trilliant health™
Exponentially Better.™

2022

TRENDS SHAPING THE Health Economy

SECULAR TRENDS SUGGEST LOWER YIELD FOR EVERY HEALTH ECONOMY STAKEHOLDER

As a health economist, I study healthcare through the lens of demand, supply, and yield. Even though markets for healthcare products and services deviate from what we economists would call the ideal market, the core principles offer a valuable framework for examining secular trends.

The health economy creates more data than any other part of the economy. New findings emerge daily, whether it be MedPAC's latest payment rate update, the AAMC's physician shortage estimates, Rock Health's report on digital health investments, or McKinsey's survey of consumer preferences, to name a few. While I enjoy studying these analyses, the challenge is synthesizing seemingly unrelated data to understand implications for the health economy. Does a finding that MedPAC makes based on analysis of only traditional fee-for-service Medicare data mean we should assume the same to be true for Medicare Advantage? Absolutely not. Are behaviors observed among Medicare beneficiaries predictive of what we can expect to see from commercially insured or Medicaid patients? Not exactly.

And yet, as an industry, we are satisfied with data that is "directionally correct" instead of demanding data that is "statistically representative" and market specific. Moreover, the industry habitually extrapolates a discrete data point, something that is true of 5% or 10% of the population, to 100% of the population. We say healthcare is local and yet rely on national trends that fail to account for geographical nuances, even though what is true of one market is rarely reflective of another.

I have long thought **our industry has lacked a comprehensive, data-driven view of emerging trends applicable to numerous segments of the health economy (i.e., payers, providers, investors, life sciences, new entrants, policymakers)**. Connecting dots between individual analyses of a topic like telehealth in individual states or within one health plan can be somewhat helpful, but it is more valuable to compare telehealth trends to other services such as urgent care and behavioral health. What are the similarities and differences in utilization rates and patient characteristics by service line?

The *2022 Trends Shaping the Health Economy* Annual Report provides data-driven insight into 13 secular trends that the COVID-19 pandemic has significantly amplified or accelerated. These trends are relevant to every stakeholder and understanding them has never been more important.

To contextualize these trends, we present a range of demand and supply-related data points. Demand refers to both the exogenous and endogenous factors that influence consumer preferences (e.g., location) and need (e.g., genetic predisposition) for services; whereas supply refers to all the providers of health services ranging from hospitals and physician practices to retail pharmacies, new entrants (e.g., Amazon) and virtual care platforms.

The intersection of demand and supply informs the expected yield in terms of patients and, therefore, revenue. **The cumulative impact of the 13 secular trends: every stakeholder from health systems to medical device companies will be impacted by reduced yield.**

Whether the industry is prepared for the dire consequences of reduced yield is an open question. Amid the accelerating forces catalyzed by the pandemic, I encourage you to read this report (a few times), in order. Supporting each secular trend are a handful of data stories grounded in facts about the past along with projections about the future based upon sophisticated machine learning models, with minimal reliance on survey data.

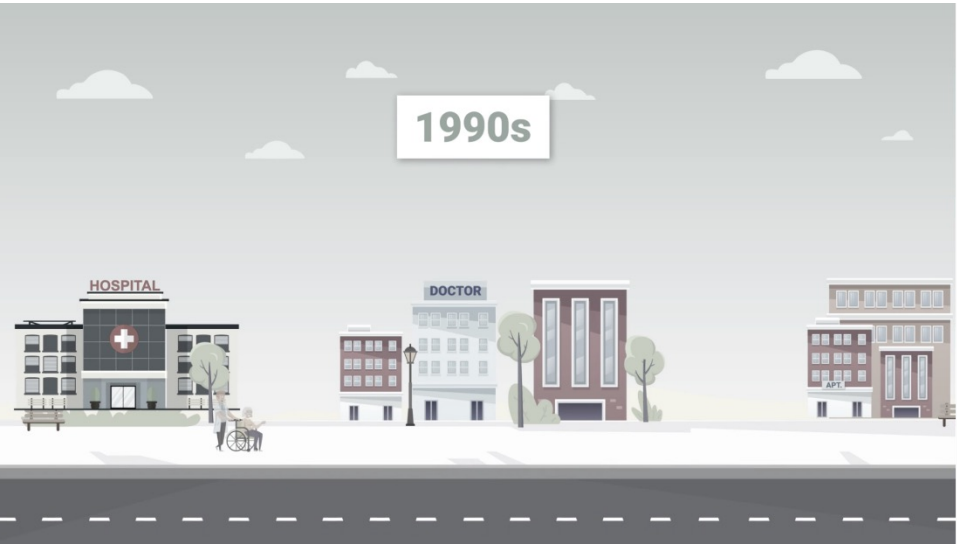
Armed with this research, I encourage you to think critically about what each trend means for your organization's future. While this study is not intended to provide all the answers, I hope that you will use it as a tool to ask the right questions. What trends have you not considered, and how will they impact the markets that your business serves? How well prepared are you compared to your current competitors? Are you prepared to compete against new entrants? How can understanding these trends improve your organization's capital allocation strategies? How can you compete in an era of declining yield?

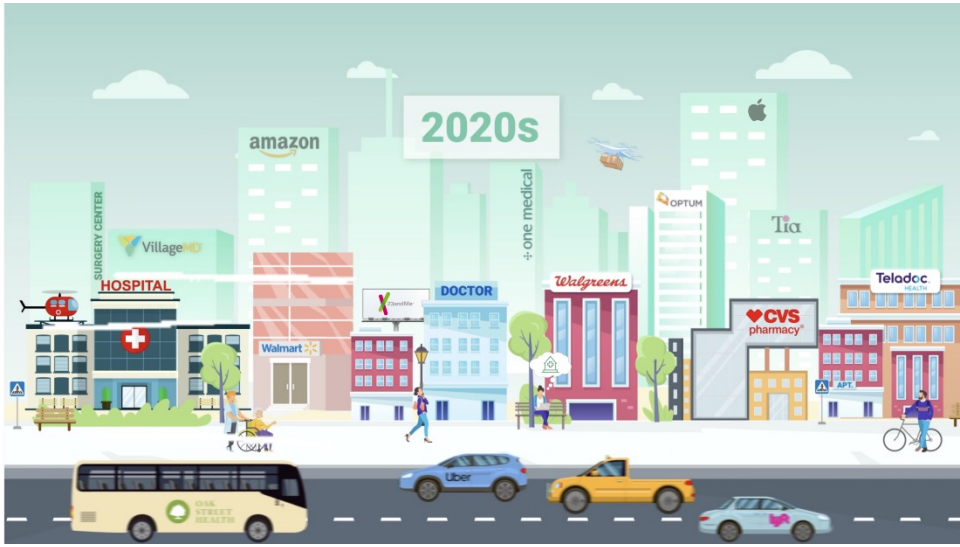
Sanjula

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

Table of Contents

The Evolving Health Economy





The U.S. health economy is the largest sector of the largest global economy and has changed dramatically over the last 30 years. Healthcare spending totaled $4.1T in 2020, representing 19.7% of U.S. gross domestic product. Hospitals and health systems 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. Moreover, everything in the health economy begins with a provider decision, whether an admission to a hospital or the use of a medical device or a prescription for a drug.

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 any health economy stakeholder whose business depends on commercially insured patients can no longer ignore these economic fundamentals. The U.S. healthcare system is what game theorists call a "negative-sum game," and the rules of that game are immutable.

In this second installment of our annual *Trends Shaping the Health Economy* series, we hope to persuade stakeholders in the health economy to re-examine their longstanding assumptions about the basic economics of their business. In the words of Sun Tzu, "in the midst of chaos, there is also opportunity."

INTRODUCTION

2022 Secular Trends Shaping the Health Economy

Demand ↘

- **TREND 1** | The Total Available Market (TAM) Of Commercially Insured Patients Is Shrinking
- **TREND 2** | Care Forgone During the Pandemic Is Permanently Lost, and the Observed Rebound Is Illusory
- **TREND 3** | Higher Patient Acuity Is Likely to Materialize Eventually
- **TREND 4** | Projected Growth in Demand for Healthcare Services Is Tepid
- **TREND 5** | How Individuals Access the Healthcare System Varies
- **TREND 6** | Individuals Are Increasingly Making Healthcare Decisions Like Consumers
- **TREND 7** | Increasing Unaffordability Is Suppressing Healthcare Demand

Supply +

- **TREND 8** | Migration of Care Delivery to Lower-Acuity Ambulatory Settings Is Accelerating
- **TREND 9** | Low-Acuity Healthcare Services Are Increasingly Being Commoditized
- **TREND 10** | The Impacts of Commoditization Are Predictable
- **TREND 11** | Provider Burnout Is Exacerbating the Long-Standing Physician Supply Shortage
- **TREND 12** | Only in Healthcare Can a Monopoly Lose Money, and Regulators Want to Prevent More of Them
- **TREND 13** | More Providers Are Competing for Fewer Patients

Conclusion

Every Stakeholder Will Be Impacted By Reduced **Yield**

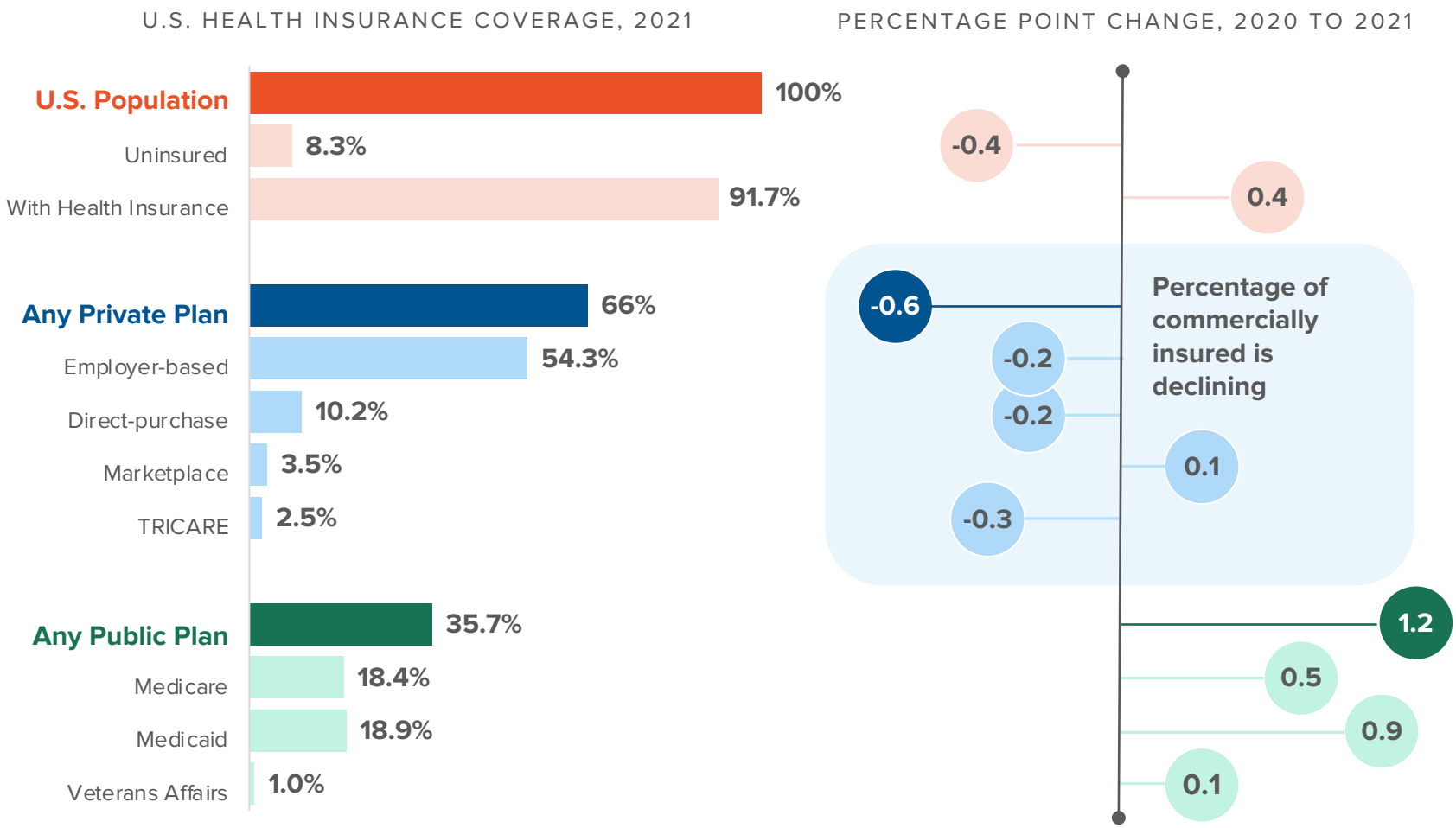
TREND 1

The Total Available Market (TAM) of Commercially Insured Patients Is Shrinking

TREND 1: SHRINKING TAM

The Number of Commercially Insured Americans Is Declining

From a financial perspective, commercially insured Americans account for the majority of profitable revenue across health economy stakeholders. However, the share of commercially insured Americans dropped 0.6 percentage points from 2020 to 2021.

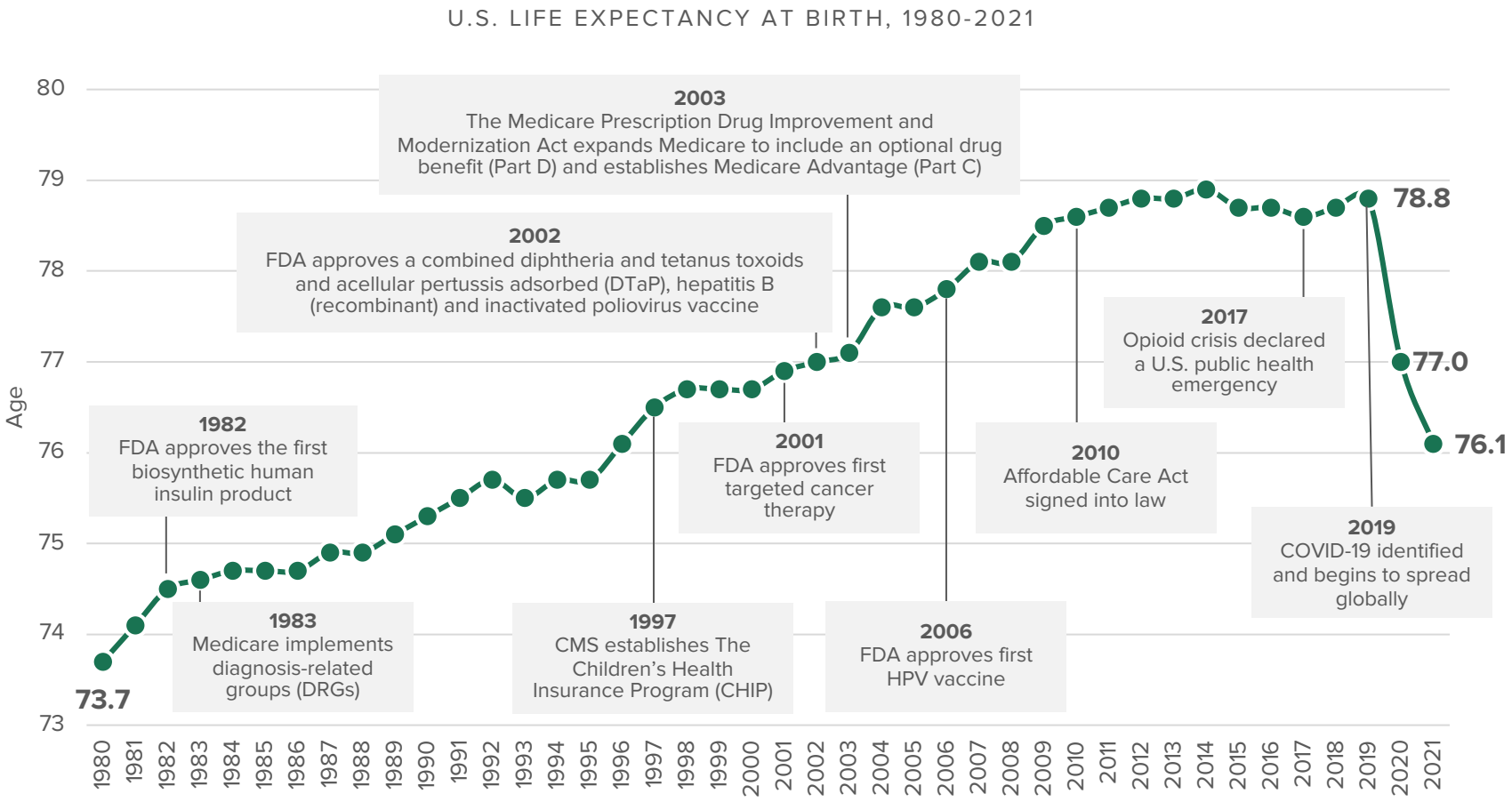


Note: Percentages do not sum to 100% due to dual enrollment.
Source: U.S. Census Bureau, Current Population Survey, 2021 and 2022 Annual Social and Economic Supplements (CPS ASEC).

TREND 1: SHRINKING TAM

Life Expectancy Declines for the Second Consecutive Year

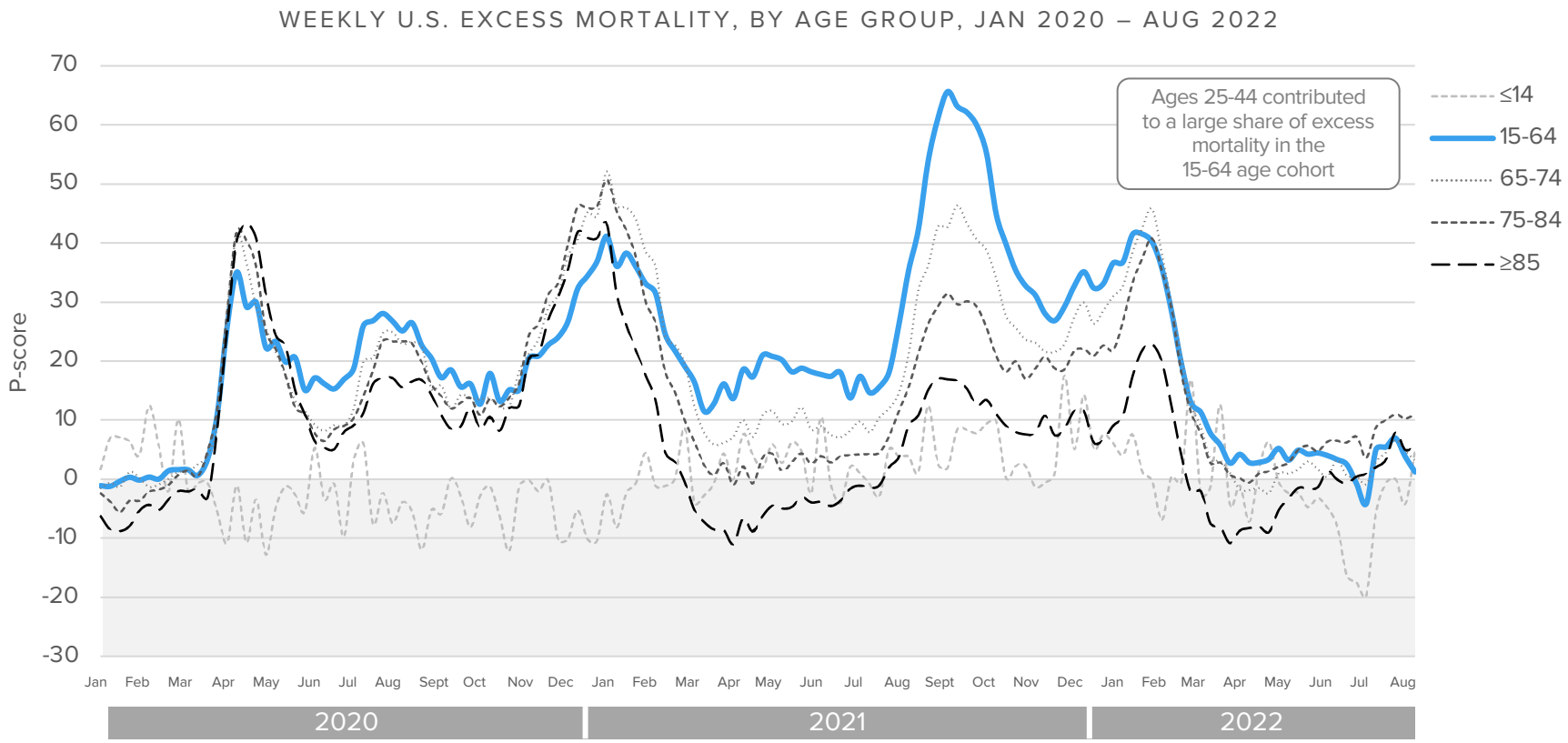
Between 2019 and 2021, U.S. life expectancy declined 2.7 years from 78.8 to 76.1, the lowest age since 1996. The decline is largely attributed to the COVID-19 pandemic, overdose deaths, and heart disease.



Source: Centers for Disease Control and Prevention, National Center for Health Statistics.

The Impact of Excess Mortality During the Pandemic Will Have a Long Tail Effect

Throughout 2021, there was significant excess mortality among the U.S. adult population. Young and working-age adults (ages 15-64) account for a disproportionately large share of excess mortality.



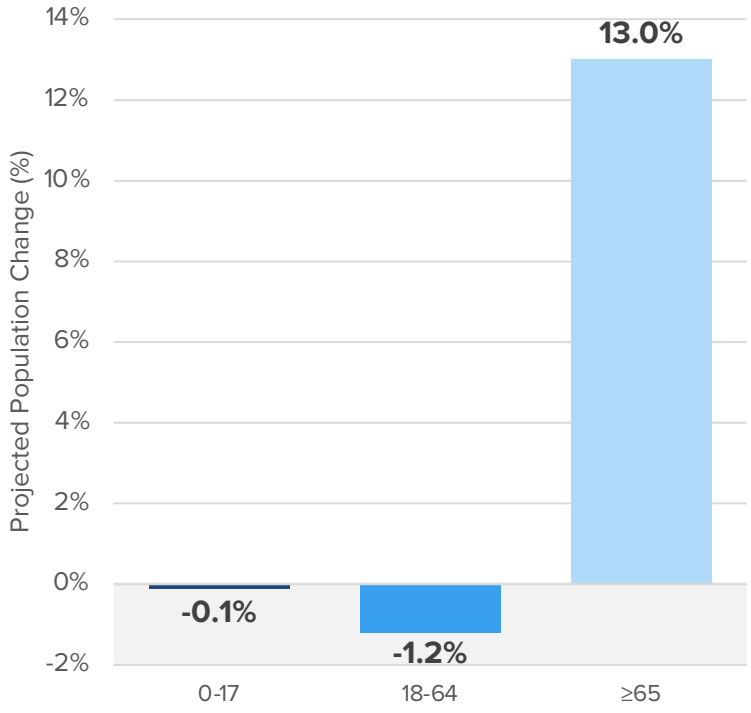
Note: The P-score is the percentage difference between the reported number of weekly or monthly deaths in 2020–2022 and the projected number of deaths for the same period based on previous years. The P-scores were calculated using the reported deaths data from Human Mortality Database and World Mortality Dataset and the projected deaths for 2020–2022 from World Mortality Dataset.
Source: Our World in Data COVID-19 dataset; Centers for Disease Control and Prevention.

TREND 1: SHRINKING TAM

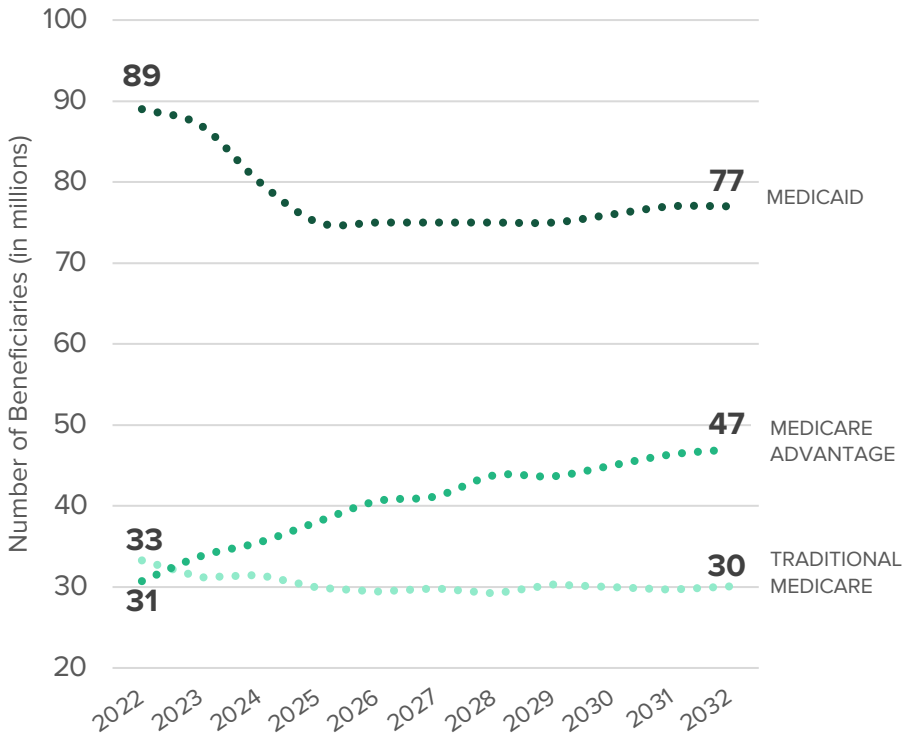
The Medicare-Eligible Population Is Growing Faster Than Other Cohorts

Projected births will not offset the continued aging of the Baby Boomers. The “silver tsunami” will result in a larger number of Medicare beneficiaries and a smaller number of commercially insured working-age adults.

PROJECTED U.S. POPULATION CHANGE, BY AGE SEGMENT, 2022-2027



PROJECTED MEDICARE AND MEDICAID ENROLLMENT, 2022-2032



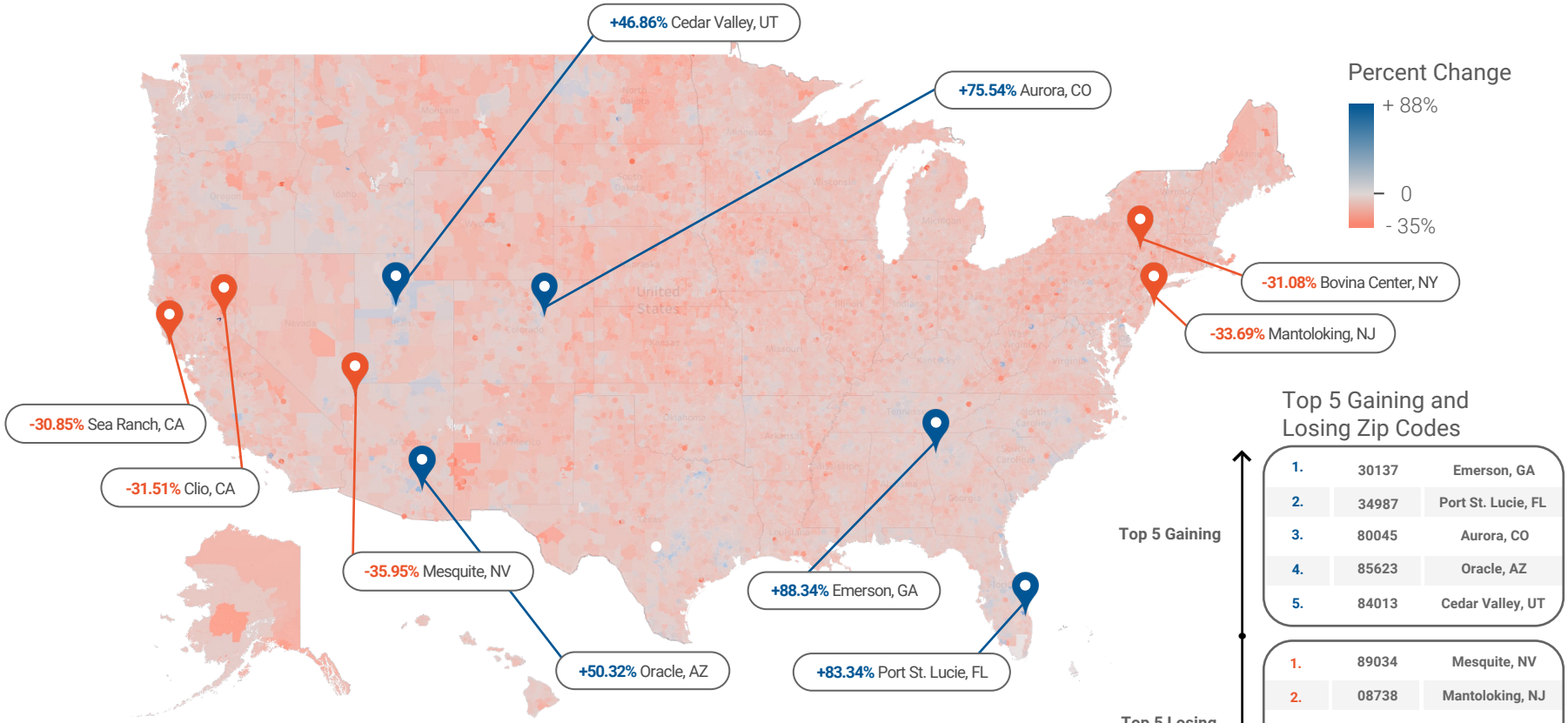
Note: 2022-2032 Medicare and Medicaid enrollment numbers represent projections.
Source: Trilliant Health national consumer database. U.S. Congressional Budget Office Baseline Projections for Medicare and Medicaid.

TREND 1: SHRINKING TAM

Older Commercially Insured Patients Are Moving

Americans ages 45-64 are leaving areas of the Northeast and West at a high rate and migrating to states such as Florida, Colorado, and Georgia.

MIGRATION OF AMERICANS AGES 45-64 BY **ZIP CODE**, 2020 - 2025



Top 5 Gaining and Losing Zip Codes

Top 5 Gaining	1.	30137	Emerson, GA
	2.	34987	Port St. Lucie, FL
	3.	80045	Aurora, CO
	4.	85623	Oracle, AZ
	5.	84013	Cedar Valley, UT
Top 5 Losing	1.	89034	Mesquite, NV
	2.	08738	Mantoloking, NJ
	3.	96106	Clio, CA
	4.	13740	Bovina Center, NY
	5.	95497	Sea Ranch, CA

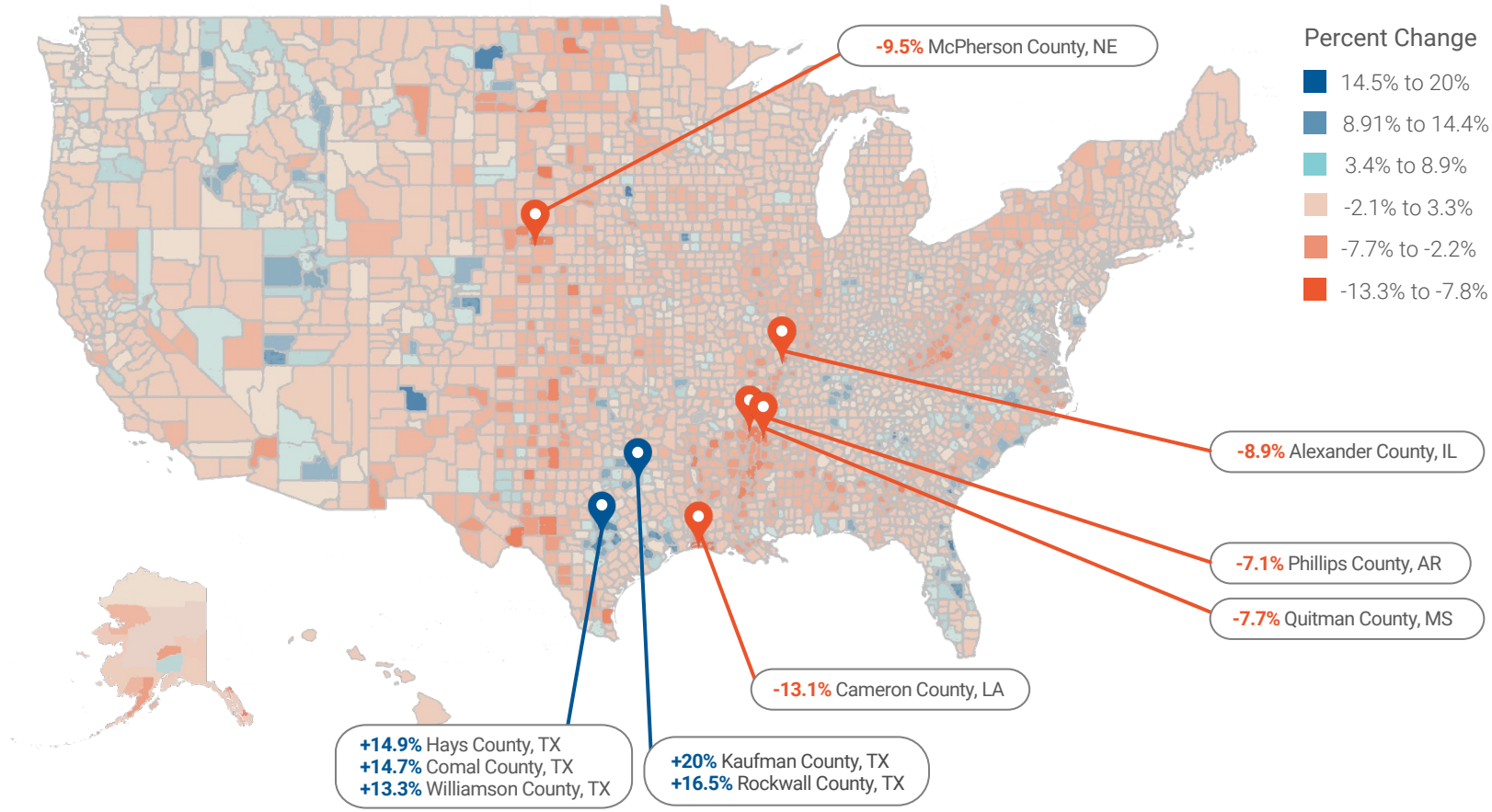
Source: Trilliant Health national consumer database.

TREND 1: SHRINKING TAM

Migration Patterns Foreshadow Changing Healthcare Demand

The American population is increasingly concentrated in the Sunbelt. Over the next five years, high growth is expected in the Carolinas, Orlando, Houston, Austin, Dallas-Ft Worth, and Phoenix because of population migration patterns, not underlying population growth.

PROJECTED FIVE-YEAR POPULATION PERCENT CHANGE BY **COUNTY**, 2022-2027



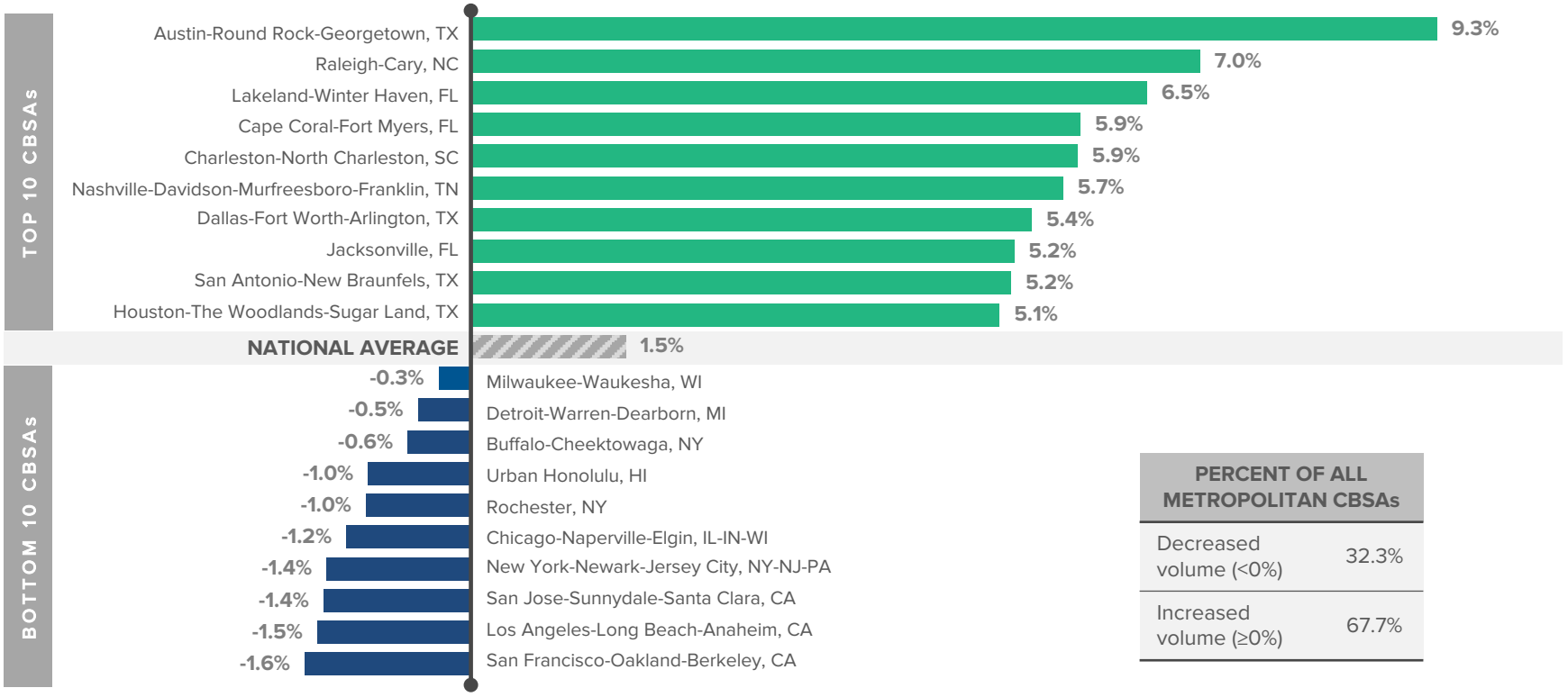
Source: Trilliant Health national consumer database.

TREND 1: SHRINKING TAM

High-Growth CBSAs Are Concentrated in the Sunbelt

Most CBSAs (68%) will experience population growth between 2022 and 2027, averaging 1.5% nationally. Among CBSAs with population over 750K, the percent change ranges from -1.6% in San Francisco, CA to +9.3% in Austin, TX.

CBSAs OVER 750K WITH GREATEST AND LEAST PROJECTED POPULATION CHANGE, 2022-2027



PERCENT OF ALL METROPOLITAN CBSAs	
Decreased volume (<0%)	32.3%
Increased volume (≥0%)	67.7%

Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs.
Source: Trilliant Health national consumer database.

Demographic Composition Varies Across High-Growth CBSAs

Of the select CBSAs over 750K with significant projected aggregate change in population over the next five years, the changes in minority groups and elderly population are higher than the national average. The 65+ population is growing most in Austin (+22.4%).

5-YEAR PROJECTED CHANGE IN POPULATION DEMOGRAPHICS FOR 10 METROPOLITAN CBSAs WITH **GREATEST TOTAL PROJECTED POPULATION CHANGE**

METROPOLITAN CBSA	TOTAL POPULATION	0-17 POPULATION	18-64 POPULATION	≥65 POPULATION	BLACK POPULATION	ASIAN POPULATION	HISPANIC POPULATION
Austin-Round Rock-Georgetown, TX	9.3%	8.5%	7.1%	22.4%	9.5%	11.7%	10.7%
Raleigh-Cary, NC	7.0%	4.9%	5.0%	20.9%	6.3%	7.9%	9.4%
Lakeland-Winter Haven, FL	6.5%	7.0%	3.3%	14.3%	7.6%	11.1%	12.4%
Cape Coral-Fort Myers, FL	5.9%	7.0%	1.8%	12.9%	6.3%	9.5%	11.3%
Charleston-North Charleston, SC	5.9%	6.2%	2.8%	17.2%	2.5%	11.4%	8.8%
Nashville-Davidson-Murfreesboro-Franklin, TN	5.7%	4.7%	2.8%	19.3%	4.1%	7.7%	10.0%
Dallas-Fort Worth-Arlington, TX	5.4%	4.4%	3.3%	17.9%	4.7%	9.2%	7.1%
Jacksonville, FL	5.2%	5.1%	2.1%	16.8%	5.1%	9.1%	9.5%
San Antonio-New Braunfels TX	5.2%	4.3%	17.2%	2.6%	5.3%	10.0%	5.9%
Houston-The Woodlands-Sugar Land TX	5.1%	4.7%	17.5%	2.7%	4.9%	7.8%	7.3%
NATIONAL	1.5%	-0.1%	-1.2%	13.0%	1.0%	5.7%	3.5%

Note: These 10 CBSAs represent the markets with populations over 750K that are projected to increase most between 2022 and 2027.
Source: Trilliant Health national consumer database.

TREND 2

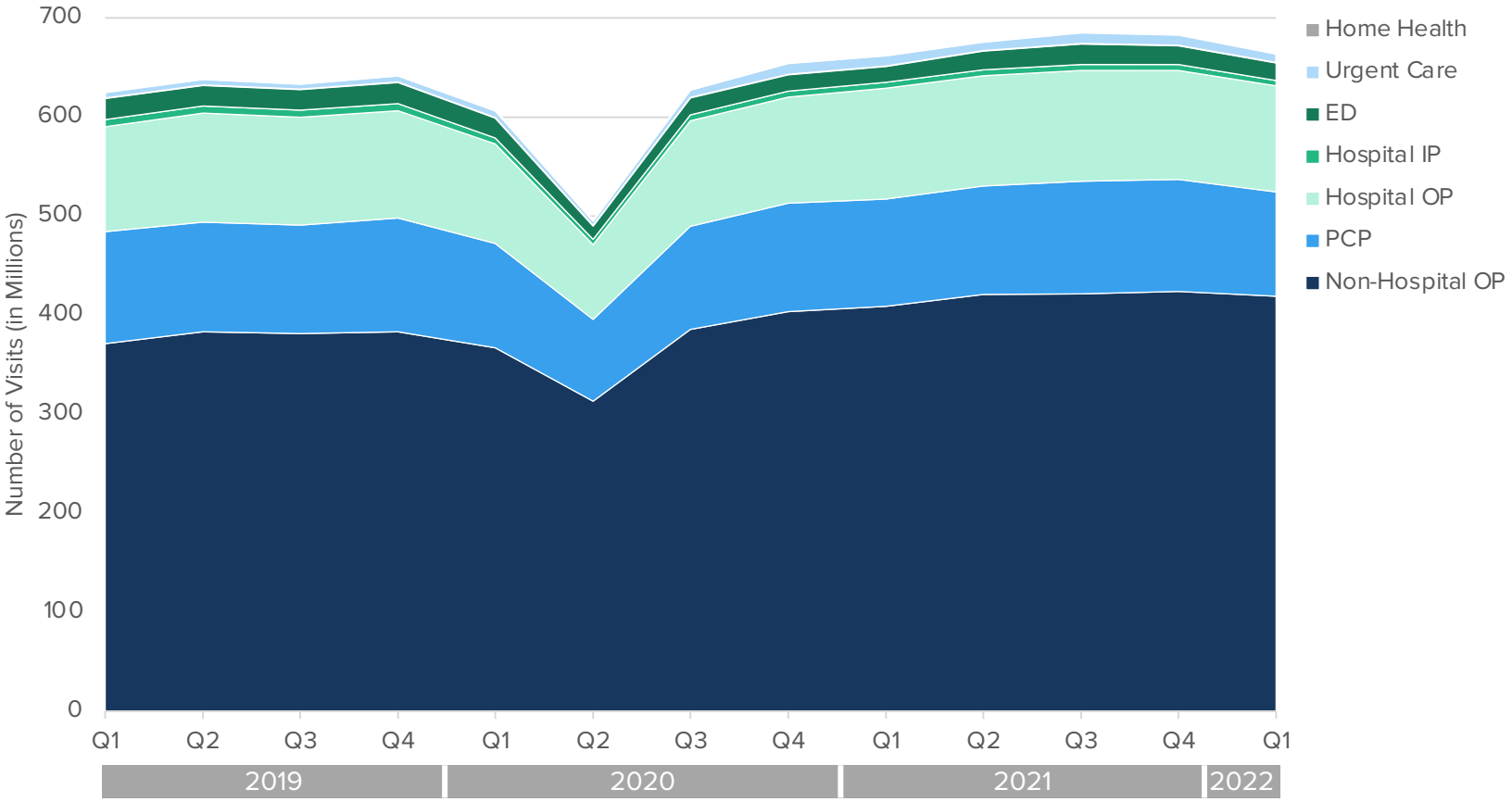
Care Forgone During the Pandemic Is Permanently Lost, and the Observed Rebound Is Illusory

TREND 2: ILLUSORY VOLUME REBOUND

Pandemic-Era Care Is Forgone Rather Than Delayed

While urgent care volumes were 31% higher in Q1 2022 than Q1 2019, this increase is driven by COVID-19 testing and treatment. In contrast, emergency department visits remain 30% below pre-pandemic levels.

VISIT VOLUMES BY **CARE SETTING**, Q1 2019 – Q1 2022

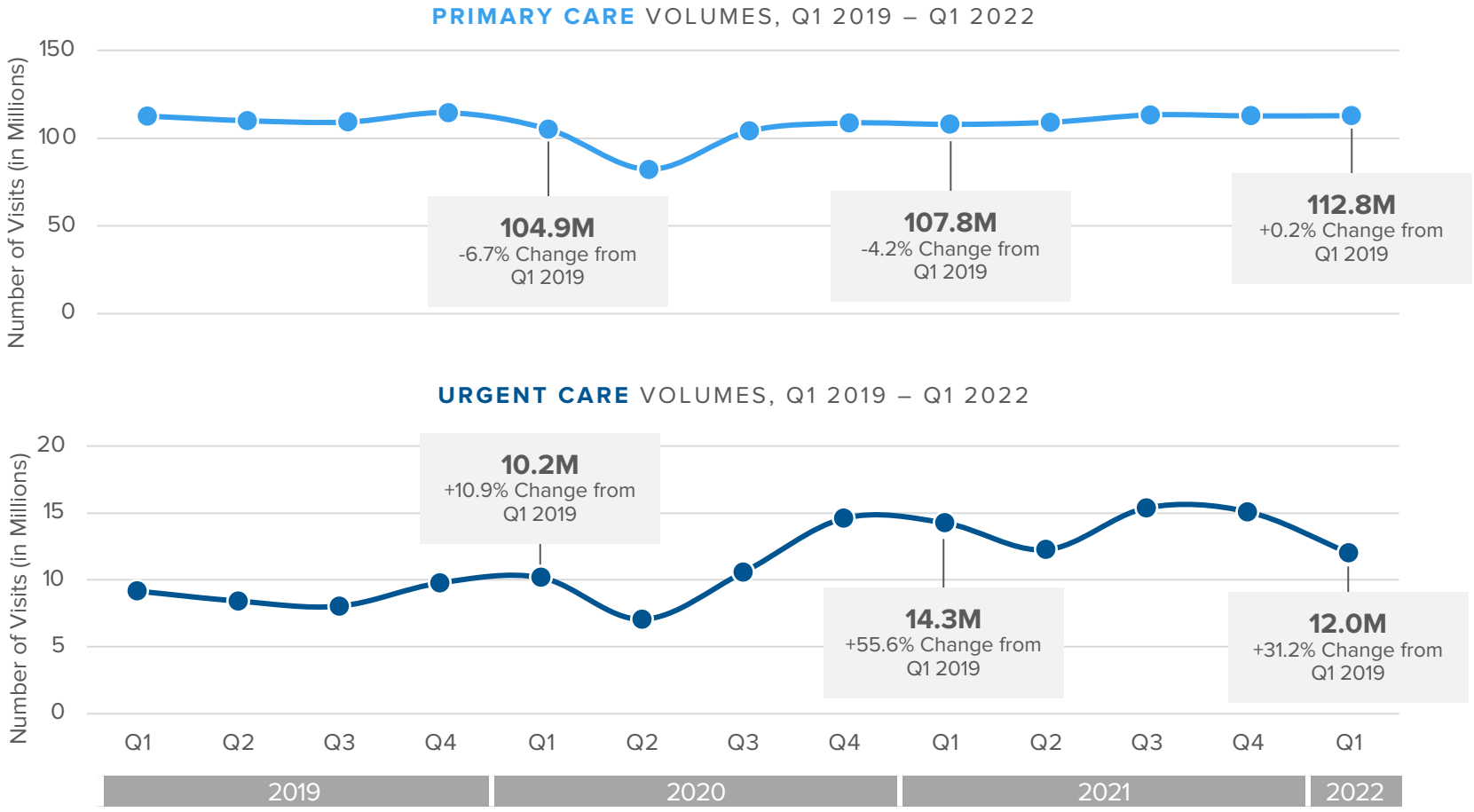


Note: IP denotes Inpatient; OP denotes Outpatient; PCP denotes Primary Care Provider; ED denotes Emergency Department.
Source: Trilliant Health national all-payer claims database.

TREND 2: ILLUSORY VOLUME REBOUND

Total Primary Care Volume Has Finally Returned to 2019 Levels

After more than two years of below-average national primary care utilization, volumes in Q1 2022 were 0.2% higher than in 2019. However, primary care trends vary significantly by market. Urgent care volumes are higher and primary care is approaching pre-pandemic levels, driven by COVID-19-related care.

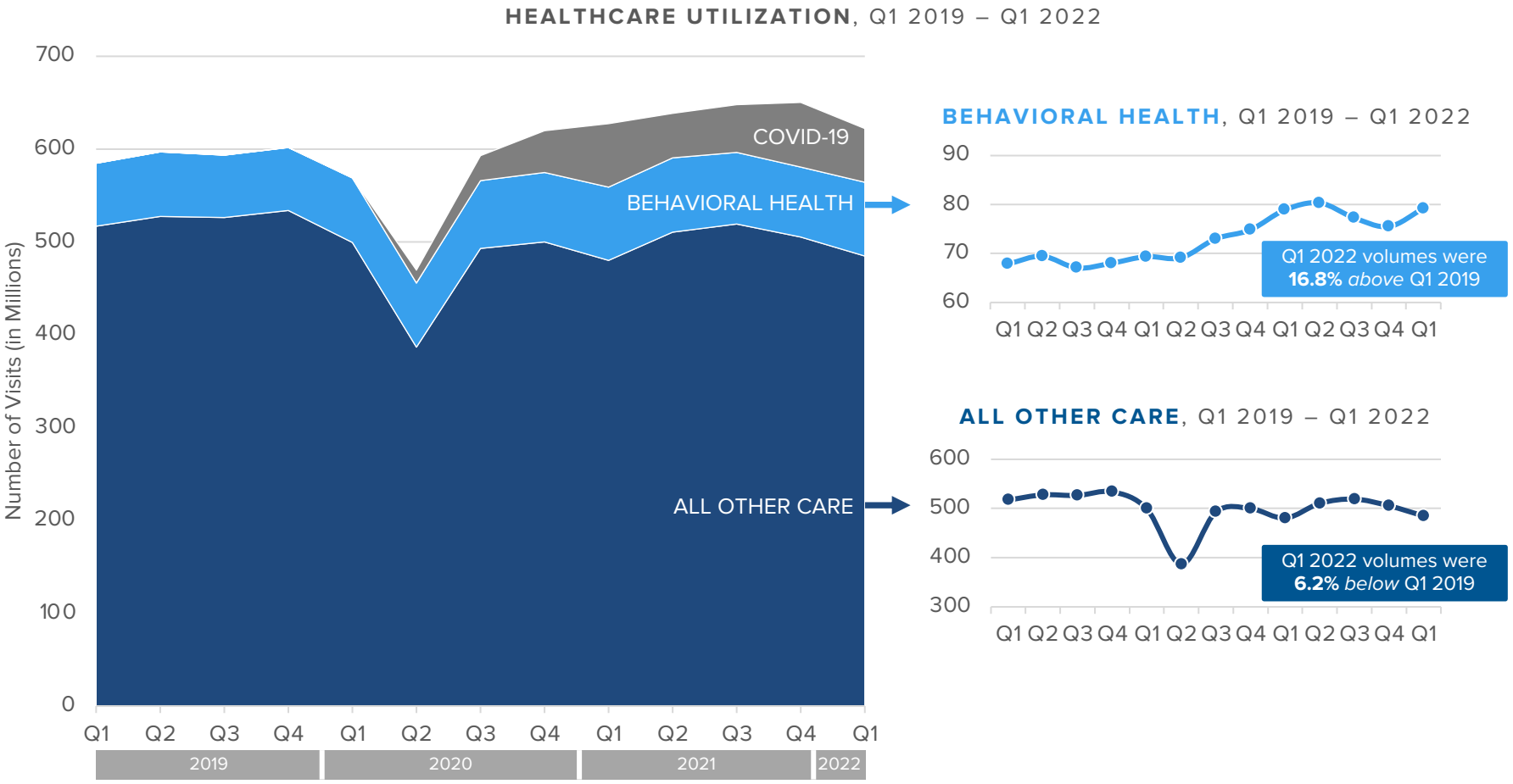


Source: Trilliant Health national all-payer claims database.

TREND 2: ILLUSORY VOLUME REBOUND

Omitting Care for COVID-19, Healthcare Utilization Is Down

COVID-19-related care (i.e., testing, treatment, and vaccination) is driving the appearance of a post-pandemic return to care. With COVID-19 omitted, behavioral health volumes are up 16.8% from Q1 2019, while all other healthcare encounters are down by 6.2%.

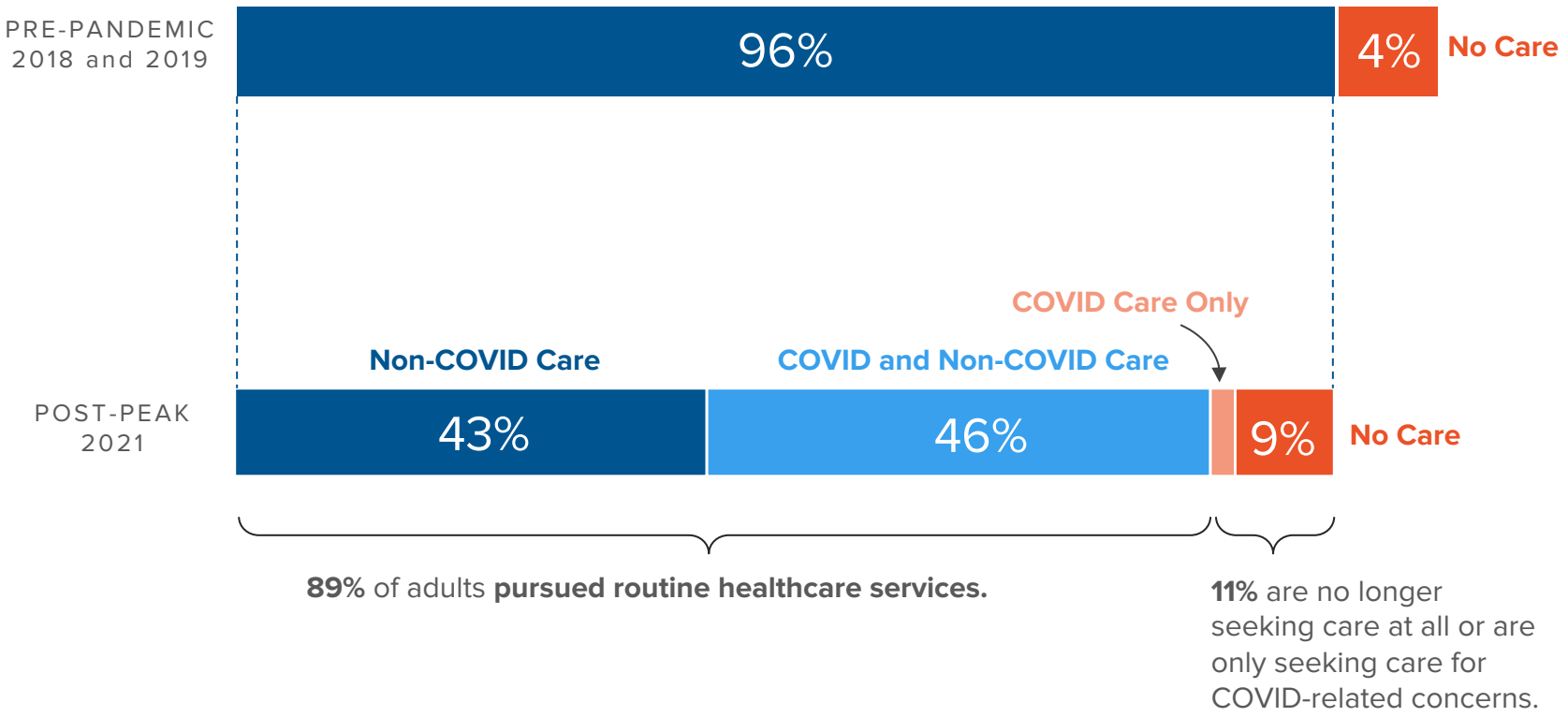


Note: The "All Other Care" category represents any healthcare visit in the timeframe unrelated to behavioral health or COVID-19-related testing, treatment, or preventive care. The COVID-19 category is likely underrepresented due to the prevalence of at-home testing, self pay encounters, and non-specific coding of COVID-19 encounters.
Source: Trilliant Health national all-payer claims database.

TREND 2: ILLUSORY VOLUME REBOUND

Patients Have Not Returned to Pre-Pandemic Care Patterns

Between January 2018 and December 2019, 96% of adults had at least one encounter with the healthcare system. Among that population, only 89% have returned to normal care in 2021, while only 43% have returned solely to care that is unrelated to COVID-19.

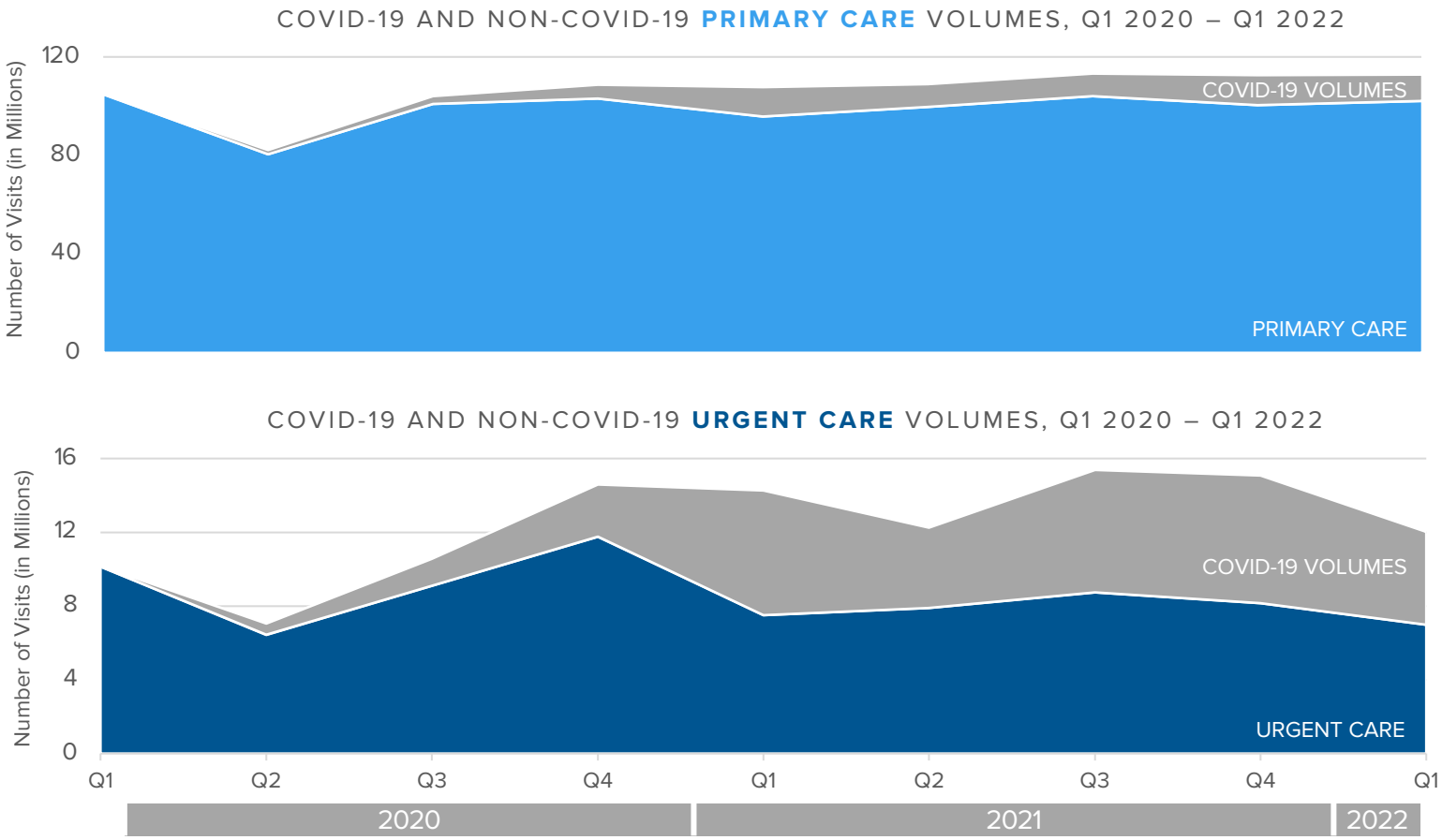


Note: Pre-COVID-19 is inclusive of 2018-2019. Individuals included in the analysis were continuously enrolled between 2018 and 2021, excluding Traditional Medicare.
Source: Trilliant Health national all-payer claims database.

TREND 2: ILLUSORY VOLUME REBOUND

COVID-19 Care Underpins Increase in Primary Care and Urgent Care Volumes

While total urgent care volume is up, almost half (47%) of urgent care volumes in Q1 2021 are related to treatment and/or testing of COVID-19.



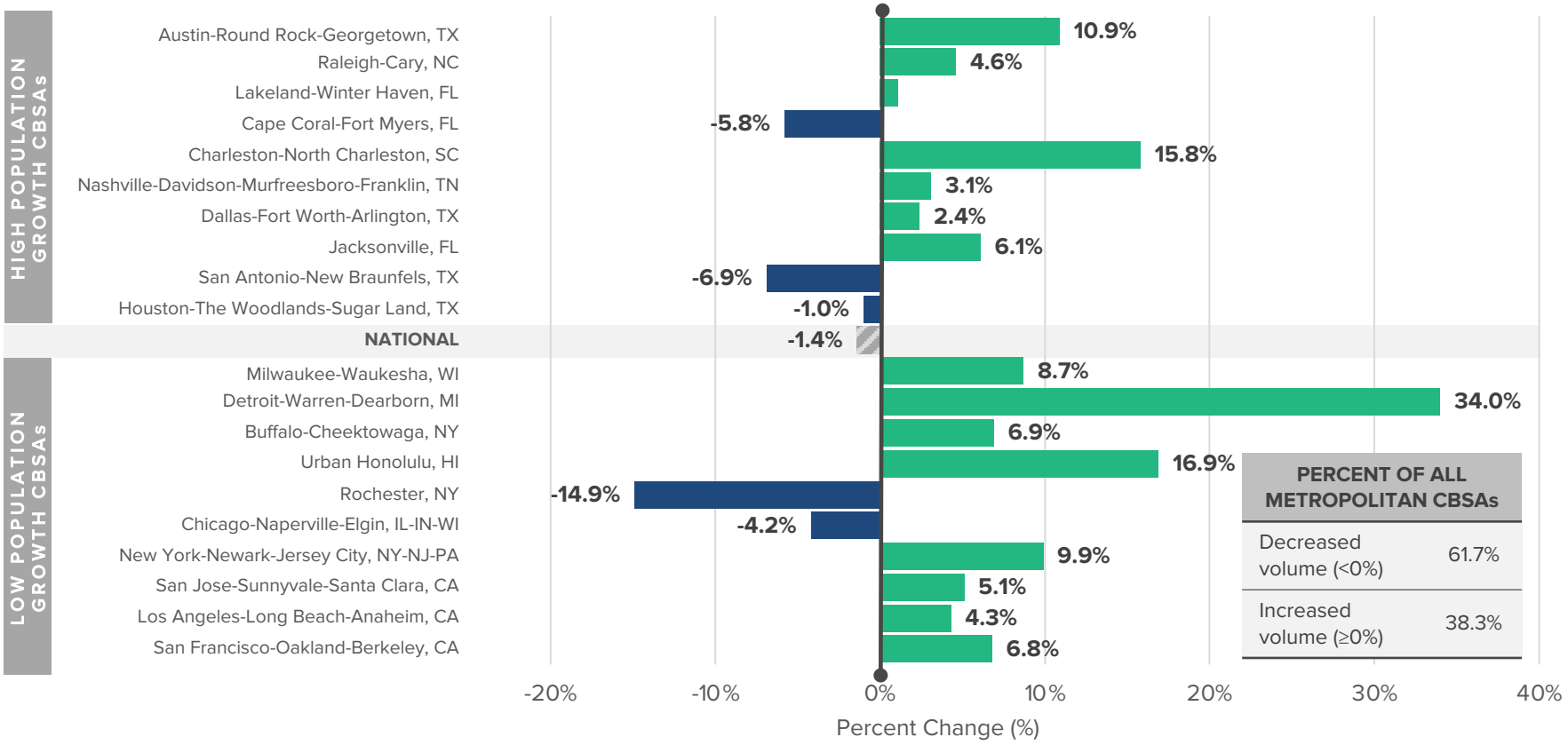
Source: Trilliant Health national all-payer claims database.

TREND 2: ILLUSORY VOLUME REBOUND

61.7% of Markets Exhibit Sustained Declines in Primary Care

Primary care volumes in most (61.7%) CBSAs are below pre-pandemic levels. The percent change of visits from January 2019-March 2020 to January 2021-March 2022 ranges from -14.9% to +34.0% among the selected CBSAs, averaging -1.4% nationally.

MARKET-LEVEL **PRIMARY CARE** VOLUMES, PERCENT CHANGE JAN 2019-MAR 2020 TO JAN 2021-MAR 2022



Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs.
Source: Trilliant Health national all-payer claims database.

TREND 2: ILLUSORY VOLUME REBOUND

Limited Access Does Not Fully Explain the Sustained Declines in Routine Care Utilization

56% of Americans agree or strongly agree that individuals can access the primary care they need. This suggests that the observed declines in primary care volume are likely driven by fear or other individual reasons (e.g., insurance/deductibles, provider availability).

PERCENT OF AMERICANS THAT AGREE WITH THE FOLLOWING STATEMENTS ABOUT THE U.S. HEALTHCARE SYSTEM, DECEMBER 2021

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
The **quality** of healthcare in the U.S. is good.	31%	31%	18%	16%
People in the U.S. can access the **primary care** they need.	26%	30%	20%	20%
People in the U.S. can access the **medications** they need.	23%	28%	22%	23%
People in the U.S. have access to the health **insurance coverage** they need.	22%	28%	24%	23%
People in the U.S. can access the **specialty care** they need.	22%	28%	19%	26%
The U.S. healthcare system provides **equitable care** for all.	21%	24%	18%	32%
Healthcare in the U.S. offers good **value for the cost**.	19%	22%	20%	35%

Note: Data reflects responses from a nationally representative sample to the following survey 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?"
Source: Public Opinion Strategies National Survey of 800 Registered Voters, conducted December 1-6, 2021.

TREND 3

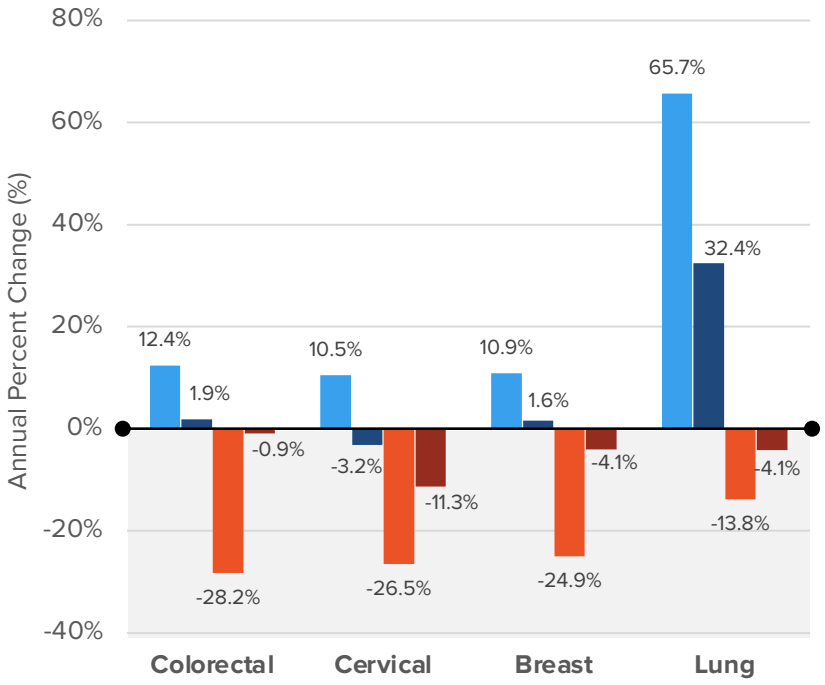
Higher Patient Acuity Is Likely to Materialize Eventually

TREND 3: HIGHER ACUITY

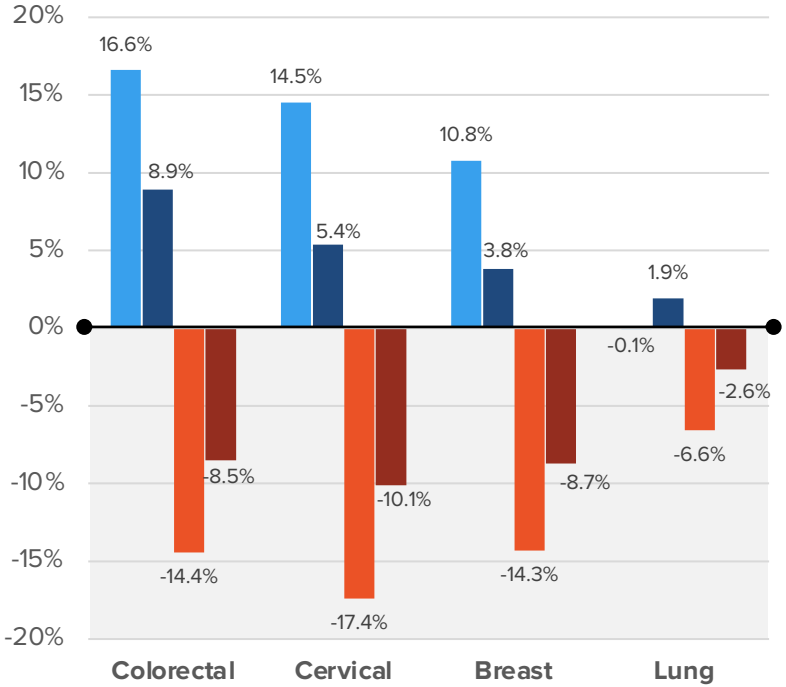
Fewer Cancer Screenings May Signal Increased Disease Acuity

Across cancer types, preventive screenings have declined since 2017. If the decline in incidence of associated cancer diagnoses over the same period results from underdiagnosis, then it is likely that patients will increasingly receive an initial diagnosis of a more advanced stage cancer.

YEAR-OVER-YEAR PERCENT CHANGE IN **CANCER SCREENINGS**, 2017-2021



YEAR-OVER-YEAR PERCENT CHANGE IN **CANCER DIAGNOSES**, 2017-2021



2017-2018 2018-2019 2019-2020 2020-2021

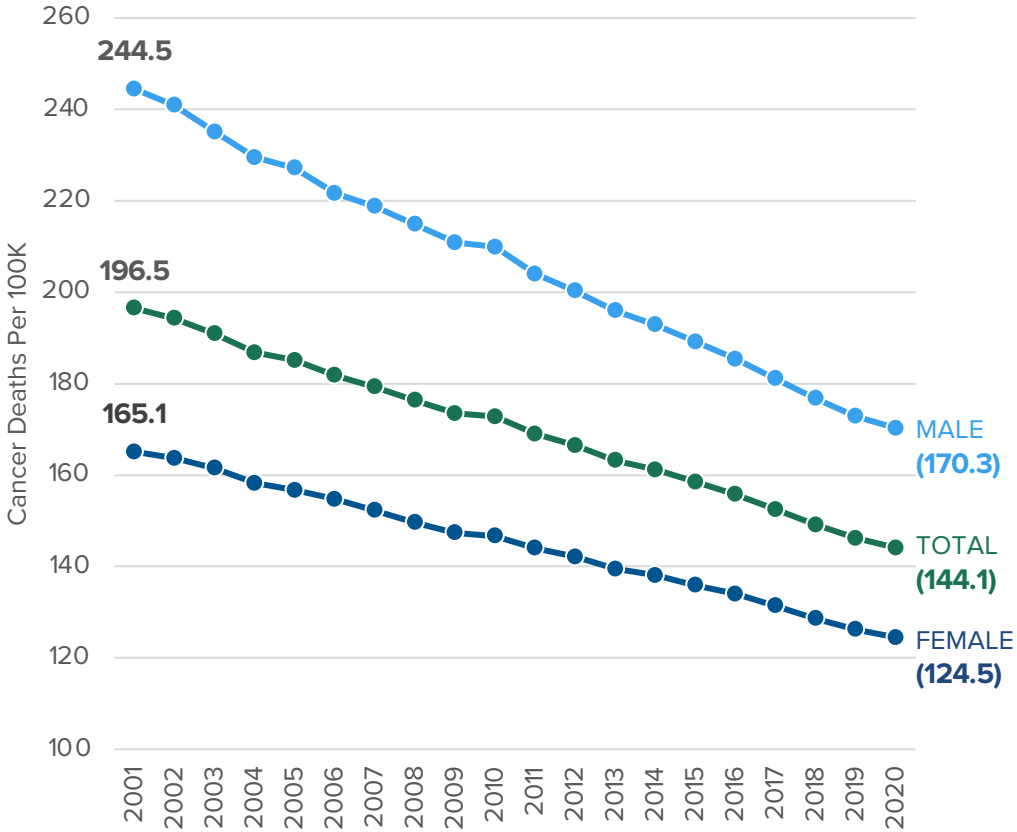
Note: Analysis is limited to adult patients (18+) without a personal history of cancer with at least three years of continuous insurance coverage; coverage sources include commercial, Medicaid, Traditional Medicare, Medicare Advantage. Cancer screening rates are calculated at the unique patient level, rather than the episode level. Rates for breast and cervical cancers are limited to the adult female population, while rates for colorectal and lung cancers are inclusive of the entire adult population. Multiple screening methods (e.g., colonoscopy, blood-based, stool-based screenings for colorectal cancer) were included for each cancer type, identified through both CPT and HCPCS codes indicating screening for these cancers.
Source: Trilliant Health national all-payer claims database.

TREND 3: HIGHER ACUITY

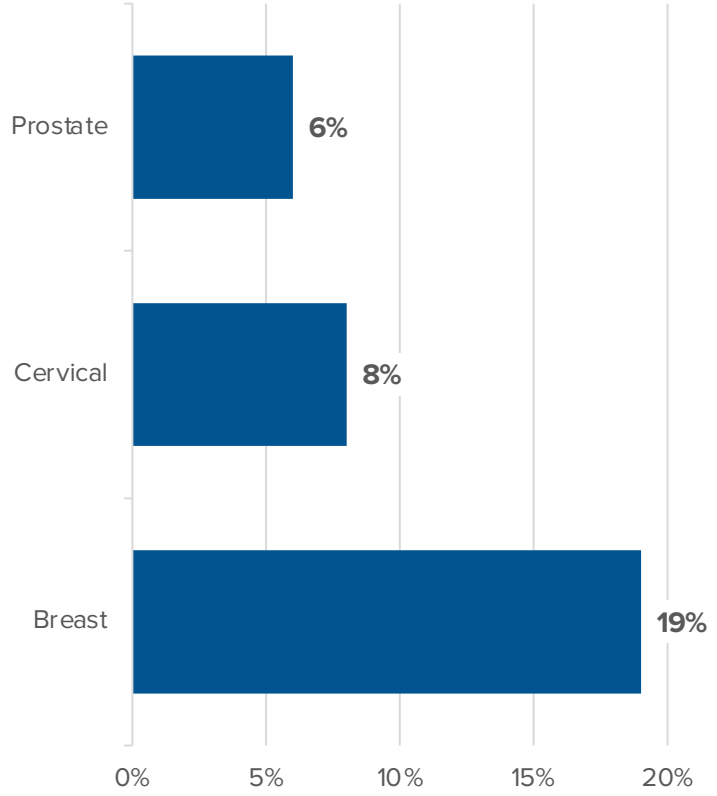
Decreasing Cancer Mortality May Be Jeopardized by Care Delays

While the total cancer case count is increasing, overall incidence of cancer has remained relatively flat. The cancer death rate declined by 27% between 2001 and 2020, from 196.5 to 144.1 deaths per 100K population. However, the combination of delayed screening and increasing rates of incident metastatic disease may jeopardize these gains.

CANCER MORTALITY BY GENDER, 2001-2020



PERCENT CHANGE FROM Q1 2020-Q1 2022 IN NEWLY DIAGNOSED PATIENTS PRESENTING WITH METASTATIC DISEASE



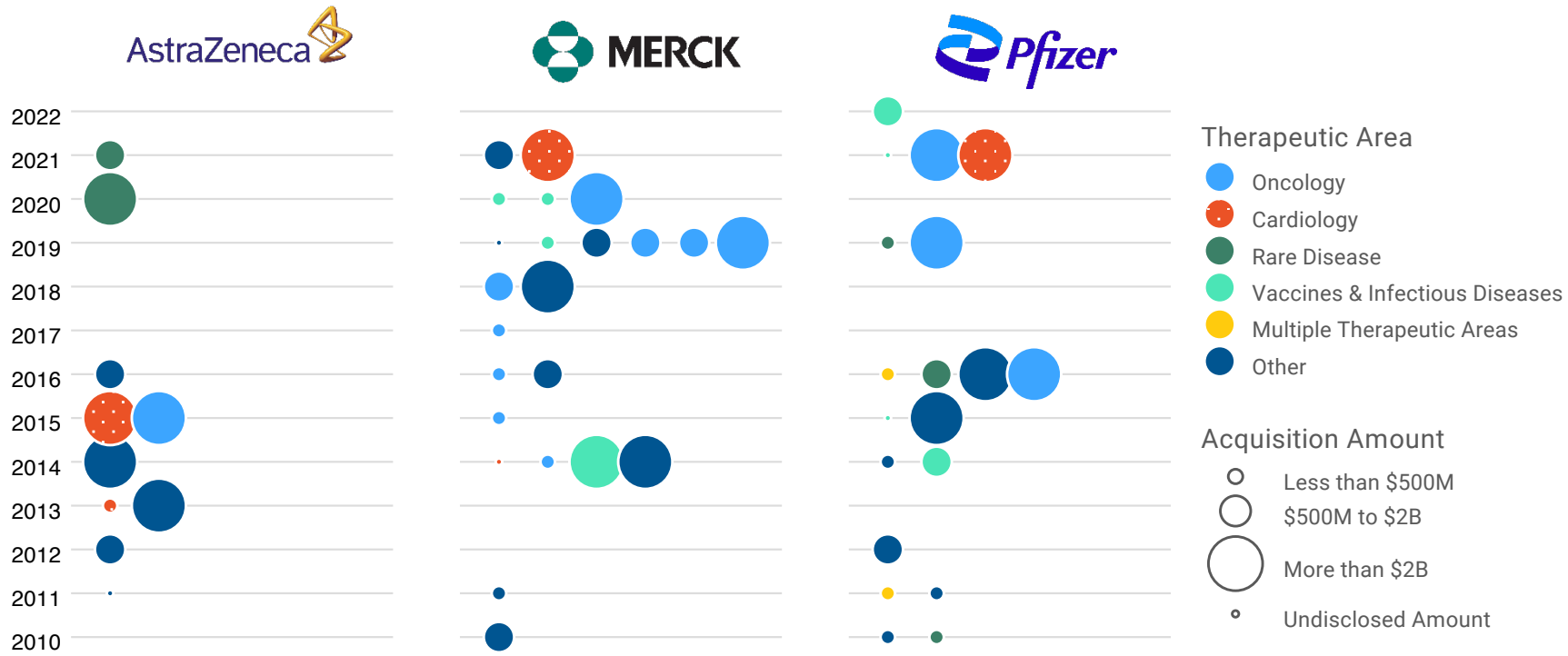
Source: Centers for Disease Control and Prevention; IQIVIA 2022 Oncology Trends Report.

TREND 3: HIGHER ACUITY

Recent Life Sciences Investments Signal Focus On Cardiology and Oncology

The M&A activity of select biopharmaceutical manufacturers indicate strategic shifts. Despite recent declines in cardiovascular R&D spending, two of the four largest M&A transactions in 2021 were focused on cardiovascular disease.

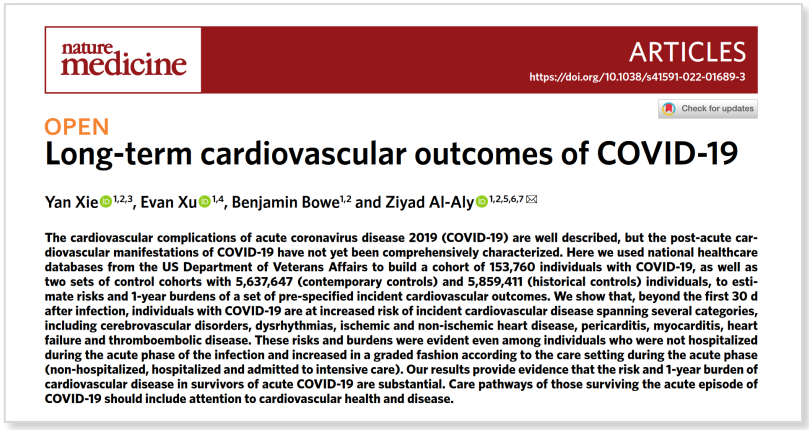
M&A ACTIVITY BY THERAPEUTIC AREA FOR THREE MAJOR BIOPHARMACEUTICAL MANUFACTURERS, 2010-2022



Note: "Multiple" indicates the acquired company specialized in more than one therapeutic area. "Other" includes areas such as immunology, pain, respiratory, ophthalmology, neurology, biosimilars, etc.
Source: Analysis of company press releases.

In Line With Life Science M&A Activity, a Growing Body of Research Cites Increasing Cardiovascular Risk

According to a *Nature* Portfolio supplement, as of November 30, 2021, there were at *least* 159 peer-reviewed research studies that find a positive relationship between COVID-19 infection and vaccination and new cardiac conditions.



nature medicine

ARTICLES

https://doi.org/10.1038/s41591-022-01689-3

Check for updates

OPEN

Long-term cardiovascular outcomes of COVID-19

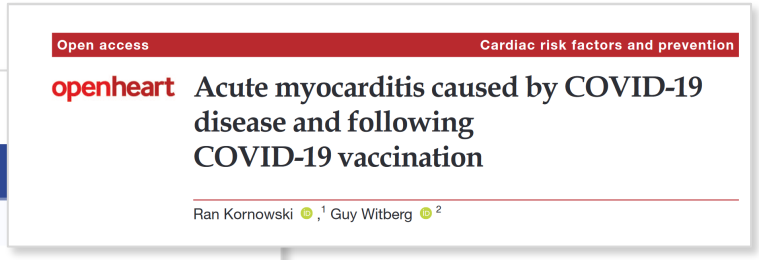
Yan Xie[1,2,3], Evan Xu[1,4], Benjamin Bowe[1,2] and Ziyad Al-Aly[1,2,5,6,7]

The cardiovascular complications of acute coronavirus disease 2019 (COVID-19) are well described, but the post-acute cardiovascular manifestations of COVID-19 have not yet been comprehensively characterized. Here we used national healthcare databases from the US Department of Veterans Affairs to build a cohort of 153,760 individuals with COVID-19, as well as two sets of control cohorts with 5,637,647 (contemporary controls) and 5,859,411 (historical controls) individuals, to estimate risks and 1-year burdens of a set of pre-specified incident cardiovascular outcomes. We show that, beyond the first 30 d after infection, individuals with COVID-19 are at increased risk of incident cardiovascular disease spanning several categories, including cerebrovascular disorders, dysrhythmias, ischemic and non-ischemic heart disease, pericarditis, myocarditis, heart failure and thromboembolic disease. These risks and burdens were evident even among individuals who were not hospitalized during the acute phase of the infection and increased in a graded fashion according to the care setting during the acute phase (non-hospitalized, hospitalized and admitted to intensive care). Our results provide evidence that the risk and 1-year burden of cardiovascular disease in survivors of acute COVID-19 are substantial. Care pathways of those surviving the acute episode of COVID-19 should include attention to cardiovascular health and disease.

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Myocarditis after Covid-19 Vaccination in a Large Health Care Organization

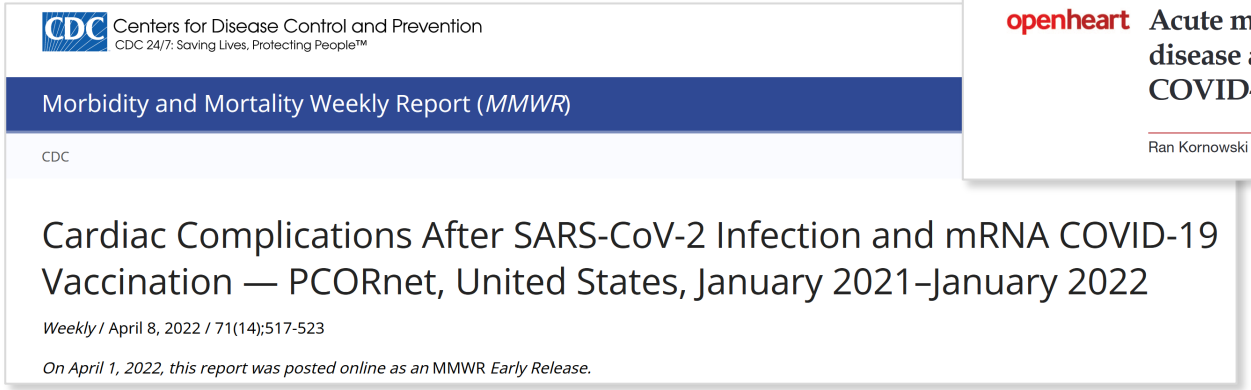


Open access Cardiac risk factors and prevention

openheart

Acute myocarditis caused by COVID-19 disease and following COVID-19 vaccination

Ran Kornowski[1], Guy Witberg[2]



CDC Centers for Disease Control and Prevention

CDC 24/7: Saving Lives, Protecting People™

Morbidity and Mortality Weekly Report (*MMWR*)

CDC

Cardiac Complications After SARS-CoV-2 Infection and mRNA COVID-19 Vaccination — PCORnet, United States, January 2021–January 2022

Weekly / April 8, 2022 / 71(14);517-523

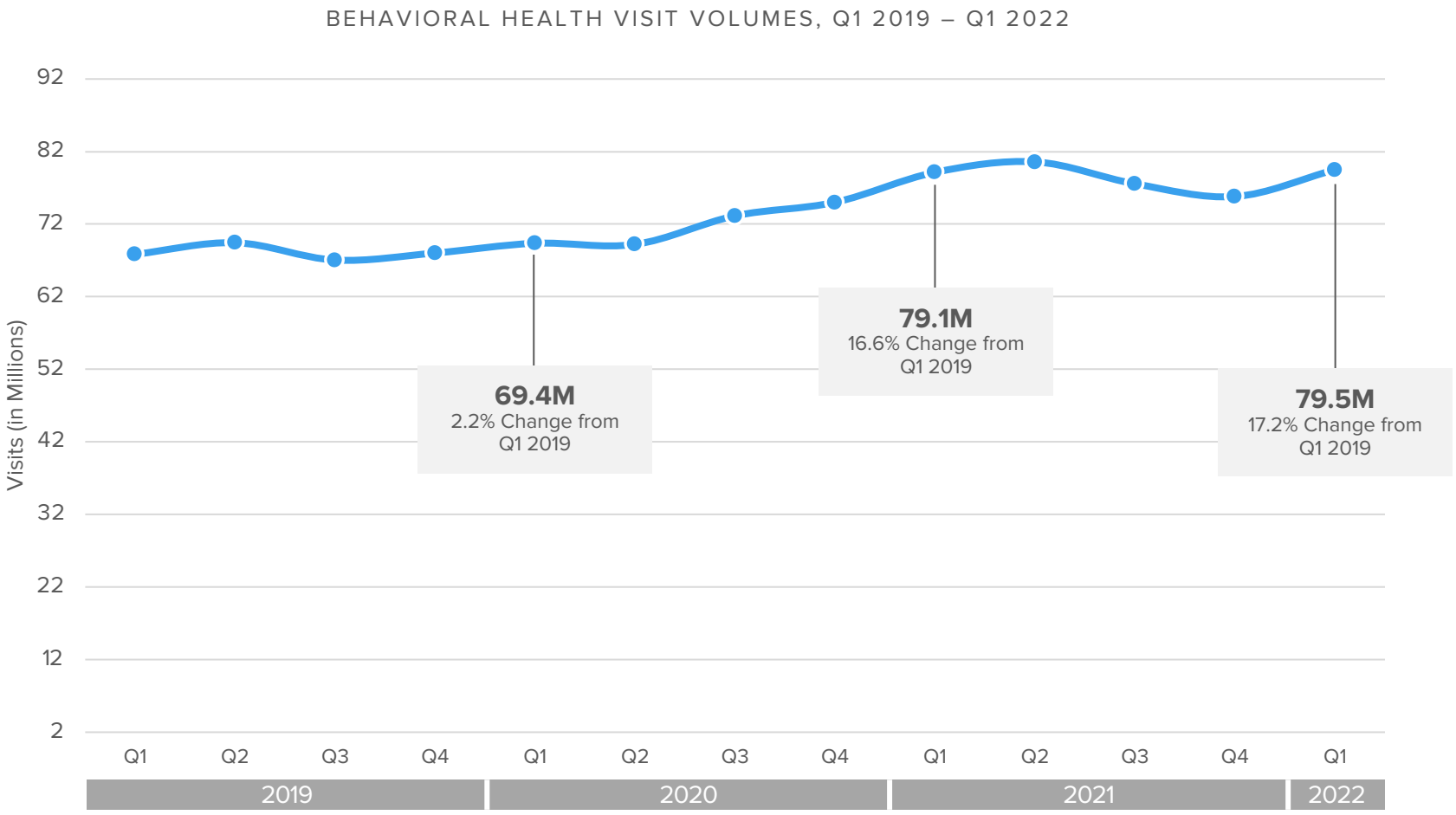
On April 1, 2022, this report was posted online as an MMWR *Early Release.*

Source: Analysis of peer-reviewed literature, *Nature* supplements (DOI:0.1038), and Centers for Disease Control and Prevention website.

TREND 3: HIGHER ACUITY

Behavioral Health Demand Has Increased

At the height of the pandemic, behavioral health volumes were 2.2% higher than in Q1 2019 and have remained more than 15% above pre-pandemic levels. Increasing prevalence of behavioral health can exacerbate other medical comorbidities and drive higher spending.



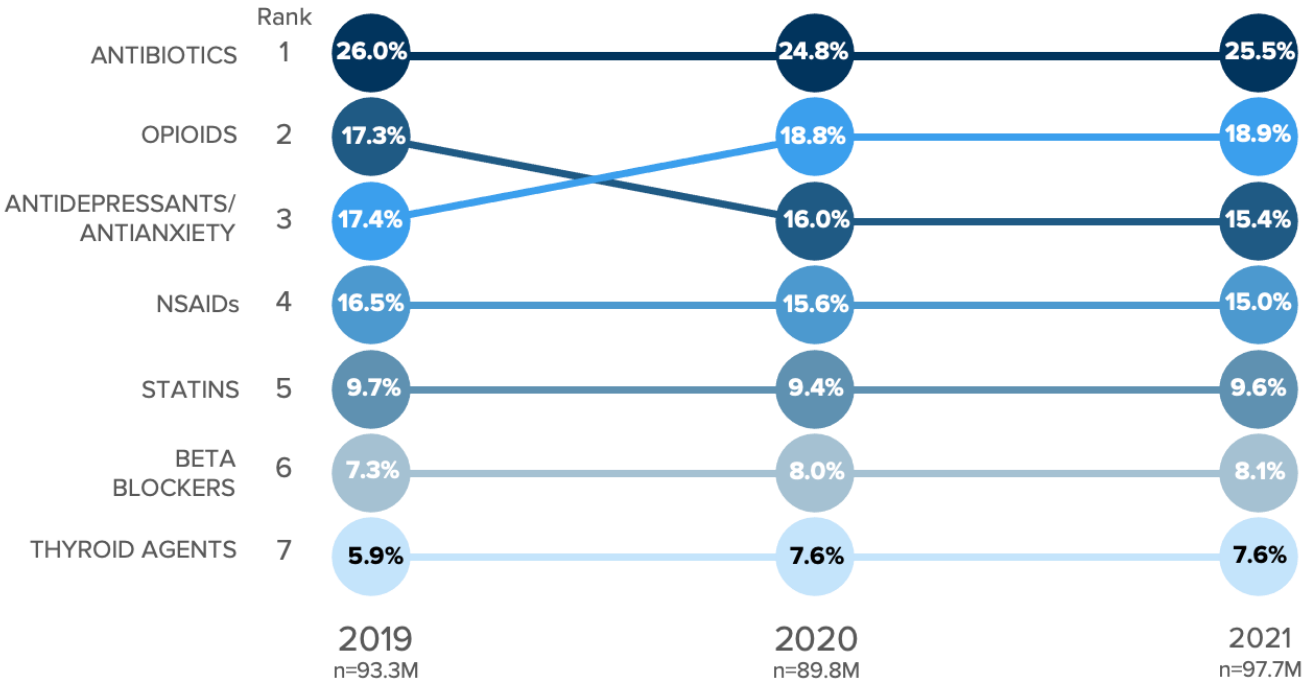
Source: Trilliant Health national all-payer claims database.

TREND 3: HIGHER ACUITY

Mental Health Related Prescribing on the Rise

Following the onset of the pandemic, prescribing of antidepressants and antianxiety medications increased in 2020 and 2021, accounting for 18.8% and 18.9% of select prescription volume, respectively, up from 17.3% in 2019.

SELECT DRUG CATEGORIES RANKED BY PRESCRIPTION VOLUME, 2019-2021



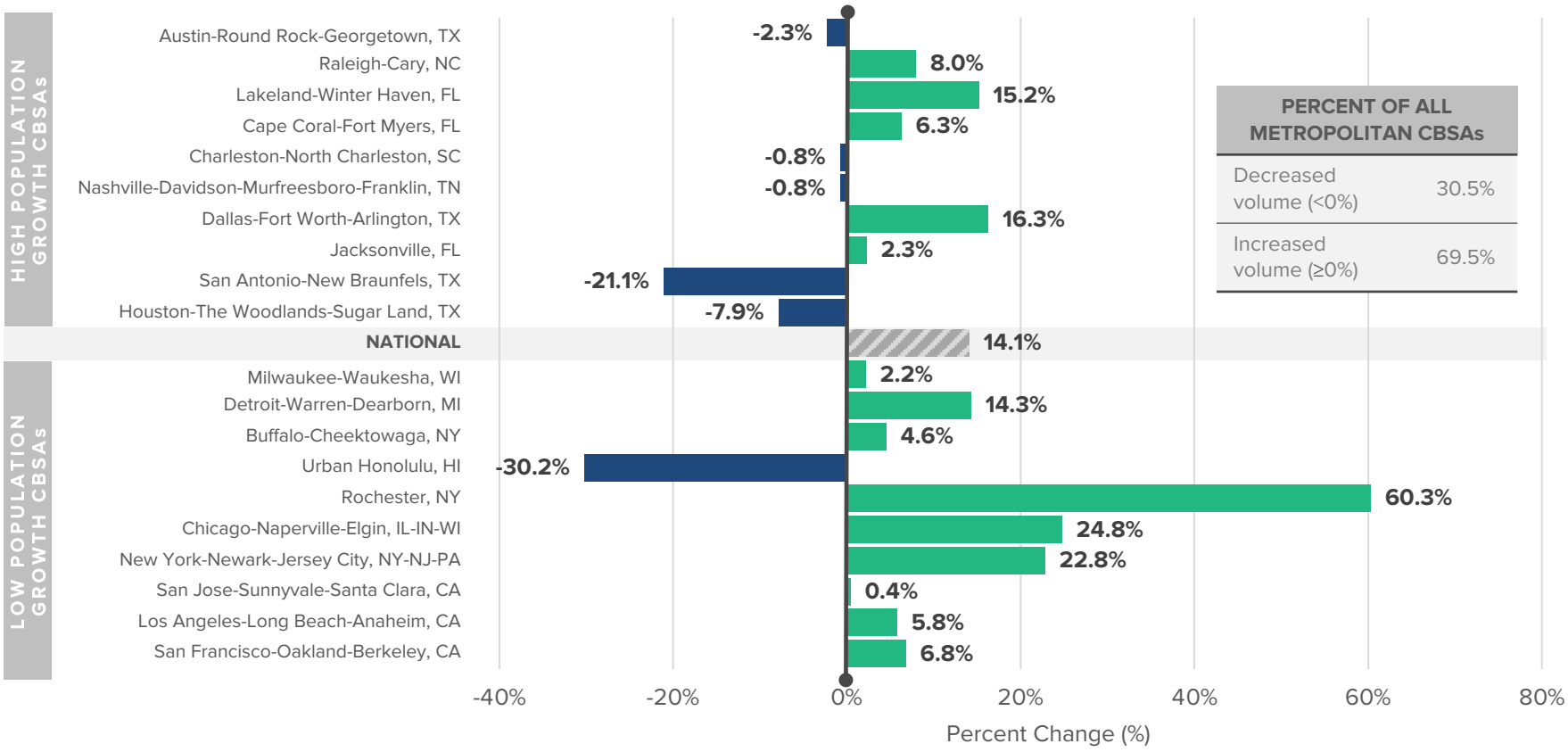
Note: Percentages reflect the share of drug categories shown here, rather than all prescriptions dispensed annually. Opioids are inclusive of hydrocodone.
Source: Trilliant Health national all-payer claims database.

TREND 3: HIGHER ACUITY

Behavioral Health Demand Varies by Market

The national post-pandemic increase in behavioral health utilization is concentrated in 69.5% of markets, averaging +14.1% nationally.

MARKET-LEVEL **BEHAVIORAL HEALTH** VOLUMES, PERCENT CHANGE JAN 2019-MAR 2020 TO JAN 2021-MAR 2022



Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs.
Source: Trilliant Health national all-payer claims database.

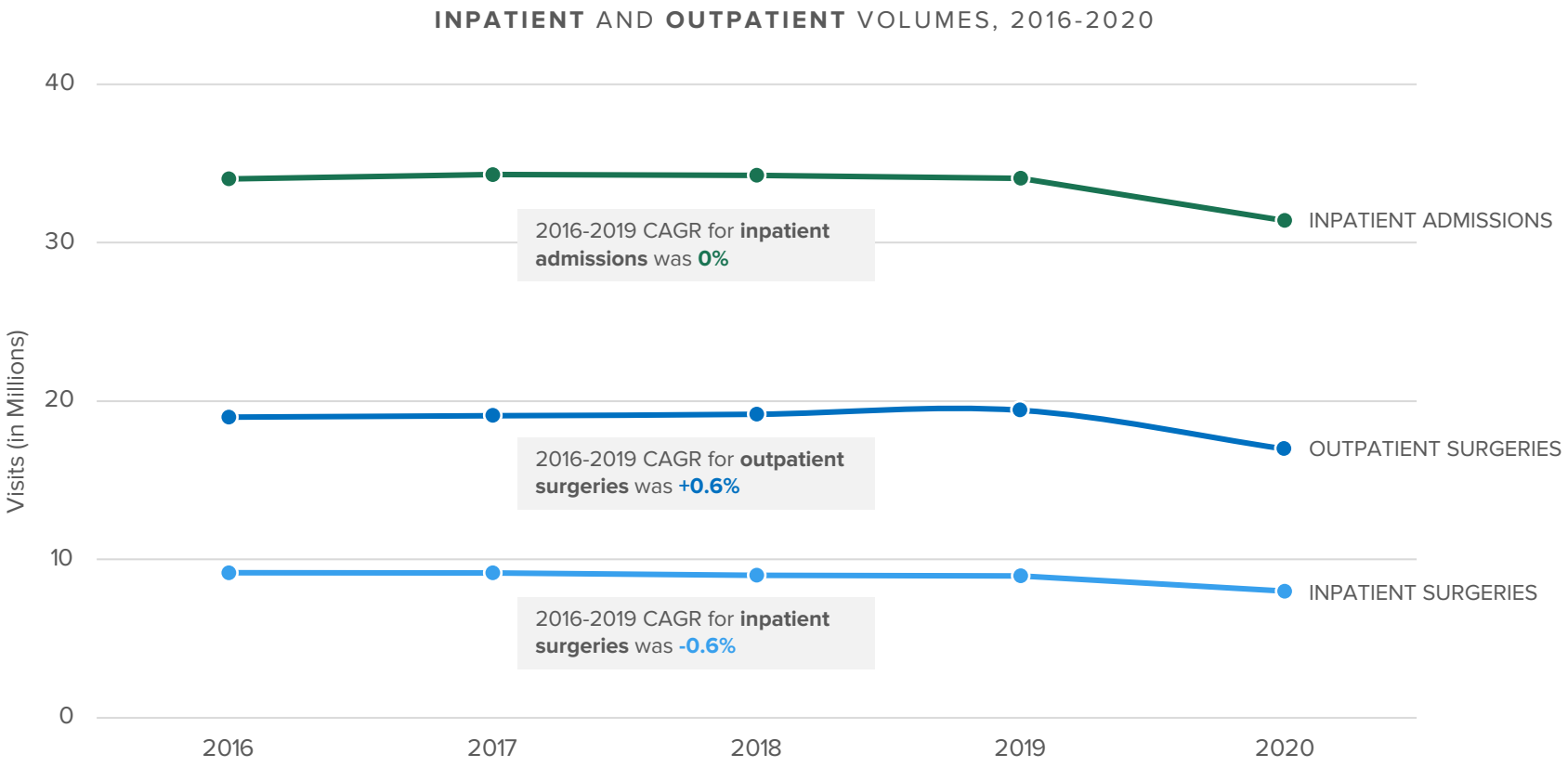
TREND 4

Projected Growth in Demand for Healthcare Services Is Tepid

TREND 4: TEPID GROWTH

Even Prior to the Pandemic, Hospital Inpatient and Outpatient Volumes Have Been Relatively Flat for Years

Inpatient hospital admissions (0% CAGR) 2016-2019 and outpatient surgeries (0.6% CAGR) 2016-2019 have been flat to declining for years, a trend has been further accelerated by the pandemic.



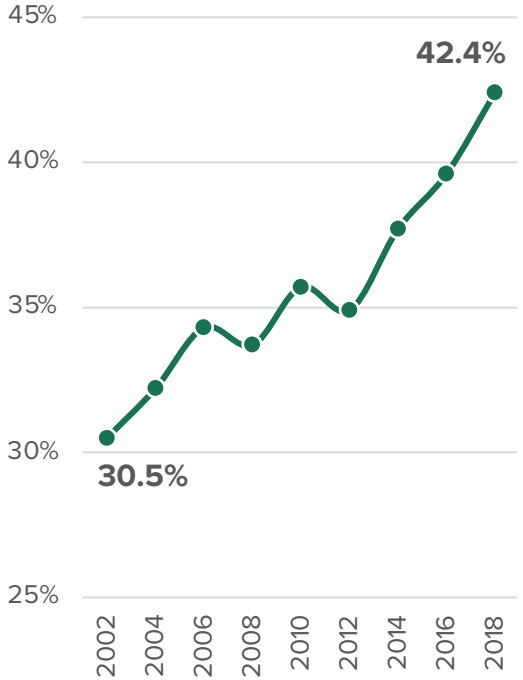
Source: Analysis of 2022 American Hospital Association data.

TREND 4: TEPID GROWTH

Burden of Disease Is Not Directly Correlated With Demand for Services

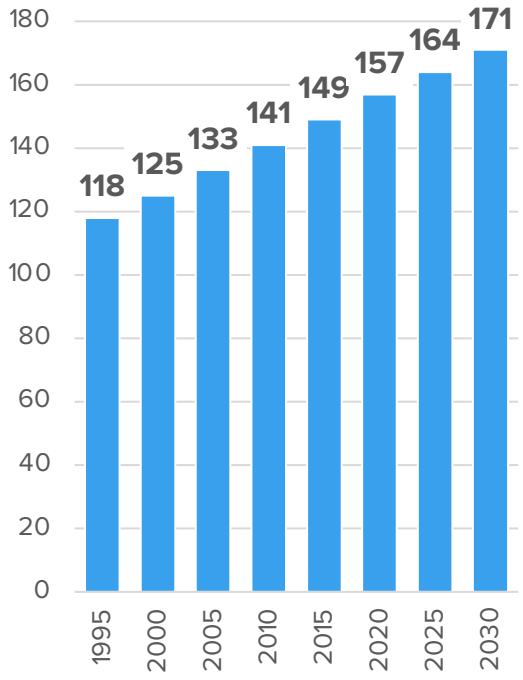
While the prevalence of obesity and chronic disease among Americans continues to increase, the rate of demand for healthcare services remains flat to declining.

RATE OF OBESITY IN THE U.S. FOR ADULTS AGES 20 AND OVER, (% OF ADULTS), 2002-2018



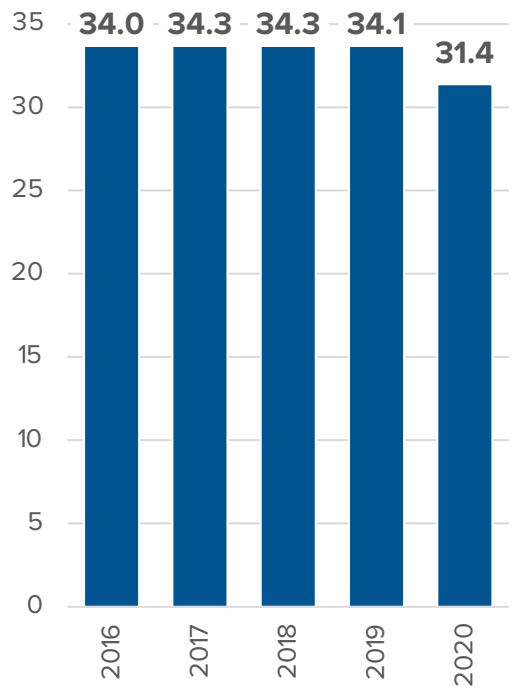
≠

NUMBER OF AMERICANS WITH CHRONIC CONDITIONS (IN MILLIONS), 1995-2030



≠

INPATIENT ADMISSIONS (IN MILLIONS), 2016-2020



Source: RAND Corporation; Centers for Disease Control and Prevention National Center for Health Statistics; American Hospital Association.

TREND 4: TEPID GROWTH

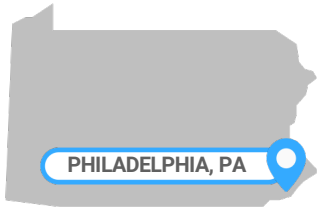
Healthcare Demand Is a Function of Incidence of Disease and Population Characteristics

Because healthcare is local, markets with a similar population size can have widely divergent demand for healthcare services.

GROWING MARKET

2022	Current Population:	6,259,588
	Digestive Surgical Incidence Rate per 10K:	423
	Digestive Surgical Procedure Volume:	27,041
2027	Projected Population:	6,473,868
	Forecasted Digestive Surgical Incidence Rate per 10k:	501
	Forecasted Digestive Surgical Procedure Volume:	32,434

SHRINKING MARKET



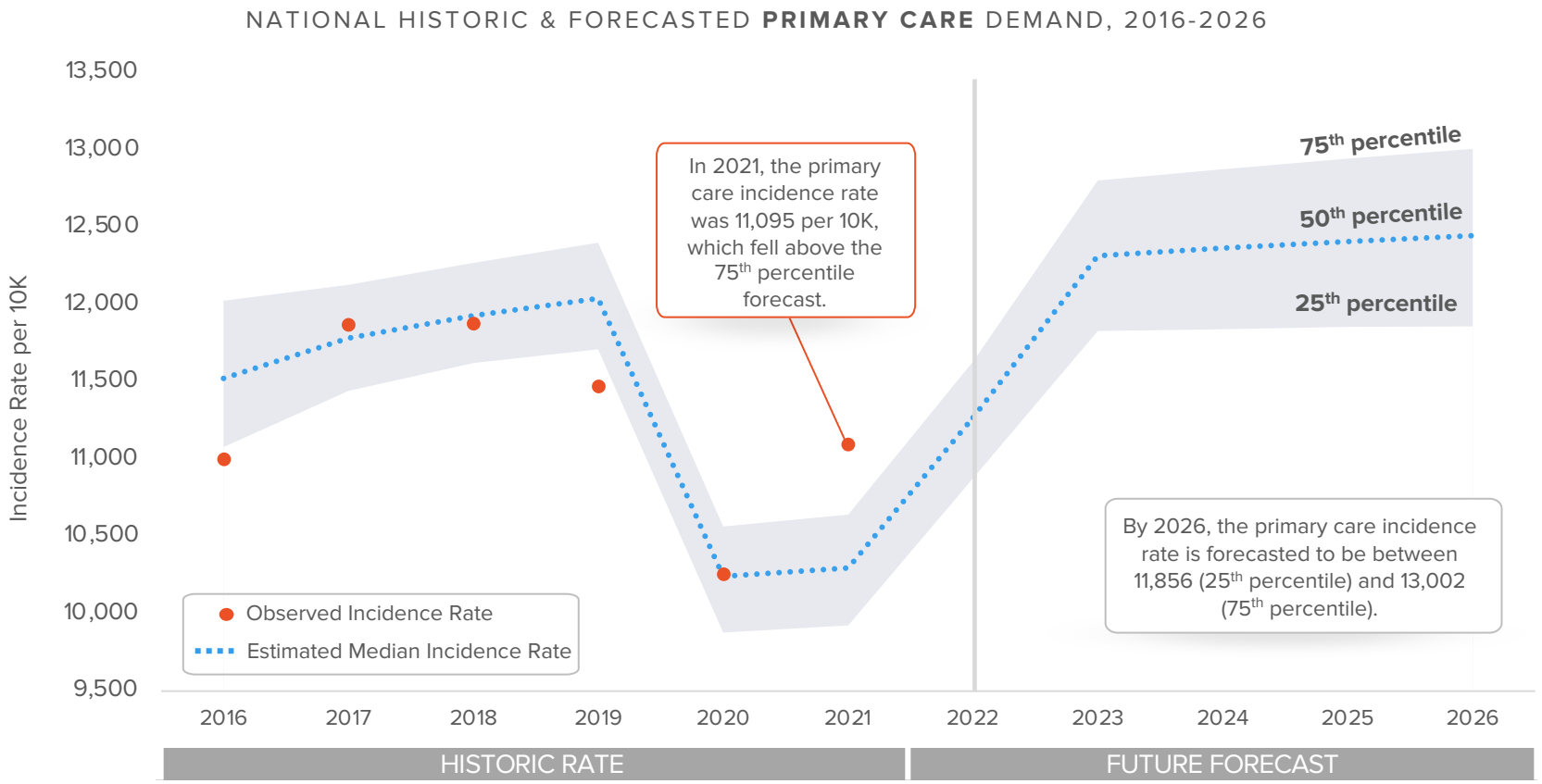
2022	Current Population:	6,473,868
	Digestive Surgical Incidence Rate per 10K:	605
	Digestive Surgical Procedure Volume:	39,166
2027	Projected Population:	6,295,528
	Forecasted Digestive Surgical Incidence Rate per 10k:	703
	Forecasted Digestive Surgical Procedure Volume:	44,257

Note: Growing Market and Shrinking Market indicate whether the population is projected to increase or decrease over the next five years.
Source: Trilliant Health national all-payer claims database.

TREND 4: TEPID GROWTH

Nationally, Demand for Primary Care Is Projected to Increase Slightly

The national median incidence rate for primary care is projected to increase at 1.7% CAGR between 2022 and 2026. This indicates that by 2026, on average, Americans are expected to need 1.2 primary care visits per year, which is 0.1 more visits above observed 2021 levels.



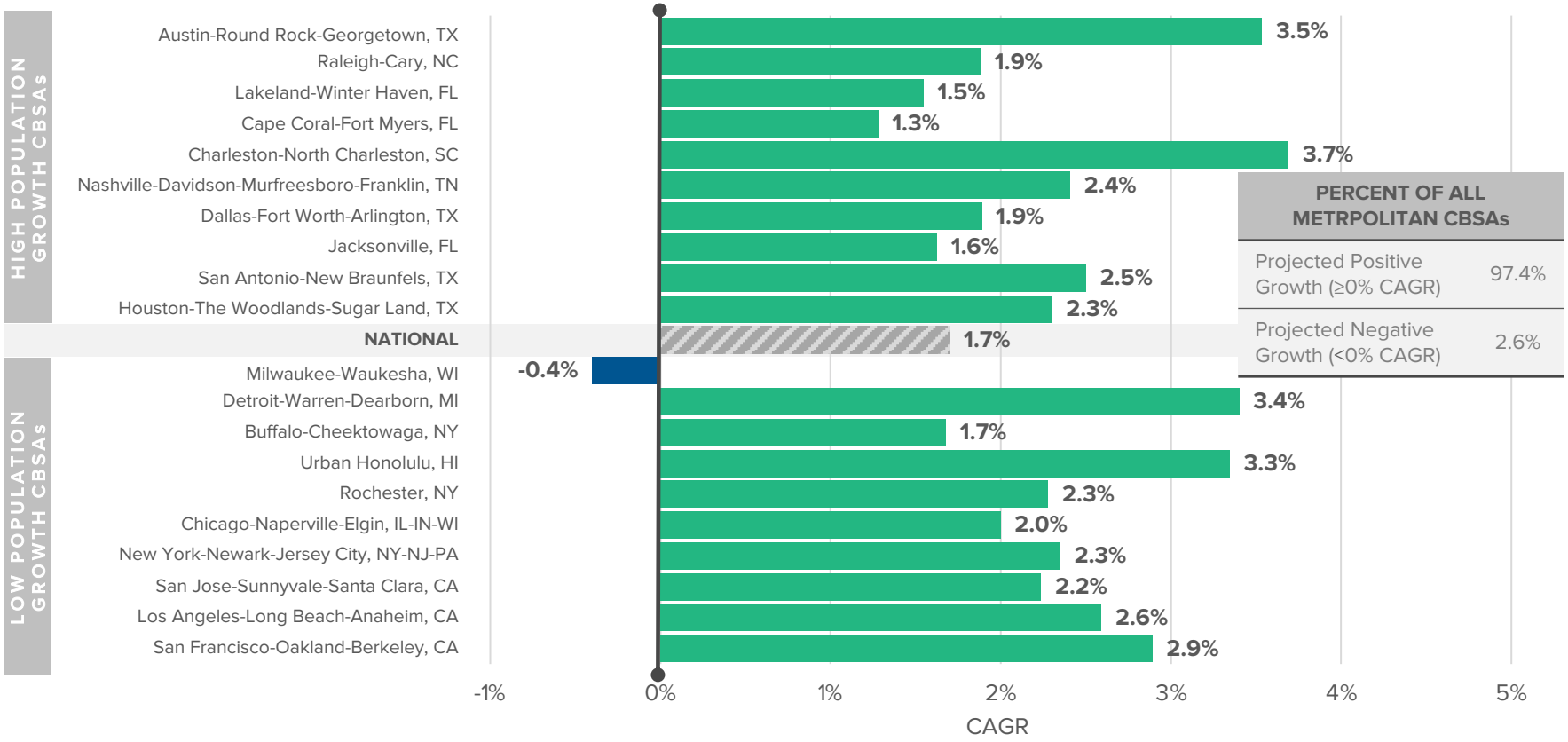
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Primary Care Demand Is Projected to Increase Slightly in Most Markets

While most markets (97.4%) reflect positive 5-year growth in primary care demand, only 55.9% are projected to grow at a CAGR above 2%, and 18.6% are projected to grow at a CAGR above 3%.

MARKET-LEVEL FORECASTED **PRIMARY CARE** DEMAND, 2022-2026 CAGR



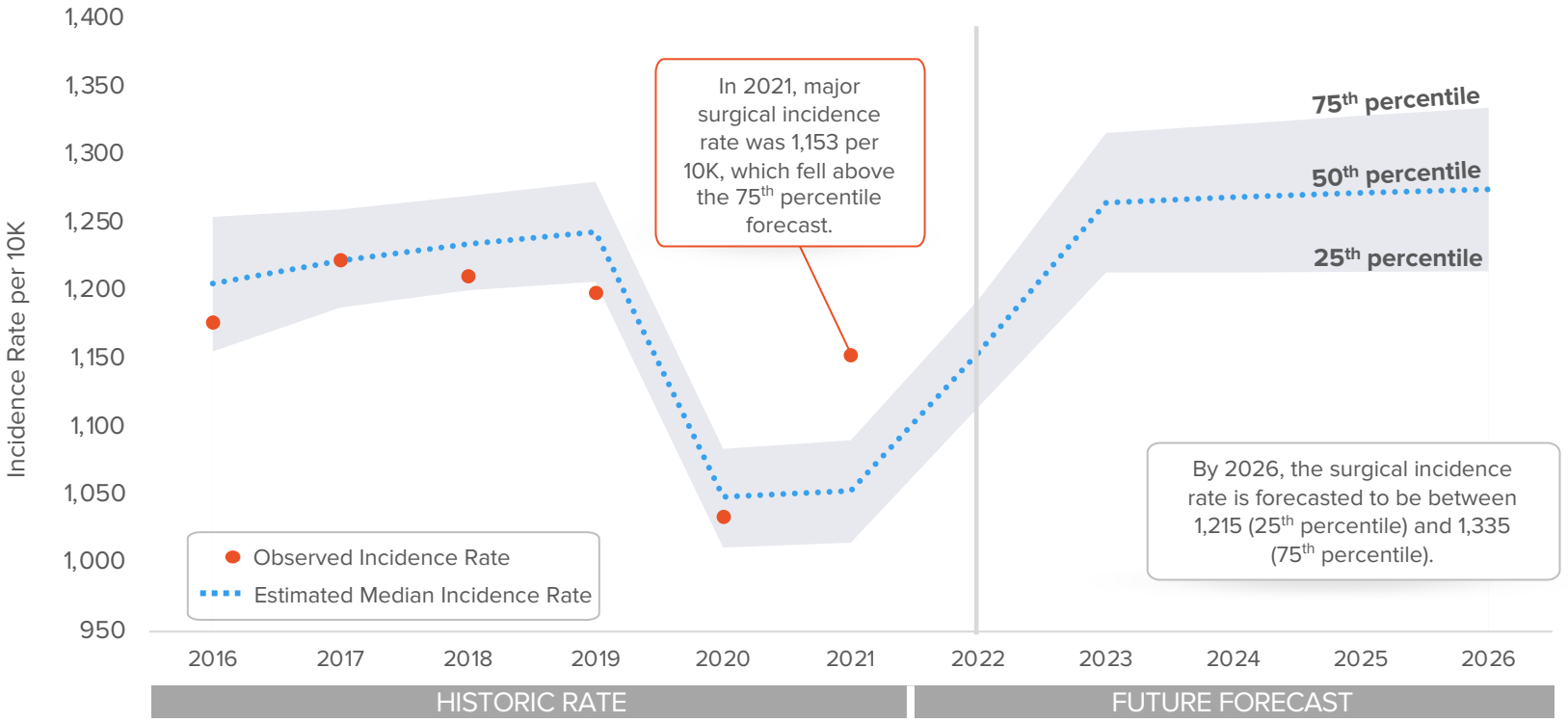
Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Demand for Major Surgical Services Is Projected to Be Significantly Less Than 3% CAGR

The national median incidence rate for major surgical service lines is projected to increase at 2.0% CAGR between 2022 and 2026, with digestive surgical services contributing the most by volume. This indicates that by 2026, 12.8% of the U.S. population will require major surgical services, which is 1.2 percentage points above observed 2021 levels.

NATIONAL HISTORIC & FORECASTED **MAJOR SURGICAL** DEMAND, 2016-2026



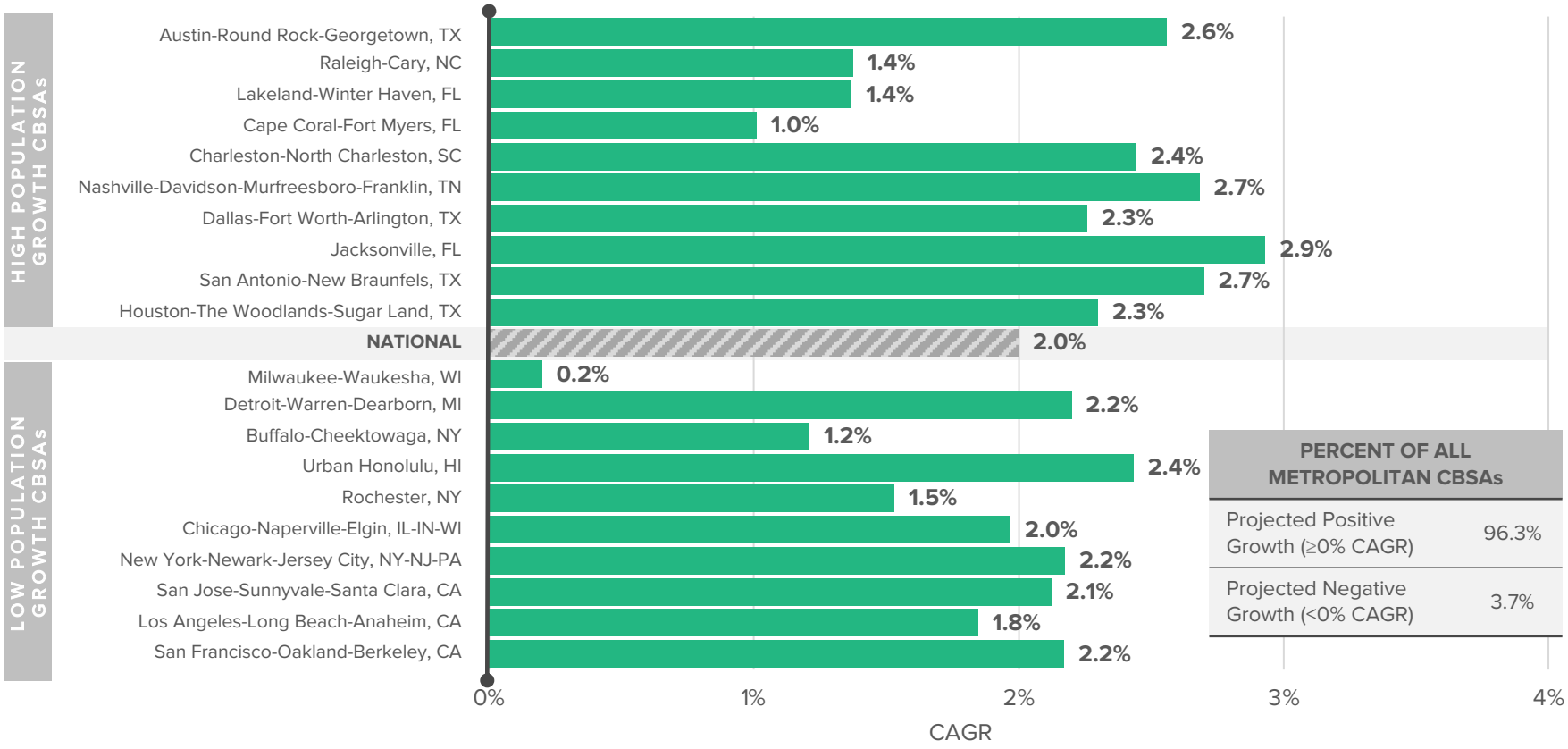
Note: Surgical service lines reflected are OB/GYN, Orthopedic, Digestive, Heart/Vascular, and Neuro/Spine, inclusive of inpatient and outpatient procedures. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Projected Surgical Demand Growth Varies by Market

At the market level, the projected five-year CAGR for surgical services ranges from -1.6% to 6.6%, averaging 2% nationally. However, even in the fastest growing CBSAs, median projected growth in surgical demand is less than 3% CAGR.

MARKET-LEVEL FORECASTED **MAJOR SURGICAL** DEMAND, 2022-2026 CAGR



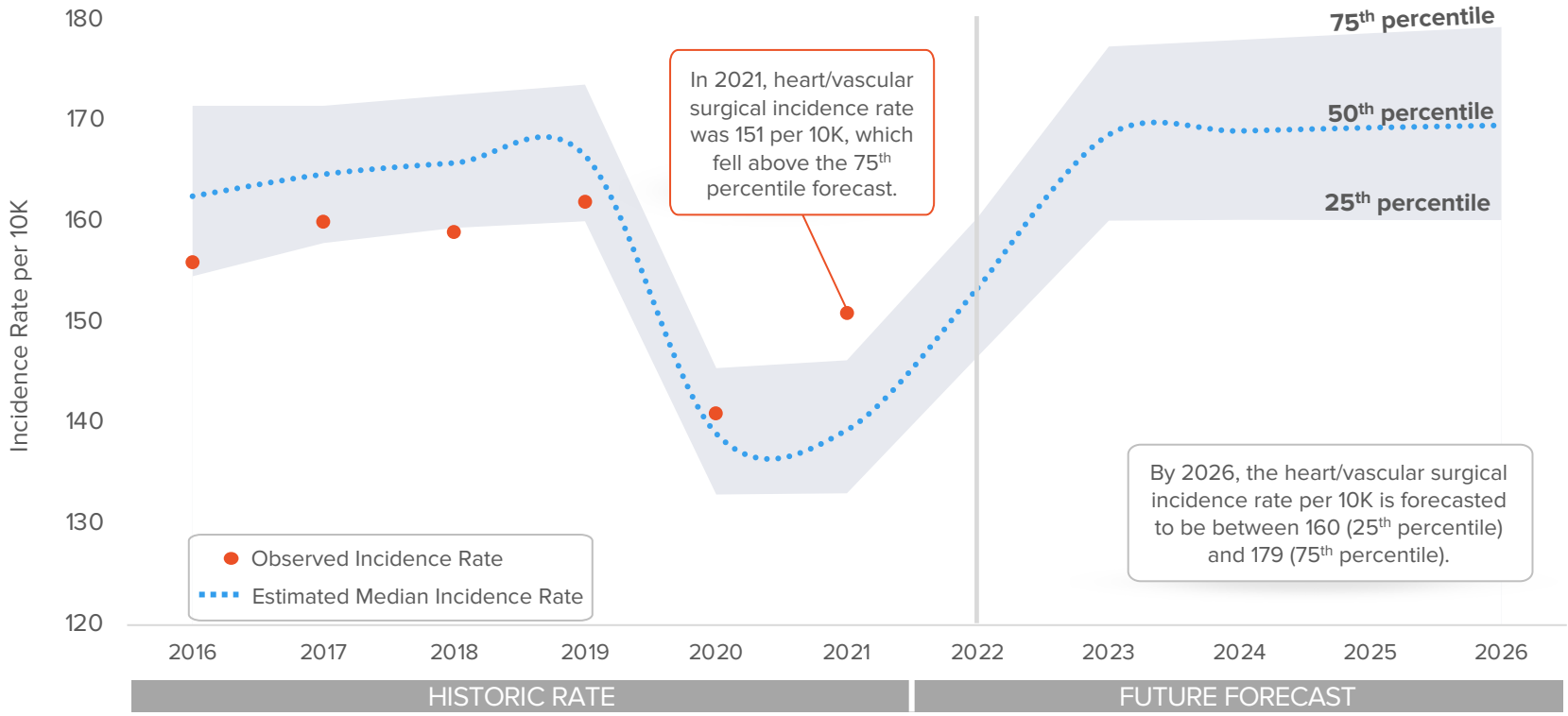
Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Heart/Vascular Surgical Demand Projected to Be Significantly Less Than 3% CAGR

Despite the stark increase in obesity in America, the national median incidence rate for heart/vascular surgical services is projected to increase at 2.0% CAGR between 2022 and 2026. This indicates that by 2026, 1.7% of the U.S. population will require heart/vascular surgical services, which is 0.2 percentage points above observed 2021 levels.

NATIONAL HISTORIC & FORECASTED **HEART/VASCULAR** SURGICAL DEMAND, 2016-2026



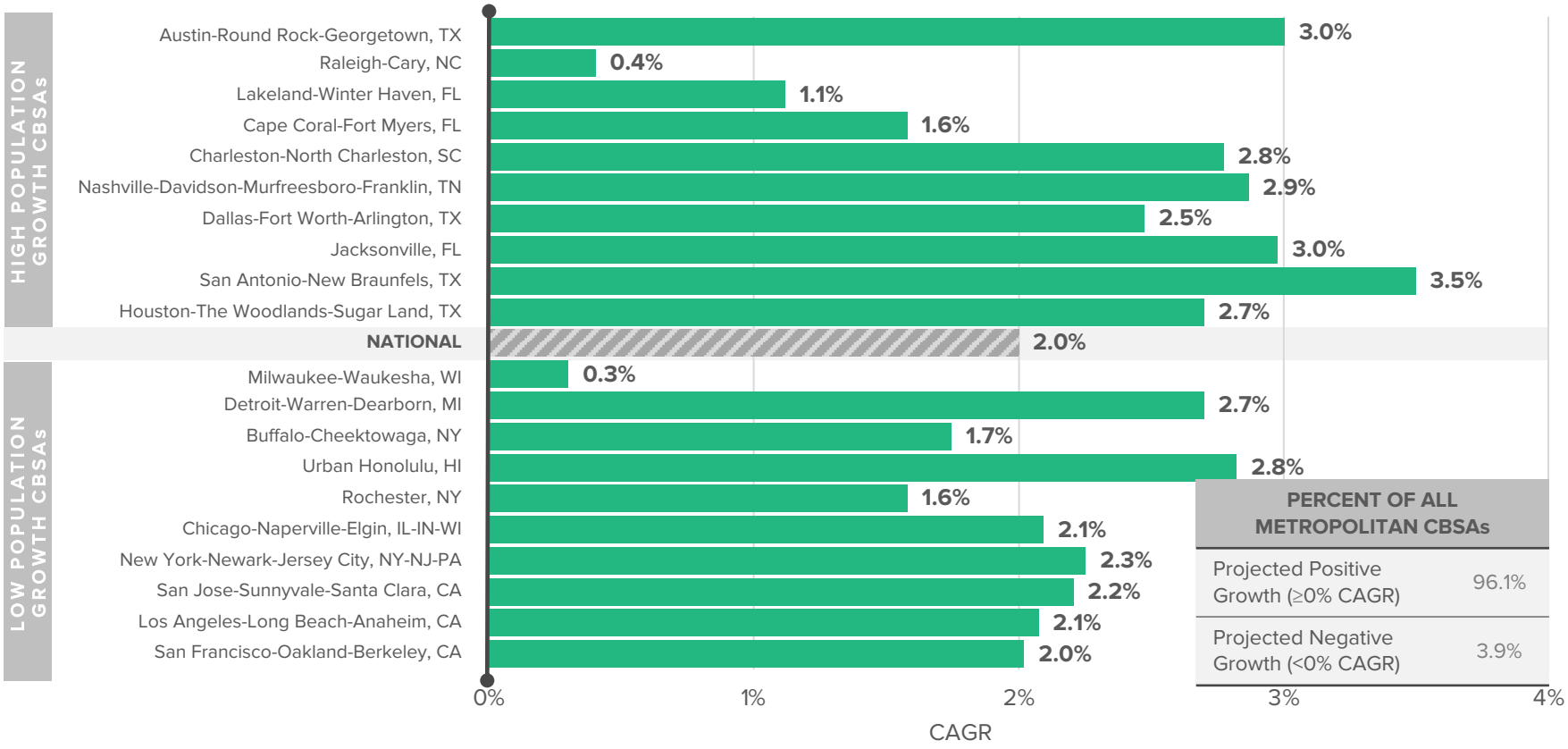
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Heart/Vascular Surgical Demand Varies Geographically

At the market level, the projected five-year CAGR for heart/vascular surgical services ranges from -2.3% to 4.6%, averaging 2% nationally. However, even in the fastest growing CBSAs, median projected growth in surgical demand is at most 3.5% CAGR.

MARKET-LEVEL FORECASTED **HEART/VASCULAR** SURGICAL DEMAND, 2022-2026 CAGR



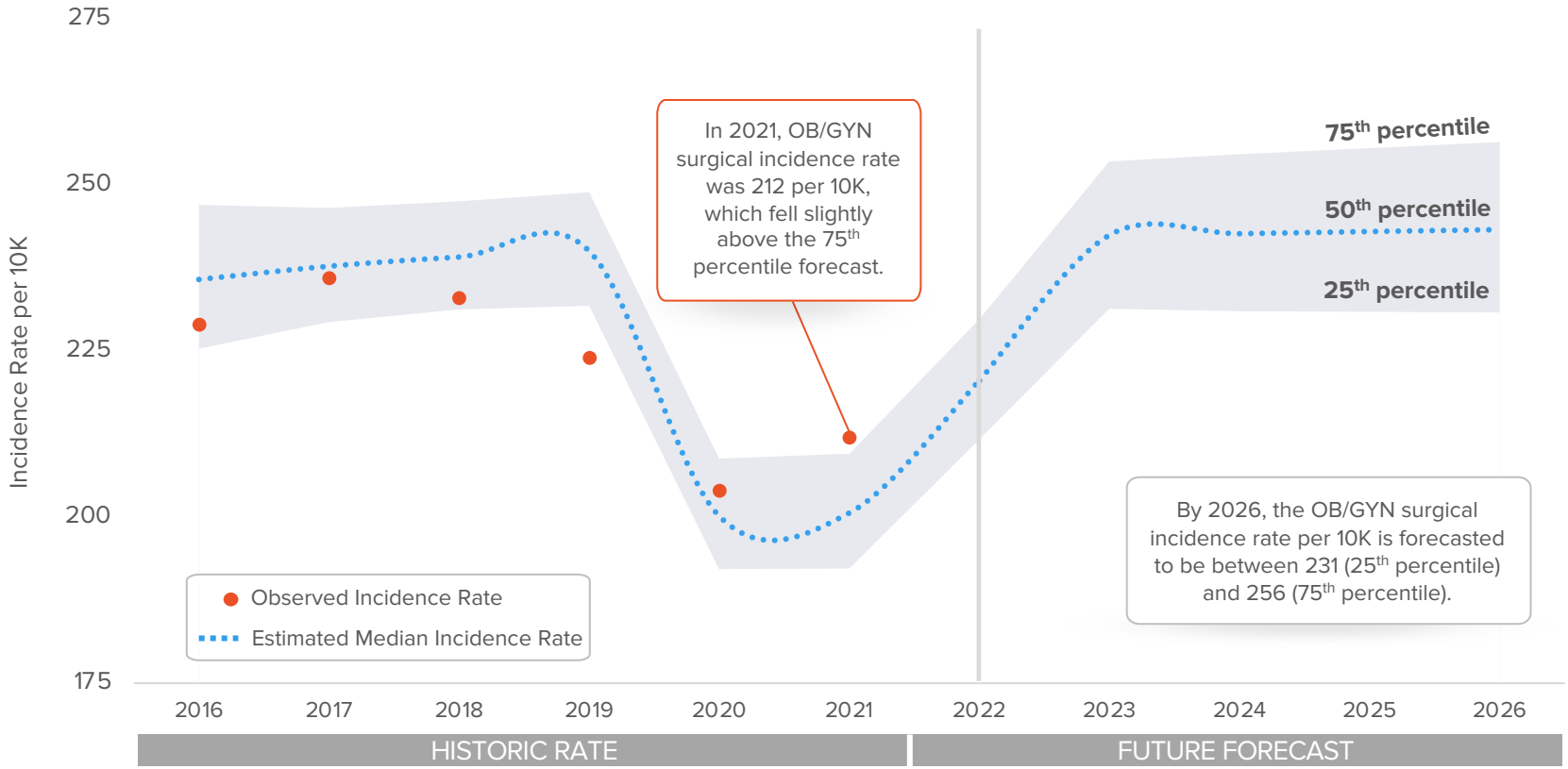
Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

OB/GYN Surgical Demand Projected To Increase Slightly

The national median incidence rate for OB/GYN surgical services is projected to increase at 2.0% CAGR between 2022 and 2026. This indicates that by 2026, 2.4% of Americans will require OB/GYN surgical services, which is 0.3 percentage points above observed 2021 levels.

NATIONAL HISTORIC & FORECASTED **OB/GYN** SURGICAL DEMAND, 2016-2026



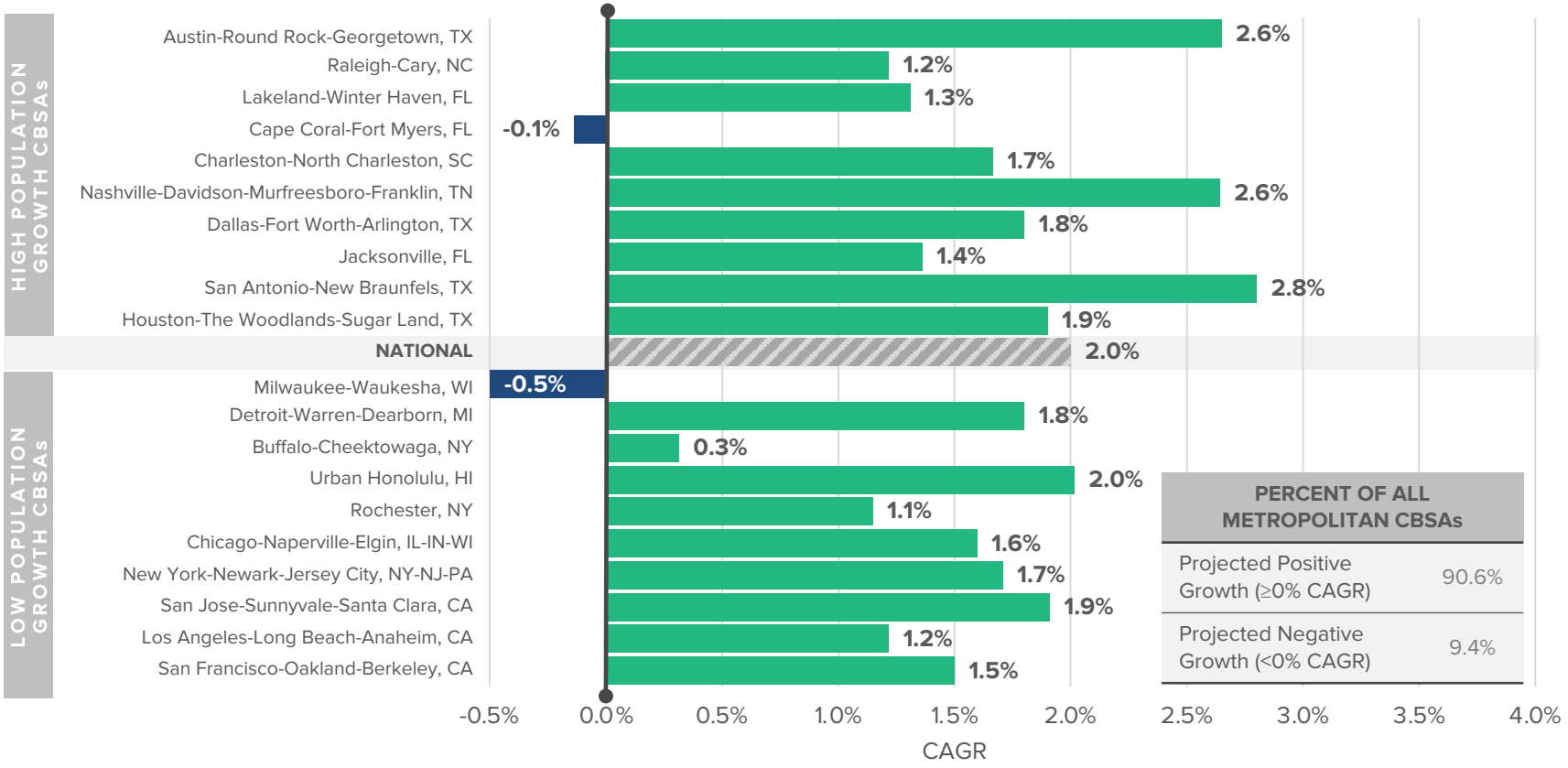
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

OB/GYN Surgical Demand Growing Slightly in Most Markets

At the market level, the projected five-year CAGR for OB/GYN surgical services ranges from -2.2% to 4.9%, averaging 2.0% nationally. However, even in the fastest growing CBSAs, median projected growth in surgical demand is less than 3% CAGR.

MARKET-LEVEL FORECASTED **OB/GYN** SURGICAL DEMAND, 2022-2026 CAGR

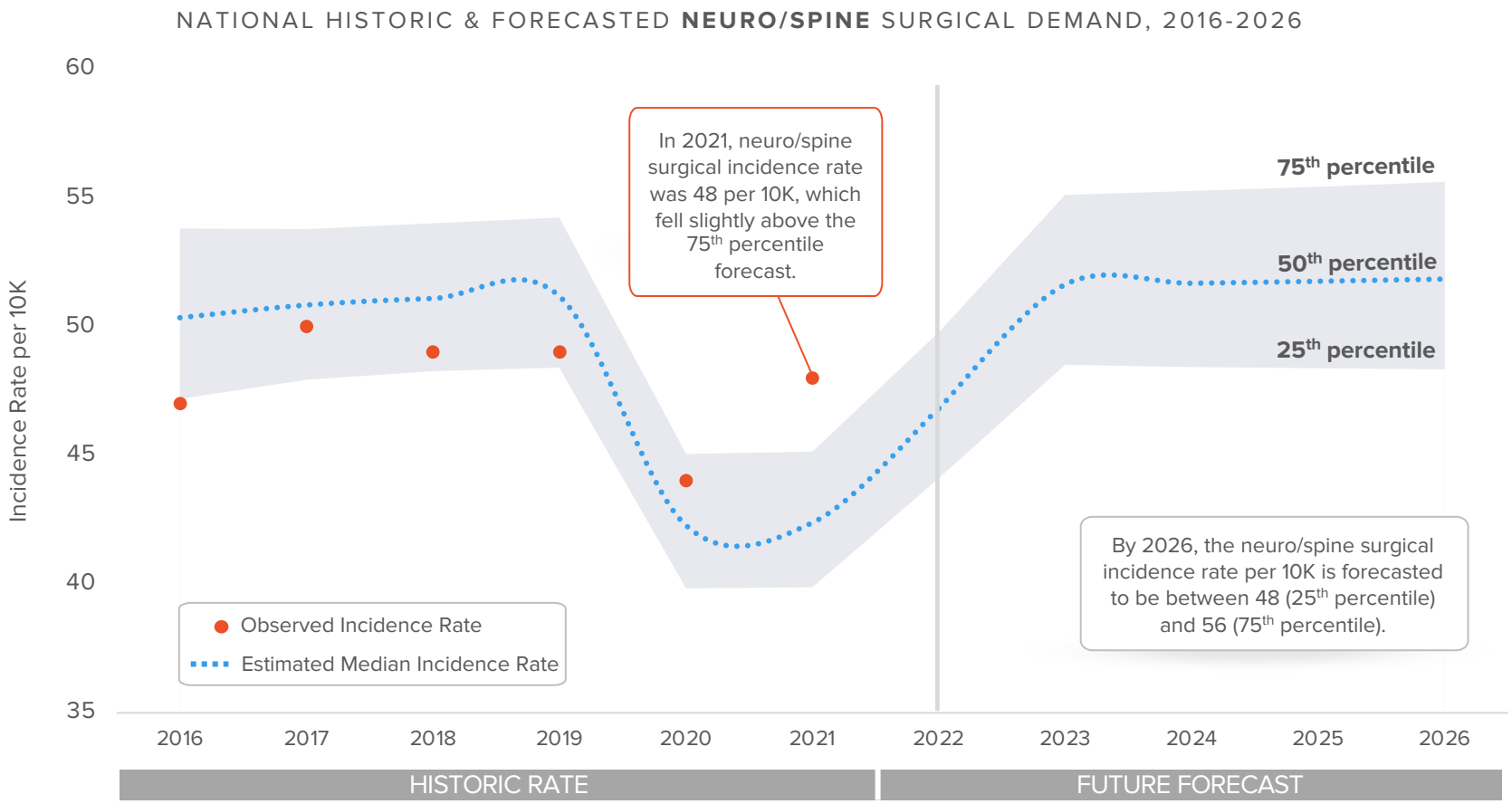


Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Neuro/Spine Surgical Demand Will Increase Slightly

The national median incidence rate for neuro/spine surgical services is projected to increase at 2.1% CAGR between 2022 and 2026. This indicates that by 2026, 0.5% of the U.S. population will require neuro/spine surgical services, which is .02 percentage points above observed 2021 levels.



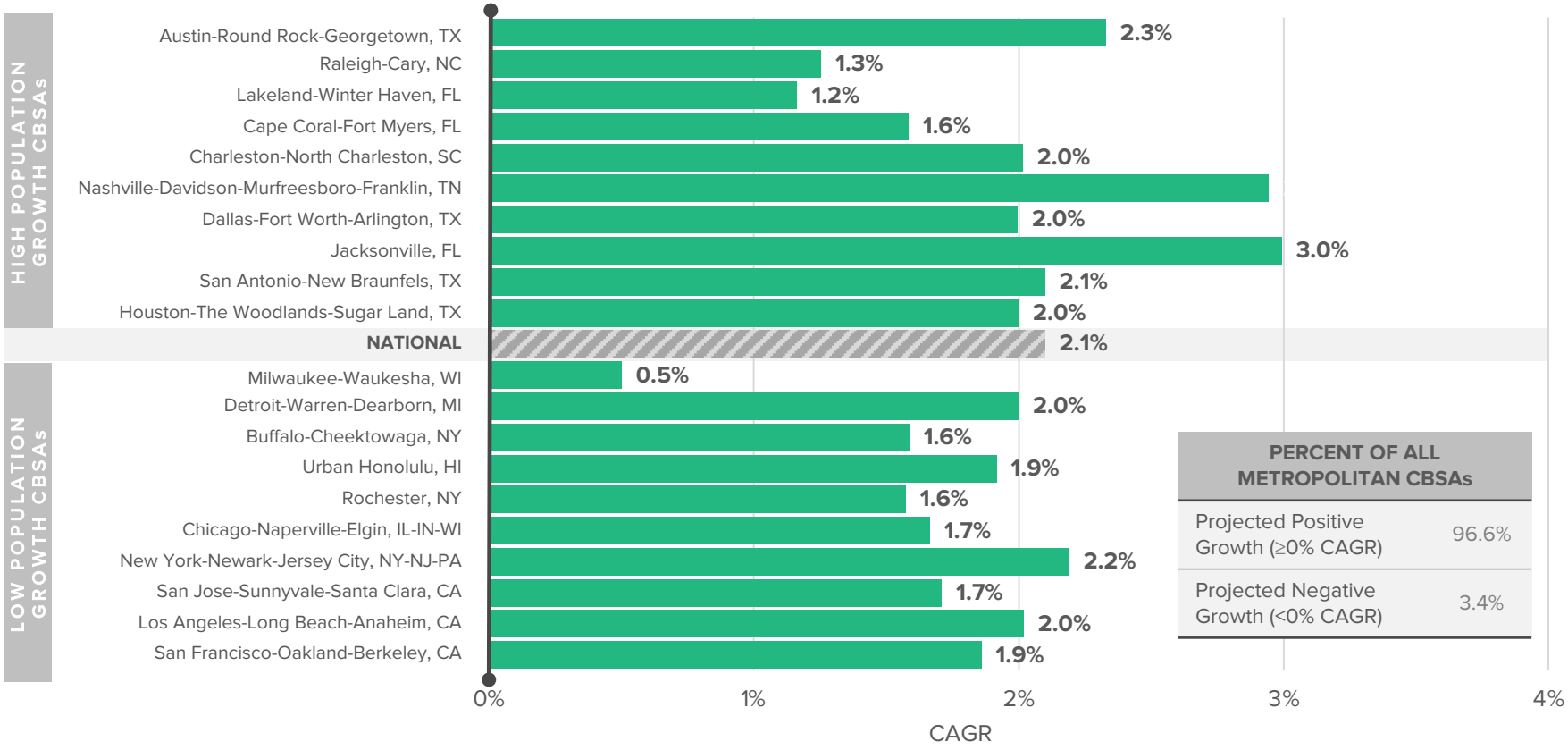
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Neuro/Spine Surgical Demand Growing in Almost All Markets

At the market level, the projected five-year CAGR for neuro/spine surgical services ranges from -0.9% to 3.7%, averaging 2.1% nationally. However, even in the fastest growing CBSAs, median projected growth in surgical demand is at most 3% CAGR.

MARKET-LEVEL FORECASTED **NEURO/SPINE** SURGICAL DEMAND, 2022-2026 CAGR

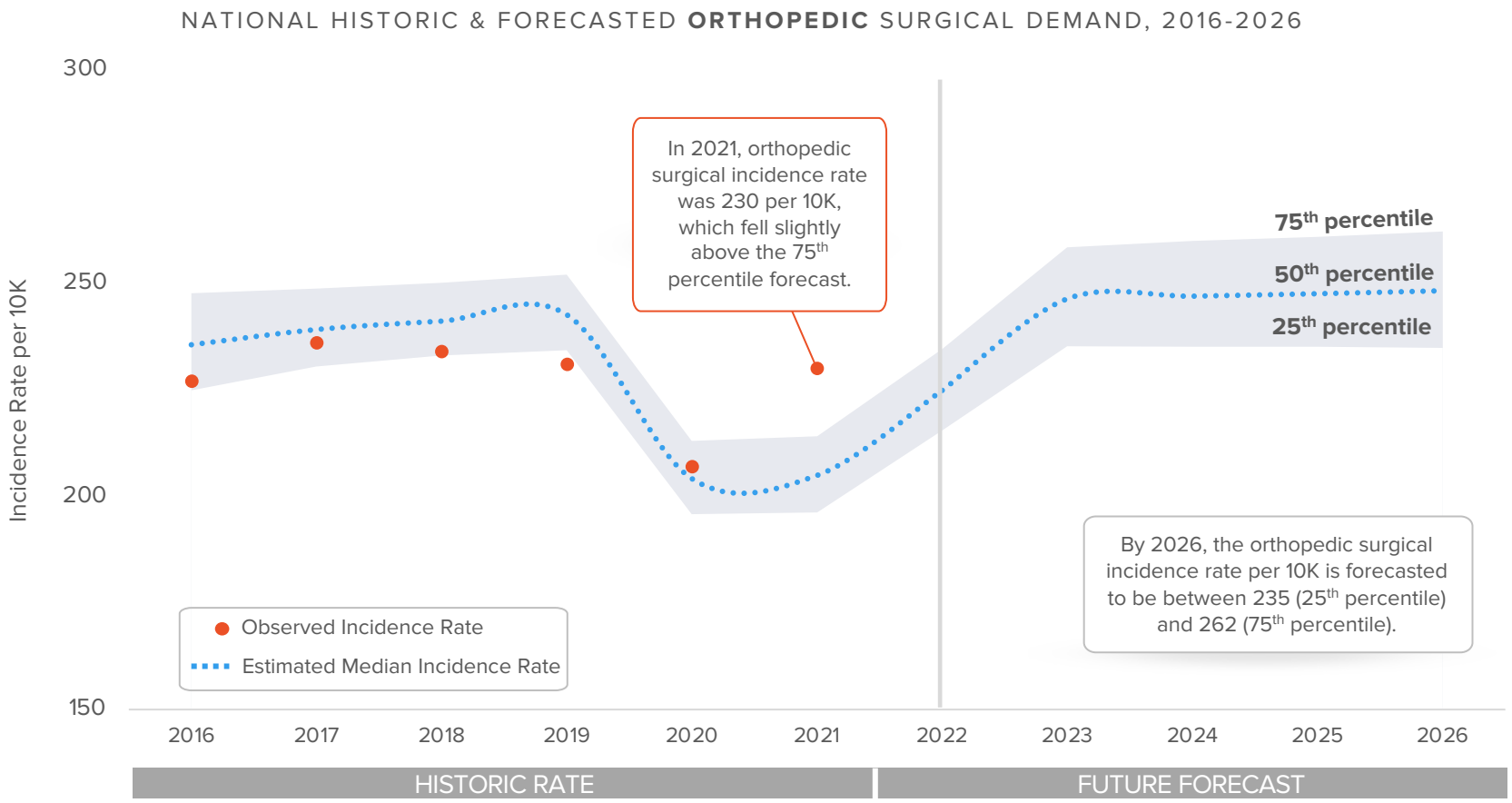


Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Orthopedic Surgical Demand Will Increase Slightly

The national median incidence rate for orthopedic surgical services is projected to increase at 2.0% CAGR between 2022 and 2026. This indicates that by 2026, 2.5% of the U.S. population will require orthopedic surgical services, which is 0.2 percentage points above observed 2021 levels.



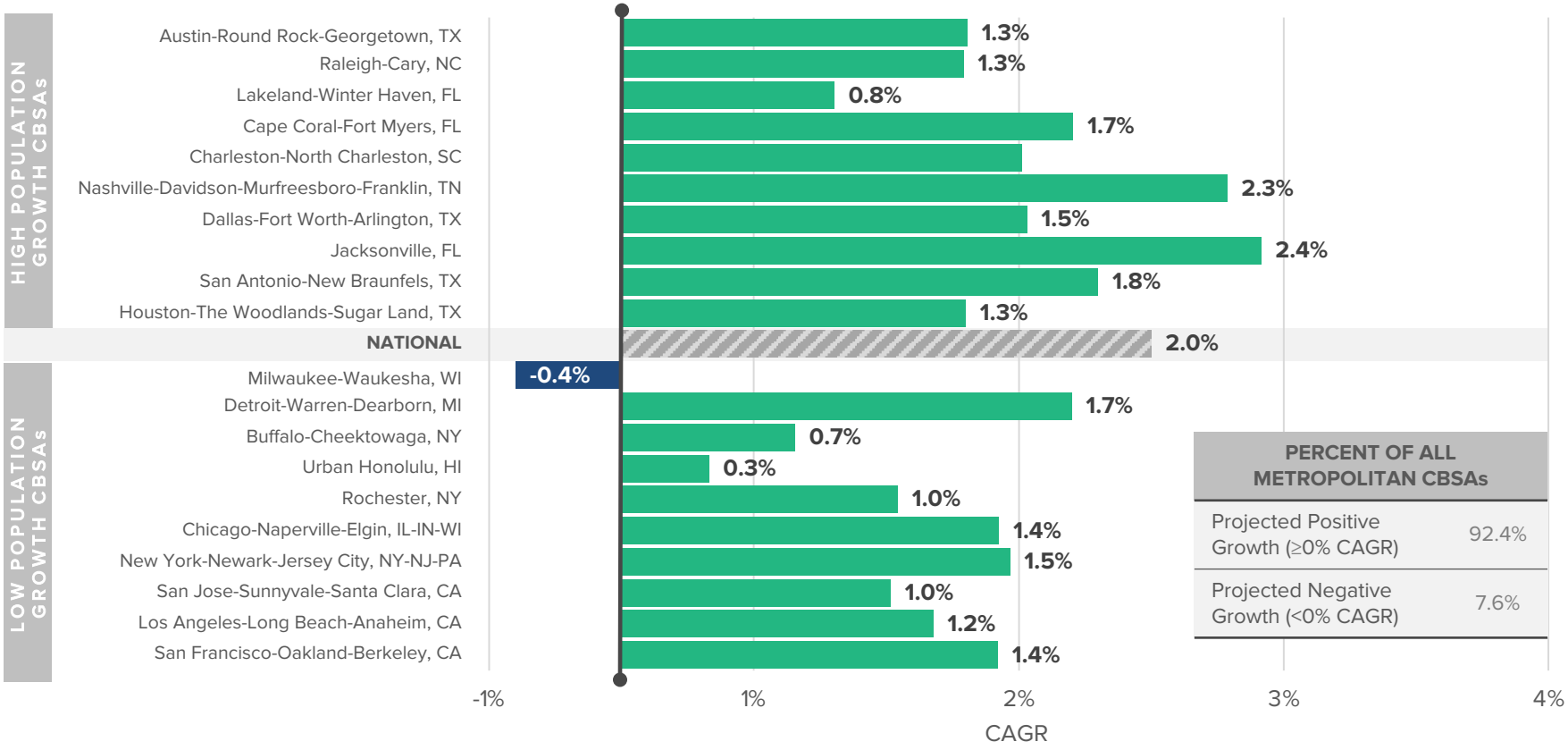
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Orthopedic Surgical Demand Growing in Most Markets

At the market level, the projected five-year CAGR for orthopedic surgical services ranges from -1.6% to 4.0%, averaging 2.0% nationally. However, even in the fastest growing CBSAs, median projected growth in surgical demand is less than 3% CAGR.

MARKET-LEVEL FORECASTED **ORTHOPEDIC** SURGICAL DEMAND, 2022-2026 CAGR

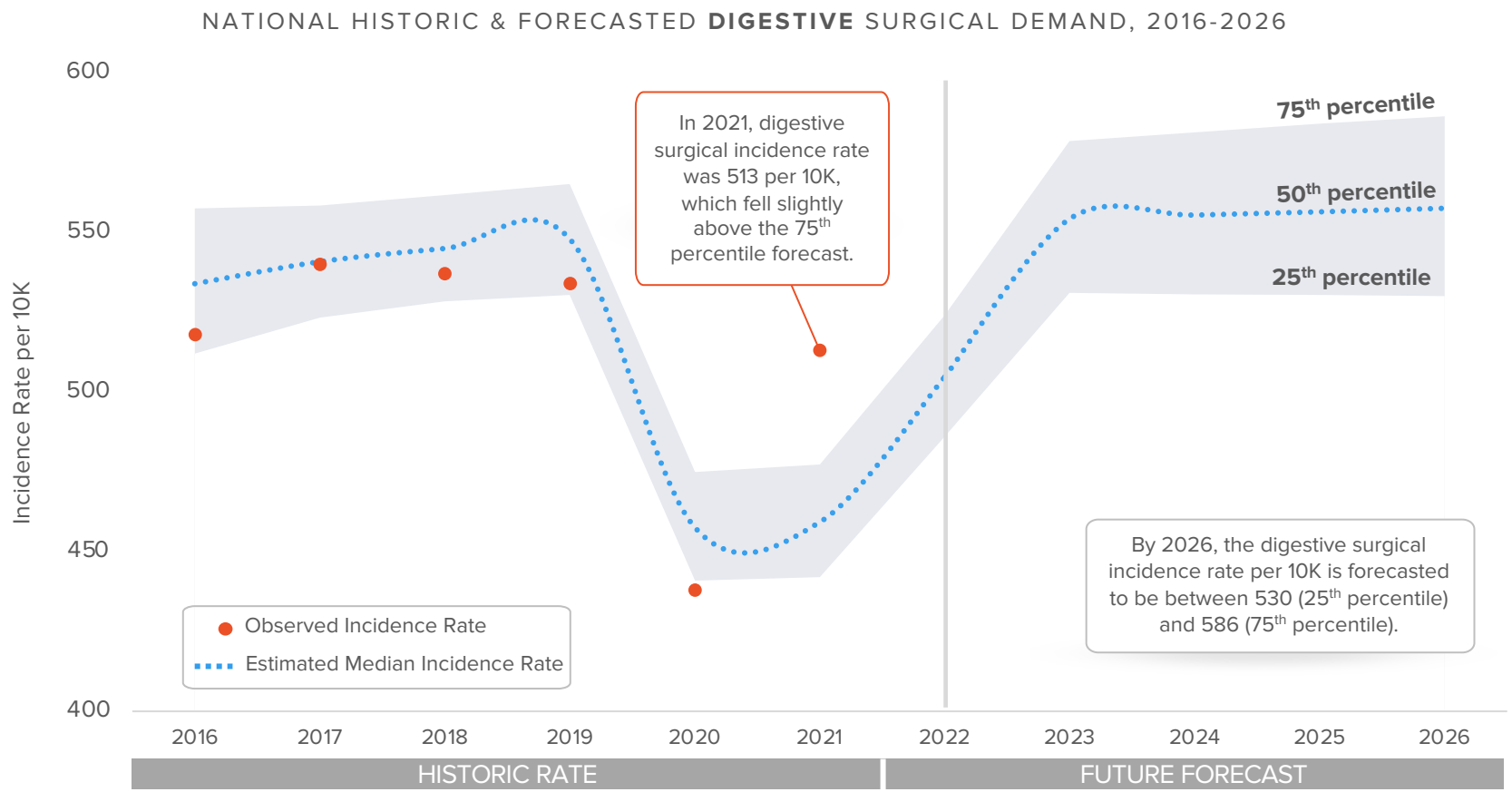


Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Digestive Surgical Demand Will Have Highest Volume Growth

The national median incidence rate for digestive surgical services is projected to increase at 2.0% CAGR between 2022 and 2026. This indicates that by 2026, 5.6% of the U.S. population will require digestive surgical services, which is 0.4 percentage points above observed 2021 levels.



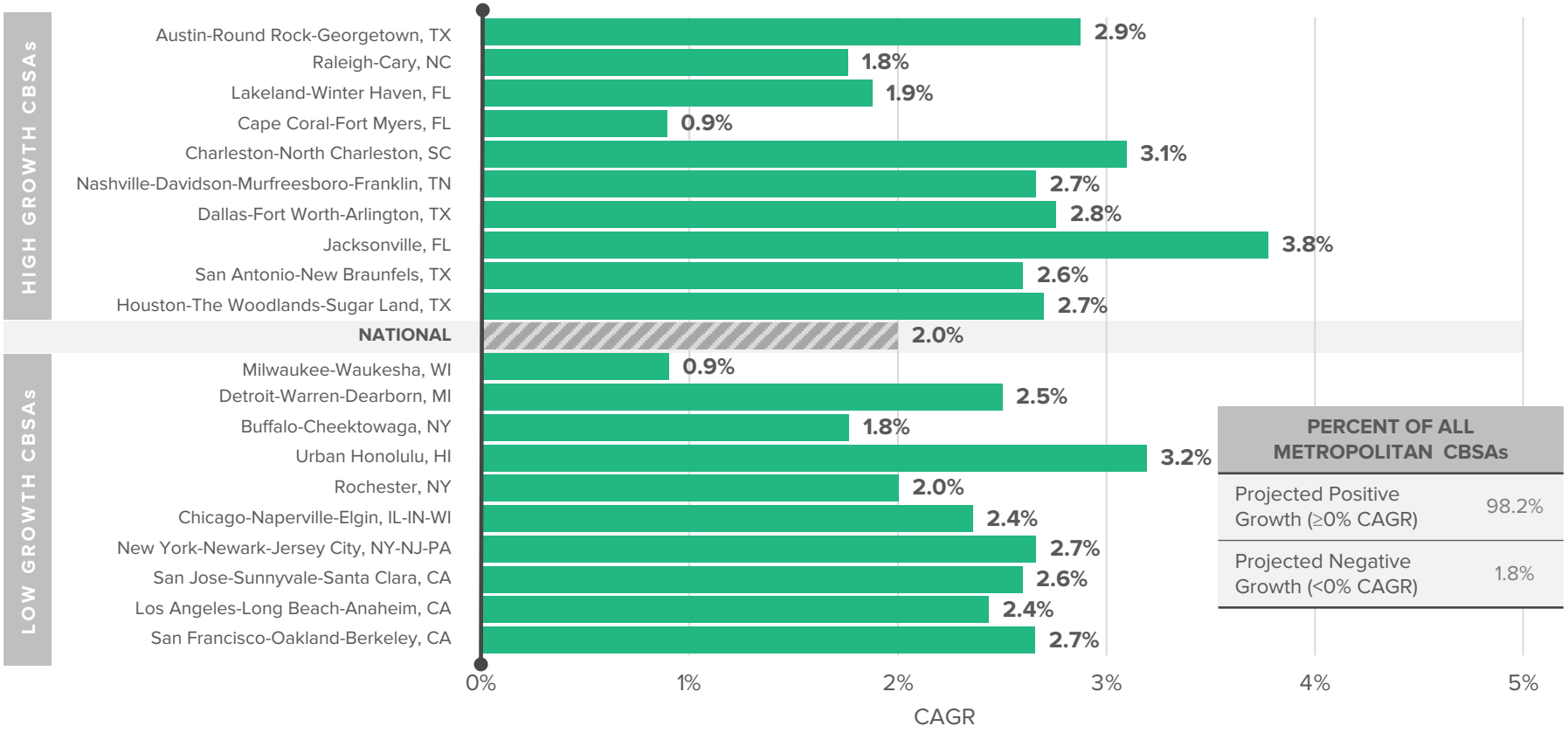
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Digestive Surgical Demand Growing in Almost All Markets

At the market level, the projected five-year CAGR for digestive surgical services ranges from -1.1% to 4.4%, averaging 2.0% nationally. However, even in the fastest growing CBSAs, median projected growth in surgical demand is rarely higher than 3% CAGR.

MARKET-LEVEL FORECASTED **DIGESTIVE** SURGICAL DEMAND, CAGR 2022-2026



PERCENT OF ALL METROPOLITAN CBSAs	
Projected Positive Growth (≥0% CAGR)	98.2%
Projected Negative Growth (<0% CAGR)	1.8%

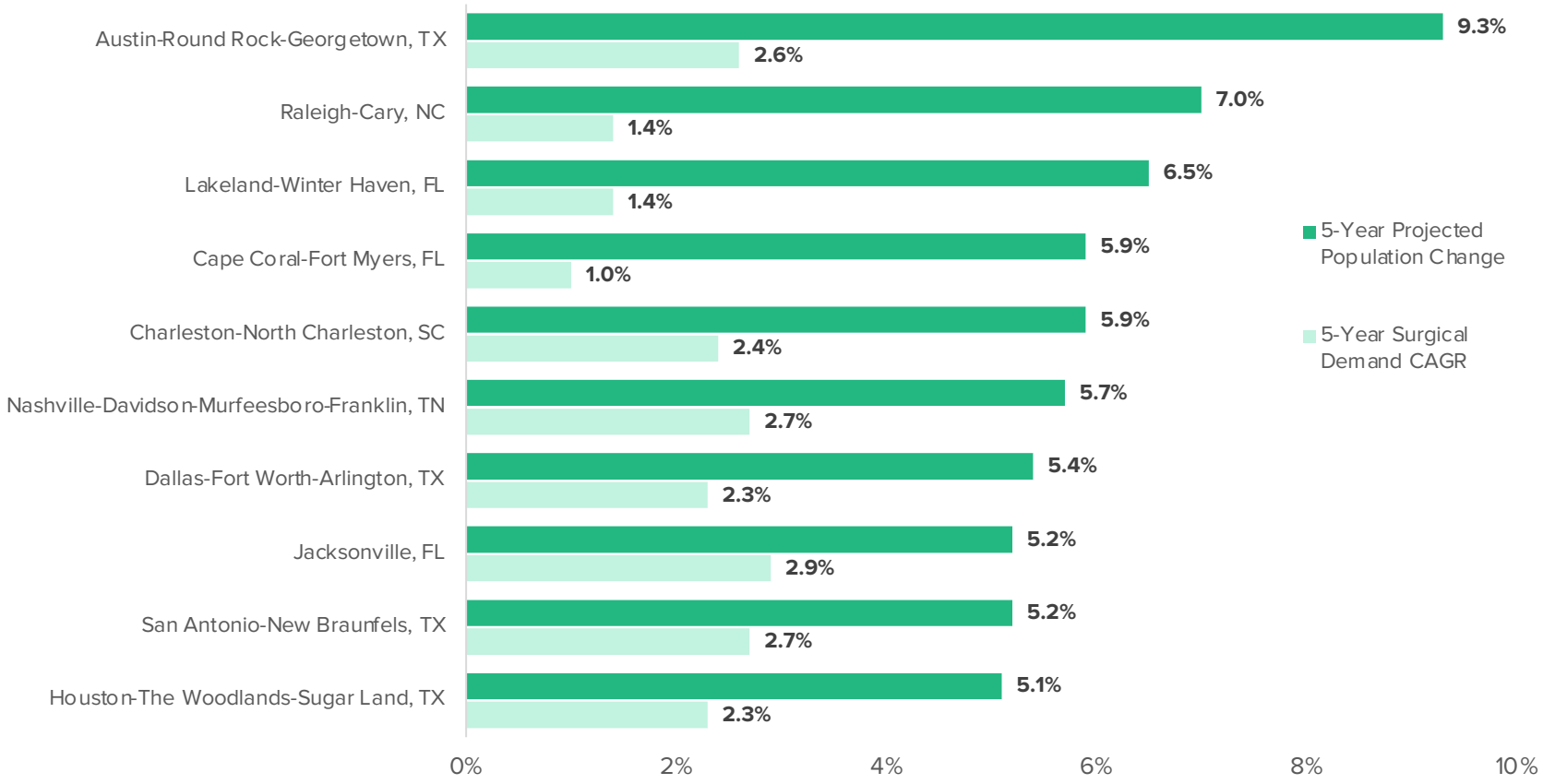
Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 4: TEPID GROWTH

Population Change Is Not Directly Correlated to Surgical Demand

While projected population growth among these select CBSAs ranges from 5.1% to 9.3%, the median forecasted 5-year CAGR for surgical services ranges from only 1.0% to 2.9%.

FORECASTED **SURGICAL DEMAND** AND **POPULATION GROWTH** FOR 10 HIGH-GROWTH CBSAs



Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast; Trilliant Health national consumer database.

TREND 4: TEPID GROWTH

Projected Growth in Demand Is Below Industry Expectations

While the population of San Francisco, CA is projected to decline by 1.6% over five years, the CAGR for orthopedic surgical demand is higher in San Francisco than in Austin, TX, where the population is projected to increase by 9.3%.

SUMMARY OF 5-YEAR SURGICAL DEMAND FORECAST

CATEGORY	CAGR (2022-2026)	RATIO OF OP:IP	TOP AGE BAND BY GROWTH RATE	CAGR IN AUSTIN, TX (5-YEAR POPULATION CHANGE +9.3%)	CAGR IN SAN FRANCISCO, CA (5-YEAR POPULATION CHANGE -1.6%)	TOP OUTPATIENT SURGICAL PROCEDURE DRIVING DEMAND
HEART/ VASCULAR	2.0%	2:1	65-84 (3.4%)	3.0%	2.0%	Cardiac Catheterization
OB/GYN	2.0%	1:1	65-84 (3.5%)	2.6%	1.5%	Surgical Procedures on the Corpus Uteri
NEURO/ SPINE	2.1%	1:1	65-84 (3.5%)	2.3%	1.9%	Surgery on Nerves and Nervous System
ORTHOPEDIC	2.0%	3:1	65-84 (3.5%)	1.3%	1.4%	Endoscopy/ Arthroscopy Procedures on the Musculoskeletal System
DIGESTIVE	2.0%	5:1	65-84 (3.5%)	2.9%	2.7%	Colonoscopy
ALL	2.0%	3:1	65-84 (3.5%)	2.6%	2.2%	Colonoscopy

Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

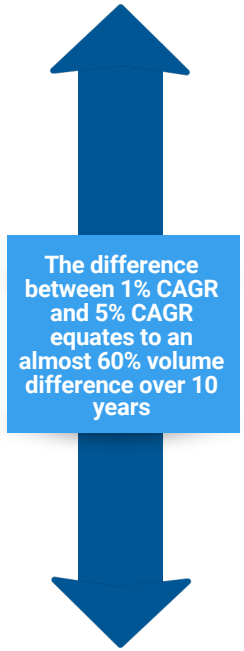
TREND 4: TEPID GROWTH

The Magnitude of a 1% CAGR Difference Is Significant

Incremental percent differences in a service demand forecast based on compound annual growth rates result in significantly different projections. The difference between a 1% CAGR and a 5% CAGR equates to an almost 60% difference in volume over 10 years.

SCENARIOS FOR DIFFERENT FORECASTED CAGRs

	SCENARIO	2022 FORECASTED MAJOR SURGICAL VOLUME	10-YEAR CAGR	2031 FORECASTED MAJOR SURGICAL VOLUME
1	Major surgical service lines will grow at a CAGR of 1% **(HYPOTHETICAL)**	38,000,000	1%	**+10.5%**
2	Major surgical service lines will grow at a CAGR of 2% **(ACTUAL 50TH PERCENTILE FORECAST)**	38,000,000	2%	**+21.9%**
3	Major surgical service lines will grow at a CAGR of 3% **(HYPOTHETICAL)**	38,000,000	3%	**+34.4%**
4	Major surgical service lines will grow at a CAGR of 4% **(HYPOTHETICAL)**	38,000,000	4%	**+48.0%**
5	Major surgical service lines will grow at a CAGR of 5% **(HYPOTHETICAL)**	38,000,000	5%	**+69.2%**



Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast; Trilliant Health national consumer database.

TREND 5

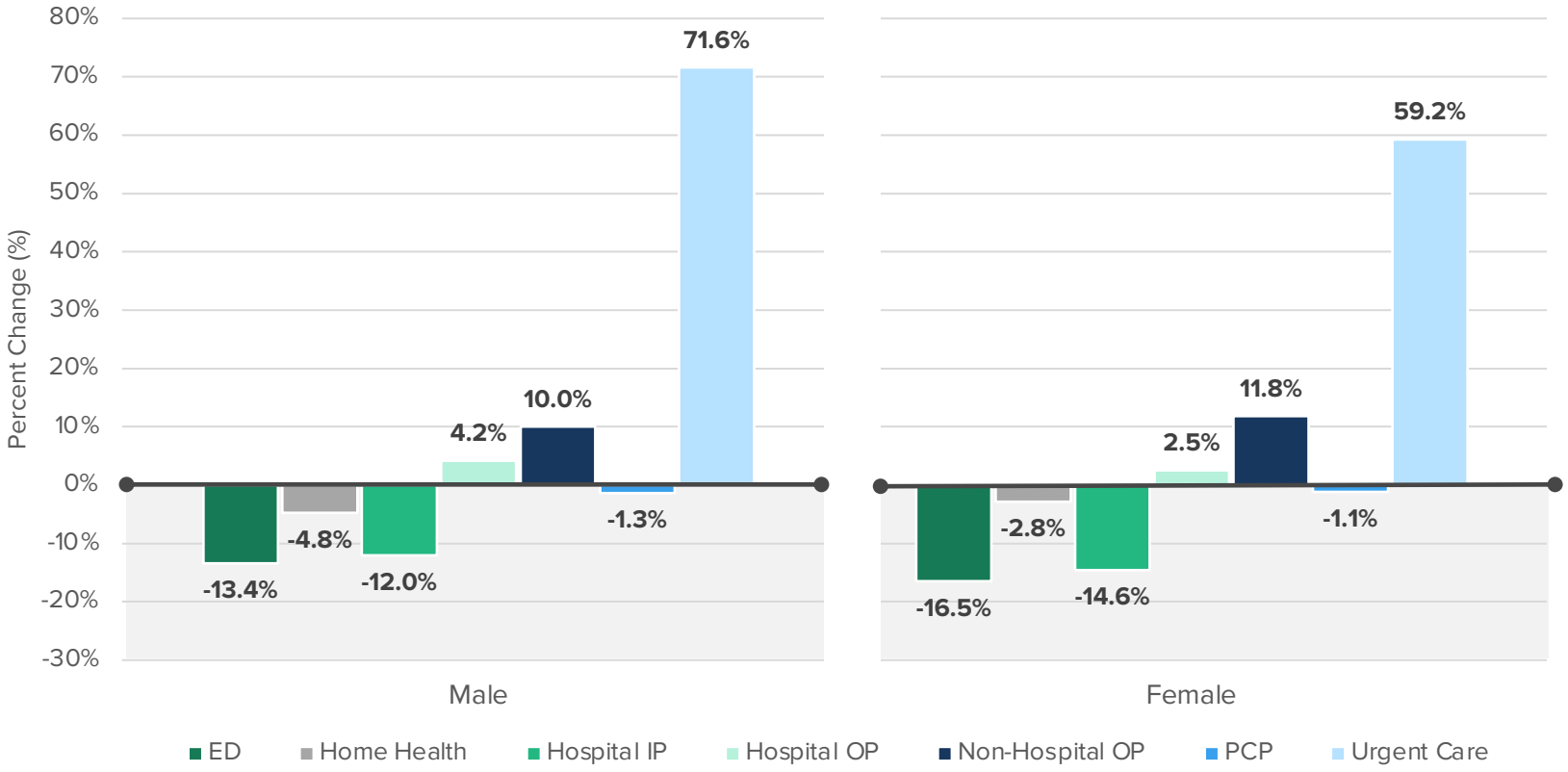
How Individuals Access the Healthcare System Varies

TREND 5: VARIATION BY POPULATION

Men and Women Are Returning to Different Care Settings

Compared to pre-pandemic utilization, men are disproportionately using urgent care (+71.6%), and women are using non-hospital outpatient settings at a higher volume (+11.8%).

CHANGE IN VOLUMES BY CARE SETTINGS & **GENDER**, JAN 2019-MAR 2020 TO JAN 2021-MAR 2022

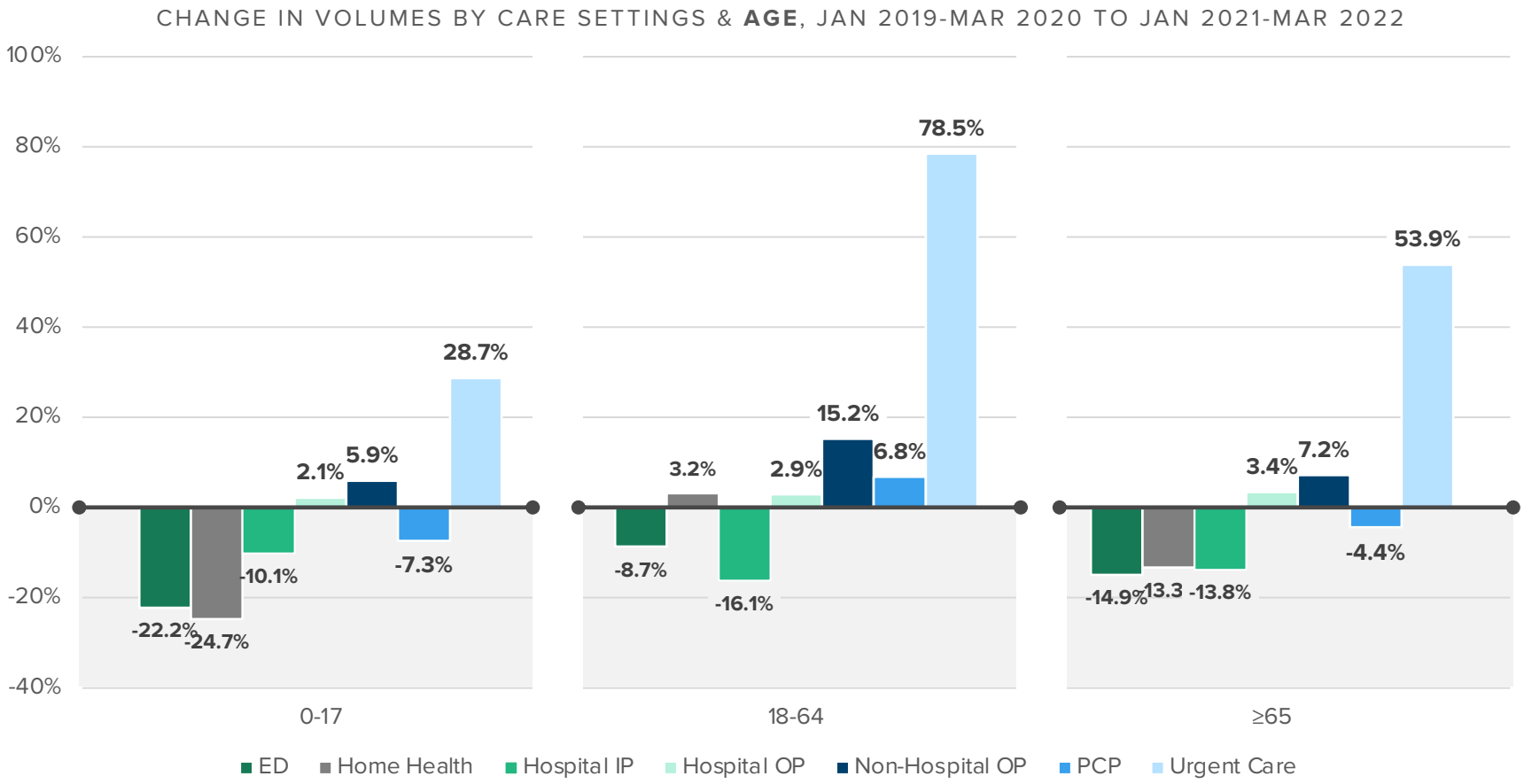


Note: IP denotes Inpatient; OP denotes Outpatient; PCP denotes Primary Care Provider; ED denotes Emergency Department.
Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Return to Healthcare Is Concentrated in Working-Age Adults

Inpatient care is tracking consistently below pre-pandemic levels, with adult patients ages 18-64 showing a -16.1% drop, while non-hospital outpatient care has increased by 15.2%.



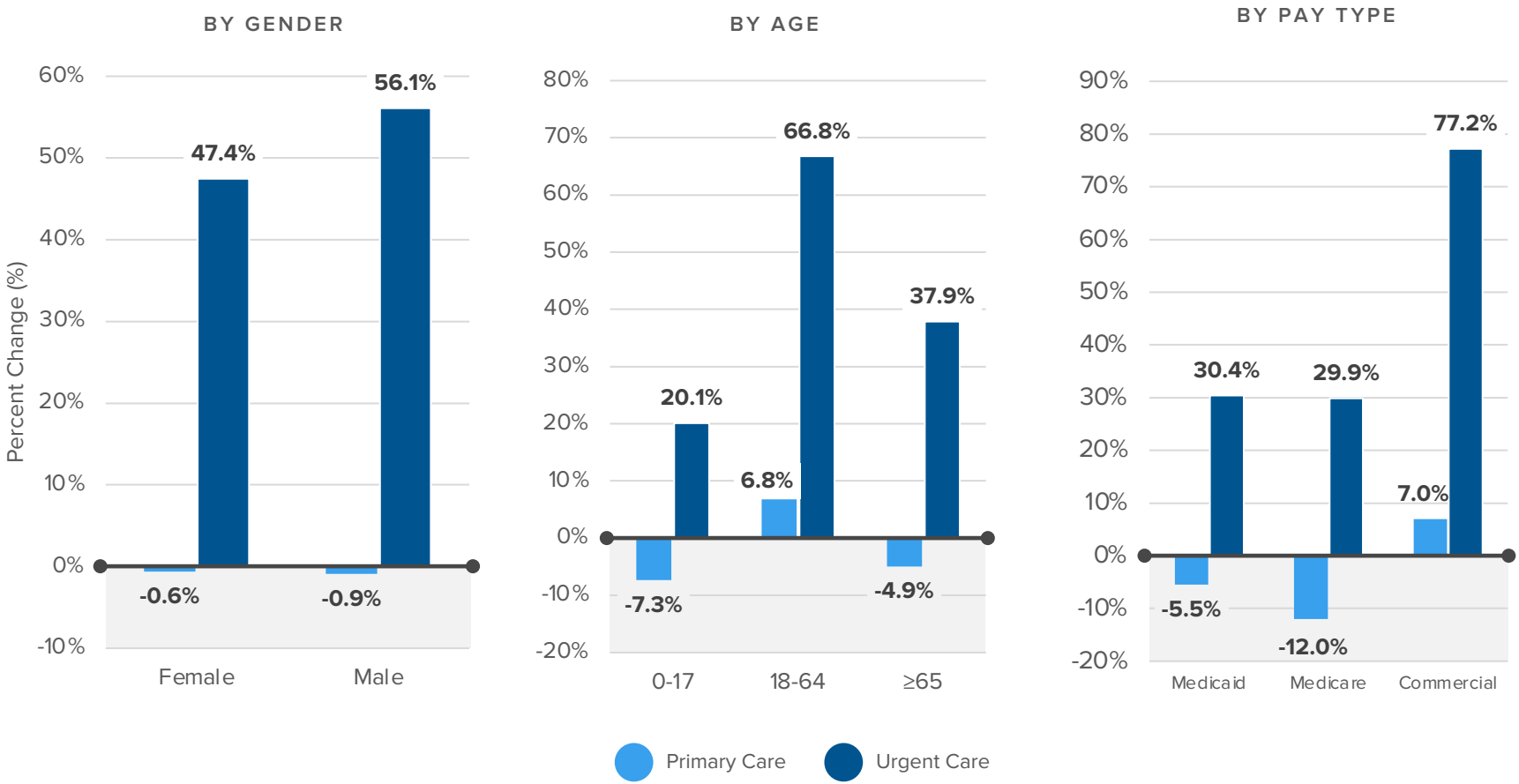
Note: IP denotes Inpatient; OP denotes Outpatient; PCP denotes Primary Care Provider; ED denotes Emergency Department.
Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Driven by COVID-19, Urgent Care Use Has Grown Across Groups

Working-age adults are the patient population that is returning to primary care. However, a high proportion of this care is related to COVID-19 testing and treatment rather than preventive services.

CHANGE IN **PRIMARY CARE** AND **URGENT CARE** VOLUMES, JAN 2019-MAR 2020 TO JAN 2021-MAR 2022



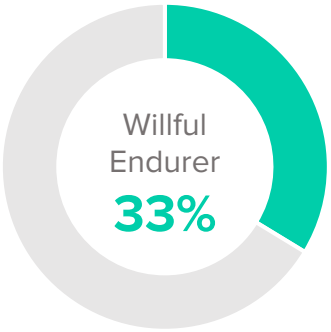
Source: Trilliant Health national all-payer claims database.

Psychographics Influence Likelihood of Established Primary Care Relationship

Individuals whose primary psychographic profile is Willful Endurers (33%), which is characterized by living in the "here and now," are less likely to have established primary care relationships than Direction Takers (12.6%), who believe a physician is the most credible source of healthcare information.

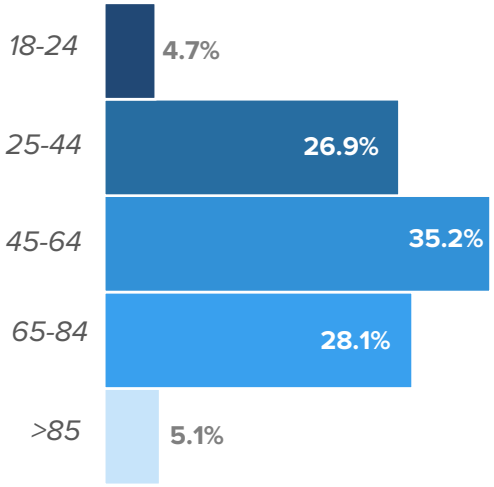
CHARACTERISTICS OF PATIENTS WITHOUT ESTABLISHED PRIMARY CARE RELATIONSHIPS

Top Psychographic Profile

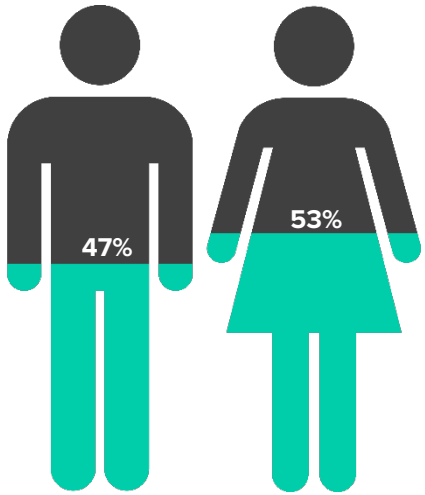


2. Self Achiever (23.8%)
3. Balance Seeker (18.2%)
4. Priority Juggler (17.5%)
5. Direction Taker (12.6%)

Patient Age Breakdown



Gender Breakdown



Uninsured Index

(Weighted Average)

Manage Health

(Weighted Average)

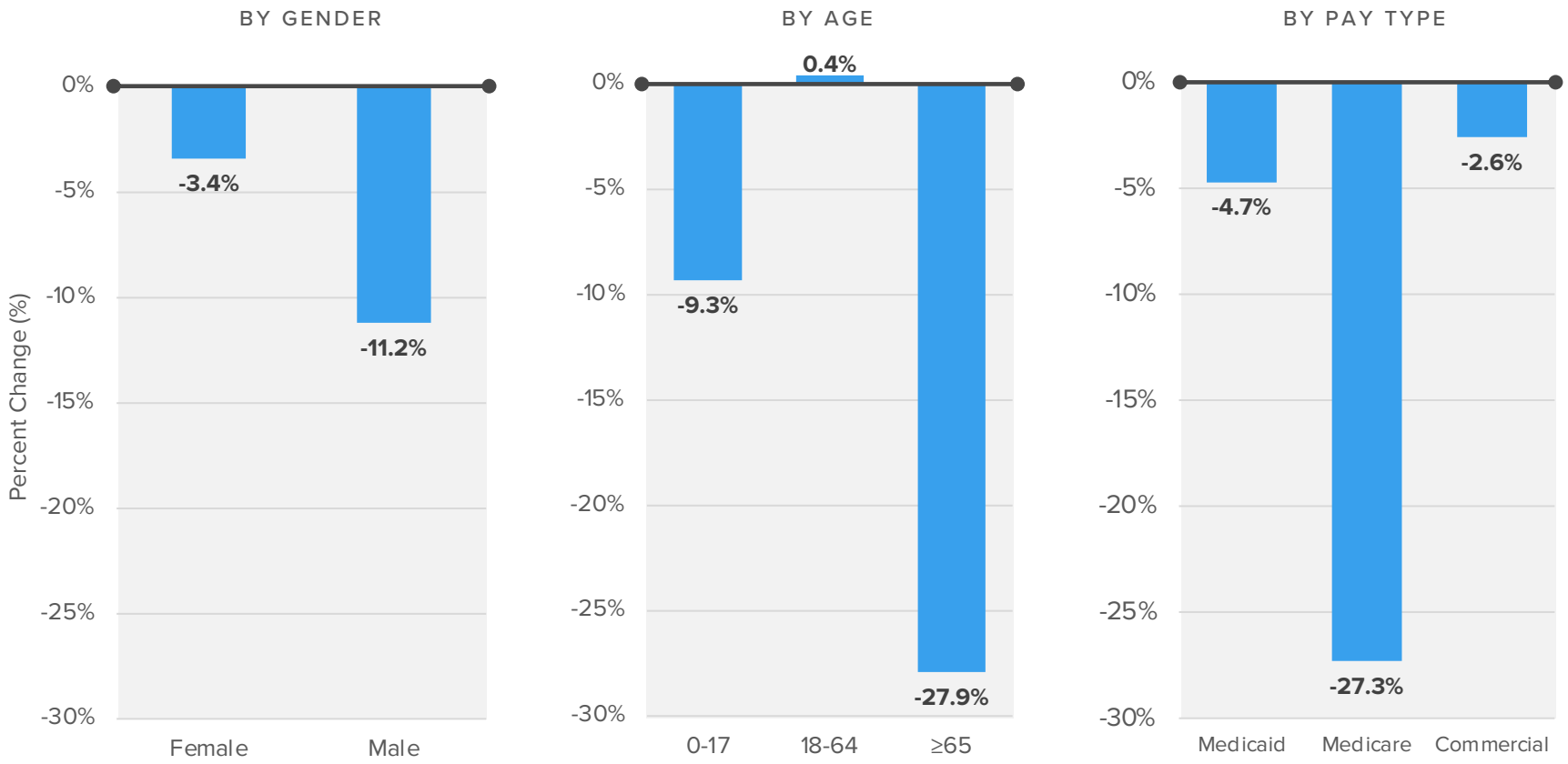
Note: The "Manage Health" index predicts the likelihood of an individual to manage their personal health (e.g., scheduling preventive services). The scale ranges 0 (most likely to manage business of health) to 9 (least likely to manage business of health).
Source: Trilliant Health national all-payer claims and consumer databases.

TREND 5: VARIATION BY POPULATION

Older Patients Are Forgoing Telehealth

While telehealth utilization by adults ages 18-64 remained at a similar rate following the peak of the pandemic, seniors and children utilized telehealth well below peak pandemic levels, at -9.3% and -27.9%, respectively.

CHANGE IN **TELEHEALTH** VISIT VOLUMES, JAN 2020-MAR 2021 TO JAN 2021-MAR 2022

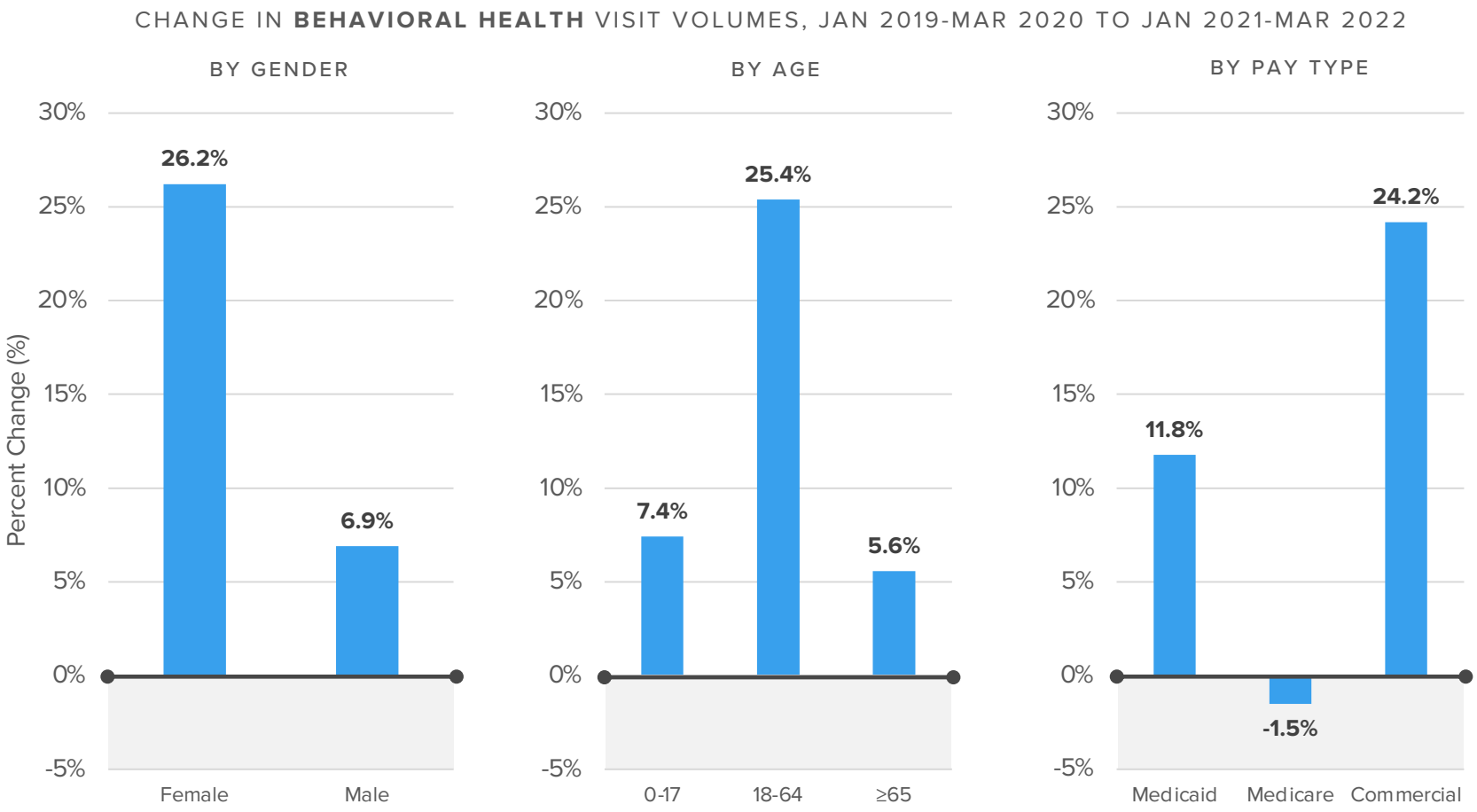


Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Behavioral Health Demand Is Higher Across Most Patient Segments

Compared to pre-pandemic volumes, demand for behavioral health services has increased most for females (+26.2%) and adults ages 18-64 (25.4%).



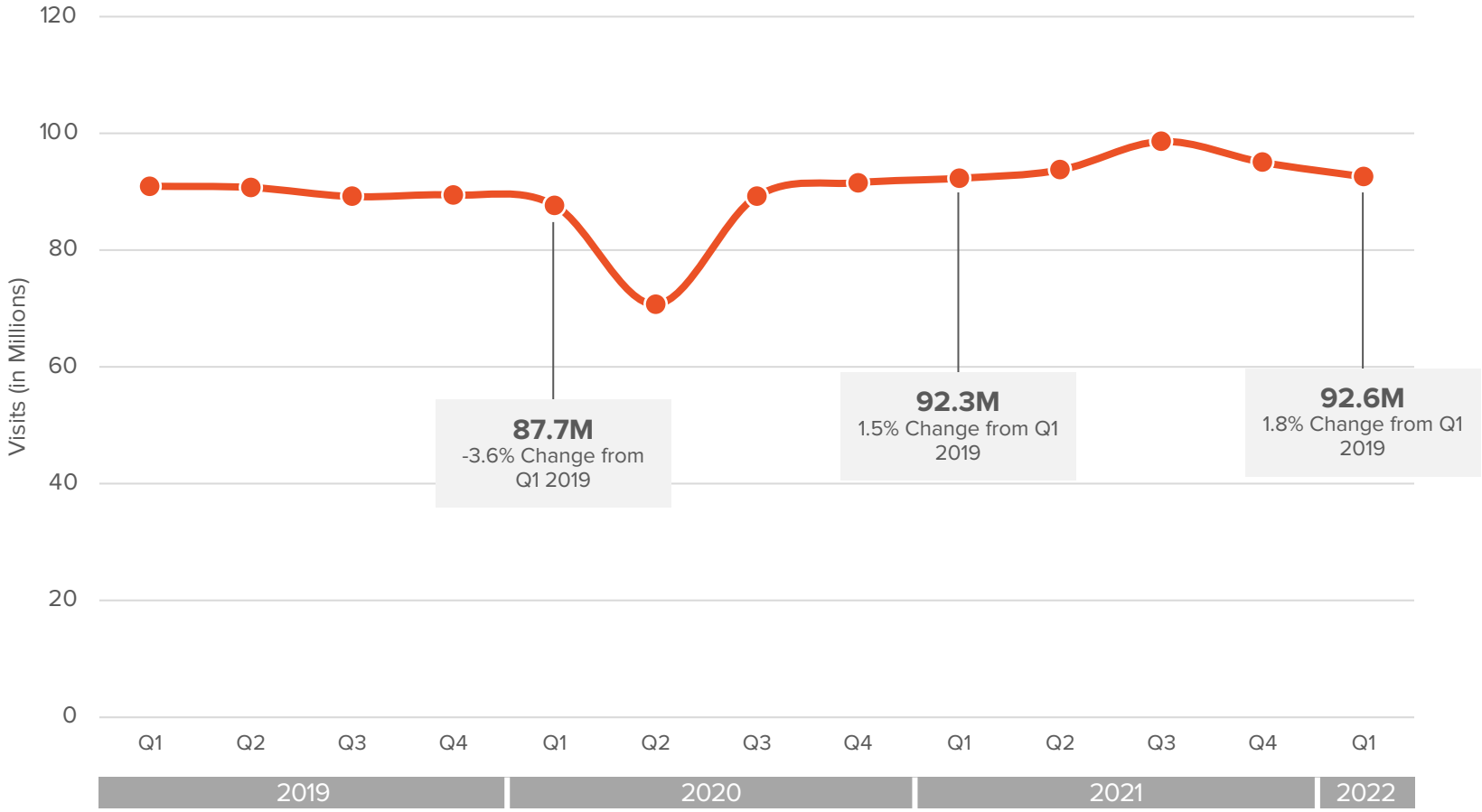
Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Demand for Women's Health Now Exceeds 2019 Levels

Despite a 3.6% decline in routine women's preventive care (e.g., services such as cancer screenings) in Q1 2020, total visit volumes have stabilized above pre-pandemic levels.

ROUTINE **WOMEN'S HEALTH** VISIT VOLUMES, FEMALES ALL AGES, Q1 2019 – Q1 2022

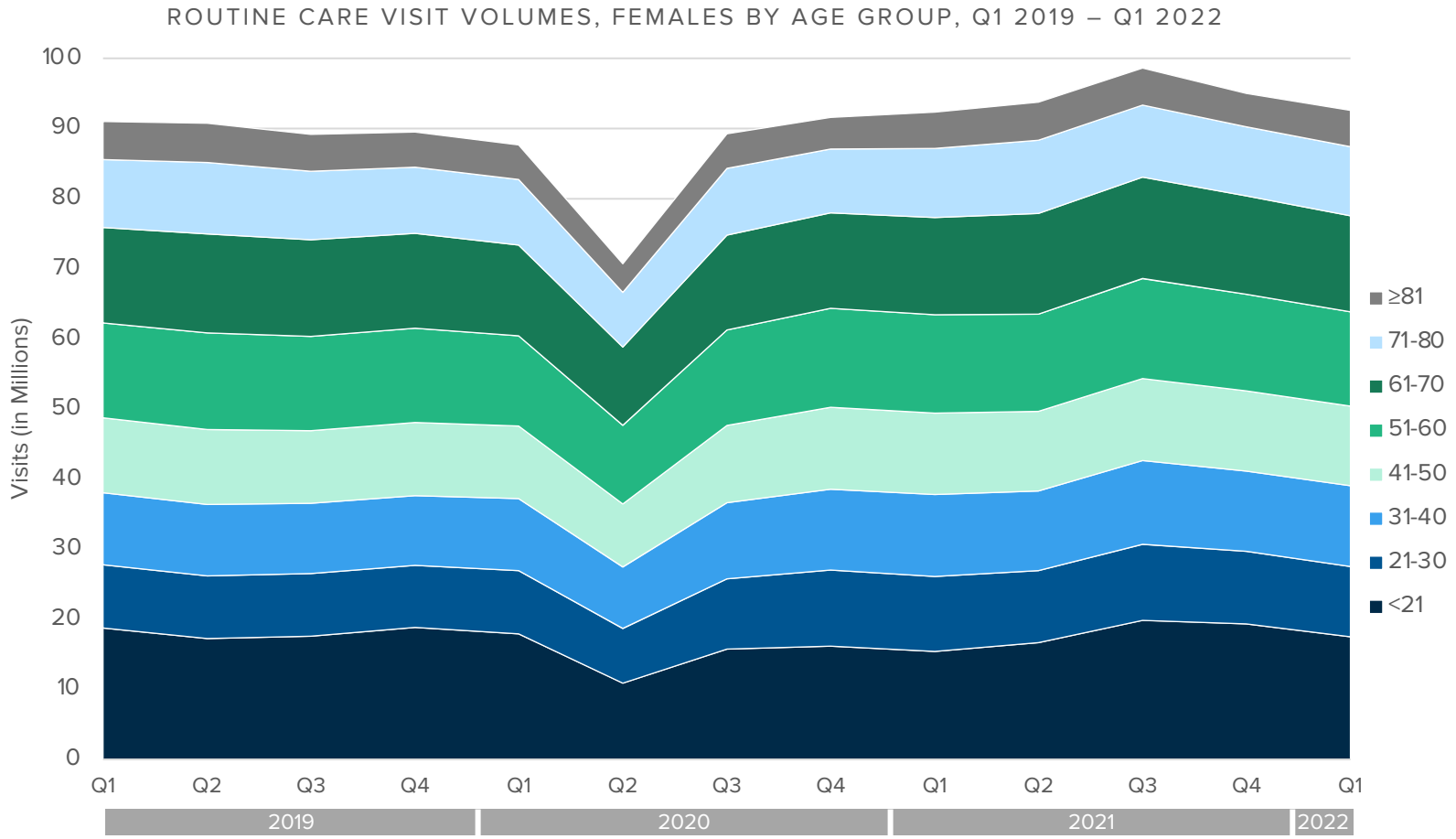


Note: See Methodology for definition of women's health.
Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Return to Preventive Women's Health Varies by Age

The 31-40 age cohort has seen the greatest volume increase in routine women's health, up 11.7% in Q1 2022 from Q1 2019.



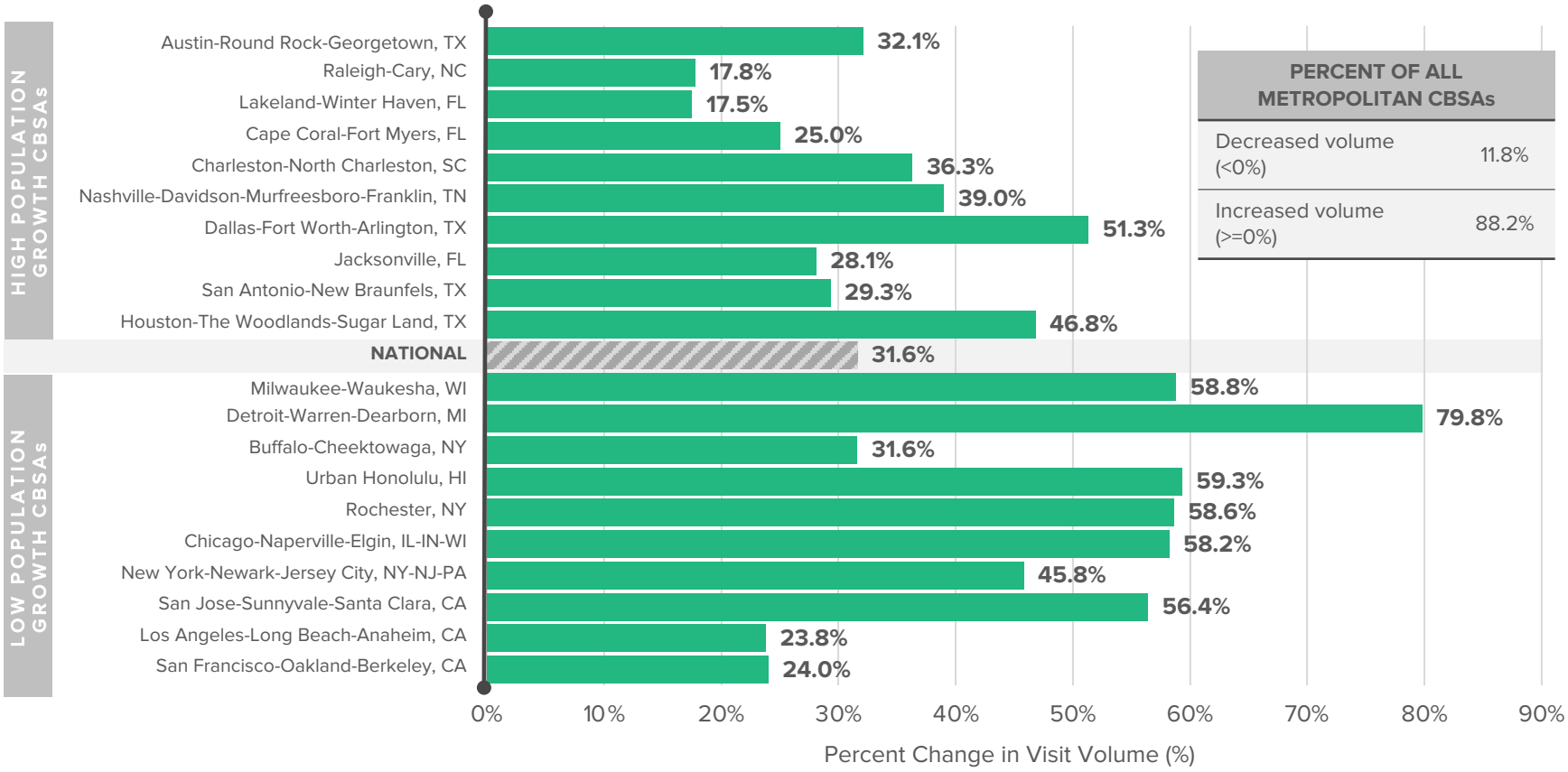
Note: See Methodology for definition of women's health.
Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Demand for Women's Health Is Increasing in Most Markets

Nationally, demand for routine women's healthcare services is up 31.6% compared to pre-pandemic, with volumes higher in 88% of markets.

ROUTINE WOMEN'S HEALTH VISIT VOLUMES, PERCENT CHANGE JAN 2019-MAR 2020 TO JAN 2021-MAR 2022



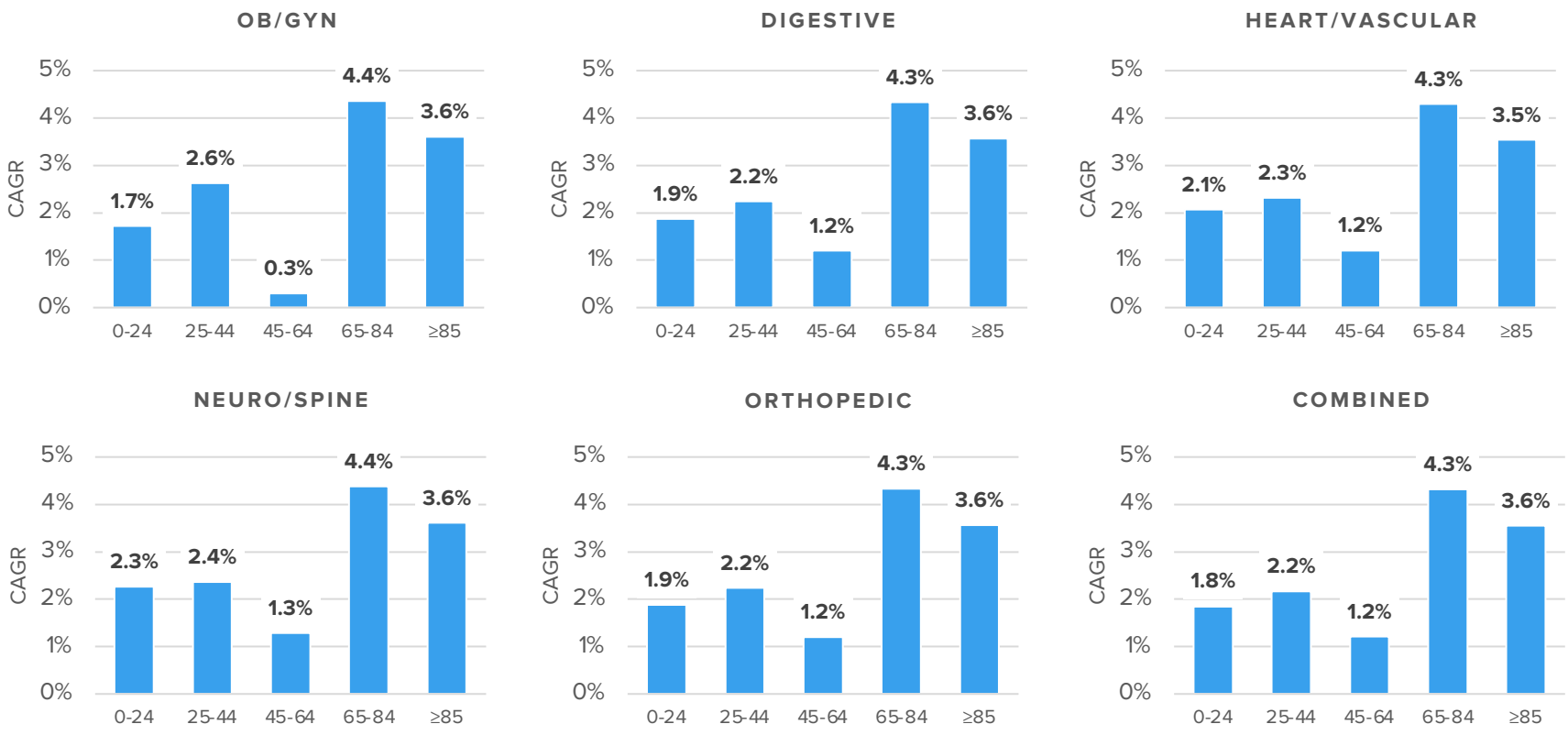
Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs. See Methodology for definition of women's health.
Source: Trilliant Health national all-payer claims database.

TREND 5: VARIATION BY POPULATION

Growth in National Surgical Demand Driven by Older Adults

While CAGR for older populations (65+) reflect the highest growth rates, surgical demand for adults ages 25-44 is projected to grow at a higher rate than adults ages 45-64.

CAGR FOR MAJOR SURGICAL SERVICES BY **AGE BAND**, 2022-2026



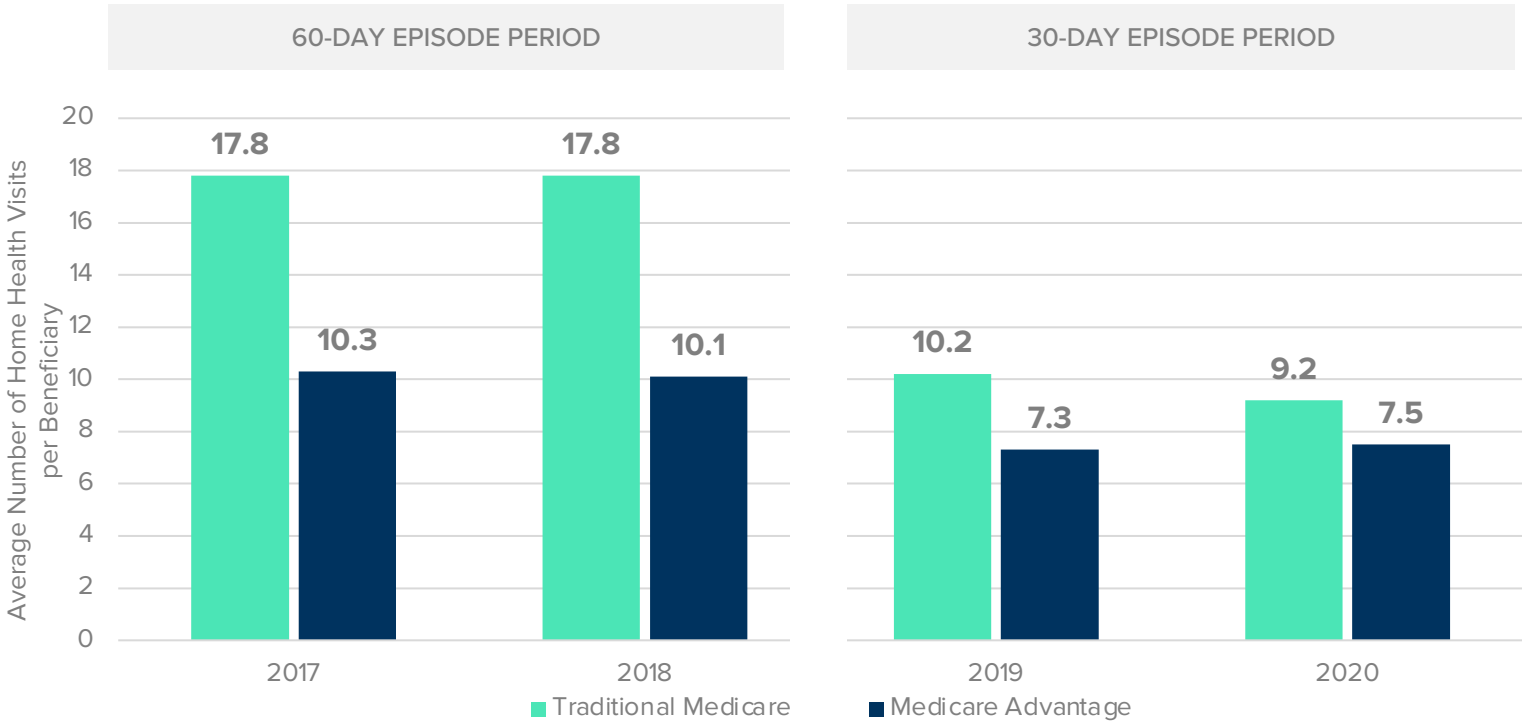
Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

TREND 5: VARIATION BY POPULATION

Home Health Utilization Varies Between Traditional Medicare and MA Beneficiaries

In 2018, Traditional Medicare beneficiaries had 17.8 visits per 60-day payment period as compared to 10.1 visits for Medicare Advantage (MA), on average. Traditional Medicare utilization of home health is declining slightly, while MA remains flat to minimally increasing.

HOME HEALTH VISITS PER EPISODE, TRADITIONAL MEDICARE VS MEDICARE ADVANTAGE, 2017-2020



Note: 2021 was excluded due to reporting lags for traditional Medicare from CMS and MedPAC.
Source: Trilliant Health national all-payer claims database. Medicare Payment Advisory Commission (MedPAC) March Reports to Congress (2020, 2021, 2022).

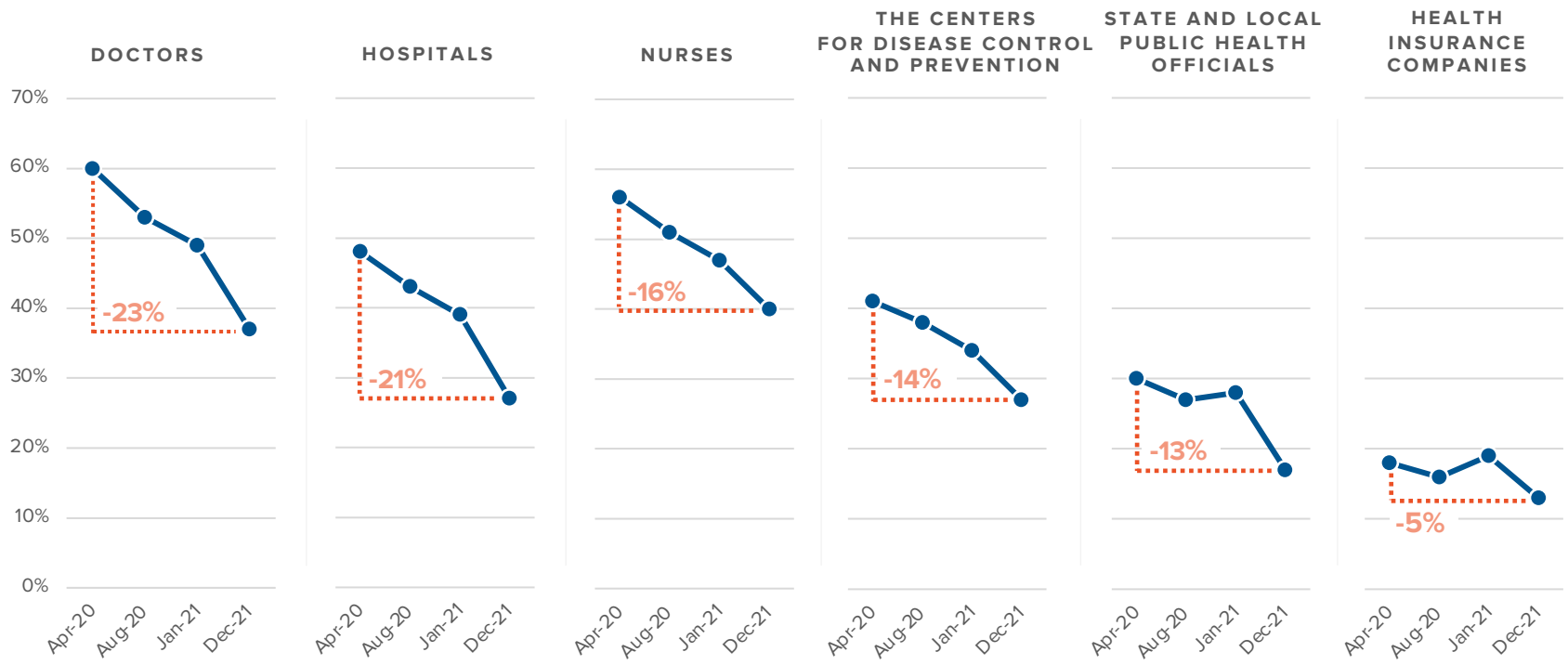
TREND 6

Individuals Are Increasingly Making Healthcare Decisions Like Consumers

Patients are Losing Trust in Providers

Health insurance companies have consistently earned the least amount of consumer trust. From April 2020 to December 2021, while all stakeholders saw declines in trust among American consumers, doctors (-23%) and hospitals (-21%) were disproportionately affected.

PERCENT OF AMERICANS WHO TRUST RECEIVING HEALTH INFORMATION A **GREAT DEAL** BY STAKEHOLDER

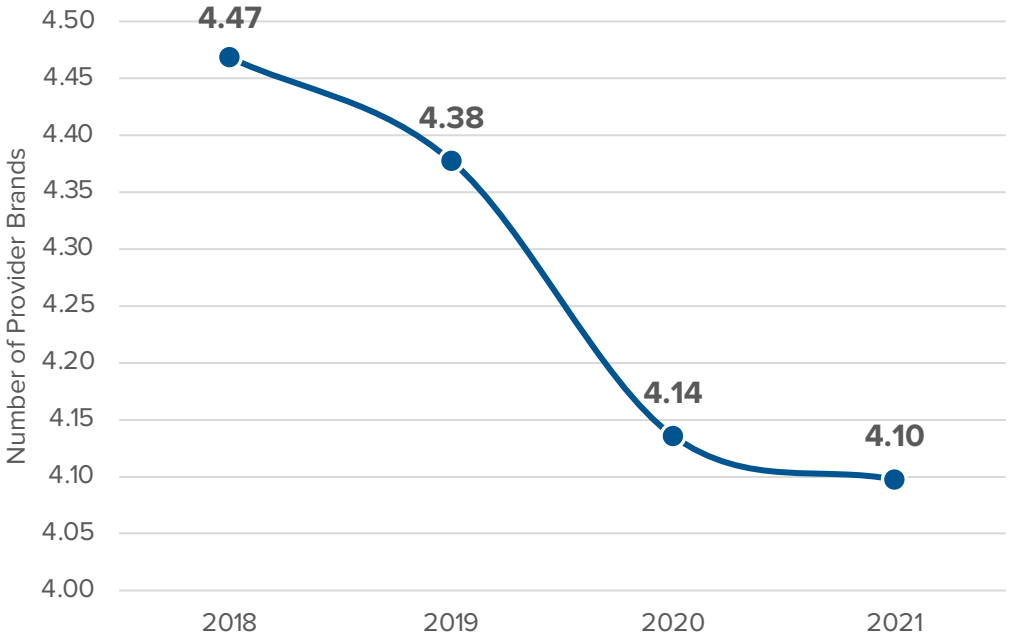


Note: Data reflects responses from a nationally representative sample to the following survey question: "When it comes to providing information about critical health issues, how much do you trust each of the following people, organizations, and companies a great deal, a fair amount, not very much, or not at all?" Percent change values (i.e., -23% for doctors) represent the difference in trust between April 2020 and December 2021.
Source: Public Opinion Strategies. National Survey of 800 Registered Voters, conducted December 1-6, 2021.

Earning Consumer Loyalty Is Harder in Competitive Markets

As more care options become available, "splitting" behavior among provider brands will likely increase. Consumers in more competitive markets tend to visit a greater number of provider brands (4.57) than those in highly concentrated markets (4.03 - 4.24). Lower provider loyalty has implications for effective care coordination.

AVERAGE ANNUAL NUMBER OF PROVIDER BRANDS PER CONSUMER, 2018-2021



AVERAGE NUMBER OF PROVIDER BRANDS PER CONSUMER BY MARKET CONCENTRATION, 2021

MARKET TYPE	AVERAGE NUMBER OF PROVIDER BRANDS PER CONSUMER
Competitive (HHI <1,500)	4.57
Moderately Concentrated (HHI 1,500-2,500)	4.43
Highly Concentrated (HHI > 2,500)	4.14

Note: Patients included in the calculations were required to have at least five or more claims within a given year and to be located in a metropolitan CBSA to more accurately measure consumer loyalty. Data excludes lab and pathology services. Provider brands were defined as the unique number of rendering provider primary organization names. This finding does suggest whether a higher or lower "brand per consumer count" is ideal; additional quality and cost data is needed to draw further conclusions.
Source: Trilliant Health national all-payer claims database.

Cleveland Clinic Had the Highest Patient Loyalty in 2021

Patient loyalty ranges from 68.7% (Ochsner Health System) to 79.4% (Cleveland Clinic) among the large health systems with the highest loyalty.

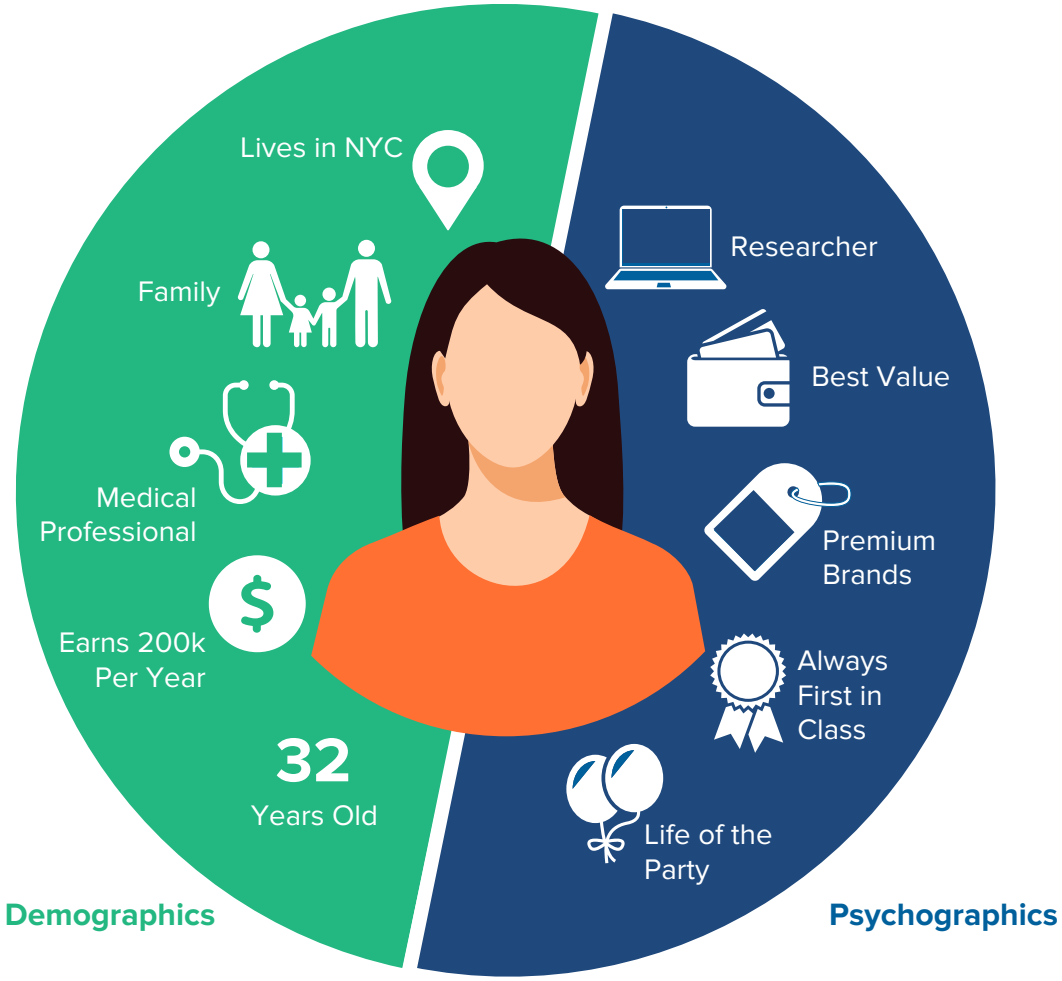
PROVIDER BRANDS WITH **MOST LOYAL** PATIENTS IN 2021

HEALTH SYSTEM	SHARE OF LOYAL PATIENTS
Cleveland Clinic	79.4%
SENTARA	74.8%
NorthShore	73%
Indiana University Health	72.8%
Beth Israel Lahey Health	72.8%
CHRISTUS Health	71.6%
MICHIGAN MEDICINE UNIVERSITY OF MICHIGAN	71.1%
MAYO CLINIC	70.7%
Atrium Health	69.7%
Ochsner	68.7%

Note: Loyalty by health system reflects the average proportion of care delivered at the patient level at each health system annually. Patients included in the loyalty calculations were required to have at least three annual visits within between 2018 and 2021. Health systems with at least 100,000 associated patients were included in the analysis.
Source: Trilliant Health national all-payer claims database.

Psychographics Transcend Demographics

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.



Psychographics Can Predict Healthcare Decision Making

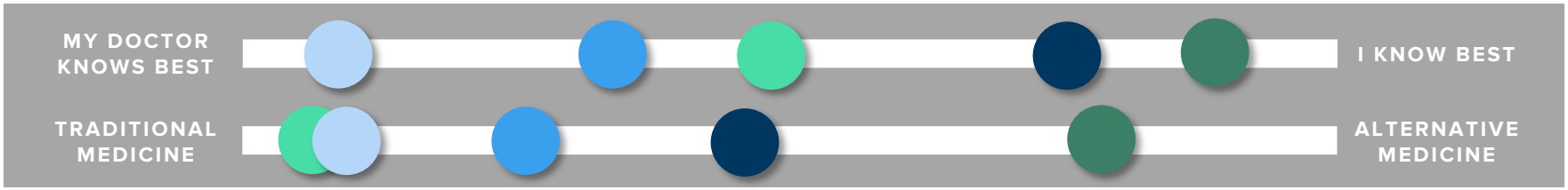
Psychographics provide insight into the "why" behind consumer choices.

MORE PRICE SENSITIVE → LESS PRICE SENSITIVE

MORE REACTIVE → MORE PROACTIVE

	WILLFUL ENDURER	DIRECTION TAKER	PRIORITY JUGGLER	BALANCE SEEKER	SELF ACHIEVER
CHARACTERISTICS	• Live in the "here and now" and believe there are more important things to focus on than improving their health • Not necessarily unhealthy, but do what they like, when they like, and typically do not change their habits • Self-reliant	• Believe their physician is the most credible resource • Look to physicians and healthcare professionals for guidance, but may not always follow advice if it doesn't fit into their routine • Prefer to "cut to the chase" and do not like being asked many questions	• Very busy with many responsibilities and may not take the time to invest in their own wellbeing • More reactive with their own health issues, but very proactive when it comes to their family's health	• Generally proactive in their health and are wellness oriented • Open to many ideas, sources of information and treatment options • Physicians and healthcare professionals are viewed as useful resources, but not the only resource for leading a healthy life • They define what success looks like in their health	• The most proactive when it come to their wellness • They invest what is necessary toward their health and appearance • They may have health issues, but they stay on top of them with regular medical checkups, health screenings and research • Task-oriented and will tackle a challenge if they are given measurable goals
PREFERRED SITES OF CARE	Urgent care, retail clinics, emergency department	Traditional primary care	Traditional primary care	Traditional primary care	Telehealth, traditional primary care

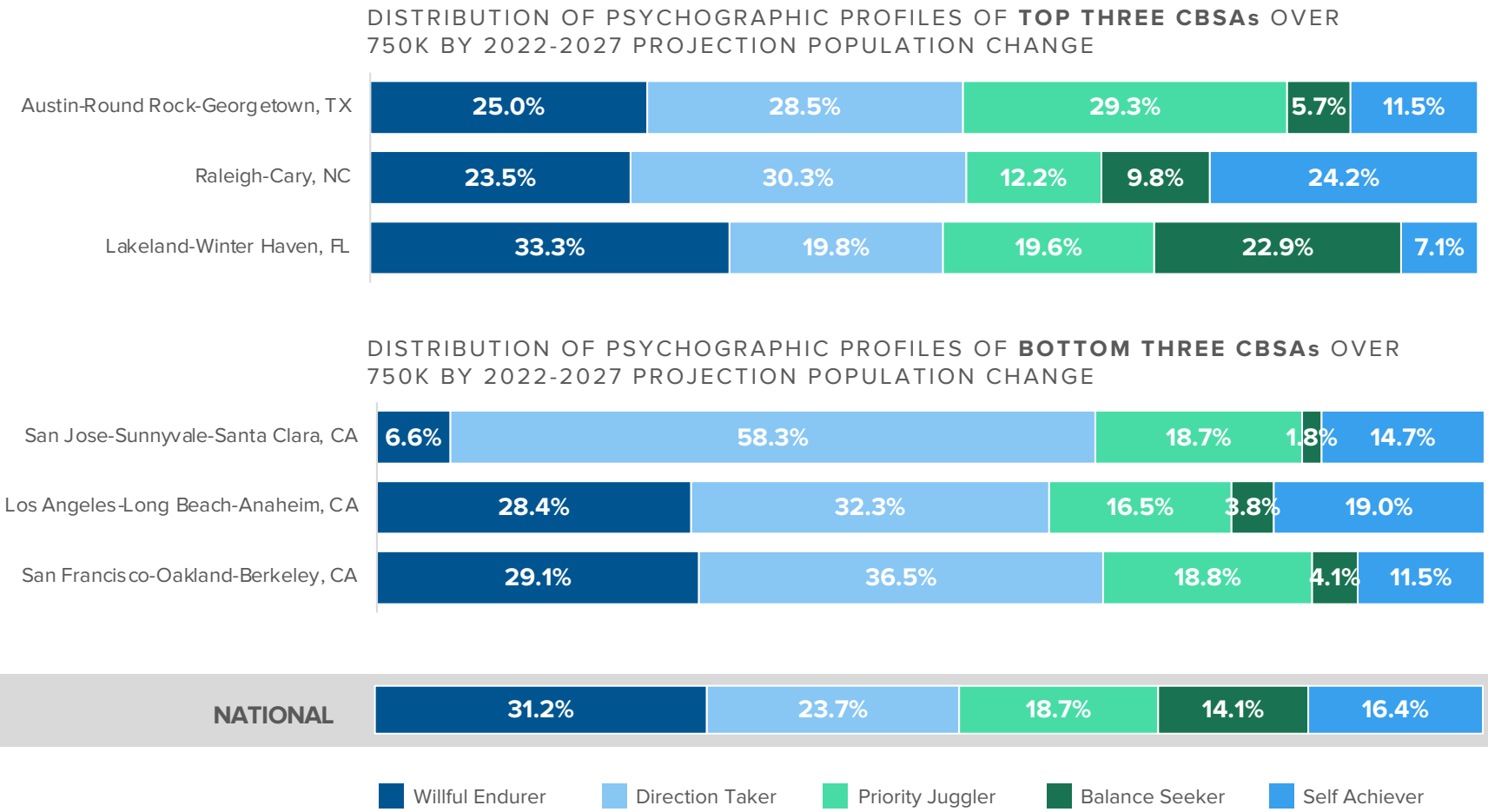
SEGMENTATION INSIGHTS DRIVE SPECIFIC MESSAGINGS



Source: Trilliant Health national consumer database.

Psychographic Mix Varies by Market

Despite having similar population growth trajectories, psychographic mix in high- and low-growth markets does not follow a consistent pattern.



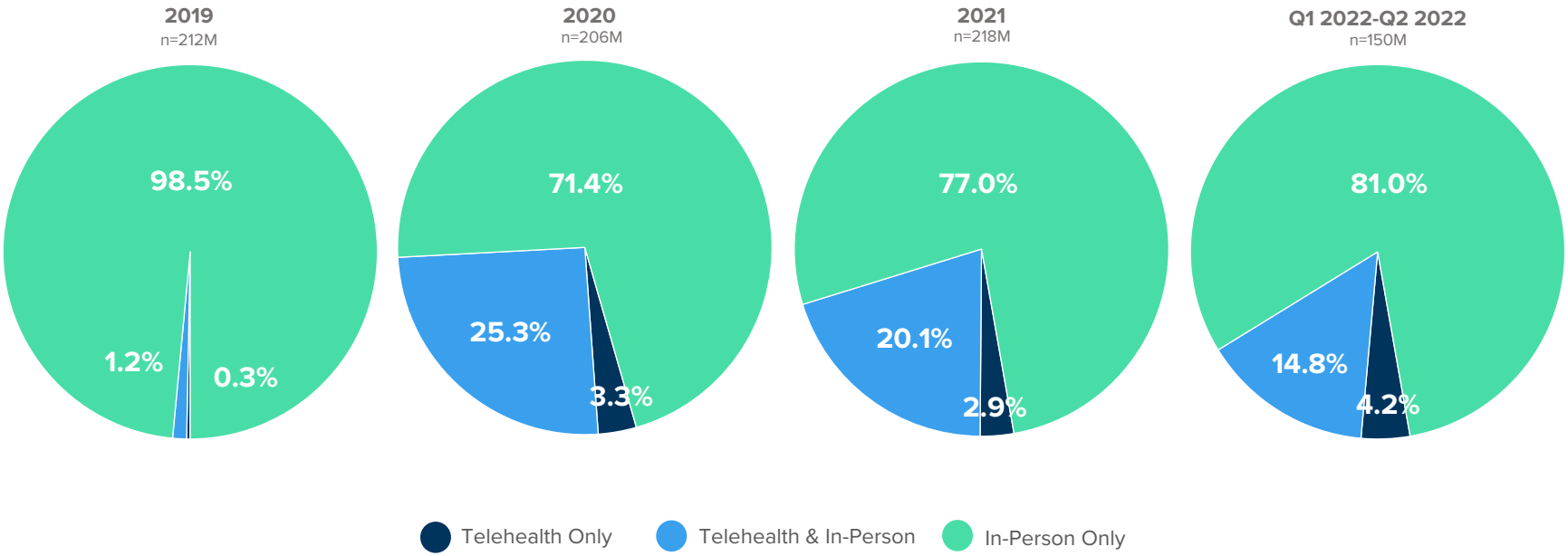
Source: Trilliant Health national consumer database.

TREND 6: INDIVIDUAL AS CONSUMER

More Patients Returning to Solely In-Person Care

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

PERCENT OF IN-PERSON, TELEHEALTH & IN-PERSON, AND TELEHEALTH-ONLY PATIENTS, 2019-2022



Source: Trilliant Health national all-payer claims database.

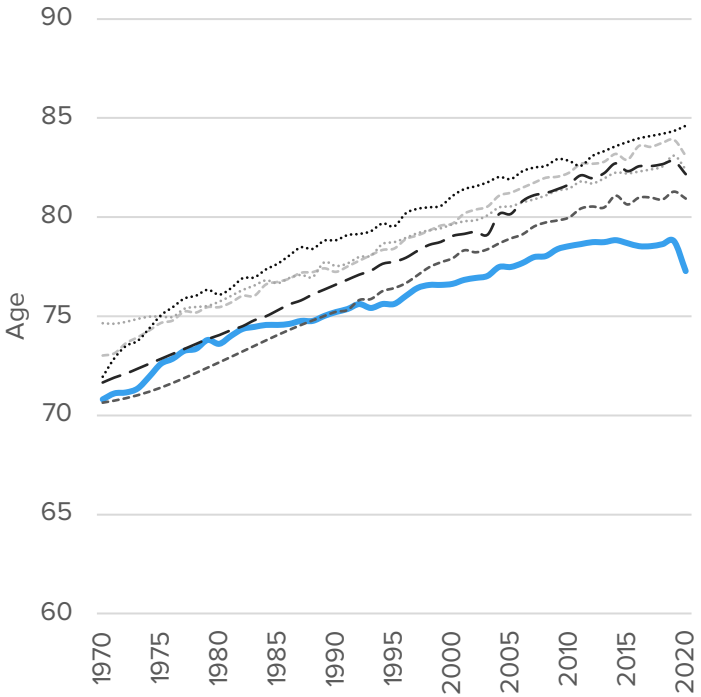
TREND 7

Increasing Unaffordability Is Suppressing Healthcare Demand

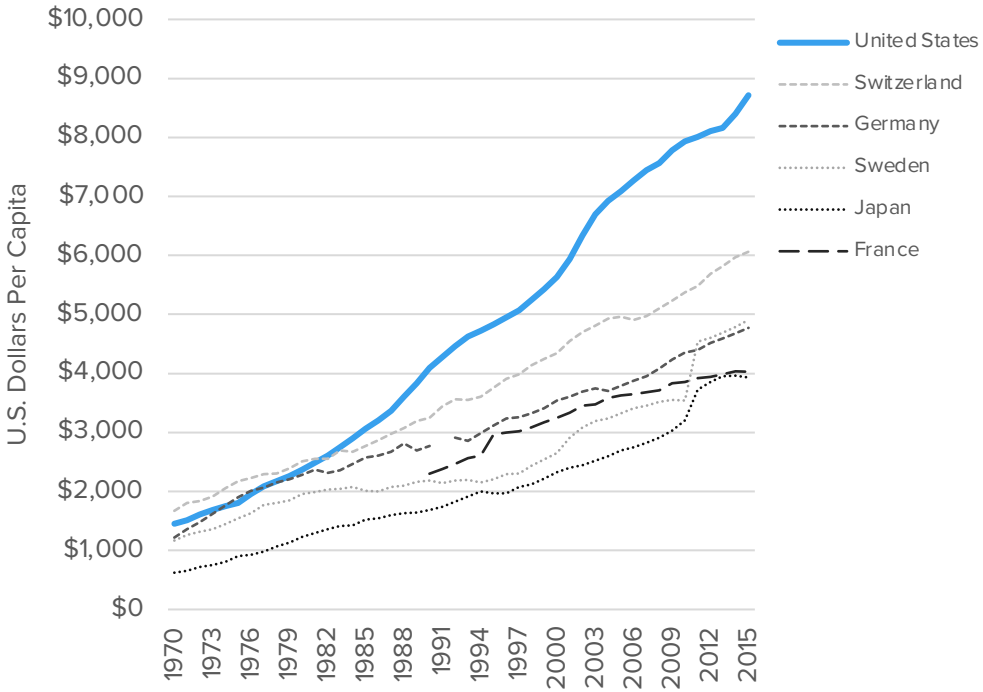
The U.S. Outspends on Healthcare Without Better Outcomes

Healthcare spending is the result of price and utilization. Comparing U.S. spending and life expectancy vs. other OECD countries reveals that the U.S. has the highest per capita healthcare spending ($8,714.90) and the lowest life expectancy (77.3 years).

LIFE EXPECTANCY BY COUNTRY, 1970-2020



HEALTH EXPENDITURES PER CAPITA BY COUNTRY, 1970-2015

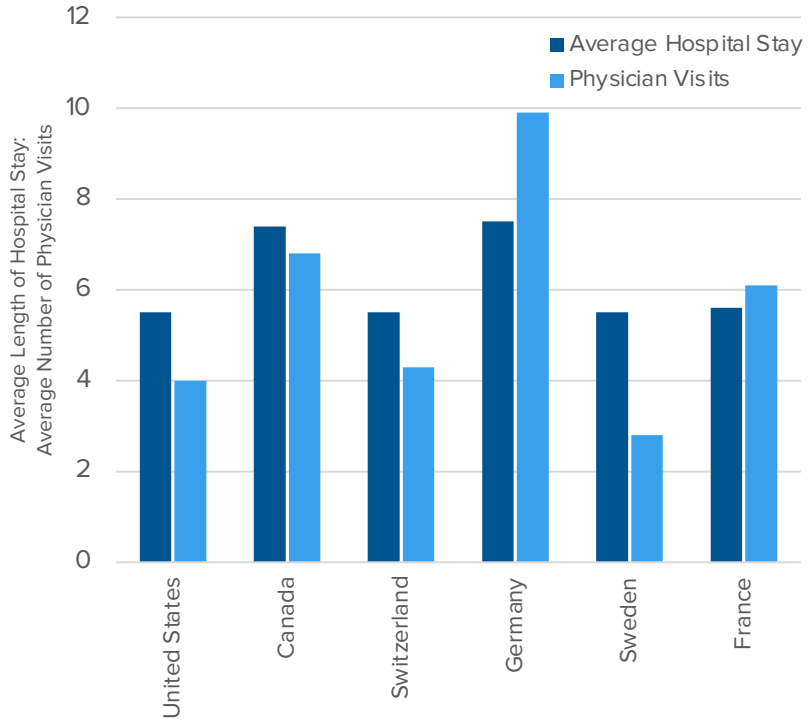


Source: Our World in Data Life Expectancy vs. Health Expenditure 1970-2015.

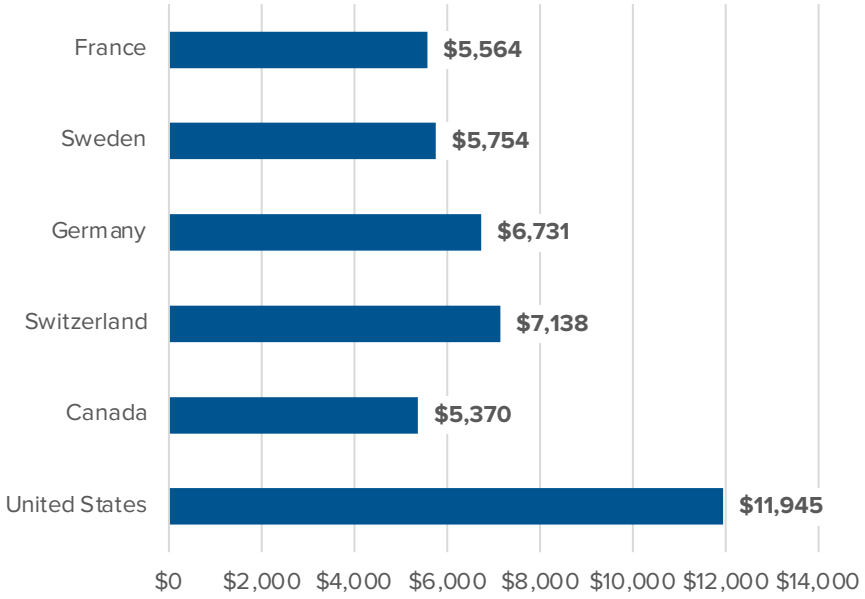
U.S. Healthcare Prices Are Uniquely High

U.S. healthcare utilization (e.g., physician visits per person, average length of stay) is comparable to other OECD countries. In contrast, the U.S. per capita health expenditures are twice that of other countries. Similar volume and dissimilar spending suggests that U.S. healthcare prices are uniquely high.

LENGTH OF STAY & PHYSICIAN VISITS, 2017



HEALTH EXPENDITURES PER CAPITA, 2019 (U.S. DOLLARS)

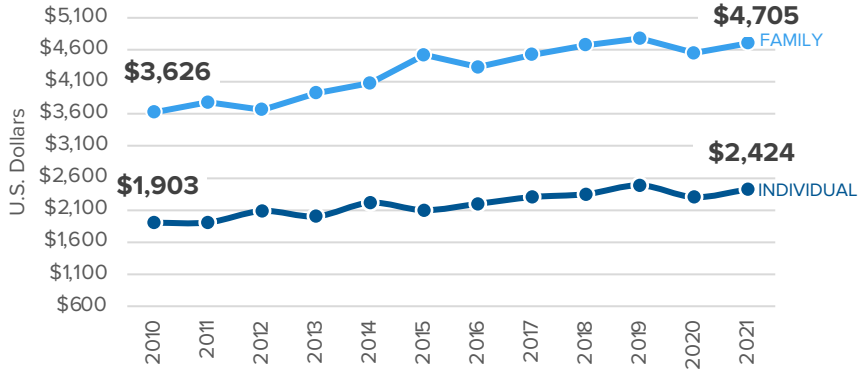


Source: Commonwealth Fund. Kaiser Family Foundation. Centers for Medicare and Medicaid Services National Health Expenditures.

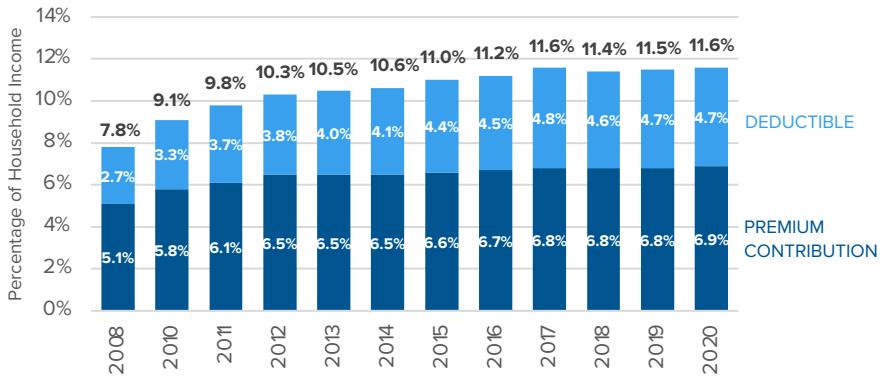
Healthcare Affordability Increasingly Affects Most Americans

With healthcare affordability an increasing concern for most Americans, the barriers to re-engaging patients in necessary medical care will be even greater.

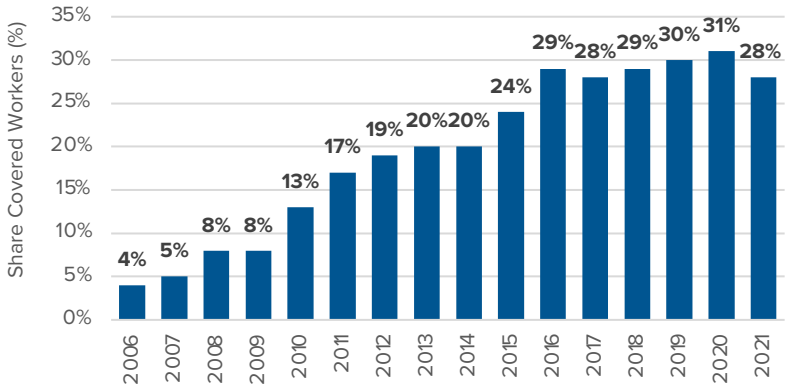
AVERAGE ANNUAL EMPLOYER-SPONSORED HDHP DEDUCTIBLE, 2010-2021



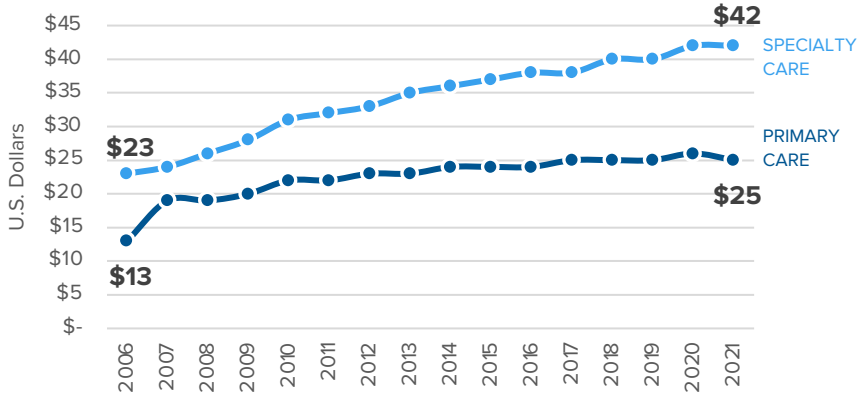
MEDIAN INCOME SPENDING ON HEALTHCARE, 2008-2020



SHARE OF COVERED WORKERS ENROLLED IN A HDHP, 2006-2021



AVERAGE COPAYMENT FOR PHYSICIAN OFFICE VISITS, 2006-2021

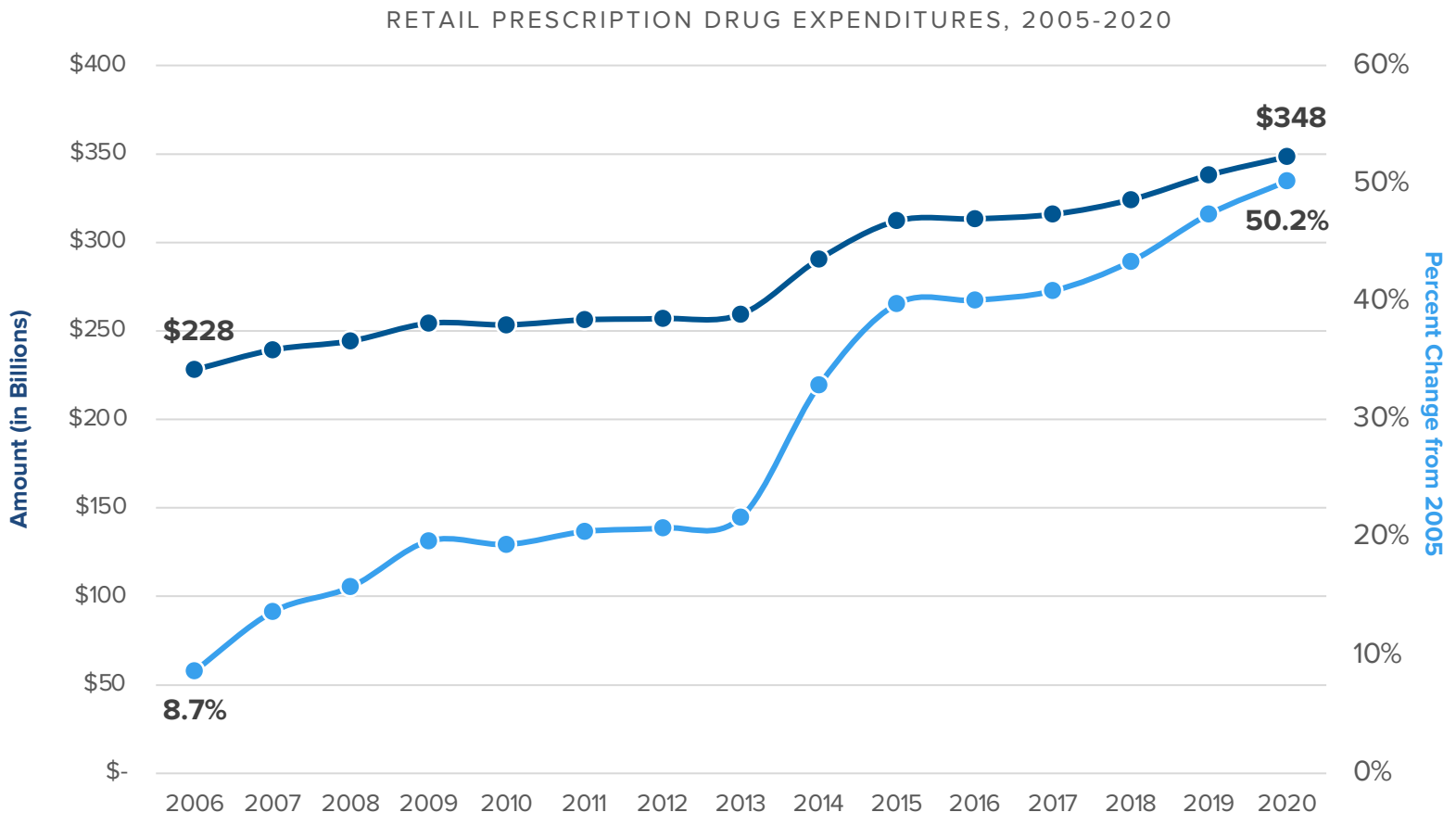


Note: HDHP denotes High-Deductible Health Plan.
Source: Kaiser Family Foundation Employer Health Benefits 2021 Survey; U.S. Census Bureau Current Population Survey CPS.

TREND 7: UNAFFORDABILITY SUPPRESSING DEMAND

High and Growing Drug Prices Contribute to Affordability Issues

Retail prescription drug expenditures increased 50.2% from 2005 to 2020, accounting for 8% of national health expenditures.

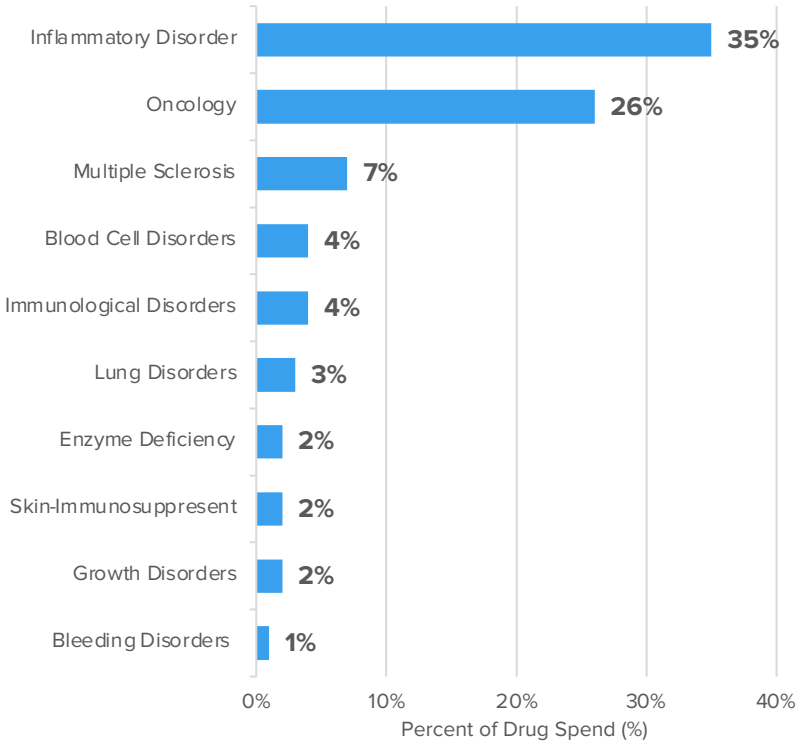


Source: Centers for Medicare and Medicaid Services National Health Expenditures.

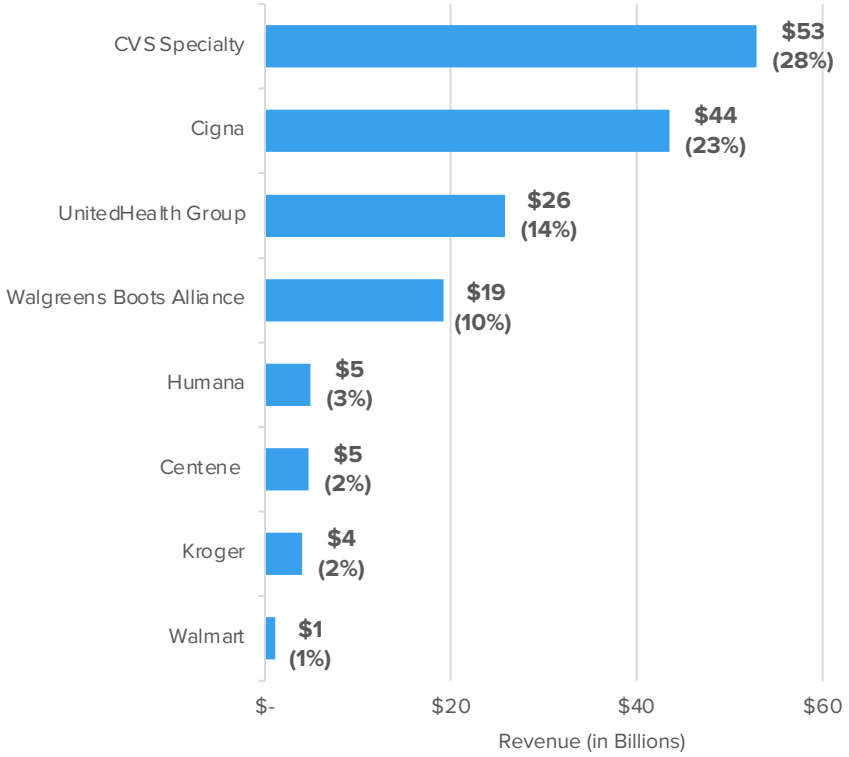
Specialty Pharmacy Spending Concentrated in Oncology and Immunology

Inflammatory disorders contribute to a disproportionate amount of specialty pharmacy spending (35%). CVS, Cigna, and UnitedHealth Group account for 27% of estimated U.S. prescription revenues attributed to specialty drugs.

SPECIALTY PHARMACY CATEGORIES BY DRUG SPEND



PHARMACY PARENT ORGANIZATIONS REVENUE AMOUNT (SHARE OF PRESCRIPTION REVENUES FROM SPECIALTY DRUGS)

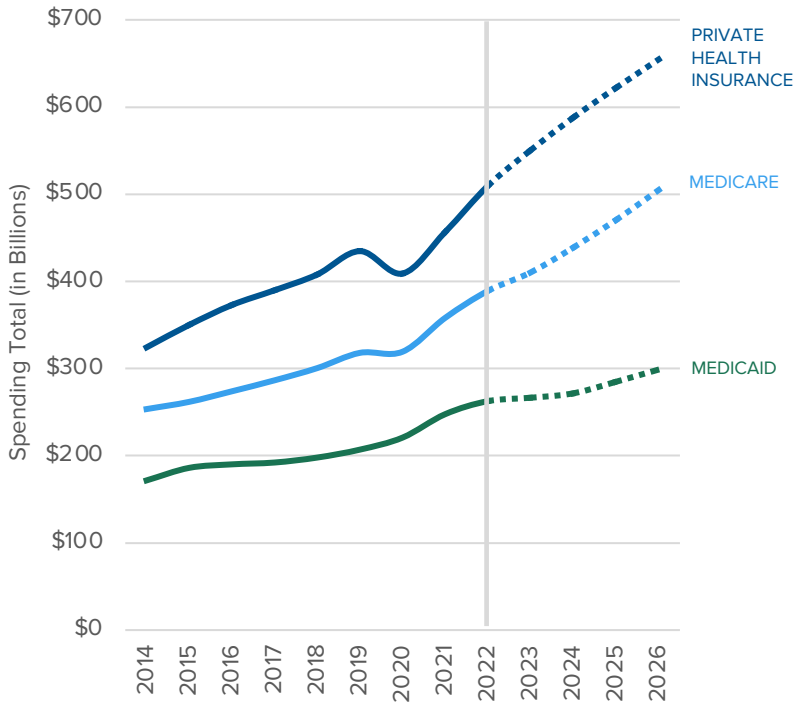


Source: Pharmaceutical Strategies Group. 2022 Artemetrx State of Specialty Spend and Trend Report. Dallas, TX.

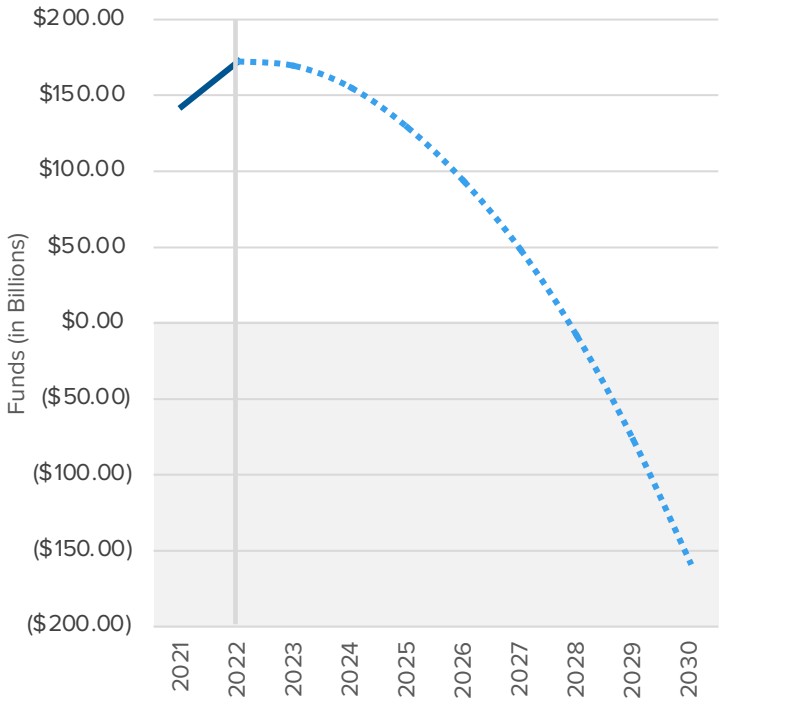
Current and Projected Healthcare Spending Is Unsustainable

Healthcare spending is projected to continue to grow through 2026 across all payers. In tandem, the Medicare Hospital Insurance Trust Fund is depleting, projected to expire by 2028.

HEALTHCARE SPENDING BY PAY TYPE



MEDICARE HOSPITAL INSURANCE TRUST FUND
END OF YEAR FUNDS AND PROJECTED AMOUNTS

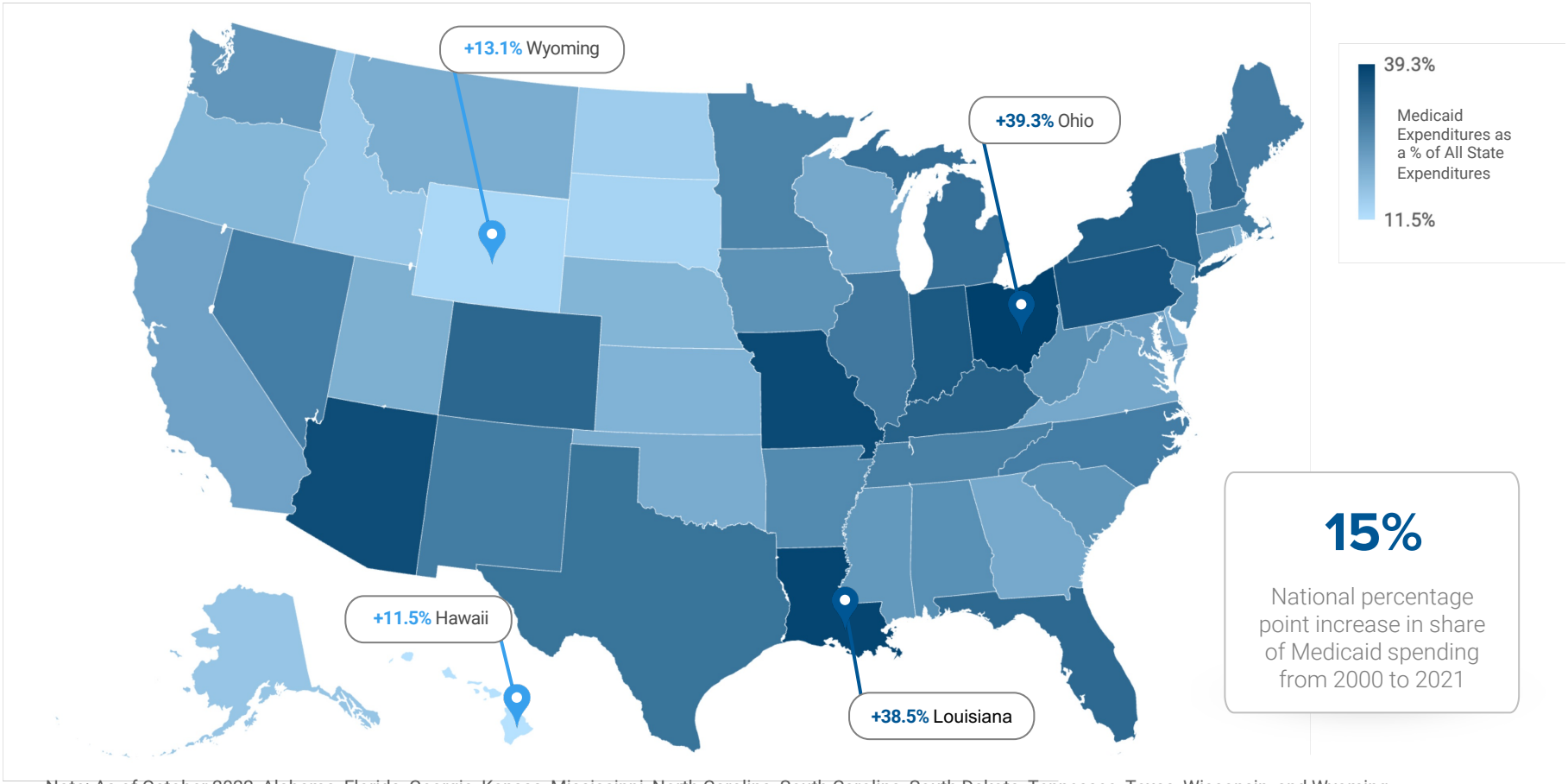


Source: Centers for Medicare and Medicaid Services (CMS) National Health Expenditures Projections, 2019-28.

Medicaid Spending Growing as A Share of State Spending

For FY 2021, 24 states spent more than 25% of total spending on Medicaid. Nationally in FY 2022, 27.2% of state expenditures went towards Medicaid, a 15-percentage point increase from 2000 spending.

MEDICAID SPENDING AS A PERCENT OF STATE BUDGETS, FY 2021



15%

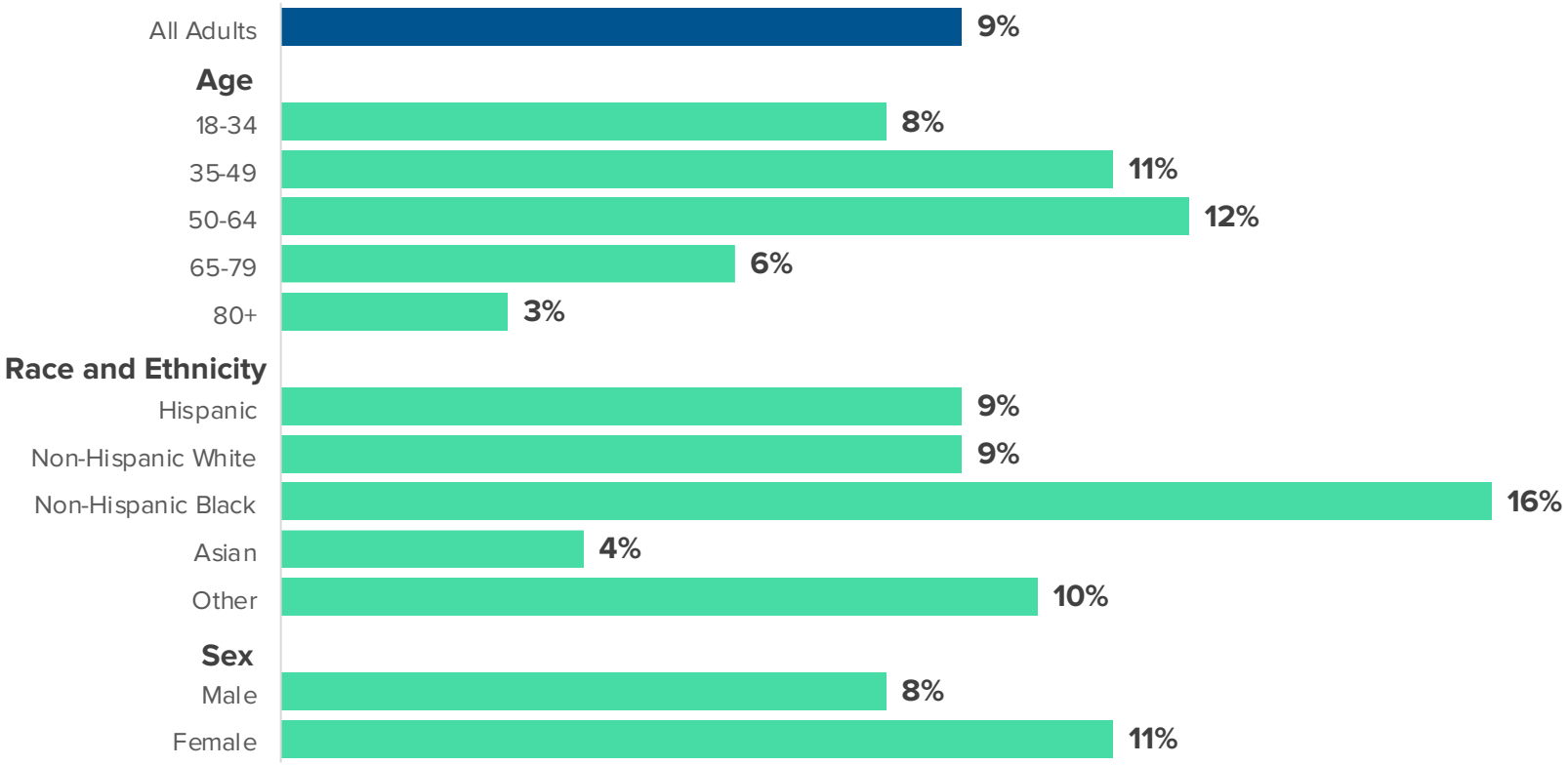
National percentage point increase in share of Medicaid spending from 2000 to 2021

Note: As of October 2022, Alabama, Florida, Georgia, Kansas, Mississippi, North Carolina, South Carolina, South Dakota, Tennessee, Texas, Wisconsin, and Wyoming have not yet expanded Medicaid. FY denotes fiscal year.
Source: National Association for State Budget Officers; The Pew Charitable Trusts.

U.S. Medical Debt Reaches $140B

Although over 90% of Americans have health insurance, 17.8% had medical debt in June 2020. Medical debt is highest among individuals in the South and zip codes in the lowest income deciles. High deductibles and other forms of cost sharing can contribute to an individual's inability to afford their medical bills.

SHARE OF ADULTS WHO HAVE MEDICAL DEBT, BY DEMOGRAPHIC, 2019



Source: Kluender et al *JAMA*, 2021; KFF Analysis of Survey of Income and Program Participation.

TREND 8

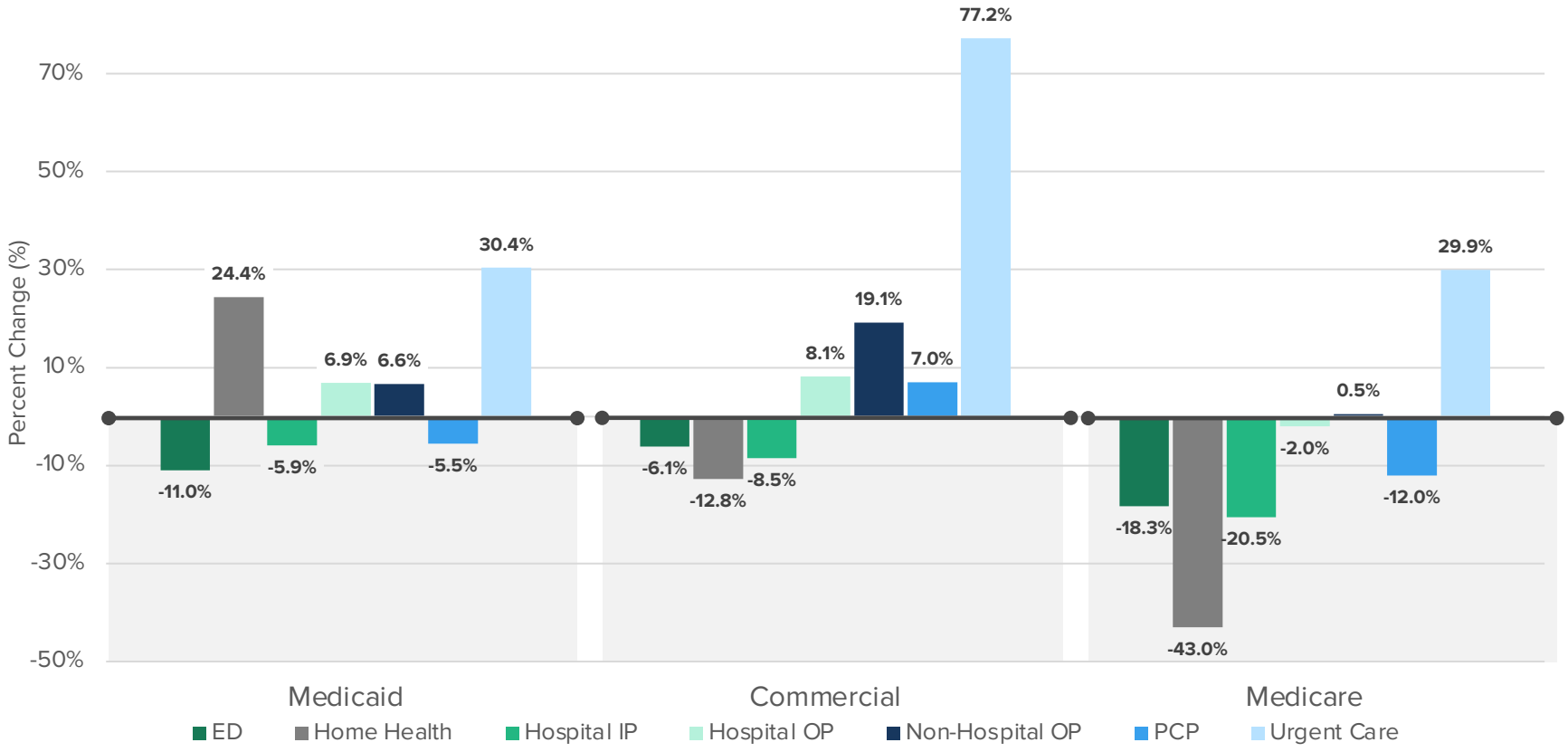
Migration of Care Delivery To Lower-Acuity Ambulatory Settings Is Accelerating

TREND 8: ACCELERATING AMBULATORY MIGRATION

Non-Hospital Outpatient Volumes Are Higher Across Pay Types

Across payers, volumes are only consistently above pre-pandemic levels in urgent care and non-hospital outpatient settings. Commercial volumes are up 77.2% for urgent care and 19.1% for non-hospital outpatient care. Much of this increase is driven by COVID-related care.

CHANGE IN VOLUMES BY **CARE SETTINGS** & **PAY TYPE**, JAN 2019-MAR 2020 TO JAN 2021-MAR 2022



Note: IP denotes Inpatient; OP denotes Outpatient; PCP denotes Primary Care Provider.
Source: Trilliant Health national all-payer claims database.

Volume Increases Are Concentrated in Non-Hospital Outpatient Settings

The only settings of care with a positive growth rate from 2019 to 2021 are urgent care and non-hospital outpatient departments. Notably, almost half (47%) of urgent care volumes in Q1 2021 are related to treatment and/or testing of COVID-19.

PERCENT CHANGE IN VISIT VOLUMES, JAN 2019-MAR 2020 TO JAN 2021-MAR 2022

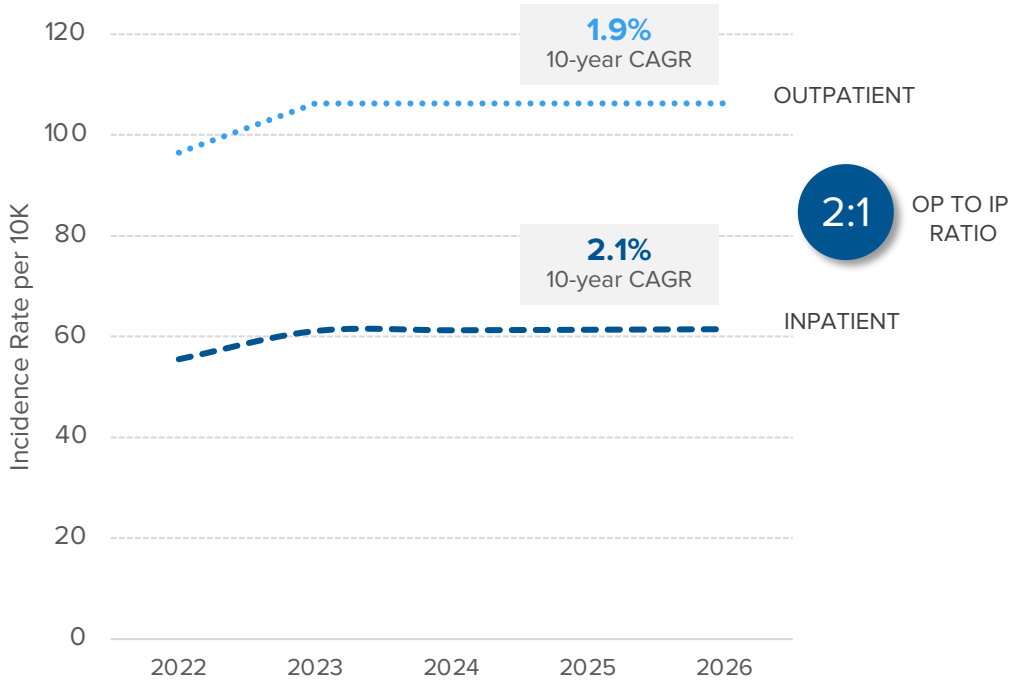
CATEGORY	OVERALL POST-COVID VOLUMES	COMMERCIAL INSURANCE	AGES 18-64	WOMEN
PRIMARY CARE	↓	7.0%	6.8%	-0.6%
URGENT CARE	↑	77.2%	78.5%	59.2%
EMERGENCY DEPARTMENT	↓	6.1%	-8.7%	-16.5%
HOME HEALTH	—	12.8%	3.2%	-2.8%
INPATIENT	↓	8.5%	-16.1%	-14.6%
OUTPATIENT (HOSPITAL)	↓	8.1%	2.9%	2.5%
OUTPATIENT (NON-HOSPITAL)	↑	19.1%	15.2%	11.8%
TELEHEALTH	↓	37.0%	0.4%	-3.4%
WOMEN'S HEALTH	↑	9.9%	N/A	N/A
BEHAVIORAL HEALTH	↑	24.2%	25.4%	26.2%

Note: Telehealth reflects the percent change from January 2020-March 2021 to January 2021-March 2022
Source: Trilliant Health national all-payer claims database.

Outpatient Heart/Vascular Growth Outpacing Inpatient 2:1

Inpatient and outpatient demand for heart/vascular surgical services is projected to increase slightly at 2.1% and 1.9% CAGR, respectively. Cardiac catheterization is the top procedure contributing to demand growth in both inpatient and outpatient settings.

FORECASTED NATIONAL **HEART/VASCULAR** SERVICE GROWTH, 2022-2026



TOP SURGICAL **HEART/VASCULAR** PROCEDURES CONTRIBUTING TO FORECASTED DEMAND

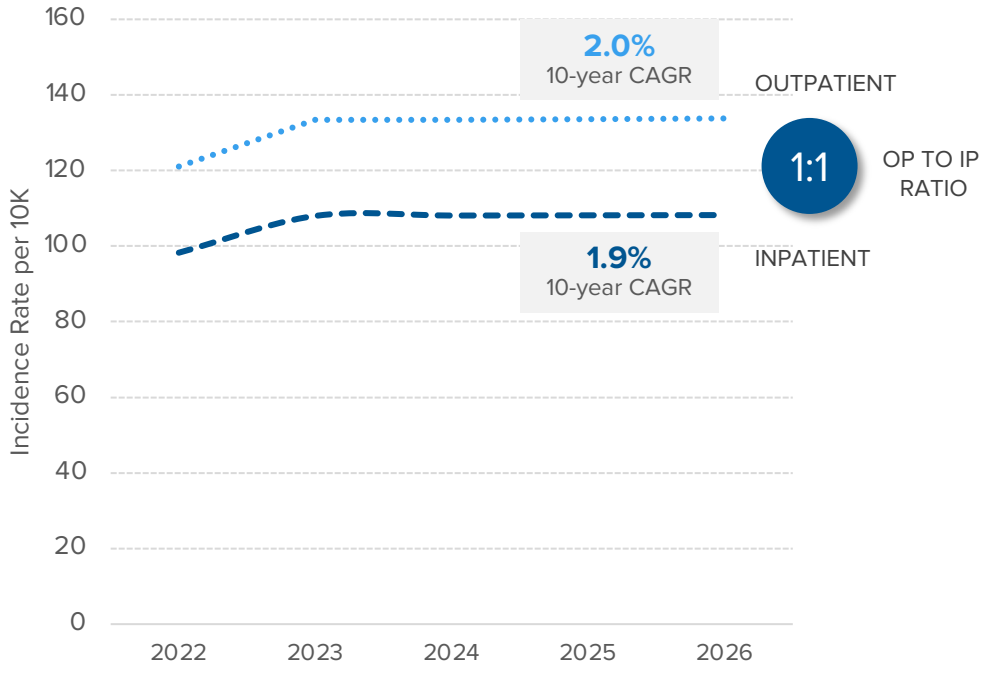
	INPATIENT	OUTPATIENT
1	Cardiac Catheterization	Cardiac Catheterization
2	Other Vascular Procedures	Percutaneous Cardiovascular Procedures
3	Other Procedures on Arteries and Veins	Other Procedures on Arteries and Veins
4	Pacemaker or Pacing Cardioverter-Defibrillator Procedures	Pacemaker or Pacing Cardioverter-Defibrillator Procedures
5	Percutaneous Cardiovascular Procedures	Other Therapeutic Cardiovascular Services and Procedures

Source: Trilliant Health Demand Forecast.

Inpatient OB/GYN Growth Similar to Outpatient

Inpatient and outpatient demand for OB/GYN surgical services is projected to increase slightly at 1.9% and 2.0% CAGR, respectively. Vaginal delivery and surgical procedures on the corpus uteri are the top procedures contributing to demand growth for inpatient and outpatient settings, respectively.

FORECASTED NATIONAL **OB/GYN** SERVICE GROWTH, 2022-2026



TOP SURGICAL **OB/GYN** PROCEDURES CONTRIBUTING TO FORECASTED DEMAND

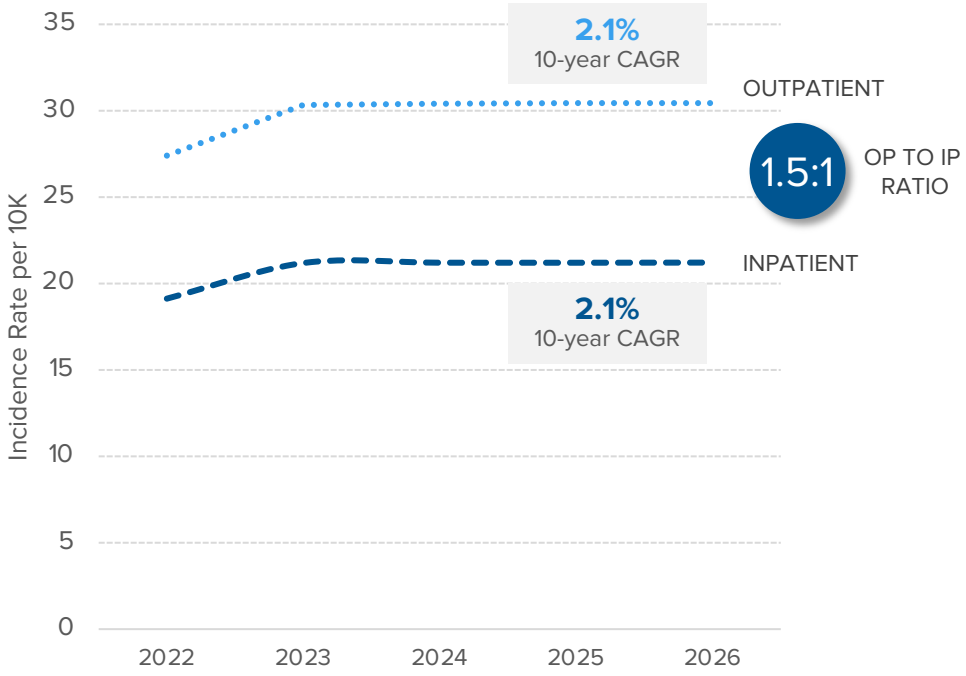
	INPATIENT	OUTPATIENT
1	Vaginal Delivery	Surgical Procedures on the Corpus Uteri
2	Cesarean Delivery Procedures	Surgical Procedures on the Cervix Uteri
3	Surgical Procedures on the Corpus Uteri	Surgical Procedures on the Vagina
4	Surgical Procedures on the Cervix Uteri	Surgery of the Breast
5	Surgical Procedures on the Cervix Uteri	Mastectomy

Source: Trilliant Health Demand Forecast.

Outpatient Neuro/Spine Surgery Outpacing Inpatient 1.5:1

Inpatient and outpatient demand for neuro/spine surgical services is projected to increase slightly at 2.1% CAGR for each. Spinal fusions and surgeries on nerves and nervous system are the top procedures contributing to demand growth in both inpatient and outpatient settings, respectively.

FORECASTED NATIONAL **NEURO/SPINE** SERVICE GROWTH, 2022-2026



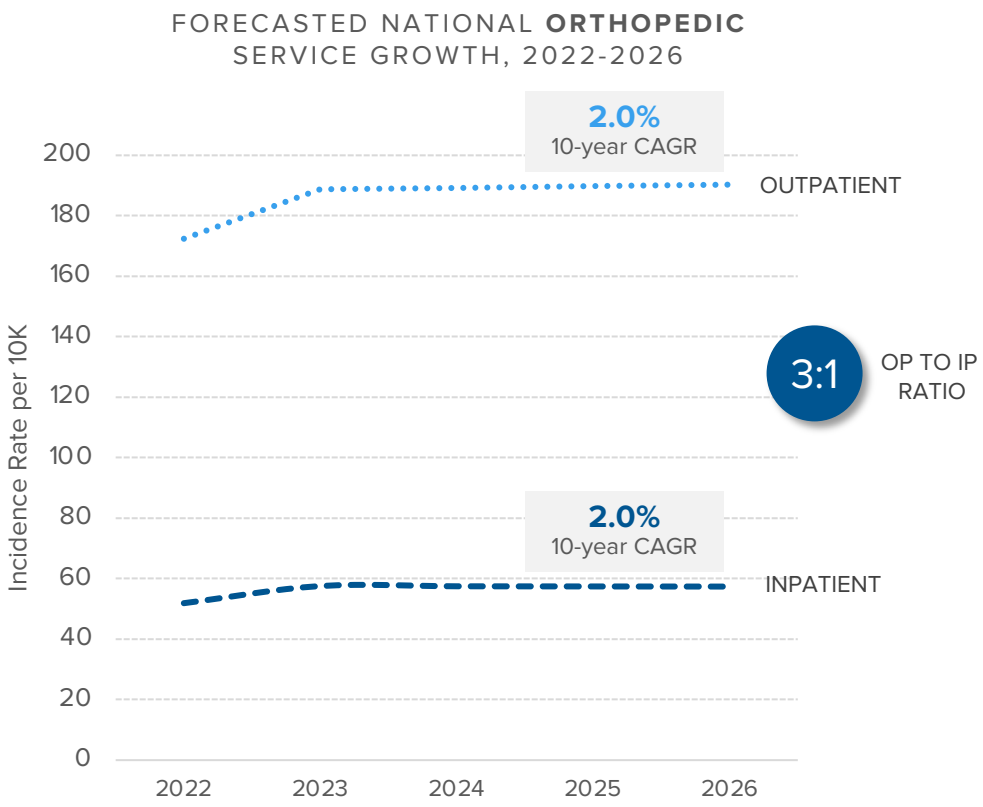
TOP SURGICAL **NEURO/SPINE** PROCEDURES CONTRIBUTING TO FORECASTED DEMAND

	INPATIENT	OUTPATIENT
1	Spinal Fusion	Surgery on Nerves and Nervous System
2	Surgery on the Spine and Spinal Cord	Surgery on the Spine and Spinal Cord
3	Surgery of Brain and Skull	Surgery of Brain and Skull
4	Craniectomy or Craniotomy	Spinal Fusion
5	Surgery on Nerves and Nervous System	Ventricular Shunt Procedures

Source: Trilliant Health Demand Forecast.

Outpatient Orthopedic Surgery Outpacing Inpatient 3:1

Inpatient and outpatient demand for orthopedic surgical services is projected to increase slightly at 2.0% CAGR for each. Joint replacements of knee or hip and endoscopy/arthroscopy procedures on the musculoskeletal system are the top procedures contributing to demand growth in both inpatient and outpatient settings, respectively.



TOP SURGICAL **ORTHOPEDIC** PROCEDURES CONTRIBUTING TO FORECASTED DEMAND

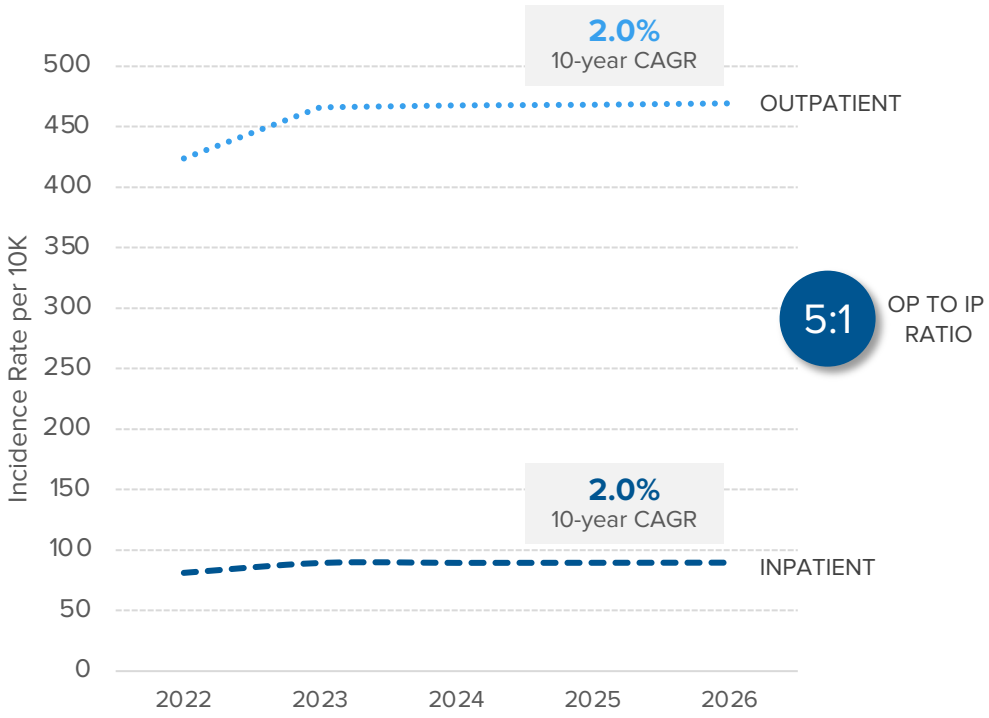
	INPATIENT	OUTPATIENT
1	Joint Replacement of Knee or Hip	Endoscopy/Arthroscopy Procedures on the Musculoskeletal System
2	General Surgical Procedures on the Musculoskeletal System	Joint Replacement of Knee or Hip
3	Repair Revision and/or Reconstruction Procedures on the Femur (Thigh Region)	Fracture and/or Dislocation Procedures on the Forearm and Wrist
4	Fracture and/or Dislocation Procedures on the Pelvis and Hip Joint	Other Surgical Procedures on the Hand and Fingers
5	Amputation of Limb	General Surgical Procedures on the Musculoskeletal System

Source: Trilliant Health Demand Forecast.

Outpatient Digestive Surgery Outpacing Inpatient 5:1

Inpatient and outpatient demand for digestive surgical services is projected to increase at 2.0% CAGR for each. Upper GI endoscopies and colonoscopies are the top procedures contributing to demand growth in both inpatient and outpatient settings.

FORECASTED NATIONAL **DIGESTIVE** SERVICE GROWTH, 2022-2026



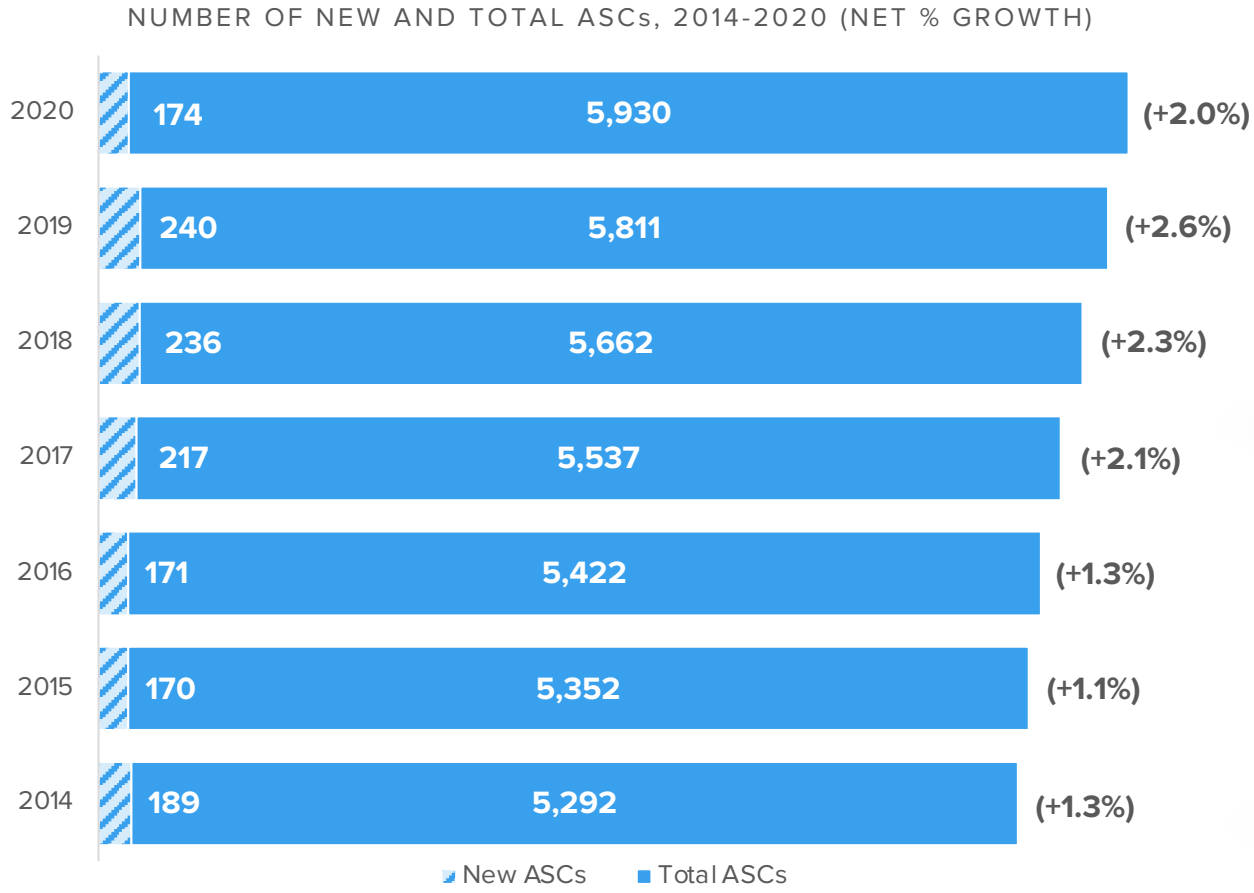
TOP SURGICAL **DIGESTIVE** PROCEDURES CONTRIBUTING TO FORECASTED DEMAND

	INPATIENT	OUTPATIENT
1	Upper GI Endoscopy	Colonoscopy
2	Colonoscopy	Upper GI Endoscopy
3	Procedures on the Abdomen Peritoneum and Omentum	Procedures on the Abdomen Peritoneum and Omentum
4	Major Small and Large Bowel Procedures	Anal and Stomal Procedures
5	Laparoscopic Procedures on the Biliary Tract	Hernia Procedures

Source: Trilliant Health Demand Forecast.

Supply of ASCs Is Increasing, But The Rate of Growth Slowed in 2020

The number of Medicare-certified ASCs continues to grow steadily.



98%

ASCs operating as for-profit

93%

ASCs operating in urban areas

Note: Median values represent ASC counts for all 50 states and Washington, D.C.
Source: Medicare Payment Advisory Commission (MedPAC) July 2022 Data Book: Chapter 7.

Most ASC Procedures Are Lower Acuity and Commodity-Like

Over time, changes to the CMS inpatient-only list rule will further accelerate the shift from inpatient to outpatient settings. In terms of volume, upper GI endoscopies moved from the fourth position in 2019 (9.5% of all volume) to the third position in 2021 (9.9% of all volume).

TOP SURGICAL PROCEDURES PERFORMED IN ASCs, 2019 & 2021

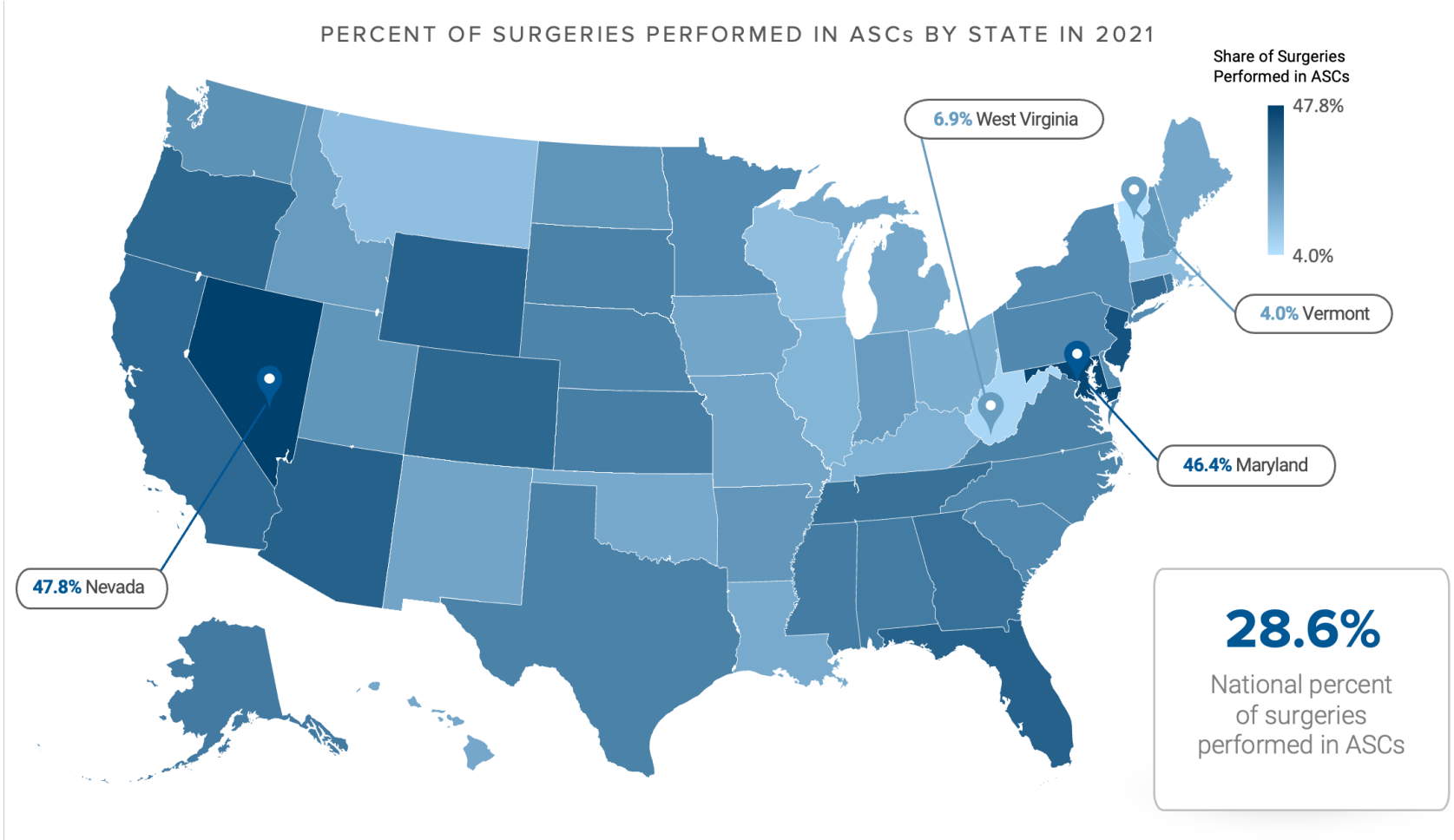
	2019		2021	
SURGICAL PROCEDURE	% OF VOLUME	RANK	% OF VOLUME	RANK
Colonoscopy	17.5%	1	18.1%	1
Intraocular Procedures	13.0%	2	13.3%	2
Other Skin Subcutaneous Tissue and Breast Procedures	11.2%	3	9.9%	4
Upper GI Endoscopy	9.5%	4	9.9%	3
Epidural and Nerve Root Blocks	4.9%	5	4.9%	6
Vitreous Procedures on the Posterior Segment of the Eye	4.8%	6	4.9%	5
Paravertebral Facet Injection/Nerve Block	3.2%	7	3.0%	8
Endoscopy/Arthroscopy Procedures on the Musculoskeletal System	3.0%	8	3.1%	7
Other Ear Nose Mouth and Throat O.R. Procedures	2.6%	9	2.0%	9
Sinus and Mastoid Procedures	2.2%	10	1.9%	10

Note: Columns do not sum to 100% as list of procedures were capped to the top 15.
Source: Trilliant Health national all-payer claims database.

TREND 8: ACCELERATING AMBULATORY MIGRATION

Almost 30% of Surgeries Are Performed at ASCs

Nationally, 28.6% of all surgeries are performed in ambulatory surgical centers. At the state level, this percentage ranges from 4.0% (Vermont) to 47.8% (Nevada).



Source: Trilliant Health national all-payer claims database.

Reimbursement for the Same Service Varies by Payer and Setting

Reimbursement for the same healthcare service varies significantly by payer, care setting, and geography. Across payers, private prices are 1.4X-2.5X Medicare prices. Within the same payer, reimbursement for an inpatient procedure is 2.1X-7.5X more than an outpatient procedure. This variation drives higher spending without improving patient outcomes.

MEDICARE AND COMMERCIAL REIMBURSEMENT RATES FOR HIGH-VOLUME SURGICAL PROCEDURES

	MEDICARE			COMMERCIAL			COMMERCIAL : MEDICARE RATIO	
PROCEDURE CATEGORY	Average IP Reimbursement	Average OP Reimbursement	IP : OP Ratio	Average IP Reimbursement	Average OP Reimbursement	IP : OP Ratio	IP	OP
CARDIAC PROCEDURES WITH CARDIAC CATHETERIZATION	$50,298	$6,669	7.5	$70,892	$14,055	5.0	1.4	2.1
SPINAL FUSION	$32,790	$6,540	5.0	$52,497	$11,774	4.5	1.6	1.8
TOTAL JOINT REPLACEMENT KNEE/HIP	$16,107	$5,577	2.9	$39,099	$12,356	3.2	2.4	2.2
HYSTERECTOMY	$15,617	$7,502	2.1	$39,118	$12,998	3.0	2.5	1.7

Source: Trilliant Health national all-payer claims database.

Site Neutral Payments Reduce Spend Without Impacting Quality

Payment rates often vary for the same service provided to similar patients in different settings. Aligning payment rates across ambulatory care settings—hospital outpatient departments, ambulatory surgical centers, and freestanding offices—could reduce spending without impacting patient care. In the below example, site neutral payment for a level 2 nerve injection provided in a hospital outpatient department is $444.88 less per service.

ACTUAL 2019 AND SITE-NEUTRAL PAYMENT RATES IN MEDICARE

ACTUAL 2019 PAYMENT RATES		PAYMENT RATES UNDER SITE NEUTRAL REIMBURSEMENT POLICY	
Service in Physician's Office		**Service in Physician's Office**	
Physician work	$64.87	Physician work	$64.87
Non-facility practice expense	$185.64	Non-facility practice expense	$185.64
Professional liability insurance	+ $5.77	Professional liability insurance	+ $5.77
Total payment	**$256.28**	**Total payment**	**$256.28**
Service in Hospital Outpatient Department (HOPD)		**Service in Hospital Outpatient Department (HOPD)**	
Physician work	$64.87	Physician work	$64.87
Facility practice expense	$31.71	Facility practice expense	$31.71
Professional liability insurance	+ $5.77	Professional liability insurance	+ $5.77
Payment to physician	$102.35	Payment to physician	$102.35
Payment to HOPD	+ $598.81	Payment to HOPD (non-facility PE – facility PE)	+ $153.93
Total payment	**$701.16**	**Total payment**	**$256.28**

Source: Medicare Payment Advisory Commission (MedPAC) analysis of physician fee schedule and outpatient prospective payment system rates for 2019.

TREND 9

Low-Acuity Healthcare Services Are Increasingly Being Commoditized

TREND 9: LOW ACUITY COMMODITIZATION

Large Retailers Have Established Loyalty With Healthcare Consumers for Commodity Services

While healthcare delivery is not the core business of Walmart or Amazon, each possesses strong brand loyalty, consumer reach, and ability to drive scale to commoditize products and services.

Loyalty Programs
(Number of Members)

Membership Programs
(Annual Fees)

74M

of Americans are **CVS** loyalty program members

CVS Health

$139

Annual **Amazon Prime** membership fee

amazon Prime

100M

of Americans are **Walgreens** loyalty program members

Walgreens

$98

Annual **Walmart+** membership fee

Walmart

Source: CVS, Walgreens, Amazon and Walmart websites.

TREND 9: LOW ACUITY COMMODITIZATION

Retailers Offer Commodity Prices for Commodity Healthcare Services

While prices vary among retailers, their rates consistently fall below that of traditional non-retail urgent care. In addition, consumers may be attracted to the price transparency offered by large retailers.

COST COMPARISONS FOR SELECT COMMODITY HEALTHCARE SERVICES

	NEW ENTRANTS			ESTABLISHED
SERVICE	CVS Health	Walgreens	Walmart	URGENT CARE
Office Visit	$99-$139	$89	$40	$137
Flu Test	$70-$100	$66	$20	$102
Strep Test	$35-$45	$25	$20	$102
Lipid Panel	$37	$35	$10	$102

Source: Publicly available company information.

Amazon Further Expands Its Healthcare Footprint

Although Amazon Care was shuttered amid the One Medical acquisition, many markets overlapped between the two entities, expanding Amazon's geographic healthcare reach and solidifying its brick-and-mortar presence in healthcare.

MARKETS WITH EXISTING **ONE MEDICAL** AND FORMER **AMAZON CARE** LOCATIONS

1994 Amazon is founded

2006 Amazon launches the first cloud computing platform

2017 Amazon creates lab focused on healthcare technology innovation

2018 Amazon launches a machine-learning service that extracts data from medical records

2018 Haven launches in partnership with JPMorgan and Berkshire Hathaway to improve employee costs and access

2019 Amazon acquires PillPack (delivery pharmacy) and Health Navigator (digital health)

2020 Haven ceases operations

2020 Amazon launches Amazon Care for employees; plans to launch to 20 cities

2020 Amazon releases Halo, a health-tracking wearable

2021 Amazon Care expands to Washington, Baltimore, and DC; Amazon Pharmacy officially launches; starts healthcare startup accelerator

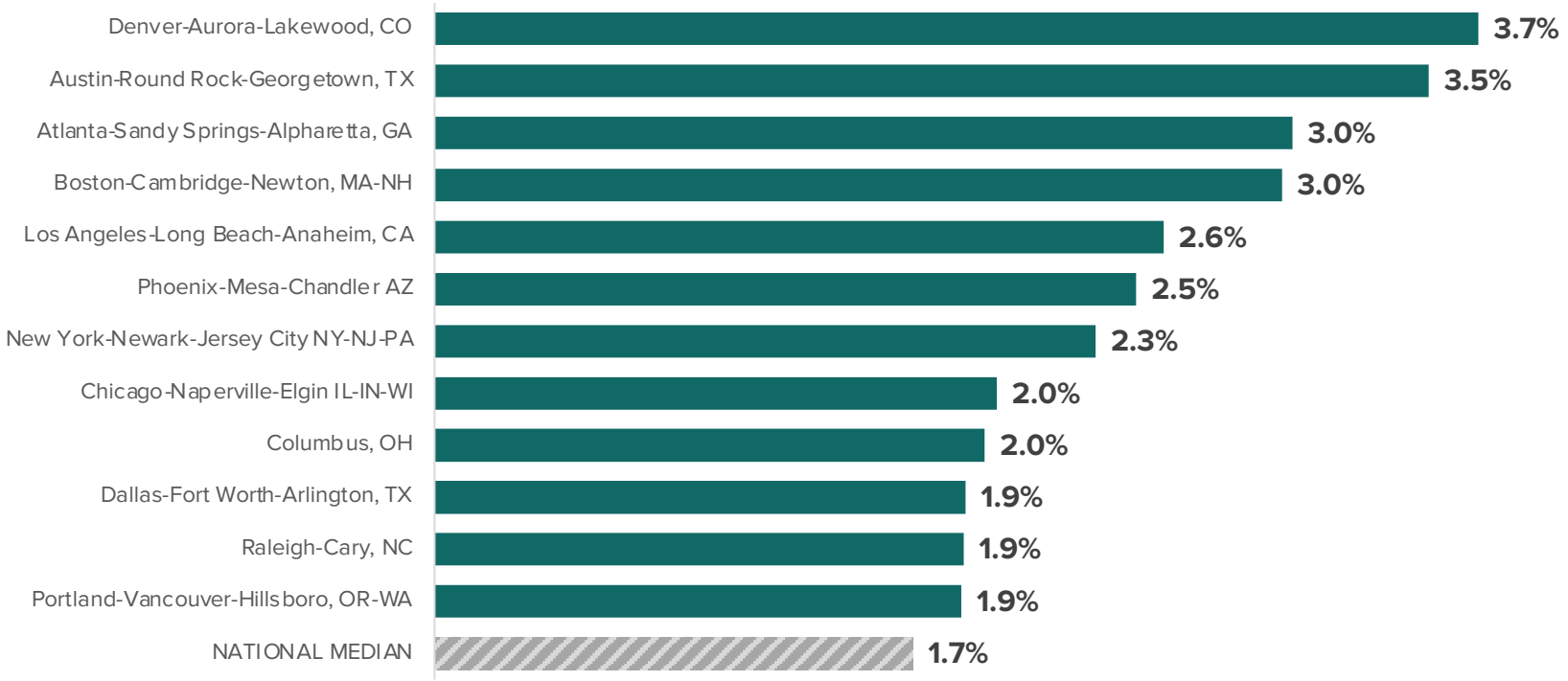
2022 Amazon acquires care provider, One Medical and shutters Amazon Care operations and expansion plans

Source: Analysis of company information.

Forecasted Growth in Primary Care Demand in One Medical Markets Is Higher Than the National Average

While median forecasted demand for primary care is projected to nominally increase (1.7% CAGR) between 2022 and 2026, this demand in select One Medical markets is growing faster than the national median, ranging from 1.9% to 3.7%.

FORECASTED MEDIAN CAGR OF PRIMARY CARE FOR SELECT ONE MEDICAL MARKETS, 2022-2026

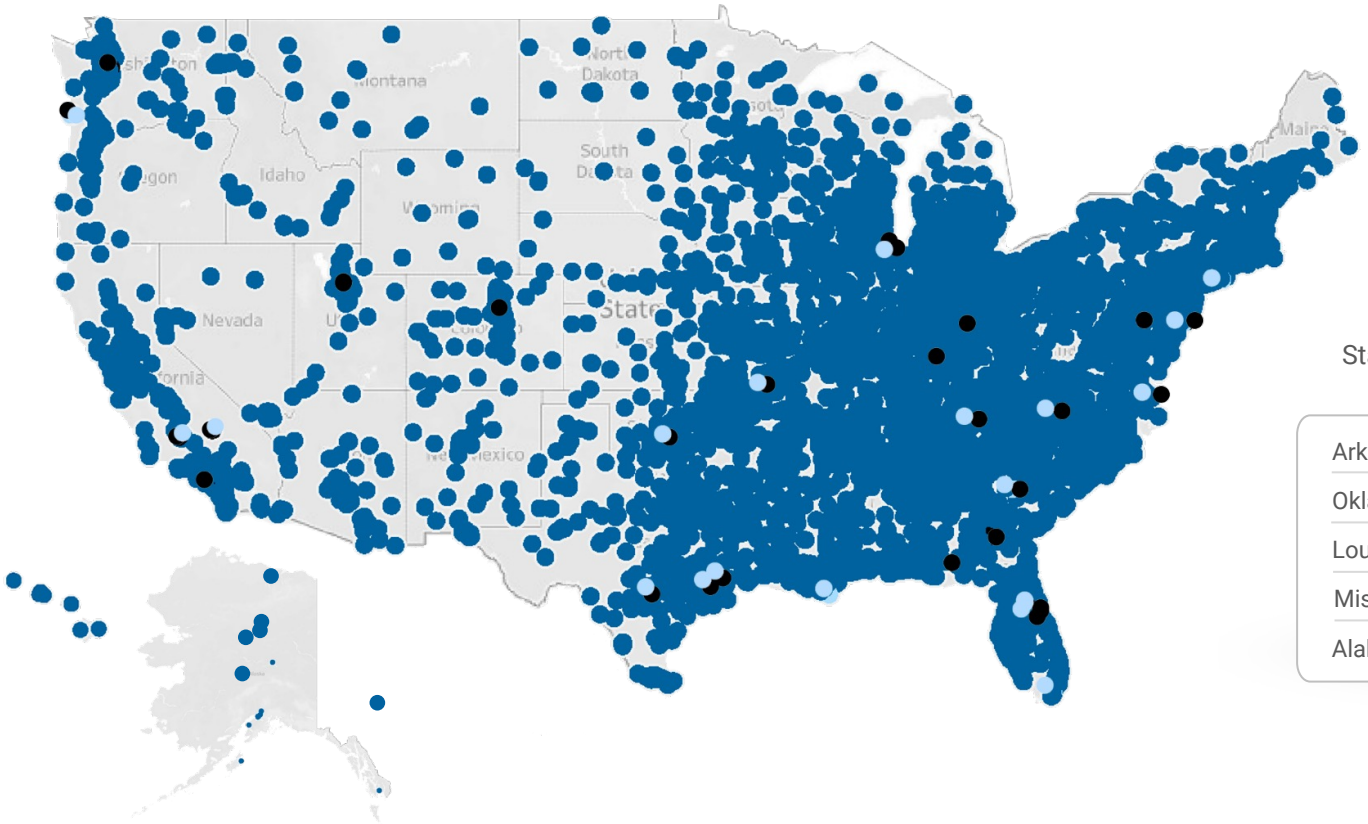


Note: CAGR denotes compound annual growth rate.
Source: Trilliant Health Demand Forecast.

Walmart Continues to Distinguish Itself From Other Retailers in Bringing Quality Care to Underserved Areas

The migration of residents during the pandemic to Texas and Florida suggests competition with Walmart for greater share of care among traditional and new entrant providers will intensify, especially for Medicaid and Medicare beneficiaries.

WALMART'S PHYSICAL U.S. FOOTPRINT



States with Largest Walmart Presence per 100K:

Arkansas	3.9
Oklahoma	3.0
Louisiana	2.7
Mississippi	2.7
Alabama	2.6

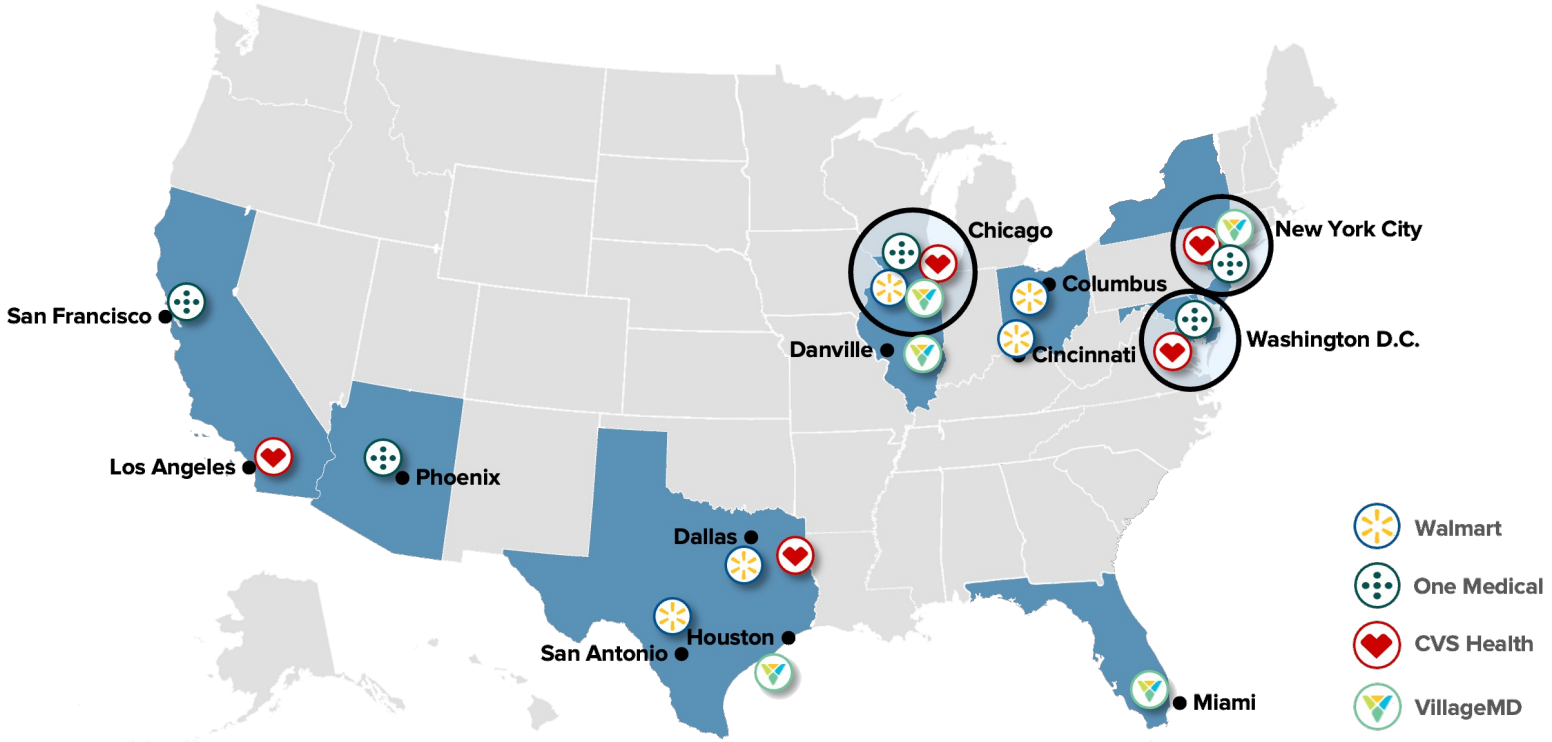
Source: Analysis of publicly available Zip Code and retail data.

TREND 9: LOW ACUITY COMMODITIZATION

New York, Chicago, and Washington D.C. Represent Key High Volume Markets for Multiple New Entrants

The lack of new entrant volume in other major cities identifies potential CBSAs for expansion, such as Miami or Phoenix. Across new entrants, Walmart has carved out a unique presence in the Midwest and Southwest.

MARKETS WITH HIGH CONCENTRATION OF PATIENT CARE ACROSS NEW ENTRANTS



Note: VillageMD featured due to partnership with Walgreens.
Source: Trilliant Health national all-payer claims database.

New Entrants Are Competing on Price and Service Offerings

CVS MinuteClinics and Walmart tend to deliver higher acuity services relative to Walgreens/Village MD and One Medical.

PRICING AND MOST COMMON SERVICES OVERVIEW FOR NEW ENTRANTS

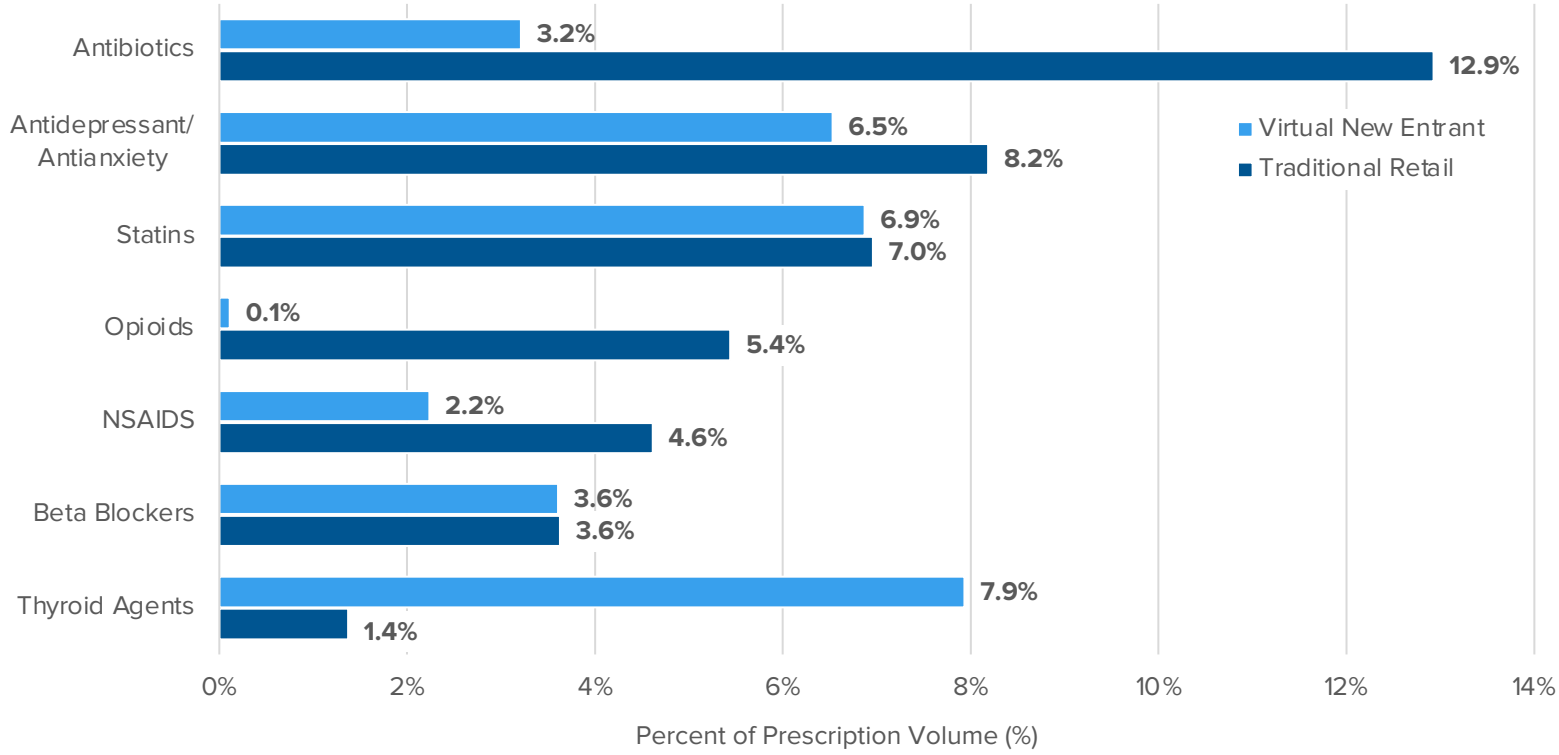
	minute clinic	Walmart	Walgreens VillageMD	one medical
MOST COMMON CARE CONCERNS TREATED	Standard office checkups Strep/influenza tests Preventive medicine Blood/urine tests Upper respiratory infections and sore throat Ear infection UTI	Standard office checkups Hypertension Upper Respiratory infections Diabetes UTI Optometry services Ophthalmological care	Standard office checkups High BP/Cholesterol/Diabetes Upper respiratory infections Anxiety Low back pain	Standard office checkups Blood draws Electrocardiograms Urine test Mammography IUD administration Solar Keratosis Treatment
PRICING STRUCTURE	Accepts insurance as well as welcoming cash patients with transparent pricing $100-139 for most services and treatment (excluding vaccine)	Accepts insurance as well as welcoming cash patients with transparent pricing. $10-100 for labs and $30-$130 for standard services and treatments.	Standard office appointments start at $130 and service model places emphasis on intake of new patients and continued care of regular patients.	Annual subscription model with several partnerships with employers. Cost of visit is passed on to individual's insurance and patient responsible for regular copay/deductible.

Note: Most common care concerns were determined using a representative sample of patient claims attributed to each new entrant.
Source: Publicly available company information and Trilliant Health all-payer claims database.

Share of Prescription Volume Differs at Virtual Pharmacies

While antibiotics account for 12.9% of the drugs dispensed at traditional retail, they only account for 3.2% of prescription volume at virtual pharmacies. Conversely, thyroid agents account for 7.9% of drugs dispensed at virtual pharmacies and only 1.4% at retail pharmacies.

SHARE OF DRUG CLASSES DISPENSED BY RETAIL AND NEW ENTRANT PHARMACIES AS A SHARE OF TOTAL VOLUME, 2021



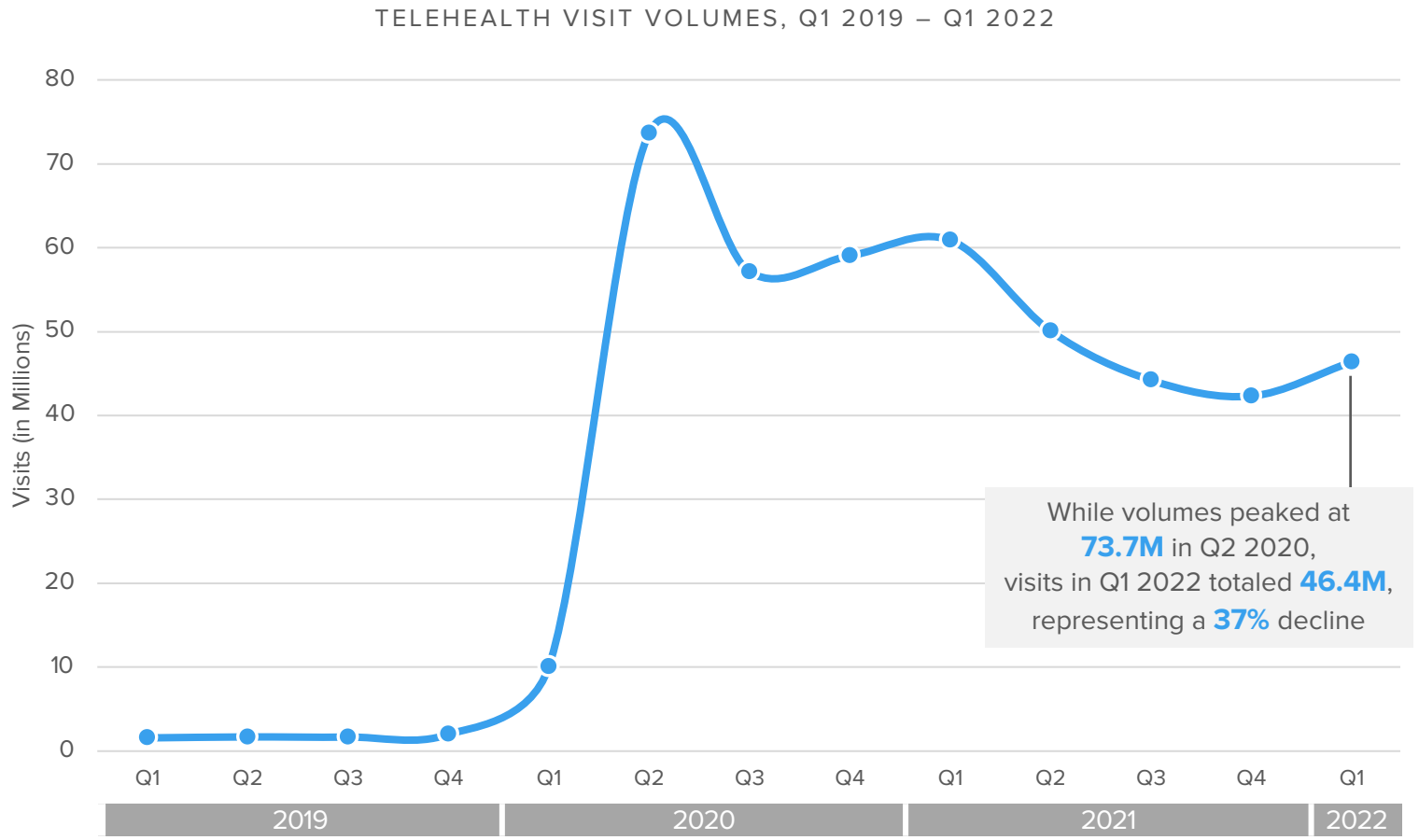
Note: Virtual new entrants include pharmacy claims from Amazon and Truepill; traditional retail is inclusive of CVS, Walgreens, and Kroger.
Source: Trilliant Health national all-payer claims database.

TREND 10

The Impacts of Commoditization Are Predictable

Telehealth Demand Continues to Track Below Pandemic Peak

The 37% drop in telehealth visit volumes from the peak in Q2 2020 to Q1 2022 suggests that expanded availability of virtual care options has not shifted widespread consumer preferences.

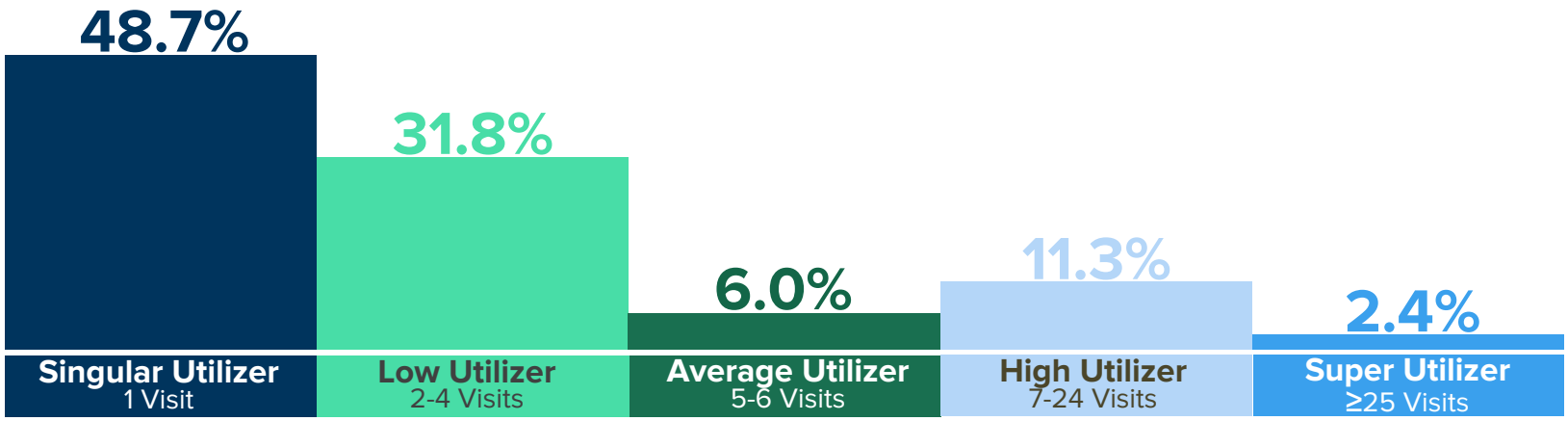


Source: Trilliant Health national all-payer claims database.

Almost Half of Telehealth Patients Used It Only Once

80.5% of telehealth patients had between one and four visits in 2021, with less than 3% of telehealth patients falling into the "Super Utilizer Category" of having 25 or more telehealth visits in the same timeframe.

ANNUAL UTILIZATION PATTERNS OF TELEHEALTH USERS, 2021



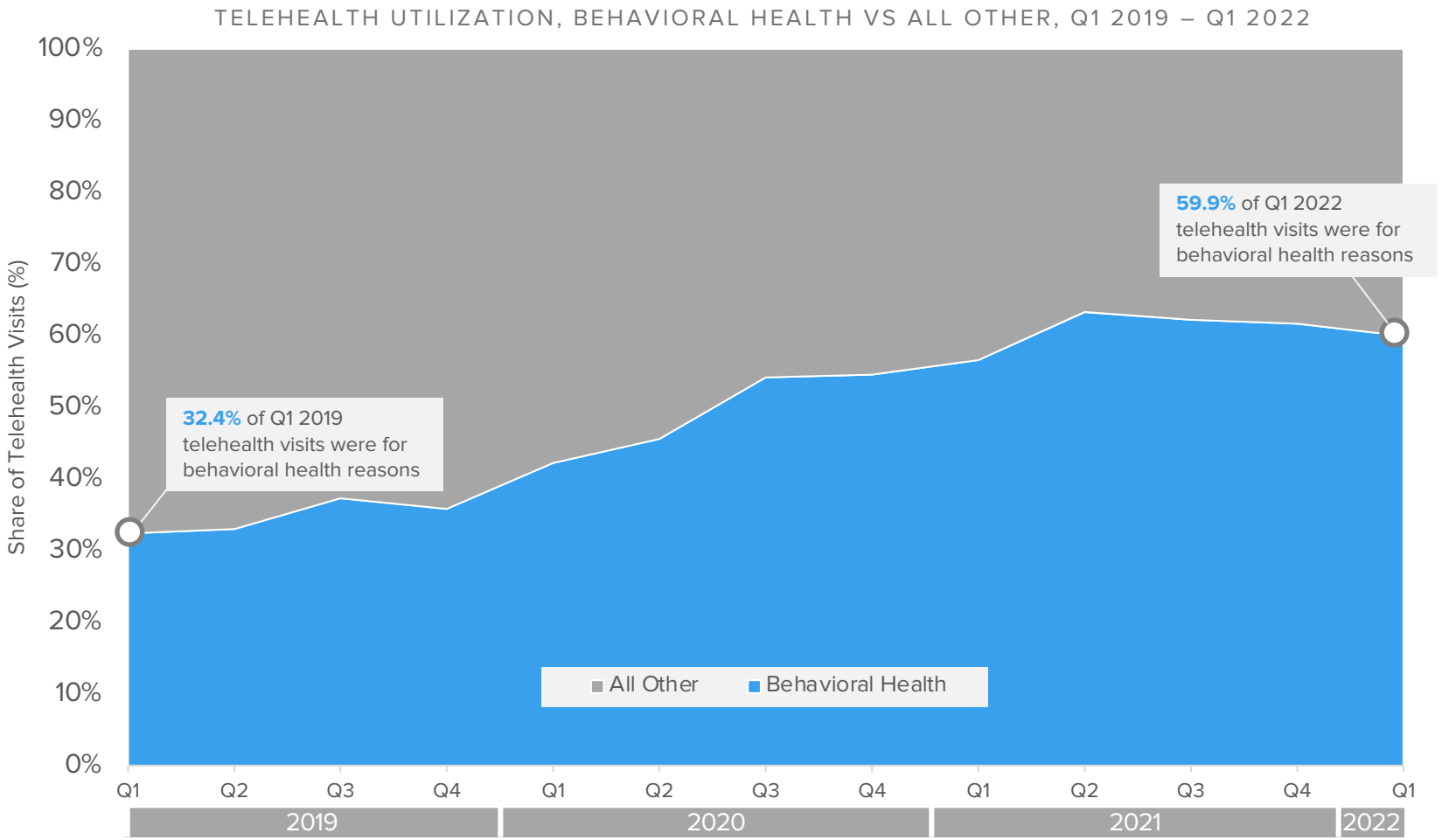
AGE AND GENDER BREAKDOWN OF TELEHEALTH USERS, 2019-2022

	AGES 0-17		AGES 18-64		AGES 65+		ALL AGES	
	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
2019	52.3%	47.7%	34.4%	65.6%	44.5%	55.5%	38.3%	61.7%
2020	51.8%	48.2%	38.3%	61.7%	43.1%	56.9%	41.5%	58.5%
2021	51.4%	48.6%	36.9%	63.1%	41.8%	58.2%	40.3%	59.7%
Q1 2022	48.8%	51.2%	68.1%	31.9%	62.7%	37.3%	64.2%	35.8%

Source: Trilliant Health national all-payer claims database.

Behavioral Health Accounts for Majority of Telehealth Use

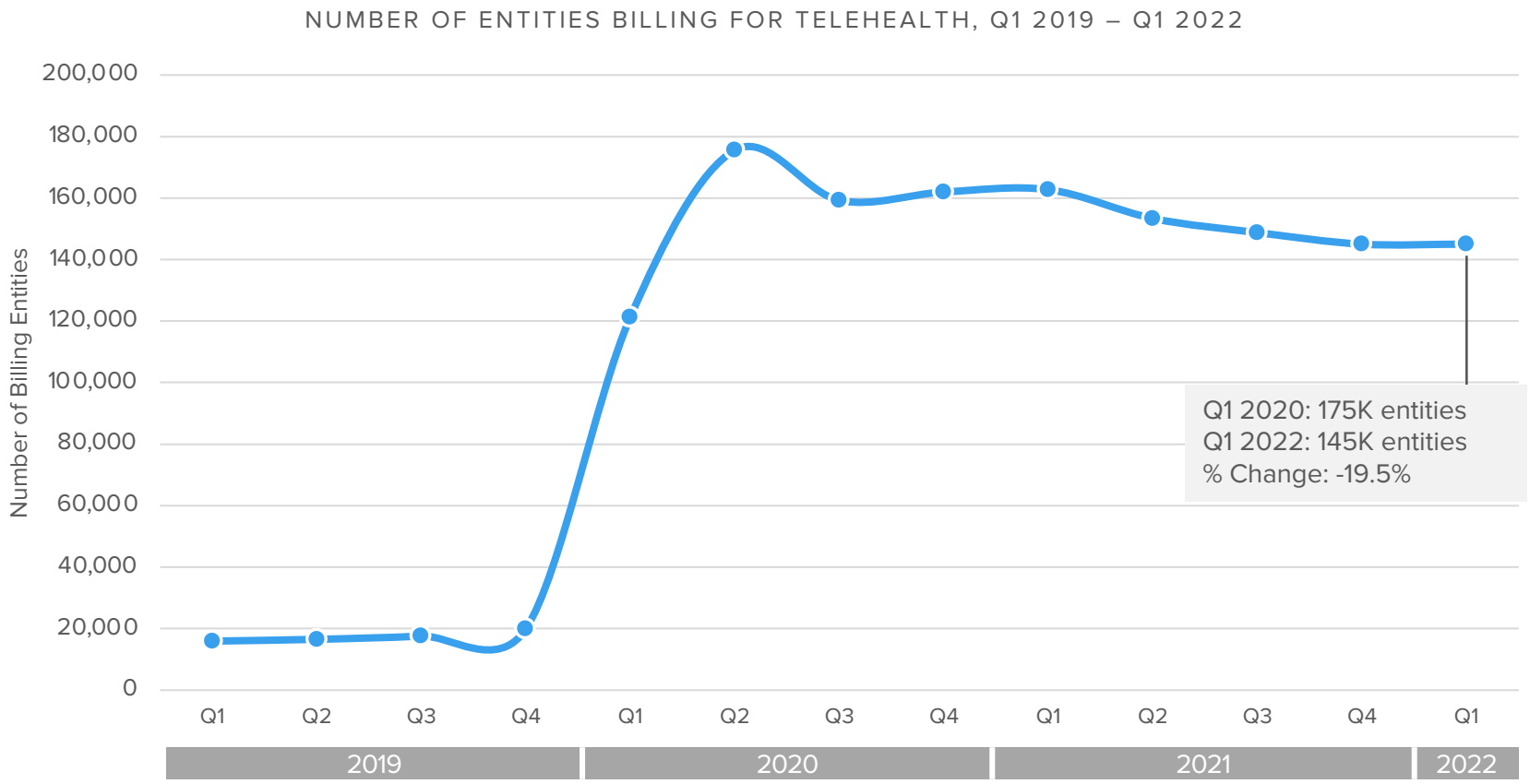
In a declining telehealth market, behavioral heath accounts for a greater share of a smaller number of visits over time. From Q1 2019 to Q1 2022, behavioral health telehealth utilization as a proportion of the total increased by over 27 percentage points.



Source: Trilliant Health national all-payer claims database.

Entities Billing for Telehealth Continue to Taper

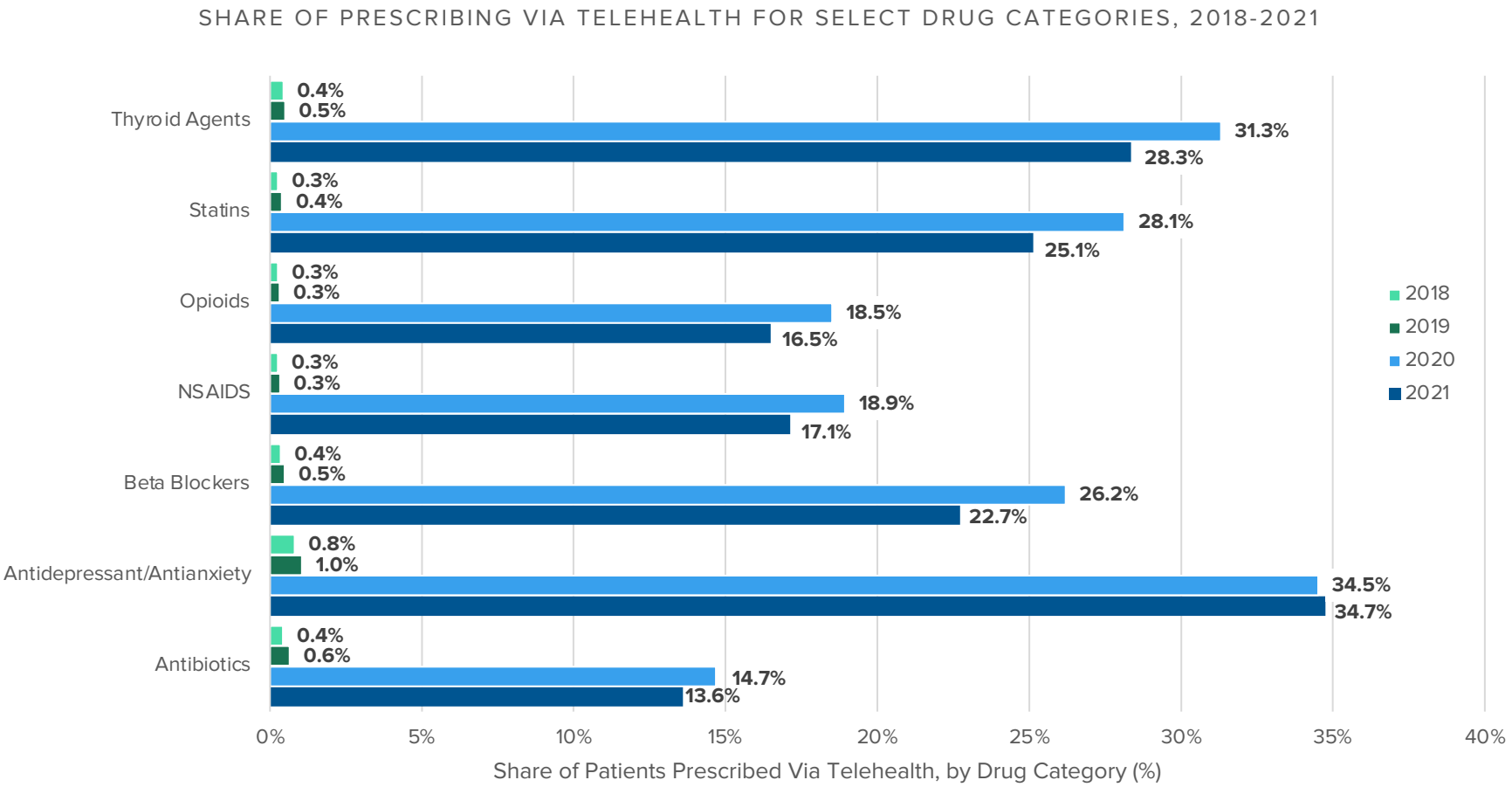
In response to the pandemic, the number of provider entities billing for telehealth services skyrocketed. Since then, the number of billing entities has been declining (-19.5% from Q1 2020 to Q1 2022). While many aspects of telehealth were touted to in part provide more scale to physicians (as a way to minimize the supply shortage), the data suggests otherwise.



Source: Trilliant Health national all-payer claims database.

Telehealth-Enabled Prescribing Is Up Post-Pandemic

Post-pandemic, telehealth prescribing has become more common. In 2020 and 2021, approximately 35% of antidepressants and antianxiety drug prescriptions were associated with a telehealth visit compared to just 1% in 2019.



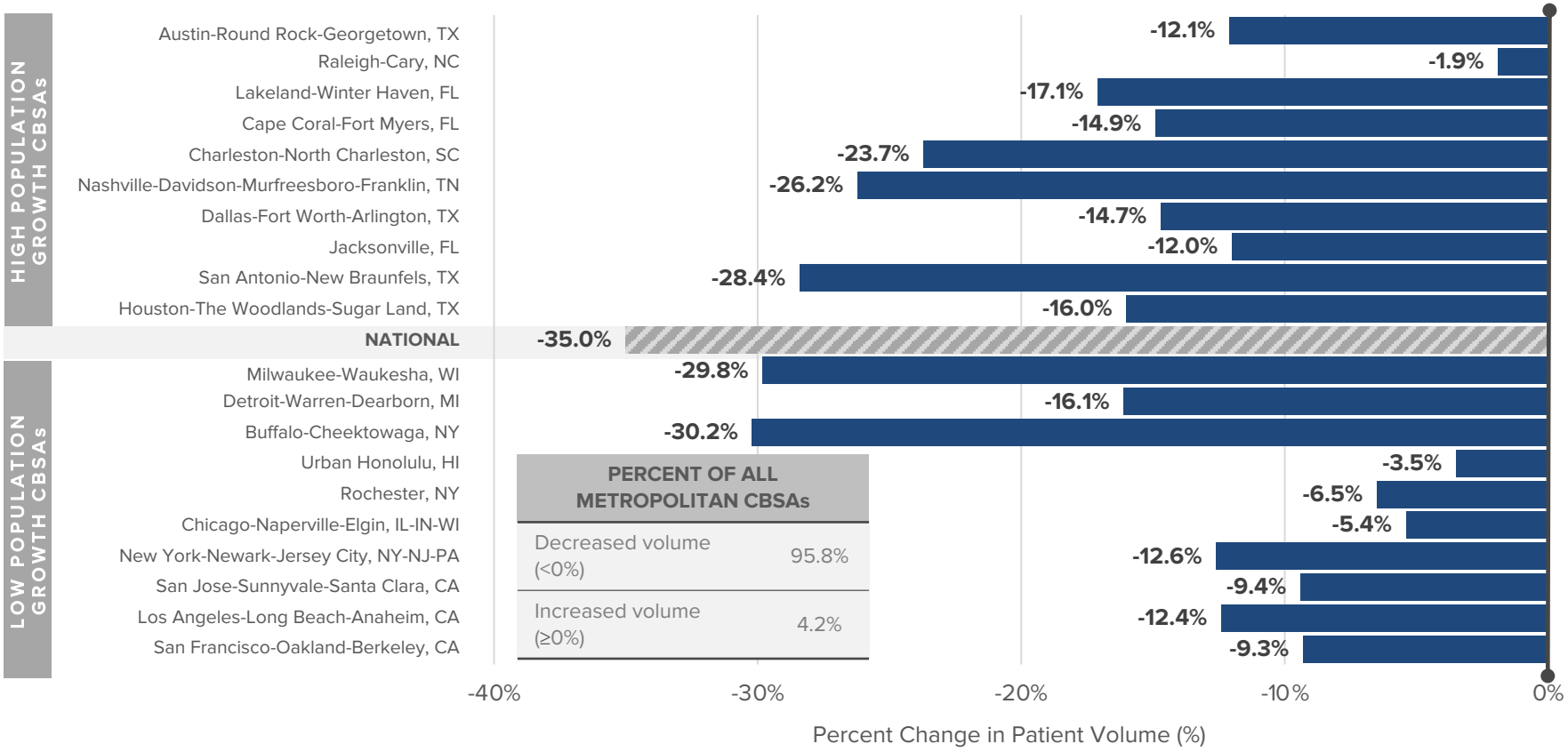
Note: Opioids are inclusive of hydrocodone.
Source: Trilliant Health national all-payer claims database.

TREND 10: COMMODITIZATION IMPACTS

Telehealth Volumes Have Declined in Over 95% of Markets

Compared to the peak of the pandemic (Q1 2020 to Q1 2021), telehealth volumes are down in 95.8% markets, with a national average decline of -35%.

MARKET-LEVEL TELEHEALTH VOLUMES, PERCENT CHANGE JAN 2020-MAR 2021 TO Q1 JAN-MAR 2022



Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The share of CBSAs projected to increase or decrease in population include all metropolitan CBSAs.
Source: Trilliant Health national all-payer claims database.

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

Because telehealth supply exceeds demand, the price of a telehealth visit will likely continue to decline, and the total addressable market will slowly approach $0 in the commercially insured market.

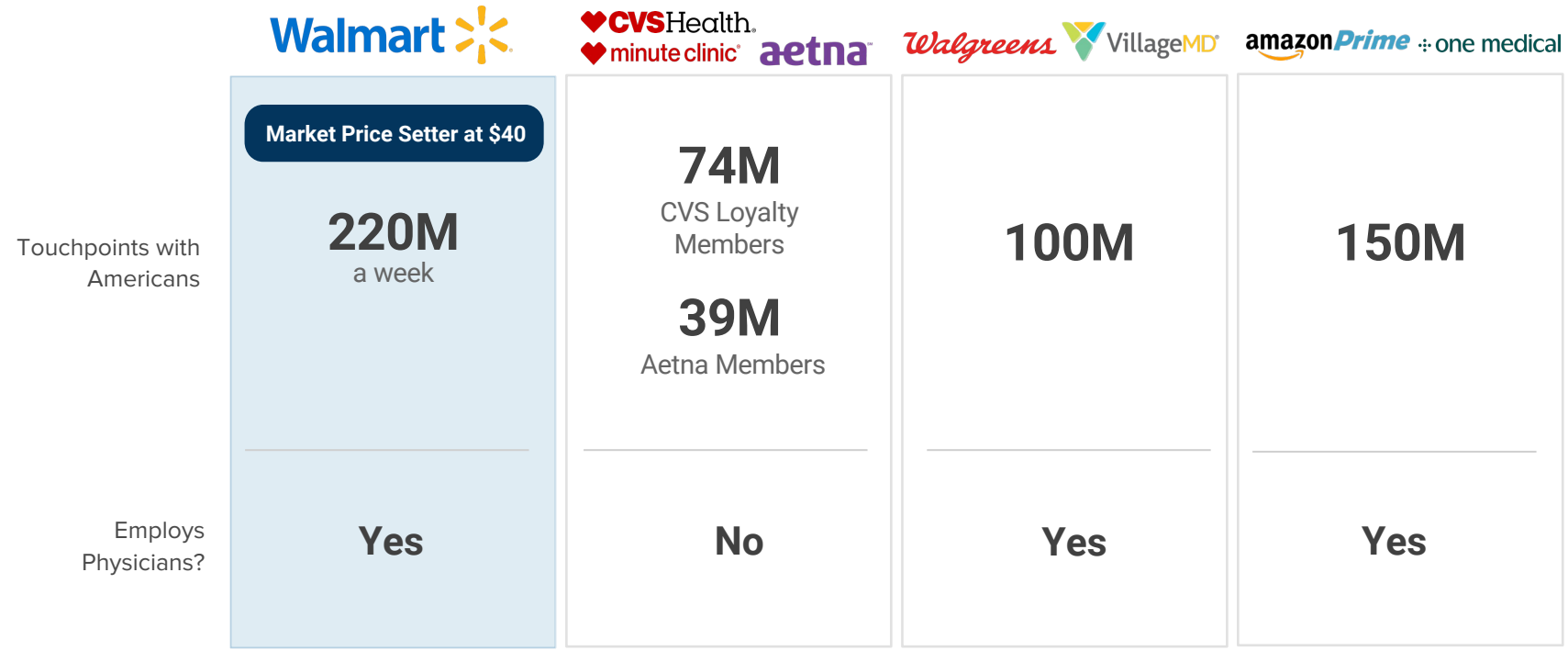
	SCENARIO	PATIENT VISIT COST	TELEHEALTH PATIENTS	TOTAL ADDRESSABLE MARKET FOR TELEHEALTH
1	**The current price-setter** in a market where *all* 2020 and 2021 telehealth patients continue telehealth use	$67	77M	$67 × 77M × 5 visits = **$26B**
2	**Walmart** is the price-setter in a market where *only* Average, High, and Super Utilizers continue telehealth use	$67	12M	$67 × 12M × 5 visits = **$4B**
3	Access to telehealth services becomes part of an **Amazon Prime** membership (hypothetical)	$15/month	148M	$15 × 148M = **$2B**
4	Commercial health plans (e.g., **United Healthcare**) offer telehealth for enrollees at no cost, bringing the effective marginal cost down to $0 in a market where *all* commercially insured individuals could use that benefit	~$0*	217M	$0 × 217M × 5 visits = **$0**

*Not accounting for monthly enrollee premiums

Note: TAM represents Total Addressable Market.

What if Retailers View Primary Care as a Loss Leader?

Given the sizeable share of retail-based primary care services that could be considered essential health benefits, heightened competition among new entrants, and effectively zero marginal cost of delivery for retail players, how will large retailers compete on price? Will their scale and larger loyal consumer base be able to generate margin at such prices?



Note: Touchpoint numbers are likely underestimates and are intended to illustrate the disproportionate share of U.S. consumers that large retailers have relative to traditional providers (e.g., health systems). The question posed is in relation to the fact that margins on primary care businesses are very low, making it historically difficult business to operate as a stand alone (at least for traditional providers).
Source: Publicly available company information.

TREND 11

Provider Burnout Is Exacerbating the Long-Standing Physician Supply Shortage

The Pandemic Effect Compounded With Long-Standing Burnout Resulted in 9.8% Of Physicians "Retiring"

The net number of physicians starting and stopping practice from 2019 to 2022 led to a 2% workforce reduction. Among practicing physicians delivering E&M services, 18.5% of physicians changed employer organization or type (e.g., hospital, new entrant).

CHANGES IN U.S. PHYSICIAN WORKFORCE, 2019-2022

PERCENT OF ALL PHYSICIANS

9.8%
Stopped Practicing

7.8%
Started Practicing
(New Physician)

Net Reduction in Physician Workforce **-2%**

PERCENT OF PHYSICIANS DELIVERING E&M SERVICES

39%
Changed Practice Location

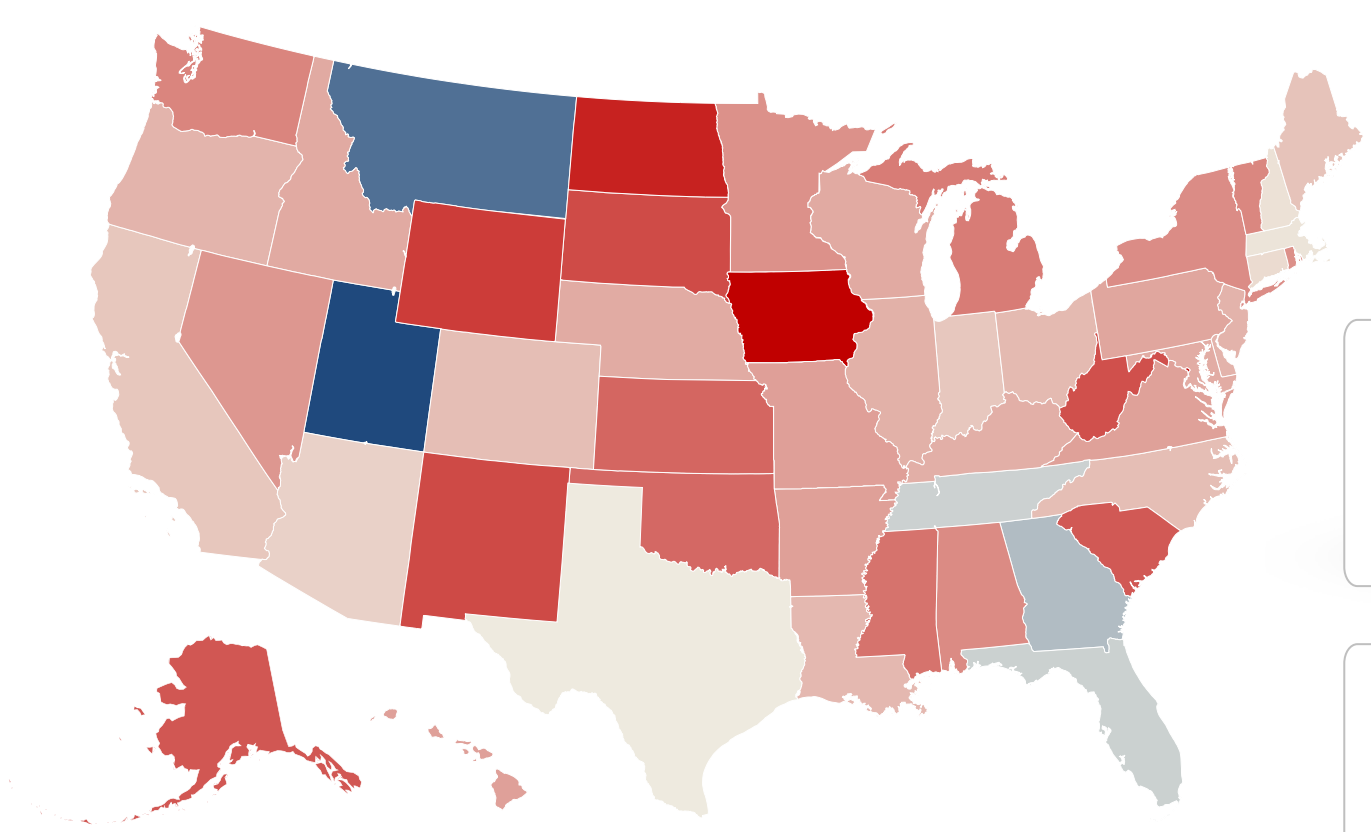
18.5%
Changed Employer

Note: Physicians denote both M.D. and D.O. Data through June 2022. Analysis of practice location changes was limited to physicians delivering office-based E&M services (N= 600,285) in 2019 to glean a more conservative estimate. Changes in physician employer is inclusive of those that changed employer due to M&A activities (e.g., Iora Health to One Medical).
Source: Trilliant Health Provider Directory.

Net Change in Physician Workforce Varies by State

At the state level, the median net change – reflective of retirements, new graduates, and relocation - to the physician workforce was -3.8%. Utah and Montana gained the most physicians, while Iowa and D.C. lost the most physicians.

NET CHANGE IN PHYSICIAN WORKFORCE BY STATE, 2019 TO 2022



States Gaining Physicians

Utah	7.4%
Montana	5.6%
Georgia	2.2%
Florida	1.2%
Tennessee	1,2%

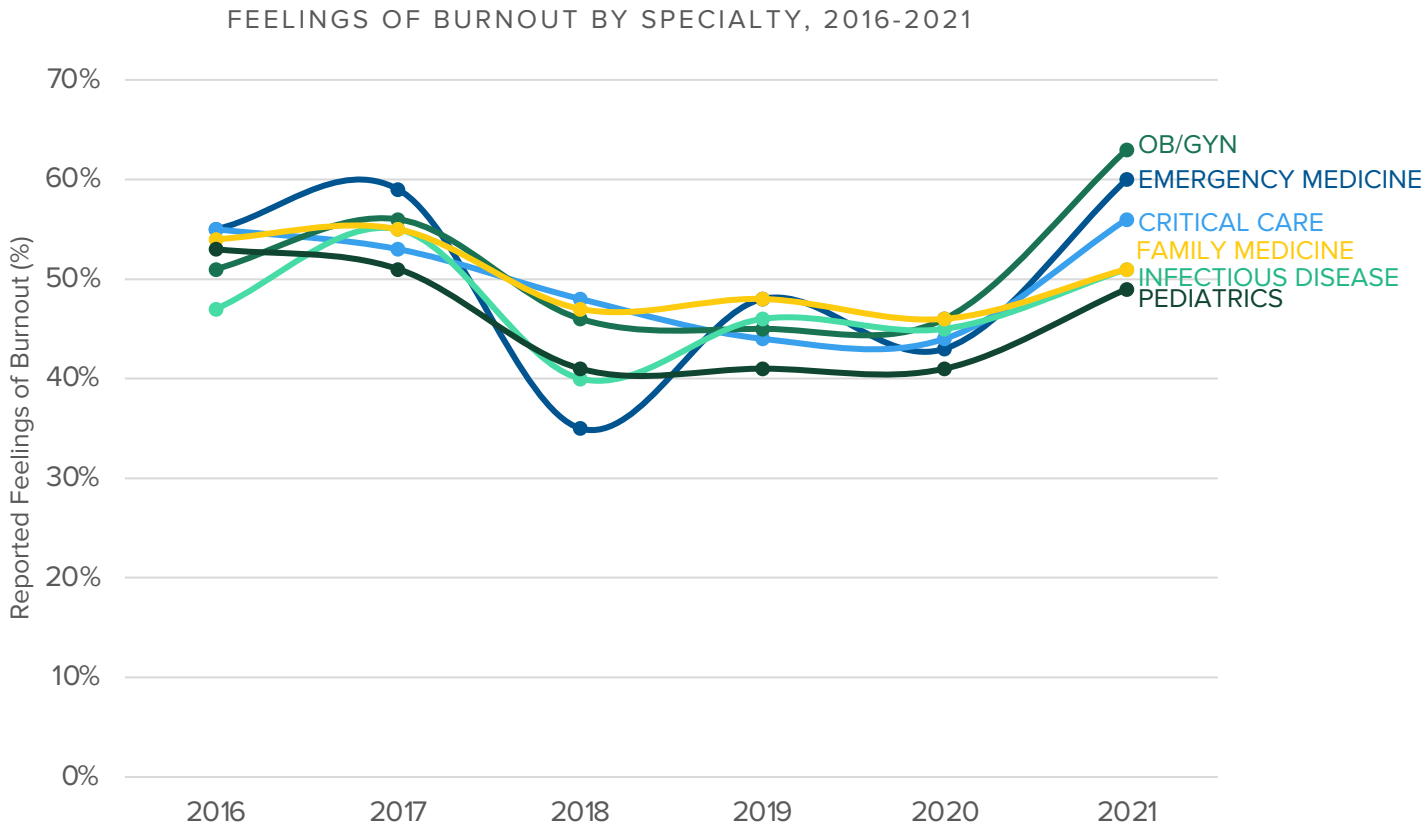
States Losing Physicians

New Mexico	-9.4%
Wyoming	-10.2%
North Dakota	-11.7%
D.C.	-13.2%
Iowa	-13.6%

Note: The state-level median (-3.8%) net change in physician supply is slightly different than the national median (-2.0%).
Source: Trilliant Health Provider Directory.

OB/GYNs Report Level of Highest Burnout

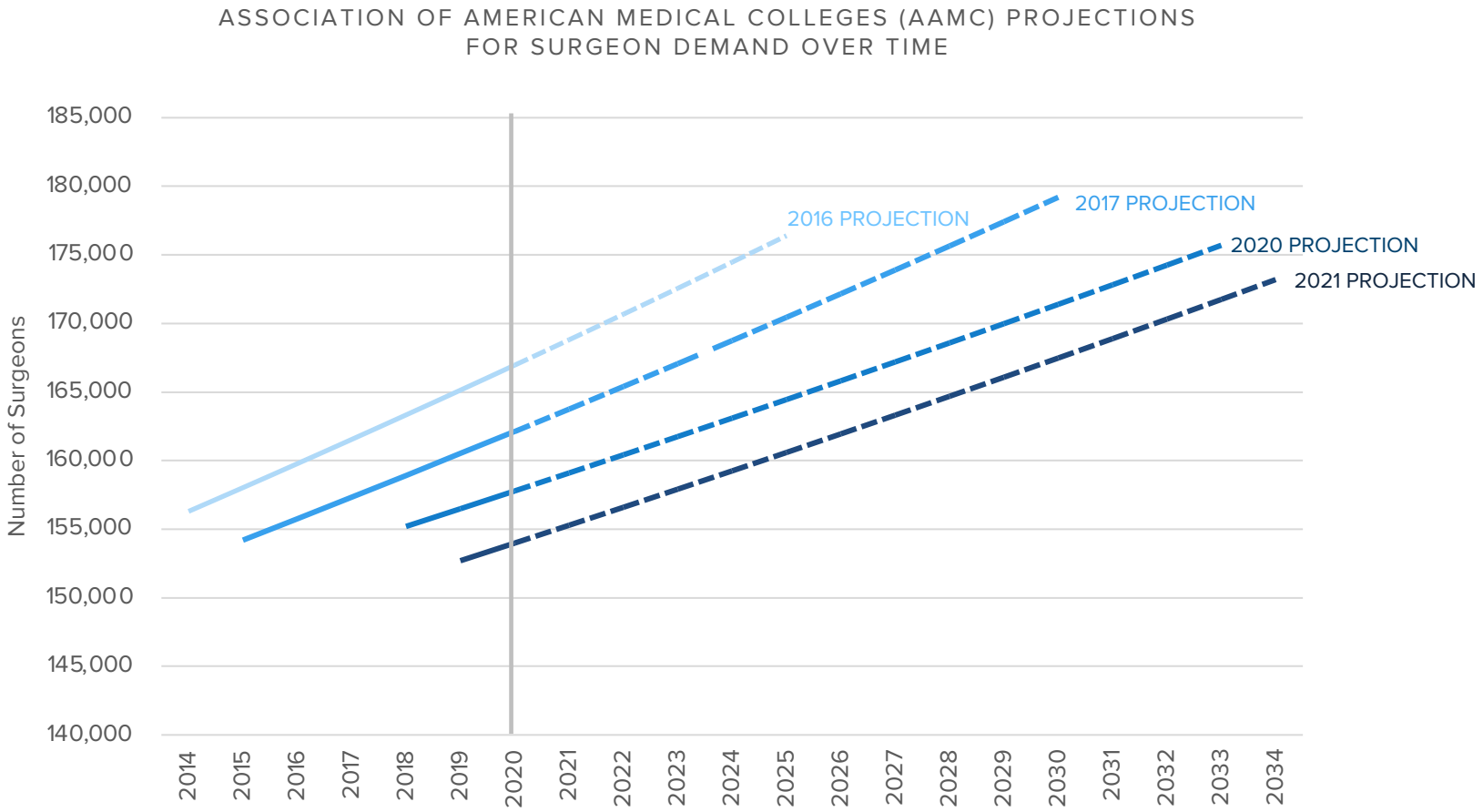
While all specialties reported feelings of burnout, five specialties reported rates higher than 50%: OB/GYN (62%), emergency medicine (60%), critical care (56%), infectious disease (51%), and family medicine (51%). From 2018 to 2021, physicians in emergency medicine experienced the greatest increase (35% in 2018 to 60% in 2021).



Source: Association of American Medical Colleges (AAMC) Physician Supply and Demand Projection Reports, 2021. Medscape Physician Burnout and Depression report, 2022.

AAMC Has Consistently Overestimated Growth in Demand

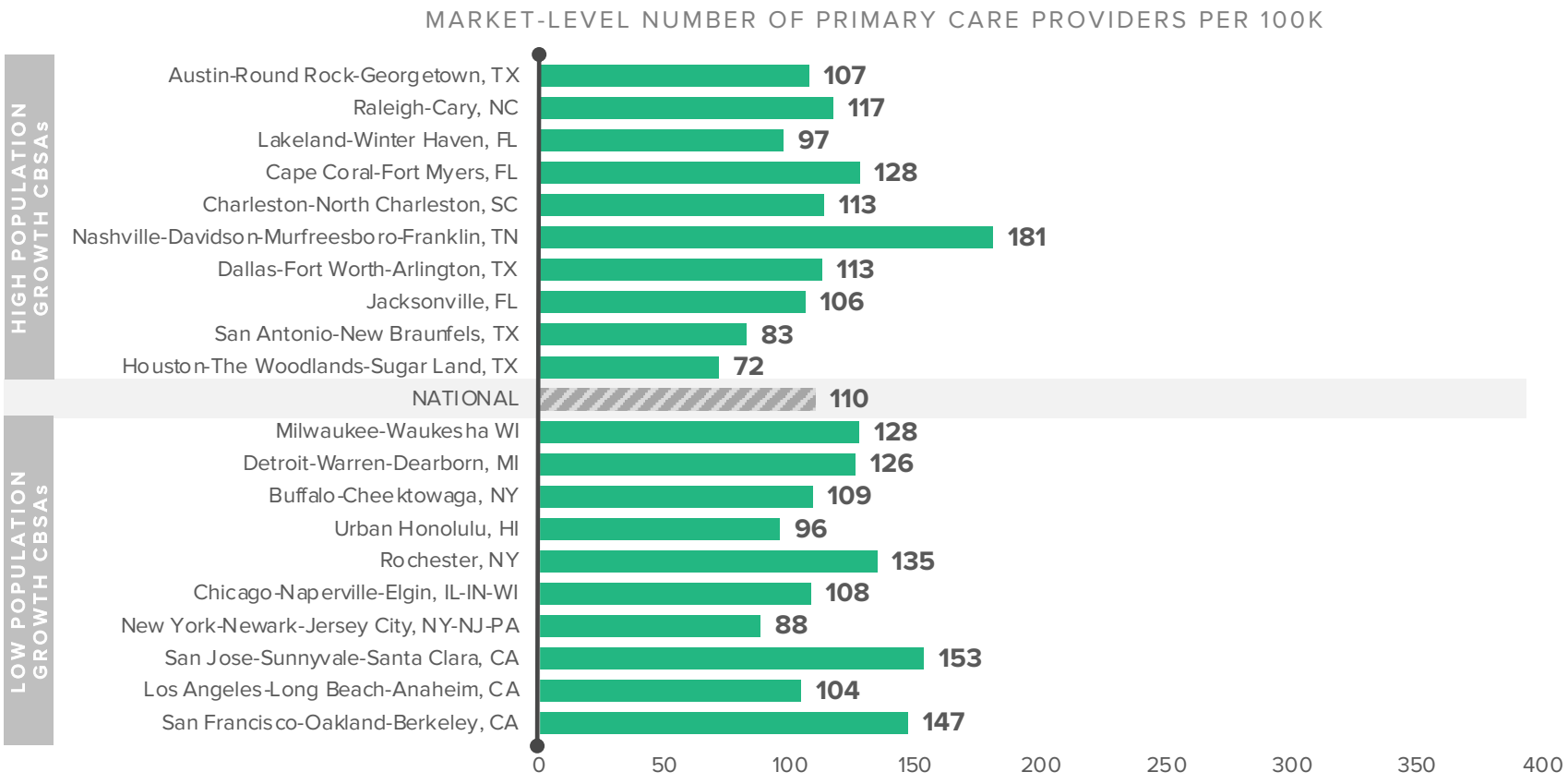
While much has been made of increasing demand and decreasing physician supply, the AAMC has consistently revised their surgeon demand projections *downward* over time.



Note: Comparable data was unavailable for years 2018 and 2019.
Source: Association of American Medical Colleges (AAMC) Physician Supply and Demand Projection Reports; 2016, 2017, 2020, 2021.

Supply of Primary Care Providers Varies Locally

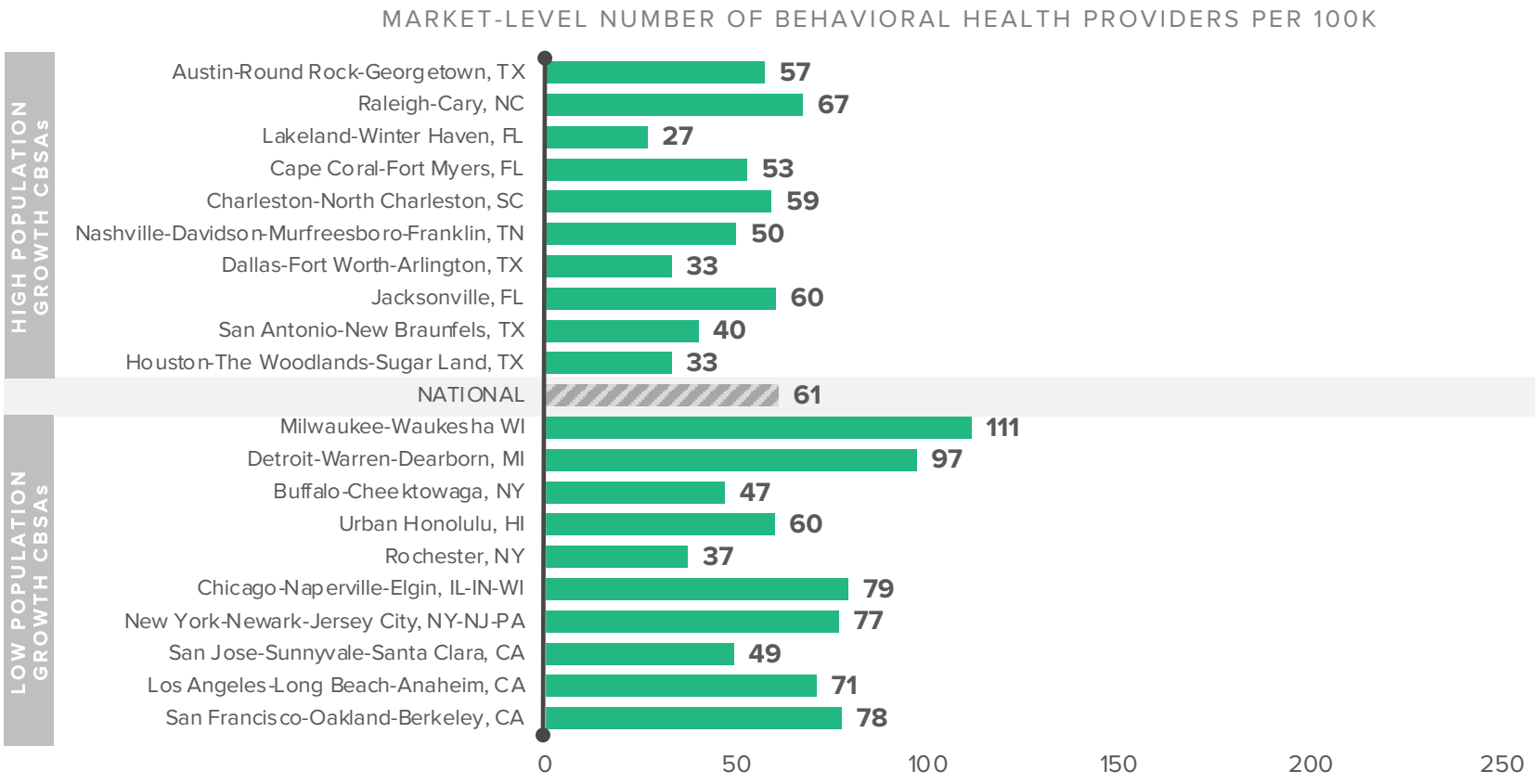
While the median rate of primary care providers is 110 per 100K, each geography will vary in need for these providers based on demand, consumer preference, and disease burden.



Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. The definition of primary care physicians is limited to board-certified physicians, though acknowledge the role physician assistants and nurse practitioners serve in delivering primary care services. 2020 Census population was used to calculate a per 100K rate.
Source: Trilliant Health Provider Directory.

Supply of Behavioral Health Providers Varies Locally

While the median rate of behavioral health providers is 61 per 100K, each geography will vary in need for these providers. Within a few years, the U.S. will experience a shortage of between 14,280 and 31,109 psychiatrists, psychologists, and social workers, which is likely to grow given the newly released USPSTF recommendations for widespread anxiety screening in children and adults.

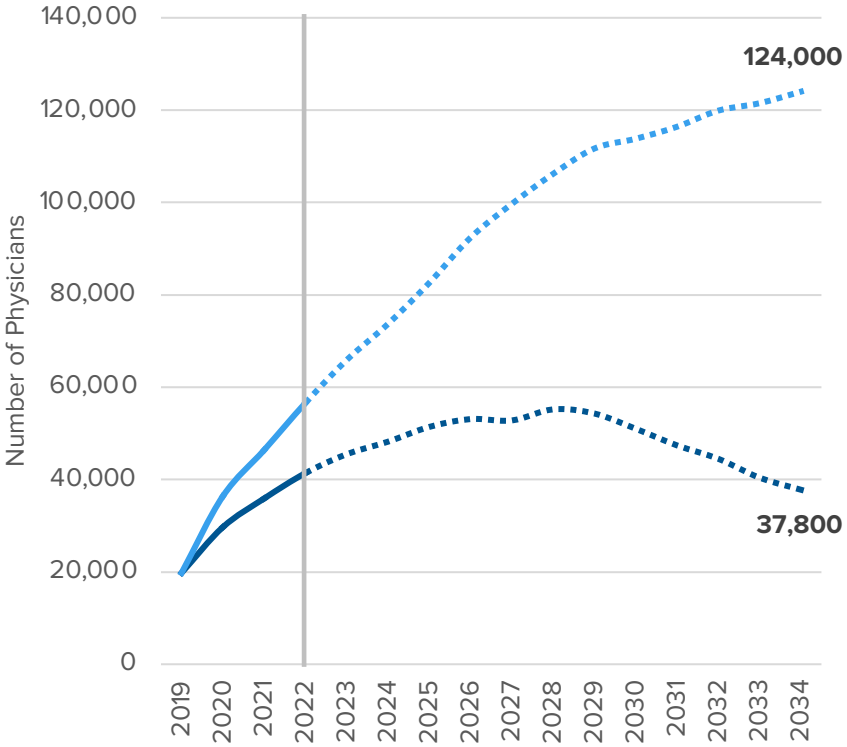


Note: These 20 CBSAs represent selected markets with populations over 750K that are projected to increase or decrease significantly between 2022 and 2027. 2020 Census population was used to calculate a per 100K rate. USPSTF denotes the U.S. Preventive Services Taskforce.
Source: Trilliant Health Provider Directory; Association of American Medical Colleges (AAMC).

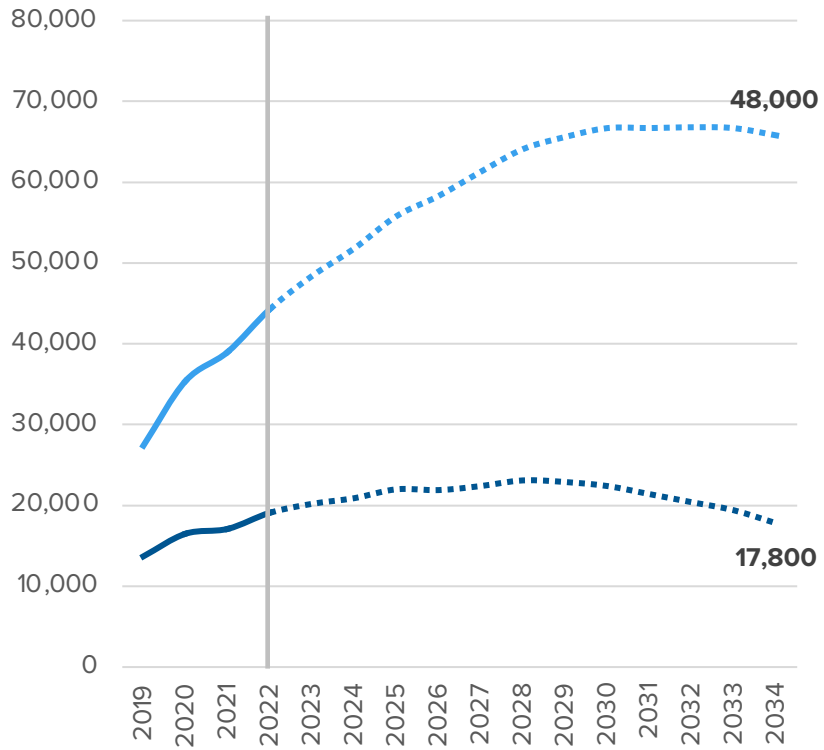
Will CBO's Price Cap Framework Increase Physician Shortage?

By 2024, the primary care physician gap is projected to range from 17.8K (25th percentile) to 48K (75th percentile). However, if prices are capped for hospital and physician services per the CBO's recent policy recommendation, the downstream impact on physician compensation may amplify supply shortages.

PROJECTED GAP IN **TOTAL PHYSICIANS**, 2019-2034



PROJECTED GAP IN **PRIMARY CARE PHYSICIANS**, 2019-2034



25th Percentile — 75th Percentile

Source: Association of American Medical Colleges (AAMC); Congressional Budget Office (CBO), *Policy Approaches to Reduce What Commercial Insurers Pay for Hospitals' and Physicians' Services*, 2022.

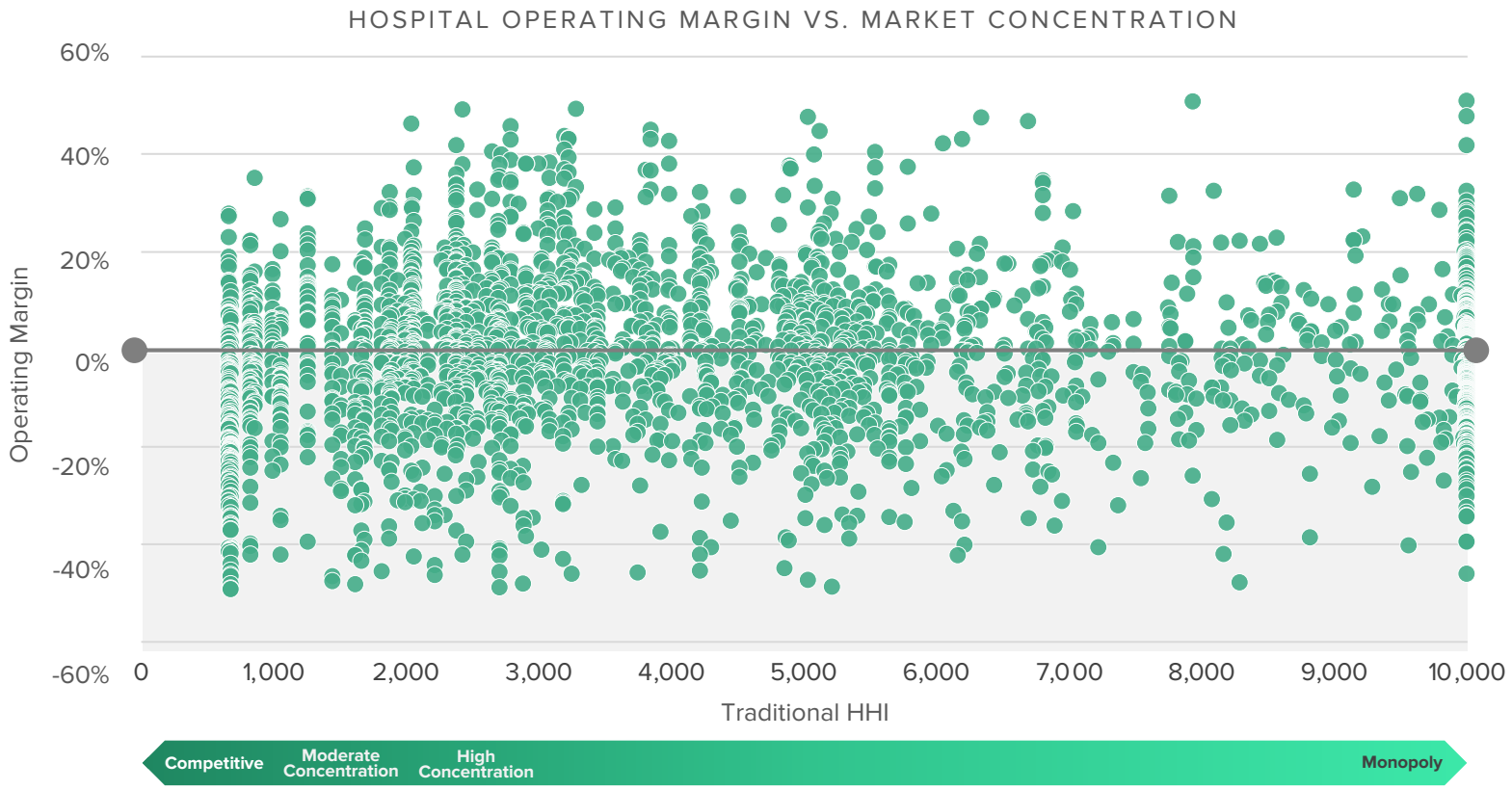
TREND 12

Only in Healthcare Can a Monopoly Lose Money, and Regulators Want to Prevent More of Them

TREND 12: LOSING MONOPOLIES

The Average Monopoly Generates Negative Operating Margins

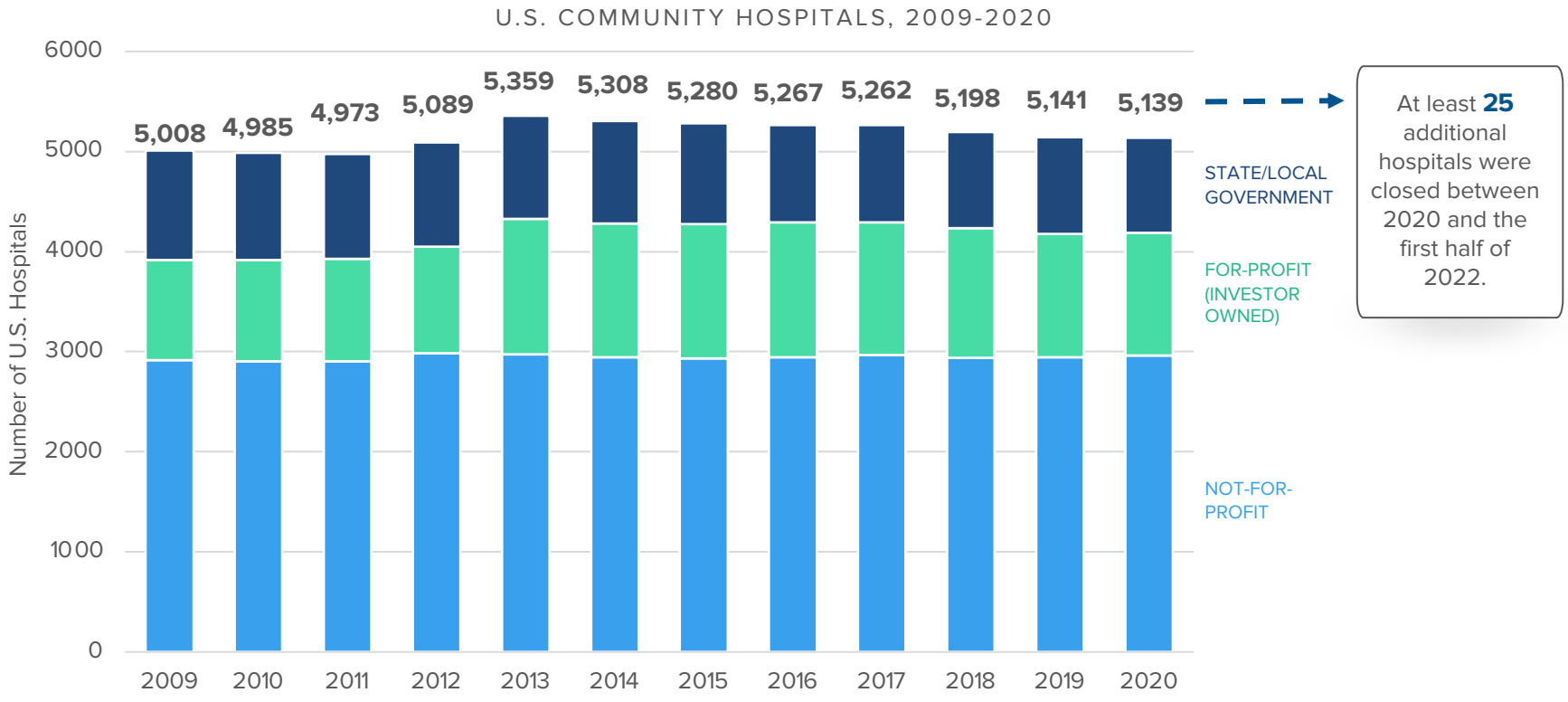
In 44 of the 225 CBSAs "controlled by a single firm," that single firm has an operating margin higher than 10%; in contrast, in 132 CBSAs "controlled by a single firm," that single firm's operating margin is negative. The average operating margin of a hospital with a maximum HHI score of 10,000 is -0.98%.



Note: Comparison of the operating margin of 2,717 short-term acute care hospitals with their Herfindahl-Hirschman Index (HHI) score. A HHI below 1,500 indicates a competitive market; between 1,500 and 2,500 indicates a moderately concentrated market, whereas a value greater than 2,500 indicates a highly concentrated market. See more detailed HHI definition in footnote. Traditional HHI refers to the standard measure focused on
Source: Operating margins calculated from Healthcare Cost Report Information System (HCRIS); HHI calculated from Trilliant Health's national all-payer claims database.

The Number of U.S. Hospitals Continues to Decline

220 hospitals have closed or been repurposed since 2013, reflecting the reduction of inpatient demand and growing financial pressures. While funding provided to hospitals during the public health emergency likely reduced the magnitude of this trend *temporarily*, the risk of increasing closures still looms.

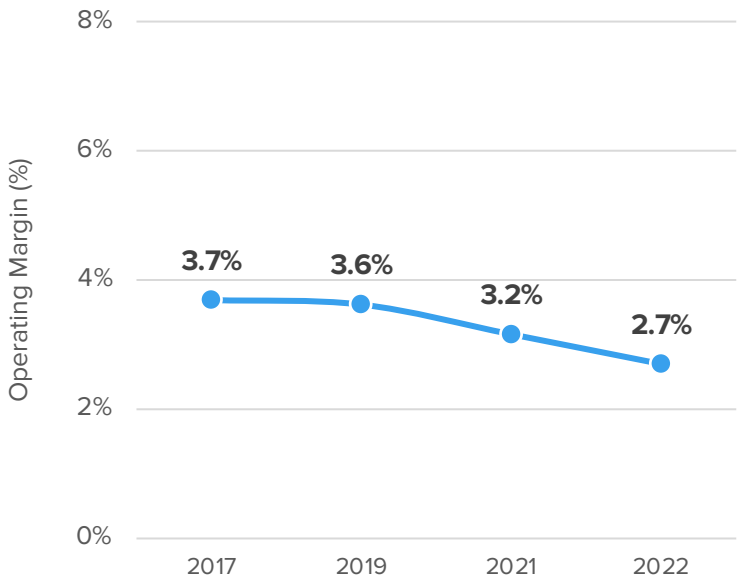


Note: The American Hospital Statistics 2022 reports data to 2020.
Source: American Hospital Association Statistics. The Cecil G. Sheps Center for Health Services Research.

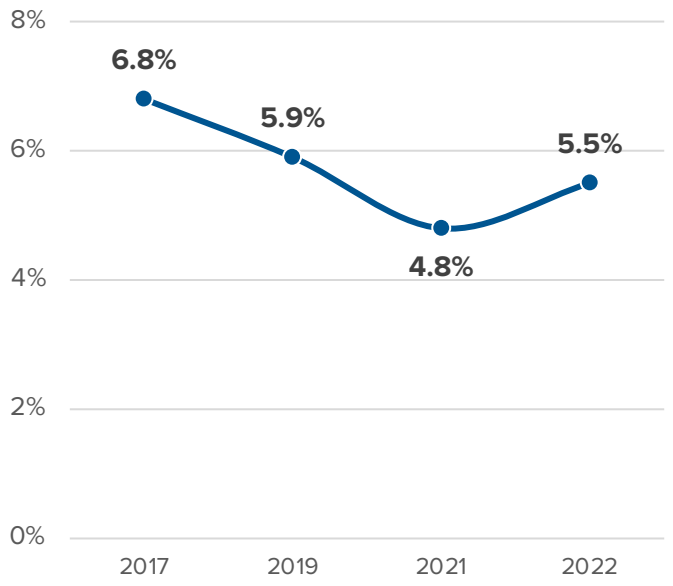
Health System Generate Lower Operating Margins (And Less Revenue) Than Payers

While both health systems and health insurers have seen declines in average operating margin, health systems are trending towards below 3% with reports of more hospitals experiencing negative margins in 2022, suggesting greater downward pressure ahead.

AVERAGE NOT-FOR-PROFIT LARGE **HEALTH SYSTEMS** OPERATING MARGINS, 2015-2021



AVERAGE OPERATING MARGIN OF LARGE **HEALTH INSURERS**, 2015-2021



Note: The top 5 health insurers average operating margins were calculated using the average of Aetna, Anthem, United HealthCare, Cigna, and Humana operating margins from 2013 to 2021. Health system margins were calculated using data provided by a representative sample of large not-for-profit health system senior executives and their financial statements. The margins are likely to be on the higher end given the sample leans towards larger organizations. Data for 2022 is reflective of mid-year performance and is subject to change through December 31, 2022.
Source: American Hospital Association Chartbook; Financial Statements of health insurers and health systems.

Providers Continue to Face FTC Scrutiny With Regard to Competition

Regulatory agencies continue to express concerns regarding anti-competitive impacts of various hospital/health system deals despite continued financial losses and risk of hospital closures.

SELECT HEALTHCARE TRANSACTIONS UNDER COMPETITION REVIEW BY THE FEDERAL TRADE COMMISSION, 2021-2022

Hospital/Health System

- HCA Healthcare + Steward
- RWJBarnabas Health + Saint Peter's Healthcare System
- Lifespan + Care New England
- Hackensack Meridian Health + Englewood Health Foundation
- DaVita + University of Utah Health Care

New Entrants

- amazon + one medical

Diagnostics

- illumina + GRAIL

Source: Publicly available Health Care Competition case filings from the Federal Trade Commission.

Expanding Traditional Measures of Market Concentration (HHI) to Include the Shift to Outpatient Care Delivery Reveals More Variation

Segmenting sites of care and type of care changes the HHI within a market. For example, Atlanta's inpatient surgical market is highly concentrated (2,651), but when including outpatient surgeries, Atlanta's surgical market is considered competitive (1,341).

HHI FOR SELECT CBSAs, INPATIENT AND OUTPATIENT, MEDICAL AND SURGICAL

CBSA	Inpatient Surgical	Inpatient Medical and Surgical	Inpatient Medical	Inpatient Surgical and Outpatient Surgical	Outpatient Surgical
NATIONAL MEDIAN	5,479	5,290	5,294	3,683	3,278
New York-Newark-Jersey City, NY-NJ-PA	794	680	650	349	278
Pittsburgh, PA	1,646	1,448	1,400	1,046	922
Oklahoma City, OK	1,299	1,819	2,314	1,198	1,219
Baltimore-Columbia-Towson, MD	1,979	1,892	1,896	912	767
San Diego-Chula Vista-Carlsbad, CA	2,328	1,938	1,801	1,611	1,421
Urban Honolulu, HI	2,475	2,124	2,213	1,989	1,880
Atlanta-Sandy Springs-Alpharetta, GA	2,651	2,061	1,883	1,341	1,054
St. Louis, MO-IL	2,681	2,453	2,353	1,656	1,433
Tampa-St. Petersburg-Clearwater, FL	2,721	2,697	2,796	1,292	967
Boston-Cambridge-Newton, MA-NH	2,328	2,708	2,882	1,824	1,719
Nashville-Davidson-Murfreesboro-Franklin, TN	3,024	3,226	3,510	1,580	1,233
Louisville/Jefferson County, KY-IN	3,670	3,318	3,459	2,766	2,489
Durham-Chapel Hill, NC	3,886	3,635	3,667	3,253	3,076
Bellingham, WA	10,000	10,000	10,000	4,835	3,640

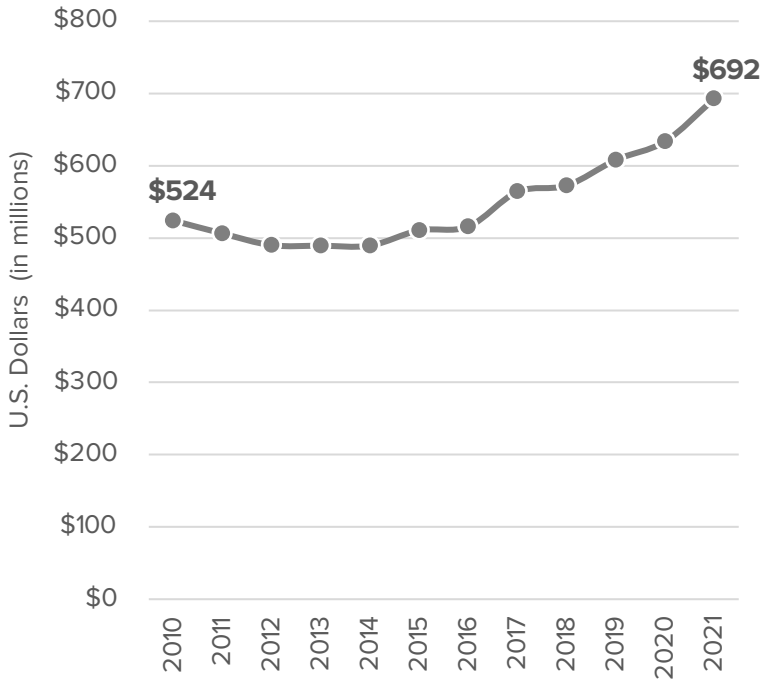
Low Concentration (<1,500) | Moderate Concentration (1,500 – 2,500) | High Concentration (>2,500) | Monopoly (10,000)

Note: HHI is a commonly accepted measure of market concentration. A concentration value below 1,500 indicates a competitive market; between 1,500 and 2,500 indicates a moderately concentrated market, whereas a value greater than 2,500 indicates a highly concentrated market. Rows of CBSAs are sorted from less concentrated to more concentrated.
Source: Trilliant Health national all-payer claims database.

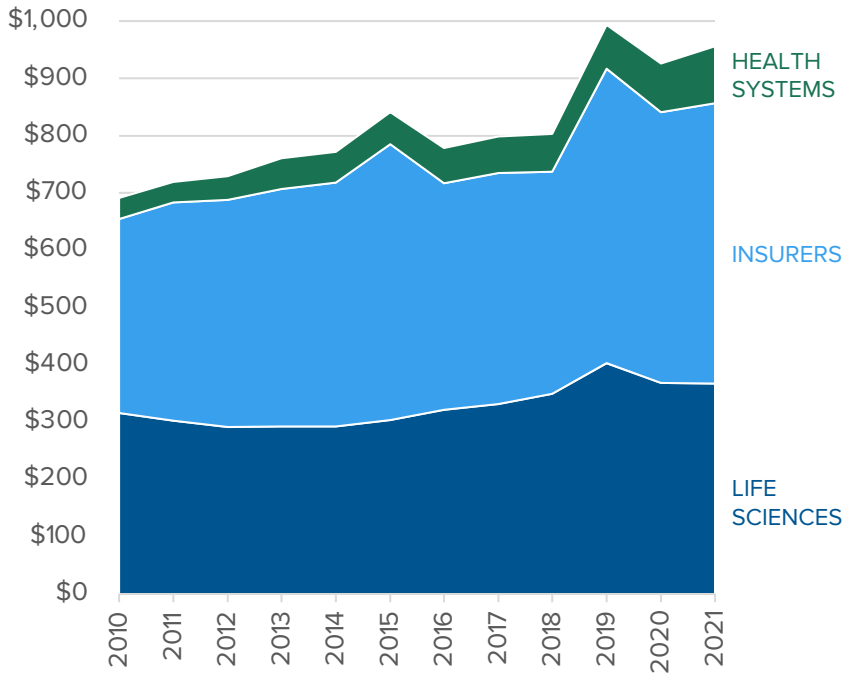
Large Insurers Spend the Most on Health Sector Lobbying

The amount spent on total healthcare lobbying increased 44% from 2010 to 2021 with a 9.3% increase between 2020 and 2021 alone. Among stakeholders, large health insurers constitute the greatest share of lobbying influence, with spend increasing 28.5% from 2019 to 2021 and 32.1% from 2000 to 2021.

HEALTHCARE LOBBYING SPENDING, 2010-2021



HEALTHCARE LOBBYING SPENDING BY STAKEHOLDER, 2010-2021



Note: Healthcare lobbying spending by sector was calculated using the annual sum of lobbying spending among a sample of five primary stakeholders within each sector: Life Sciences (Johnson & Johnson, Pfizer, Bristol-Myers Squibb, Merck & Co, and AbbVie Inc.); Health Systems (HCA Healthcare, Ascension Health, Trinity Health, Tenet Healthcare, and University of Pittsburgh Medical Center); Insurers (Humana, Inc., Blue Cross/Blue Shield, Aetna Inc. Centene Corporation, and UnitedHealth Group). HCA Healthcare and AbbVie Inc. 2010-2012 data is not reflected in the health system's total.
Source: The Senate Office of Public Records Lobbying Disclosure Act (LDA) Reports.

TREND 13

More Providers Are Competing for Fewer Patients

TREND 13: MORE PROVIDER COMPETITION

Existing Consumer Loyalty Increases Competitive Pressures on Traditional Providers

While health system consolidation is growing, there is not meaningful customer concentration among a single national provider. Amazon and Walmart, which continue to expand their presence in healthcare, have a unique opportunity to acquire their existing customer base as patients.

<2%

Share of Americans treated at any given health system

ASCENSION
Cleveland Clinic
HCA Healthcare
CommonSpirit

62%

of American adults have an active prime membership

amazon Prime

42%

of Americans shop at a Walmart location weekly

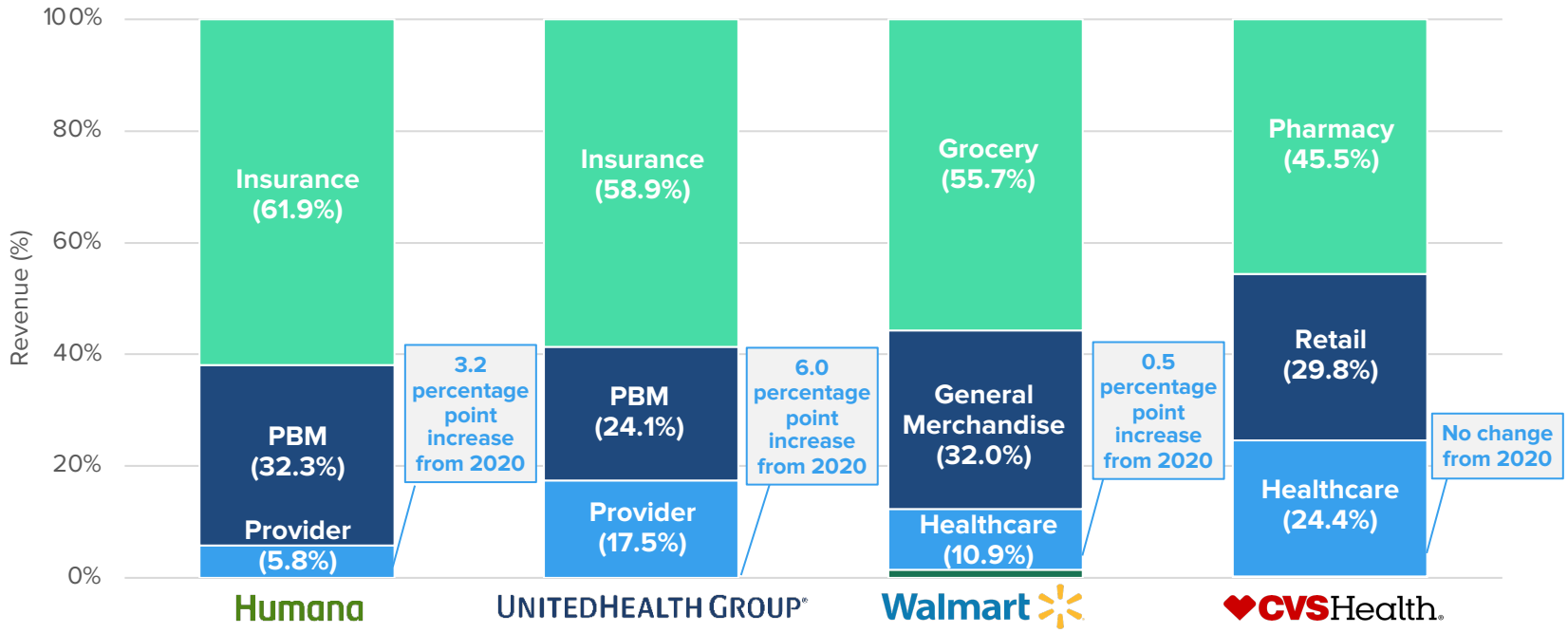
Walmart

Note: Hospital admissions at each health system as a percentage of all hospital admissions was used as a proxy.
Source: Business Insider; analysis of Walmart press releases; Trilliant Health national all-payer claims database.

Payers Are Becoming Providers...and So Are Retailers

New market entrants have extensive experience in consumer marketing and engagement, whether Medicare Advantage or retail. Entrants like UnitedHealth Group and Walmart are teaming up in their provider-based efforts.

PERCENT OF 2021 REVENUE DEDICATED TO HEALTHCARE SERVICES FOR NON-TRADITIONAL PROVIDER ENTITIES



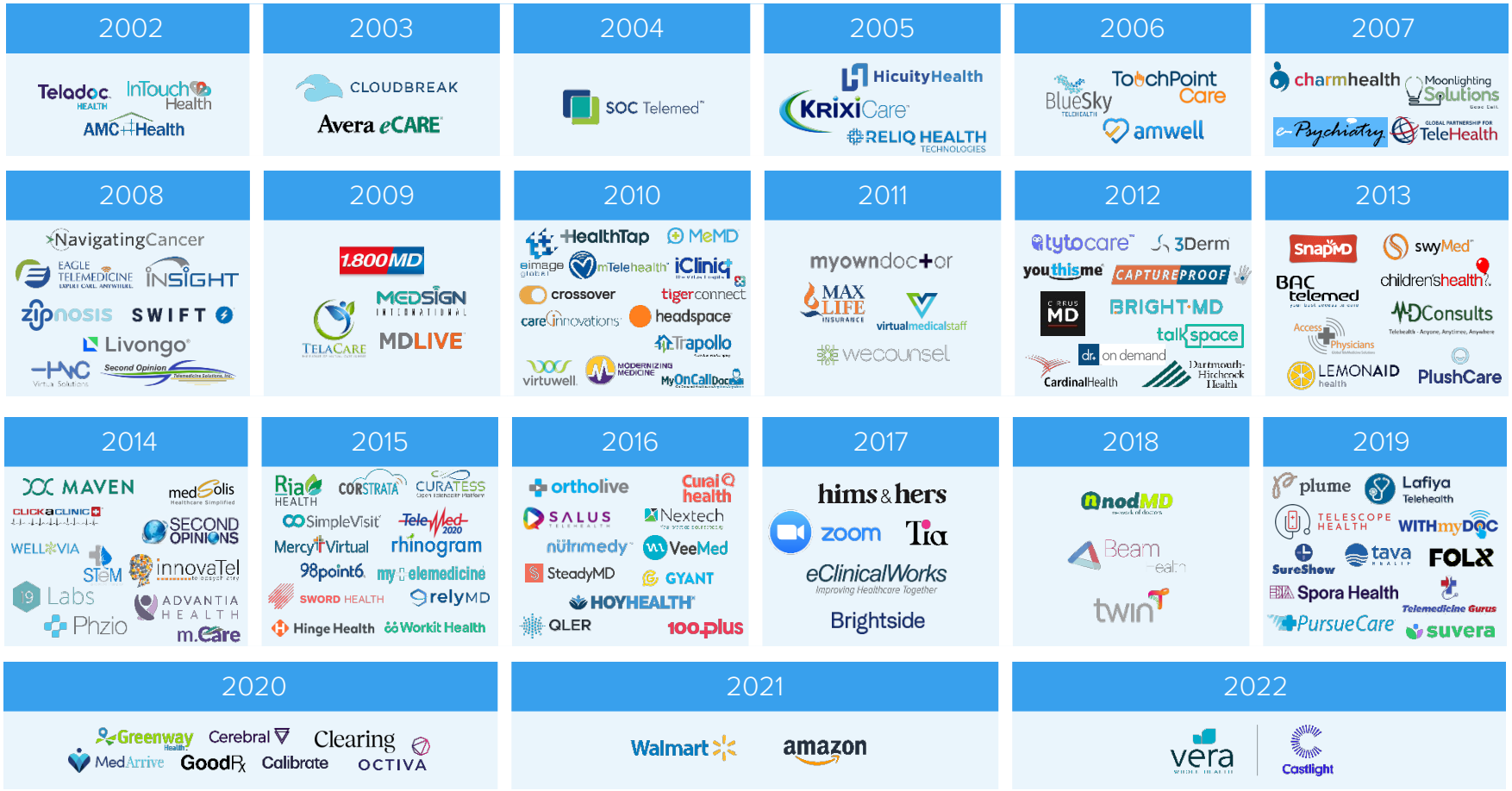
- Humana recently announced plans to acquire senior-focused primary care clinics for roughly $500M, and plan to add upwards of 50 additional clinics by 2025.
- UnitedHealth Group and Walmart entered into a ten-year collaboration to serve seniors and Medicare Advantage beneficiaries. The partnership is beginning in Florida and Georgia in 15 Walmart Health locations, and by 2023 will offer a co-branded Medicare Advantage plan in Georgia. Both companies have committed to eventual expansion into the Medicaid and commercial markets.
- Beyond its existing network of MinuteClinic locations and HealthHUB locations, CVS has expressed intentions to acquire an existing primary care provider to expand its stake as a primary care provider.

Source: Analysis of publicly available financial statements.

The Number of Tech-Enabled Care Providers Has Grown

While telehealth volumes spiked in 2020, many operators have been in the ecosystem for years; more are projected to come.

TIMELINE OF SELECT SUPPLIERS OFFERING TELE-CAPABILITIES



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

TREND 13: MORE PROVIDER COMPETITION

The Number of Retail-Based Care Providers Has Grown

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

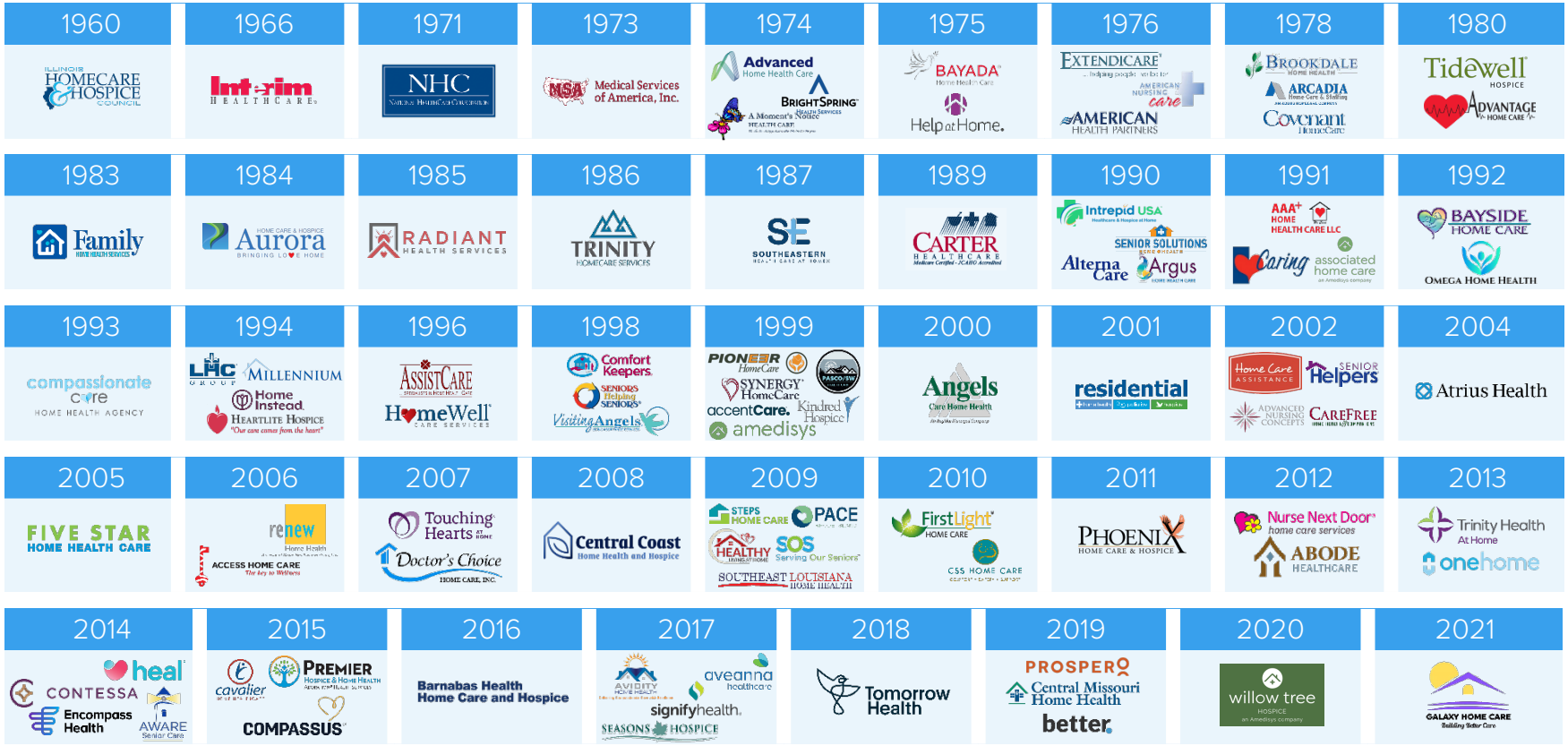
TIMELINE OF SELECT SUPPLIERS OFFERING RETAIL-BASED CARE

Source: Publicly available company information.

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.

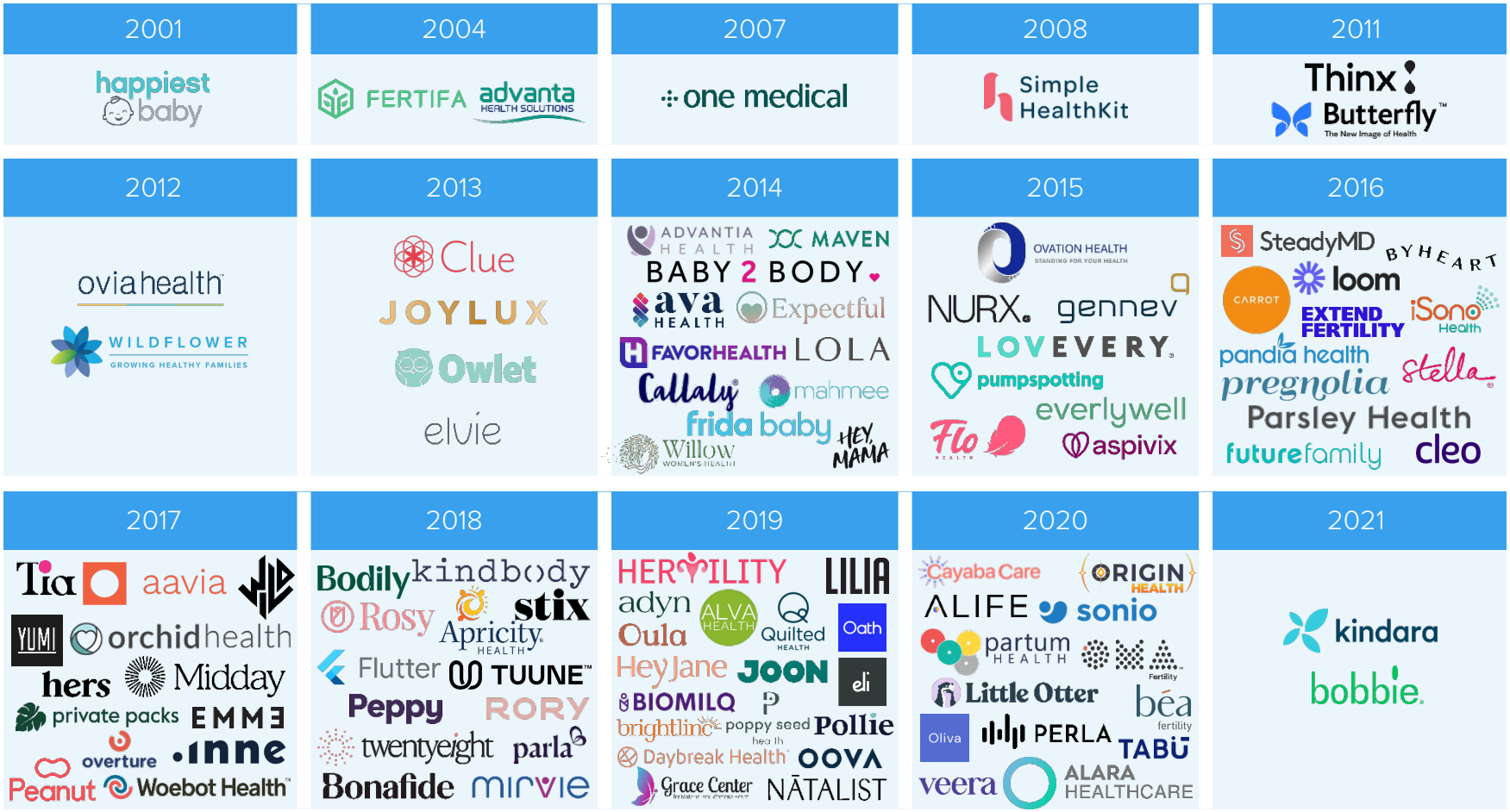
TIMELINE OF SELECT SUPPLIERS OFFERING HOME-BASED CARE



Source: Publicly available company information.

The Number of Women's Health Care Providers Has Grown

A space that was historically deemed "too niche" for significant investment, the number of women's health focused providers has increased since 2014.



Source: Publicly available company information.

CONCLUSION

Every Stakeholder Will Be Impacted by Reduced Yield

CONCLUSION

2022 Secular Trends Shaping the Health Economy

Demand ↘

- **TREND 1** | The Total Available Market (TAM) Of Commercially Insured Patients Is Shrinking
- **TREND 2** | Care Forgone During the Pandemic Is Permanently Lost, and the Observed Rebound Is Illusory
- **TREND 3** | Higher Patient Acuity Is Likely to Materialize Eventually
- **TREND 4** | Projected Growth in Demand for Healthcare Services Is Tepid
- **TREND 5** | How Individuals Access the Healthcare System Varies
- **TREND 6** | Individuals Are Increasingly Making Healthcare Decisions Like Consumers
- **TREND 7** | Increasing Unaffordability Is Suppressing Healthcare Demand

Supply +

- **TREND 8** | Migration of Care Delivery to Lower-Acuity Ambulatory Settings Is Accelerating
- **TREND 9** | Low-Acuity Healthcare Services Are Increasingly Being Commoditized
- **TREND 10** | The Impacts of Commoditization Are Predictable
- **TREND 11** | Provider Burnout Is Exacerbating the Long-Standing Physician Supply Shortage
- **TREND 12** | Only in Healthcare Can a Monopoly Lose Money, and Regulators Want to Prevent More of Them
- **TREND 13** | More Providers Are Competing for Fewer Patients

Conclusion Every Stakeholder Will Be Impacted By Reduced **Yield**

CONCLUSION: REDUCED YIELD

Changes in Supply and Demand Have Altered Healthcare

Nationally, non-COVID-related care is down 6%, urgent care utilization is up 31%, care is shifting from the inpatient to outpatient setting, there are more new entrants than ever before, and patients are facing high deductibles in an uncertain economy. Due to the combination of these factors, the healthcare status quo is no longer—the average patient is interacting with the healthcare system in a different way.

Demographic		Pre-Pandemic Status Quo	»	Post-Pandemic Reality
 52-year-old woman	No primary complaint	Annual Wellness Visit with Established Provider		Delaying Care
 65-year-old man	Knee osteoarthritis	Inpatient Knee Replacement		Outpatient Knee Replacement
 12-year-old boy	Sore throat	Office Visit with Established Pediatrician		Urgent Care Visit
 36-year-old woman	Anxiety	Office-Based Therapy		Telehealth Therapy with New Entrant
 45-year-old man	Hypertension	Annual Cardiologist Visit		Delaying Care

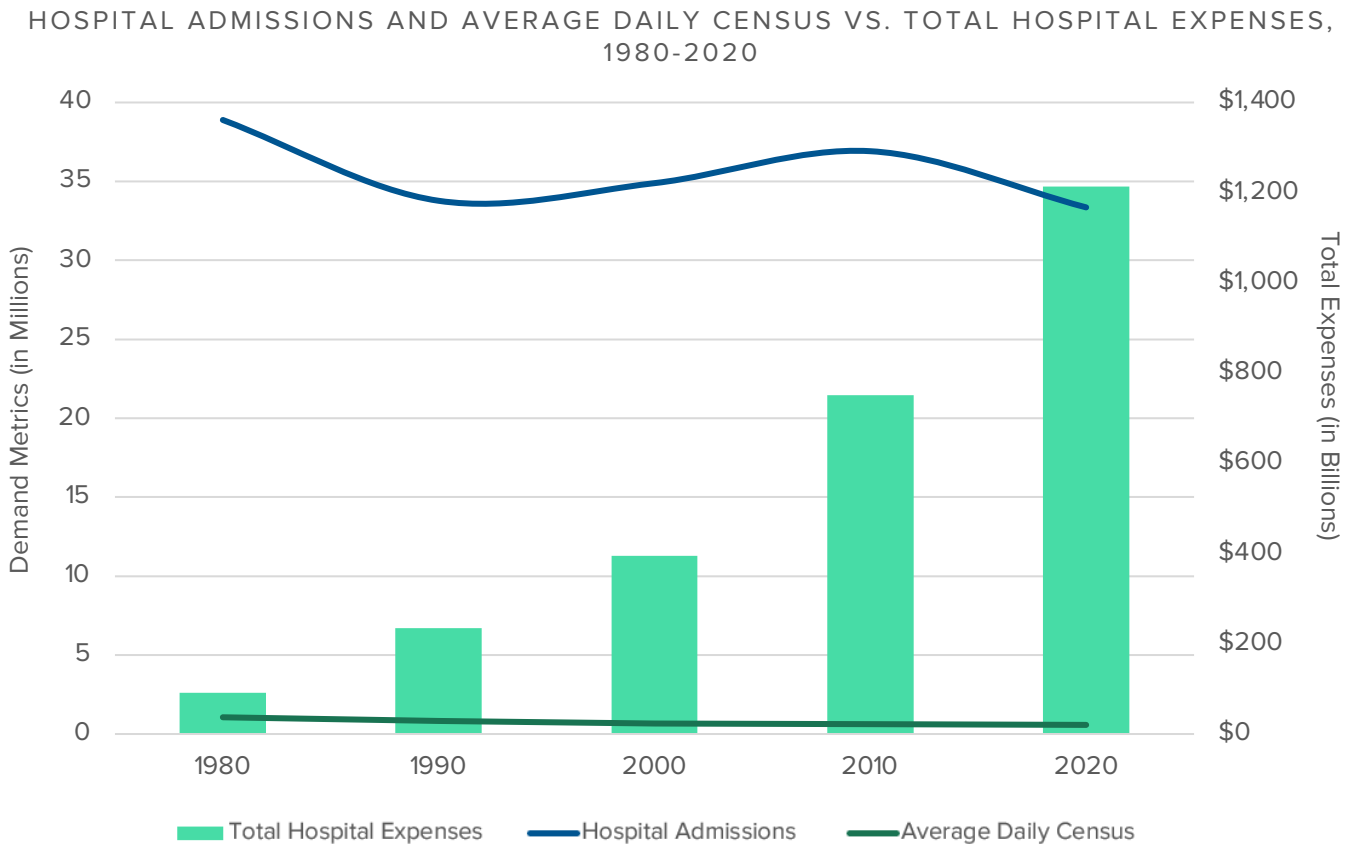
Contributing Factors

- Fear
- High Deductibles
- Lack of Provider Loyalty
- Consumer Preferences

CONCLUSION: REDUCED YIELD

The Paradox of Declining Demand and Rising Price Defies the Laws of Economics

As rising healthcare unaffordability becomes a greater concern for Americans in tandem with declining U.S. life expectancy, how much longer can the health economy get away with defying the laws of economics?

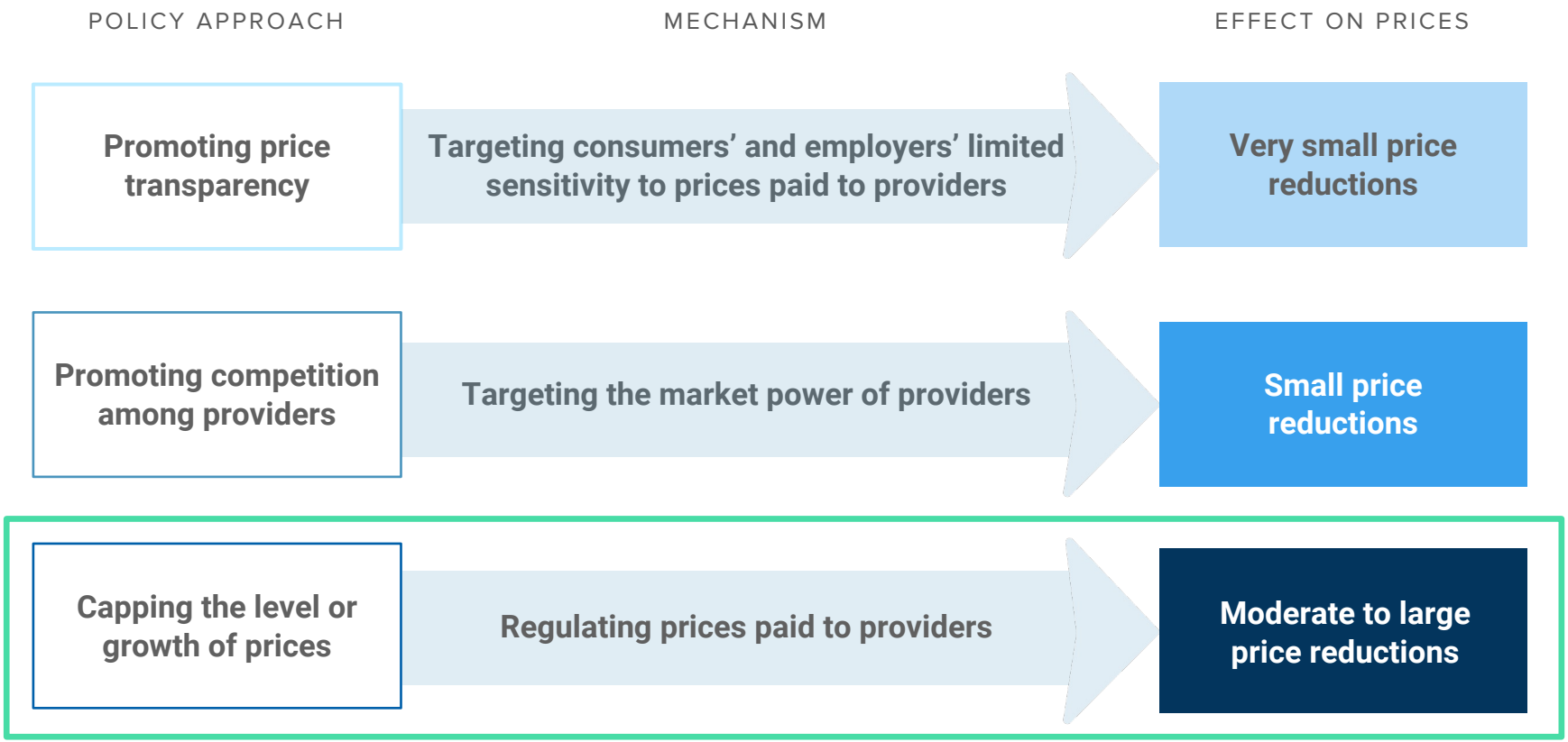


Source: Analysis of 2022 American Hospital Association data.

CONCLUSION: REDUCED YIELD

Reducing Healthcare Spending Through Price Controls

Healthcare spending accounts almost 20% of U.S. GDP. The prices that commercial health insurers pay are much higher and are rising more quickly than the prices paid by public insurance programs. The CBO has developed a framework for how Federal legislation might address high commercial prices, which result from negotiations between private payers and hospitals or physician groups. While two of the three proposed approaches are familiar to health economy stakeholders, **the CBO's proposal to cap commercial prices is one that would dramatically change the game for every stakeholder.**



Source: Congressional Budget Office (CBO), Policy Approaches to Reduce What Commercial Insurers Pay for Hospitals' and Physicians' Services, 2022

CONCLUSION: REDUCED YIELD

The U.S. Government Is Exploring All Options to Reduce Costs

Recent policy analyses from the CBO signal a greater interest in tackling the cost curve and all options are on the table.

		CHANGE IN AVERAGE HOSPITAL PRICE PAID BY PRIVATE PLANS (%)	CHANGE IN HOSPITAL SPENDING ($ BILLIONS)	CHANGE IN NATIONAL HEALTH SPENDING (%)
PRICE TRANSPARENCY – VERY SMALL PRICE REDUCTIONS				
34% Shoppable Services	Patient-Driven	-1.7	-8.7	-0.2
43% Shoppable Services		-1.4	-11.1	-0.3
75th Percentile Price	Employer-Driven	-2.2	-13.2	-0.4
Median Price		-4.7	-26.6	-0.7
INCREASED COMPETITION – SMALL PRICE REDUCTIONS				
Small Price Response	HHI decrease to 1,500	-1.6	-9.9	-0.3
Medium Price Response		-3.1	-19.7	-0.5
Large Price Response		-11.2	-68.9	-1.9
CAPPED RATES IN ALL PRIVATE PLANS – MODERATE				
100	% of Medicare Rates	-43.2	-246.4	-6.8
125		-30.8	-178.5	-4.9
150		-20.5	-119.1	-3.3
175		-12.7	-72.8	-2.0
200		-7.6	-42.7	-1.2

CBO estimates that 1% decrease in prices could lead to a **DECLINE** in total spending on commercial health insurance premiums by $13B by 2032.

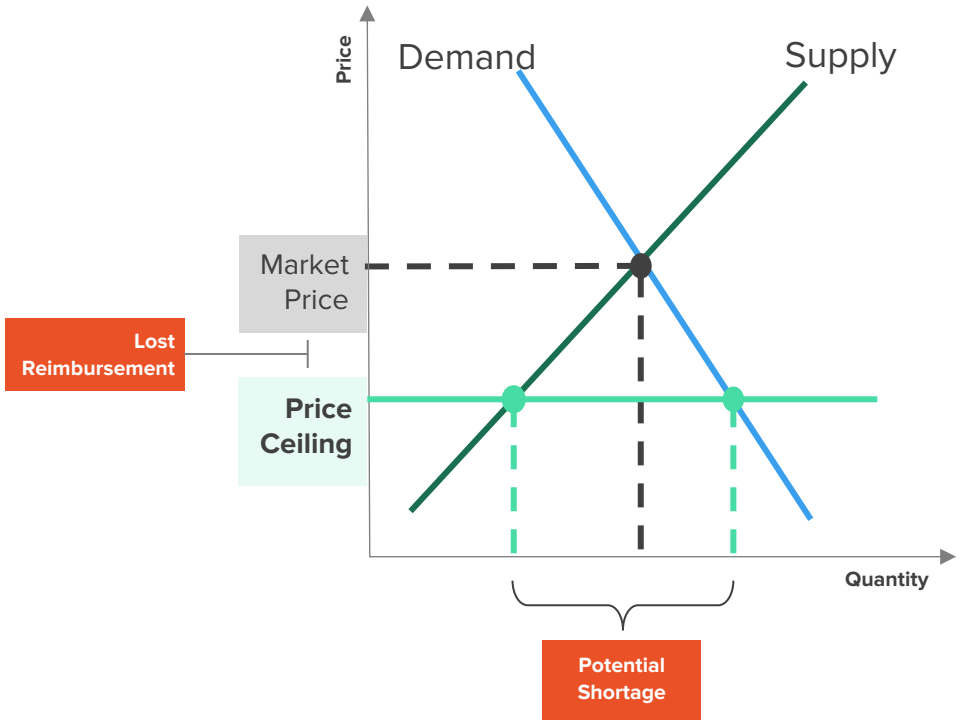
Source RAND Corporation *Impact of Policy Options for Reducing Hospital Prices Paid by Private Health Plans.*

CONCLUSION: REDUCED YIELD

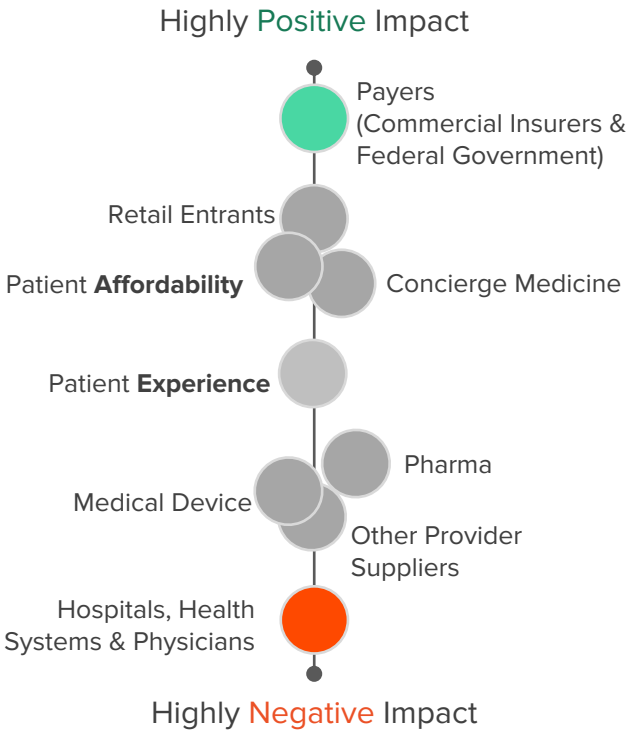
What if Yield Is Arbitrarily Flattened With a Price Ceiling?

A government may implement a price ceiling if it thinks that people need a particular good to live, and that the market price for that good is too high. Because healthcare is not a perfect market, a commercial price ceiling would *definitely* reduce the per episode reimbursement received by hospitals and providers, and it *might* lead to increased patient demand in select services. With the CBO's recent analyses to cap commercial prices, every stakeholder must consider and prepare for the implications of reduced yield in a post-pandemic health economy. While every stakeholder would be affected, payers will inevitably come out on top relative to others.

YIELD IMPLICATIONS OF CAPPED COMMERCIAL PRICES



IMPACT OF REDUCED YIELD BY STAKEHOLDER



METHODOLOGY

METHODOLOGY

Study Data

A variety of data sources were leveraged as part of this research, with most insights gleaned from Trilliant Health's proprietary datasets with visibility into patients and providers across the country. Trilliant Health's national all-payer claims dataset combines commercial, Medicare Advantage, traditional Medicare, and Medicaid claims, which provides a nationally representative sample accounting for more than 300M American lives on a deidentified basis. Trilliant Health's consumer dataset includes a range of psychographic (e.g., behaviors, preferences), demographic, social determinants (e.g., broadband), and lifestyle (e.g., wearable) data, inclusive of variables sourced from Choreograph and ESRI. Trilliant Health's proprietary Provider Directory enables a direct view into providers and their practice patterns.

Certain trends exclude traditional Medicare claims due to limitations in time period alignment attributed to data release schedules from the Centers for Medicare and Medicaid Services (CMS). In other analyses, traditional Medicare volume is imputed for Q1 of 2022. Traditional Medicare volume was imputed by multiplying the volume from the previous quarter by the average quarterly growth rate between Q1 and Q3 2021. Additional data were obtained from a variety of publicly available sources (and are noted in respective source notes), including individual health system, health plan, and company financial statements, Census Bureau, Kaiser Family Foundation, the Congressional Budget Office, Commonwealth Fund, American Hospital Association, Centers for Disease Control and Prevention, and the Association of American Medical Colleges.

Most data are presented with a national view, while some were exclusively focused on counties or the largest markets – defined as the Core-Based Statistical Areas (CBSAs) – to illustrate local variation. This research does not include data from self-pay encounters or encounters provided at no cost through commercial insurers. Data for Q2 2022 was excluded due to lack of claims completeness at the time of analysis.

METHODOLOGY

Analytic Approach

DATA SOURCE	FEATURE	CATEGORY	DESCRIPTION
TRILLIANT HEALTH NATIONAL ALL-PAYER CLAIMS DATABASE	Volume	Inpatient	Visits associated with medical and surgical care delivered inpatient on the campus of a hospital, reflective of all payers.
		Outpatient	Visits associated with medical and surgical care delivered in the outpatient setting, separating care delivered on the campus of a hospital and in non-hospital settings, reflective of all payers.
		Primary Care	Visits with providers characterized as general practice, family, internal, geriatric, adolescent, and pediatric medicine, excluding hospitalists, reflective of all payers.
		Behavioral Health	Visits categorized into the Major Diagnostic Categories 19 (Mental Diseases and Disorders) and 20 (Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders), reflective of all payers.
		Urgent Care	Visits delivered at medical facilities where the site of service was identified as urgent care, reflective of all payers.
		Women's Health	Office-based evaluation and management visits for the purposes of preventive and/or acute women's healthcare, reflective of all payers.
		Telehealth	Synchronous audio-video, audio-only, chat-based and asynchronous chat-based and store-and-forward encounters, delivered off the campus of a hospital, reflective of all payers.
		Home Health	Visits delivered at a patient's home with the place of service categorized as home health, reflective of all payers.
		COVID-19	Visits associated with the prevention, testing, treatment, or immunization of COVID-19.
	Competition	Herfindahl-Hirschman Index (HHI)	The Federal government utilizes the HHI as the standard measure of market concentration. HHI is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers. It approaches zero when a market is occupied by several firms of relatively equal size and reaches its maximum value (10,000) when a market is controlled by a single firm (i.e., monopoly). HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases. The U.S. Department of Justice (DOJ) and Federal Trade Commission (FTC) generally consider markets in which the HHI is between 1,500 and 2,500 points to be moderately concentrated and consider markets in which the HHI is in excess of 2,500 points to be highly concentrated. According to DOJ and FTC guidelines, "transactions that increase the HHI by more than 200 points in highly concentrated markets are presumed likely to enhance market power…"
	Pharmacy	Drug Categories	To provide a view of prescription drugs used to treat acute pain, chronic pain, chronic illnesses, infections, and behavioral health conditions, drug classes associated with the following were included in the analysis: Antibiotics, Antidepressants, Antianxiety, Statins, Opioids (including hydrocodone and oxycodone), Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), Beta Blockers, and Thyroid Agents.
		Tele-Prescribing	Prescriptions resulting from a telehealth visit within three days of an encounter, where the prescribing provider is also the telehealth provider.

METHODOLOGY

Analytic Approach cont.

DATA SOURCE	CATEGORY	DESCRIPTION
TRILLIANT HEALTH DEMAND FORECAST	**Service Lines**	As a proxy for total demand, the Demand Forecast analysis was limited to the 5 most common surgical service lines (Heart/Vascular, OB/GYN, Neuro/Spine, Orthopedic, and Digestive) given the contributory impact (in terms of volume and revenues) for providers.
	Confidence Intervals	Forecast outputs for the 25th and 75th incidence rate percentiles are shown to provide a broader understanding of potential outcomes. Unless noted otherwise, forecast projections account for the impact of COVID-19.
	Five-Year CAGR	Forecasted compound annual growth rate of median incidence rate between 2022 and 2026.
TRILLIANT HEALTH PROVIDER DIRECTORY	**Primary Care Provider**	Primary care providers (PCPs) per 100K were calculated using Trilliant Health's provider directory. We limited our definition of PCPs, solely including board-certified physicians, though acknowledge the role physician assistants and nurse practitioners serve in delivering primary care services. 2020 Census population was used to calculate a per 100K rate.
	Behavioral Health Provider	Behavioral health providers (BHPs) per 100K were calculated using Trilliant Health's provider directory. Our definition of BHPs includes board-certified psychiatrists, psychologists, behavioral therapists, social workers, psychiatric nurse practitioners, etc. 2020 Census population was used to calculate a per 100K rate.
	Providers That Stopped Practicing	Providers (classified as board-certified physicians) with evidence of claims activity in 2019 who no longer had any claims activity as of 2022.
	Providers That Started Practicing	Providers (classified as board-certified physicians) with evidence of claims activity in 2022 but did not have any claims activity in 2019.
	Net Provider Change	The delta between providers that stopped practicing and providers that started practicing compared to the total board-certified physician count in 2019.
	Changed Practice Location	The primary address that a provider performed E&M services in 2019 was different than the primary address where the provider performed these services in 2022, excluding telehealth visits.
	Changed Provider Organization	Instances where the billing organization is different for a provider in 2019 compared to 2022 for E&M services.

METHODOLOGY

Commonly Used Acronyms

AAMC: Association of American Medical Colleges

BHP: Behavioral Health Provider

CAGR: Compound Annual Growth Rate

CBSA: Core-Based Statistical Area

CBO: Congressional Budget Office

CDC: Centers for Disease Control and Prevention

CMS: Centers for Medicare and Medicaid Services

CPT: Current Procedural Terminology

E&M: Evaluation & Management

FDA: Food & Drug Administration

HCRIS: Healthcare Cost Report Information System

HHI: Herfindahl-Hirschman Index

ICD-10: International Statistical Classification of Diseases and Related Health Problems

IP: Inpatient

M&A: Mergers and Acquisitions

MA: Medicare Advantage

MedPAC: Medicare Payment Advisory Commission

MS-DRG: Medicare Severity Diagnosis Related Groups

OECD: Organization for Economic Co-operation and Development

OP: Outpatient

PCP: Primary Care Provider

Rx: Prescription

TAM: Total Addressable Market

METHODOLOLGY

Acknowledgements

Authors

- **Sanjula Jain, Ph.D.**, Senior Vice President of Market Strategy & Chief Research Officer
- **Katie Patton**, Research Manager
- **Kelly Boyce, M.S.**, Senior Data Analyst
- **Maggie Jackson**, Director of Data Visualization
- **Austin Miller**, Senior Research Analyst
- **Allison Oakes, Ph.D.,** Director of Research
- **Megan Davis**, Research Associate
- **Nancy Organ**, Data Visualization Developer
- **Kelsey Thomas**, Creative Manager

This second annual collection of data stories, informed by both primary and secondary sources, would not have been possible without the significant contributions of several Trilliant Health colleagues who carved out time for this research on top of their existing workload.

Distilling more than 70B claim lines, which account for more than 300M lives, into longitudinal data insights is no easy feat. The tremendous efforts of our colleagues in data science and engineering built the foundation upon which we could conduct an analysis of this scale with precision and speed. A special thanks to Grant Anderson, Dimitri Boursinos, Jim Browne, Matt Eby, Kris Enloe, Chris Hebert, Matt Ikard, Cole McKenna, Porter Morton, Chris Rash, and Jamie Supica for their data curation and analytic support.

The “fresh” eyes of Anna Jordan, Allaire Kirk, Jared McKee, Hannah Pike, Cindy Revol, and Kendra Rodgers played a critical role in reviewing and editing.

Finally, Hal Andrews, Jason Nardella, and David Taylor were invaluable thought partners throughout the entire process from the initial conceptualization of this series in 2021 to framing the 2022 trends most relevant to different health economy stakeholders.

Disclaimer