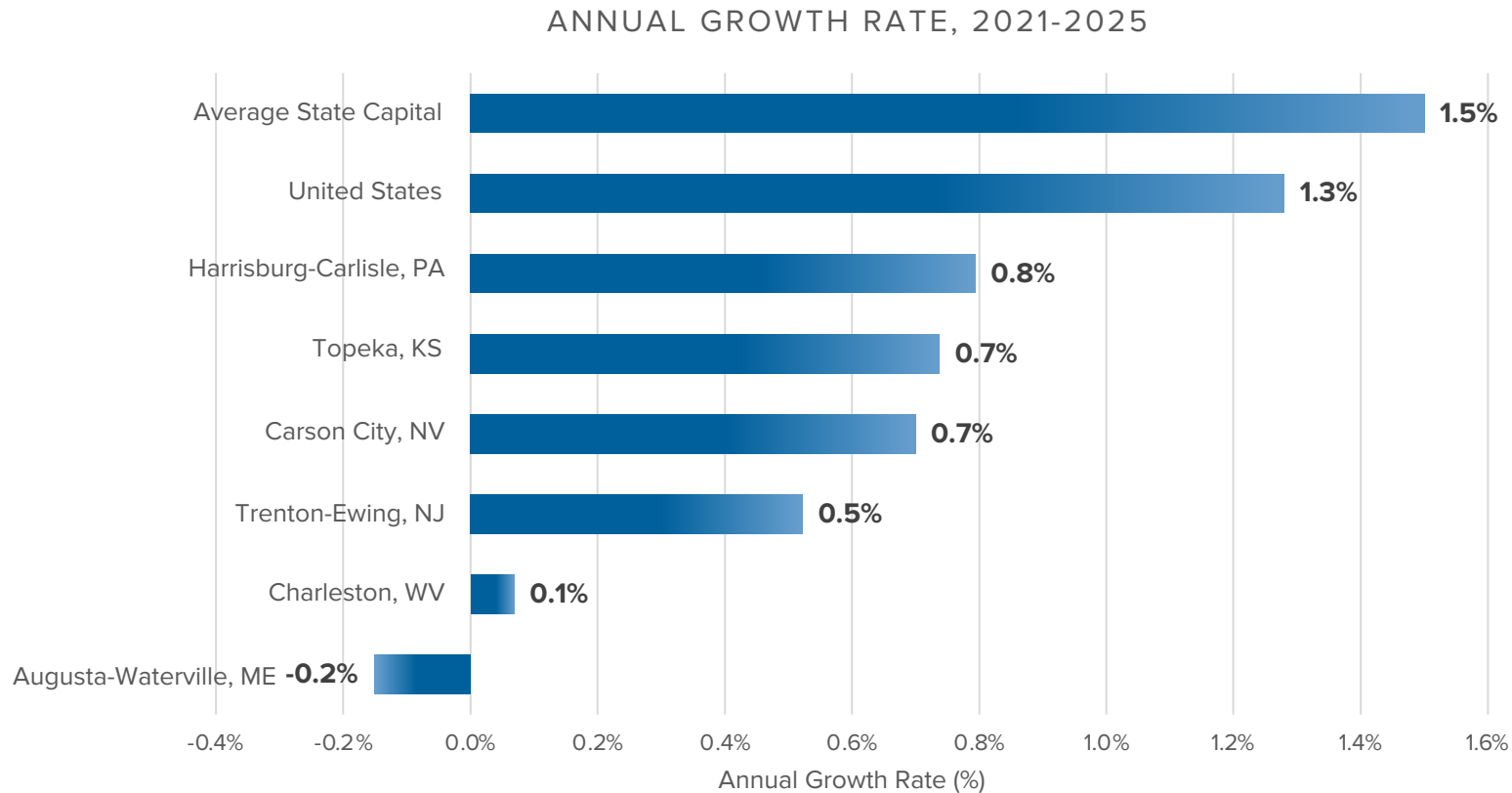


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

# Seats of Government are Seeing Declines in Healthcare Demand

While state capitals typically have greater growth (1.5% per year) than the United States overall (1.3% per year), some are in decline.

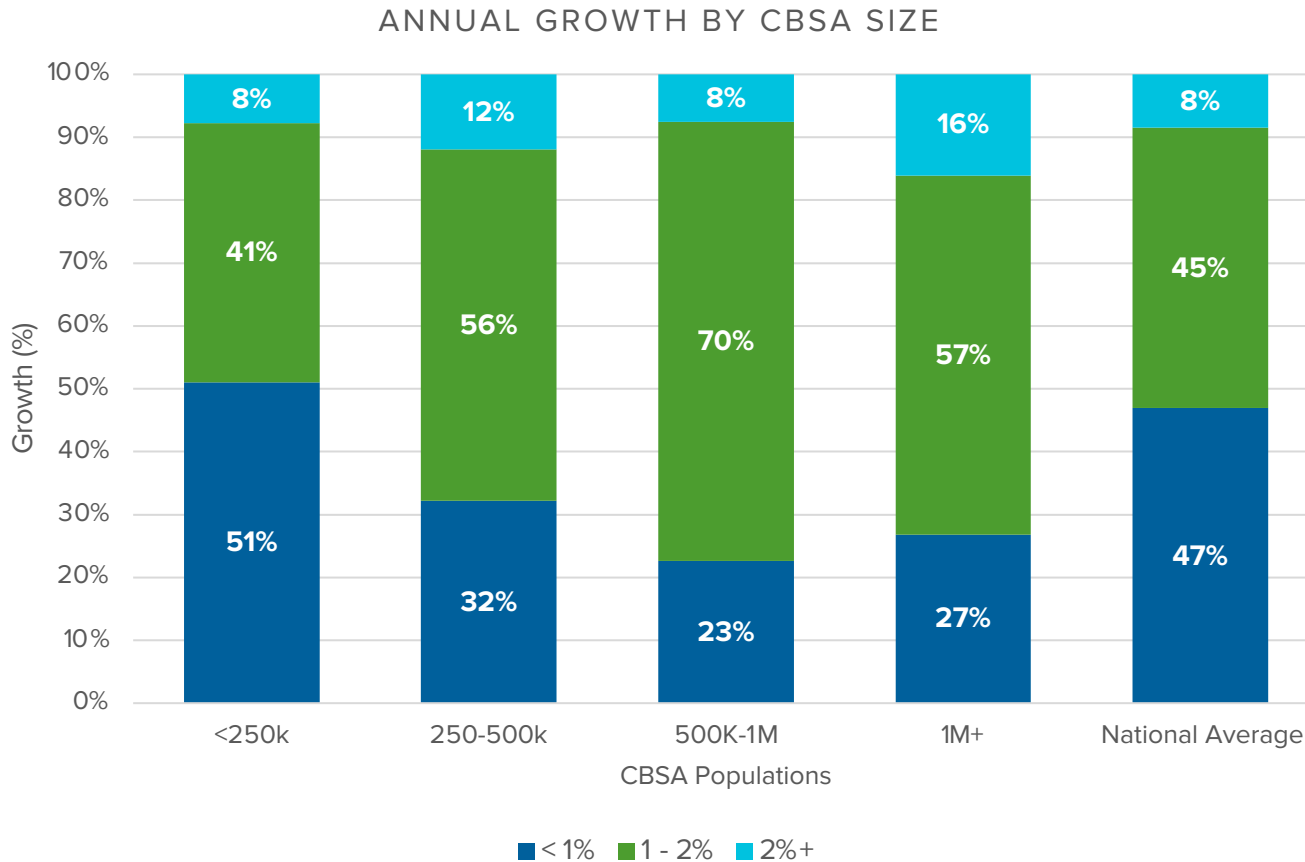


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

# Healthcare Demand is Projected to Rise Faster in Larger CBSAs

Smaller markets are growing at a lower rate than larger urban centers.



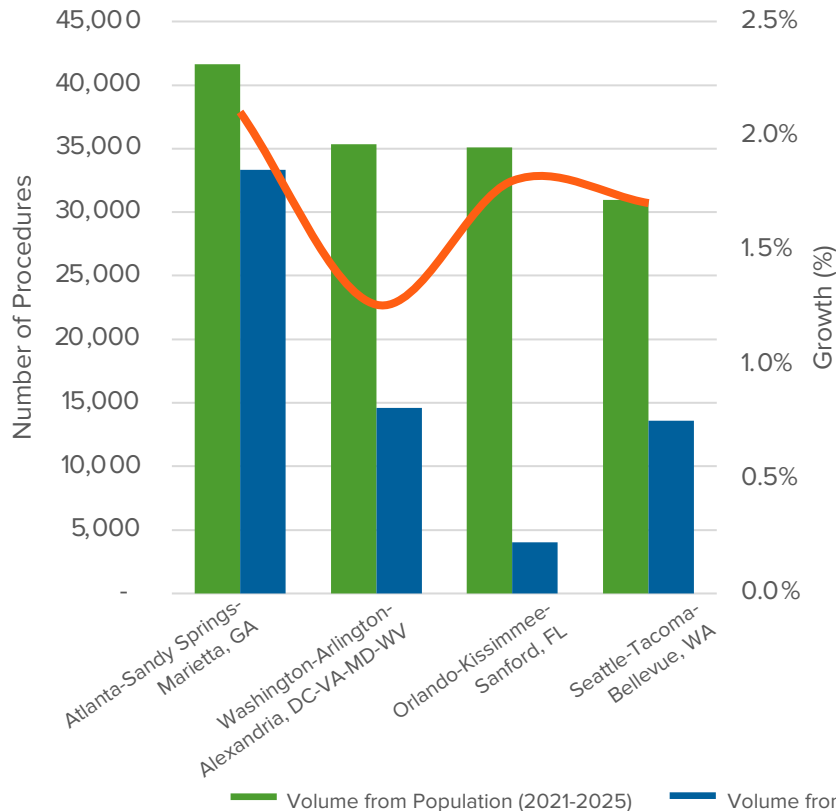
Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

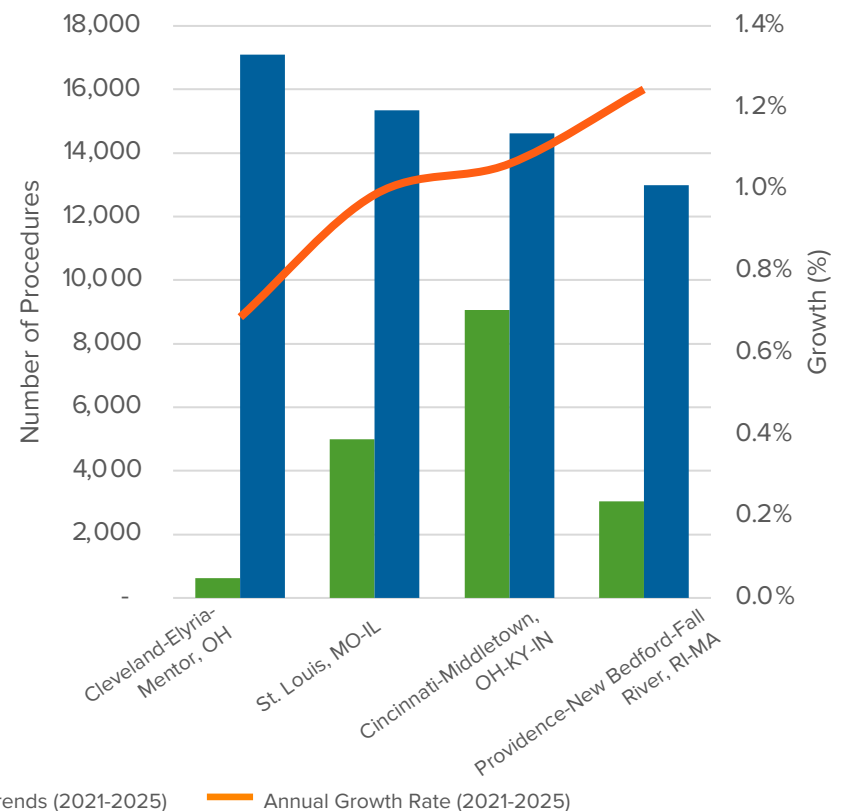
# The Drivers of Surgical Growth Vary by Market

Population growth and shifting demographics have a greater impact on expected health care demand than care trends in most markets.

EXPECTED SURGICAL VOLUME GROWTH DUE TO POPULATION SHIFTS, 2021-2025



EXPECTED SURGICAL VOLUME GROWTH DUE TO CARE TRENDS, 2021-2025



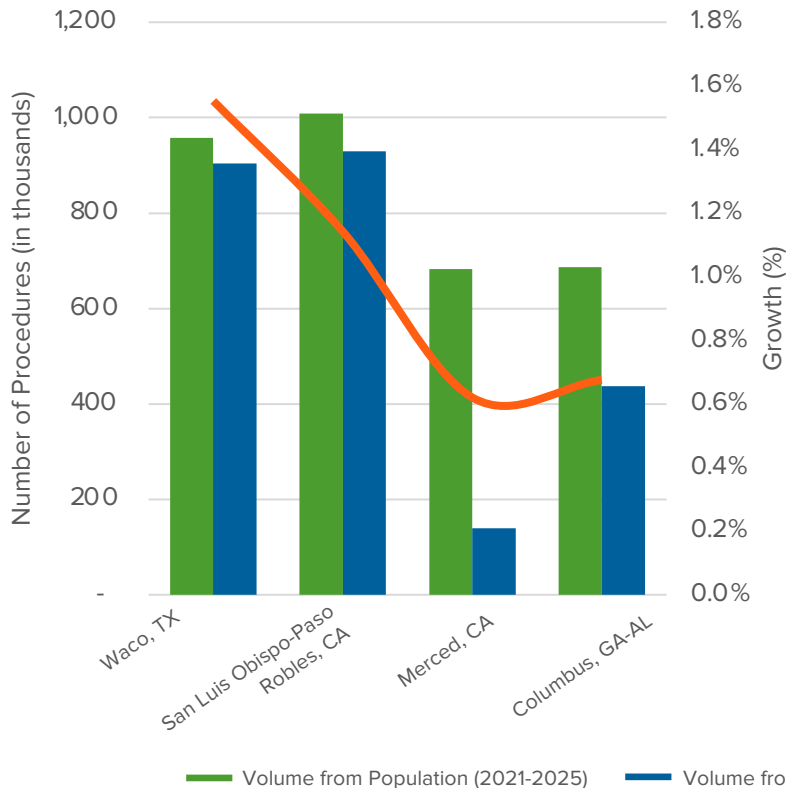
Source: Trilliant Health's proprietary demand forecast model.

## DEMAND: FORECAST OVERVIEW

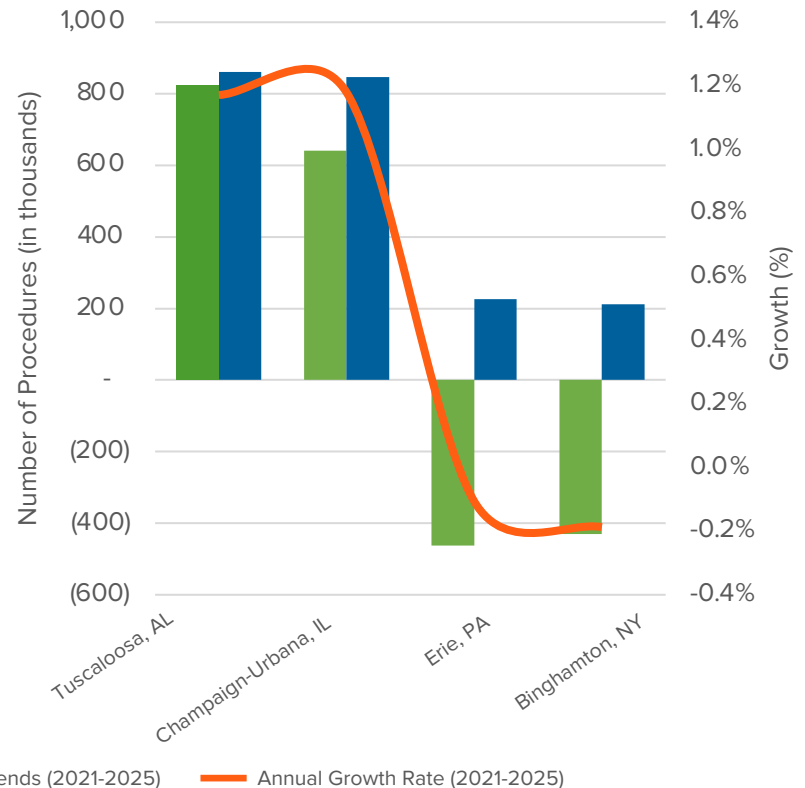
# Some CBSAs Have Flat and Declining Surgical Growth Due to Population Shifts and Care Trends

Healthcare demand grows, until it doesn't. Small and mid size CBSAs have a higher propensity for flat and declining demand, creating a "negative sum game" scenario.

EXPECTED SURGICAL VOLUME GROWTH DUE TO POPULATION SHIFTS, 2021-2025



EXPECTED SURGICAL VOLUME GROWTH DUE TO CARE TRENDS, 2021-2025



Source: Trilliant Health's proprietary demand forecast model.

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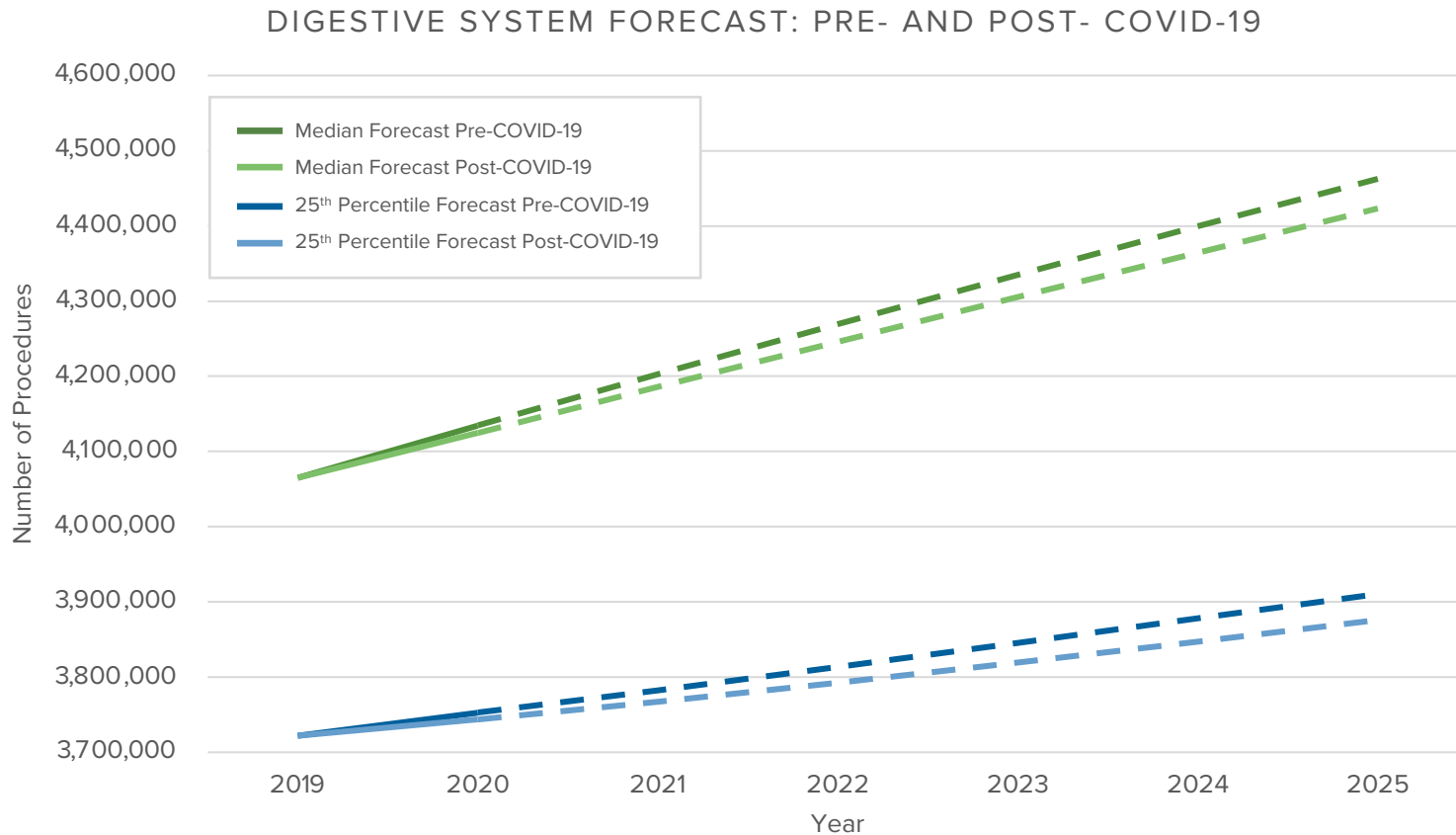
# DEMAND

*Digestive Forecast*

## DEMAND FORECAST: DIGESTIVE

# Total Demand for Digestive Services Projected to Grow by 1.2% Annually

The difference in median projected digestive surgery volumes from 2019 to 2025 is 154K procedures from pre- to post-COVID-19.



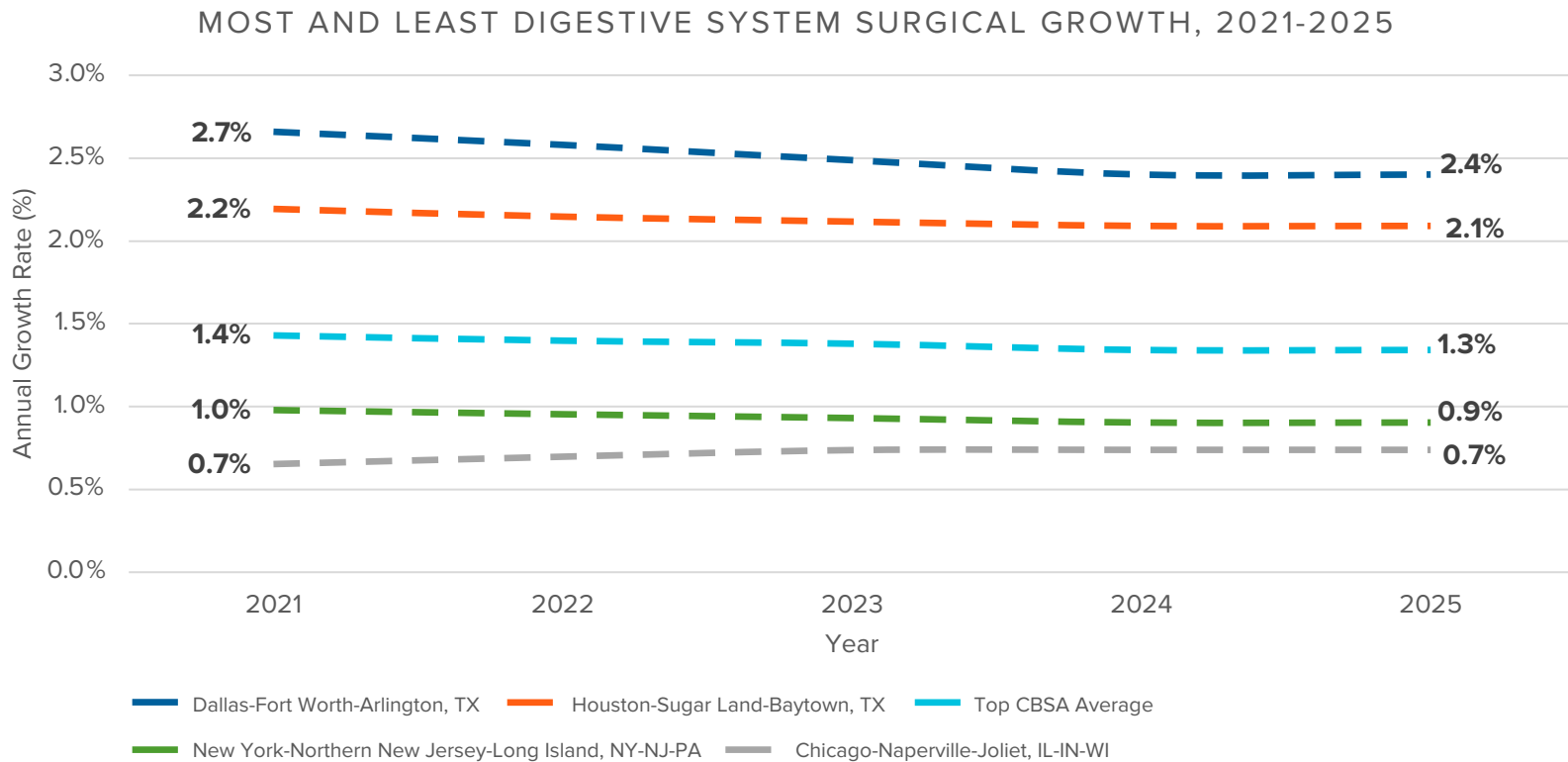
Source: Trilliant Health's proprietary demand forecast model.



## DEMAND FORECAST: DIGESTIVE

# Digestive Surgery Growth from 2021-2025 Varies by CBSA

Among the largest 10 CBSAs, Dallas-Fort Worth is expected to see the greatest growth (2.2% CAGR) in digestive system surgeries and Chicago to see the least (0.8% CAGR) compared to the average growth rate of 1.2%.

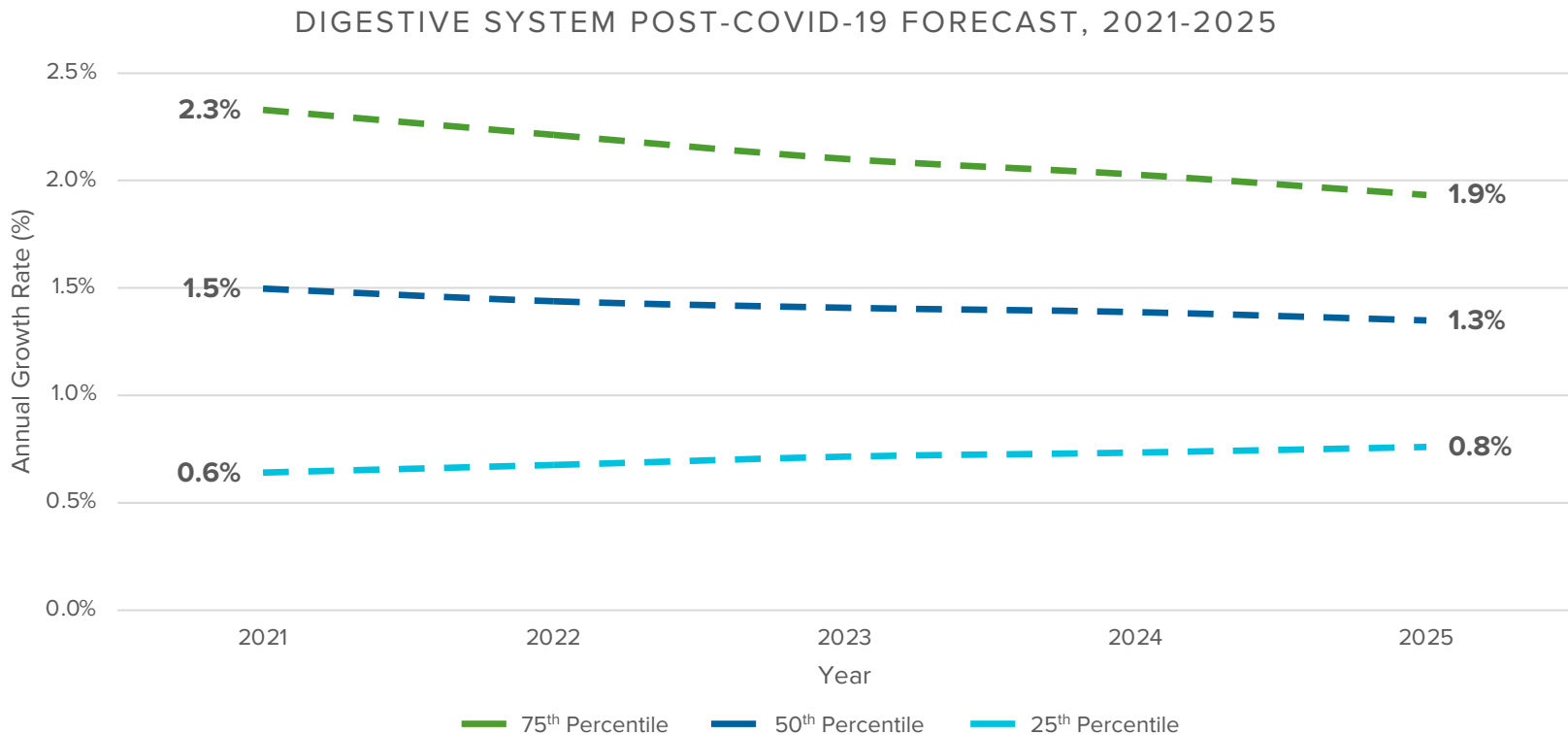


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: DIGESTIVE

# Annual Digestive Surgical Volume Will Grow at 1.2% CAGR

Uncertainty around care rebounds along with changing care patterns for routine colon health causes wide variation in expected growth. Long term forecasts suggest growth to remain under 2% per year.

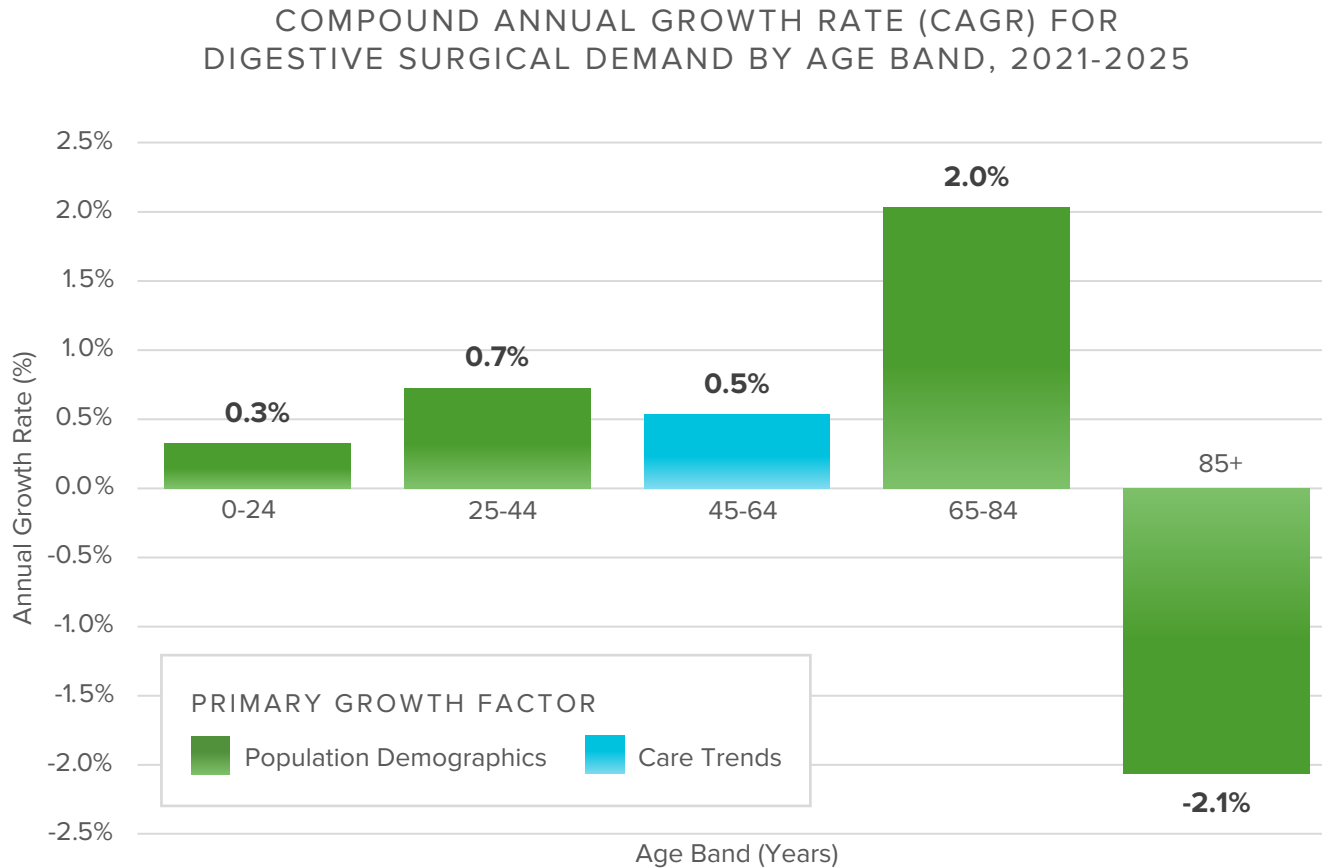


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: DIGESTIVE

# Growth in Demand for Digestive Surgeries Will Be Driven by Individuals Ages 25-44 and 65-84

Growth in these age cohorts will be primarily attributed to shifts in population demographics.



Source: Trilliant Health's proprietary demand forecast model.

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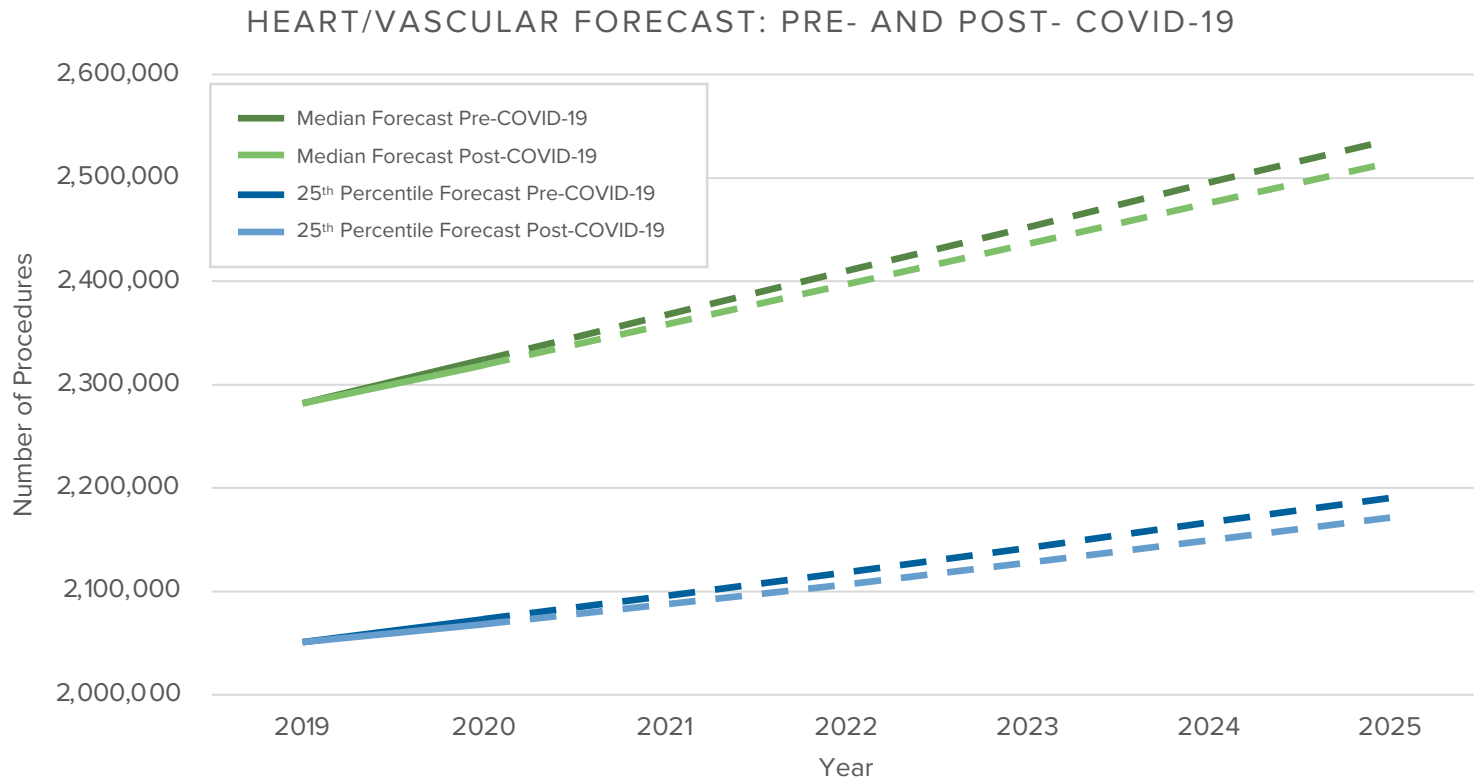
# DEMAND

*Heart/Vascular Forecast*

## DEMAND FORECAST: HEART/VASCULAR

# Total Demand for Heart/Vascular Services Projected to Grow by 1.4% Annually

The difference in median projected heart and vascular surgical volumes from 2019 to 2025 is 86K procedures from pre- to post-COVID-19.

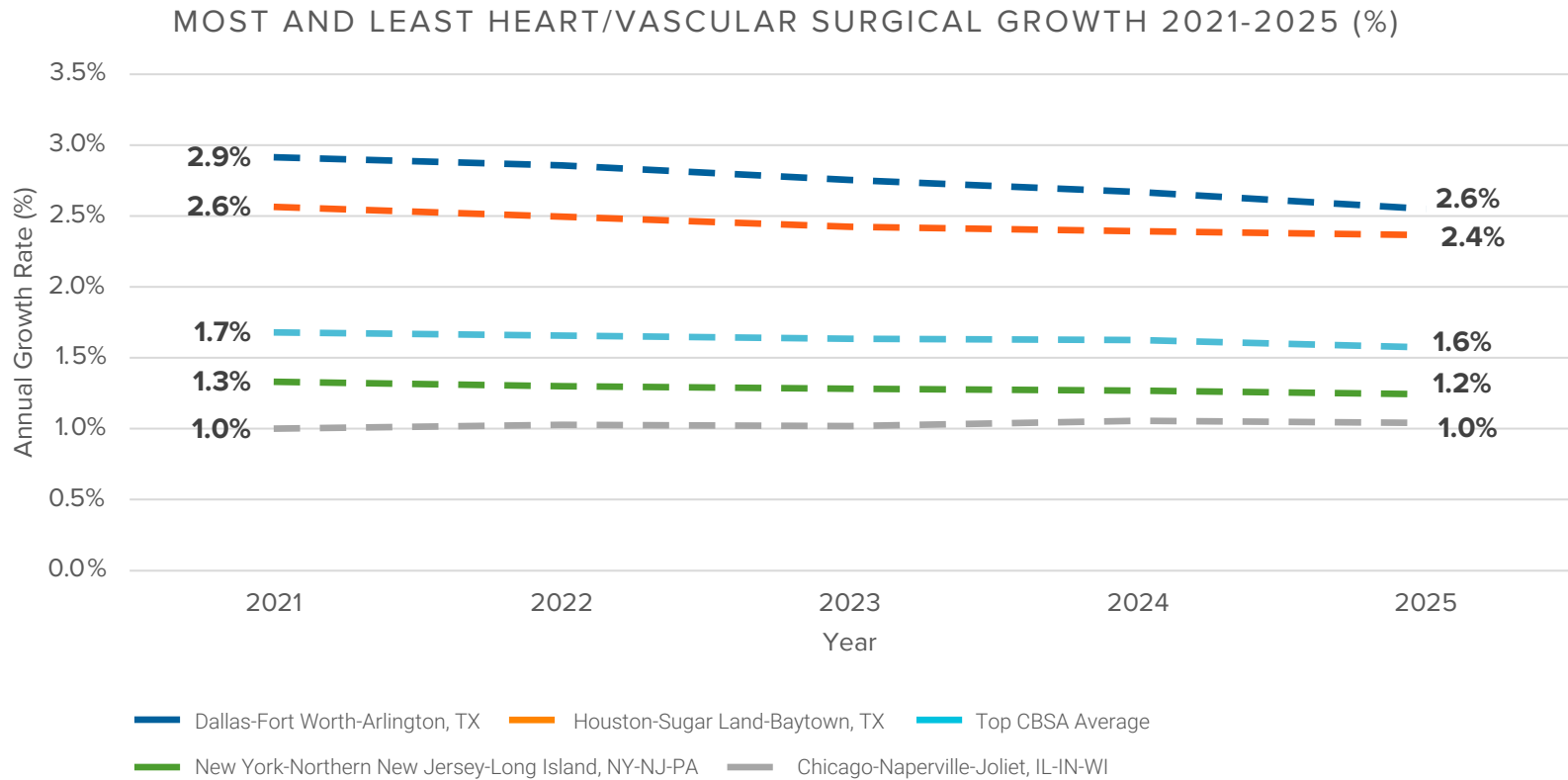


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: HEART/VASCULAR

# Heart/Vascular Growth from 2021-2025 Varies by CBSA

Among the largest 10 CBSAs, Dallas Fort Worth is expected to see the greatest growth (2.3% CAGR) in heart/vascular surgeries and Chicago to see the least (0.9% CAGR) compared to the national average growth rate of 1.4%.

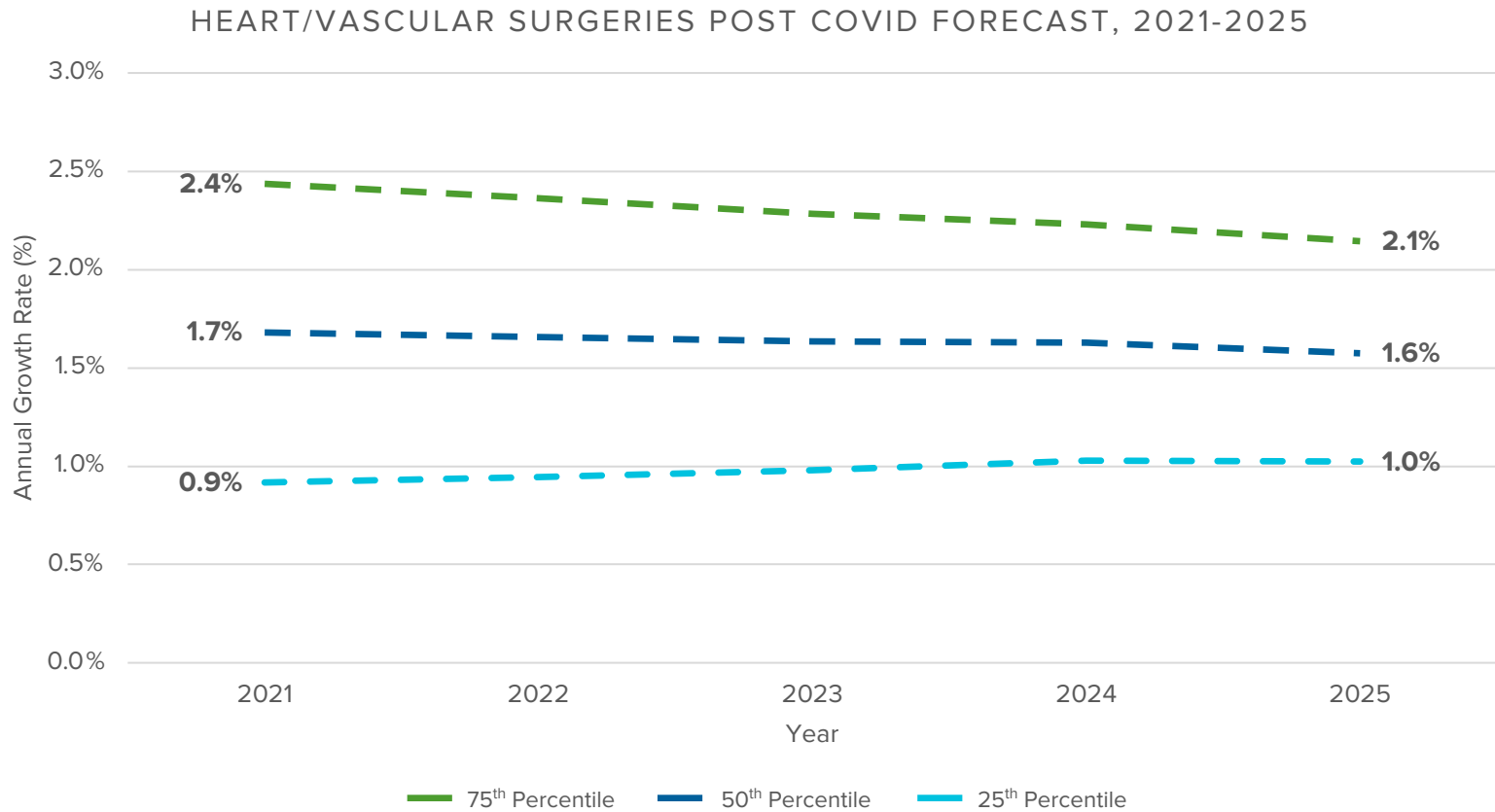


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: HEART/VASCULAR

# Annual Heart/Vascular Surgical Volume Will Grow at 1.4% CAGR

Aging demographics and delayed care create variation in expected growth in the short term. Long term forecasts suggest growth to remain between 1-2% per year.

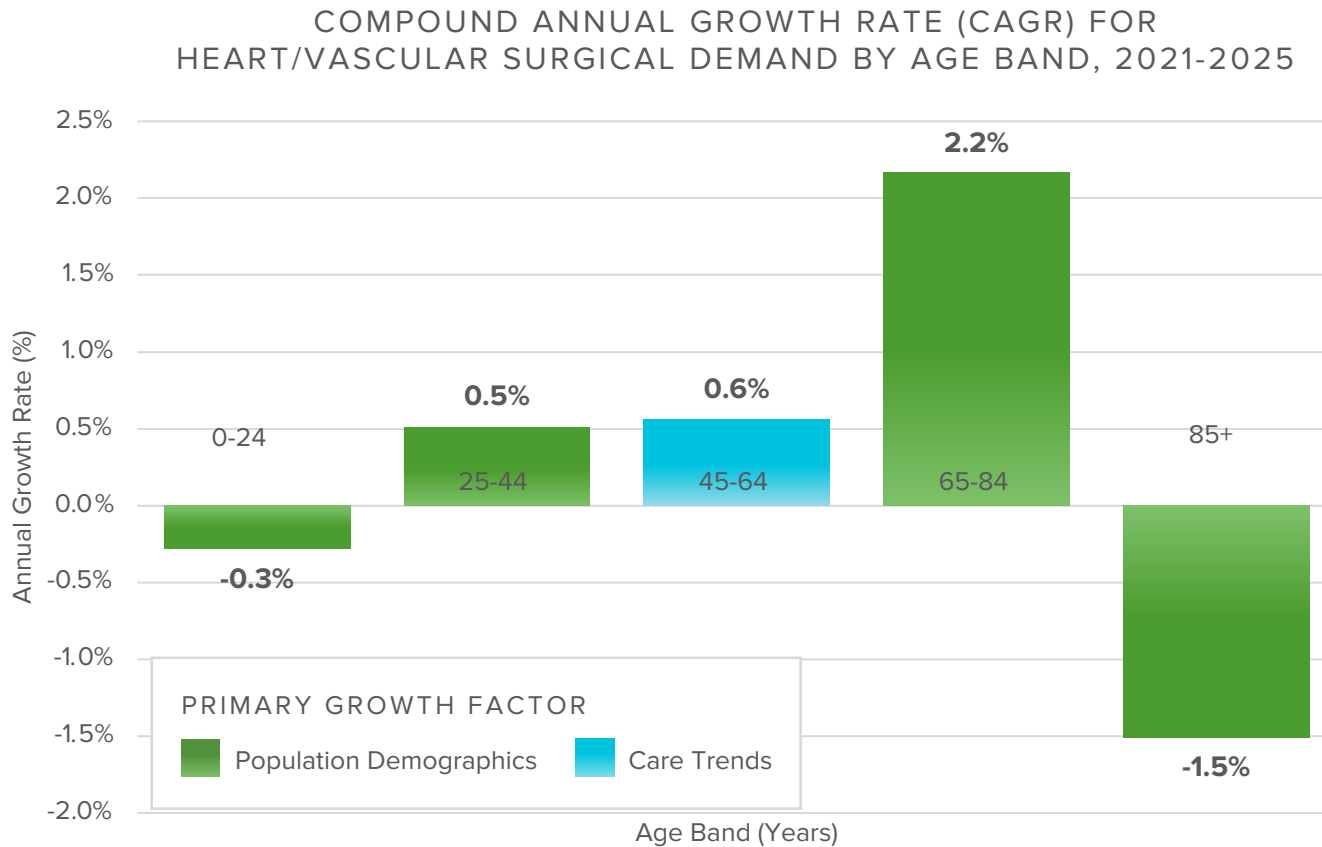


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: HEART/VASCULAR

# Growth in Demand for Heart/Vascular Surgeries Will be Driven Primarily by Individuals Ages 65-84

Growth in this age cohort will be primarily attributed to shifts in population demographics with more Americans aging.



Source: Trilliant Health's proprietary demand forecast model.



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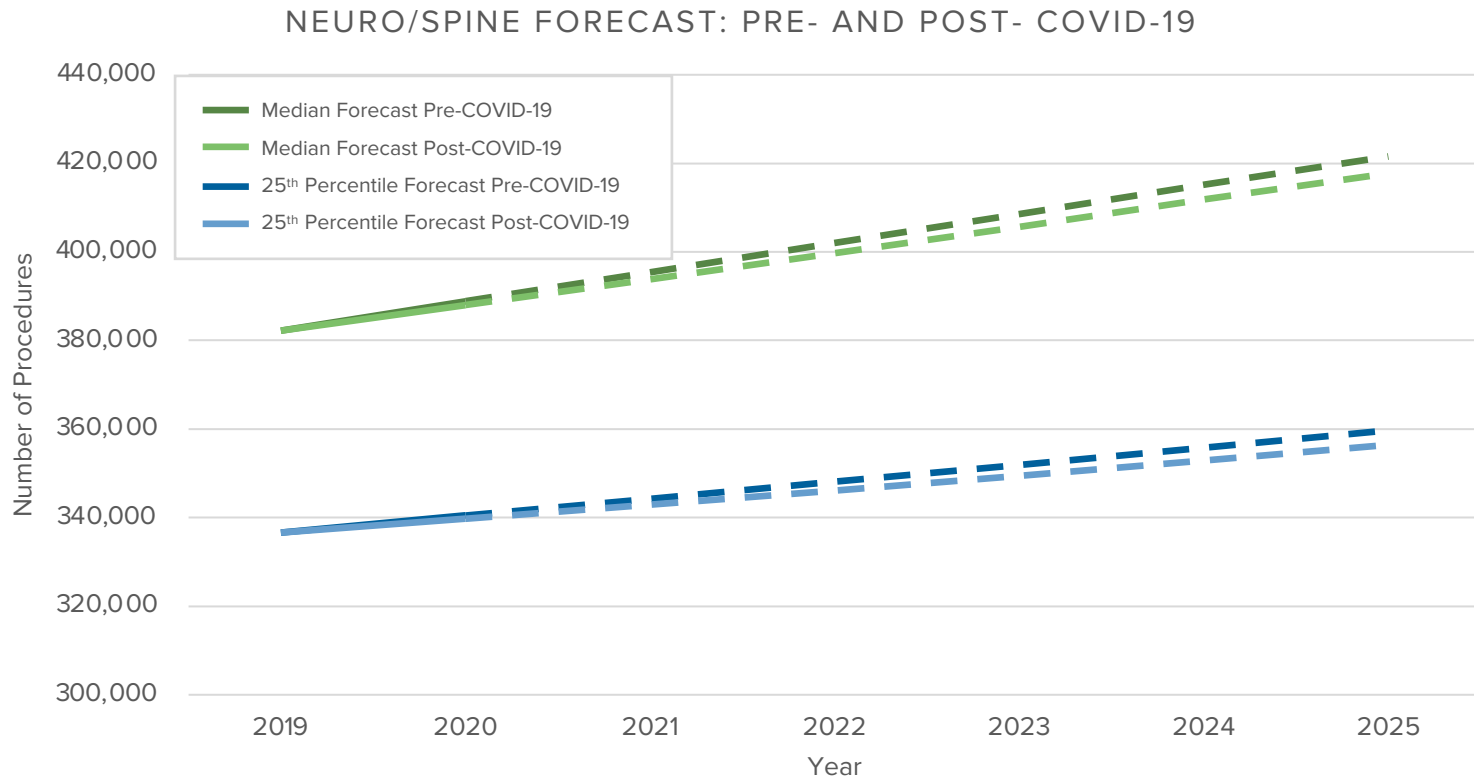
# DEMAND

*Neuro/Spine Forecast*

## DEMAND FORECAST: NEURO/SPINE

# Total Demand for Neuro/Spine Services Projected to Grow by 1.2% Annually

The difference in median projected Neuro/Spine surgical volumes from 2019 to 2025 is 14,000 procedures from pre- to post-COVID-19.

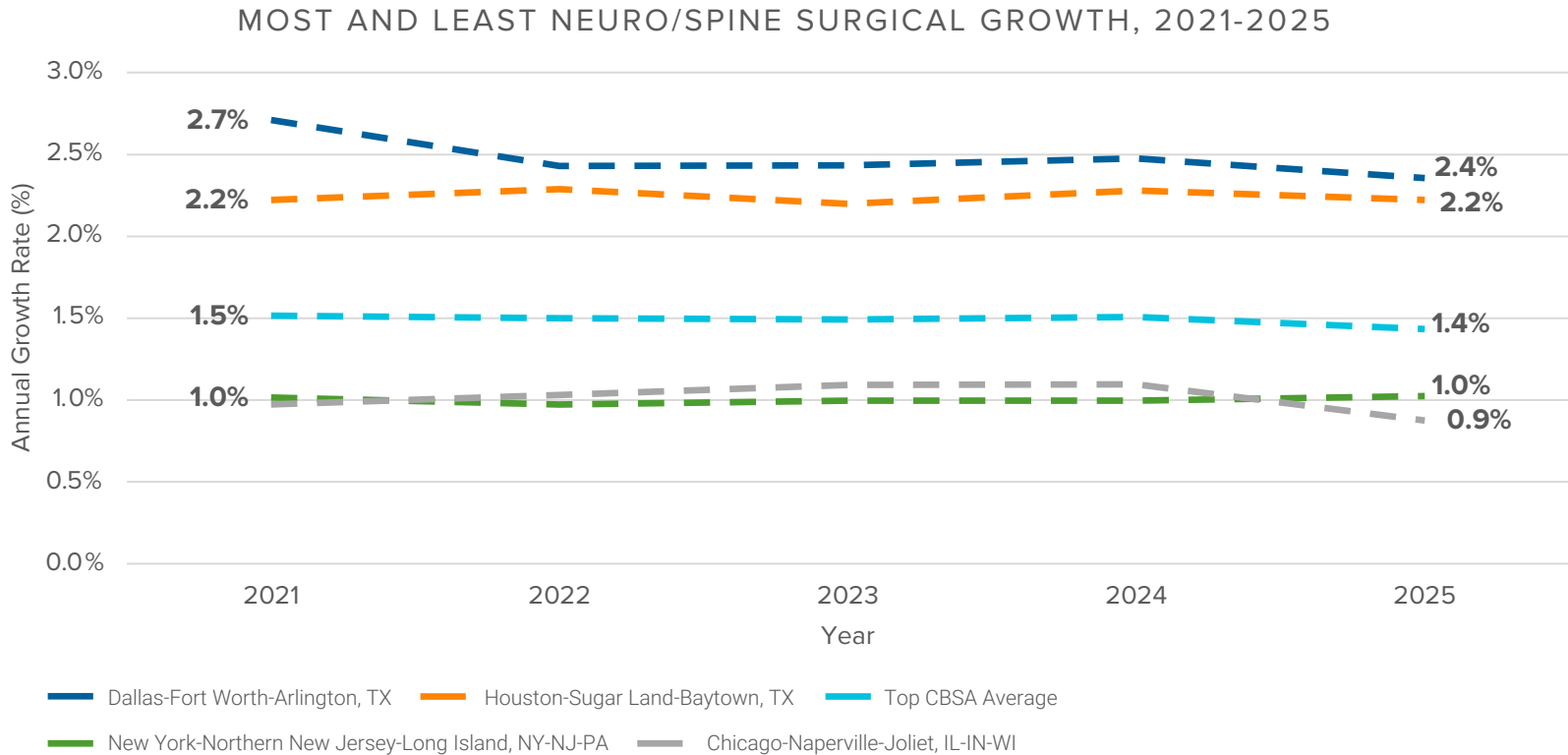


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: NEURO/SPINE

# Neuro/Spine Growth from 2021-2025 Varies by CBSA

Among the largest 10 CBSAs, Dallas-Fort Worth is expected to see the greatest growth (2.1% CAGR) in Neuro/Spine surgeries, with Chicago and New York City to see the least (0.8% CAGR), compared to the national average growth rate of 1.2%

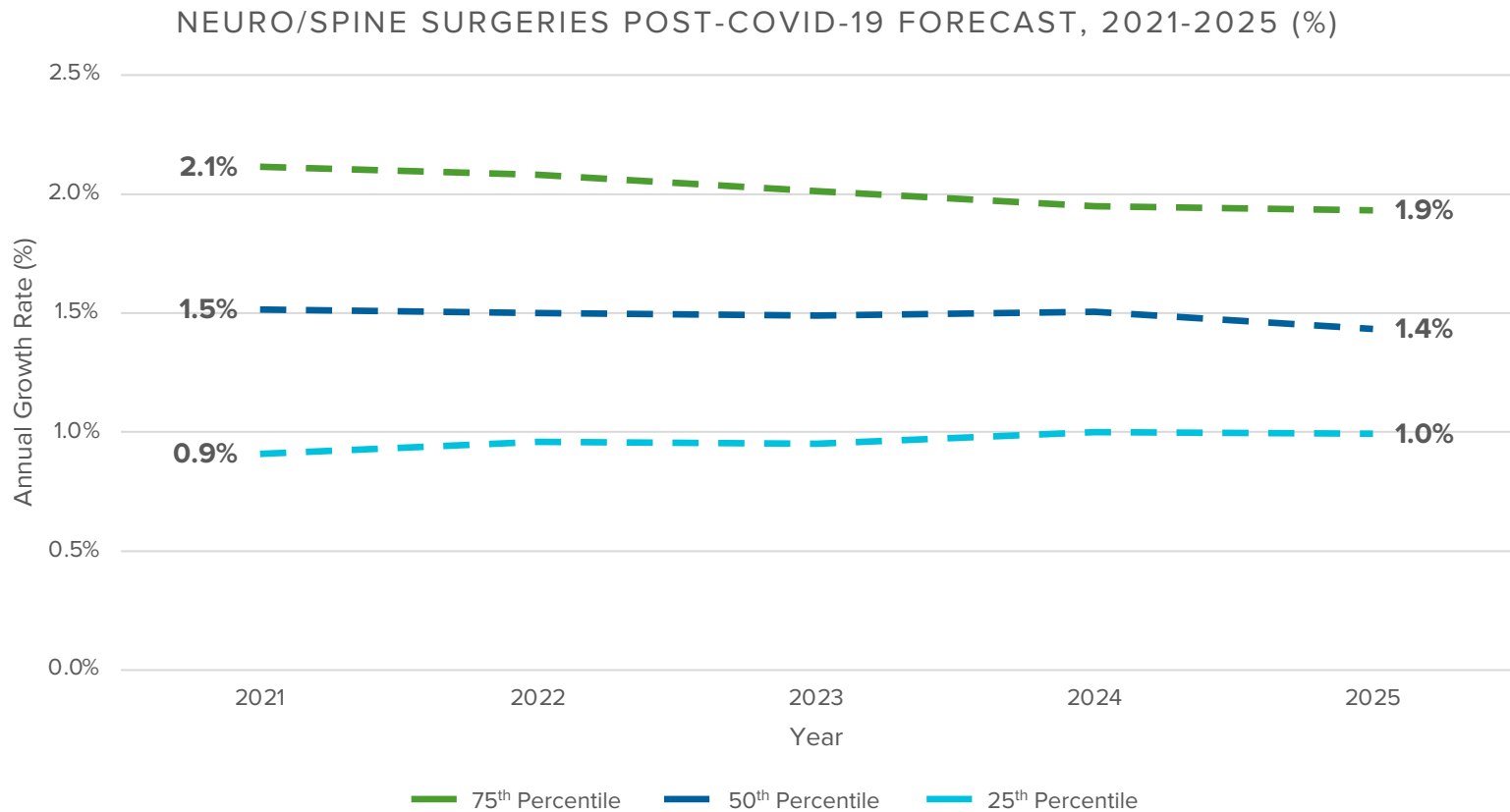


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: NEURO/SPINE

# Annual Neuro/Spine Surgical Volume Will Grow at 1.2% CAGR

Aging demographics are expected to sustain consistent 1-2% annual growth for Neuro/Spine procedures.

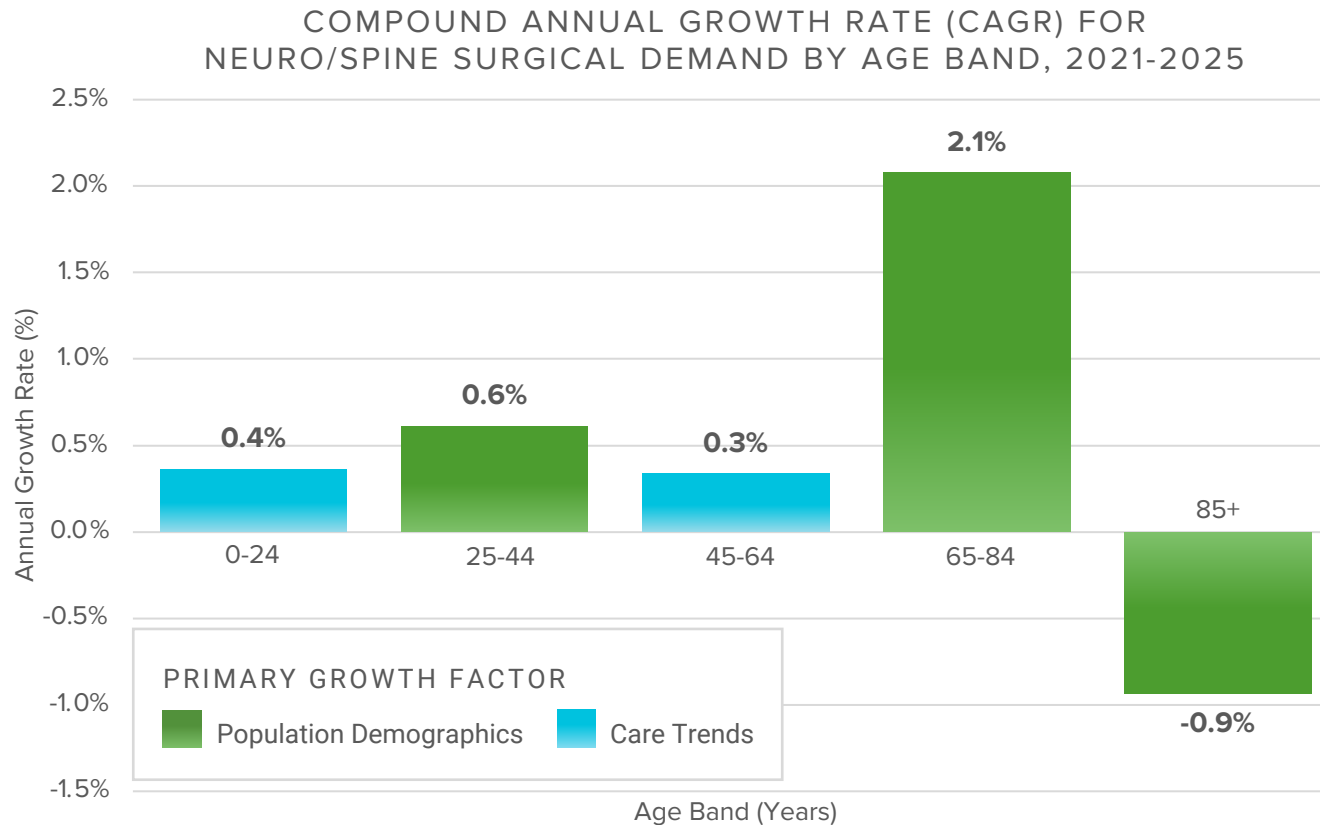


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: NEURO/SPINE

# Growth in Demand for Neuro/Spine Surgeries Will Largely be Driven by Individuals Ages 65-84

Older Americans will continue to be the major driver in Neuro/Spine with 46% of all surgeries being performed on adults ages 65-84 in 2025.



Source: Trilliant Health's proprietary demand forecast model.

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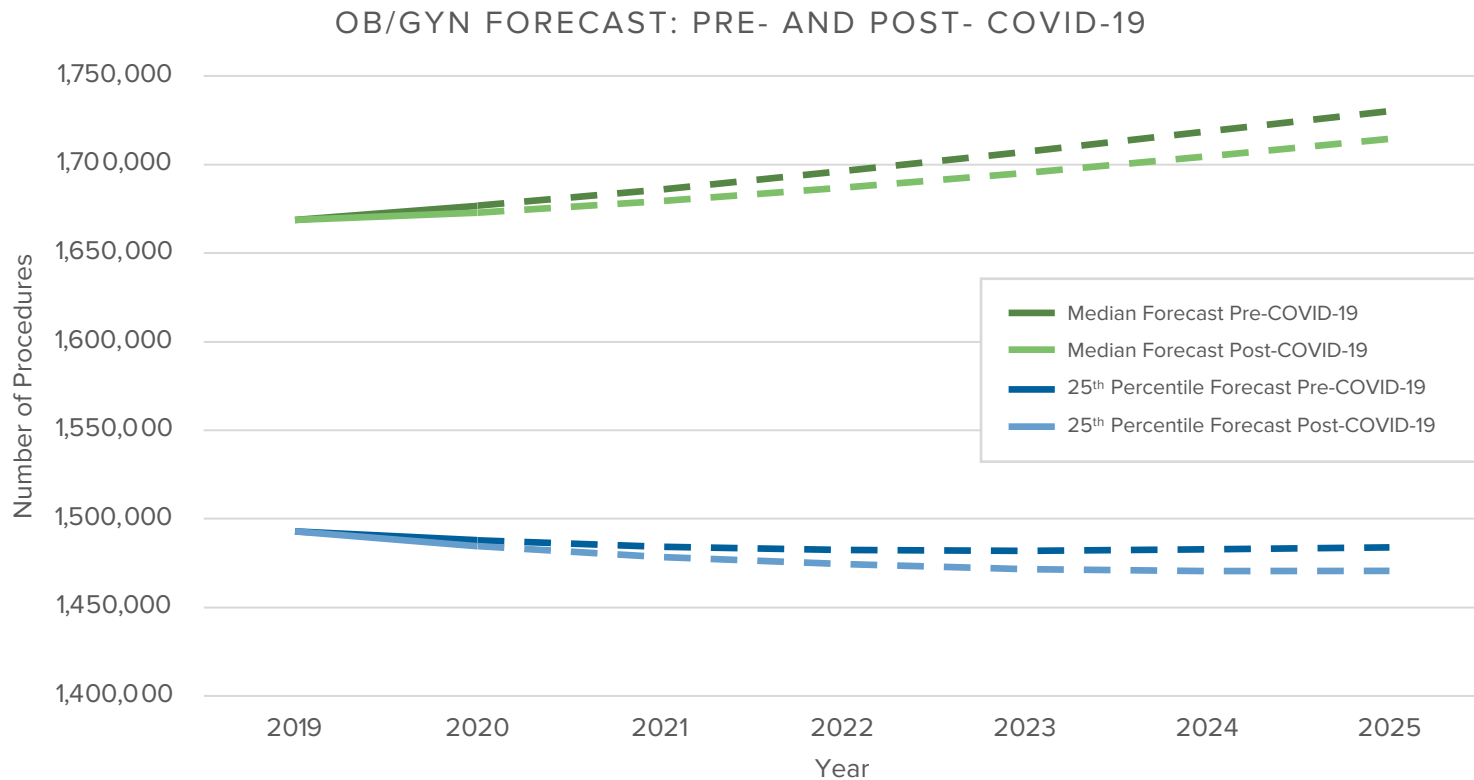
# DEMAND

*OB/GYN Forecast*

## DEMAND FORECAST: OB/GYN

# Total Demand for OB/GYN Services Projected to Grow by 0.4% Annually

The difference in median projected OB/GYN procedural volumes from 2019 to 2025 is 62K from pre- to post-COVID-19.

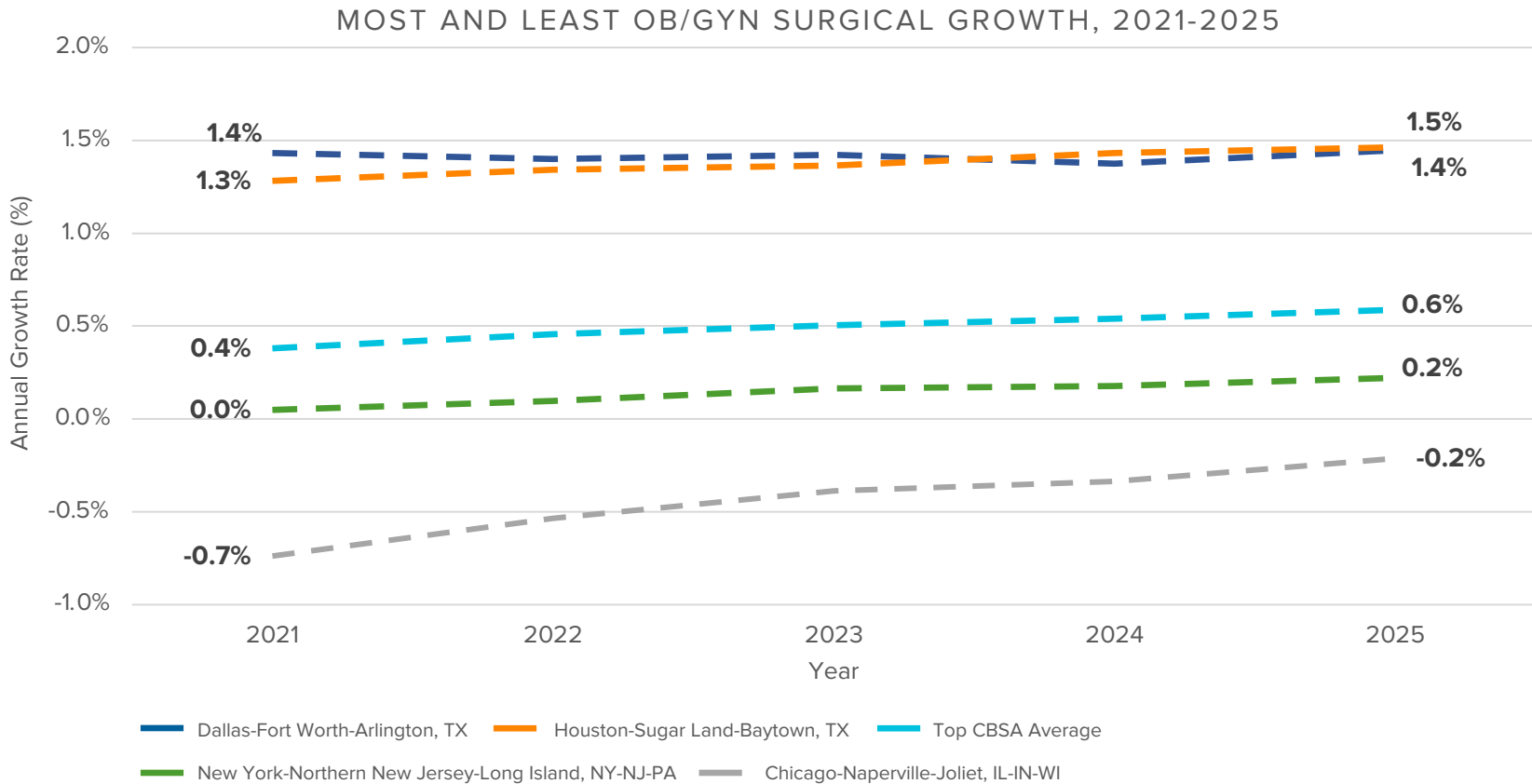


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: OB/GYN

# OB/GYN Procedure Demand from 2021-2025 Varies by CBSA

Among the largest 10 CBSAs, Dallas-Fort Worth is expected to see the greatest growth (1.2% CAGR) in OB/GYN procedures and Chicago is expected to see the least (-0.4% CAGR), compared to the national average growth rate of 0.4%.



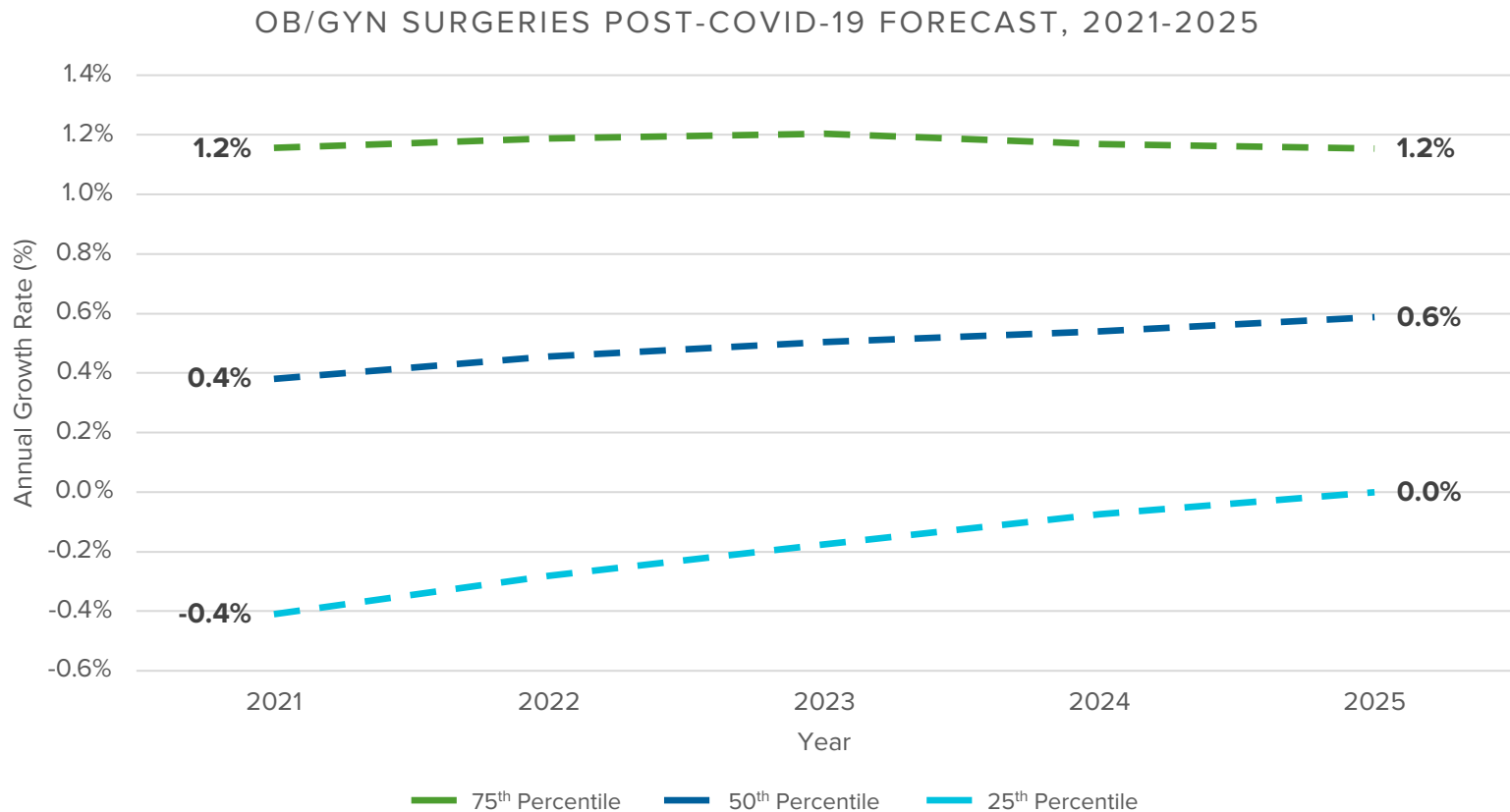
Source: Trilliant Health's proprietary demand forecast model.



## DEMAND FORECAST: OB/GYN

# Annual OB/GYN Surgical Volume Will Grow at 0.4% CAGR

Large disparity in geographic trends creates significant variability in future OB/GYN demand. Projected growth ranges from -0.4% to 1.2% by 2025.

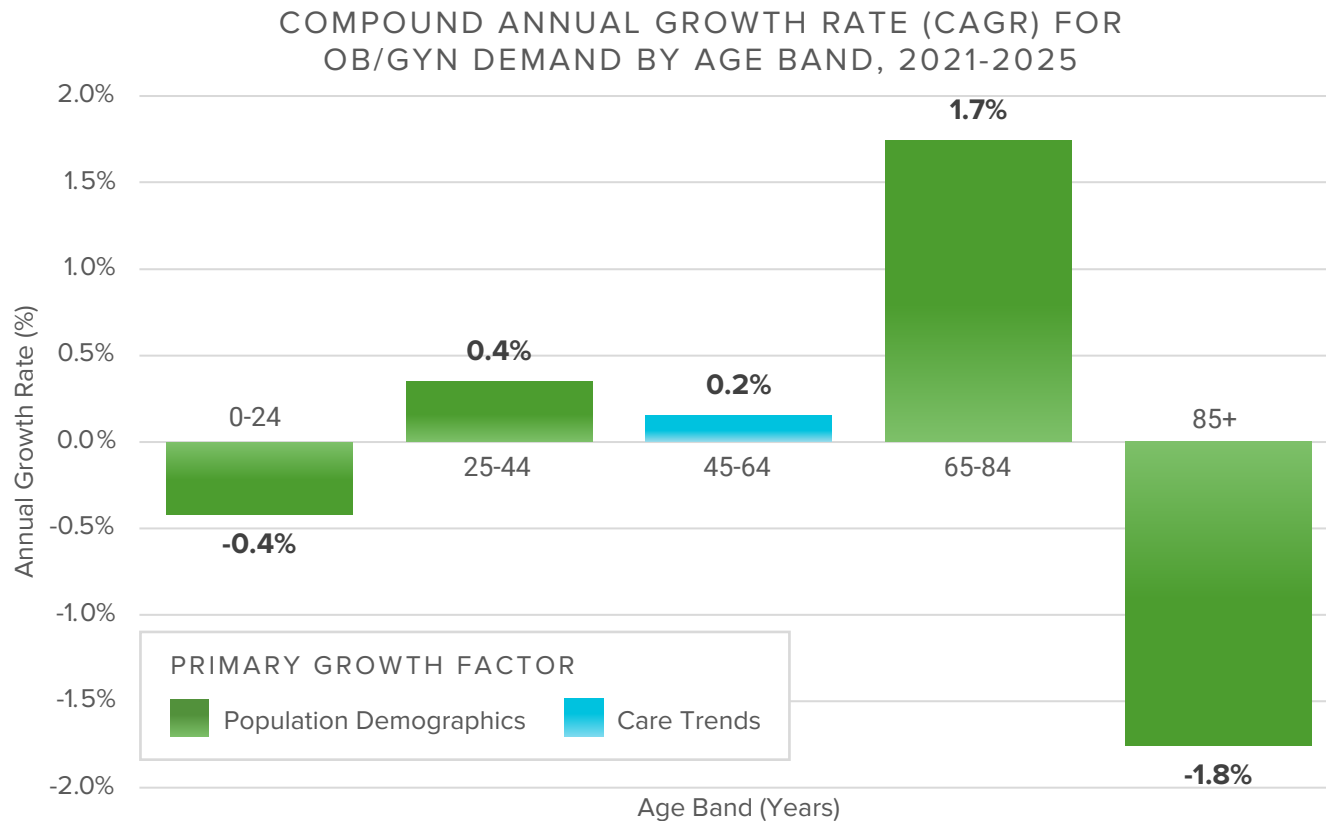


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: OB/GYN

# Growth In Demand For OB/GYN Procedures Will be Primarily Driven By Younger Population in Sunbelt CBSAs

Births in women ages 25-44 are forecast to increase due to population growth in Sunbelt CBSAs. Growth in gynecological oncology procedures for women ages 65-84 is attributed to increased population demographics.



Source: Trilliant Health's proprietary demand forecast model.

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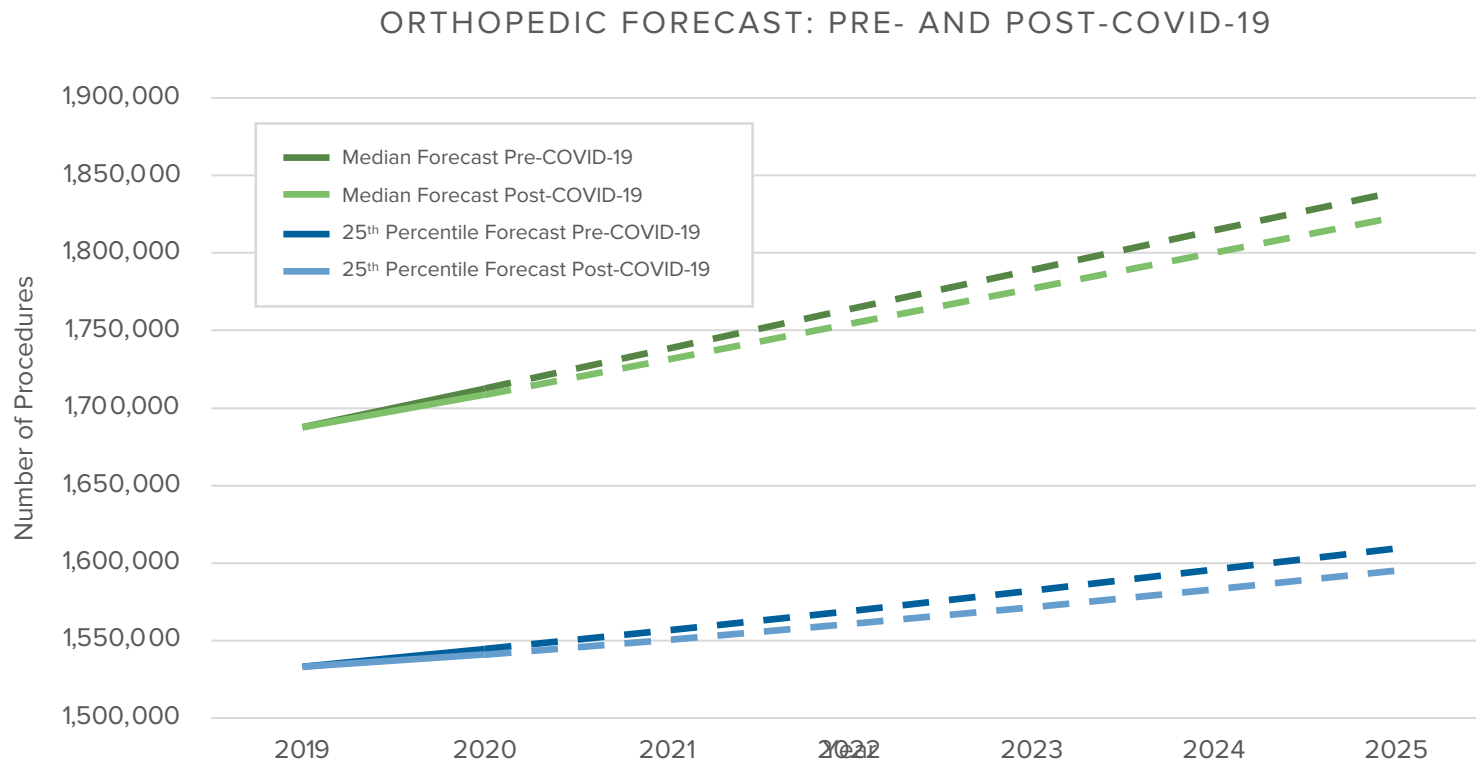
# DEMAND

*Orthopedic Forecast*

## DEMAND FORECAST: ORTHOPEDIC

# Total Demand for Orthopedic Services Projected to Grow by 1.1% Annually

The difference in median projected Orthopedic surgical volumes from 2019 to 2025 is 63K from pre to post-COVID-19.

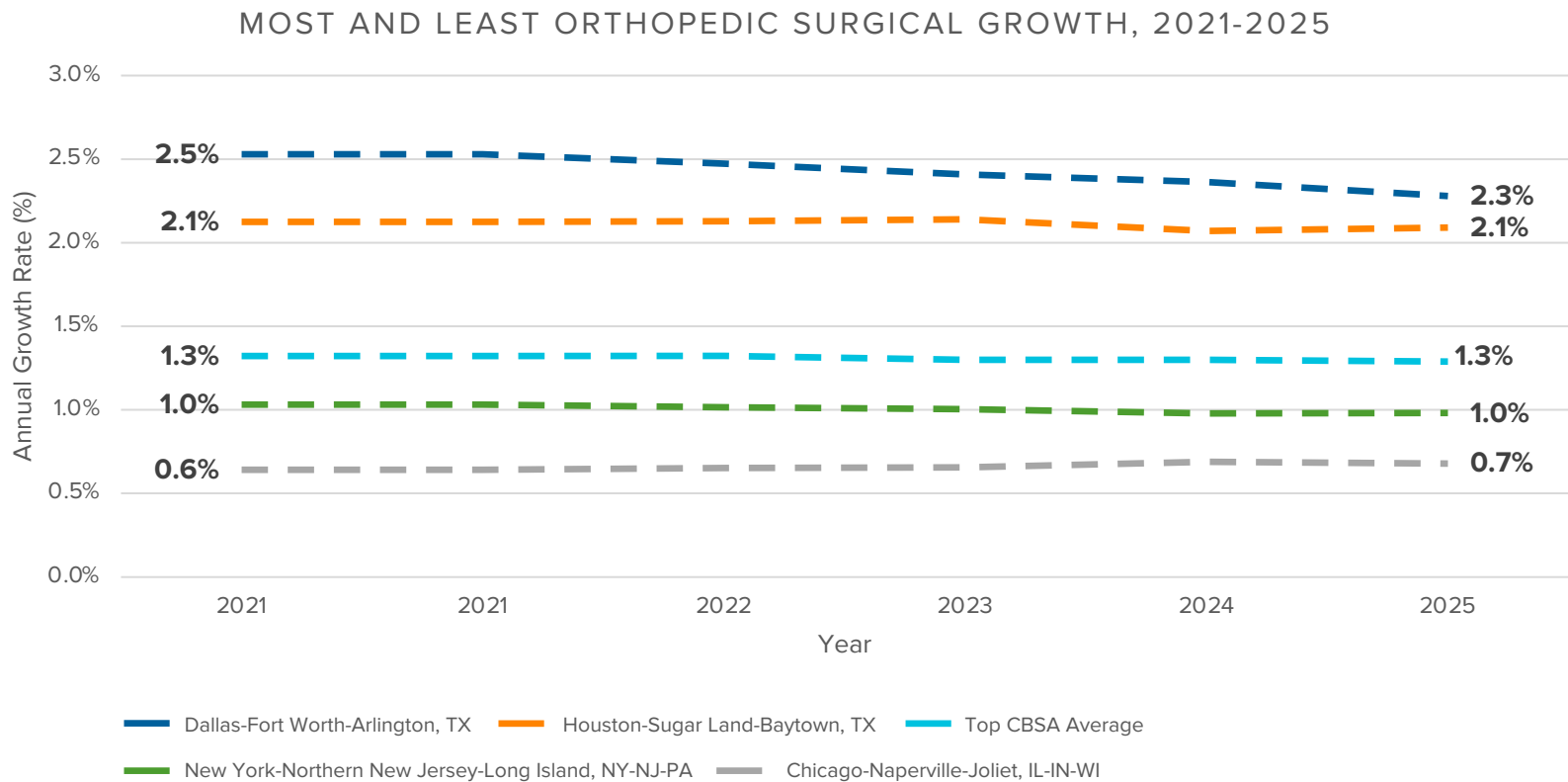


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: ORTHOPEDIC

# Orthopedic Procedure Growth from 2021-2025 Varies by CBSA

Among the largest 10 CBSAs, Dallas-Fort Worth is expected to see the greatest annual growth (2.0% CAGR) in Orthopedic surgeries and New York City is expected to see the least (0.6% CAGR), compared to the national average growth rate of 1.1%.

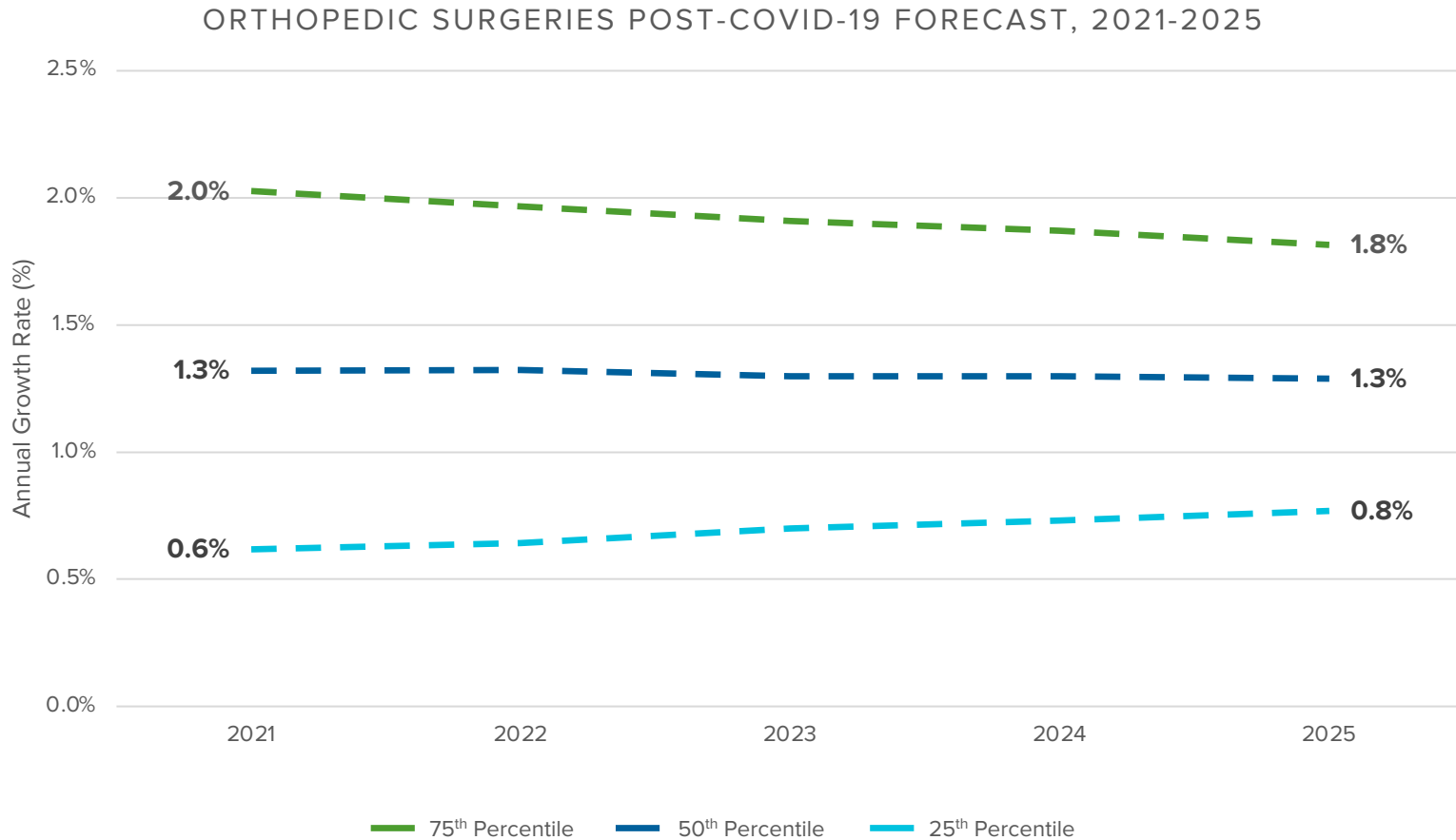


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: ORTHOPEDIC

# Annual Orthopedic Surgical Volume Will Grow at 1.1% CAGR

With a consistently aging population, growth in Orthopedic surgery is expected to be well above 1% through 2025.

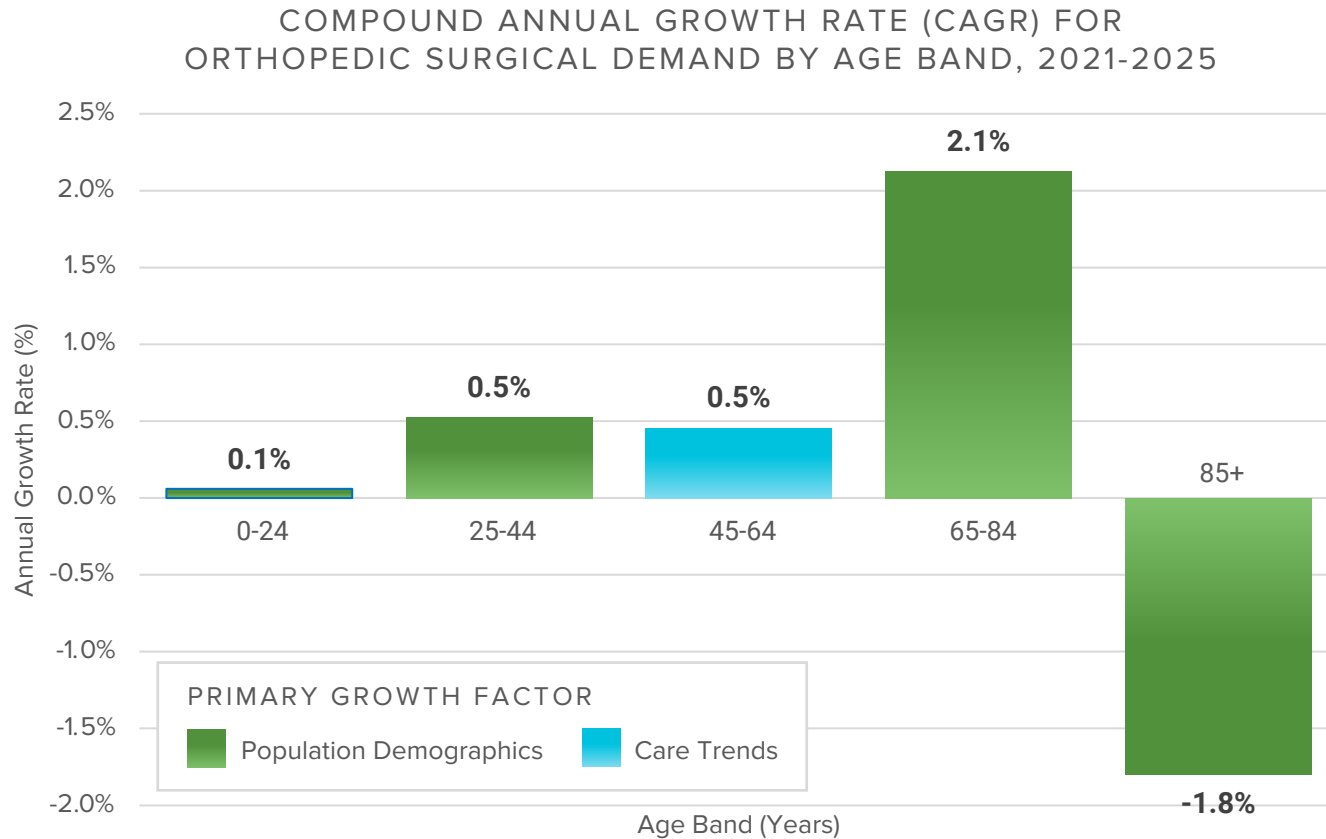


Source: Trilliant Health's proprietary demand forecast model.

## DEMAND FORECAST: ORTHOPEDIC

# Growth in Demand for Orthopedic Surgeries Will Occur in All Age Cohorts Except 85+

Growth in ages 65-84 will make up 41% of all Orthopedic surgeries in 2025. Increasing care trends in surgeries for ages 45-64 are expected to result in that age cohort making up 29% of all Orthopedic surgeries by 2025.



Source: Trilliant Health's proprietary demand forecast model.

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# DEMAND

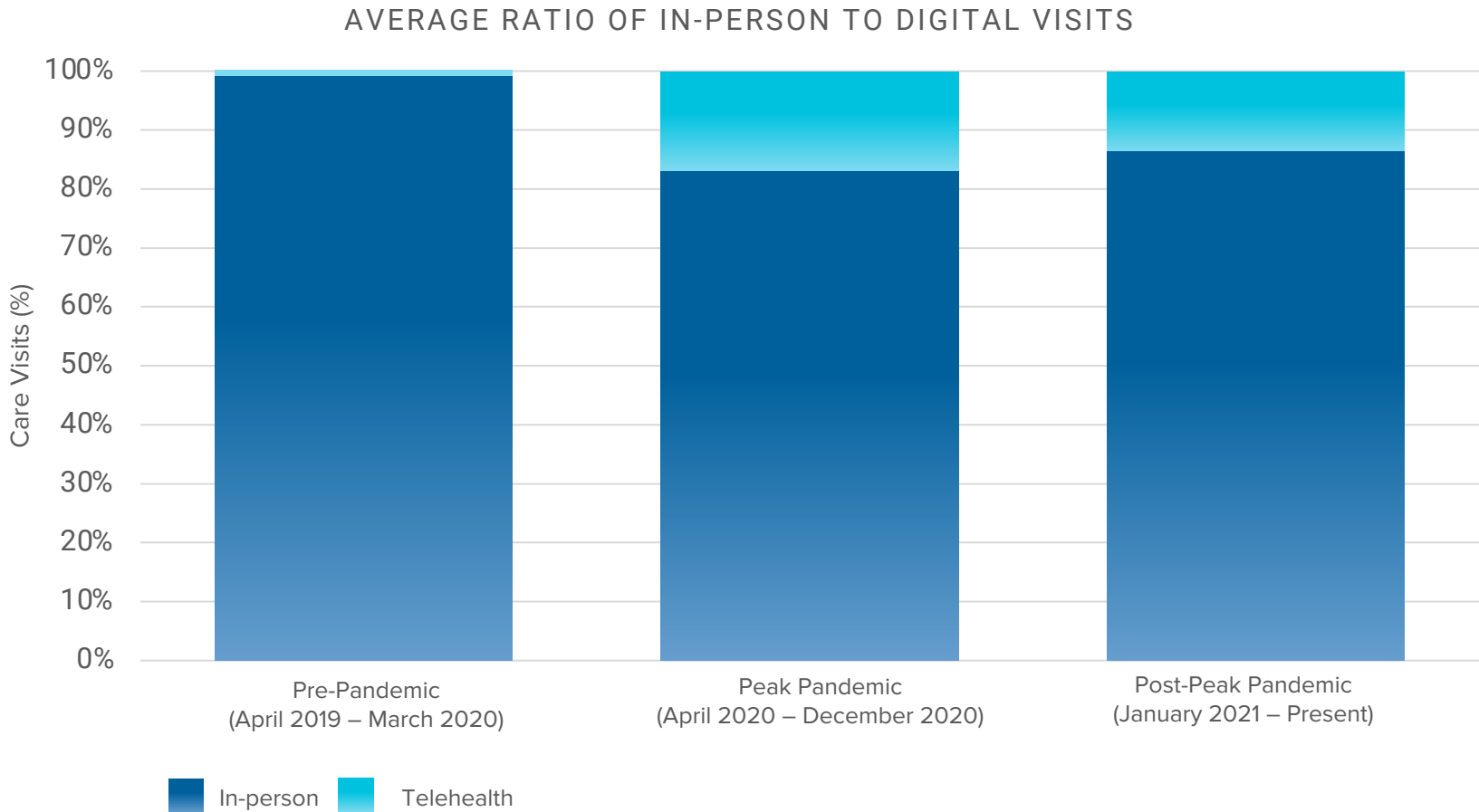
*Consumer Preferences*



## DEMAND: CONSUMER PREFERENCES

# Individuals Prefer Omni-Channel Care Options

83.2% of individuals that received care for a service with an equivalent virtual option during the peak of pandemic opted for an in-person visit and is similar across payer mix.

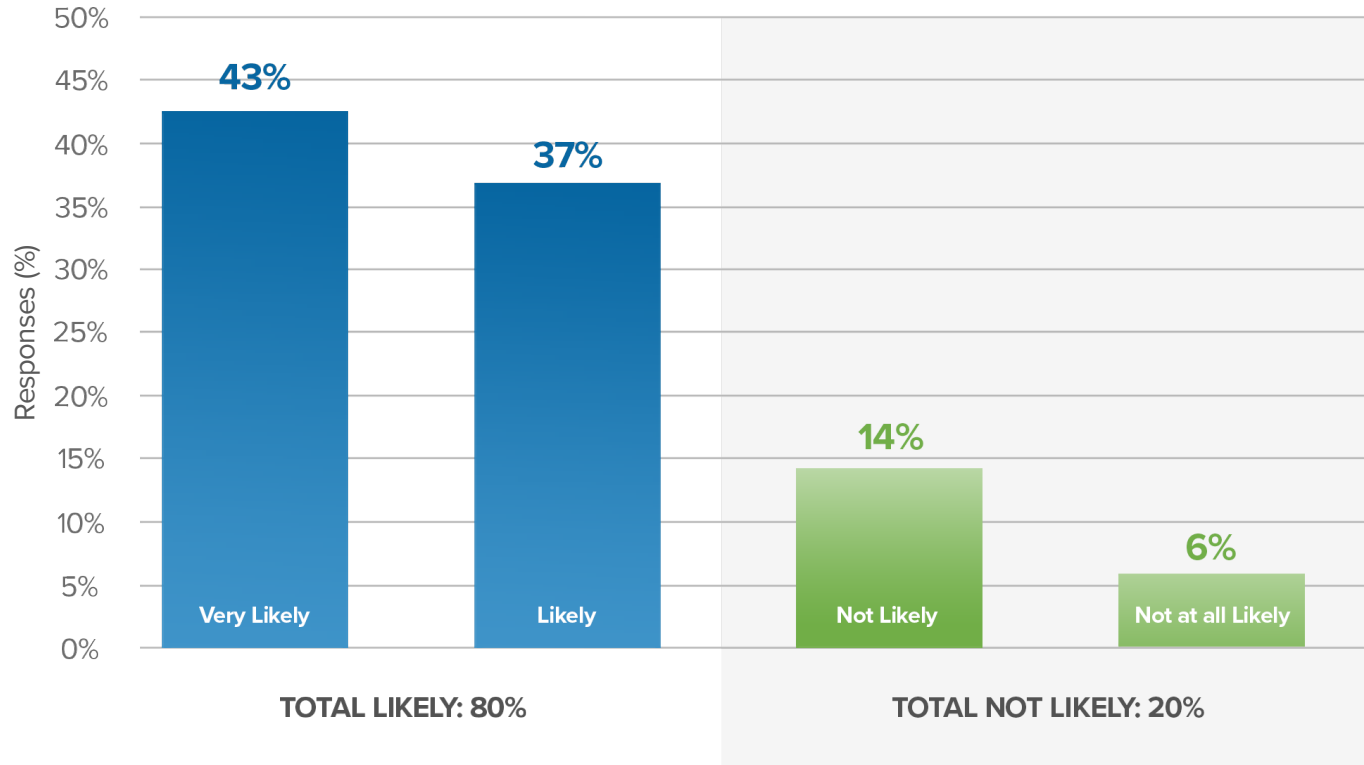


Source: Trilliant Health national all-payer claims database.

## DEMAND: CONSUMER PREFERENCES

# Strong Willingness to Engage in Home Care

On average, 80% of consumers report a likelihood to use home care models if covered by insurance.



Note: The data represents survey responses to the following question: "There is a relatively new form of medical care called "home recovery care" or "hospital at home," where doctors and other medical providers provide hospital-level care in your home for a lot of medical conditions, like Congestive Heart Failure, COPD, pneumonia, and more. This means that you do not have to be admitted to the hospital to be treated for certain conditions but can recover in the comfort of home with nurses and doctors either visiting you in person or through telehealth.

Now, thinking about yourself... If this kind of care was covered by your insurance, how likely would you be to use it?

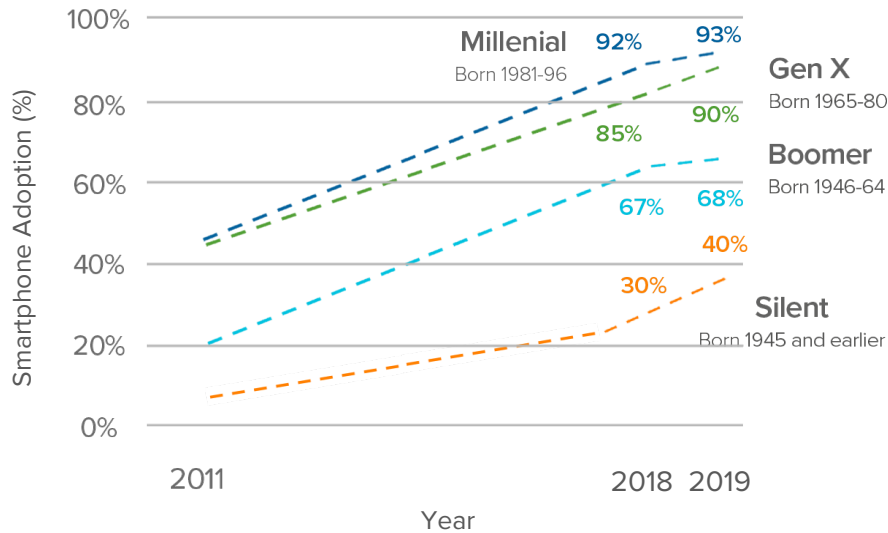
Source: Public Opinion Strategies/Jarrard Phillips Cate & Hancock National Survey of 1,000 Adults, Conducted April 16-20, 2020.

## DEMAND: CONSUMER PREFERENCES

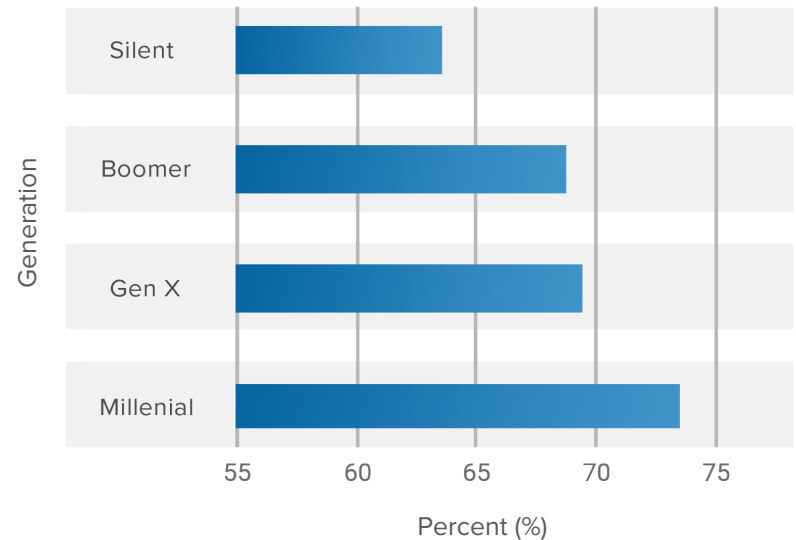
# Older Americans Are Less Inclined to Use Digital Modalities

Reflective of their preferences for telehealth, older adults are in the cohort of those less likely to leverage digital platforms.

### GROWTH IN SMARTPHONE ADOPTION BY GENERATION



### PERCENT OF USERS WHO REPORT THE INTERNET HAS HAD A POSITIVE IMPACT ON SOCIETY

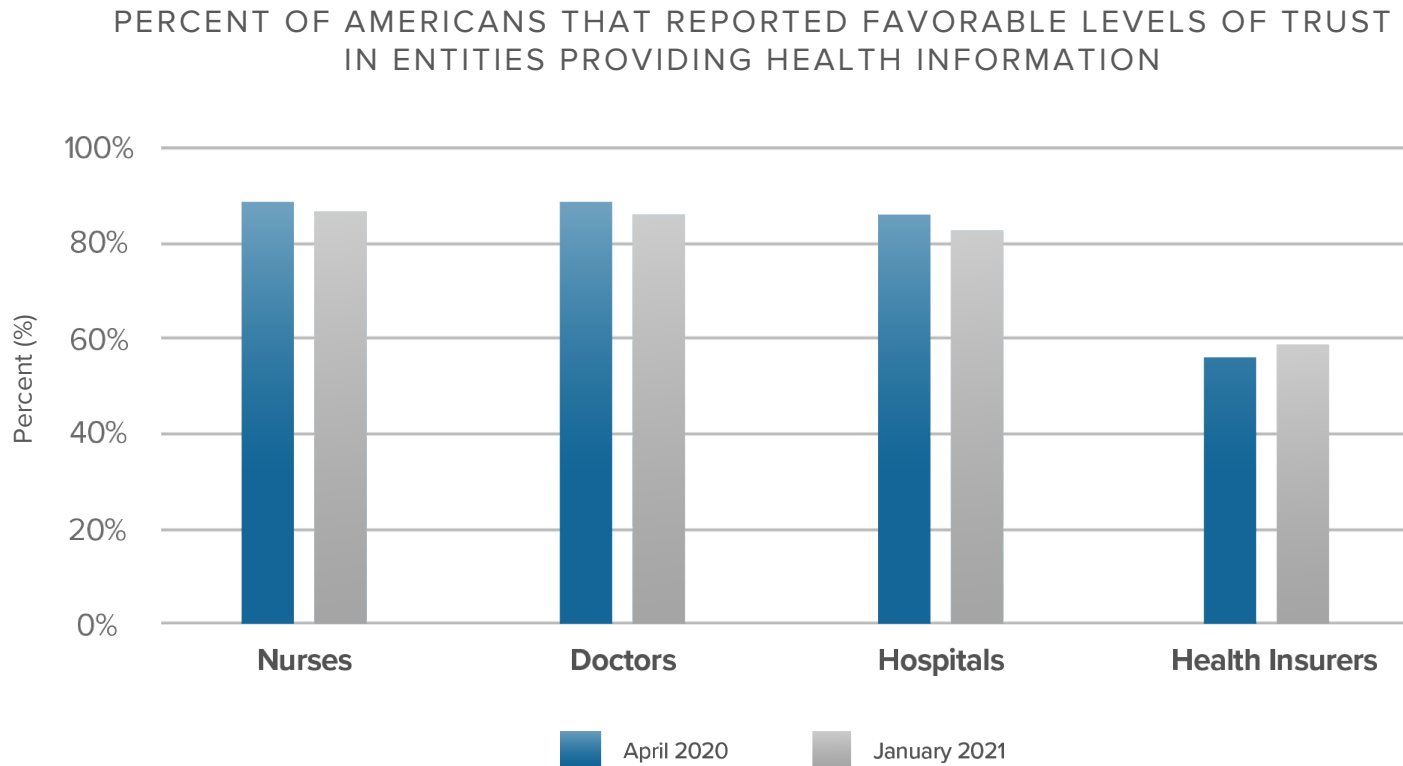


Source: Pew Research Center, 2019.

## DEMAND: CONSUMER PREFERENCES

# Americans View Providers as the Most Trusted Source of Health Information

Doctors, hospitals and nurses continue to be highly trusted but did see a slight dip in the wake of COVID-19.



Note: The data represents survey responses to the following question: "When it comes to providing information about critical health issues, how much do you trust each of the following people, organizations, and companies – a great deal, a fair amount, not very much, or not at all?" The percentages reported reflect the proportion of respondents that indicated either "Trust a Great Deal" or "Trust a Fair Amount."

Source: Jarrard, Phillips, Cate & Hancock/Public Opinion Strategies National Surveys of 1,000 Adults Conducted April 16-20, 2020 and 1,002 Adults Conducted January 12-16, 2021.

# Demand is Flat to Declining

### 1 Burden of Disease is Not Correlated with Demand for Services or Need for Providers

- Disease-based demand projections incorrectly assume demand for comorbid individuals is 1:1.
- Demand is a derivative of the Medicare age cohort and population migration.
- Growth in inpatient and outpatient demand has been flat to declining years prior to COVID-19.

### 2 COVID-19 Did Not Significantly Change Demand

- Projected rate of demand growth varies by 0.1% between pre- and post-pandemic estimates.
- Densely populated markets will be most adversely affected for future demand post-COVID-19.
- COVID-19's acceleration of telehealth adoption is beginning to taper and suggests long-term use is limited to a discrete user profile.

### 3 Consumer Loyalty is Lowest Where Demand is Increasing

- Women are more likely to split where they receive care across more providers.
- Consumers, particularly those with more care needs, prefer more traditional models of care and are less comfortable with digital modalities.
- Consumer decisions are driven by psychology more than neighborhood.



# SUPPLY

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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.

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# SUPPLY

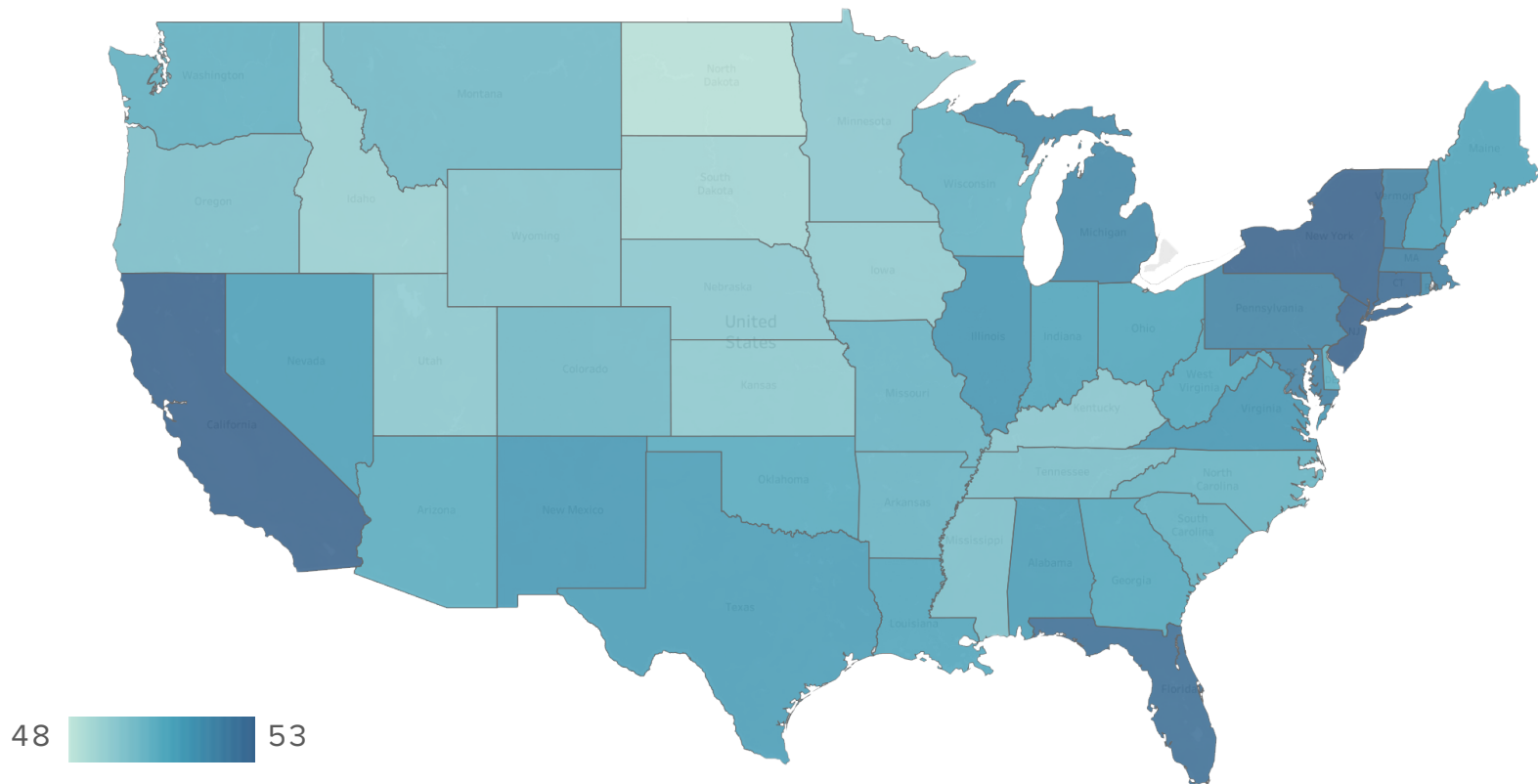
*Physicians*

## SUPPLY: PHYSICIANS

# Three of the Four Most Populated States Have the Highest Proportion of Older Physicians

The average age of practicing physicians is 50.8 years old.

AVERAGE PROVIDER AGE BY STATE



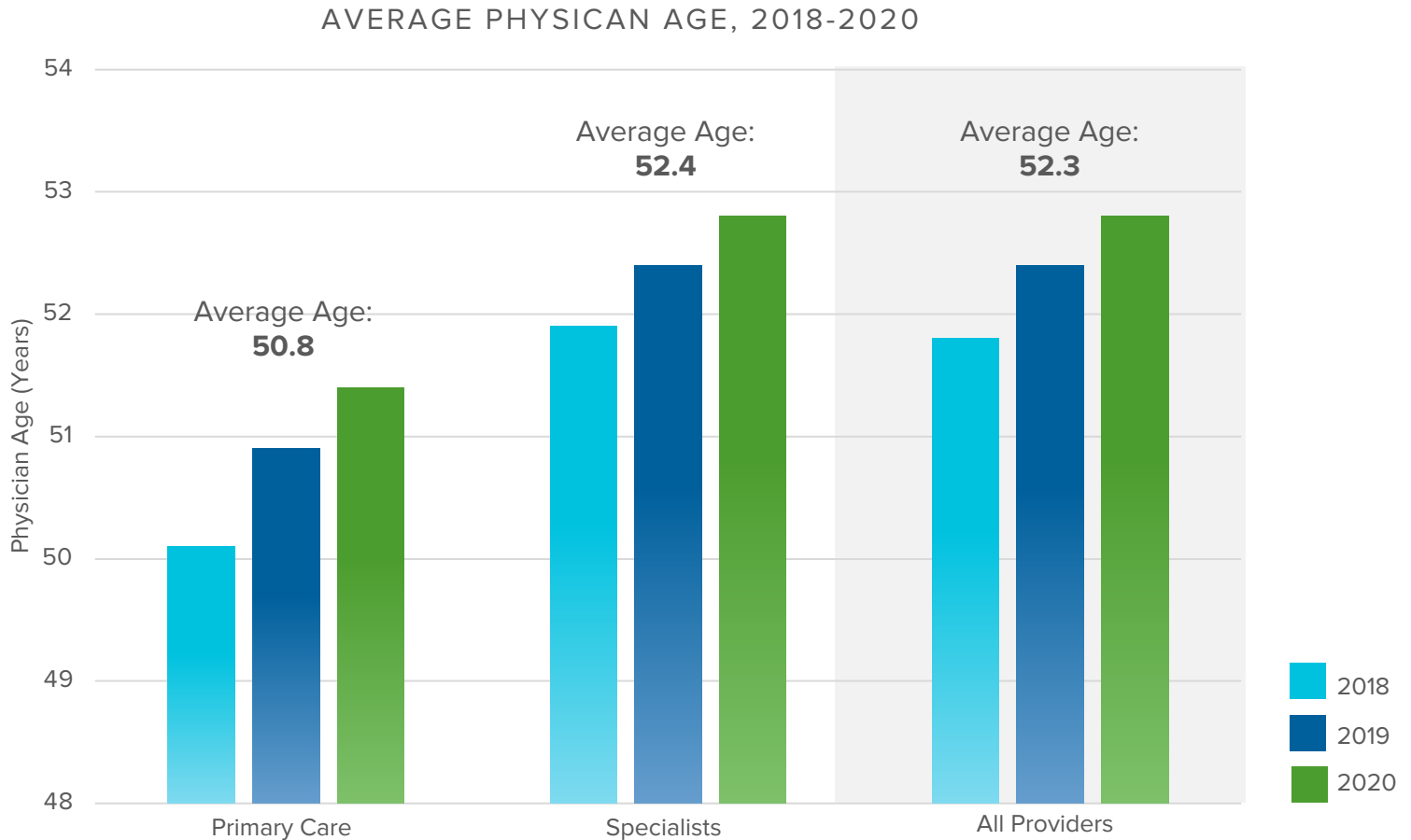
Note: Data shown for 2020.  
Source: Trilliant Health national all-payer claims database.



## SUPPLY: PHYSICIANS

# The Average Age of Specialists and Primary Care Physicians is Increasing

The three-year average age of specialists is 52.4 years compared to 50.8 years for primary care physicians.



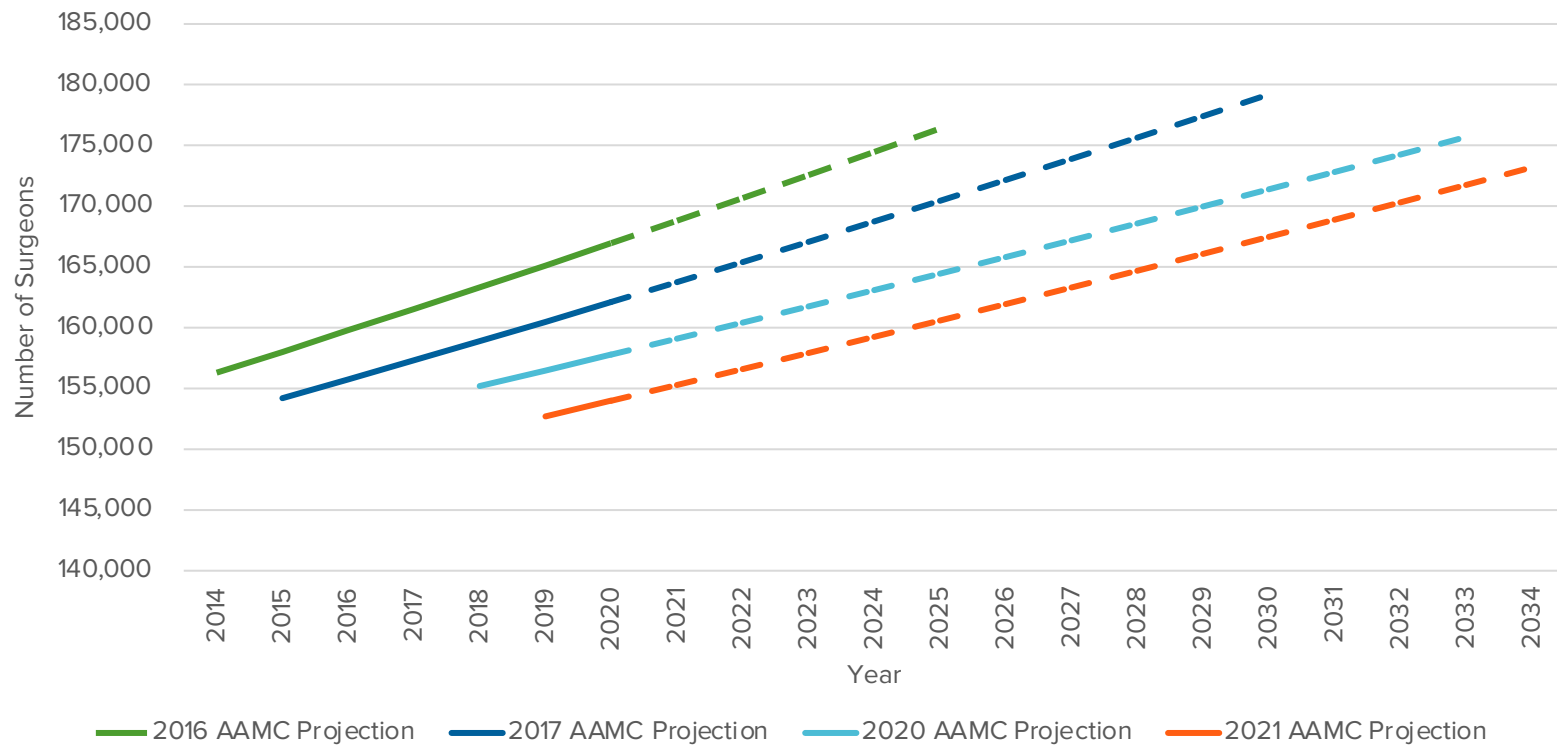
Source: Trilliant Health national all-payer claims database.

## SUPPLY: PHYSICIANS

# AAMC Has Consistently Projected Declining Surgeon Demand

While much has been made of increasing demand and decreasing physician supply, the AAMC has consistently revised their surgeon demand projections downward over time.

AMERICAN ASSOCIATION OF MEDICAL COLLEGES (AAMC) PROJECTIONS FOR SURGEON DEMAND OVER TIME



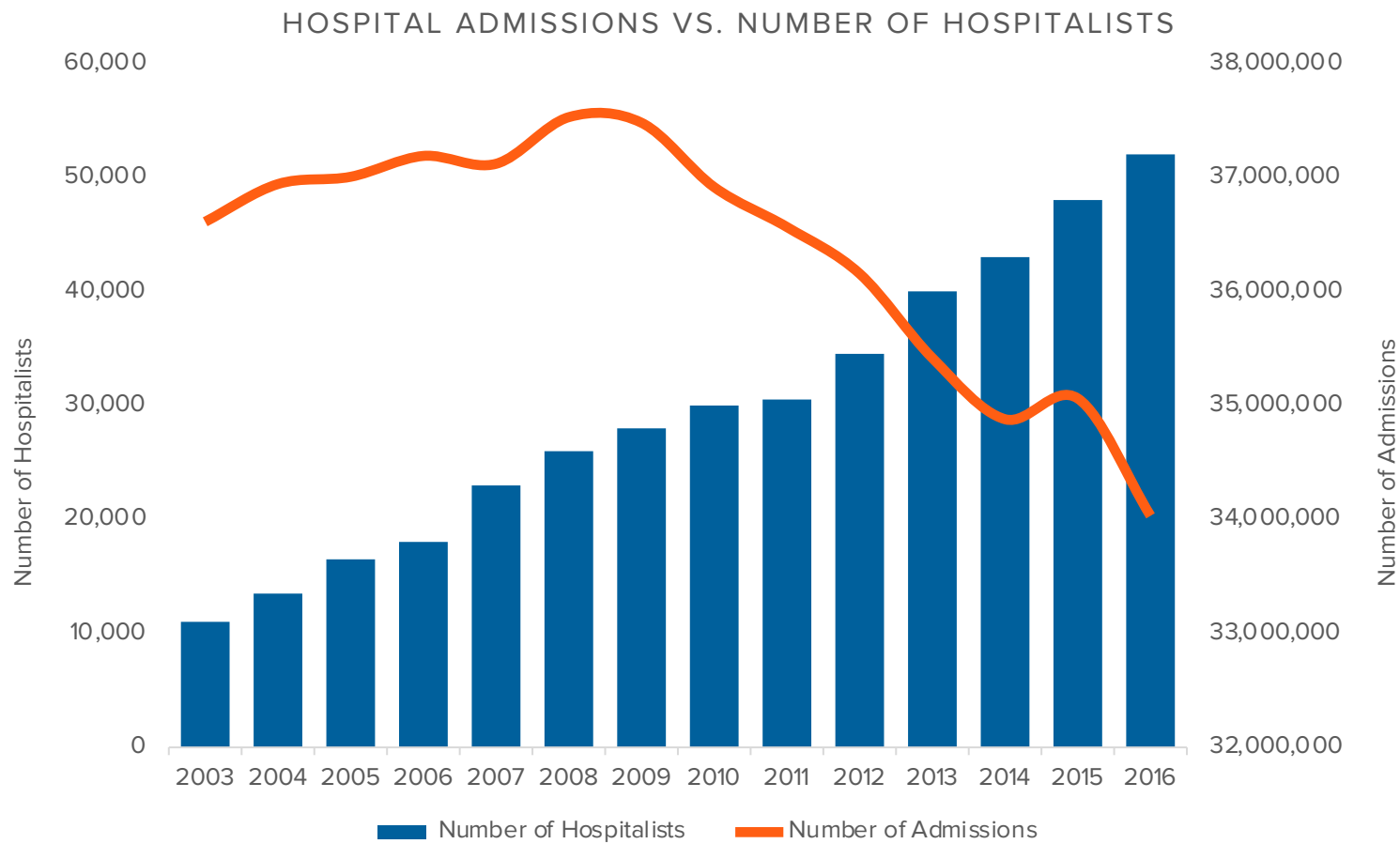
Note: Comparable data was unavailable for years 2018 and 2019.

Source: American Association of Medical Colleges (AAMC) Physician Supply and Demand Projection Reports; 2016, 2017, 2020, 2021.

## SUPPLY: PHYSICIANS

# Physician Shortage or Physician Preference?

Annual inpatient admissions have declined by 3.5M from 2008-2016 while number of hospitalists have almost doubled.



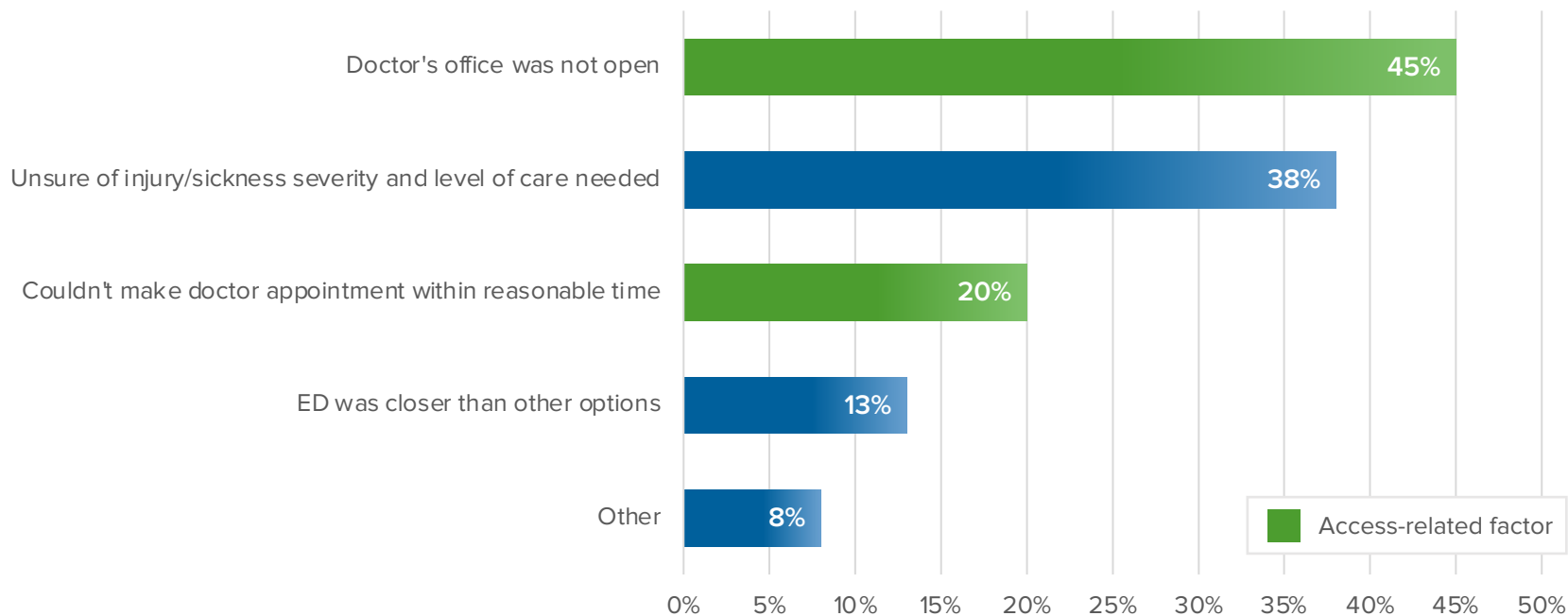
Source: Centers for Disease Control and Prevention (CDC) *Health, United States* – Previous Reports; The New England Journal of Medicine “Zero to 50,000 – The 20th Anniversary of the Hospitalist”, 2016.

## SUPPLY: PHYSICIANS

# Is Physician Supply Appropriately Matched to Patient Access Preferences?

Among the 25% of patients who reported visiting an ED in the last 12 months and believed they could have gone elsewhere, 65% cited access-related reasons for choosing the emergent setting.

REPORTED REASONS FOR VISITING THE EMERGENCY DEPARTMENT (ED) THAT COULD HAVE BEEN AVOIDED



Source: McKinsey Consumer Health Insights Survey, 2017.

## SUPPLY: PHYSICIANS

# The Largest Employer of Physicians is a *Fortune 5* Company

Optum Health, subsidiary of the largest health insurer, employs more than 5% of all U.S. physicians and plans to employ an additional 10,000+ physicians.

### UnitedHealth Group Incorporated (UNH) CEO Andrew Witty on Q1 2021 Results - Earnings Call Transcript

Apr. 15, 2021 2:45 PM ET | UnitedHealth Group Incorporated (UNH)

#### Q1: 2021-04-15 Earnings Summary

 Press Release  10-Q

EPS of \$5.31 **beats by \$0.93** | Revenue of \$70.20B (8.96% Y/Y) **beats by \$1.10B**

UnitedHealth Group Incorporated (NYSE:UNH) Q1 2021 Earnings Conference Call April 15, 2021 8:45 AM ET

“As you know, we are on track to grow by over 10,000 physicians. We are now at 56,000 doctors, both affiliated, contracted and employed and we will leverage all of those models as we go forward, and we continue to evolve and employ doctors who are really actually quite attracted to our model of value-based care. We eliminate much of the clerical burden in our physicians in advanced practitioners’ practice and let them focus on the work they love. So this is really gaining traction among our physician workforce.”

Note: Optum is the Health Services platform of UnitedHealth Group.  
Source: *Seeking Alpha* transcript of earnings call, 2021.

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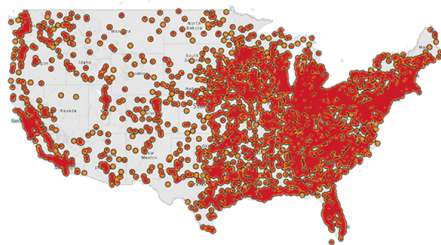
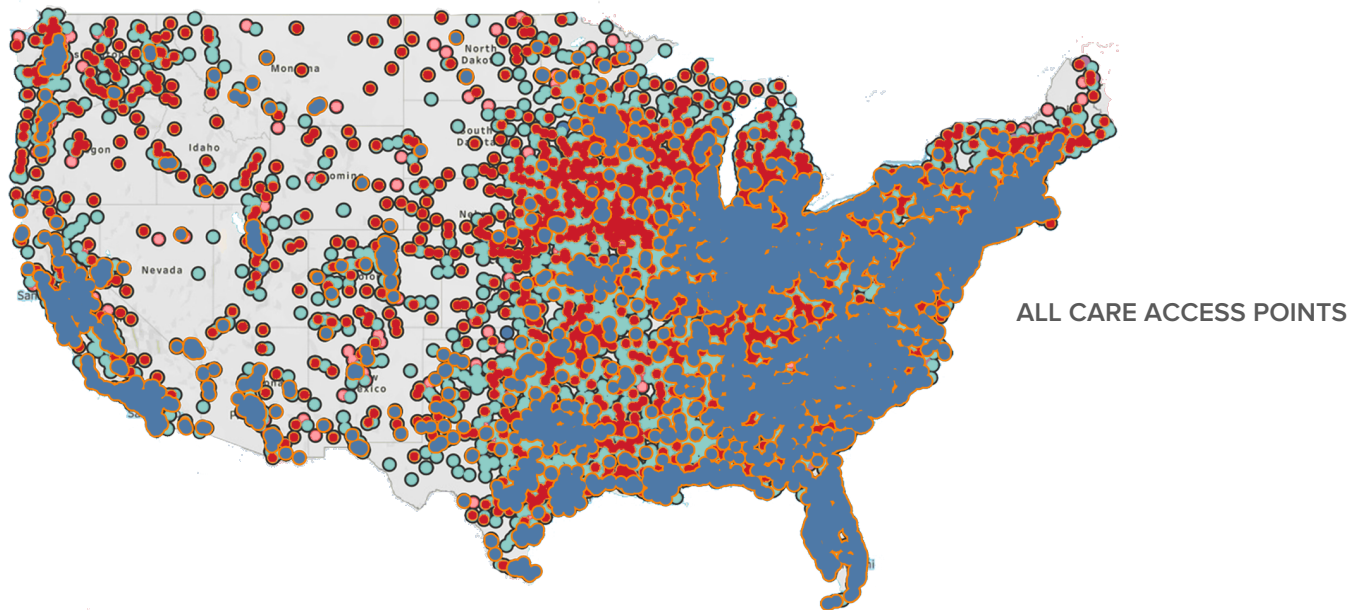
# SUPPLY

*Provider Loyalty*

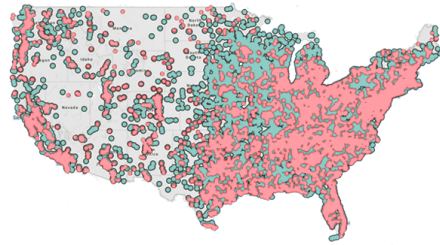
## SUPPLY: PROVIDER LOYALTY

# Increased Number of Care Access Points

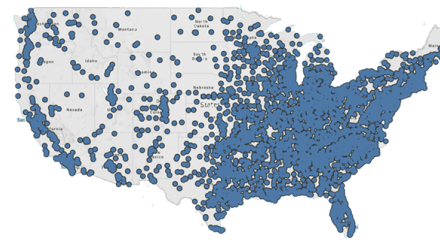
There are more suppliers of healthcare services today than in the past, with hospital providers in the minority.



HOSPITALS



PRIMARY &  
URGENT CARE



WALMART



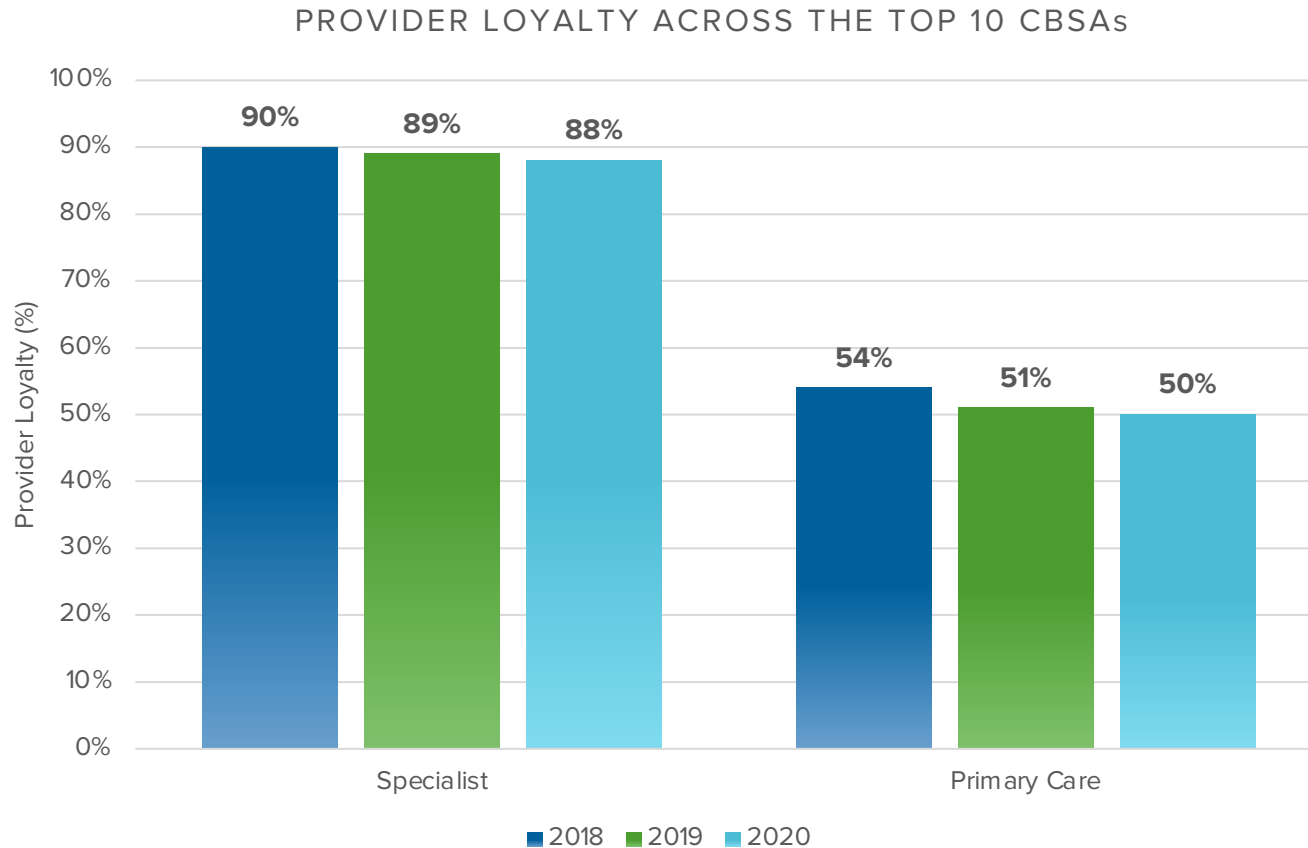
RETAIL CLINICS

Source: Trilliant Health national all-payer claims database.

## SUPPLY: PROVIDER LOYALTY

# Specialists are More Loyal than Primary Care Physicians

Specialist and primary care loyalty has declined over the last three years in tandem with the growing supply of provider networks.



Note: Provider loyalty measures reflect the number of provider networks that individual physicians render care to patients across. For example, a private practice surgeon that performs 100 cases at ASC brand A and 100 cases at ASC brand B, would receive a loyalty score of 50%.

Source: Trilliant Health national all-payer claims database.



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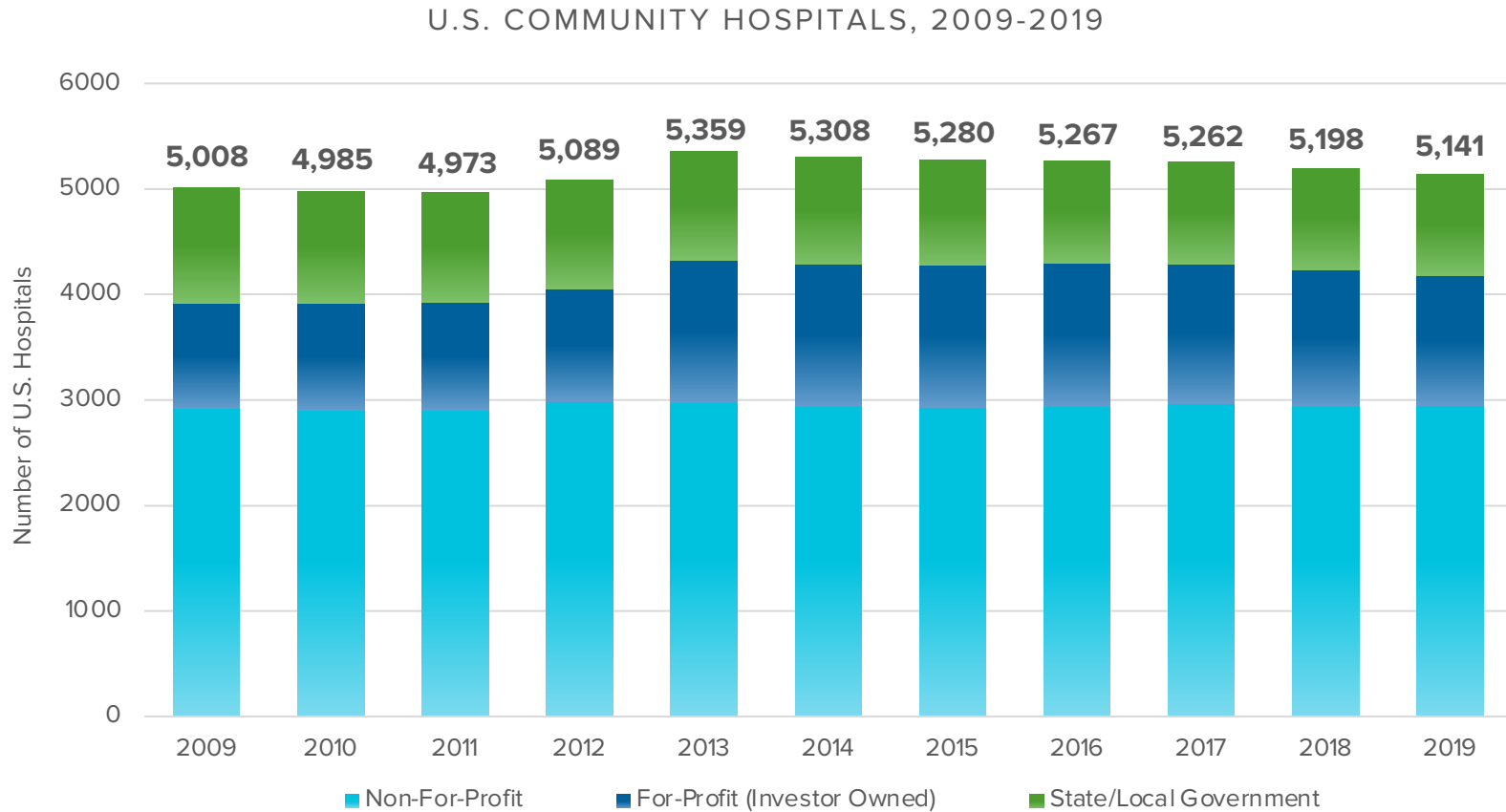
# SUPPLY

*Hospitals and  
Health Systems*

## SUPPLY: HOSPITALS & HEALTH SYSTEMS

# Total Number of U.S. Hospitals are Declining

218 hospitals have closed or been repurposed since 2013 highs, reflecting the reduction of inpatient demand.

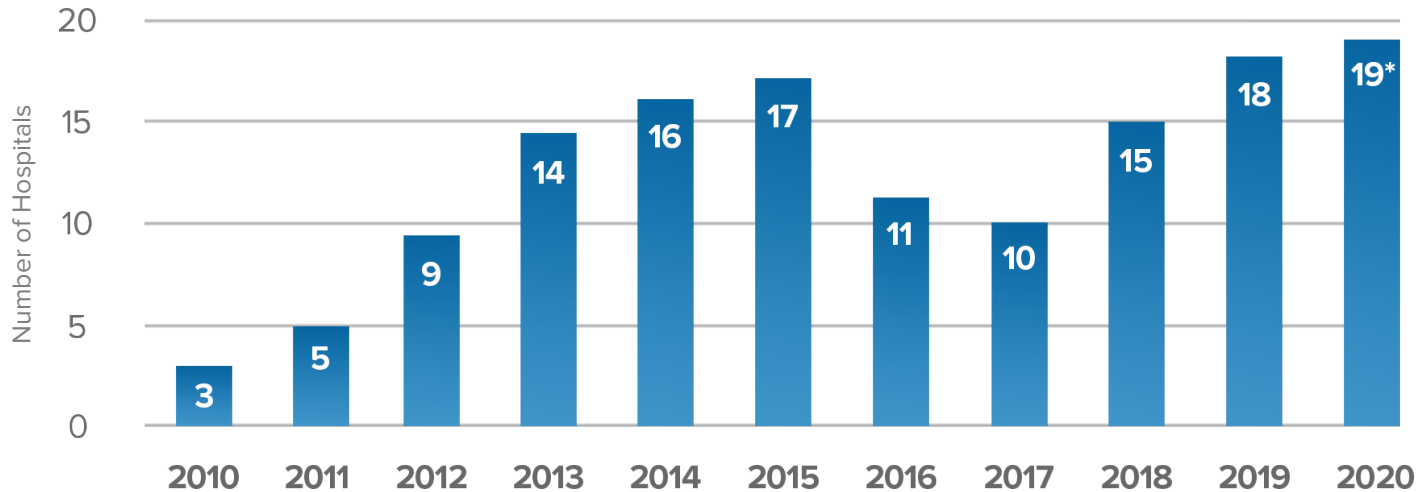


Source: American Hospital Association Statistics, 2021.

## Rural Hospital Closures Have Been on the Rise Since 2010

137 rural hospitals have closed across the U.S. since 2010 as more encountered excess inpatient capacity due to declining admissions per capita. Markets with closures are largely those in which players like Walmart will thrive.

NUMBER OF RURAL HOSPITAL CLOSURES, 2010-2020



*\*More than 500 hospitals (25% of all rural hospitals) were at immediate risk of closure prior to COVID-19.*

Source: Cecil G. Sheps Center for Health Services Research at The University of North Carolina at Chapel Hill; Center for Healthcare Quality & Payment Reform; 2021.

## SUPPLY: HOSPITALS & HEALTH SYSTEMS

# 40 Not-For-Profit Health Systems Would Qualify for *Fortune 500*

As consolidation among hospitals and health systems continues, the larger networks will be those that have the resources to more effectively compete in a “negative sum game”.

Health System	<i>Fortune 500</i> Rank	Health System	<i>Fortune 500</i> Rank
Kaiser Permanente	34	New York Health & Hospitals Corp.	355
CommonSpirit Health	102	SSM Health	386
Providence St. Joseph Health	113	Univ. of Pennsylvania Health System	399
Ascension	116	Intermountain HealthCare	405
UPMC	132	Spectrum Health	409
Trinity Health	164	HealthPartners	421
Highmark Health	172	Sentara	423
Mayo Clinic	211	Indiana Univ. Health	426
Mass General Brigham*	227	Geisinger	436
Northwell Health	238	Johns Hopkins Health System	437
Univ. of California Health System	239	Sanford Health	448
Sutter Health	240	NYU Langone Hospitals	458
Advocate Aurora Health	243	Mercy Health	470
Advent Health**	251	Henry Ford Health System	471
Bon Secours	295	Montefiore Health System	474
Atrium Health	305	Hackensack Meridian Health	478
Cleveland Clinic	307	Northwestern Medicine	481
Baylor Scott & White Health	312	Beth Israel Lahey Health System	488
Banner Health	323	Fairview Health Services	489
NewYork-Presbyterian	339	BJC Healthcare	491

\* formerly Partners Healthcare    \*\* formerly Adventist Health System

Note: Cutoff to make the *Fortune 500* in 2021 was \$5.37 billion in revenue; adding in non-for-profit health systems changes the cut-off to \$6.07 billion for purposes of this illustrative analysis.

Source: Revenue reported directly from health systems via Modern Healthcare and financial statements; *Fortune 500* list for 2021.

## SUPPLY: HOSPITALS AND HEALTH SYSTEMS

# Health System Consolidation Activities Have Resulted in Health Systems Comparable in Size to Leading Brands

Health systems with such scale advantages are better positioned to compete with even larger retailers (e.g., Walmart).

REVENUES OF LARGE HEALTH SYSTEMS COMPARED TO LEADING INDUSTRY BRANDS, 2020



Source: Trilliant Health analysis of publicly available and Modern Healthcare financial statements; 2020.

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# SUPPLY

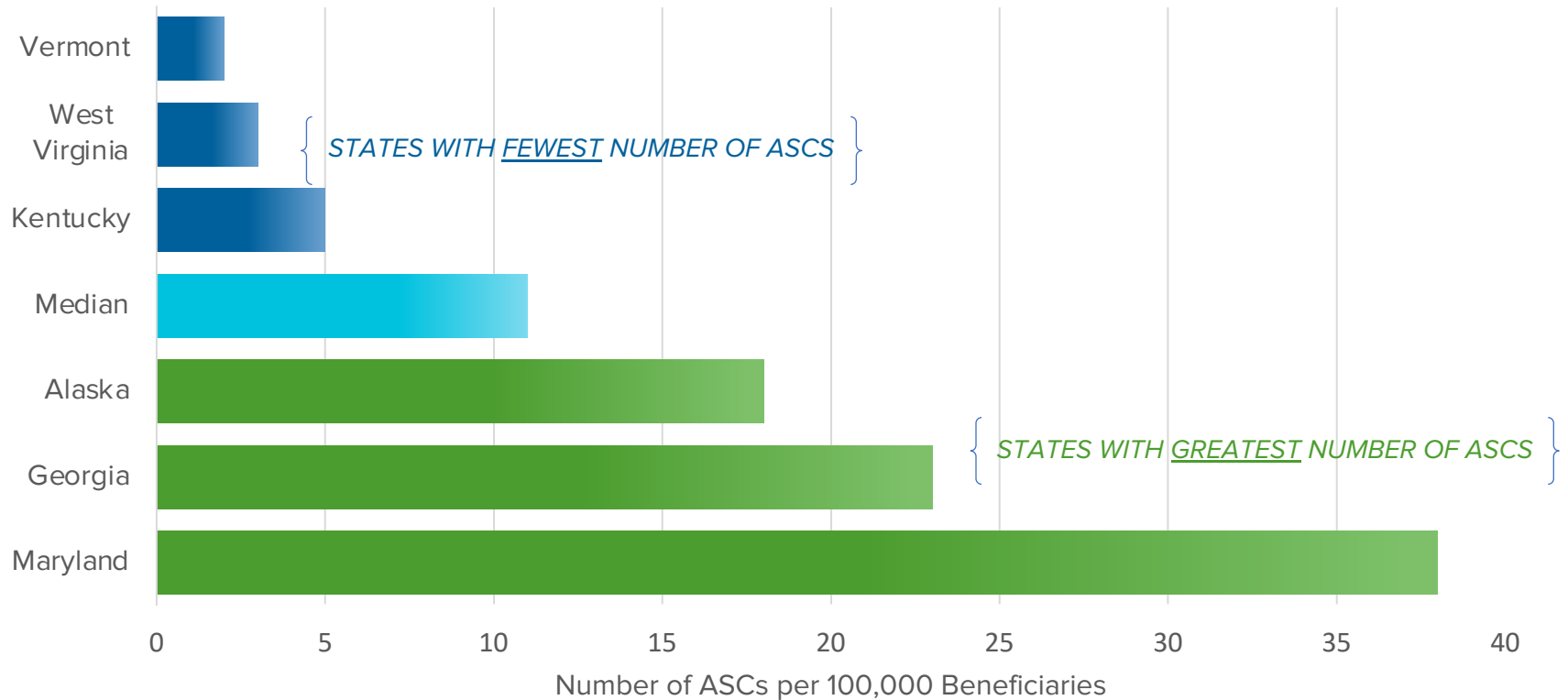
*Ambulatory Surgery  
Centers (ASCs)*

## SUPPLY: ASCs

# Geographic Distribution of ASCs is Uneven

The concentration of ASCs varies widely among states. Maryland had the most ASCs per Medicare beneficiary (38 ASCs per 100,000 beneficiaries) followed by Georgia (23 ASCs per 100,000 beneficiaries).

NUMBER OF ASCS PER MEDICARE BENEFICIARY BY STATE, 2019



Note: Median values represent ASC counts for all 50 states and Washington, D.C.

Source: Medicare Payment Advisory Commission (MedPAC) March 2021 Report to the Congress: Chapter 5.

## SUPPLY: ASCs

# The Growth in ASCs is in Services That are More Susceptible to Consumer Choice

The most common procedures (i.e., cataract surgeries) are “commodity-like” services for which Medicare is the price setter.

SPECIALIZATION OF ASCs BILLING MEDICARE, 2014-2019

	2014		2019	
Type of ASC	Number of ASCs	Share of all ASCs (%)	Number of ASCs	Share of all ASCs (%)
<b>Single Specialty</b>	<b>2,978</b>	<b>62%</b>	<b>3,356</b>	<b>65%</b>
Gastroenterology	1,059	22	1,082	21
Ophthalmology	1,049	22	1,057	21
Pain Management	364	8	619	12
Dermatology	201	4	209	4
Urology	129	3	134	3
Cardiology	12	0	88	2
Podiatry	98	2	83	2
Orthopedics/Musculoskeletal	30	1	32	1
Respiratory	19	0	26	1
OB/GYN	10	0	13	0
Neurology	5	0	6	0
Other	2	0	7	0
<b>Multispecialty</b>	<b>1,862</b>	<b>38%</b>	<b>1,787</b>	<b>35%</b>
More than 2 Specialties	1,460	29	1,283	25
Pain Management and Orthopedics	163	3	195	4
Gastroenterology and Ophthalmology	167	3	194	4
Other with 2 Specialties	72	1	115	2
<b>Total</b>	<b>4,840</b>	<b>100%</b>	<b>5,143</b>	<b>100%</b>

Source: Medicare Payment Advisory Commission (MedPAC) March 2021 Report to the Congress: Chapter 5.



## SUPPLY: ASCs

# Like Other Ambulatory Providers, ASCs are Delivering Commodity Services

In time, the inpatient-only list rule will further accelerate this trend.

Surgical Service	2014		2019	
	% of Volume	Rank	% of Volume	Rank
Cataract surgery w/IOL insert, 1 stage	18.9	1	18.5	1
Upper GI endoscopy, biopsy	8.5	2	7.8	2
Colonoscopy and biopsy	6.7	3	6.8	3
Lesion removal colonoscopy (snare technique)	5.4	4	6.5	4
After cataract laser surgery	4.5	5	4.1	6
Inject foramen epidural: lumbar, sacral	4.5	6	4.6	5
Injection spine: lumbar, sacral (caudal)	3.4	7	2.5	8
Inject paravertebral: lumbar, sacral	2.8	8	3.4	7
Diagnostic colonoscopy	2.6	9	1.6	11
Colorectal screen, high-risk individual	2.1	10	2.1	9

Note: Columns do not sum to 100% as list of services were capped to the top ten.

Source: Medicare Payment Advisory Commission (MedPAC) March 2021 Report to the Congress: Chapter 5; Trilliant Health all-claims database.

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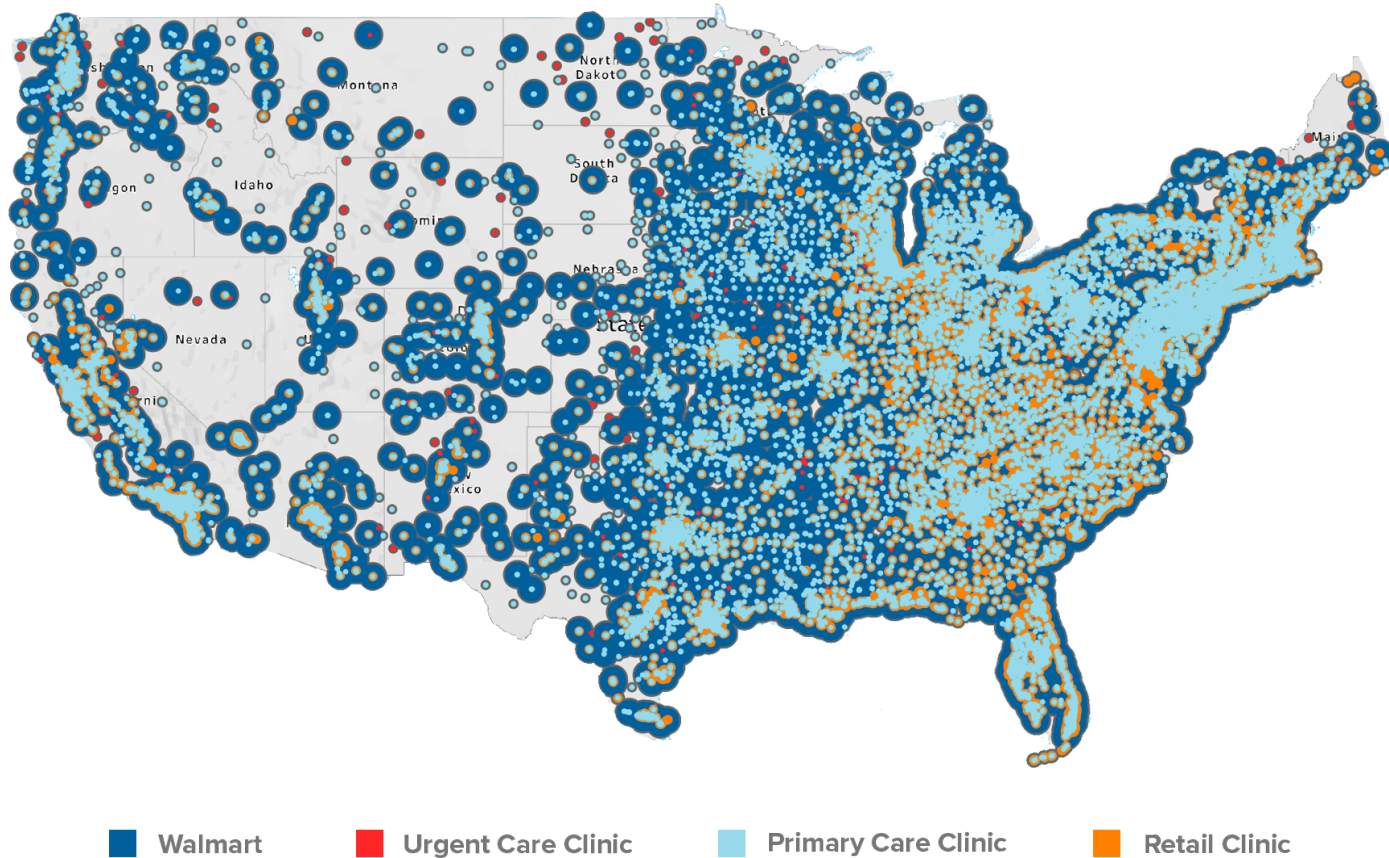
# SUPPLY

*Retail*

## SUPPLY: RETAIL

# 87% of Walmart Retail Locations Offer Health Services

Walmart continues to expand its footprint into healthcare, increasing access to care but cutting into legacy providers' revenues.



Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.

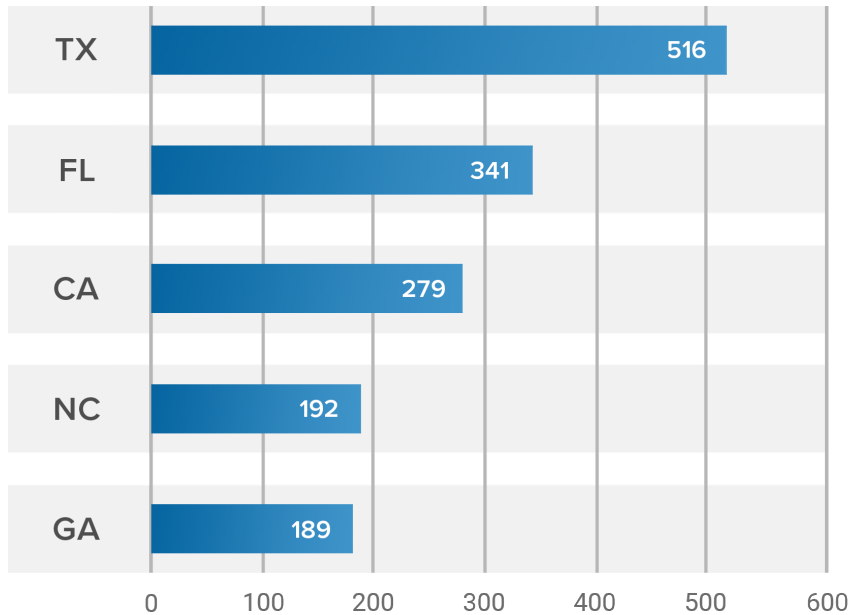
## SUPPLY: RETAIL

# Three of the Top Five States by Walmart Location Count are Gaining Congressional Seats

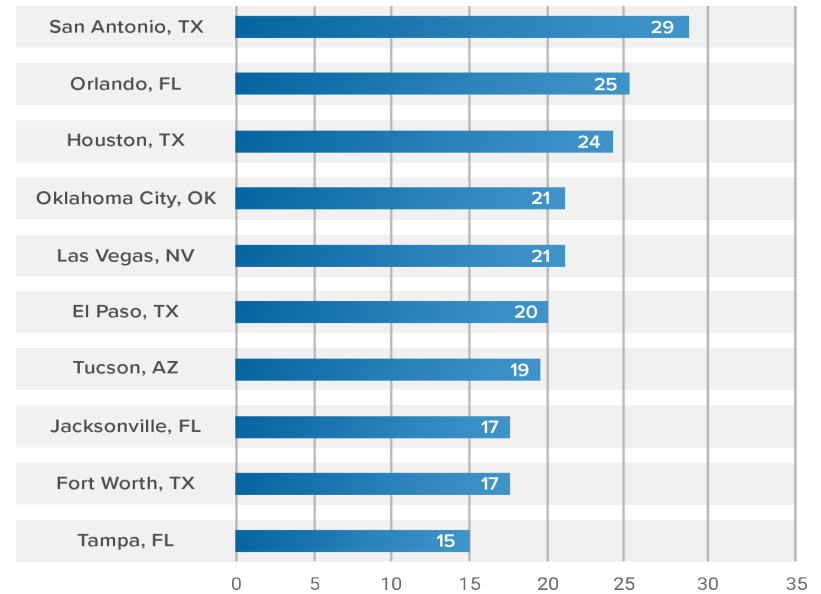
As Texas, Florida and North Carolina gain more residents in the post-pandemic economy, the competition among existing providers with Walmart for more share of care will intensify particularly for Medicaid and Medicare beneficiaries.

## Top Regions of Walmart Locations

### Top 5 States



### Top 10 Cities

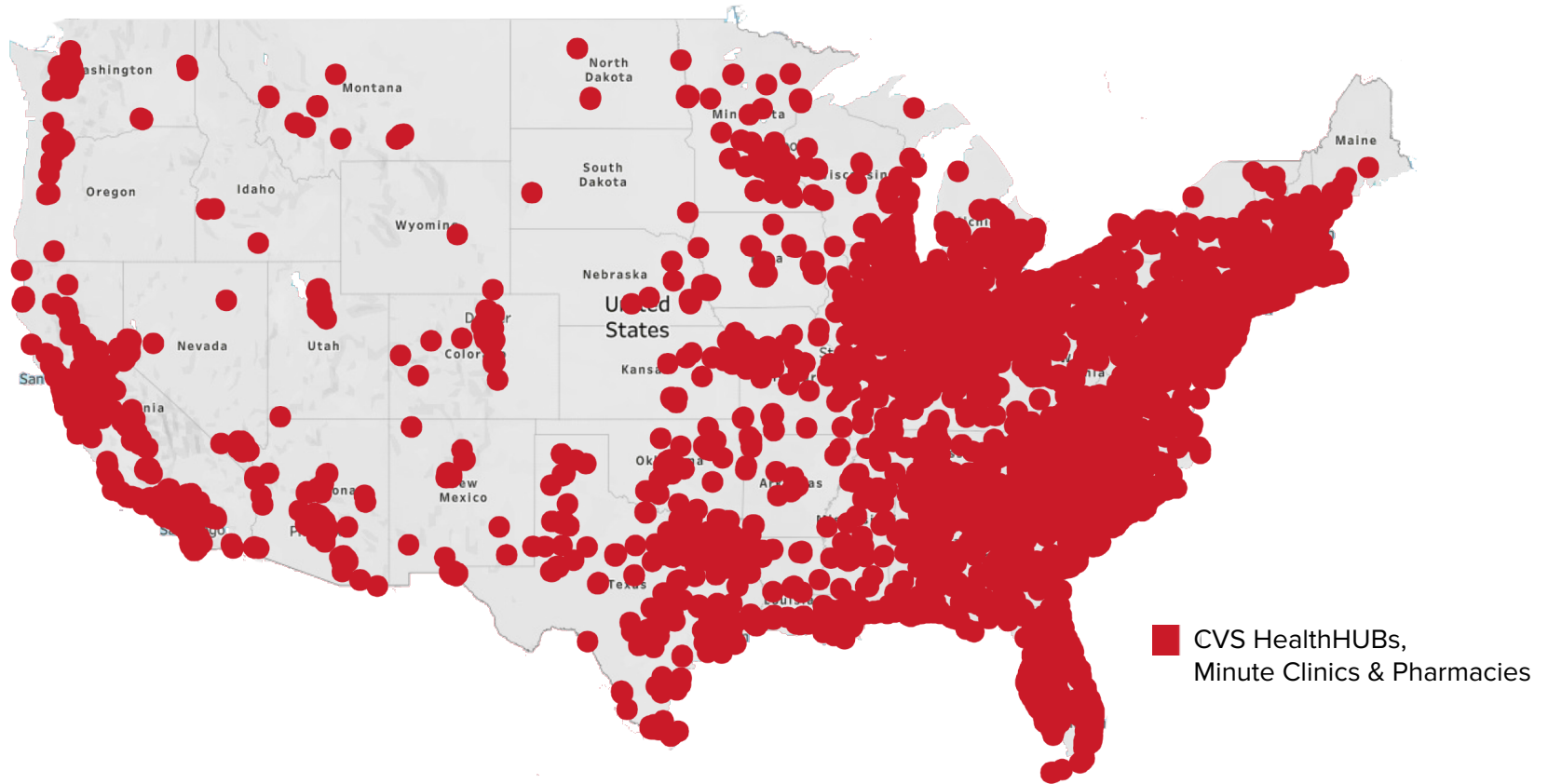


Note: Texas, Florida and North Carolina all represent states expected to gain Congressional seats due to population migration.  
Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.

## SUPPLY: RETAIL

# 11.1% of Health Locations Offer Minute Clinics

CVS has opened 136 HealthHUBs and has announced plans to open 1,500+.



Note: Minute Clinics, which are focused on low acuity services (e.g., colds, immunizations). Health HUBs are focus on more complex care services, notably those focused on chronic disease management.

Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.

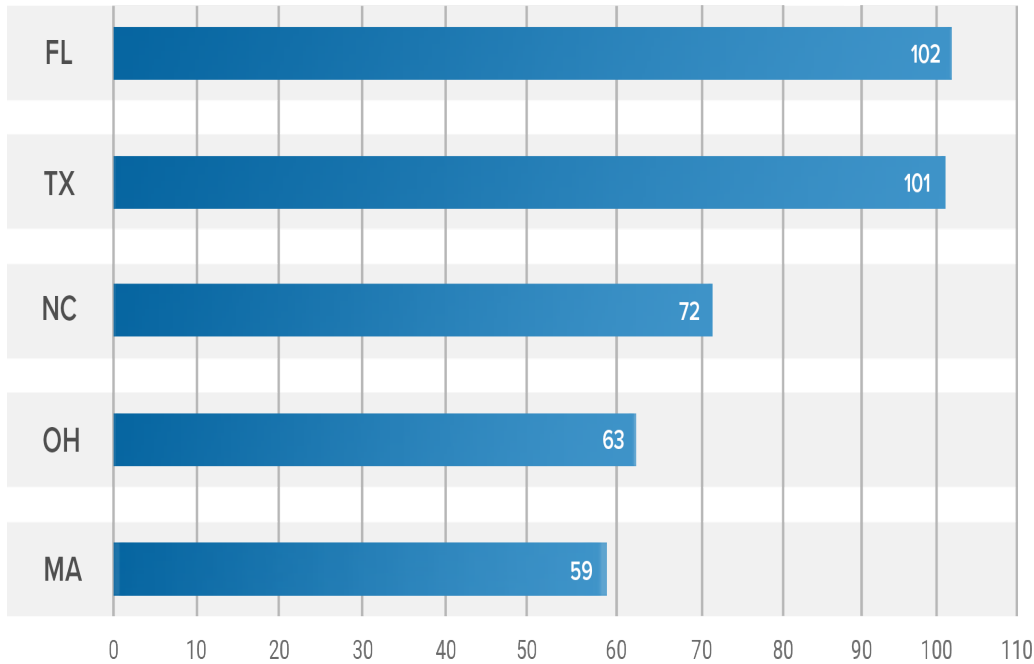
## SUPPLY: RETAIL

# CVS Minute Clinics Increasing in Sunbelt States

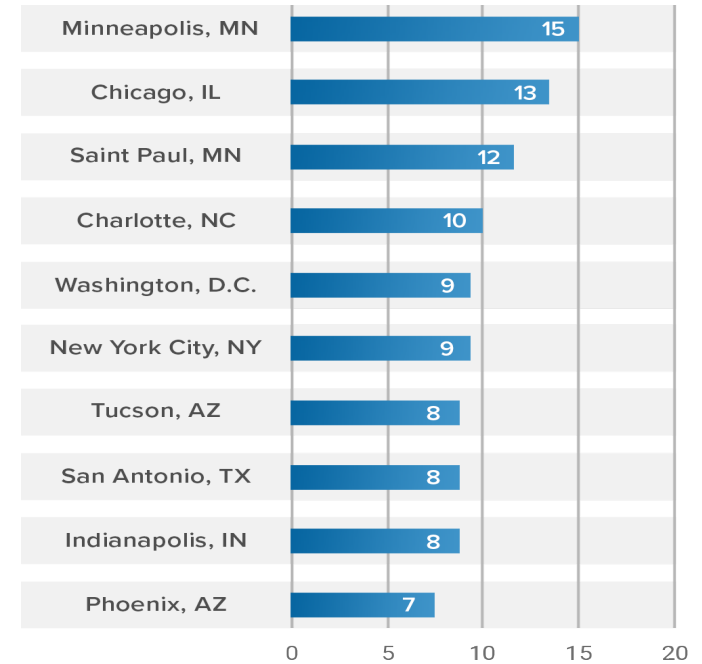
CVS' historic footprint is primarily in denser markets with greater than average proportions of commercially insured individuals, but new growth appears more focused on high-growth markets.

### Top Regions of Locations

#### Top 5 States



#### Top 10 Cities



Note: Minute Clinics, which are focused on low acuity services (e.g., colds, immunizations). Texas, Florida and North Carolina all represent states expected to gain Congressional seats due to population migration.

Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.

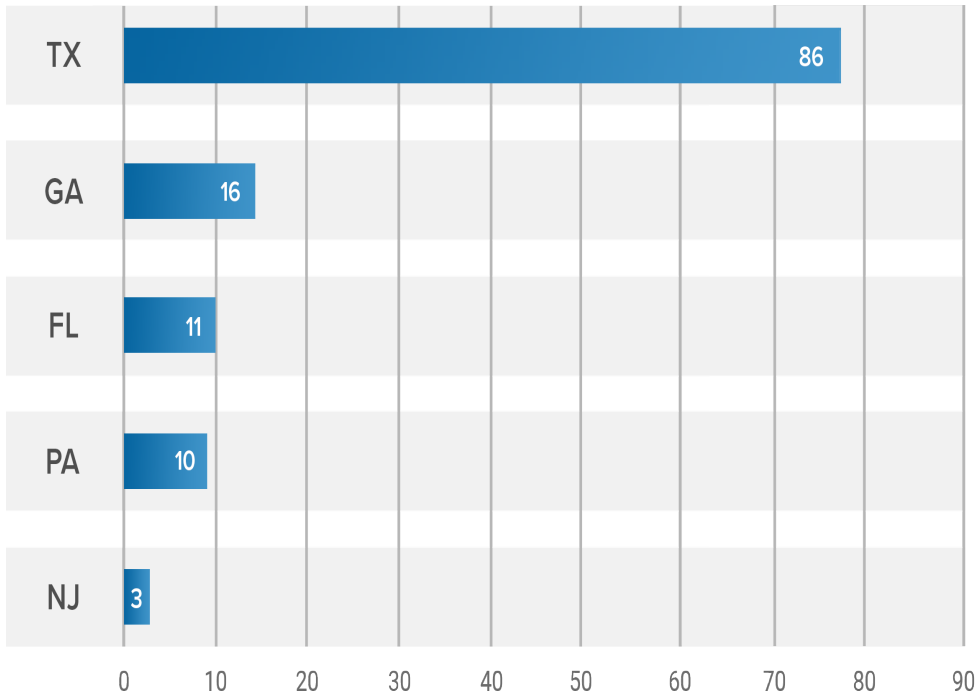
## SUPPLY: RETAIL

# CVS HealthHUBs Will Be Competing Directly with Walmart to Earn Consumer Loyalty Especially in Texas, Georgia and Florida

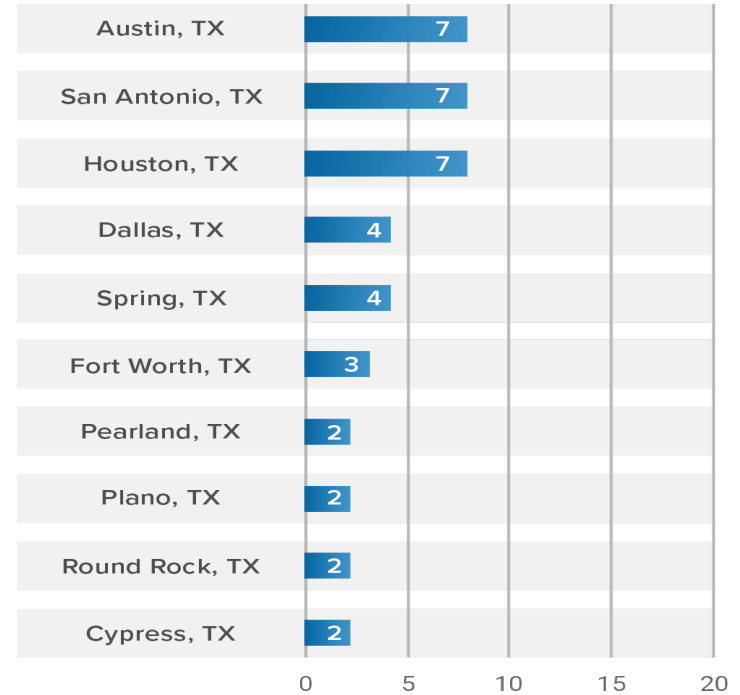
CVS HealthHUBs are planned for rapidly growing markets.

## Top Regions of **Health HUB** Locations

### Top 5 States



### Top 10 Cities

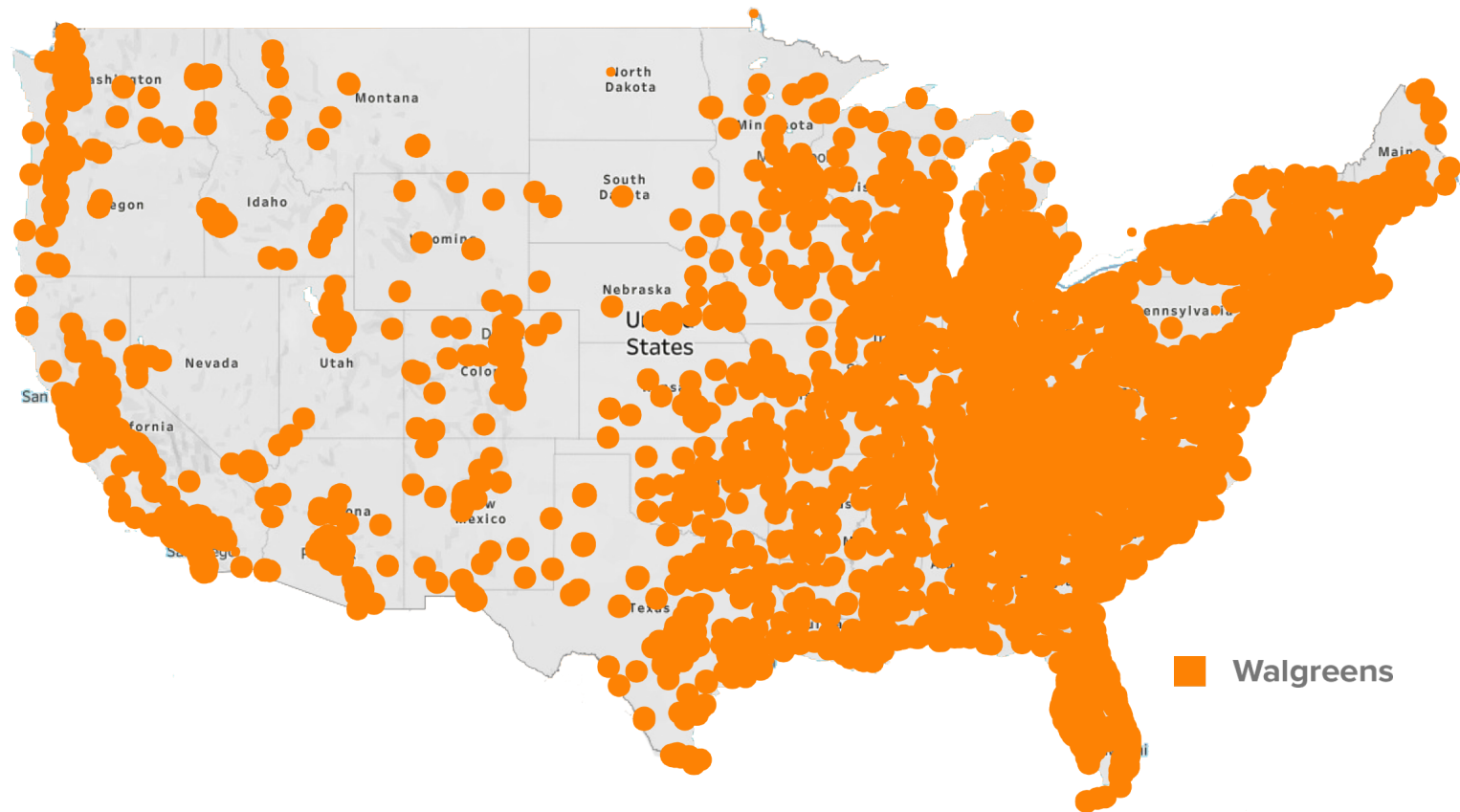


Note: Texas and Florida represent states expected to gain Congressional seats due to population migration.  
Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.

## SUPPLY: RETAIL

# *Walgreens* Physical Footprint Does Not Yet Equate to its Scale Potential in Retail Health

Walgreens currently operates 8,986 locations across the country.



Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.



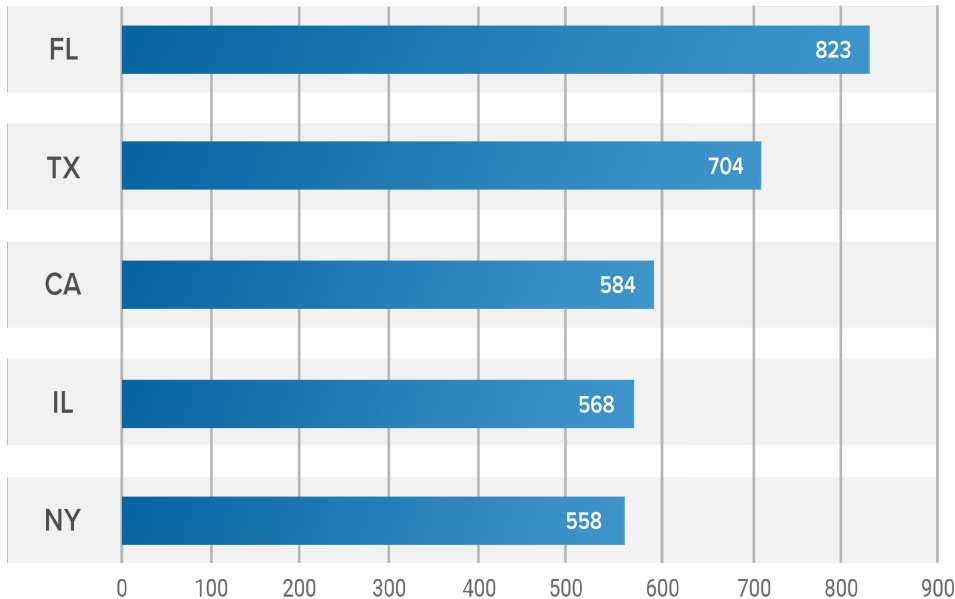
## SUPPLY: RETAIL

# Five of Walgreens' Largest Markets are Not Growth Markets

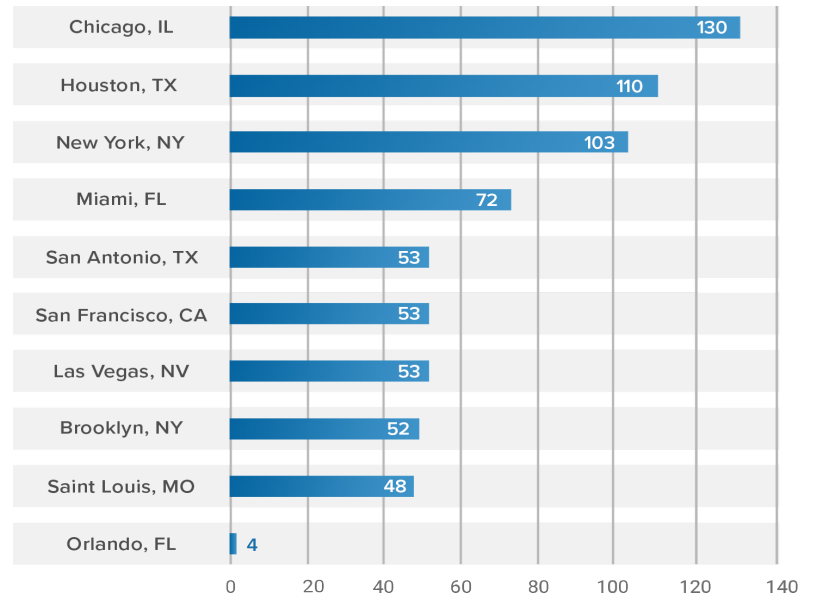
However, Walgreens' status as the largest health and wellbeing-centered customer loyalty program positions it well to compete for a growing share of consumer loyalty.

## Top Regions of *Walgreens* Locations

### Top 5 States



### Top 10 Cities



Note: Texas and Florida represent states expected to gain Congressional seats due to population migration.  
Source: Trilliant Health national all-payer database and analysis of publicly available zip code data.

## SUPPLY: RETAIL

# The Largest Retail Providers Have Established Loyalty with Healthcare Consumers

Walmart's plans to launch a membership will enhance its ability to compete directly with Amazon.

### Loyalty Programs (Number of Members)



74 million Americans



100 million Americans

### Membership Programs (Annual Fees)



\$119/year



\$98/year

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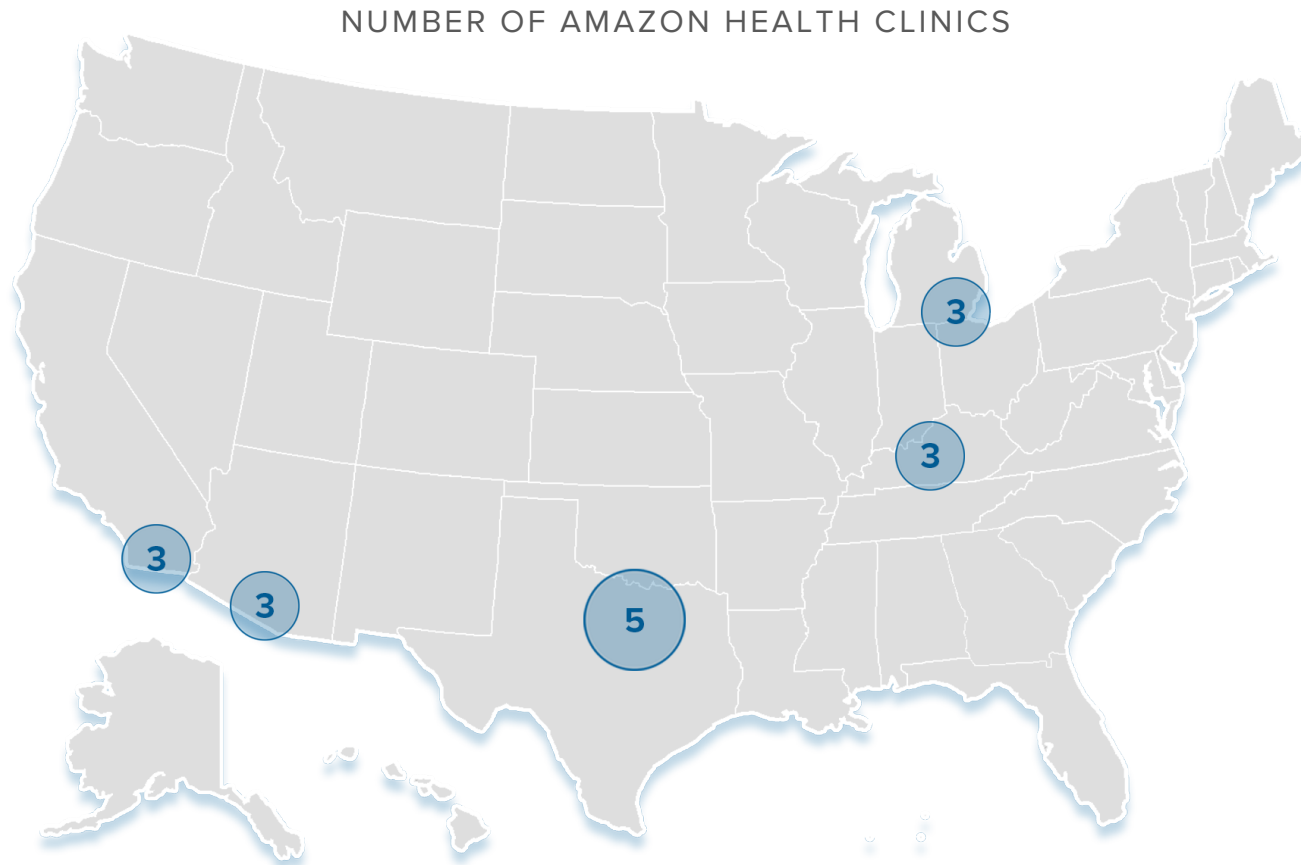
# SUPPLY

*New Entrants*

## SUPPLY: NEW ENTRANTS

# Amazon's Healthcare Footprint Continues to Expand

Amazon has launched 17 health centers with services including full-spectrum acute, chronic, and preventive primary care, same-day pediatrics, prescriptions, vaccinations, behavioral health services, physical therapy, health coaching, and care navigation for specialty referrals and diagnostic services.



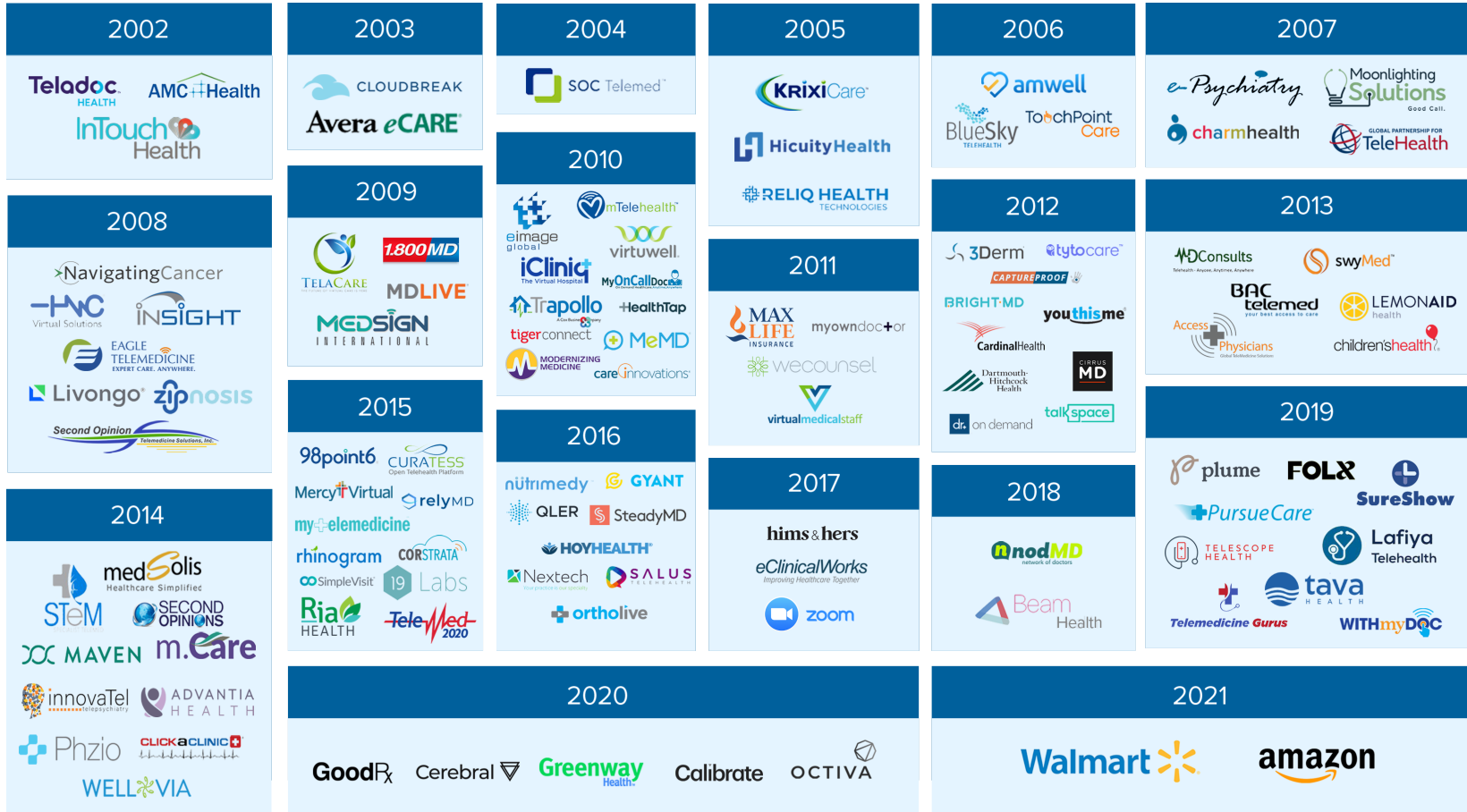
Source: Amazon website.

# SUPPLY: NEW ENTRANTS

## The Number of Tech-Enabled Care Providers Has Grown

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: NEW ENTRANTS

# The Number of Retail-Based Care Providers Has Grown

Retail clinic operators have steadily increased to capitalize on the transition to outpatient demand.

### TIMELINE OF SELECT SUPPLIERS OFFERING RETAIL-BASED CARE



Source: Publicly available company information.

## SUPPLY: NEW ENTRANTS

# The Number of Home-Based Care Providers Has Grown

Healthcare provided in the home began over a century ago out of necessity. Consumer survey data indicates that it is preferable to in-office care due to convenience and cost.

TIMELINE OF SELECT SUPPLIERS OFFERING HOME-BASED CARE

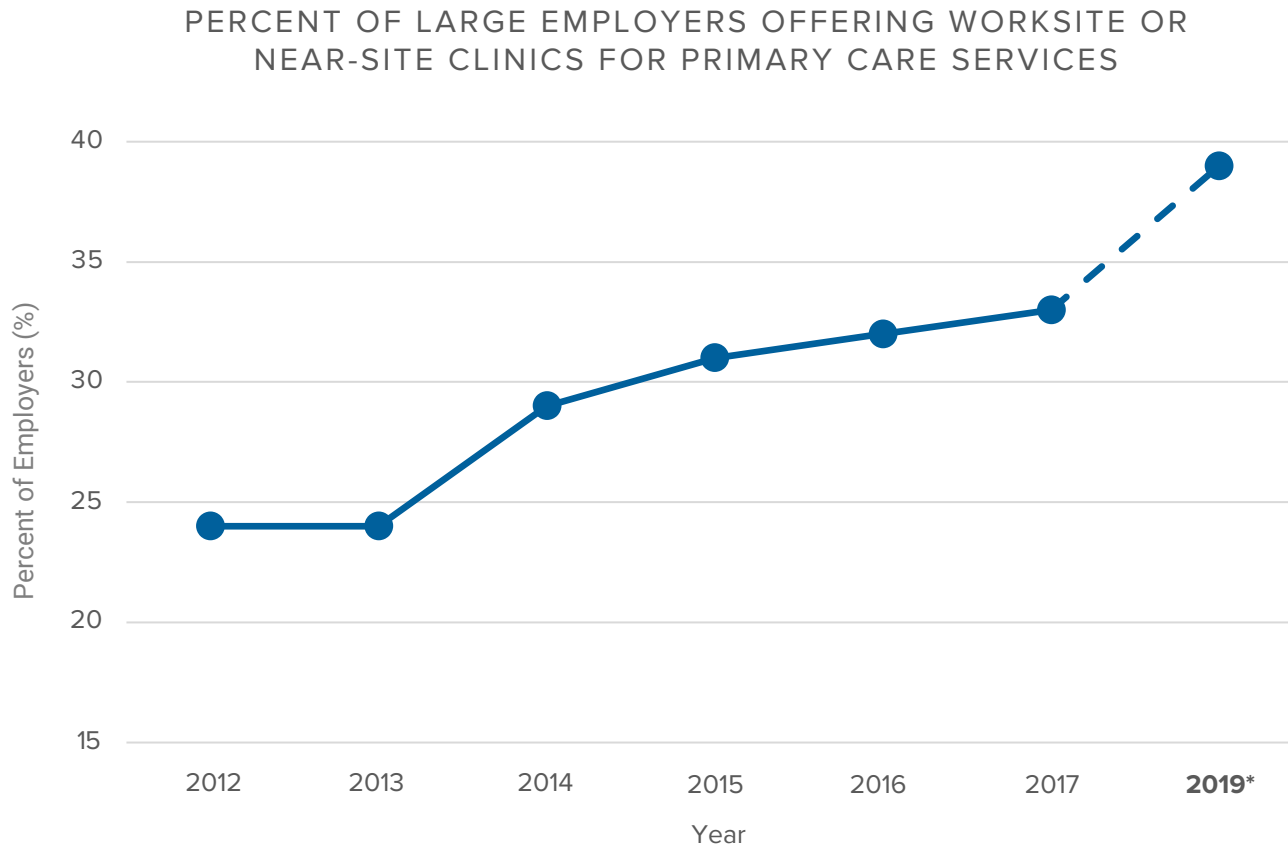


Source: Publicly available company information.

## SUPPLY: NEW ENTRANTS

# Large Employers Are Expanding Medical Service Offerings

Self-insured employers are reacting to incessant premium increases. An additional 6% of large employers reported considering medical offerings by 2019.



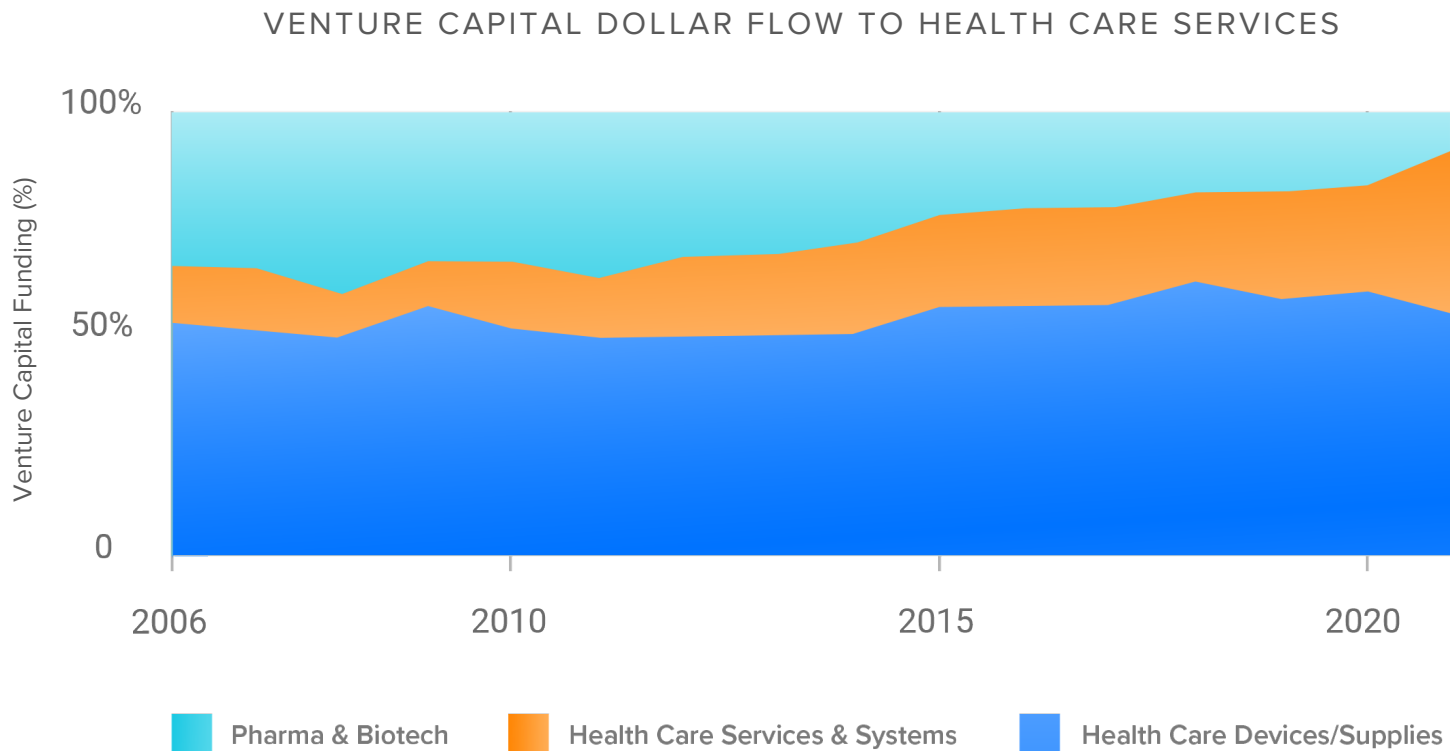
Note: \*Survey responses projecting out year values were only provided for the year 2019. Data reflects survey responses among employers with 5000 or more employees. Primary care service offering criteria EXCLUDES occupational healthcare services. For comparative purposes, 38% of large employers offered clinics for occupational health services in 2017. Source: National Survey of Employer-Sponsored Health Plans, Worksite Medical Clinics: Mercer Survey Report: 2018.



## SUPPLY: NEW ENTRANTS

# Venture Capital Funding For Health Care Services Has Outpaced Investments in Medical Devices and Biotech

Over the past ten years, healthcare services are drawing an increasing percentage of total venture capital investment.



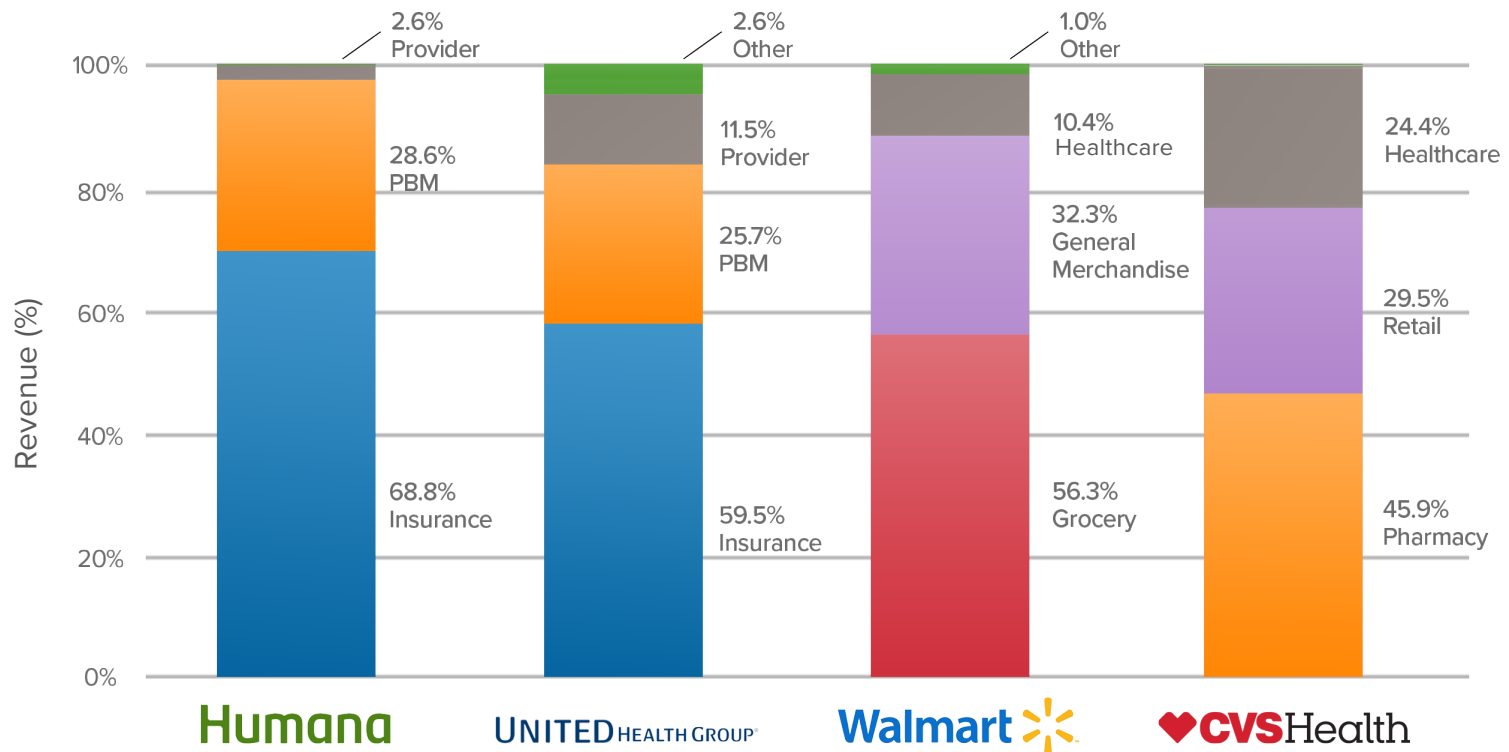
Source: Bloomberg analysis of data from PitchBook-NVCA Venture Monitor, 2021 data through Q1.  
Original article: [Investors Bet Billions That Health Care's Long Overdue Digital Shift Is Finally Here – Bloomberg](#).

## SUPPLY: NEW ENTRANTS

# Payers are Becoming Providers...and so are Retailers

New market entrants have extensive experience in consumer marketing and engagement, whether Medicare Advantage or retail.

PERCENT OF REVENUE DEDICATED TO HEALTHCARE SERVICES FOR NON-TRADITIONAL PROVIDER ENTITIES



Source: Analysis of publicly available financial statements, 2020.

## SUPPLY: NEW ENTRANTS

# Existing Relationships with Consumers Creates Greater Competitive Pressures on Traditional Health System Providers

Where consolidation in health systems is growing, there is still limited penetration among a single, national provider. Businesses like Amazon that already have penetration across the country have a unique opportunity to monetize their existing customer base.



(Largest U.S. Health System)

**1%**

of Americans



Active Memberships

**44%**

of Americans

Note: HCA's equivalent admissions were reflected as a percentage of the U.S. population.  
Source: Consumer Intelligence Research Partners, HCA Form 10-K for year ended December 31, 2020.

# Healthcare Supply is Plentiful and Growing

### 1 The number of healthcare suppliers in any given market is larger than most recognize.

- Every provider that underestimates supply, by definition, overstates their market share.
- Projected need for physicians is not the same as the anticipated shortage of physicians, and projections for physician demand have been declining for years.
- Underestimating supply limits our understanding of true consumer demand.

### 2 Traditional care providers, notably hospitals and health systems, are facing growing competition from consumer businesses.

- New entrants have pre-existing sticky relationships with consumers.
- There are numerous niche players focused on numerous niche markets.
- Scale and price advantage of new entrants and retail players increases the stakes of the existing “negative sum game”.

### 3 There is an increasing number of suppliers for commodity services at commodity prices.

- COVID-19 catalyzed the expansion of more telehealth providers.
- The increase in capital investments in retail and tele-based companies is catering to very small consumer segments of corresponding demand.
- Traditional healthcare providers are late market entrants.



# YIELD

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

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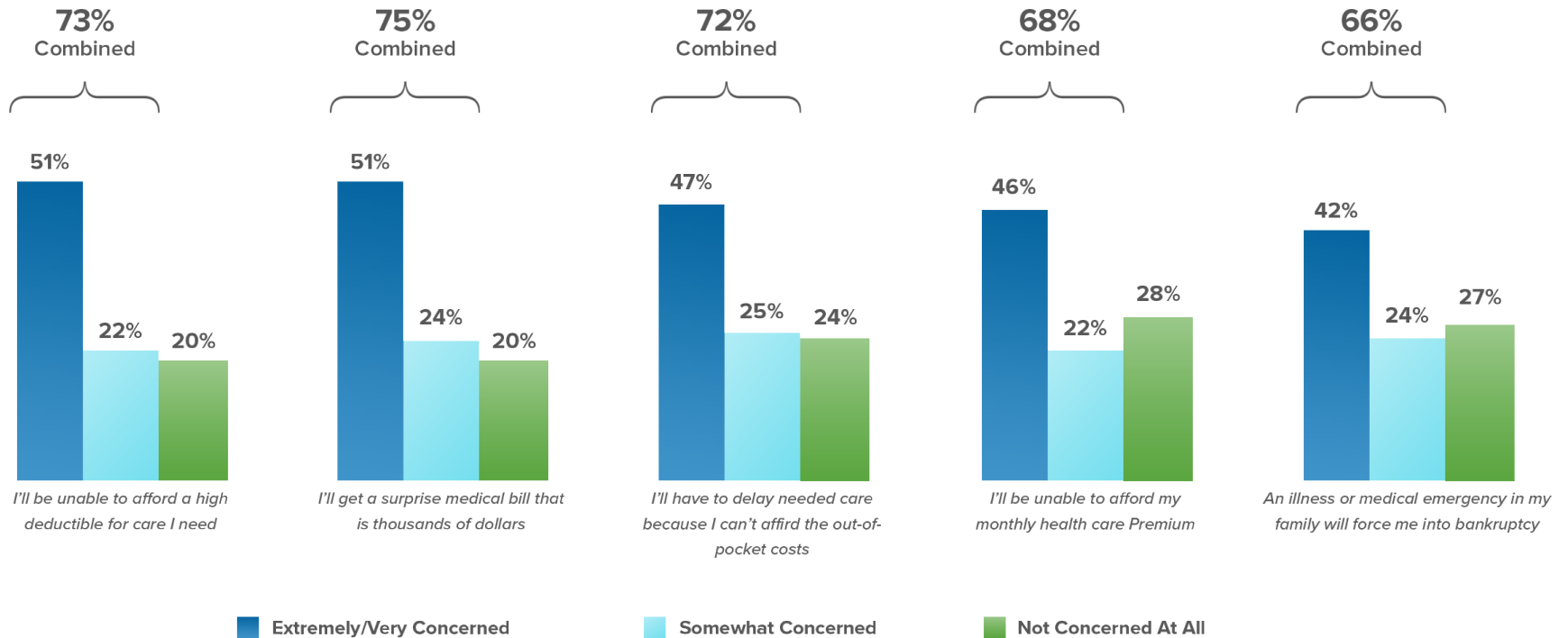
**YIELD**  
*Cost*

## YIELD: COST

# 71% Americans Report Concerns Around Costs of Care

High-deductible plans and surprise medical bills remain top concerns for U.S. consumers.

HOW CONCERNED ARE YOU ABOUT THE FOLLOWING HAPPENING TO YOU IN THE NEXT FIVE YEARS?

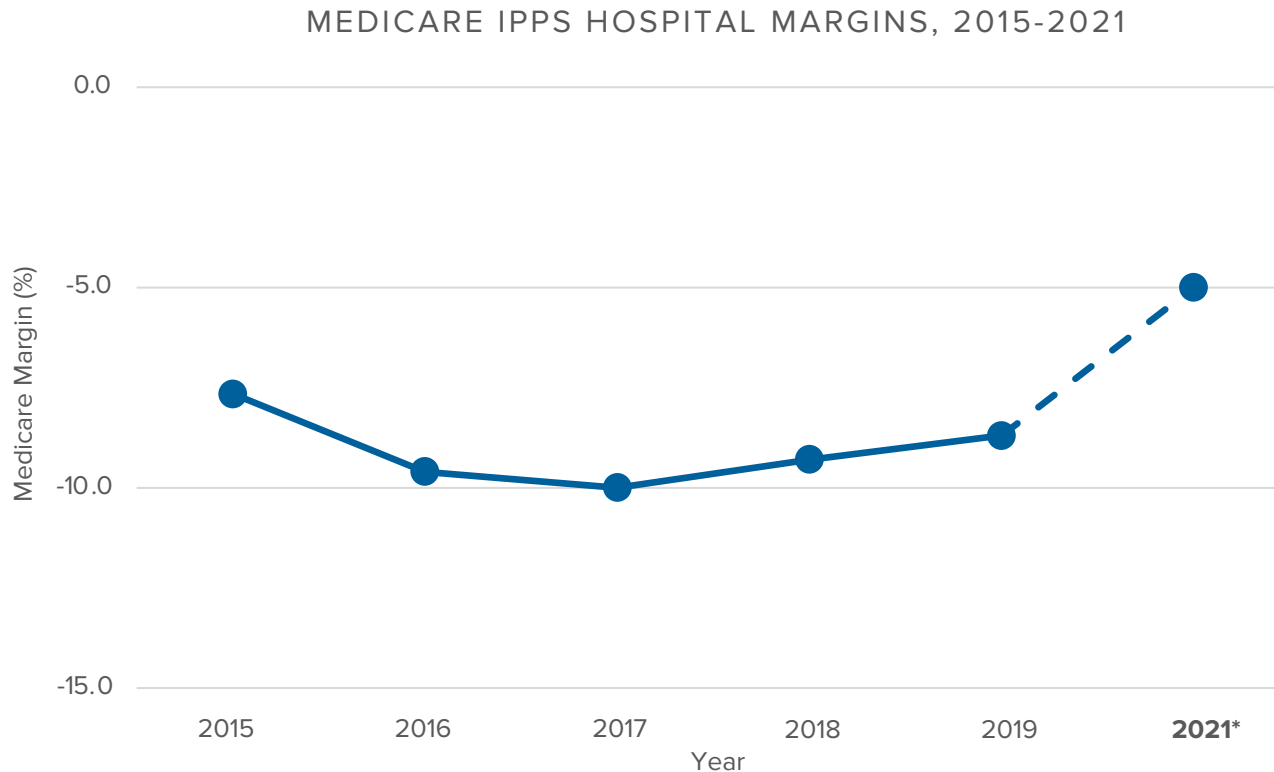


Source: Public Opinion Strategies/ALG Research National Survey of N=1,201 Registered Voters, Conducted January 22-28, 2021.

## YIELD: COST

# Hospital Medicare Margins Will Remain Negative

Despite negative margins, the increase in margins from 2018 to 2019 is in part attributed to a faster growth in payment per inpatient stay relative to cost per stay, reflecting high price inflation.



**\*Projected improvement in margin assumes higher payment rate increase, primarily in response to COVID-19, but does not reflect changes to cost relative to price inflation.**

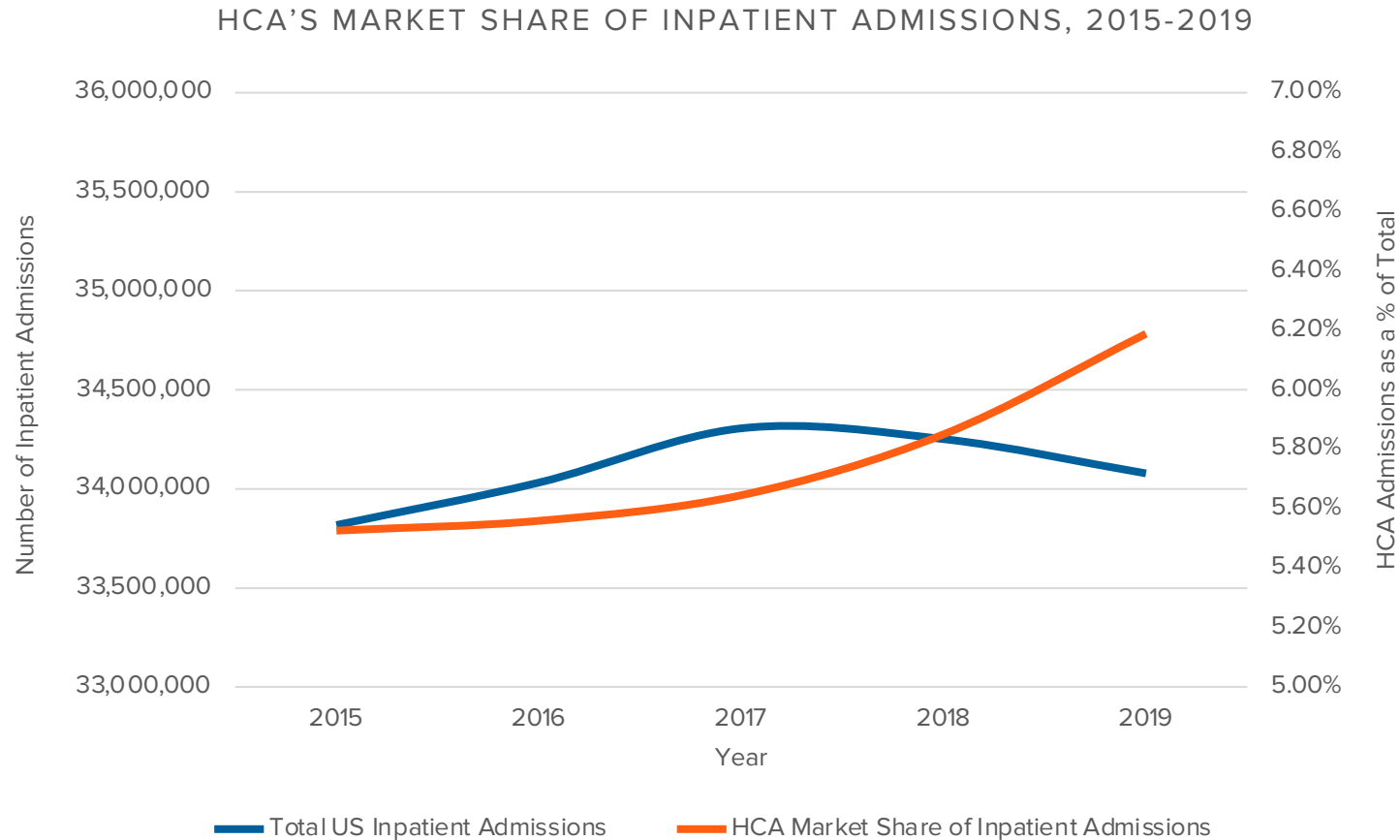
Note: Analysis includes inpatient prospective payment system (IPPS) hospitals in the U.S. with complete and nonoutlier cost report data.  
Source: Medicare Payment Advisory Commission (MedPAC) March 2021 Report to the Congress: Chapter 3.



## YIELD: COST

# One Health System That is Winning a Losing Game...

HCA is increasing market share of inpatient admissions in almost all their key markets.

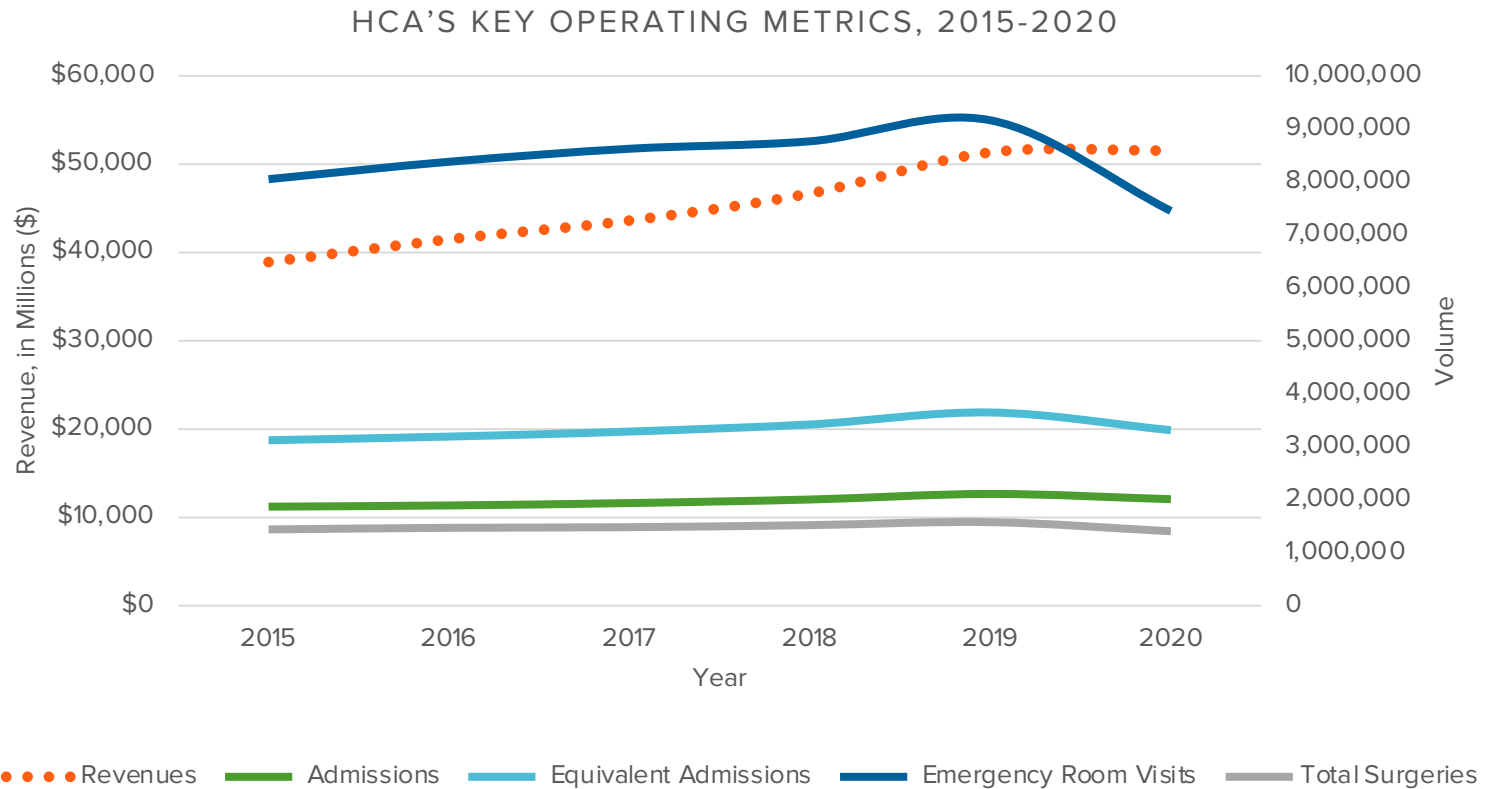


Source: HCA Form 10-K for years ended and December 31, 2018 and December 31, 2020.

## YIELD: COST

# ...And Defying the Laws of Economics

HCA had record earnings in 2020.

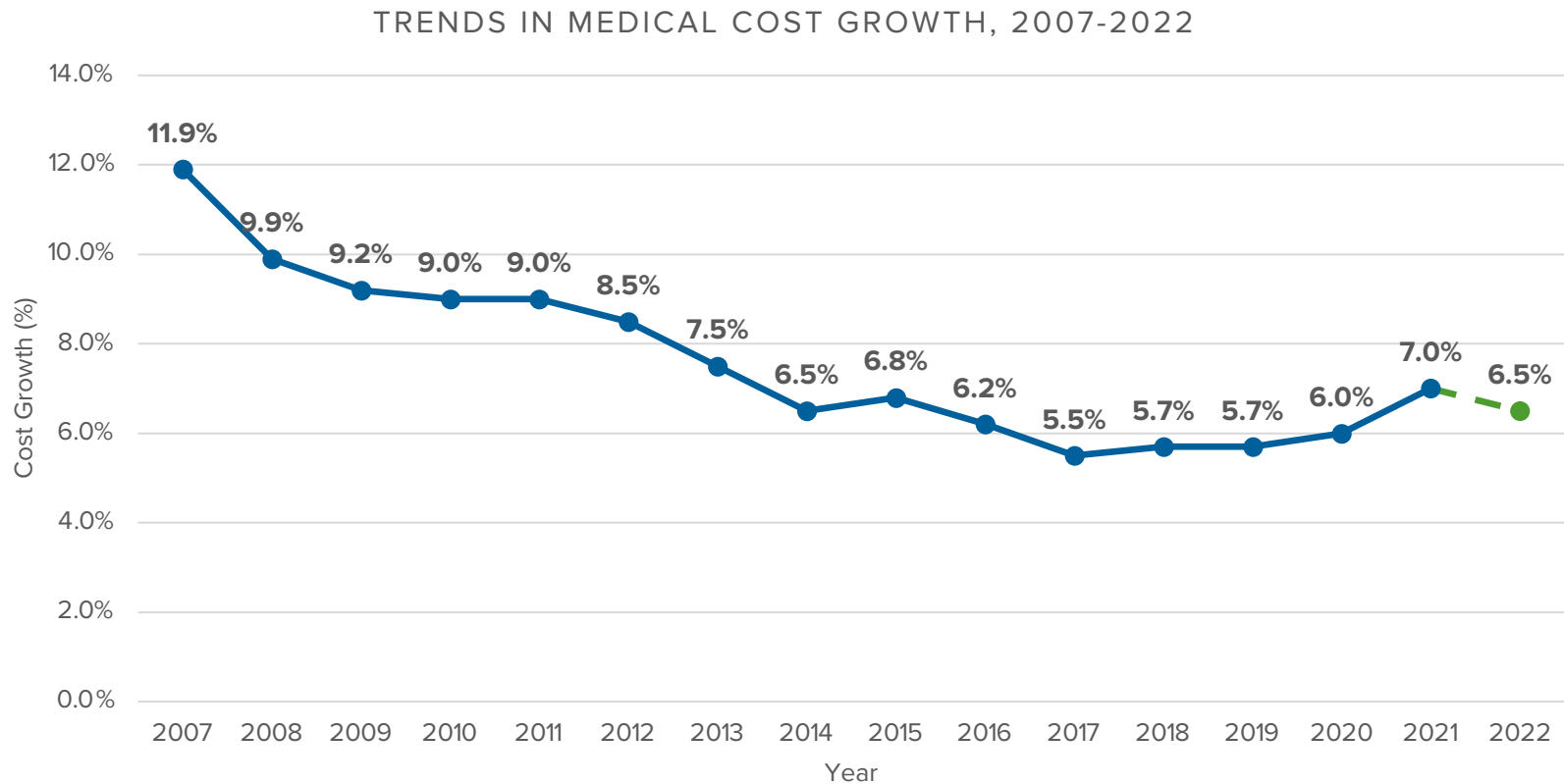


Source: HCA Form 10-K for years ended December 31, 2020 and December 31, 2018.

## YIELD: COST

# Medical Cost Growth Projected to Decline, Limiting the Opportunity for Reimbursement Increases

A 6.5% medical cost trend is projected for 2022, which is lower than 2021 trends.



Source: PWC Health Research Institute's *Behind the Cost Trend: Behind the Numbers 2022*.

## YIELD: COST

# Primary Care Can Eventually be Marginally Profitable

Retail primary care providers such as One Medical anticipate negative margins in its acquisition of Iora Health which focuses on delivering care for Medicare beneficiaries.

### FORECASTED FINANCIAL SUMMARY PRIOR TO ONE MEDICAL'S ACQUISITION OF IORA HEALTH ANNOUNCEMENT

<b>One Medical</b>	<b><u>2020</u></b>	<b><u>2021E<sup>(1)</sup></u></b>
<b>Total Revenue</b> <i>% year-over-year</i>	<b>\$380M</b>	<b>\$475M</b> 25%
<b>Total Care Margin</b> <i>% of revenue</i>	<b>\$145M</b> 38%	<b>\$180M</b> 38%
<b>Total Adj. EBITDA</b> <i>% of revenue</i>	<b>(\$14M)</b> (4%)	<b>(\$10M)</b> (2%)
<hr/>		
<b>Iora Health<sup>(2)</sup></b>	<b><u>2020</u></b>	<b><u>2021E</u></b>
<b>Total Revenue</b> <i>% year-over-year</i>	<b>\$213M</b>	<b>\$299M</b> 41%
<b>Total Care Margin</b> <i>% of revenue</i>	<b>(\$35M)</b> (16%)	<b>(\$39M)</b> (13%)
<b>Total Adj. EBITDA</b> <i>% of revenue</i>	<b>(\$75M)</b> (35%)	<b>(\$90M)</b> (30%)

Source: One Medical – Iora Health Investor Presentation, June 2021.

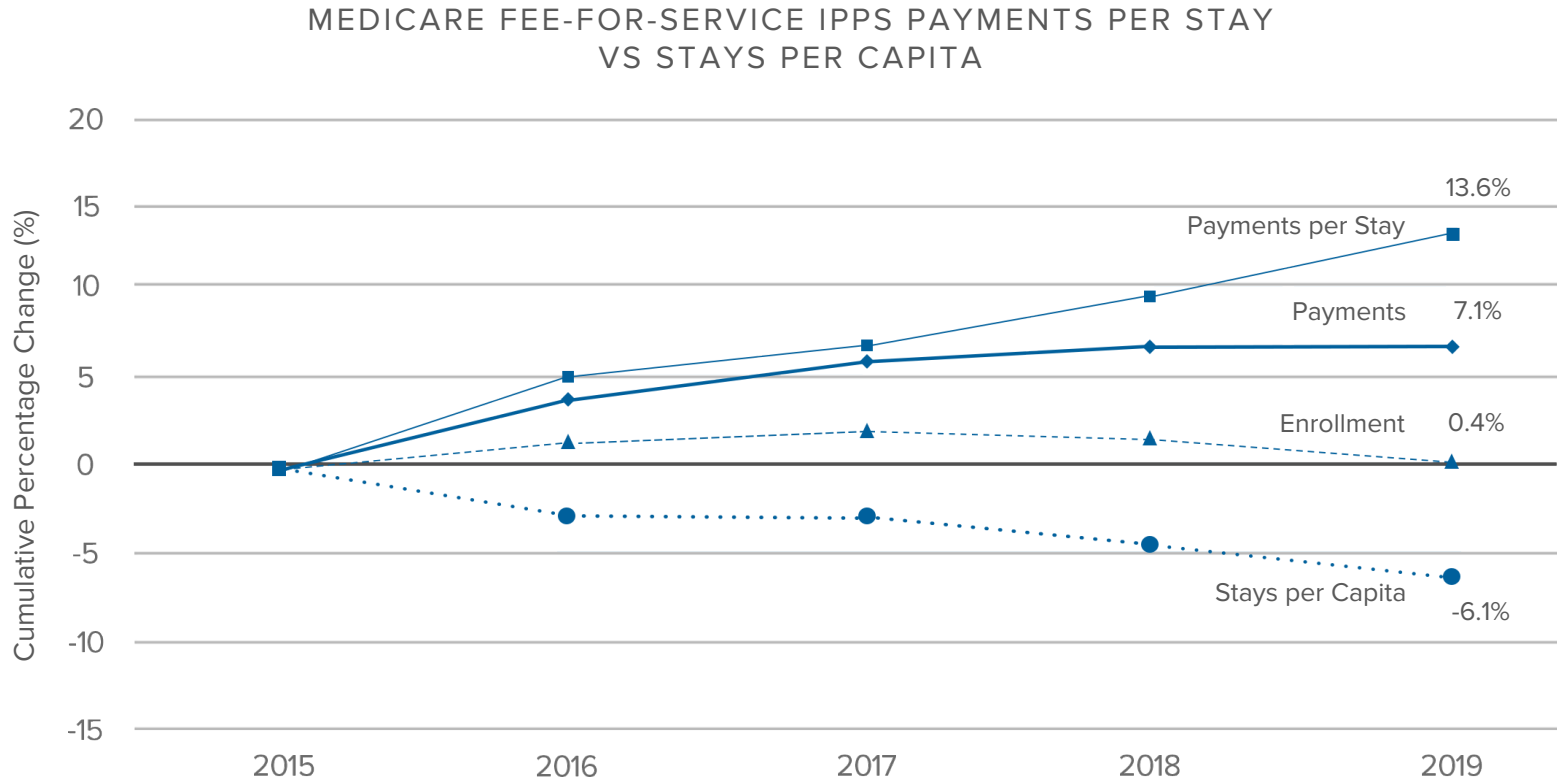
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**YIELD**  
*Price*

## YIELD: PRICE

# Growth in Medicare Payments Driven by Price, Not Volume

From 2015 to 2019, payments per stay increased 13.6%, despite a 4.4% decline in inpatient stays per capita.



Note: Analysis includes fee-for-service (FFS) Medicare beneficiaries' inpatient stays across all inpatient prospective payment system (IPPS) hospitals. Further analysis by Medicare Payment Advisory Commission (MedPAC) and the Health Care Cost Institute reveal a similar trend among commercially insured patients.

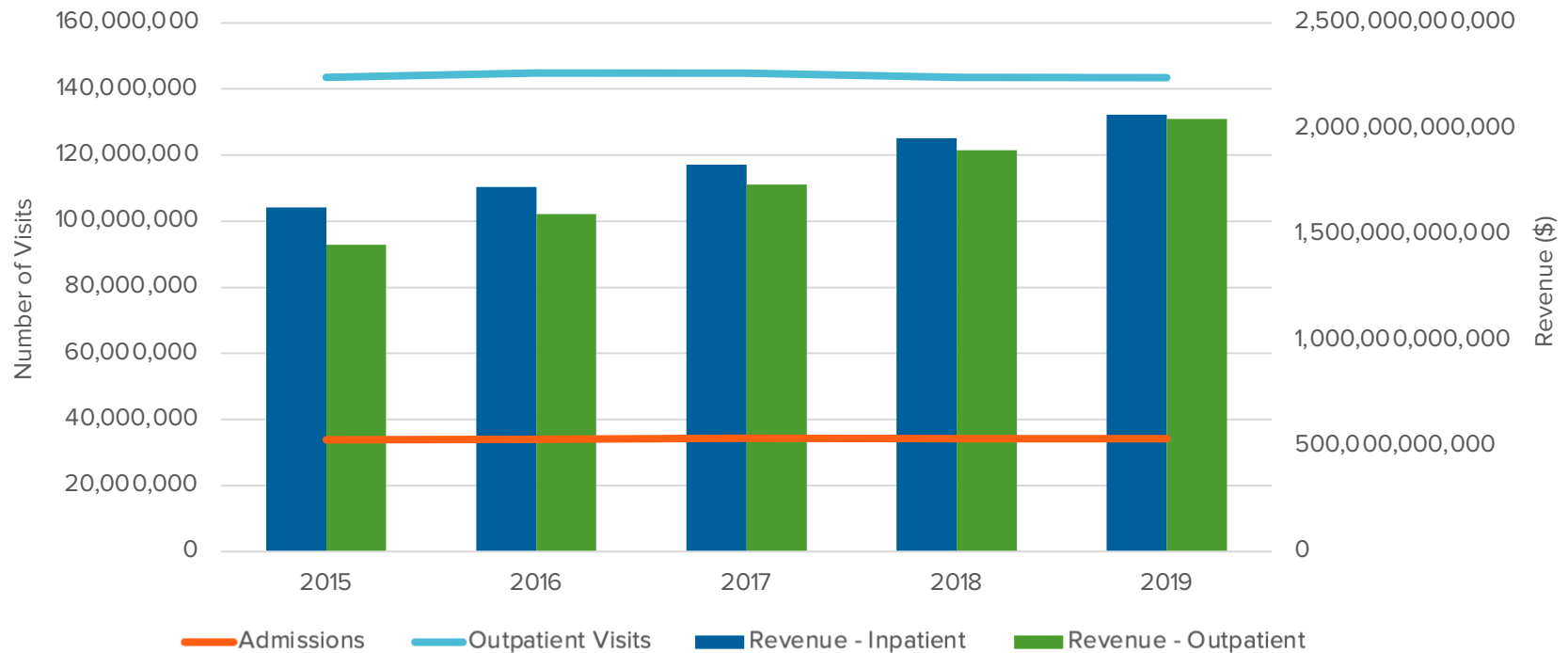
Source: MedPAC March 2021 Report to the Congress: Chapter 3.

## YIELD:PRICE

# Charging Higher Prices in Market with Low Demand and Increasing Supply is Ultimately Unsustainable

Hospital revenues have steadily grown as inpatient and outpatient visits have remained flat. The key question is how long will consumers tolerate 6% annual inflation against flat demand?

HOSPITAL INPATIENT ADMISSIONS & OUTPATIENT VISITS, 2015-2019

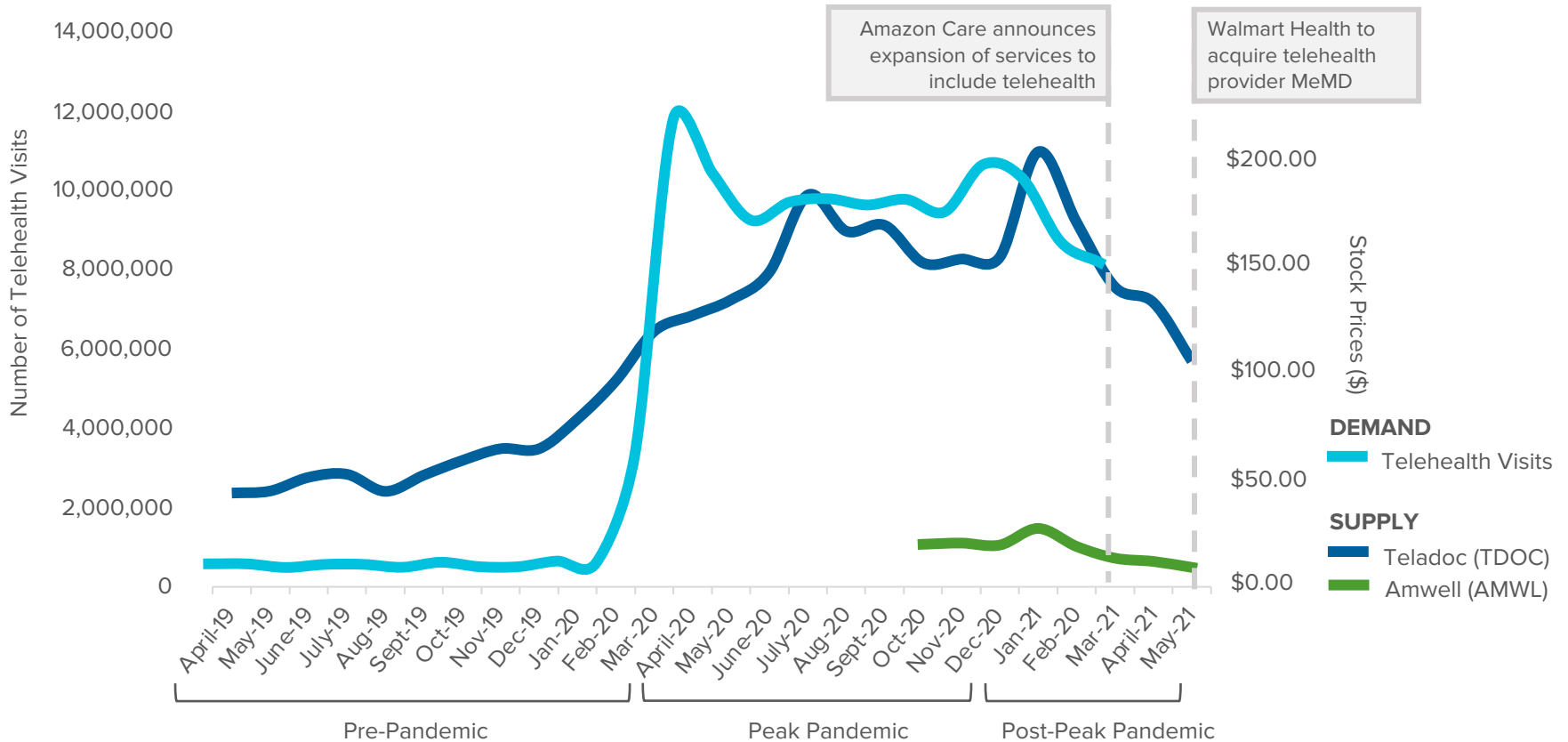


Note: Data shown for U.S. community hospitals. Total net revenue includes both inpatient and outpatient revenues.  
Source: American Hospital Association Statistics, 2021.

## YIELD: PRICE

# Telehealth Meets the Laws of Economics

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



Note: Telehealth visit volumes reflect video-only encounters for all payers excluding traditional Medicare. Survey data released from The Kaiser Family Foundation (May 2021) suggests that approximately 6.6M Medicare beneficiaries utilized a video telehealth visit. American Well Corp (AMWL), also known as Amwell, went public on September 17, 2020.

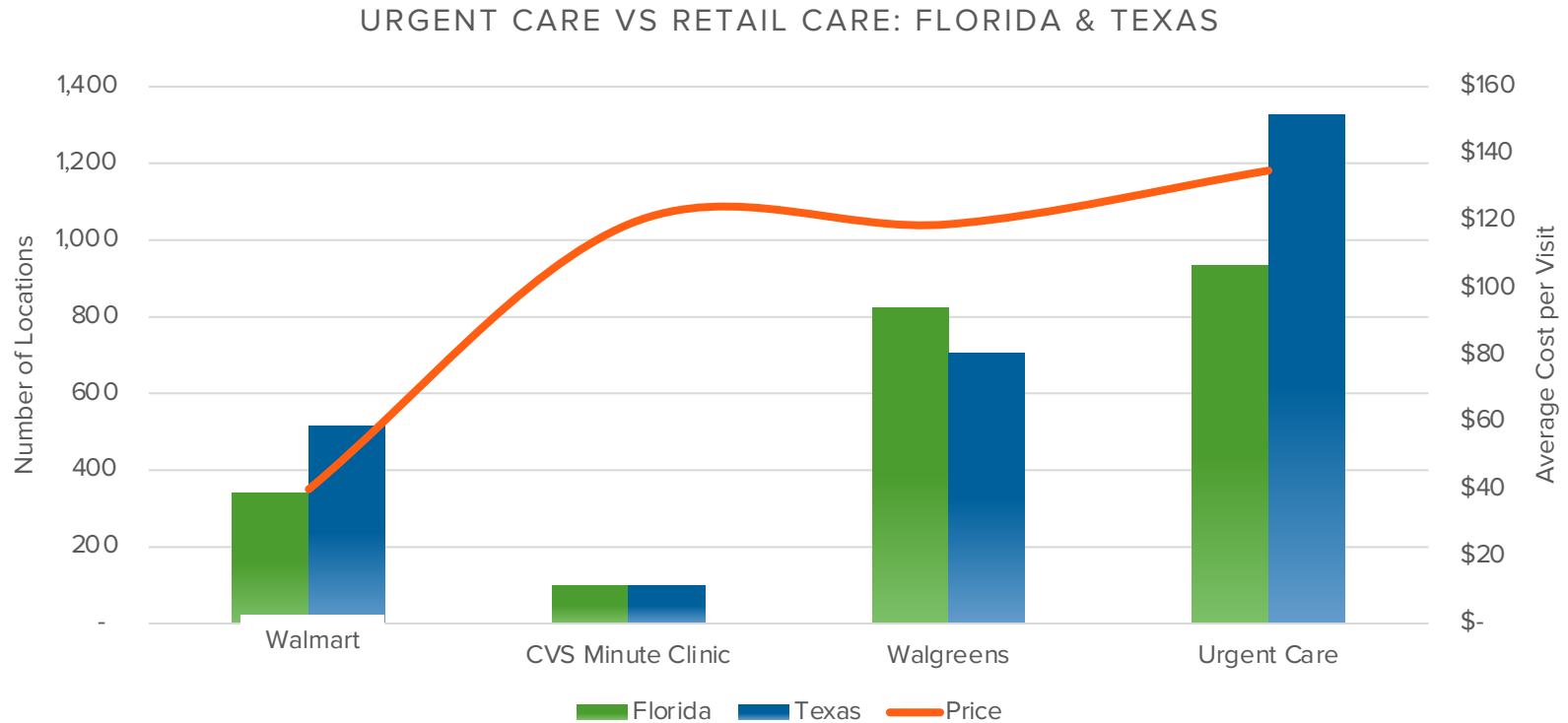
Source: Trilliant Health national all-payer claims database; April 2019–March 2021. Stock trends obtained from publicly available data via Yahoo Finance, April 2019–May 2021.



## YIELD: PRICE

# There is a Wide Disparity in Urgent Care Pricing

Even “lower cost” urgent care centers will be hard pressed to compete with all other retail players, especially in markets like Florida and Texas with high and growing supply of Walmart and Walgreens.




Note: Costs reflect average 2020 prices. Florida and Texas were selected given the states' high concentration of retail brands and projected population growth (gaining Congressional seats). Source: Trilliant Health national all-payer claims database; price plans publicly available on Walmart, CVS and Walgreens websites.

## YIELD: PRICE

# Medicaid is No Longer Setting the Floor for Primary Care

Prices and reimbursement rates vary widely by market and pay type except for Walmart who has opted for simplicity and low-cost options.

### COST COMPARISON FOR OFFICE VISITS

	Commercial	Medicaid	Walmart  Health
Boston	\$145.89	\$74.56	\$40.00
Chicago	\$112.74	\$60.07	\$40.00
Dallas	\$123.37	\$53.08	\$40.00
Detroit	\$106.53	\$58.39	\$40.00
Houston	\$96.12	\$73.41	\$40.00
Phoenix	\$100.01	\$79.26	\$40.00

Note: Average prices reflected are from the year 2020.

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

## YIELD: PRICE

# Will Walmart Apply “Save Money. Live Better.” to Healthcare?

Prices vary among retail providers. Walmart is conforming to its historic “low prices” strategy.

### COST COMPARISON FOR KEY SERVICES

SERVICE	COST			
	 CVS Health.	<i>Walgreens</i>	 Walmart Health	Urgent Care
<i>Office Visit</i>	\$99 - \$139	\$89	\$40	\$137
<i>Flu Test</i>	\$70 - \$100	\$66	\$20	\$102
<i>Strep Test</i>	\$35 - \$45	\$25	\$20	\$102
<i>Lipid Panel</i>	\$37	\$35	\$10	\$102

Source: Walmart, CVS, Walgreen’s website; Trilliant Health all-payer claims database.

## YIELD: KEY INSIGHTS

# To Compete in a Low Demand, High Supply Economy, Price is a Critical Lever

### 1 The increasing costs of healthcare are artificially demand driven

- The commercially insured population is shrinking relative to Medicare and Medicaid beneficiary growth.
- Steady price inflation against a flat to declining demand defies the law of economics, creating opportunities for others to compete on price.
- New entrants following the rules of economics are well positioned to increase their brand loyalty with consumers.

### 2 Traditional providers cannot compete on the unit prices established by leading consumer brands

- The Medicare cohort generating the greatest growth in demand is the population where hospitals have historically lost money.
- New entrants will be similarly challenged to make margins on non-commodity services such as primary care.
- The demand for lower price commodity services (e.g., telehealth) is limited to niche population cohorts with non-acute clinical needs.

### 3 Providers that define value from the consumer's perspective will be those that earn their loyalty

- Growing cost, or affordability, of care remains a key concern for majority of healthcare consumers.
- Consumers will choose provider brands based on a variety of factors from access modality (e.g., digital) to location, with price as the most important.
- Psychographics influences consumer choice more than demographics.

## CONCLUSION

# Winners in the Post-Pandemic Health Economy Play by the Rules of Economics

## Demand

### 1 Burden of Disease is Not Correlated with Demand for Services or Need for Providers

- Disease-based demand projections incorrectly assume demand for comorbid individuals is 1:1.
- Demand is a derivative of the Medicare age cohort and population migration.
- Growth in inpatient and outpatient demand has been flat to declining years prior to COVID-19.

### 2 COVID-19 Did Not Significantly Change Demand

- Projected rate of demand growth varies by 0.1% between pre- and post-pandemic estimates.
- Densely populated markets will be most adversely affected for future demand post-COVID-19.
- COVID-19's acceleration of telehealth adoption is beginning to taper and suggests long-term use is limited to a discrete user profile.

### 3 Consumer Loyalty is Lowest Where Demand is Increasing

- Women are more likely to split where they receive care across more providers.
- Consumers, particularly those with more care needs, prefer more traditional models of care and are less comfortable with digital modalities.
- Consumer decisions are driven by psychology more than neighborhood.

## Supply

### 1 The number of healthcare suppliers in any given market is larger than most recognize

- Every provider that underestimates supply, by definition, overstates their market share
- Projected need for physicians is inconsistent with recent demand trends
- Underestimating supply limits our understanding of true consumer demand

### 2 Traditional providers of care, notably hospitals and health systems, are facing growing competition from consumer businesses

- New entrants have pre-existing sticky relationships with consumers
- There are numerous niche players focused on numerous niche markets
- Scale and price advantage of new entrants and retail players increases the stakes of the existing "negative sum game"

### 3 There is an increasing number of suppliers for commodity services at commodity prices

- COVID-19 catalyzed the expansion of more telehealth providers
- The increase in capital investments in retail and tele-based companies is catering to very small consumer segments of corresponding demand
- Traditional healthcare providers are late market entrants

## Yield

### 1 The increasing costs of healthcare are artificially demand driven

- The commercially insured population is shrinking relative to Medicare and Medicaid beneficiary growth.
- Steady price inflation against a flat to declining demand defies the law of economics, creating opportunities for others to compete on price.
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# Methodology

A variety of data sources were leveraged as part of this research, with most insights gleaned from proprietary Trilliant Health datasets. Trilliant Health's all-payer claims dataset combines commercial, Medicare Advantage, traditional Medicare, and Medicaid claims, which represents approximately 70 billion claim lines accounting for more than 300M Americans on a deidentified basis. The analytics were calculated using a variety of methods, and the projections were created using machine learning.

Certain trends exclude traditional Medicare claims due to the timing of release of certain data from Centers for Medicare and Medicaid Services (CMS). Additional data were sourced from a variety of publicly available sources, (and are noted in respective source notes) primarily: individual health system and company financial statements, the American Hospital Association (AHA), Johns Hopkins University COVID-19 Tracking, Centers for Disease Control and Prevention (CDC), Medicare Payment Advisory Commission (MedPAC), Modern Healthcare, and the American Association of Medical Colleges (AAMC).

Many trend analyses were exclusively focused on the largest markets – defined as the Core-Based Statistical Areas (CBSAs) – as representative and illustrative of broader national trends. As noted in the report, population shifts and changes in care trends are the primary drivers to understanding future market demand.

- Population: Population encompasses local demographic shifts (age, location, sex) as well as growth and declines due to migration.
- Care Trends: Care Trends encompass the local care patterns, disease burden, and healthcare technology adoption. Physician care patterns and patient disease burdens are unique to a market. Our model balances sensitivity to recent trends while referencing the global data to provide forecasts that are accurate, local, and insightful.

As a proxy for demand, we limited our modeling analysis to the most common surgical services given the contributory impact (in terms of volume and revenues) for providers. We only show forecast outputs for the 25<sup>th</sup> and 50<sup>th</sup> (median) percentiles to provide a conservative baseline. Unless noted otherwise, forecast projections account for the impact of COVID-19.

# Acknowledgements

From whiteboarding the initial concepts to artfully articulating the intricacies of each data story, this report would not have been possible without the unwavering support and tireless efforts of my Trilliant Health colleagues.

David Taylor and Jason Nardella built the analytic backbone upon which the research depends and diligently created and curated the necessary data outputs. Matt O'Neill and Josh Saunders were always on call to ensure there were no gaps in the underlying claims powering the analytic models. Timothy Nobles and Mark Bacurin strengthened the methodological approach by introducing conceptual frameworks that are traditionally not considered in our industry but have profound implications. Lindsey Swearingen and Austin Thomas explored the depths of secondary sources to identify fascinating nuances hidden in the data.

Kendra Rogers' eye for detail was invaluable in stitching all the components together. Maggie Jackson and Kelsey Thomas brought extraordinary creative vision and design expertise to bring the data stories to life. Adam Peebles was my right hand from ideation to execution, jumping in to support with any need no matter how big or small.

My sincerest gratitude to Hal Andrews for giving me the platform to explore a wealth of interesting research questions, asking the tough questions, expanding my knowledge of healthcare (and pop culture analogies), and encouraging me to challenge the status quo.

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