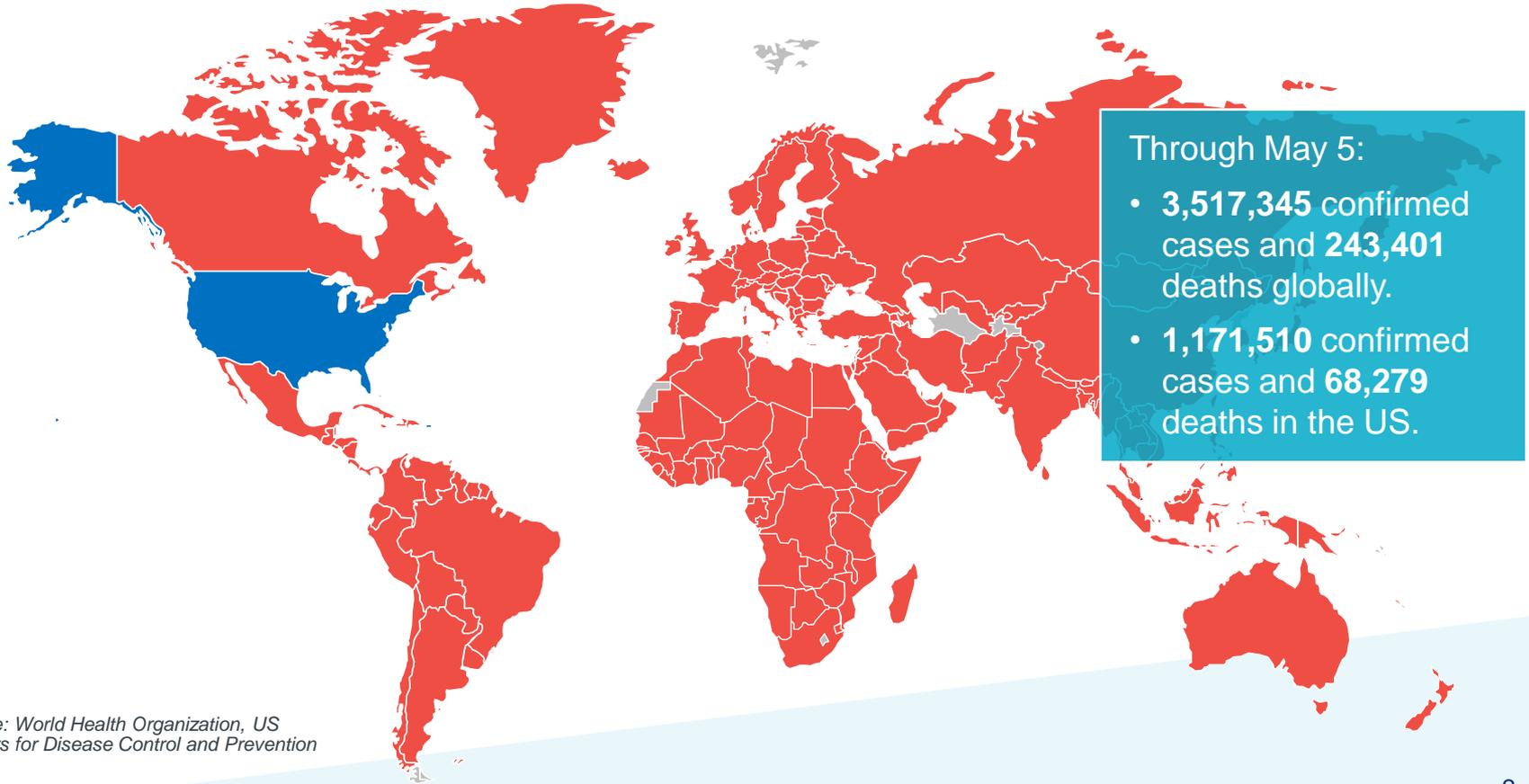


COVID-19's Economic Impact

May 6, 2020

COVID-19's Economic Impact

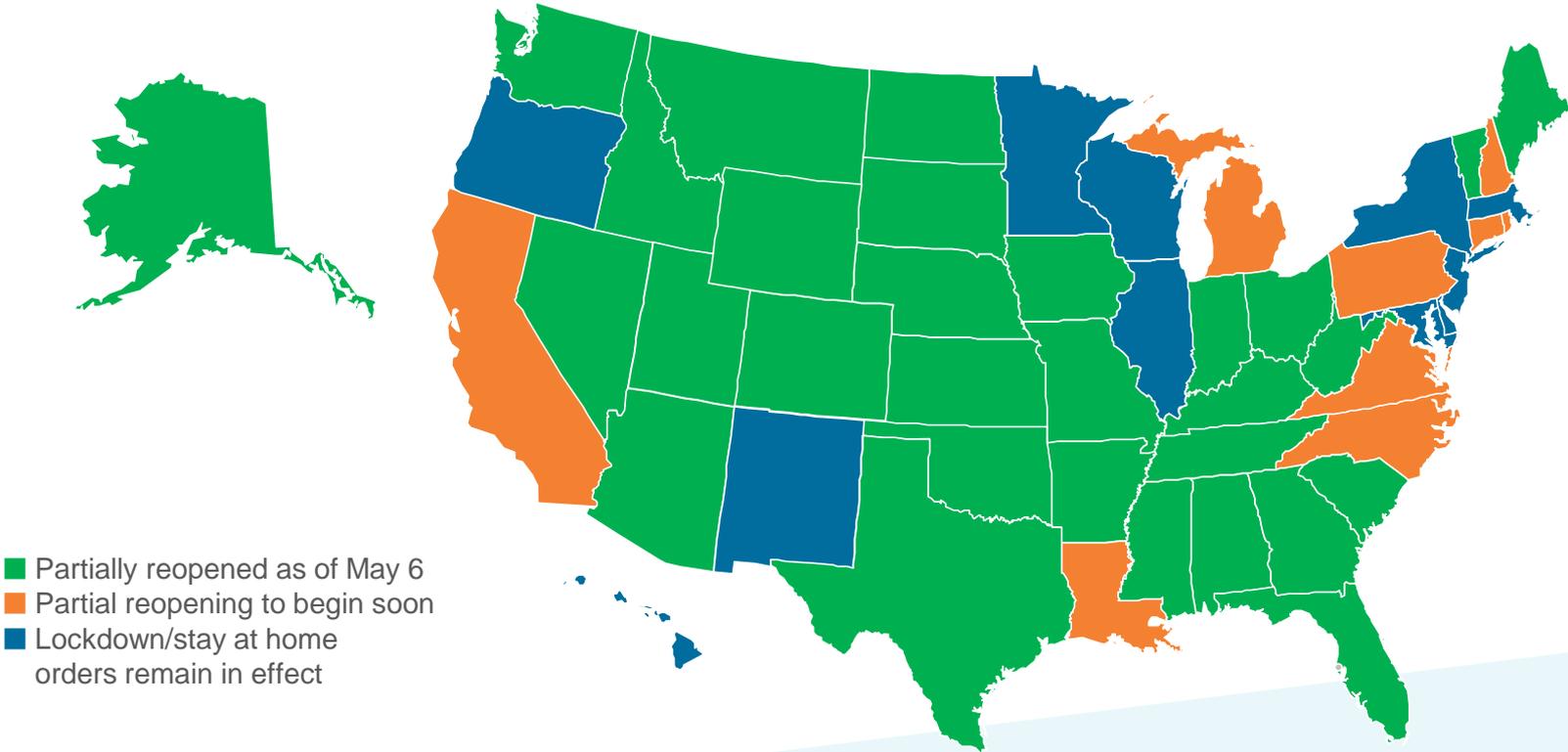
Situation Update



Source: World Health Organization, US Centers for Disease Control and Prevention

COVID-19's Economic Impact

States Beginning to Reopen



- Partially reopened as of May 6
- Partial reopening to begin soon
- Lockdown/stay at home orders remain in effect

Source: National Governors Association, news reports

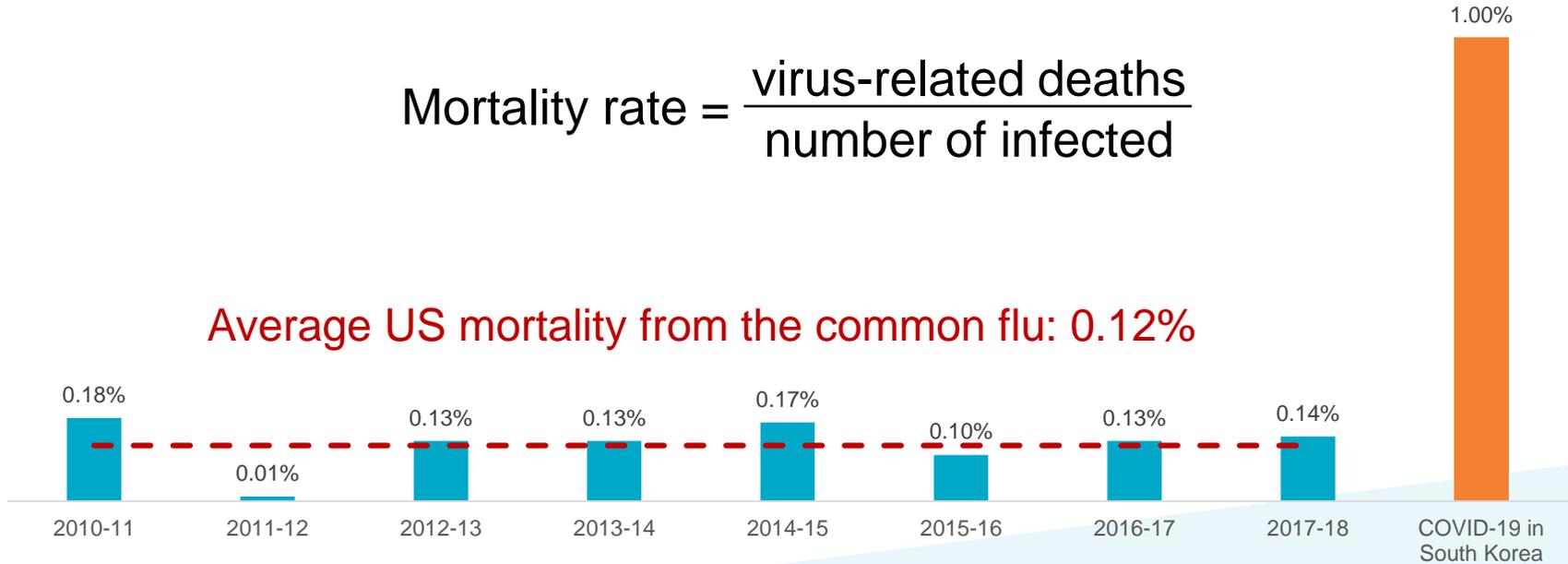
COVID-19's Economic Impact

What We Can Learn From South Korea

South Korea Mortality Rates From COVID-19 and Past Flu Seasons

$$\text{Mortality rate} = \frac{\text{virus-related deaths}}{\text{number of infected}}$$

Average US mortality from the common flu: 0.12%

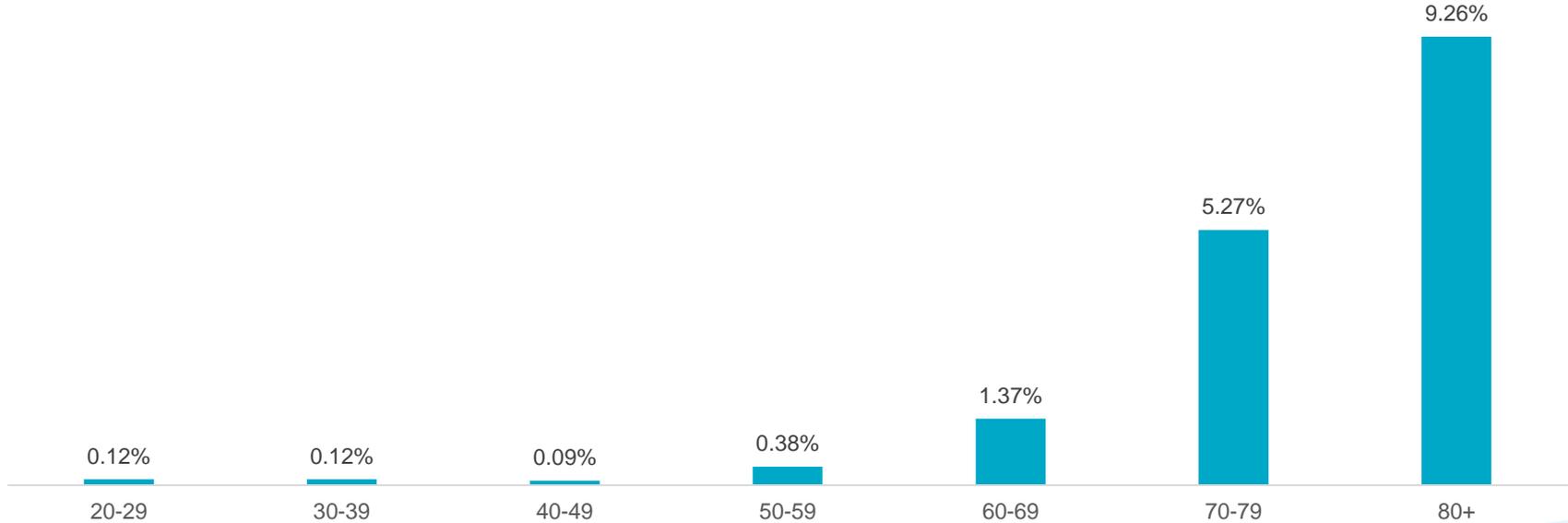


Source: South Korea Ministry of Health and Welfare

COVID-19's Economic Impact

What We Can Learn From South Korea

COVID-19 Mortality Rate in South Korea by Age

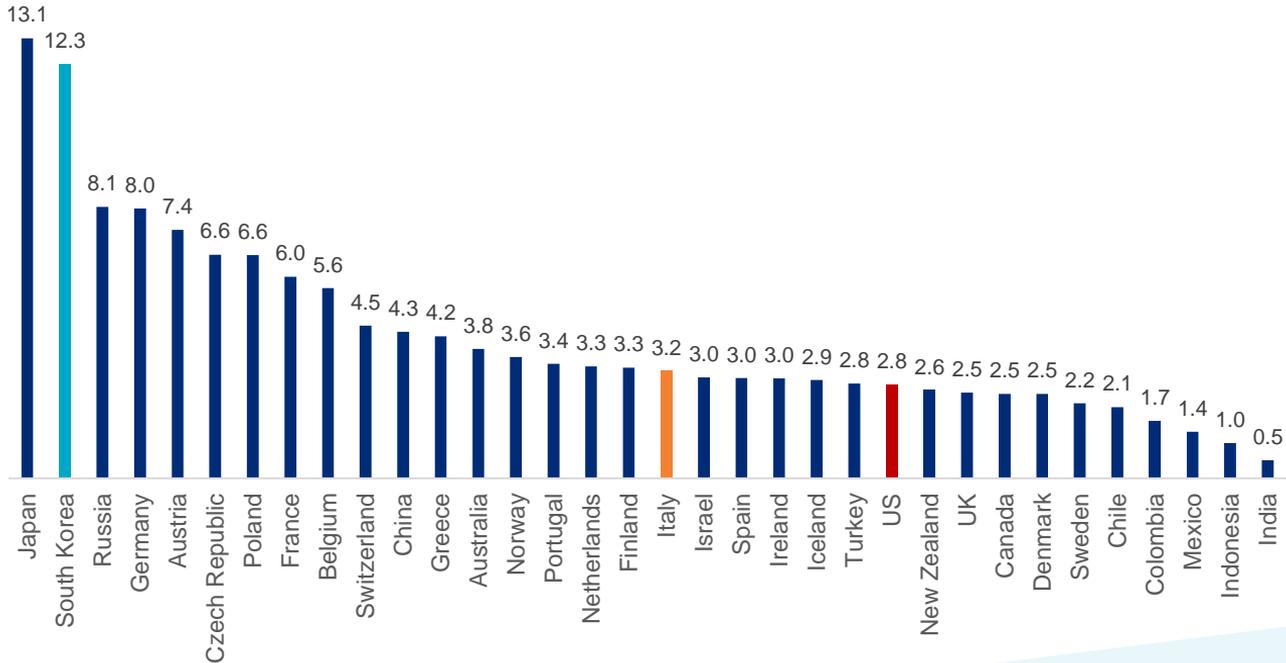


Source: South Korea Ministry of Health and Welfare

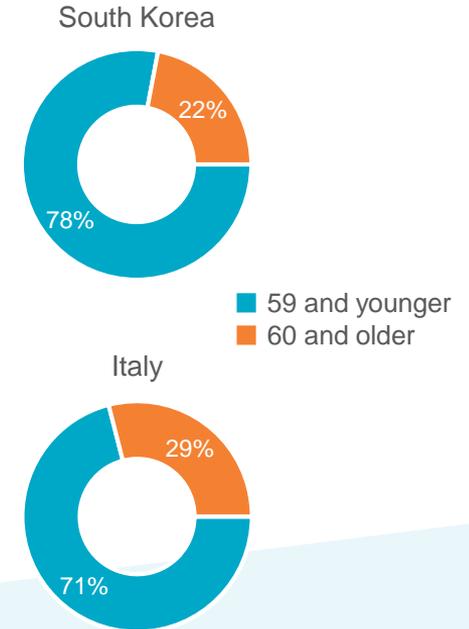
COVID-19's Economic Impact

How South Korea Compares to Other Countries

Hospital Beds Per 1,000 People (2018 or latest available)



Population Age Distribution in South Korea and Italy



Source: Organisation for Economic Co-operation and Development, United Nations

COVID-19's Economic Impact

How Do Pandemics and Epidemics End?

1

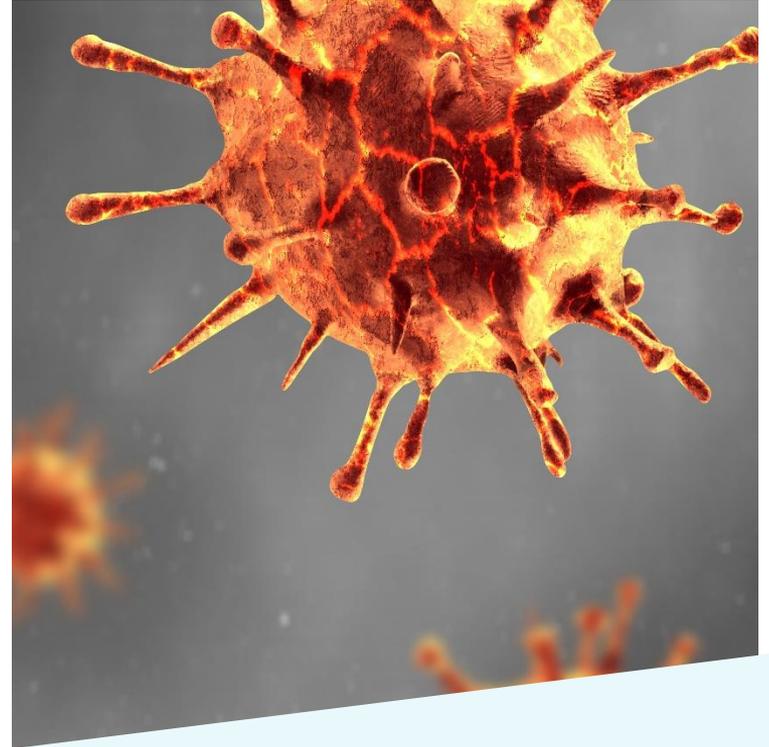
The virus mutates and becomes less lethal.

2

Effective vaccines or treatments are discovered.

3

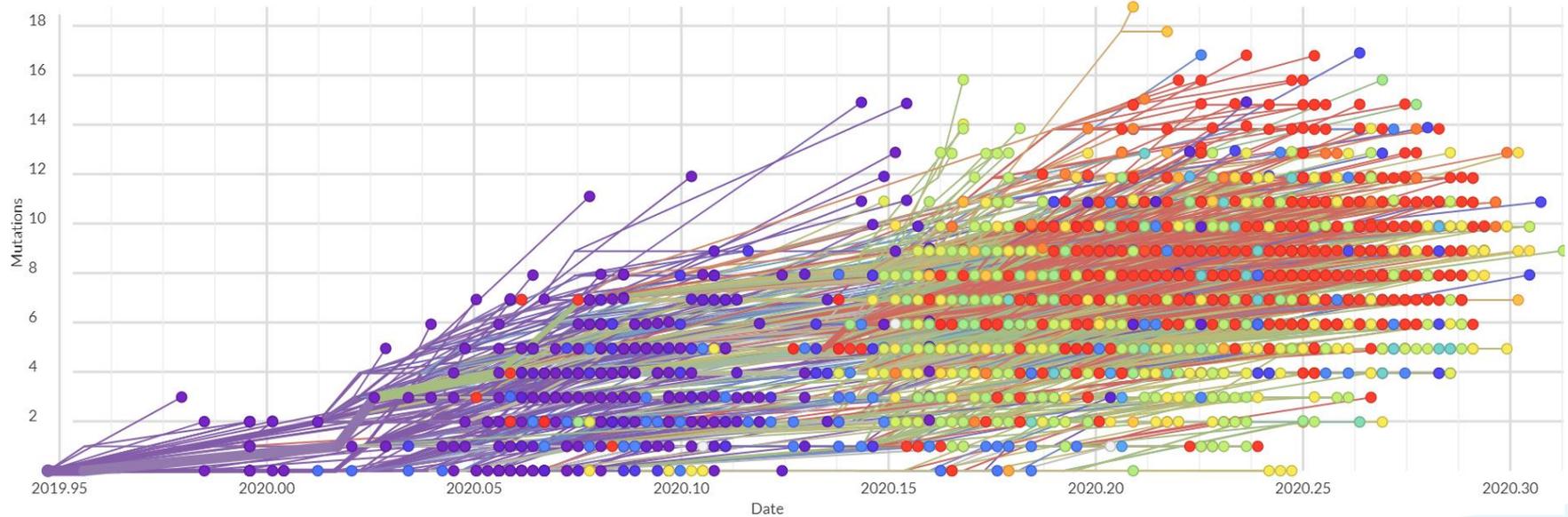
The population acquires “herd immunity.”



COVID-19's Economic Impact

Virus Mutations

Phylogeny



Source: nextstrain.org/GISAID

COVID-19's Economic Impact

How Close Is Herd Immunity?



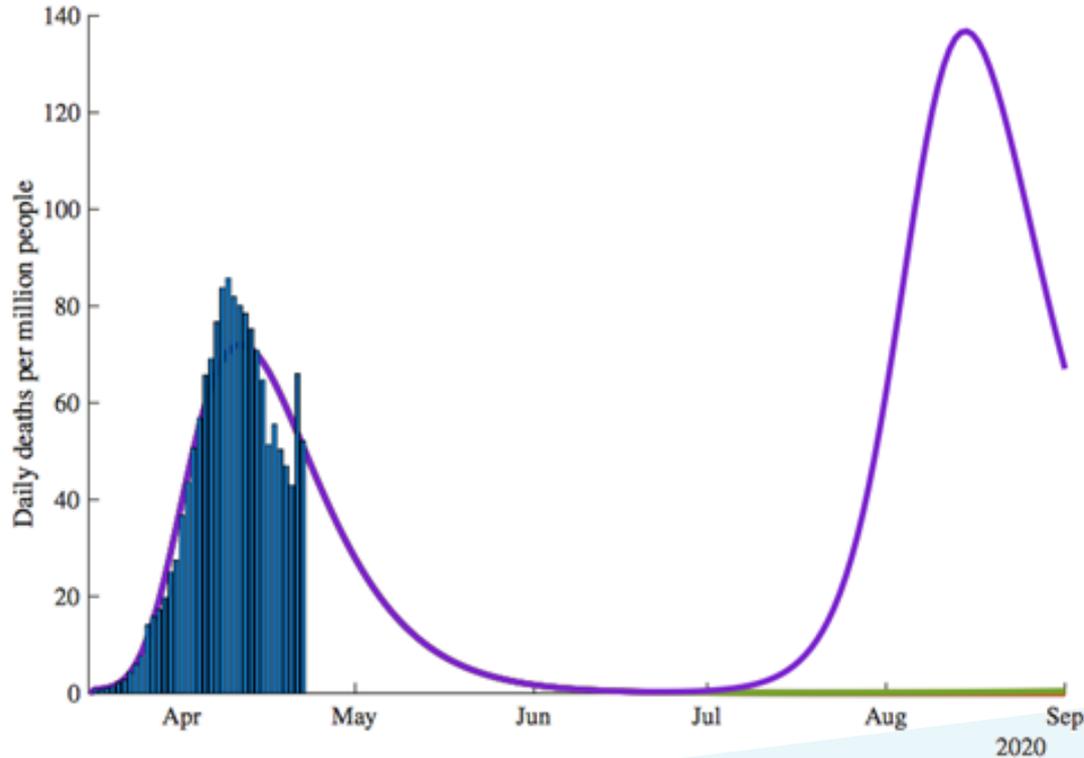
Source: New York City Health Department

Through May 5, COVID-19 has resulted in **13,724** confirmed deaths in New York City.

Assuming a mortality rate of 0.8%, **1.7 million** New Yorkers have been infected — or roughly **20%** of the population.

COVID-19's Economic Impact

How Eliminating Containment Will Affect COVID-19 Deaths in New York City

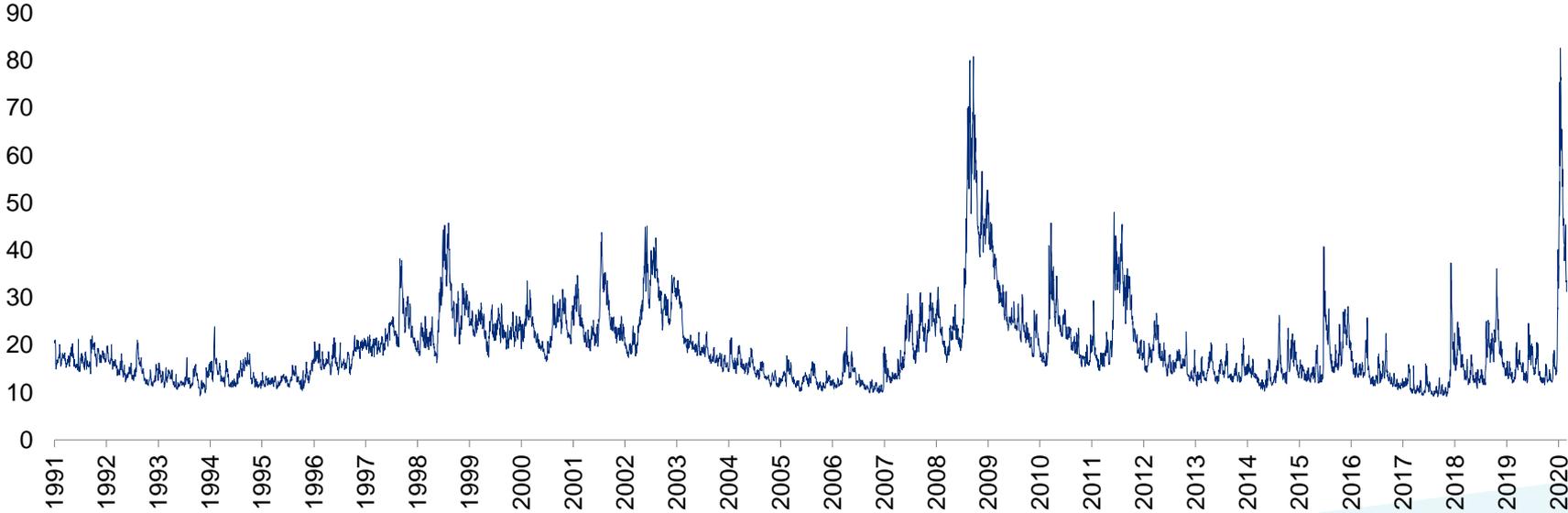


Source: Jesus Fernandez-Villaverde and Charles I. Jones, "Estimating and Simulating a SIRD Model of COVID-19 for Many Countries, States, and Cities," Stanford University, 2020

COVID-19's Economic Impact

US Stock Market Volatility

CBOE S&P 100 Volatility Index (VIX)

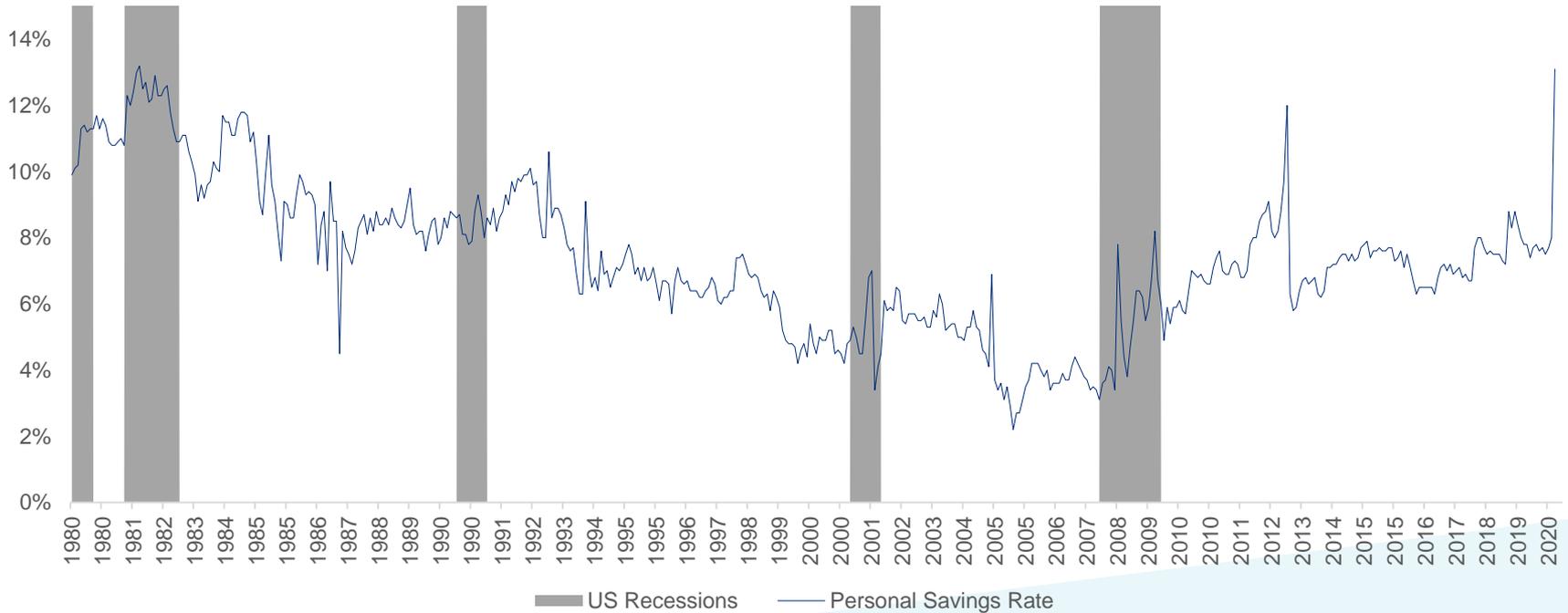


Source: Cboe Global Markets

COVID-19's Economic Impact

How Americans Manage Their Savings

US Personal Savings Rate, 1980 to Present

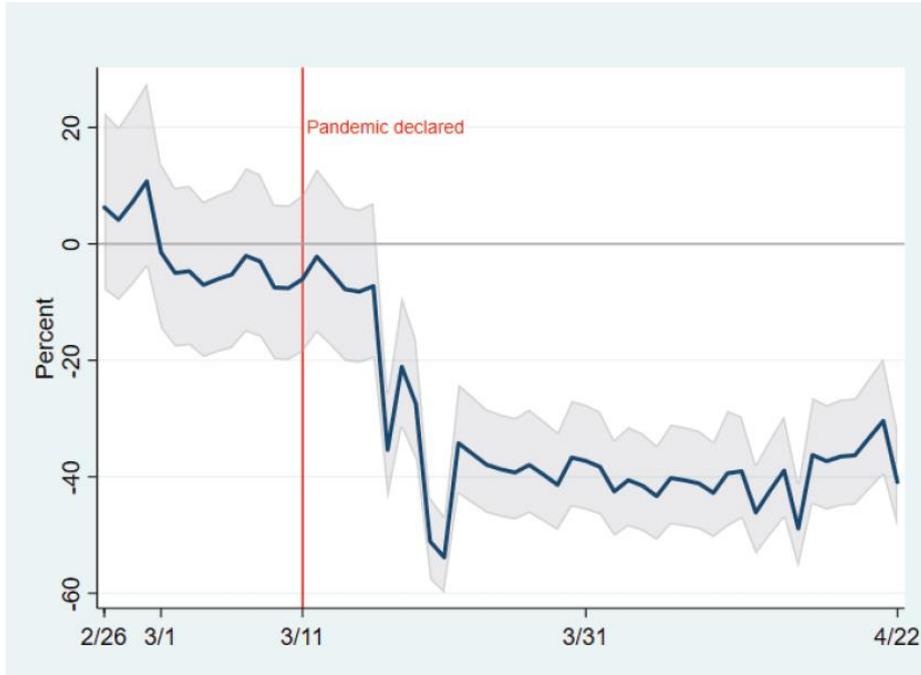


Source: Federal Reserve Bank of St. Louis/US Bureau of Economic Analysis

COVID-19's Economic Impact

Oil Prices and Consumer Spending at Gas Stations Falling

Daily Card Transactions at US Gas Stations



Source: US Bureau of Economic Analysis, US Energy Information Administration

West Texas Intermediate Crude Oil Spot Prices (dollars per barrel)

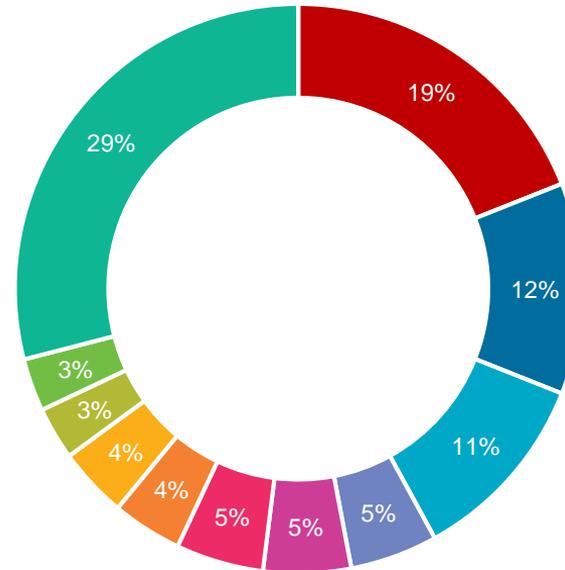


COVID-19's Economic Impact

The US Is the World's Leading Oil Producer

Global Oil Production by Country, 2019

- United States
- Saudi Arabia
- Russia
- Canada
- China
- Iraq
- United Arab Emirates
- Brazil
- Iran
- Kuwait
- Other

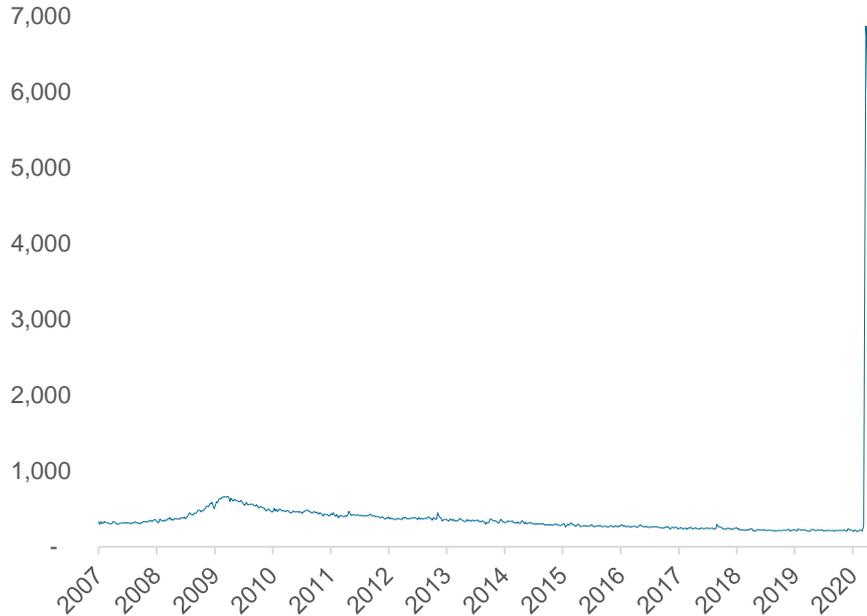


Source: US Energy Information Administration

COVID-19's Economic Impact

Significant Risk for People, Businesses, and Economies

Weekly Unemployment Insurance Claims,
Seasonally Adjusted (thousands)



Source: US Department of Labor

Who's at Risk?

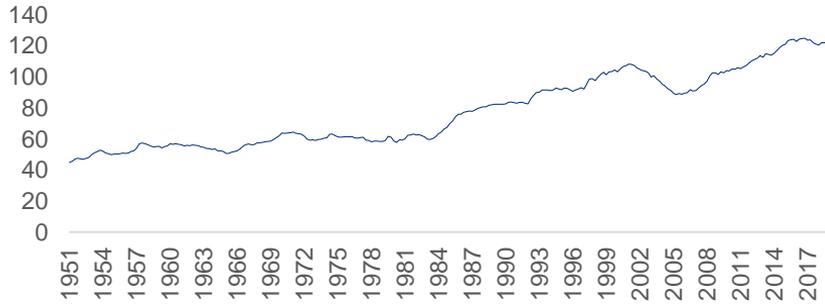
- Households in countries with high debt and weak safety nets.
- Businesses with:
 - High fixed costs (operational leverage).
 - High debt.

Financial systems are better capitalized than in 2008, but are not capable of withstanding the shock caused by the pandemic.

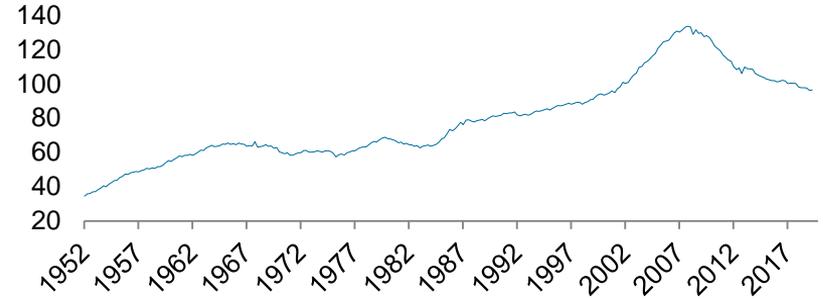
COVID-19's Economic Impact

US Economic Indicators

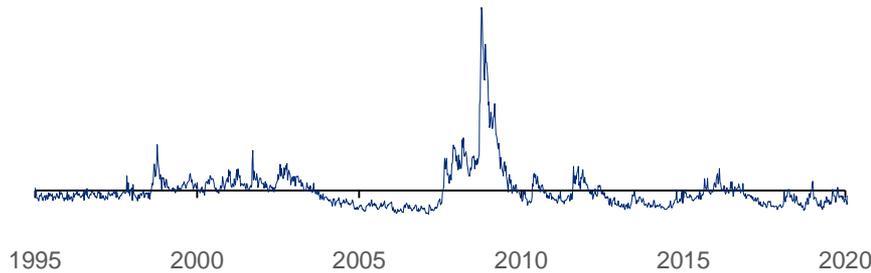
Nonfinancial Corporate Debt as Percentage of GDP



Household Debt as Percentage of Disposable Income



St. Louis Fed Financial Stress Index



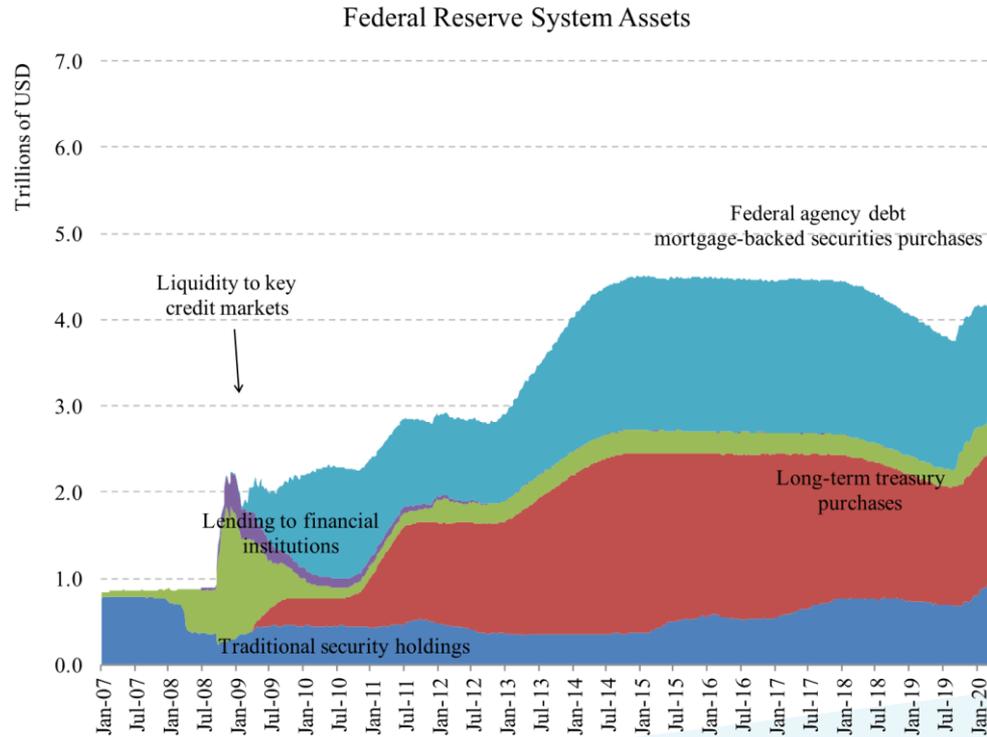
"Can't pay rent" Search Interest



Source: Federal Reserve Board of Governors, Federal Reserve Bank of St. Louis, Google

COVID-19's Economic Impact

Federal Reserve System Assets

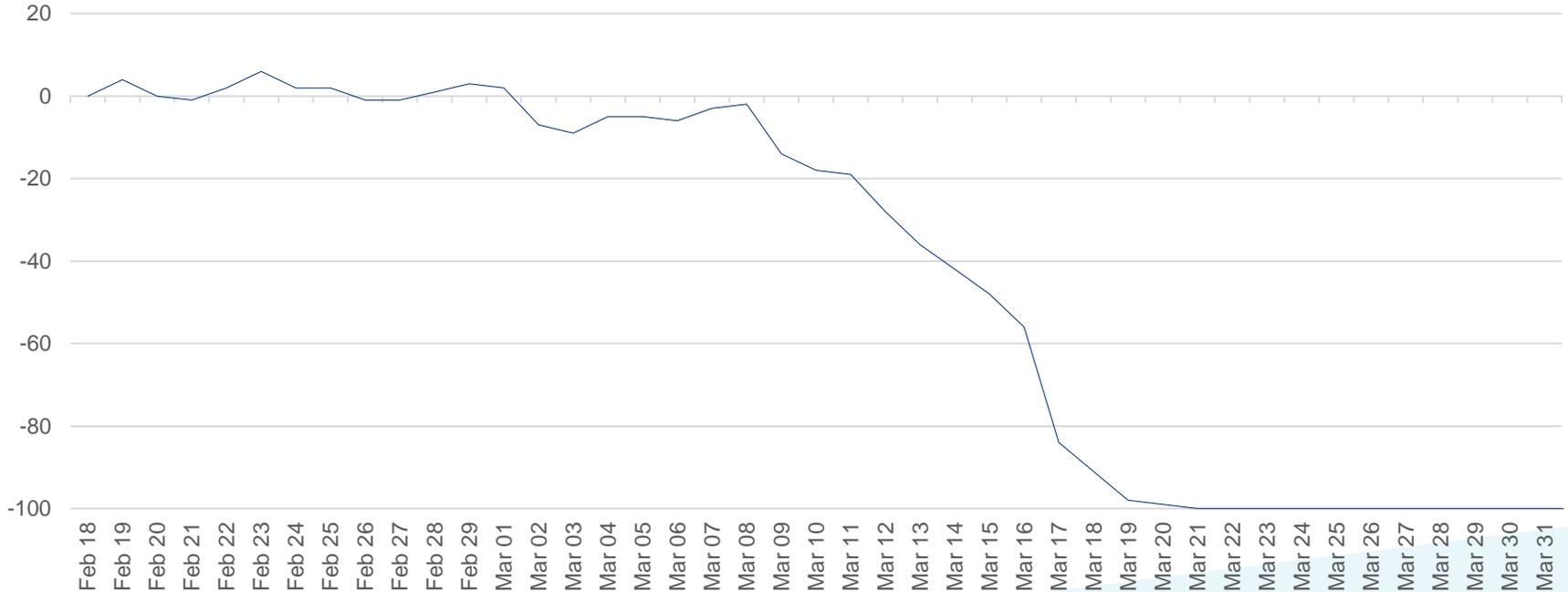


Source: Federal Reserve Bank of Cleveland

COVID-19's Economic Impact

The Pandemic's Effect on the Restaurant Industry

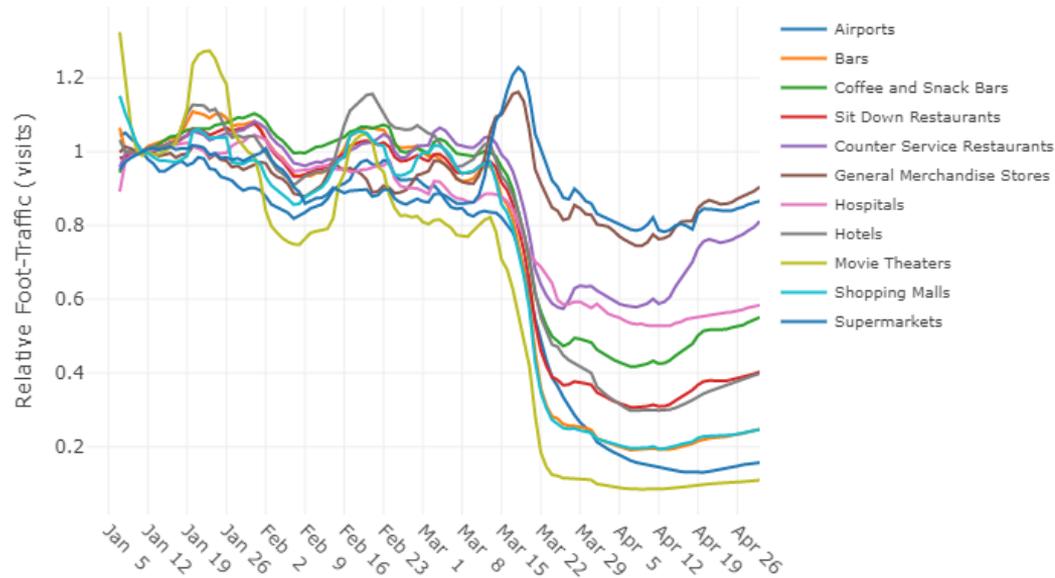
Seated Restaurant Diners, Year-Over-Year Percentage Change



Source: OpenTable

COVID-19's Economic Impact

Effects on Individual Industries



Source: SafeGraph

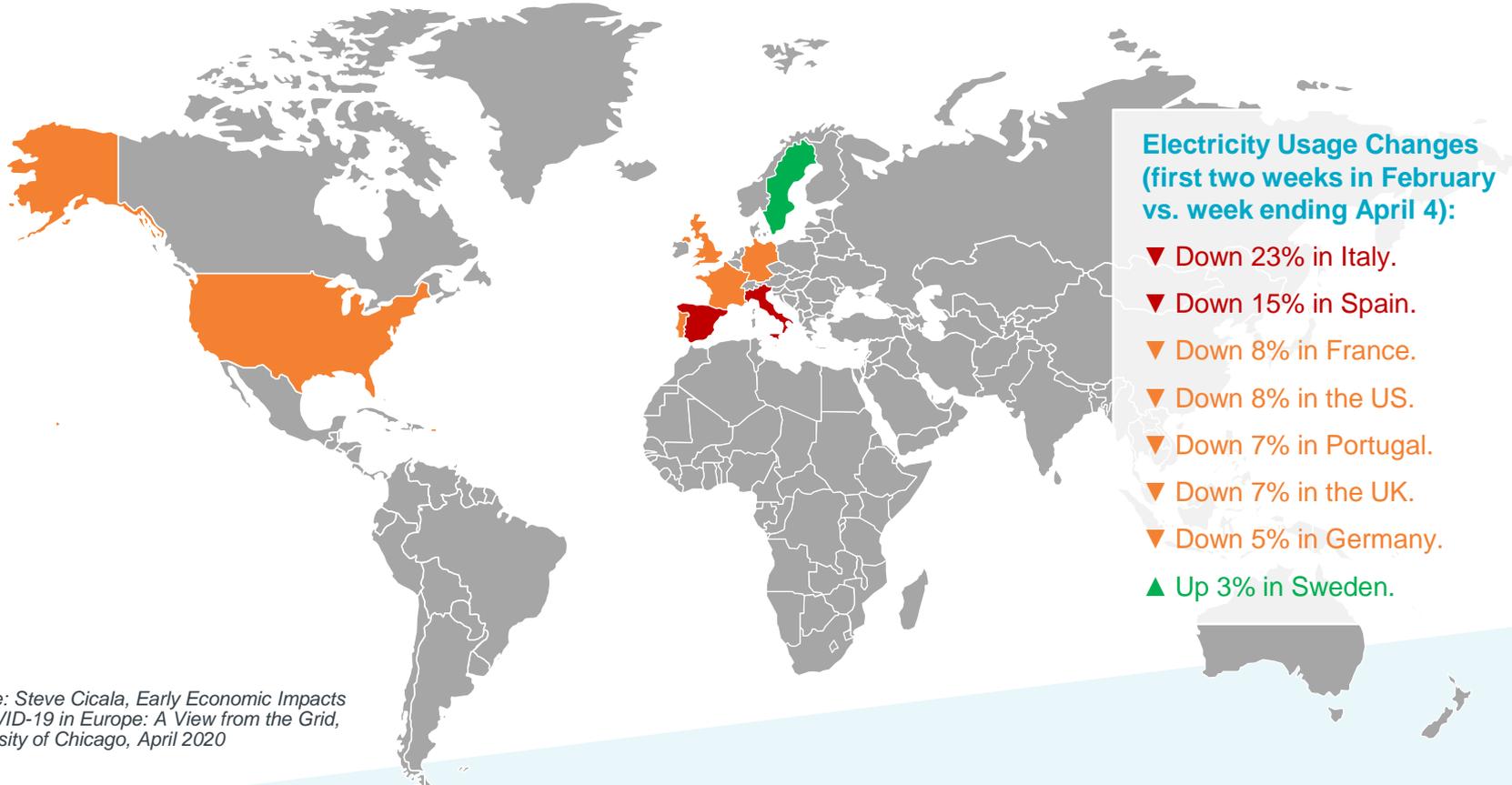
Demand by Industry

- ▼ Airlines.
- ▼ Restaurants.
- ▼ Hotels.
- ▼ Car rental services.
- ▼ Movie theaters.
- ▼ Durable goods.

- ▲ Health care.
- ▲ E-commerce.
- ▲ Groceries.
- ▲ General merchandise.

COVID-19's Economic Impact

Power Consumption Has Fallen Dramatically



Electricity Usage Changes (first two weeks in February vs. week ending April 4):

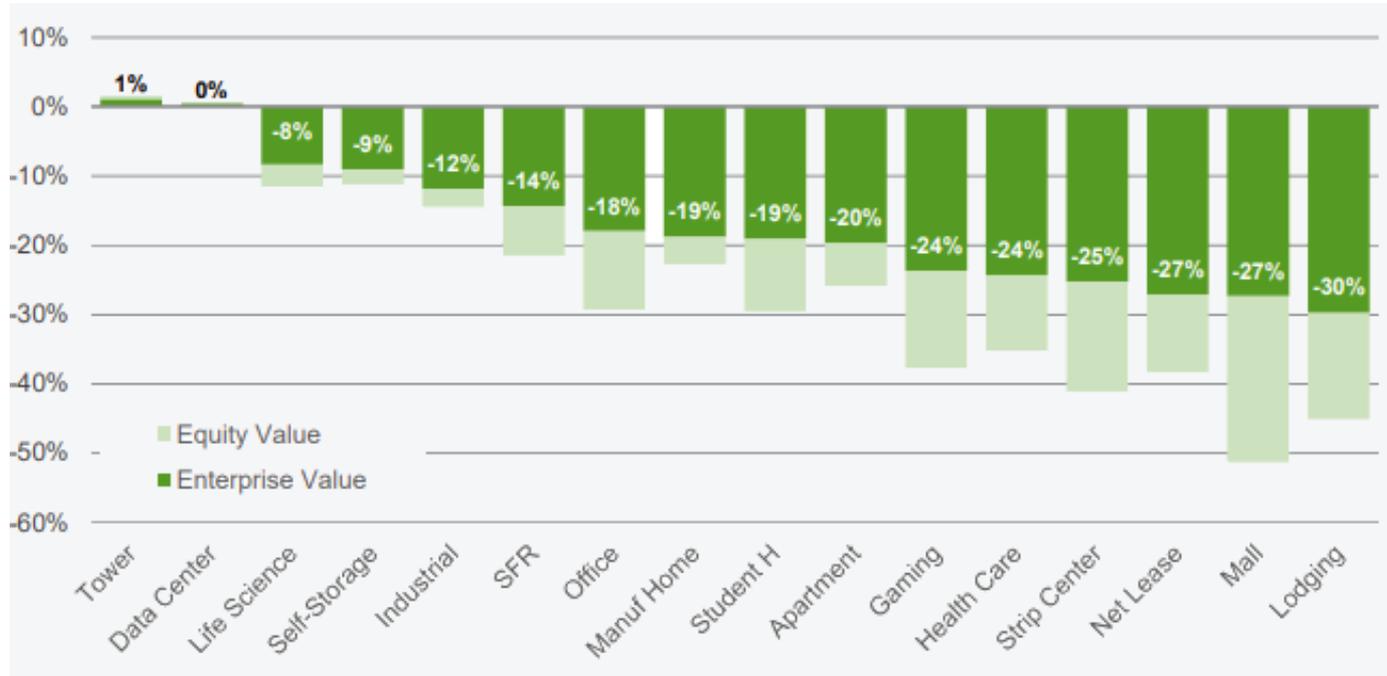
- ▼ Down 23% in Italy.
- ▼ Down 15% in Spain.
- ▼ Down 8% in France.
- ▼ Down 8% in the US.
- ▼ Down 7% in Portugal.
- ▼ Down 7% in the UK.
- ▼ Down 5% in Germany.
- ▲ Up 3% in Sweden.

Source: Steve Cicala, *Early Economic Impacts of COVID-19 in Europe: A View from the Grid*, University of Chicago, April 2020

COVID-19's Economic Impact

Falling REIT Returns

Change in US Unlevered and Levered Values, February 21 to April 15



Source: Green Street Advisors

COVID-19's Economic Impact

Why Government Intervention?

1 “Infection externality.”

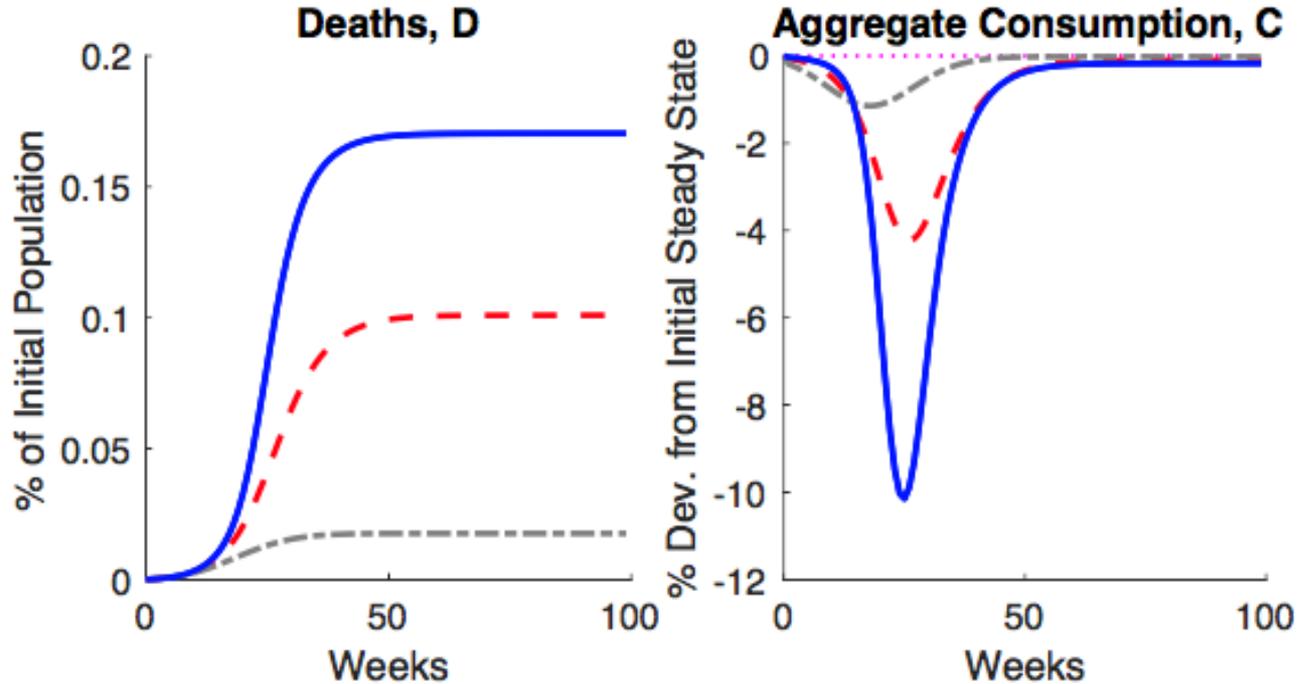
2 Short-term solution: crude containment measures, such as lockdowns.

3 Medium-term solution: smart containment/large-scale testing and quarantining of infected individuals.



COVID-19's Economic Impact

Modeling Economic Effects



Source: Eichenbaum, Martin, Sergio Rebelo and Mathias Trabandt, "The Macroeconomics of Testing and Quarantining," Northwestern University, April 2020

COVID-19's Economic Impact

The Pandemic's Permanent Changes

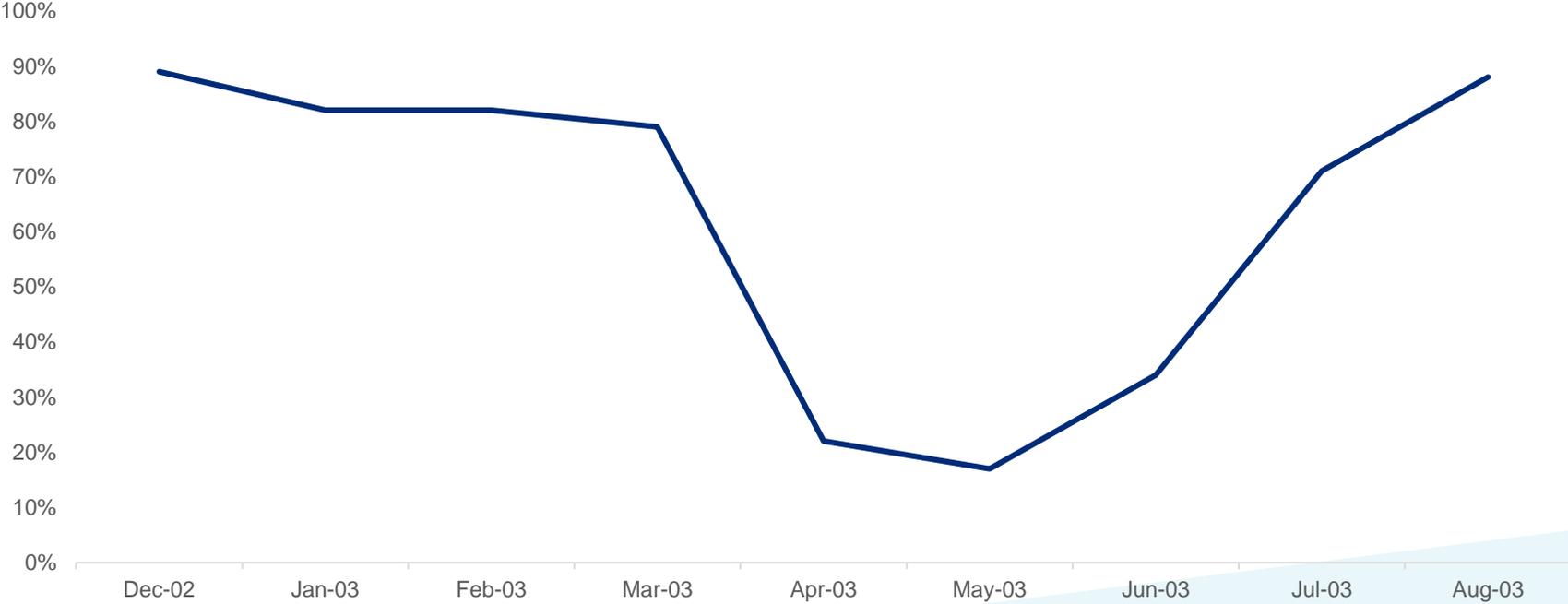
- Remote work.
 - Decline in value of office buildings.
- E-commerce.
 - Further declines in value of retail space.
- Telemedicine.
- Video conferencing.
- Online teaching.
- Fintech replacing conventional banking.
- Automation and reshoring.



COVID-19's Economic Impact

Hong Kong Hotel Occupancy During the SARS Epidemic

Hotel Occupancy in Hong Kong, December 2002 to August 2003



Source: Hong Kong Tourism Board

COVID-19's Economic Impact

An Uncertain Future



COVID-19's Economic Impact

Future Decision-Making for States

- Governments need to balance economic priorities with public safety needs.
- Decisions will be made based on local levels of preparedness and potential vulnerabilities:
 - Equipment stockpiles.
 - Planning.
 - Testing kits.
 - Aging populations or those with underlying health conditions.
- Different approaches to reopening will highlight best practices and lessons learned.
 - This will inform responses in the event of a second COVID-19 wave.



COVID-19's Economic Impact

A Whole of America Response



Preparedness at all levels of government is crucial.



Mitigation is in the hands of individuals, families, and communities.



Nonprofits are providing valuable resources to vulnerable populations.



The private sector's lifesaving capabilities have never been more needed.

COVID-19's Economic Impact

Looking Ahead

- 1** Governments will look for opportunities to learn lessons as they reopen.
- 2** Emergency managers will assume there will be a second COVID-19 wave.
- 3** Businesses should similarly learn lessons and prepare for additional restrictions in the future.



COVID-19's Economic Impact

Priorities for Employers



Engage with empathy.

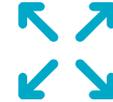
Focus on communication.

Start with the most appropriate return-to-work process and adjust/refine as needed.



Define who needs to return.

Be clear about which employees must return to work — and which ones do not.



Understand screening.

Evaluate screening options and choose the right one for your organization.

Take steps to maintain privacy and confidentiality.

COVID-19's Economic Impact

How Employers Are Supporting Employees and Protecting Their Health



Implementing enhanced cleaning and disinfection.



Administering on-site temperature screening.



Providing face masks to employees.



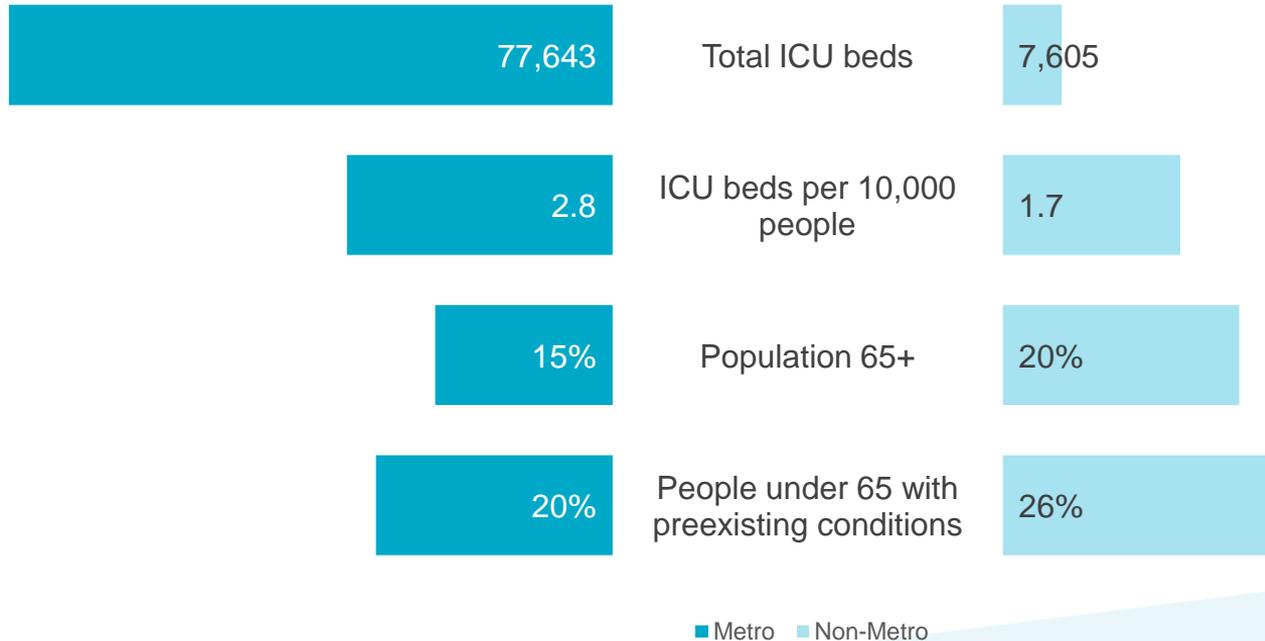
Communicating reminders about mental health programs.

Source: Mercer Global COVID-19 Survey #4

COVID-19's Economic Impact

Preparedness and Access to Care Differs by Geography

Metro vs. Non-Metro Health Resources and Challenges

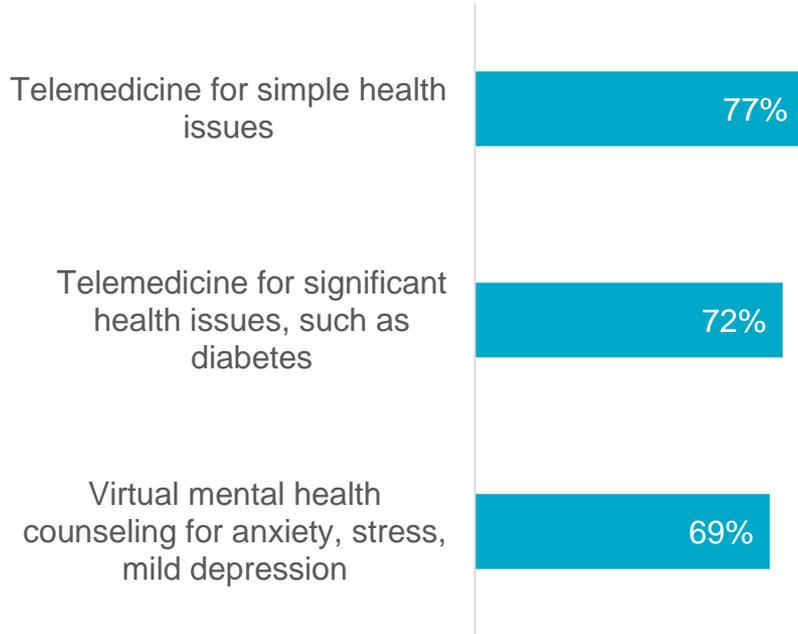


Source: Kaiser Family Foundation

COVID-19's Economic Impact

Telemedicine Is Here to Stay

Employees' Willingness to Try Telemedicine



Source: Mercer Health on Demand Workers Survey

Telemedicine can help address:

- Wariness of hospitals and doctors' offices.
- Strains on health care systems.
- Employee anxiety.

Liquidity Strategies for COVID-19



INSIGHTS | APRIL 2020

Improving Liquidity During and After the Pandemic

Beyond its effect on people, the continuing COVID-19 pandemic has had severe effects on the US and global economies. Maintaining liquidity can act as a bridge until economic activity improves, and a number of insurance and risk management strategies can enable that process.

Cash Flow Challenges

Since the pandemic began, businesses have had to contend with volatile financial markets and uncertainty about their current and future revenues and cash flow. With worries about a potential recession growing, many businesses have taken steps to preserve cash – including being off or furloughing employees and shutting down production – while exploring potential lines of credit and other ways to maintain liquidity. The White House, Congress, and the Federal Reserve have also introduced a major stimulus package, lowered interest rates, and taken other measures to ease companies' pain and ensure capital is readily available.

But adverse effects and uncertainty for businesses will likely persist for some time – with the worst possibly yet to come – which underscores how important it is for businesses to preserve cash. In addition to any actions they may have taken so far, businesses will likely need to explore other solutions, such as claims and collateral cost reduction strategies, credit insurance products, premium financing, and the use of captive insurers – all of which can help them stay liquid.

Reducing Claims and Collateral Costs

Although many employees' workers' compensation losses will fall in the short term – as fewer people are working and social distancing measures remain in place – injury rates may increase for some. And employers of all types may experience delays in key processes and the resolution of existing claims, during which time injured employees will continue to collect benefits.

Outstanding liabilities associated with aging inventories of open workers' compensation claims can significantly reduce the amount of working capital – both short- and long-term – that is available to companies. Settling these claims proactively, however, can help employers improve their balance sheets given uncertainty about the post-COVID-19 economic environment.

A strategic approach to closing legacy claims can enable employers to better manage their cash flow. Working with insurance and claim adjusters, employers can use analytics and claims inventory management tools to aggressively reduce their liabilities and reserves. For Marsh clients, the current average paid for legacy claims closure initiatives on each \$1 of reserves is 80-90%. Lower claims expenses and associated outstanding liabilities can also help reduce collateral and overall loss costs.

Employers should pay particular attention to the adverse development of new and existing claims. Though resources may be limited, employers can use analytics and other claims monitoring tools to identify potentially difficult or complex claims and prioritize resources on them. They should also proactively reach out to injured workers and help them navigate the current environment, which may prevent costly litigation in some cases and can contribute to better claim outcomes and lower costs.



For the latest information and insights from Marsh about how to manage COVID-19's effects on your business, including our new briefing on how insurance and risk management strategies can help your organization maintain liquidity during challenging times, visit marsh.com/us/insights/research/pandemic-risk-hub.html.

Join us again on **Wednesday, May 20**, for more information and insights on how you can manage critical risks as the pandemic continues. Visit marsh.com to register.



Marsh is one of the Marsh & McLennan Companies, together with Guy Carpenter, Mercer, and Oliver Wyman.

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