



State of the Union 2020

The resilient health care system

Prepared for Penn Medicine
September 24, 2020

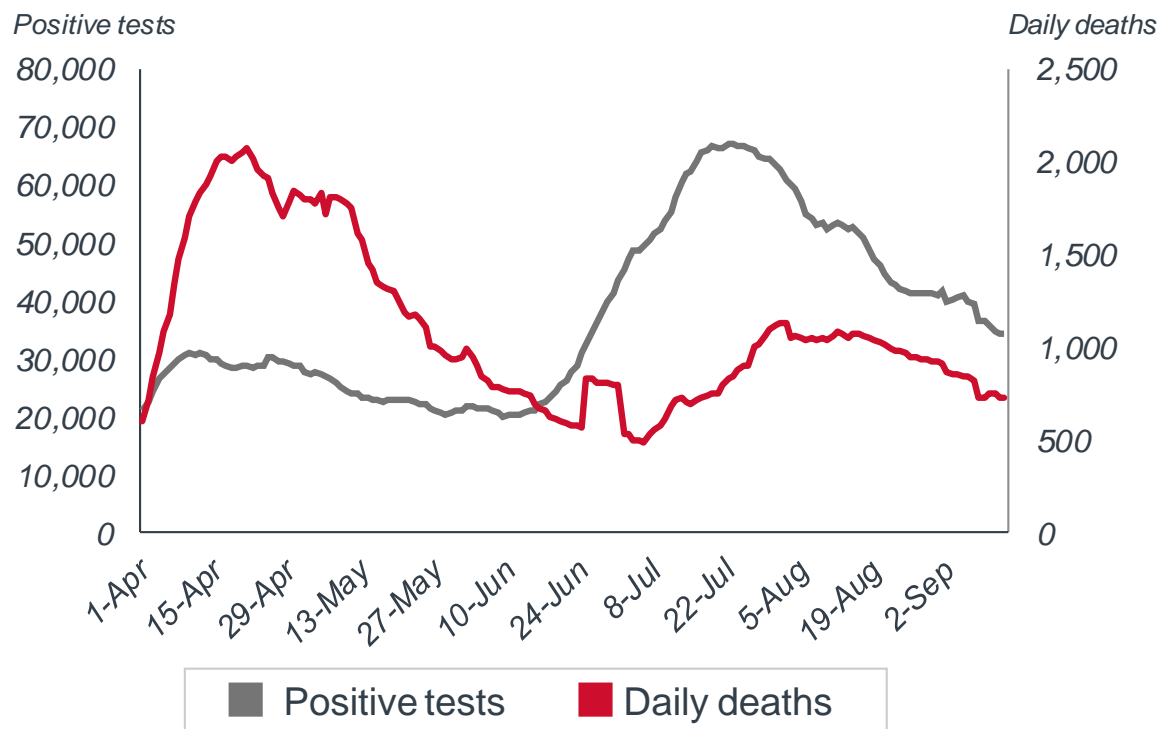
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A fearsome foe, risen from the mat

After second national peak, local resurgences continue as flu season looms

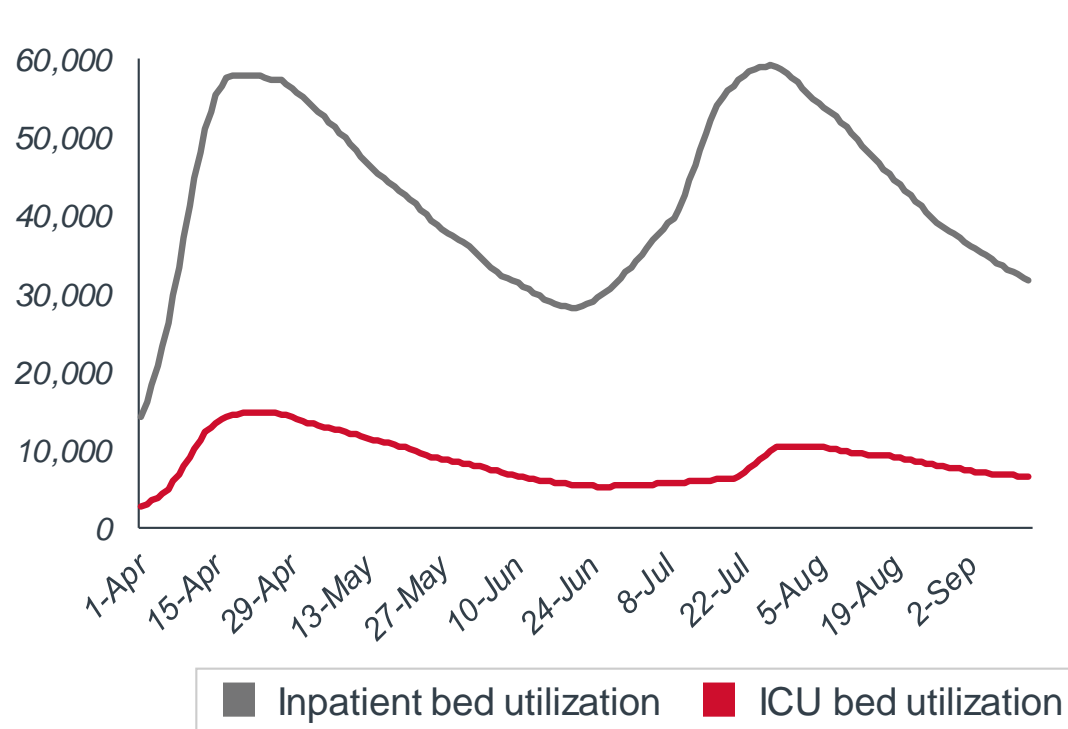
Daily Covid-19 deaths and positive tests

Rolling 7-day average from April 1 to September 13



U.S. Covid-19 inpatient bed and ICU bed utilization

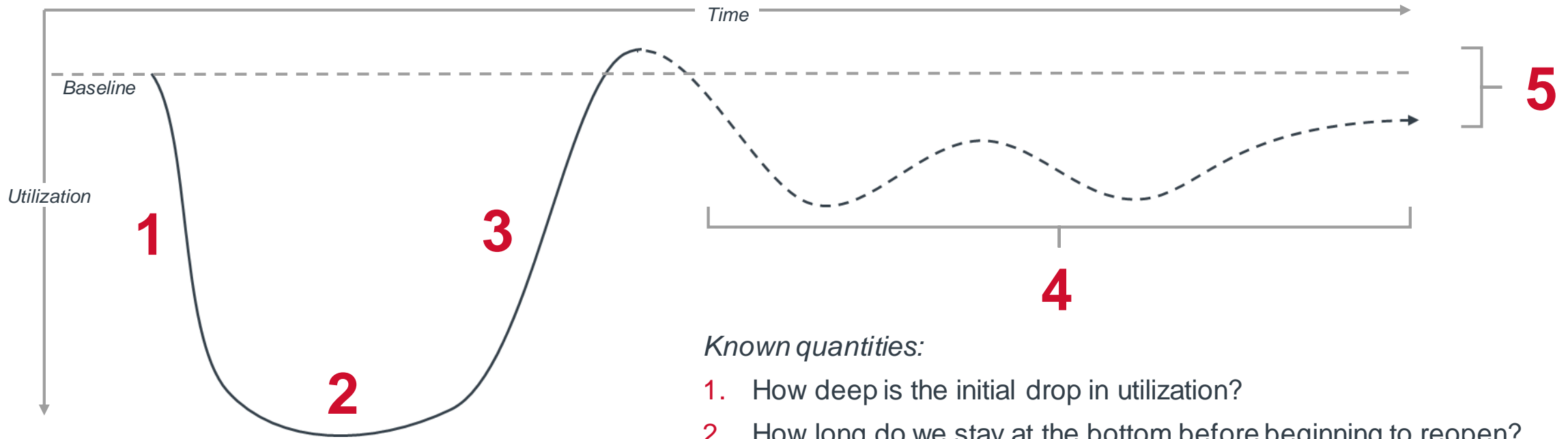
Rolling 7-day average from April 1 to September 13



Source: "US Historical Data," The COVID Tracking Project.

What lies ahead beyond the pandemic?

New questions emerge as others come into focus



Known quantities:

1. How deep is the initial drop in utilization?
2. How long do we stay at the bottom before beginning to reopen?
3. How fast is the operational rebound as supply returns?

Outstanding questions:

4. How does utilization fall and rise in the medium-to-long term?
5. Is the “new normal” baseline different than before?



Use our Market Scenario Planner to assess your market's 5- and 10-year volume outlook, at [advisory.com](https://www.advisory.com)

Health impacts will linger long beyond pandemic's end

Direct and indirect impacts of Covid-19 likely to increase patient complexity

Impact on Covid-19 survivors

Damage to...



Kidneys – 15% of hospitalized patients have experienced acute kidney injury, many of whom require future dialysis



Nervous system – 37% percent of hospitalized patients in Wuhan study had neurologic symptoms



Heart – 60% of patients had ongoing myocardial inflammation



Lungs – 77% of patients in Chinese study developed scarring on lungs

Impact of deferred care

Delayed...



Treatment – 23% drop in ER visits for heart attacks in 10 weeks following national emergency announcement; 20% drop in ER visits for strokes



Vaccinations – In Michigan, childhood vaccination rates fell from 66% to 49%



Diagnostics – 94% fewer cervical, breast cancer screenings in March compared to previous 3 years; 86% fewer colon cancer screenings

Impact of stress and isolation

Worse...



Physical health – Social isolation has been linked to a 29% increased risk of heart disease and a 32% increased risk of stroke



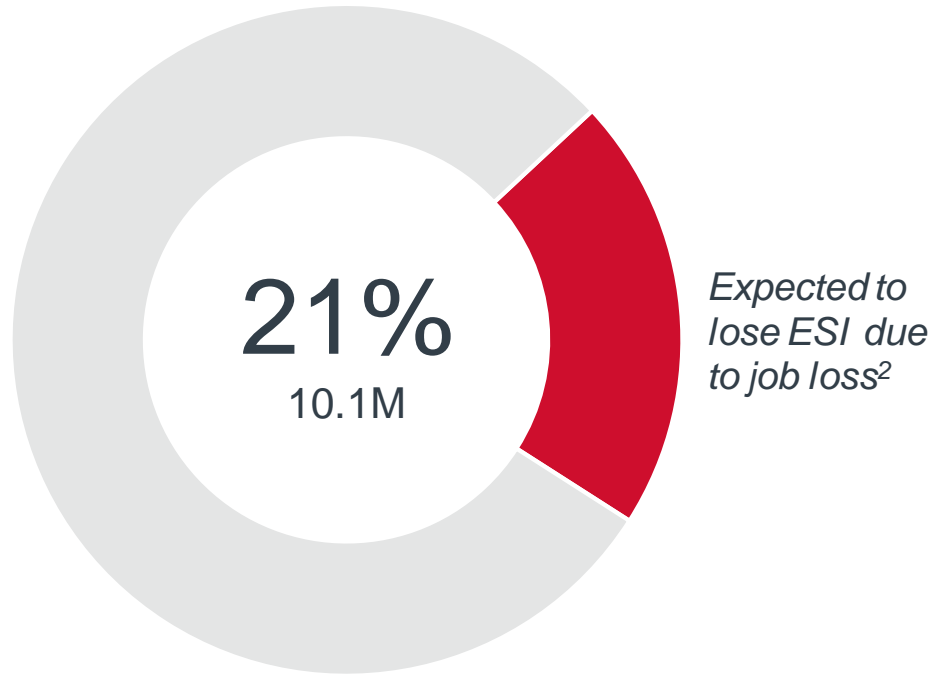
Behavioral health – 45% of Americans reported their mental health has been negatively impacted by stress and worry over virus; 130% increase in tele-behavioral health visits through Doctor on Demand

Source: Daily Briefing, "What We Know (So Far) About the Long-Term Health Effects of Covid-19," Advisory Board, June 2020; Mao L et al., "Neurologic Manifestations of Hospitalized Patients With Coronavirus Disease 2019 in Wuhan, China," JAMA Neurology, April 2020; Puntmann V et al., "Outcomes of Cardiovascular Magnetic Resonance Imaging in Patients Recently Recovered From Coronavirus Disease 2019 (COVID-19)," JAMA Cardiology, June 2020; Loria K, "Many People Avoided Hospitals During the Pandemic. The Effect Was Dire.," Consumer Reports, July 2020; Waldstein D, "Vaccinations Fall to Alarming Rates, C.D.C. Study Shows," The New York Times, May 2020; Mastroianni B, "Important Cancer Screenings Have Decreased During COVID-19," Healthline, June 2020; Brody J, "Take Steps to Counter the Loneliness of Social Distancing," The New York Times, March 2020; "Increasing Demand for Behavioral Health Due to COVID-19," Cross Country Healthcare, April 2020.

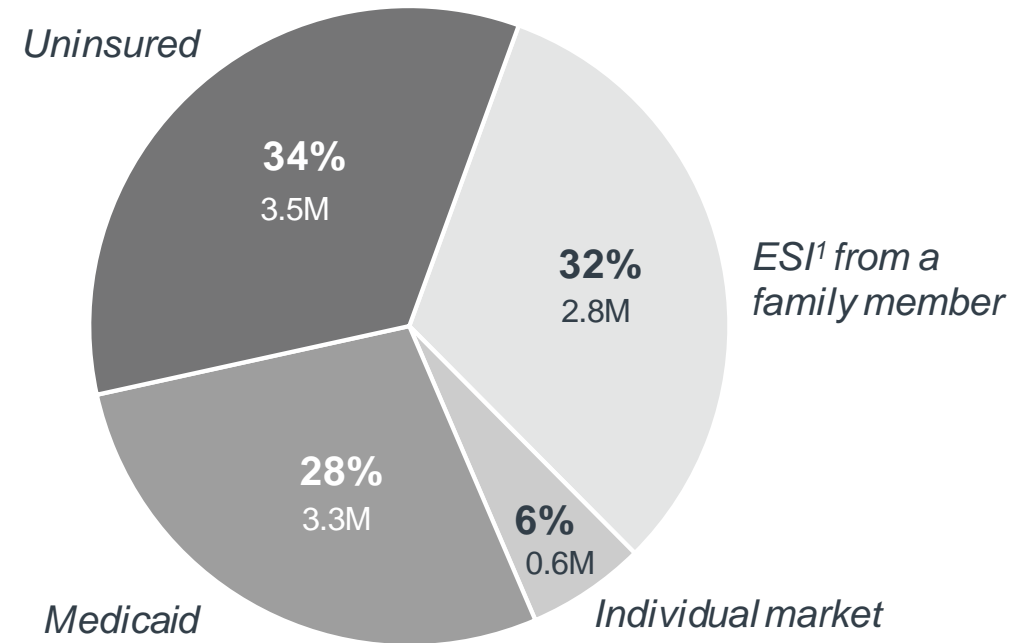
Recession poised to shake up payer mix

As millions lose jobs, ultimate outcomes remain unclear

Proportion of 48M Americans impacted by job loss expected to lose ESI



Projected future sources of coverage among 10.1M Americans expected to lose ESI



1. Employer-sponsored insurance.

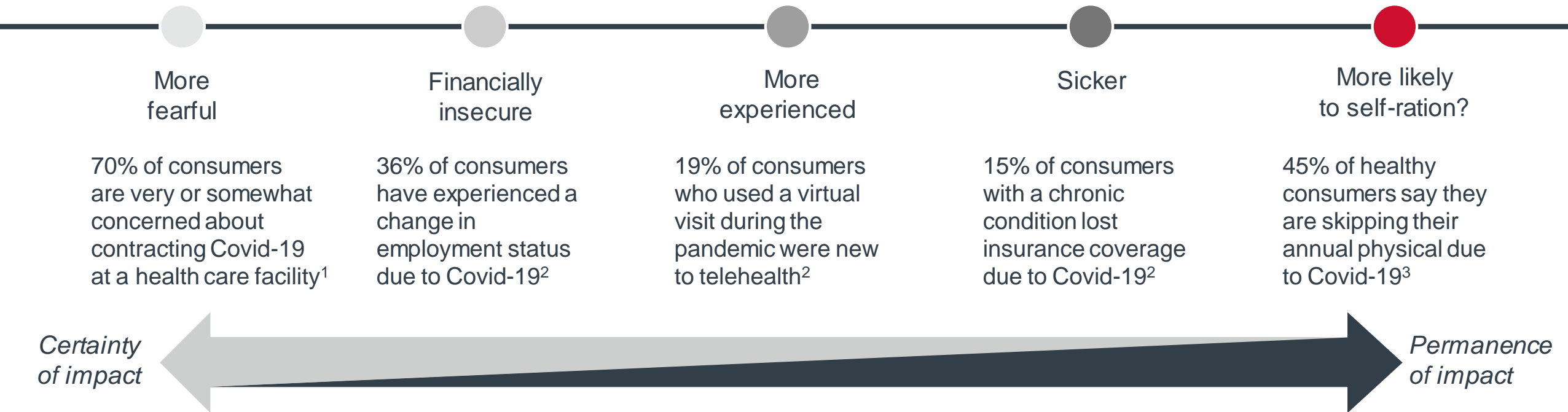
2. Remainder of individuals are either uninsured or rely on other sources of coverage (family coverage, Medicaid coverage, individual market, etc.)

Source: Banthin et al., "Changes in Health Insurance Coverage Due to the COVID-19 Recession: Preliminary Estimates Using Microsimulation," Urban Institute, July 2020.

Consumer mindsets and circumstances suddenly reshaped

Covid-19 to have lasting—and potentially permanent—impacts on behavior

Profile of the “peri-Covid” consumer



1. As of April, 2020.
2. As of June, 2020.
3. As of May, 2020.



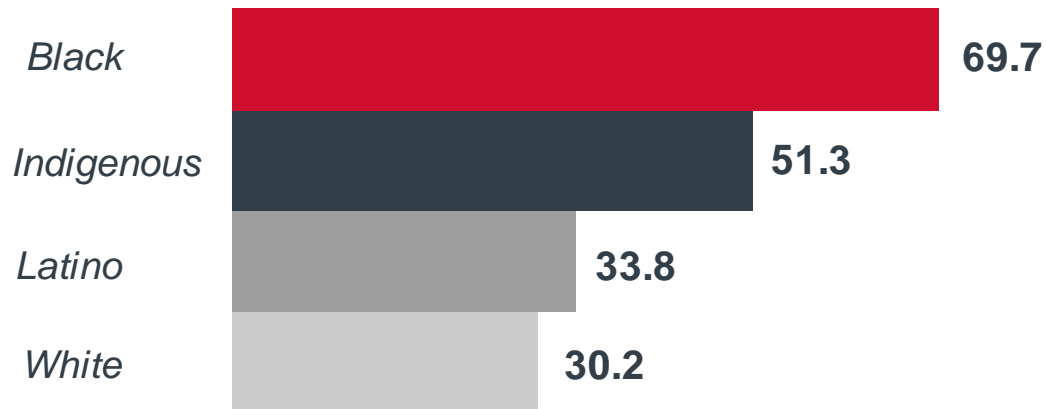
For more on this topic, see “How Covid-19 has changed consumer behavior and preferences” on [advisory.com](https://www.advisory.com)

Source: “Covid-19,” American College of Emergency Physicians, April 2020; “The COVID-19 pandemic is influencing consumer health behavior. What does this mean for healthcare providers?” PricewaterhouseCoopers, May 2020.

Disparate impact of Covid-19 a harsh reality

Health and economic outcomes prove to be worse in minority communities

Covid-19 deaths per 100,000, by race and ethnicity¹

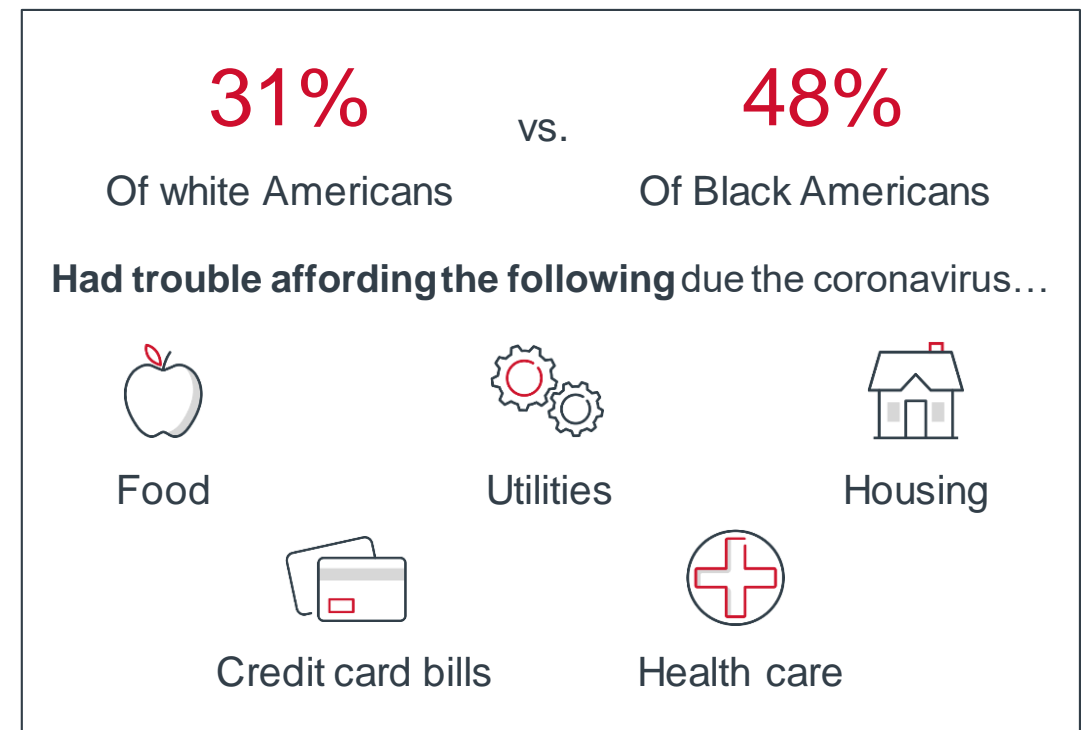


DATA SPOTLIGHT

10x

Higher mortality rate for Black Americans ages 35-44 than for white Americans in same age bracket

Unequal economic impacts of the pandemic



1. As of July 2020.

Source: "The Color of Coronavirus: Covid-19 by Race and Ethnicity in the U.S.," APM Research Lab, July 2020; Ford T et al., "Race Gaps in COVID-19 Deaths are Even Bigger Than They Appear," Brookings, June 2020; Altman D, "Coronavirus' Unequal Economic Toll," Axios, May 2020.

The dilemma of resilience

How can health care become more durable without sacrificing affordability?

Durability

Goal

The health care delivery system has the raw strength and capacity to meet demand during surges, and to survive during droughts

Essential components of durability include sufficient...

- Health system capacity
- Stockpiles of critical supplies and drugs
- Clinical staff
- Solvent reserves



Dilemma

Investing in more durability seemingly requires compromising affordability, and a middle ground meets neither goal.

Can the system satisfy both aims?

Affordability

Goal

Health care expenses are manageable enough that no one segment of the industry cannot pay its share to keep the system moving – even after a shock

Essential components of affordability include sustainable...

- Public taxes
- Government budget obligations
- Employer benefit costs
- Insurer claims payments
- Provider delivery costs
- Consumer expenses

Roadmap for resilience

Understanding financial reality

Purchaser priorities

What motivates health care purchasers today?
Which tools are they most likely to use in pursuit of affordability?

Discussion topics:

- Medicare
- Medicaid
- Employers
- Private insurers



Balancing durability and affordability

Flexibility—Agility—Efficiency—Equity

Partnership strategy

How will the delivery system attempt to build resilience through scale and partnership? Will those efforts succeed?

Discussion topics:

- Physician consolidation and partnership
- Hospital M&A and systemness



Care model redesign

Are home-based and virtual models the future of the site-of-care shift?
Who controls the pace of transition?

Discussion topics:

- Infusion therapy
- Senior care
- Telemedicine



Operational reform

How should provider cost structures evolve to meet the demands of resilience?

Discussion topics:

- Supply chain reform
- Facility planning
- Workforce sustainability



Once again, an election turning on health care

Presidential race shaped by interplay of pandemic, protests, and economy

**Former Vice President
Joe Biden**

“It's a simple proposition to us: Everyone is entitled to adequate medical health care. If you call that a ‘redistribution of income’—well, so be it.”



**President
Donald Trump**

“I want people well taken care of. But I also want health care that we can afford as a country. I have people and friends closing down their businesses because of Obamacare.”



Source: Blodget H, "Joe Biden On Taxes: You Call It 'Redistribution Of Wealth,' I Call It 'Just Being Fair'," Business Insider, May 2020; "Donald Trump on Health Care," Outbreak News Today, March, 2016.

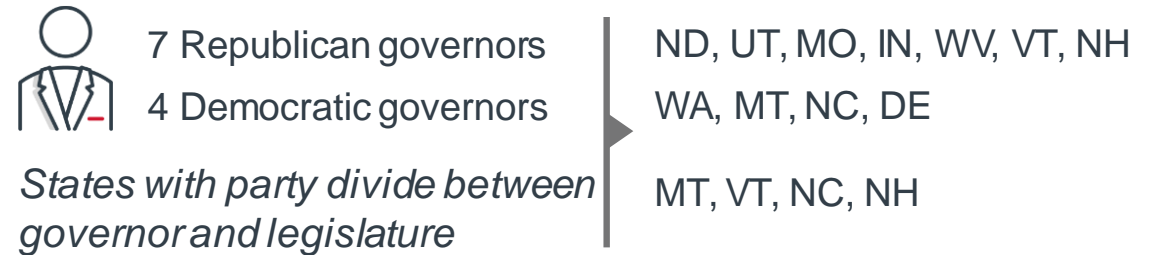
Congressional and state races just as critical

Health care policy and politics far broader than the presidency

2020 Senate races



2020 Gubernatorial races



Issues under Congressional purview

- + Coverage reform
- + Drug pricing
- + Surprise billing
- + Public health funding
- + Medicaid funding
- + Telehealth legislation

Issues under state purview

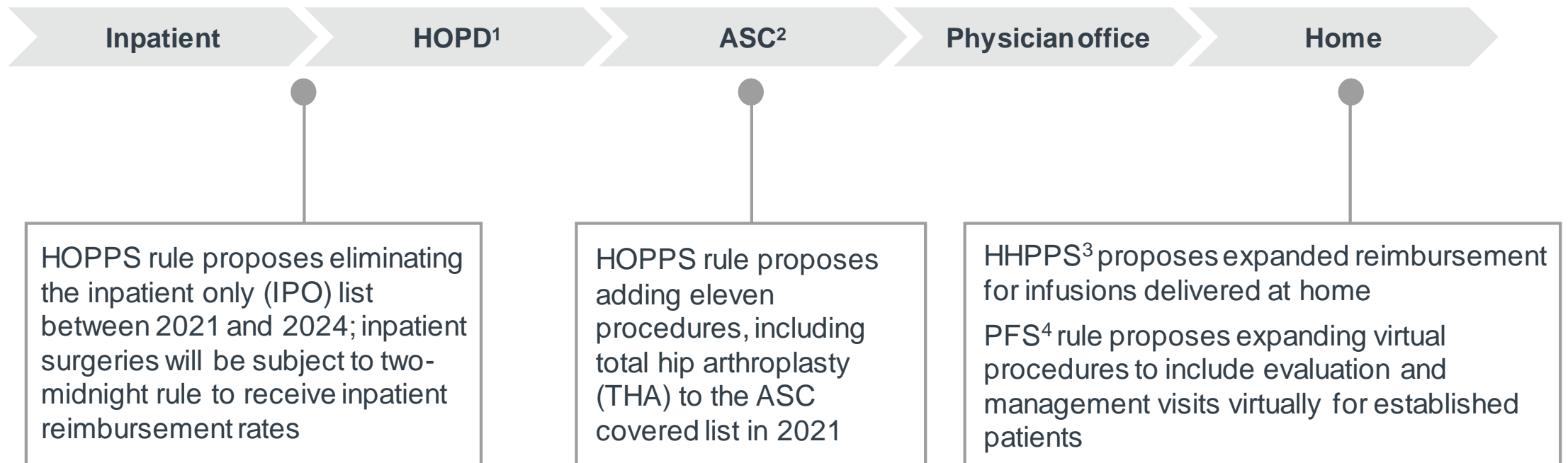
- + Coverage expansion
- + Drug pricing
- + CON laws
- + State taxes
- + Medicaid budgeting
- + Provider licensure

Source: "Gubernatorial Elections, 2020" Ballotpedia; "2020 Elections," Ballotpedia.

Medicare policy continues to impel site-of-care shift

CMS releases bold proposals to reduce inpatient care

Changes to Medicare reimbursement proposed in 2020



1. Hospital Outpatient Department.

2. Ambulatory Surgery Center.

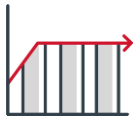
3. Home Health Prospective Payment System.

4. Physician Fee Schedule.

Source: "CY 2021 Medicare Hospital Outpatient Prospective Payment System and Ambulatory Surgical Center Payment System Proposed Rule (CMS-1736-P), Centers for Medicare & Medicaid Services, August 4, 2020; "Home Infusion Therapy Services," Centers for Medicare & Medicaid Services, June 25, 2020; "CY 2021 Revisions to Payment Policies under the Physician Fee Schedule and Other Changes to Part B Payment Policies; Medicare Shared Savings Program Requirements; etc.," Centers for Medicare & Medicaid Services, August 4, 2020.

Medicare's migration to value aligned with site-of-care ambition

Covid-19 a hurdle—not a death knell—for Medicare risk



Ensuring continued participation

- Covid-19 costs will be removed from performance evaluations and benchmarking
- ACOs will not be responsible for shared losses incurred due to Covid-19 during the PHE¹
- Expiring agreements and BASIC track ACO arrangements can be extended for a year



Buying time to address new complexities

- CMS will not open an application cycle for new MSSP² ACOs to begin operating in January 2021
- No announcement has been made on new benchmarking methodologies for 2021 and beyond



Delaying (but not cancelling) new program launches

- Direct Contracting (DC) model will still begin, but with its start date postponed to April 2021
- Primary Care First (PCF) general model will begin Jan 2021 as planned, with the high need population component postponed to April 2021





1. Public health emergency.

2. Medicare Shared Savings Program.

Source: Emper C, "CMS Offers ACOs Regulatory Relief in Response to the COVID-19 Pandemic," nextgen healthcare, May 2020; "Direct Contracting Model Options" CMS, June 2020.

Medicare Advantage continues to gather steam

MA, already growing quickly, now more attractive for patients and plans alike

Effects of Covid-19	Advisory Board take	Potential impact on MA enrollment
 Fewer opportunities for face-to-face broker enrollment	Plans depend heavily on face-to-face enrollment to drive growth; plans could invest more in virtual outreach, but are likely weighing the cost of such initiatives against their longevity	↓
 Increased financial pressure on seniors	MA offers cost advantages over Medicare FFS ¹ due to its OOP ² maximum and the growing number of MA plans that offer zero premium options	↑
 Increased demand for home-based care	MA plans offer more opportunities for seniors to receive home-based care than Medicare FFS, which is desirable for those avoiding clinical settings during the Covid-19 pandemic	↑
 Decline in enrollment of ESI³, Managed Medicaid, other health plan products	Plans may invest more resources into MA if other products shrink as people lose their jobs and state budgetary constraints interfere with Managed Medicaid	↑

1. Fee-for-service.

2. Out of pocket.

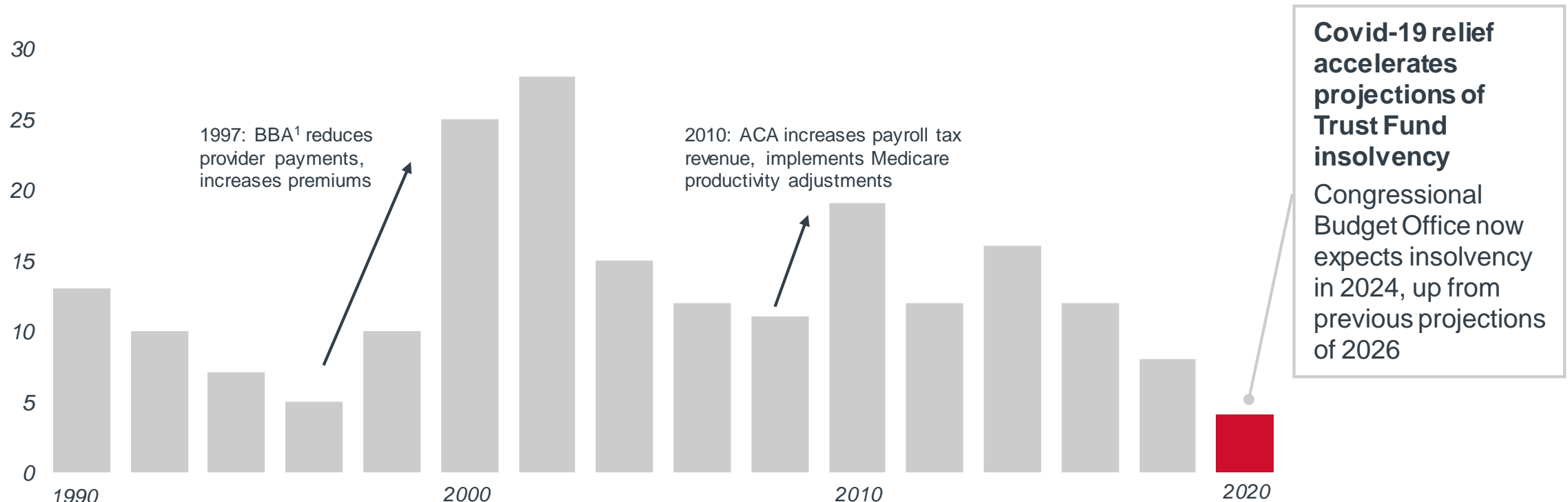
3. Employer-sponsored insurance.

Medicare price cuts still on the table if other measures fail

Depleted Trust Fund approaching levels that have triggered firmer action in past

The longevity of the Medicare Hospital Insurance (HI) Trust Fund has fluctuated since its inception

Number of years projected until HI Trust Fund insolvency



1. Balanced Budget Act of 1997.

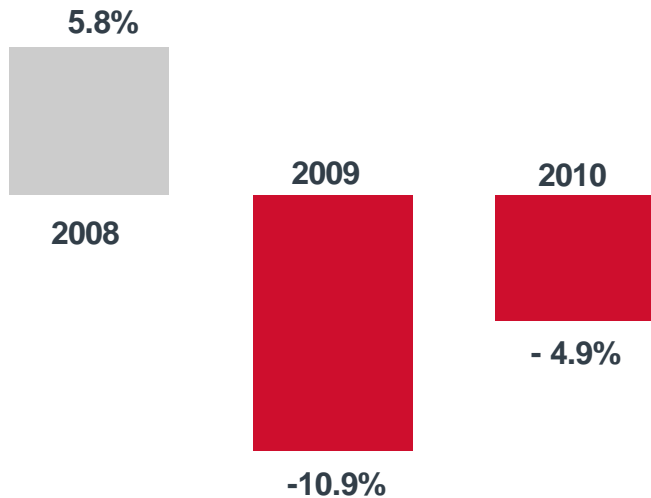
Source: "Medicare: Insolvency Projections," Congressional Research Service, May 2020; "The Outlook for Major Federal Trust Funds: 2020 to 2030," Congressional Budget Office, September 2020.

Medicaid a massive state budget item—and a massive target

States' efforts during last recession portend even more focus this time

A clear target in 2008 Recession

Percent change in state Medicaid spending

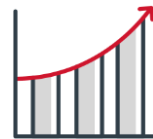
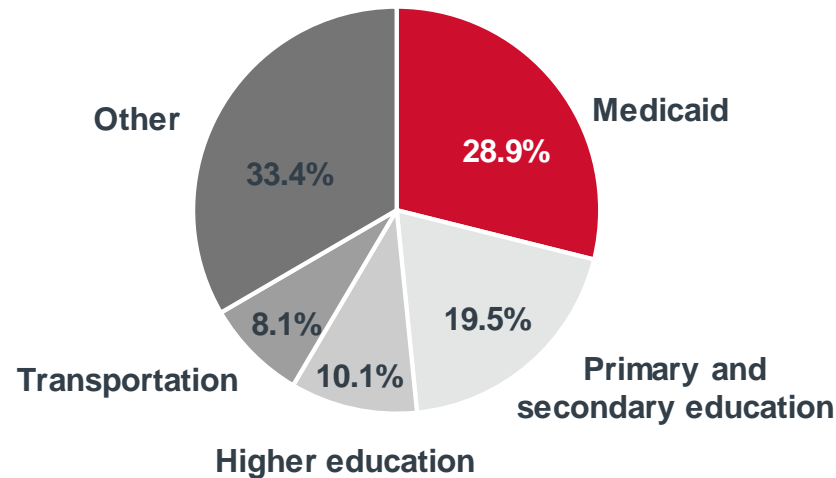


While state spending decreased in 2009 and 2010, *total* spending grew due to increased FMAP¹

1. Federal Medical Assistance Percentage.

Likely to be an even bigger target this time around

State budget expenditures, FY2019



The average share of a state's budget going toward Medicaid increased from **19.1%** in 2000 to **28.9%** in 2019



DATA SPOTLIGHT

12.7M

Estimated number of individuals who became eligible for Medicaid between March 1st and May 2nd, 2020 due to unemployment

Source: Rudowitz R et al., "Medicaid Enrollment & Spending Growth: FY 2019 & 2020," Kaiser Family Foundation, October 2019; "2019 State Expenditure Report," NASBO, November 2019; Garfield R et al., "Eligibility for ACA Health Coverage Following Job Loss," Kaiser Family Foundation, May 2020.

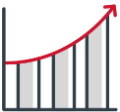
CARES Act a double-edged sword for states

Increased funding and FMAP¹, but limited cost-saving options to balance budgets

Increased funds for states and providers



\$25 billion for Medicaid providers and safety net hospitals, **\$150 billion** to support Covid-19 response by states



Increase federal match by **6.2%** during public health crisis

Limited cost-savings options



In order to qualify for the enhanced FMAP, states **must refrain from** the following during the public health emergency²:

- Increasing cost sharing
- Disenrolling beneficiaries
- Cutting benefits

OPTIONS FOR STATES TO BALANCE BUDGETS

Education: a big-ticket item

The largest share of state and local spending is dedicated to education, making it a source of cuts, as it was during the last recession

Workforce: lots of flexibility

Employee compensation is another area of high spending targeted in 2008, including hiring and raise freezes, furloughs, and reduced pensions

Infrastructure: lower urgency

Transportation and infrastructure grew significantly in FY 2019, but non-urgent improvement projects will likely be put on hold for the foreseeable future

1. Federal Medical Assistance Percentage.
2. Currently slated to end on July 25th, 2020.

Source: Musumeci M, "Key Questions About the New Increase in Federal Medicaid Matching Funds for COVID-19," Kaiser Family Foundation, May 2020; "Update: State Budgets in Recession and Recovery," Brookings Institution, 2016.

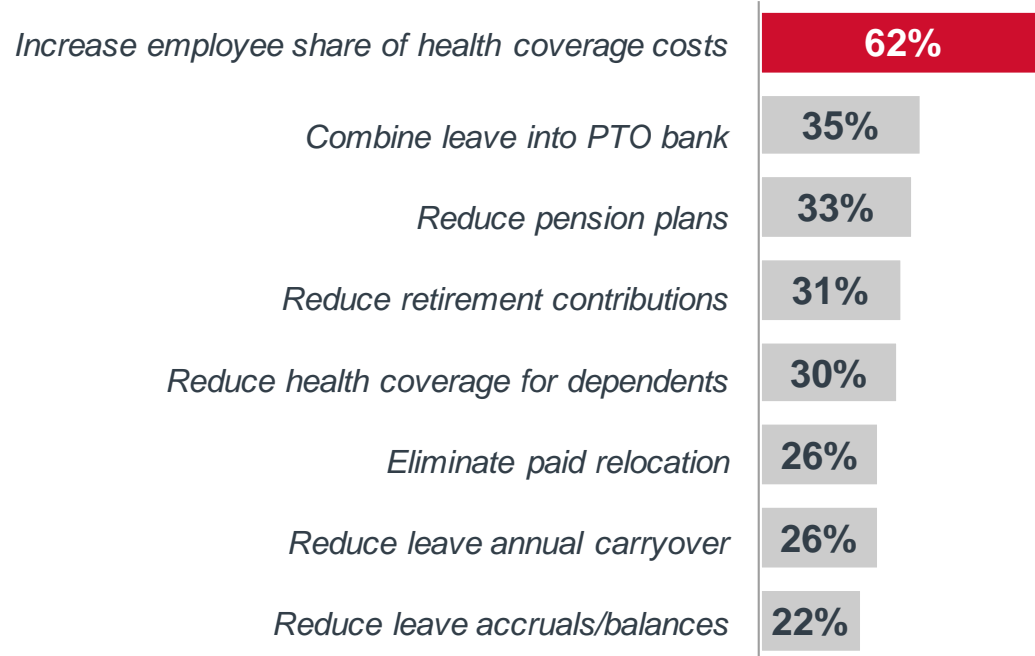
Employers unlikely to reuse Great Recession playbook

Cost-shifting opportunity not completely exhausted, but less attractive now

Common employer benefit changes post-2008 recession

Percent indicating likely or very likely to make or keep changes after economy recovers, 2009

n=329 human resources professionals



Critical distinctions between employer landscape in 2009 vs. 2020



Employers have already pursued easy savings opportunities and additional progress will require significant time and effort



Optics of cutting health care benefits during a pandemic are poor

3-5% Typical employer savings due to canceled elective procedures through H1 2020

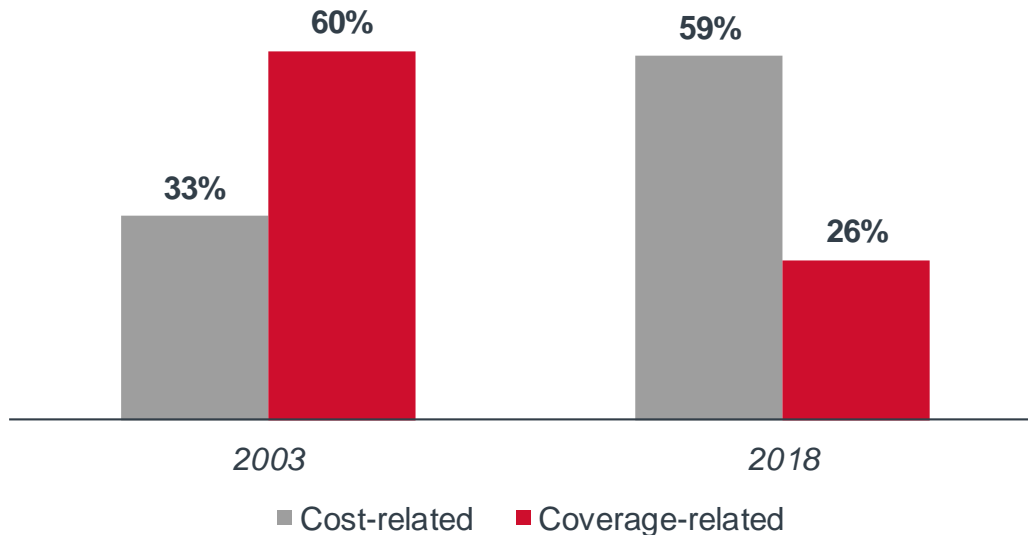
Source: Fronstin P, "The Impact of the Recession on Employment-Based Health Coverage," Employee Benefit Research Institute, May 2010; "The Post-Recession Workplace: Competitive Strategies for Recovery and Beyond," Society for Human Resource Management, September 2010.

For commercial payers, referral management a top priority

Consumers now more tolerant of managed care—if the price is right

Cost sharing increased acceptance of managed care

Percent of people who report cost or coverage-related features as the most important aspects in a health plan



Likely strategic approach post-Covid-19



High-touch member navigation support



Patient steering methods



Network alignment

- Hyper-narrow networks
- Dedicated (or owned) providers



Price incentives

- Value-based cost sharing
- Advance price information
- Reference pricing



Referral management

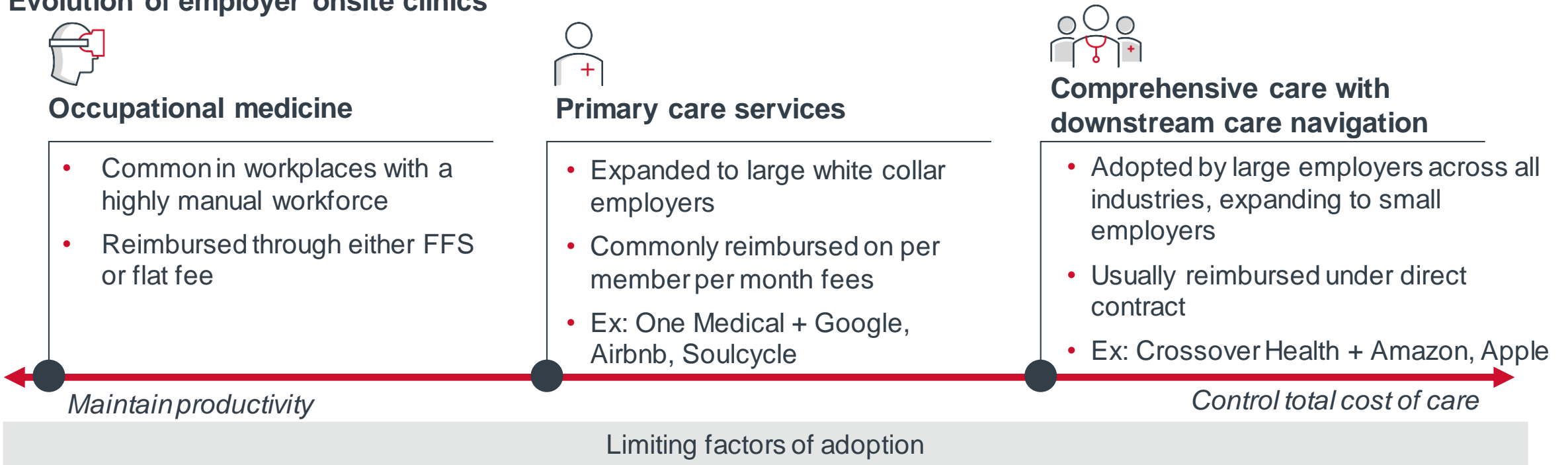
- HMO gating
- Virtual visit-based triage
- Second opinion service

Source: Kirzinger Ashley, "Data Note: Americans' Challenges with Health Care Costs," Kaiser Family Foundation, June 2019.

Employers betting on more expansive primary care strategies

Onsite clinic strategy has evolved far beyond focus on occupational medicine

Evolution of employer onsite clinics



- Requires large number of employees in a single geographic location

- Resource-intensive, especially if building a new clinic from scratch

Narrowing the top of the funnel powerful—but does it scale?

32BJ extends provider selectivity into primary care to wield more upstream influence

Center of Excellence for joint replacements and bariatric care



- Implemented direct contracting with Mount Sinai to share risk of surgical procedures
- Saved close to one million dollars in first two years of Center of Excellence programs

\$0

OOP costs for joint replacement or bariatric surgery at Mount Sinai

5-Star wellness primary care centers



- Partner with non-hospital owned primary care practices
- Evaluating how to build referral strategy from preferred PCPs to preferred hospital network

\$0

Co-pay for primary care visit

\$10

Cost for 90-day supply of generic or brand name chronic disease medications

Limiting factors on adoption

- Insufficient supply of preferred and differentiated providers (e.g. independent primary care physicians)
- Network curation time-, resource-intensive endeavor that requires significant expertise

Source: "Taking Direct Aim at Direct Contracting," Managed Care Magazine, 2019; "5 Star Centers," 32BJ Health Fund.

Virtual care could accelerate employers' steerage ambitions

Technology addresses common barriers to scalable, physician-led management



DATA SPOTLIGHT

#1

Expansion of telehealth is the top health benefit change employers plan to make for 2021 as a result of Covid-19 pandemic

Historical barriers to employer adoption of physician-led steerage

- ✗ Requires sufficient supply of non-hospital-employed physicians in local market
- ✗ Requires sufficient density of employees to justify onsite or near site clinic
- ✗ Requires significant time and resources to either curate network or build a new clinic



Potential advantages of expanded telehealth coverage by employers

- ✓ Enables access to physicians across multiple geographies
- ✓ Does not require large in-office presence; accessible even to highly-remote workforce
- ✓ Places burden of curation and infrastructure development on vendor, rather than employer

Source: "Global Survey #5: In the United States, how are companies returning to the workplace and continuing to manage the impact of COVID-19?" Mercer, July 2020.

At first glance, Covid-19 a windfall for insurers

Insurance one of few industries with short-term financial shelter during pandemic

Early data shows stable finances



DATA SPOTLIGHT

30%

Decrease in non-elective procedures

-\$101B to -\$10B

Net cost impact on health plans in 2020 at a baseline infection rate of 20%

11% increase

Q1 revenue of the seven largest health insurers over same time period in 2019

“Second quarter 2020 net earnings were **substantially higher than anticipated** due primarily to the unprecedented, temporary deferral of care in the Company’s risk-based businesses.”

United HealthGroup¹, Q2 2020 Earnings Call

“We’ve delivered strong fundamental performance this year, while also seeing **lower medical costs from deferred care**.”

Cigna, Q2 2020 Earnings Call

“As expected, our earnings for the second quarter of 2020 were uniquely impacted by the Covid-19 pandemic through **muted medical utilization and increased membership**.”

Centene, Q2 2020 Earnings Call

1. Advisory Board is a subsidiary of UnitedHealth Group. All Advisory board research, expert perspectives, and recommendations remain independent.

Source: Goldberg D et al., “Coronavirus drives health insurers back to Obamacare,” Politico, May 2020. Livingston S, “Large health insurers appear immune to COVID-19”, Modern Healthcare, May 2020; “COVID-19 Cost Scenario Modeling Update,” AHIP, June 2020.

Long-term outlook for insurers less rosy—or at least less certain

Pricing premiums in disrupted market an exercise in leaps of faith

Factors influencing future premium pricing

Expected utilization

- Deferred care
- Covid-19 treatment
- Covid-19 testing
- Covid-19 vaccination

Revenue shifts

- Premium discounts
- Membership changes
- Risk coding accuracy
- Rate increase approvals



Provider reimbursement

- Supportive payments
- Risk-based surplus sharing
- Consolidation impacts on rate negotiation

Financial adjustments

- Available reserves
- Medical loss ratio rebates
- Reinsurance premiums
- Risk mitigation policies

Some insurers taking opportunity to advance strategic aims

Covid-19 creates new opening for plans to strengthen alliances with physicians

BCBS of North Carolina accelerated payment program



Financial stabilization

Distribute payments until the end of 2021 to “true up” revenue to what an average practice earned in 2019



Transition to value-based care

Require practices to commit to join a Blue Premier ACO by January 1, 2021



Eligibility for capitation

Offer practices a primary care capitation model that will start in 2022 (PCPs are not required to join at this time)

Requirements to participate in the program

- 1 Provide care delivery and care coordination activities
- 2 Commit to join the pathway to value-based care
- 3 Maintain independent status for the duration of the program

Source: “Accelerate to Value Program for Independent Primary Care,” BlueCross BlueShield of North Carolina, June 2020.

Physician outlook not (yet) as dire as some headlines suggest

Covid-19 has not prompted fire sales, but long-term outlook still unclear

Media predicts extinction of independent physicians



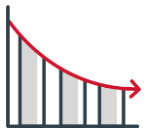
247wallst

“American Doctors Will Go **Out of Business by the Thousands**”



Bizjournal

“Expect **exodus of physicians** from health care after Covid-19 pandemic, survey says”



Washington Post

“The coronavirus is **bankrupting primary care doctors**”



Variety of structures propping up practices (for now)



Government loans and grants

CARES act advanced payments and small business loans have provided temporary relief



Advanced payments from health plans

Some insurers have followed the governments lead in advancing payments to physicians



Loosened telehealth restrictions

Has enabled practices to maintain revenue streams with relatively minimal investment








Voluntary pay cuts, furloughs, PTO

Physician shareholders have opted to take a short-term hit in hopes of maintaining viability

No shortage of potential partners

Flight to safety under hospitals' umbrella (and terms) far from the only option

Potential strategic partners for established physician practices

Potential partner	Attractive factors	Deterring factors	Common target specialties	
 Other physician practices	Like-minded, similar to status quo	Likely only large groups with enough capital to acquire	Single and multispecialty groups	Typical physician preference
 Enablement partner	Remain independent, long term sustainability, burnout mitigation	Partial business model change, limited short term cash support	Small independent primary care practices	New suitors
 Health plan	Long term sustainability, burnout mitigation	Lose independence, partial business model change	Independent primary care practices	
 Private equity investor	Rapid cash infusion, remain independent	Aggressive growth targets, limited control over future owners, range of business model change	Orthopedics, gastroenterology, women's health, urology	
 Health system	Stability with employment, existing delivery infrastructure	Lose independence, uncertain revenue stability due to Covid-19	Primary care practices, new physician graduates	No slam dunk

Hospital M&A likely to remain slow through 2020, but not forever

Future outlook depends on changing motivations

Factors contributing to a **near-term slowdown**



Management teams actively redeploying resources and investing time to manage Covid-19 crisis



Reduced cash on hand as a result of delayed and cancelled care



Organizations waiting for health care demand to stabilize before committing to mergers and acquisitions

Possible drivers of **long-run M&A acceleration**



More “have to” scenarios?

Will financial pressure from Covid-19, economic downturn, or competitive upheaval force previously unwilling partners to the table?



More “want to” scenarios?

Will the post-Covid competitive landscape offer new opportunities for larger organizations? Is true systemness now easier to achieve, or more valuable?



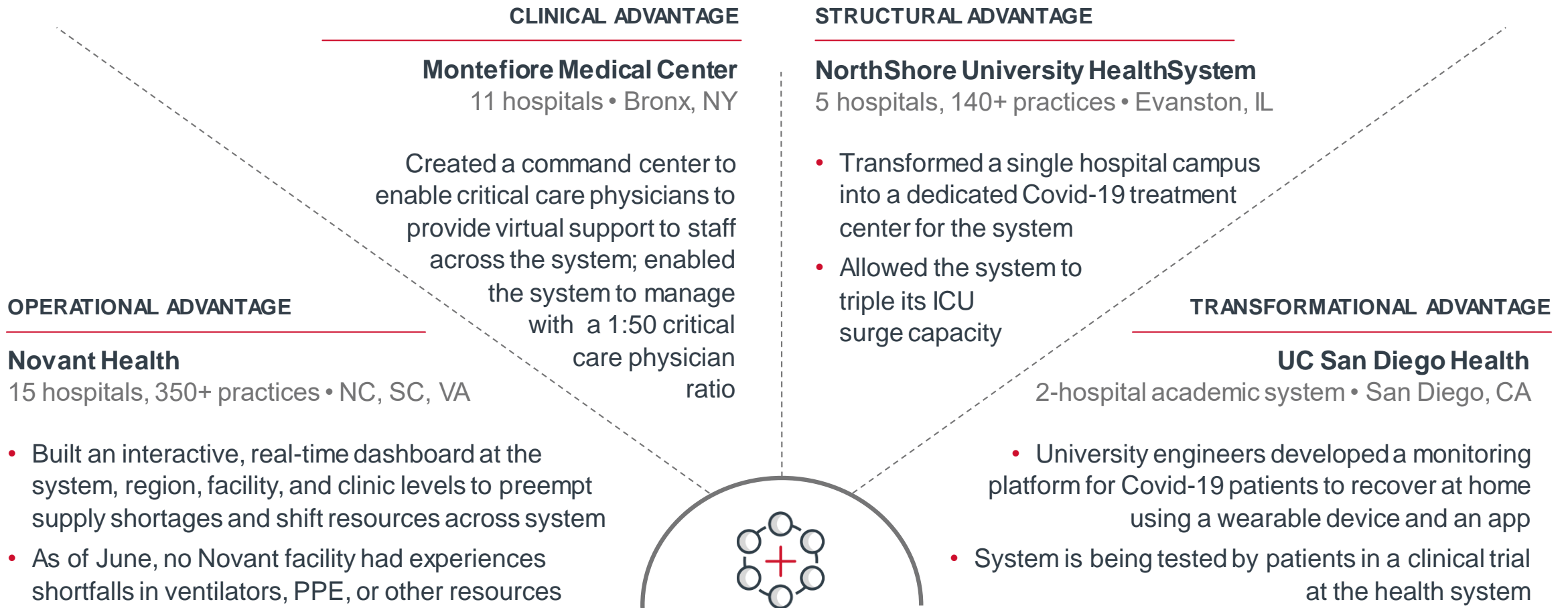
More freedom to act?

Will regulators accept new arguments (or old ones) for the value of scale and permit consolidation where they had not before?

Source: “Jefferson and Temple end deal to purchase Fox Chase Cancer Center,” Temple, May 2020.

Put to the test: Were larger systems more resilient?

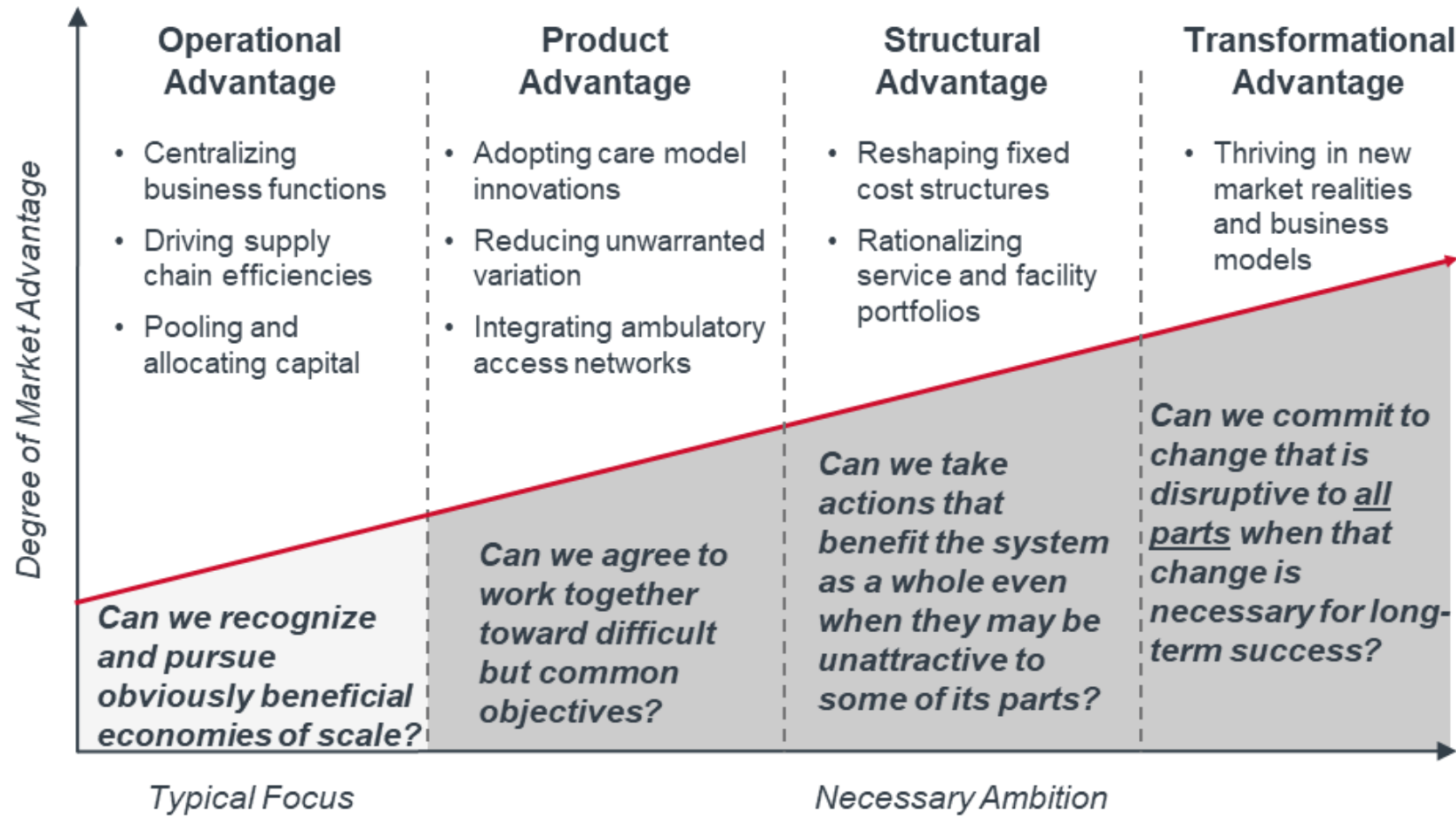
Some systems able to reap rewards of systemness—not just scale



Source: "Q&A: How Novant Health is harnessing real-time data to safely reopen," Advisory Board, June 2020; "How Montefiore stood up an ICU command center for Covid-19—in just 2 weeks," Advisory Board, April 2020; "Q&A: How NorthShore's CEO fought Covid-19 as a patient—and a health system leader," Advisory Board, May 2020; "eCOVID platform provides remote patient monitoring", Medical Xpress, May 2020.

Systems should demand more from their scale

True systemness yields powerful market advantages—if the work is done right



Recovery period represents opportunity for overdue change

This is the time to do the difficult work of systemness

Leading health systems will use the recovery period as an opportunity to...



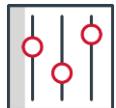
Reorganize governance and leadership structures

Emergency response efforts highlight organizational structures that slow down decision-making and hinder coordination



Re-evaluate ratio of inpatient to outpatient capacity

While more outpatient capacity is needed, health systems will be even more reluctant to downsize acute inpatient capacity



Make difficult decisions about outsourcing

Financial pressure jumpstarts conversations about which business functions to keep in-house and which can be outsourced to third parties



Shift procedures out of the hospital/ HOPD¹ setting

After clinging to hospital-based reimbursement, hospitals will confront which services can safely move to alternative sites of care



Rationalize services across sites of care

Evaluate which services to bring back and where; recovery period could be opportunity to sunset underperforming programs or shift settings



Permanently expand telehealth and virtual options

After being forced to use telehealth, consumers (and some physicians) will expect continued availability of virtual care services

1. Hospital Outpatient Department.

Telehealth adoption off the charts during shutdown

Investment boom a big opportunity for Big Tech?

Huge increase in amount of virtual care provided

3,500%

Increase in telehealth claims at **Blue Cross Blue Shield of Massachusetts** between February and March 2020

1,300

New providers added to **NYU Langone Health's** telehealth platform during crisis

1.7M

Medicare fee-for-service beneficiaries received telehealth services in the last week of April

Significant telehealth investments made in 2020



DATA SPOTLIGHT

\$788M

Venture capital funding raised by telehealth companies in Q1 2020; **over three times more** than raised in Q1 2019



Amwell files for IPO

1,818%

YoY¹ increase in funding for telemedicine startups

168%

YTD increase in **Teladoc** valuation²

168%

YoY increase in funding for remote patient monitoring startups

1. Year-over-year.
2. Through July 8, 2020.

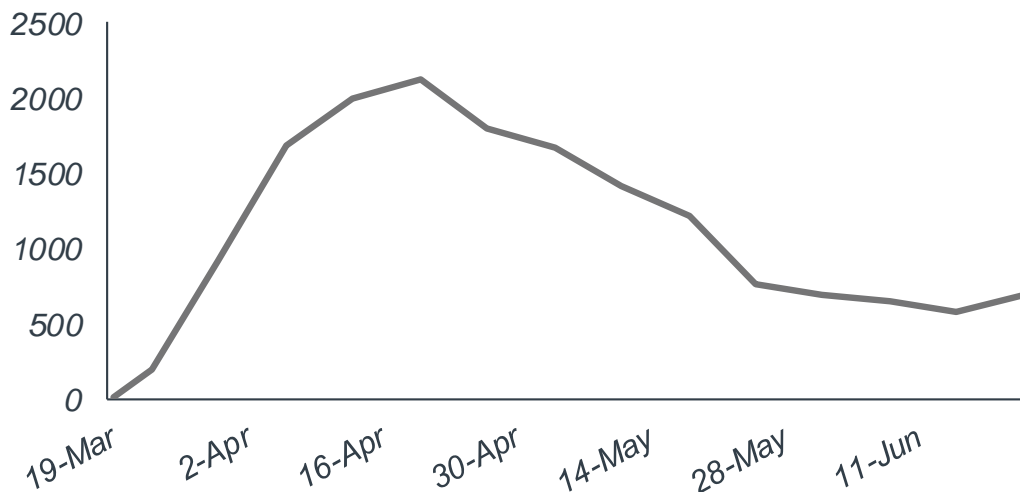
Source: Drees J, "NYU Langone Health Adds 1,300 Providers to Telemedicine Platform," Beckers Hospital Review, March 2020; "Telehealth Companies Lead Digital Health to Record VC Funding in Q1 2020 with \$3.6 Billion," Mercom Capital Group, April 2020; Landi H, "Telemedicine Companies See Funding Boom of \$788M in Q1," Fierce Healthcare, April 2020; Lovett L, "Amwell Xcores \$194M, as Telehealth Business Booms During Coronavirus Pandemic," mobihealth news, May 2020; Pifer R, "Amwell Files for IPO," Healthcare Dive, June 2020; "Telehealth: A Quarter-Trillion-Dollar Post-Covid-19 Reality?" McKinsey and Company, May 2020.

Future of telehealth depends on stakeholder action today

Providers can engineer a favorable environment—but only by acting quickly

Telehealth utilization plateauing well above pre-Covid levels

Daily telehealth visits at a regional health system in the South








Advisory Board perspective: It is unrealistic to expect telehealth use to maintain its unnatural peak achieved during widespread shutdowns, but also to expect it to drop back to pre-crisis levels.

Provider opportunities to shape telehealth space

- 1 Implement telehealth platform that could withstand reinstatement of security regulations
- 2 Seize opportunity to build “healthy habits” for appointment scheduling
- 3 Engage all providers, not just early champions, in telehealth use
- 4 Make believers of patients through positive, supported experience
- 5 Collect outcome and cost data to prepare case for favorable reimbursement, regulatory posture, stakeholder adoption

Sustained adoption will require confluence of conditions

Not all providers, patients, or use cases will follow the same path


Condition	Description	Influential stakeholder actions
 Patient mindset	Evolution from awareness→willingness→experience→preference	Promote virtual modalities, train patients, deliver positive experience
 Provider considerations	<ul style="list-style-type: none">• Safety• Efficacy• Workflow• Care continuity	Engage physician champions, provide necessary training and resources
 Technical feasibility	<ul style="list-style-type: none">• User interfaces• Device availability• Bandwidth• Provider infrastructure	Subsidize devices; support policies to boost broadband, invest provider-side
 Financial reality	<ul style="list-style-type: none">• Provider payments• Insurance coverage• Out-of-pocket cost• FFS vs risk	Demonstrate clinical value <u>and</u> cost savings to potential purchasers
 Regulatory landscape	<ul style="list-style-type: none">• Licensure (level of training, location, etc.)• Liability• Privacy	Engage with and inform local, state, federal policymakers

Reimbursement outlook still up in the air

Reimbursement expected to fluctuate by payer type, size, and region

Variety of stances on telehealth adoption from major payers

Nationals are silent

 UHC, Aetna, Cigna, Anthem have yet to signal their intentions


Blues plans are mixed

BCBS of TN is first major insurer to make telehealth coverage permanent



Heard in the research: At least one Blues plan is soon returning to pre-Covid-19 telehealth posture

CMS vague on details

 We're maintaining that equilibrium, but going forward that's something that needs to be looked at.
I don't see it as a one-to-one.
—Seema Verma, CMS Administrator

What to watch for on future telehealth coverage

- ▶ What services will be reimbursed at or near parity with in-person visits?
- ▶ What modalities will be permitted?
- ▶ What clinical staff and licensure will be permitted?

Source: Landi H, "Providers to Congress: Patients Will Lose Access to Care Without Permanent Expansion of Telehealth," Fierce Healthcare, June 2020.

Consequences of telemedicine boom remain ambiguous

Consequences extend far beyond office visit substitutions

Implications of telehealth far from written in stone

Defensive medicine:

Physicians may be more apt to order labs or imaging to supplement potentially less-confident virtual assessments

Spillover to ancillary services

Tougher “upsell”:

Fewer opportunities for immediate in-person services (i.e., vaccines, in-house diagnostics)

Pandora’s box:

Incremental access serving unsatisfied demand/ease of access could lead to spikes in utilization and costs

Impact on total cost of care

Management miracle:

Easier, more frequent management of chronic conditions could lower long-run costs

Category killers:

Attractive, low-cost access options may lower switching costs, break loyalties, and spur market share shifts

Disruption to competitive landscape

Great equalizer:

Widespread familiarity with telehealth may reduce competitive differentiation, drive consumer complacency

Access democratizer:

Virtual care could help address care deterrents such as transportation and child care challenges

Impact on health equity

Whack-a-mole:

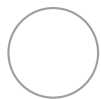
Lack of access to technology could create new barriers to care, even as it addresses old ones

No shortage of services with the potential to shift toward home

But dynamics during shutdown may not reflect long-run outcomes

Short- and long-term impact of Covid-19 on home-based care landscape

	<i>Pre-acute</i>		<i>Acute</i>				<i>Post-acute</i>	
	Virtual care	House calls	Hospital at home	Home infusion	Home dialysis	Home birth	Home health	SNF at home
Shift during pandemic								
Post-pandemic outlook								
Explanation	Volumes declining from Covid-19 peak	Fears of infection limit growth	Pandemic growth likely sustained	Covid-19 accelerated existing trend	Covid-19 accelerated existing trend	Regulatory restrictions limit growth	Fears of infection limit growth	Practical constraints inhibit growth



Negligible shift



Slight shift



Moderate shift



Significant shift



Download the full *Home Based Care Market Scan* at [advisory.com](https://www.advisory.com)

Nursing home outbreaks thrust senior care into the spotlight

Covid-19 has an outsized impact on long-term care facilities, particularly SNFs



DATA SPOTLIGHT

Covid-19 and long-term care

~25%

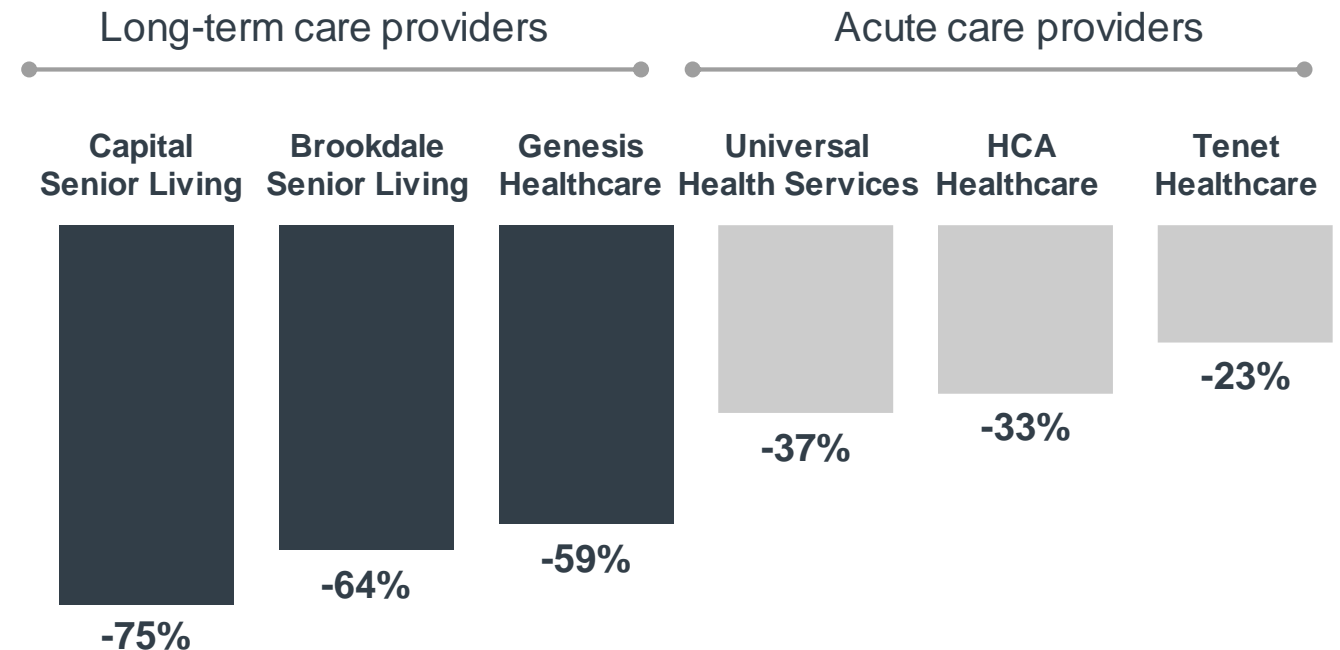
Percent of Covid-19 deaths that have occurred in long-term care facilities

<0.5%

Of the U.S. population that lives in a long-term care facility

LTC¹ stocks slower to recover than acute care facilities

Percent change in stock value between Feb 24 and June 24, 2020



1. Long-term care.

Source: Kamp J, Mathews AW, "As U.S. Nursing-Home Deaths Reach 50,000, States Ease Lockdowns," The Wall Street Journal, June 2020; Kacik A, "Pandemic Proves to be Pivotal Moment for Senior Care," Modern Healthcare, June 2020.

Many pushing for transition of senior care into the home

Bleak funding outlook for SNFs intensifies focus on home-based care

Advocates rally for more funding in facility-based care...

\$4.9 billion

vs.

\$200 billion

First federal Covid-19 relief funds specifically assigned to **skilled nursing facilities** in late May

Federal relief funds allocated to **hospitals** by the end of April

“I’m encouraged that HHS is finally recognizing the need to respond to the severity of this crisis in our nursing homes and assisted living facilities. **However, this amount is still far short of the funding desperately requested** by our long-term care facilities and their advocates”

”

—U.S. Representative Abigail Spanberger (D-VA)

...but others instead propose a shift toward the home



Increasing consumer preference to age in place



Growing stigma associated with long-term care due to frequent Covid-19 outbreaks



DATA SPOTLIGHT

67%

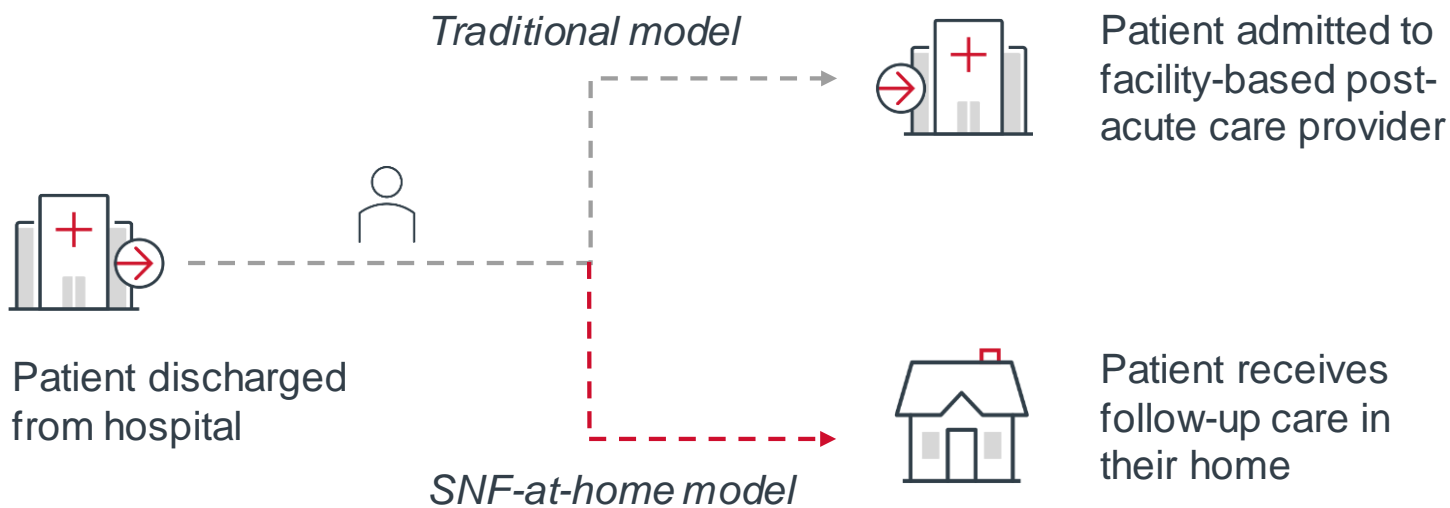
Family members say they plan to substitute in-home care for facility-based care even after the pandemic

Source: Huang B, "Why Were Nursing Homes Devastated by the Coronavirus? Low Pay and Staff Shortages Are Among the Reasons," The Morning Call, June 2020; "Spanberger: HHS Nursing Home Funding Announcement Step in Right Direction, But 'Not Nearly Enough' to Address COVID-19 Crisis in Long-Term Care Facilities," U.S. Representative Abigail Spanberger, May 2020; Donlan A, "Long-Term Care Decision-Makers More Likely to Choose Home Care in Covid-19 Aftermath," Home Health Care News, June 2020.

A new frontier for high-value home offerings

Contessa expands vision for at-home care through “SNF-at-home” program

Contessa transforms post-acute patient journey



SNF-at-home care model

-  Recreates intensive therapy services at home
-  RNs and physical, occupational, speech-language therapists round in-person once per day
-  Offers 60-day episodic cap reimbursement
-  Physicians round via telehealth at least once per week

What characterizes a good SNF-at-home candidate?

- + Non-SNF resident
- + Non-ventilator dependent
- + No central line
- + Safe home environments
- + Available caregivers
- + Over 18 and not pregnant

Example diagnoses:

Patients with myocardial infarction, sepsis, stroke, trauma, surgery

Plenty of practical barriers remain

Patient preference is not the factor preventing transition to the home



Clinical limitations

- Many patients have multiple comorbidities
- Requires access to high-licensure staff
- Necessitates 24/7 monitoring, therapy, and nursing support



Environmental constraints

- Patient needs frequent access to equipment not easily available in home
- Patient's home has stairs or other obstacles reducing navigability



Reimbursement barriers

- Lack of specific codes to bill for under Medicare fee-for-service
- Non-provider caregivers cannot bill for services



Personal and family challenges

- Patient lacks caregiver at home
- Patient faces housing instability
- Patient has limited health literacy



Covid-19 amplifies purchaser demand for home infusion

Payer preference steady as demand from employers and patients ramps up



1.9x Price differential for infused cancer drugs delivered in hospitals vs. physician offices

“As specialty drugs became more common and more expensive, Tennessee employers started asking us for help managing the costs.”

—John Maki, BCBS Tennessee

Seeking non-hospital care as a result of perceived risks during (and after) pandemic

Pikes Health System¹



Shifted 70% of patients from one HOPD infusion center to home infusion program



Expect a majority of these to remain in home setting even after hospitals reopen



Drivers: Quality, convenience, expanded access for Medicare patients

What to watch

- ▶ CMS relaxed home infusion reimbursement provisions in response to Covid-19 crisis
- ▶ House of Representatives drafted bill in March which would give Medicare patients access to Part B home infusion drugs

Source: Hawbaker J, “Moving forward with flexibility: Q&A on our specialty pharmacy changes,” BCBST, May 2020; Fronstin et al. “Cost Differences for Oncology Medicines Based on Site of Treatment,” EBRI, January 2020; Inzerro A, “Home Infusion Services for Part B Drugs in the Spotlight Amid COVID-19 Regulatory Changes,” American Journal of Managed Care, April 10, 2020.

1. Pseudonym.

Insurer incentives make shift to alternative sites more likely

Vertically-integrated plans look to lower costs, capture revenue

Payers have new incentives to influence two things:

1 Drug sources



i.e. “white bagging” from a specialty pharmacy (potentially payer-owned) rather than “buy & bill”



On October 1, 2020, **UnitedHealthcare**¹ began requiring providers to source certain provider-administered drugs from indicated specialty pharmacies

REVENUE OPPORTUNITY



Specialty drug revenue

COST SAVING OPPORTUNITY



Avoidance of provider mark-ups

2 Infusion sites



i.e. at a freestanding or home infusion provider (potentially payer-owned) rather than a hospital outpatient infusion center

Heard in the research:



Health plans requiring in-network providers to conduct certain infusion therapies at freestanding sites or home

REVENUE OPPORTUNITY



Drug and drug administration revenue

COST SAVING OPPORTUNITY



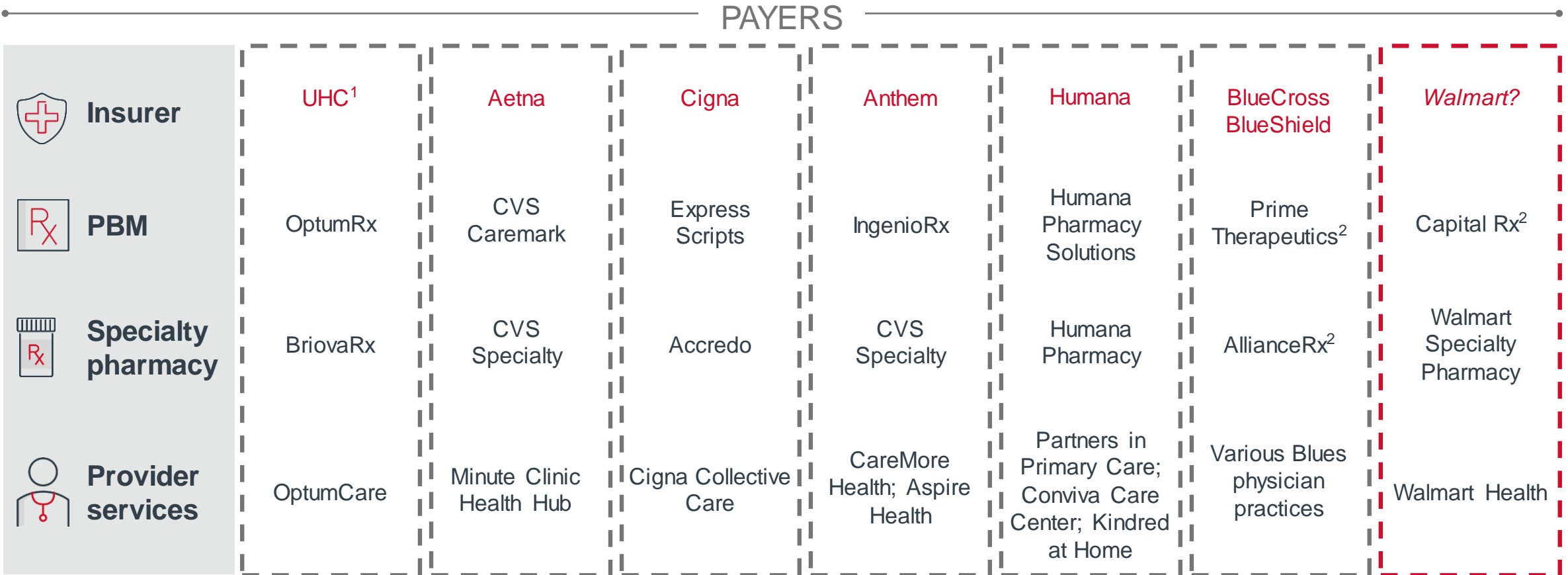
Avoidance of hospital outpatient prices

1. Advisory Board and UnitedHealthcare are both subsidiaries of UnitedHealth Group. All Advisory board research, expert perspectives, and recommendations remain independent.

Source: “UnitedHealthcare’s New Specialty Pharmacy Policy Can Result In Reduced Payments To Hospitals,” King & Spalding, March 2020; “Network Bulletin,” UnitedHealthcare, July 2020.

Vertical integration pushing site-of-care shifts industry-wide

All major insurers have growing pharmacy and ambulatory footprint



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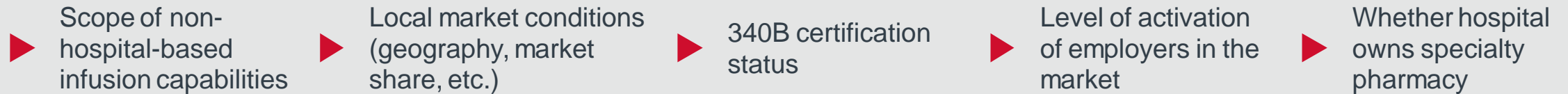
2. Partnership.

Source: Fein, "Insurers + PBMs + Specialty Pharmacies + Providers: Will Vertical Consolidation Disrupt Drug Channels in 2020?" Drug Channels, December 2020.

As infusion shifts, hospitals often on the losing end

Price cuts a necessary response for most

Factors that determine impacts of infusion shifts on health systems



Three health system strategies to handle infusion site-of-care shift

1 Demonstrate unquestionable value

Walmart has identified **Mayo Clinic** as a center of excellence for breast, lung, colon, and rectal cancers. Because of their high quality and safety, patients benefit from:

- Accurate diagnosis and treatment plans
- Potential to join clinical trials
- Appropriate care that is unavailable locally

2 Adapt and embrace the shift

OhioHealth created algorithm to determine which infused drugs could safely be delivered in ambulatory vs. inpatient sites. They presented analysis to payers to negotiate infusion site-of-care policies

Penn Medicine offering more infusion at home – especially for cancer patients

3 Resist shift – but pay the price

Antero Health System¹ reported dropping their infusion rates by 20% in order to continue using buy-and-bill in hospital-based infusion centers

1. Pseudonym.

Covid-19 forces a closer look at hospital operating models

Tension between durability and affordability especially clear during crisis

“

“There was this notion that for true change to happen in health care, it had to come from outside of the industry... But Covid-19 has convinced me even more that we have a moral obligation—as well as a path forward—to be the ones transforming health care from within.”

Dr. Gianrico Farrugia, President and CEO

MAYO CLINIC

Covid-19 prompts executives to re-think the largest components of hospital cost structure

- 1 *Supplies*
 - How much money do we have to spend to get access to future PPE?
 - Should we rationalize our ambulatory office space?
- 2 *Physical infrastructure*
 - Do we need to build flexible inpatient rooms?
 - Should we change how our staff get paid?
- 3 *Workforce*
 - How can we engage clinicians that put their lives in danger for our patients?

Source: “Mayo Clinic CEO Gianrico Farrugia on why he doesn’t want to go back to a pre-pandemic world,” At the Helm, Advisory Board, July, 2020.

The supply chain paradox

Supply chain lacking in resilience—but also not particularly efficient

Historical approach to supply chain management



Laser-like focus on lowering the unit cost for commodities and PPI¹



“Just in time” inventory management to minimize holding costs and waste



Overreliance on third parties (GPOs², distributors) for contracting and purchasing with limited visibility into supplier inventories or alternatives



Net result of supply chain initiatives



Lacking resilience

- No transparency to identify shortfalls in supply chain and proactively implement changes
- Inability to access or produce the increased quantities of supplies needed to respond to Covid-19



Lacking efficiency

- Despite low unit costs on specific supplies, other components of the supply chain remain inefficient
- Severe lack of transparency inhibits efficient use of supplies once purchased

1. Physician preference items.

2. Group purchasing organizations.

Clearer sightlines can redefine what's possible

Shared cost, inventory, forecast data unlock collaboration, savings opportunities

Health systems and distributors

- Distributors can more easily anticipate and accommodate demand spikes
- Systems can “see” their allocated stock within distributor-managed service centers

Distributors and suppliers

- Suppliers can alert distributors more quickly to emerging threats to production volumes
- Distributors (and third-party trading platforms) can increase purchaser awareness of smaller, pre-approved new suppliers

Health systems and clinicians

- Clinicians gain confidence that right products will be available at right time
- Health systems gain greater clinician compliance with contracts and formularies

Health systems and suppliers

- Suppliers can help customers reduce spend on expedited shipping
- Health systems can reduce amount of wasted, unused, or expired product



Covid-19 flips the script on fixed cost restructuring

Focus now is on capacity flexibility—not capacity reduction

Acuity-adjustable rooms provide flexibility... at a cost



Room design that can adjust full range to accommodate any patient and keep patient in same room throughout duration of stay



Rooms ~300-400 sq. ft. in size to accommodate electrical outlets, medical gasses, observation window, and data port found in ICUs



DATA SPOTLIGHT

25%

Increase in cost to build an acuity-adjustable room compared to an average inpatient room

Organizations more likely to opt for partially flexible space



CMS lifted room code requirements during pandemic to allow for surge capacity, granting organizations significant flexibility when it was needed

Cost effective ways to enhance room flexibility

- Expanded headwalls
- Additional med-gas lines/outlets in patient rooms to accommodate two patients per room
- Add med-gas lines to non-patient rooms (i.e., waiting rooms, staff rooms, cafeterias) for extra capacity in an emergency

Source: "COVID-19 Emergency Declaration Blanket Waivers for Health Care Providers," CMS, June 2020.

Ambulatory, administrative facilities getting a closer look

Virtualization of care, commerce suggests opportunity for lighter footprint

Virtual care could shrink **ambulatory** footprint—but savings likely modest



Rationalization of **administrative** footprint more likely



SPOTLIGHT

Lincoln Medical Group¹ calculated reduction in demand for physical exam space if visits shifted virtually

8%

Reduction in facility space needed if **one third** of visits and procedures done virtually, despite 20% reduction in exam rooms



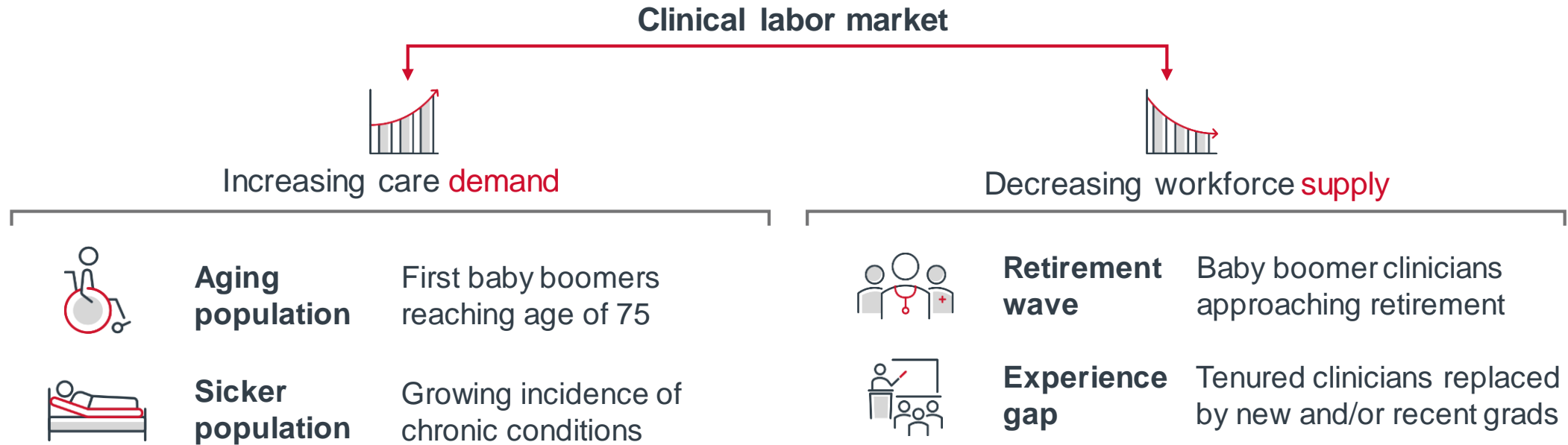
Determined there wasn't enough justification to scale down office footprint—especially given rate of ambulatory growth

- Encouraging continued telecommuting on a regular and permanent basis
- Cutting back on a portion of offices when existing leases are renewed
- Consolidating administrative offices that require workers to maintain in-person presence
- Canceling new construction of administrative offices, eliminating footprint altogether

1. Pseudonym med 600-physician medical group.

Clinical labor to remain an indispensable asset

Underlying demographics guarantee critical role for constrained resource



Potential impact of Covid-19

- | | |
|--|--|
| ↓ Depressed demand due to Covid-19 fears, financial fears | ↑ Deferred retirement due to Covid-19-induced financial concerns |
| ↑ Increased patient complexity due to deferred care | ↓ Accelerated retirement due to Covid-19-induced burnout |
| ↑ Increased patient complexity due to Covid-19 complications | ↓ Interruption of education and clinical rotations |
| ↑ Increasing behavioural health needs and comorbidities | ↓ Variable volumes limiting opportunities to get hands-on practice |

A tale of two workforces

Clinicians asked to shoulder immense but diverse burdens amid Covid-19

In the trenches



Put their lives on the line to treat Covid-19 patients



Separated from family members to prevent risk of exposure

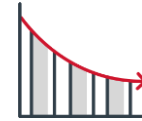


Saw patients, coworkers, family members fall ill or even pass away

Sample impacted roles:

- Critical care providers
- Inpatient nurses

On the sidelines



Seeing lower volumes or lack of work altogether



Financially vulnerable due to furloughs, pay cuts



Feelings of helplessness due to lack of work, ability to treat patients

Sample impacted roles:

- Unlicensed staff
- Ambulatory clinicians

A compact for the crisis (and beyond)

Mutual sacrifice unavoidable—challenge is in mutual understanding



I need you to....

- ...trust that our workplace is safe.
- ...be productive while I'm making cuts.
- ...be more flexible.
- ...be comfortable with ongoing uncertainty.

Front-line staff



In return, I will...

- ...address disengagement and burnout.
- ...invest in diversity and inclusion.
- ...ensure fair compensation.
- ...sufficiently staff the mission.

Leaders



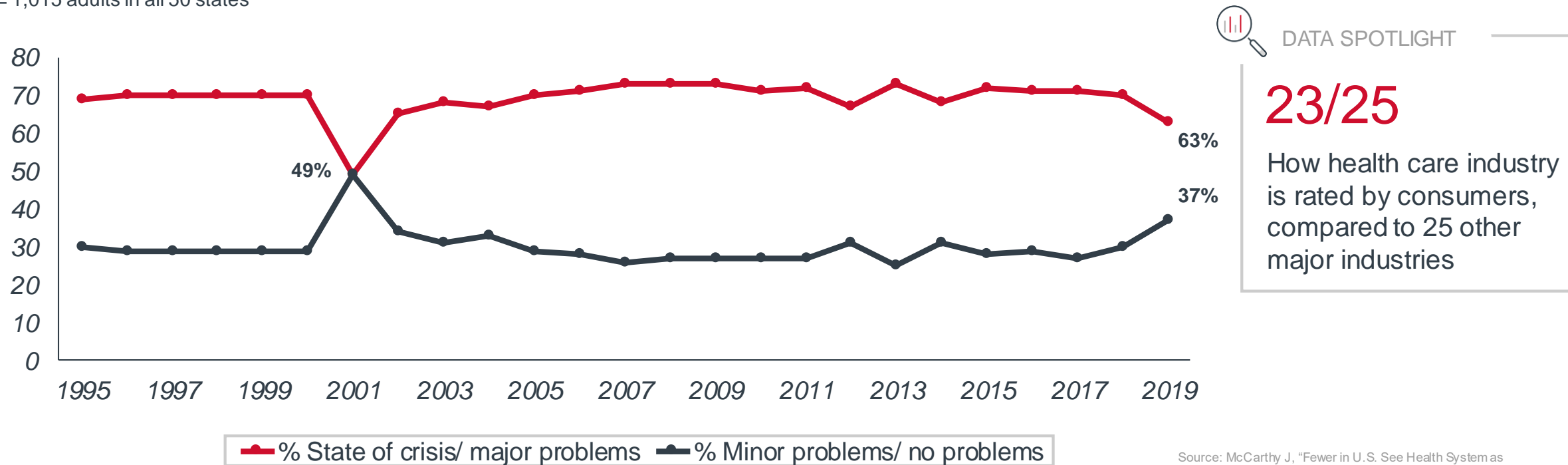
Don't take goodwill for granted

Dramatic improvement in perceptions after 9/11 also dramatically brief

Negative view of health system mostly holds steady

Is the U.S. health care system today in a state of crisis, has major problems, has minor problems, or it does not have any problems?

n= 1,015 adults in all 50 states



Source: McCarthy J, "Fewer in U.S. See Health System as Having Major Problems," Gallup, December 2019; "Business and Industry Sector Ratings," Gallup, August 2019.

Key takeaways



Covid-19 has revealed significant weaknesses in the industry's ability to endure major shocks; however, efforts to improve the industry's durability cannot come at the expense of affordability—true resilience enables both durability *and* affordability.

Purchaser priorities

01

The need for providers to improve durability has not shifted purchasers' demands for affordability, but the pandemic has markedly altered the ways public and private payers will pursue affordability.

02

Unlike Medicaid, Medicare is likely to back off from any immediate cuts to unit prices, but such short-term moves will only increase the urgency to control unit pricing increases over the next three-to-five years.

03

In the wake of recession, employers will mostly forgo more cost-shifting to patients, but will seek savings by accelerating physician-led efforts to aggressively steer patients to lower-cost care settings.

04

While the pandemic complicates the economics of Medicare ACOs and will likely temporarily slow adoption, private payers will look to accelerate uptake of risk among independent physician groups.

Partnership strategy

05

Fear that both vertical and horizontal provider consolidation will be used to build durability is the primary driver of purchaser efforts to more strategically align with independent physicians.

06

Although most independent physician groups want to remain that way, those who need partnership will prefer to align with other physicians; many more are likely to end up acquired by PE or health plans, eschewing health systems.

07

Following a short-term slow down, Covid-19 is likely to accelerate hospital M&A; an uptick in opportunistic acquisitions is certain, while the bar for value in "mergers of equals" has increased for participants and regulators alike.

08

Health systems must not squander a unique opportunity to prove the value of scale, whether by demonstrating flexibility and agility in their Covid responses or by using of the post-Covid recovery period to drive elusive efficiency gains.

Key takeaways

Care model redesign

09

Enthusiastic projections about care shifting to the home setting tend to hinge primarily on growing patient preference—overlooking the complex interplay of factors that influence site-of-care shifts.

10

A growing and widespread web of alliances between health plans, PBMs, specialty pharmacies, and ambulatory providers is poised to accelerate the shift of pharmaceutical-reliant services out of the hospital setting.

11

Despite the obvious challenges facing SNFs and clear patient preference to “age in place”, practical, regulatory, and reimbursement barriers will continue to constrain home-based senior care—absent a mold-breaking innovation.

12

While telehealth is unlikely to remain at its pandemic peak, it is equally unlikely to drop back to pre-pandemic lows—and care must be taken to ensure it is used to confront (rather than exacerbate) health care unaffordability and inequity.

Operational reform

13

As frontline providers during the pandemic, hospitals have been forced to publicly grapple with three major weaknesses inhibiting their resilience: supply chain shortages, capacity management, and workforce burnout.

14

Although hospitals will be asked to bear much of the cost associated with building supply chain resilience, success will hinge on tighter partnerships and improved transparency between providers, distributors, and manufacturers.

15

While low occupancy has long been held up as a problematic exemplar of the industry’s inefficiency, the pandemic will shift fixed-cost restructuring efforts away from the inpatient space to the ambulatory and administrative footprints.

16

Given the immense sacrifice and burden frontline clinicians have been asked to bear, executives must reaffirm their commitment to protecting, supporting, and investing in their clinical workforces.