Anatomy of an Outbreak: Part 4
Some signs of progress amid a national mobilization of resources

April 9, 2020

Presented by
Health Care Advisory Board
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Coronavirus cases in the United States
Current as of April 8, 2020

Current COVID-19 cases
At least cases 397,754
140,081 cases in New York
At least 12,956 deaths

Original estimates of possible effects
96 million cases
4.8 million hospitalizations
480,000 deaths

Death toll still accelerating in U.S.

Daily coronavirus deaths (rolling 3-day average), by number of days since 3 daily deaths first recorded¹

<table>
<thead>
<tr>
<th>Country</th>
<th>Total deaths per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>310</td>
</tr>
<tr>
<td>Italy</td>
<td>293</td>
</tr>
<tr>
<td>France</td>
<td>162</td>
</tr>
<tr>
<td>U.K.</td>
<td>106</td>
</tr>
<tr>
<td>U.S.</td>
<td>45</td>
</tr>
<tr>
<td>Germany</td>
<td>25</td>
</tr>
<tr>
<td>South Korea</td>
<td>4</td>
</tr>
</tbody>
</table>


States continue to see record single-day fatalities…

But death toll doesn’t communicate full picture

Total coronavirus deaths since 10 total deaths in state

NYC’s curve beginning to flatten?

Tuesday, April 7th – Gov. Andrew Cuomo commented that NY state’s strict social distancing measures are paying off

Death toll is still increasing, but seeing decreases in…

- Daily ICU admissions
- Intubations
- Three-day hospitalization rates


What a difference a week makes
Resources and capacity expectations one week earlier

Projected ICU bed shortage and dates of peak resource use by state

Updated April 1, 2020

States with greatest predicted peak ventilator demand

- New York: 9,055
- Tennessee: 2,318
- Texas: 1,975
- Michigan: 1,798
- Florida: 1,594

States with least predicted peak ventilator demand

- Vermont: 27
- Wyoming: 53
- North Dakota: 59
- Alaska: 60
- South Dakota: 72

An extraordinary mobilization of resources
Access to resources and capacity varies widely

Projected ICU bed shortage and dates of peak resource use by state


States with greatest predicted peak ventilator demand
- New York: 5,008
- New Jersey: 2,189
- Massachusetts: 1,592
- Florida: 1,323
- Connecticut: 1,153

States with least predicted peak ventilator demand
- Vermont: 13
- Delaware: 14
- Idaho: 20
- New Hampshire: 24
- Wyoming: 26
Large variation in epidemic curve projections
Models strongly influenced by social distancing, transmissibility assumptions

### Institute for Health Metrics and Evaluation's Model
- Best-fit curve model constructed from historical data on reported deaths—rather than case counts—to account for asymptomatic cases and shortages of tests
- Provides state-wide epidemic curves to estimate bed-days, ICU-days, ventilator-days, and deaths at a given date
- Assumes **high levels of social distancing** on par with that seen in China, Italy, and Spain; uses observed change in death rates after social distancing measures are put into place to build curve

### Penn Medicine’s CHIME Model
- Traditional Susceptible, Infected, Recovered (SIR) model for spread of disease built based on number of hospitalizations at a point in time and transmissibility assumptions
- Provides facility-specific epidemic curves to estimate number of hospitalizations, ICU, and ventilator needs at a given date
- Assumes **low levels of social distancing** (30% reduction compared to baseline) and upper estimate for number of infectious days (14 days)

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Peak hospital beds required in the entire state of **Pennsylvania**

- **2,180 hospital beds**
- **April 13th**

Peak hospital beds required in the **Philadelphia region**

- **2,079 hospital beds**
- **May 18th**
“How will I know *my* region is at the peak of the curve?”
Three recommended metrics for hospital and state leaders to track

<table>
<thead>
<tr>
<th>Metric</th>
<th>What to watch for</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Daily new confirmed cases (rolling 3-day average)</td>
<td>Starts to decrease</td>
<td>Best indicator of live transmission of virus</td>
<td>Highly dependent on level of testing in region</td>
</tr>
<tr>
<td>2 Daily new confirmed deaths (rolling 3-day average)</td>
<td>Starts to decrease</td>
<td>Less subject to testing availability</td>
<td>Possibly a “lagging” indicator Death toll frequently underreported</td>
</tr>
<tr>
<td>3 Days for number of cases to double</td>
<td>Starts to increase</td>
<td>Useful for measuring exponential growth (or lack thereof)</td>
<td>Highly dependent on level of testing in region</td>
</tr>
</tbody>
</table>
Assessing the seasonality of COVID-19

Novel virus still too new to confirm warmer climates will kill the virus

Contributing factors to the seasonality of viruses

- **Environment**
  - Influenza does not spread in humid conditions

- **Human Behavior**
  - In summer, schools are out and people spend more time separated outside

- **Host Immune System**
  - People have stronger immune systems from more vitamin D and melatonin

- **Host depletion**
  - People gain immunity and decrease the chance of transmission

Unknown factors about COVID-19 and seasonality

- COVID-19 spread in Singapore, humidity effects aren’t fully understood
- Unknown if children carry COVID-19, transmit the virus, or will remain asymptomatic
- Vitamin D and melatonin reduce the incidence of respiratory infection, but not influenza virus
- COVID-19 is a new virus with very little immunity in the population

Key takeaways

- COVID-19 may transmit more efficiently in the winter than summer
- Size of seasonal change will be modest and is not enough to stop transmission on its own
- A resurgence in the winter is possible, which highlights the need for additional public health measures to stop the spread

Testing (still) accelerating, surpassing 2M mark
Limiting factors include state variability and U.S. labs’ processing capacity

COVID-19 tests performed in United States, by day¹

State COVID-19 testing rates per 1000 population¹ with percentage increase from April 2, 2020

<table>
<thead>
<tr>
<th>State</th>
<th>Rate</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA</td>
<td>16.1</td>
<td>63%</td>
</tr>
<tr>
<td>WA</td>
<td>12.1</td>
<td>23%</td>
</tr>
<tr>
<td>MA</td>
<td>11.8</td>
<td>57%</td>
</tr>
<tr>
<td>VT</td>
<td>11.4</td>
<td>59%</td>
</tr>
<tr>
<td>NY</td>
<td>11.4</td>
<td>0%</td>
</tr>
<tr>
<td>DC</td>
<td>11.1</td>
<td>103%</td>
</tr>
<tr>
<td>UT</td>
<td>10.8</td>
<td>64%</td>
</tr>
<tr>
<td>HI</td>
<td>10.7</td>
<td>45%</td>
</tr>
<tr>
<td>NJ</td>
<td>10.7</td>
<td>45%</td>
</tr>
<tr>
<td>NM</td>
<td>10.6</td>
<td>59%</td>
</tr>
</tbody>
</table>

Highest: LA (63%), Lowest: NC (57%)

DATA SPOTLIGHT

750K
Testing capacity needed for case-based intervention²

1.01M
Total tests run over last seven days


¹ As of April 8, 2020, 8:45AM EST
² In conjunction with supportive public health infrastructure like contact tracing
More than diagnostics required to return to new normal
Solutions needed for three unanswered questions to phase out social distancing

<table>
<thead>
<tr>
<th>Who is immune?</th>
<th>Who has it and doesn’t know?</th>
<th>How is it spreading?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antibody tests</strong>&lt;br&gt;To understand community spread and immunity levels in the population</td>
<td><strong>Disease surveillance</strong>&lt;br&gt;To scan populations broadly for early symptoms and report data to CDC</td>
<td><strong>Scaled contact tracing</strong>&lt;br&gt;To isolate symptomatic people who around them may have been exposed</td>
</tr>
<tr>
<td><strong>Telluride, CO</strong>&lt;br&gt;County of 8,000 begins widespread antibody testing study</td>
<td><strong>Wearable devices</strong>&lt;br&gt;UCSF and Scripps testing wearables’ potential as early-warning system</td>
<td><strong>Massachusetts</strong>&lt;br&gt;Gov. Baker (R) forms CTC¹ with Partners In Health to deploy 1,000 contact tracers</td>
</tr>
</tbody>
</table>

1. Contact Tracing Collaborative

What is needed to reopen, state-by-state

Where it’s already happening

What’s in the way of doing more?

- Antibody tests
- Disease surveillance
- Scaled contact tracing
- Wearable devices
- Massachusetts

1. Commercially available FDA-approved antibody test
2. Potential infringement on personal privacy laws
3. Training and deploying newly idled government workers

Source:
- Brodwin E. “We’re racing against the clock’: Researchers test wearables as an early warning system for Covid-19”, STAT News, March 26, 2020;
- Wilson, Reid “Health experts call for Roosevelt-style programs to kill virus, revive economy”, The Hill, April 6, 2020.

1. Contact Tracing Collaborative
## Encouraging advancements in clinical trials, manufacturing

Industry needs to execute process flawlessly, though

### Clinical trials

| 140+ | Experimental drug treatments and vaccines in development worldwide—11 in clinical trials |
| 44   | US-based vaccine trials (as of Mar. 27) |
| 70   | Countries participating in the WHO’s¹ SOLIDARITY clinical trial—testing four treatments |
| 4    | Number of countries testing nitric oxide or nitric oxide derivatives (e.g., Viagra), which both dilate blood vessels and help draw oxygen into the lungs |

### Manufacturing capacity

| 1.5M | Doses of Remdesivir in stock; Gilead has continued to ramped up production |
| 130M | Doses of generic hydroxychloroquine Novartis will donate pending FDA approval |
| 7    | Potential COVID-19 vaccine manufacturers working with Bill and Melinda Gates Foundation to build factories, even though only one or two is likely to manufacture an approved vaccine |

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¹. The World Health Organization.

Also making strides with access and pricing

<table>
<thead>
<tr>
<th>FDA actions</th>
<th>Affordability</th>
</tr>
</thead>
</table>
| 1. Issued EUAs¹ for existing drugs (i.e., faster label expansions)  
  - Chloroquine, hydroxychloroquine, convalescent plasma |  
  **Gilead rejected orphan drug designation** for Remdesivir and **committed to affordable pricing** if Remdesivir proves a safe and effective treatment |
| 2. Established an emergency *investigational NDA*² process for convalescent plasma |  
  Rising Pharmaceuticals slashed the price of its chloroquine phosphate tablet **in half** |
| 3. Expanded eligibility for *expedited approval processes* to all treatments developed for COVID-19 |  
  $8.3B federal stimulus package from early March includes a provision that when a vaccine becomes available, the government will pay a “fair and reasonable” price |
| 4. Former FDA Commissioner, Scott Gottlieb, called for **real-time reviews** of drugs before clinical trials conclude | |

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1. Emergency use authorization.
2. New drug application.

CMS releases initial round of $100B relief fund
Many providers will still be waiting for emergency support

Distribution of $100B Public Health and Social Services Emergency Fund

$30B
- Divided based on Medicare fee for service revenues
- Deposited this week through existing direct deposit mechanisms

~$42B
- Projected funding to hospitals to cover COVID-19 care for uninsured individuals
- Exact amount and distribution channels remain unknown

Additional support for providers outside $100B fund

$34B (so far)
- Accelerated and Advance Payment Program accelerates Medicare payments to 4-6 days, down from 3-4 weeks
- Eligible providers include Medicare Part A providers and Part B suppliers including physicians, non-physician practitioners, and DME suppliers

Unanswered questions

How will CMS support providers that have low Medicare fee for service revenues?

How and when will the remainder of the $100B dollar fund be distributed?

Source: Cohrs, Rachel; “Verma: $30 billion in CARES Act grants will be distributed starting ‘this week’”, Modern Healthcare, April 7, 2020; The Centers for Medicare and Medicaid Services, “CMS Approves Approximately $34 Billion for Providers with the Accelerated/Advance Payment Program for Medicare Providers in One Week”, April 7, 2020.
Finding coverage for uninsured patients
Trump Administration paves the way to reimburse providers at Medicare rates

Coverage options for uninsured patients

The Trump administration’s plan
- Use funding from $100 billion CARES Act allotment to reimburse hospitals for treating uninsured COVID-19 patients
- Reimbursement would be set at Medicare rates and hospitals are prohibited from balance billing patients
- Remains unclear how will providers distinguish COVID treatment from treatment for pre-existing conditions exacerbated by the disease

Individual market special enrollment
- Almost every state that operates its own exchanges has opened a special enrollment period (SEP)
- The 38 states using federal exchanges are not able to have an SEP without the Trump administration’s approval
- Regardless of federal action or state of residence, any worker who loses their job qualifies for an SEP and can enroll in individual market coverage

Hospitals struggle to pay employees amid pandemic

Once thought recession-proof, the health sector is feeling economic impacts

Who is furloughing?
Primarily rural and Midwestern hospitals that are not yet experiencing high numbers of COVID-19 cases, but had to end elective procedures, reduce their expenses, and preserve PPE

Who is being furloughed?
While many employees that have been asked to stay home are non-clinical staff and as-needed workers, some nurses—particularly those who work in out-patient clinics and surgery settings that are now mostly empty—are also being furloughed

Some hospitals are taking steps to protect staff salaries

• **University of Pittsburgh Medical Center** guaranteed staff will be paid at current rate until at least May 9th
• **Ascension Health** is using pay continuation, PTO advances, worker’s compensation, and short-term disability to maintain employee cash flow
• **Advocate Aurora** has offered to retrain employees to work in other departments and give furlough pay

New York state’s “one health care system”
All public and private in the state hospitals will operate like a single system

A central command center at the state capital will coordinate the movement of…

Equipment
Ventilators and PPE will be shuffled between locations to meet demand

Providers
Clinicians from up-state will come to New York City to relieve overwhelmed urban hospitals

Patients
Overcrowded hospitals can transfer patients to other facilities with greater capacity

Many of the details in the state’s plan remain unclear…

What will happen with networks and billing as patients and providers move between hospital systems?

How will hospitals be reimbursed and will they be on the hook for the cost of transferring people and supplies?

Will other states follow suit as the epicenter of the crisis moves away from New York City?

Nurse staffing still a rate limiting factor to increase capacity

Two actions clinical executives should take now to expand nurse staffing pool

1. **Expand acute care workforce**
   - Repurpose currently employed RNs, including those from closed ambulatory sites, inpatient peri-op, and hospital administration
   - Recruit temporary staff among local retirees, faculty, student nurses, and independent NPs

2. **Optimize deployment of expanded workforce**
   - Cross-train expanded workforce in key COVID competencies; organize shadowing opportunities before surge
   - Scale ICU RN expertise through different staffing models, like team-based care
   - Deploy support staff to reinforce clinical team

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**Early learnings from hospitals at the surge front line**

- Don’t underestimate the impact of COVID-19 care on productivity
- Frontline manager buy-in is key to redeployment success
- Frontline resilience a key issue to address in both short and medium-term
Leveraging systemness to fight the surge
WellSpan’s lessons learned on how to unlock system-wide cohesion

WellSpan’s preemptive preparations for a COVID-19 surge

Build a centralized command center with leaders from every level
Over 40 leaders from across the system, including those working system-wide and locally, staff the center. This allows better awareness of ground conditions and increased buy-in.

Learn from every part of the system
The command center pulls in best practices from across the system and outside of it and elevates them to the organizational level.

Launch entity commands, system-wide teams to carry out mandates
System-level command center develops guidelines and directions which are carried forward through the system by individual entity commands and new system-wide teams, including:

Create a common pool of newly available staff
A system-wide HR team redeployes employees whose work has been disrupted to where they are most needed— and provides them housing and support.

Re-deploy Lean experts to find creative solution
A system-wide “MacGyver team” made up of Lean experts innovates with the community to source PPE.

FOR FULL Q&A see advisory.com/daily-briefing
Concern about outbreaks create discharge bottlenecks
Standard post-acute usage patterns are disrupted, even for non-COVID-19 patients

Post-acute intake guidelines delay transitions

- AHCA\textsuperscript{1} interim guidelines
  - Admit patients who have tested negative for COVID-19 and continue monitoring, as well as limiting contact with other patients and staff
  - For hospital discharges with respiratory symptoms or fever, facilities should ask the hospital to perform a COVID-19 test and then base decisions on the test results.

- Facility-specific protocols
  - Many nursing homes are requiring a negative COVID-19 test even for patients who were in the hospital for nothing to do with COVID.\textsuperscript{1}

Impact on hospital throughput

- Inability to transition patients not known to have COVID-19
  - Patients who have not been tested or whose tests have not yet come back may not be accepted in post-acute settings

- Reduced usefulness of CMS waivers
  - Waiver of CMS rule that SNF admission requires a preceding 3-day hospital stay is ineffective if providers are waiting for a test


\textsuperscript{1} American Health Care Association.

\textsuperscript{2} Cassie Sauer, President
WASHINGTON STATE HOSPITAL ASSOCIATION
Supporting post-acute providers to help drive throughput
Sample ways to help move patients out of the hospital to post-acute care

UW Medicine

Goals

- To discharge patients from acute care more efficiently; prevent outbreaks in downstream facilities

How they’re doing it

1. Discharging as many patients home as clinically appropriate
2. Collaborating with post-acute partners to:
   - Set expectations about discharge strategy and testing capabilities
   - Educate staff on infection prevention skills and protocols
   - Prepare an on-demand team to be deployed in case of escalation

State of Maryland

Goals

- To provide emergency care, supplies, and equipment to assist nursing homes with cases of Covid-19

How they’re doing it

Teams will be made up of National Guard, state and local health departments and hospital systems.

- **Testing team** will identify those in close contact with a confirmed case and send out for the fastest test available.
- **Supply team** will assess the situation on site and determine equipment and supply needs
- **Clinical team** will provide on site medical triage and stabilize residents in the nursing home

Preemptive cancellations dig a big financial hole
Volume crash a necessary and painful consequence of distancing, preparation

Model health system scenario\(^1\)

- 1,000-bed health system with two ambulatory surgical centers and $1.2B in annual patient revenue
- All elective procedures prospectively cancelled for three months across all sites of care
- Outpatient revenue reduced by half

Short-term financial situation will be **better** in cases where:

- Elective shutdown is shorter than three months
- ASCs permitted and able to continue operations
- Lower initial mix of elective services (but would limit ability to treat COVID-19)

Short-term financial situation will be **worse** in cases where:

- Initial case mix disproportionately weighted toward elective services
- Additional volume loss attributable to social distancing (e.g., fewer cases of influenza, car accidents or other trauma, and missed diagnostics and subsequent treatment)
- Employment losses drive down utilization and payer mix in near term
- Non-operating income losses, reduced philanthropy play major roles

**DATA SPOTLIGHT**

51% Reduction in quarterly revenue

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1. Typical of experience observed to date.
What a major outbreak looks like in financial terms
Severe COVID-19 scenario still entails immediate cash crunch

Concentrated COVID-19 Scenario

- 1,000-bed system treats 10,000 hospitalized COVID-19 cases over 3 months
- Peak of 2,200 cases in week 8 (i.e. system is surging significantly beyond normal capacity)
- Average revenue per COVID-19 case: $15,664

$156.7 M in COVID-19 revenue

- Wild cards:
  - Actual DRG mix of IP cases
  - Further changes to payment rates, including by commercial payers

The COVID-19 caseload needed to make up for lost revenue from elective procedures and other reduced demand is well beyond system capacity—implying need for large surge expenditures

Weekly revenue impact, 3-month scenario

Note the revenue shortfall in the first weeks of the scenario—if elective shutdowns and reduced demand precede significant COVID-19 caseload, even by a few weeks, cash flow challenge will be immense and immediate.
For most, new revenues won’t backfill loss of electives
Moderate COVID-19 scenario entails immediate cash crunch

**Moderate, concentrated COVID-19 scenario**

- 1,000-bed system treats 2,000 hospitalized COVID-19 cases over 3 months
- Peak of 440 cases in week 8 (i.e. system is surging significantly beyond normal capacity)
- Average revenue per COVID-19 case: $15,506

$31.0 M in COVID-19 revenue

**Wild cards**

- Actual DRG mix of IP cases
- Further changes to payment rates, including by commercial payers

The COVID-19 caseload needed to make up for lost revenue from elective procedures and other reduced demand is well beyond system capacity—implying need for large surge expenditures

Note the revenue shortfall in the first weeks of the scenario—if elective shutdowns and reduced demand precede significant COVID-19 caseload, even by a few weeks, cash flow challenge will be immense and immediate.
Assess the financial impact of canceling elective procedures

COVID-19 Elective Surgery Cancelation Impact Estimator

Estimate financial impact from COVID-19
- Postponed surgeries
- Canceled surgeries

Incorporate customizable inputs
- Varying time frames
- Crisis acuity levels
- Capacity scenarios
- Past facility volumes and capacity

Plan accordingly for future operations
- Lost revenue
- Potential future gained revenue
- Future capacity levels

To access the top COVID-19 resources, visit advisory.com/covid-19
Things are not entirely out of health systems’ control
Level-headed planning and sharp execution will minimize losses, set up for gains

Immediate: Cash crunch
Challenge: Sudden evaporation of major revenue streams coupled with preparatory surge expenditures
Imperatives:
- Meet mission: public health and safety come first
- Activate alternative sites of care e.g., virtual channels, outlying facilities
- Establish/ draw on credit as appropriate
- Minimize any unnecessary outflows

Imminent: COVID-19 crunch
Challenge: Massive case mix shift to low- or negative-margin medical care overwhelming capacity
Imperatives:
- Configure to accept as much of COVID-19 demand surge as possible
- Minimize any unnecessary complications or inefficiencies (for all conditions) to preserve resources
- Code and document as well as possible given circumstances—payment will depend heavily on it

Looming: Competitive crunch
Challenge: Providers scrambling to capture pent-up demand and additional funding in aftermath of COVID-19
Imperatives (start now):
- Beat COVID-19! The first safe areas will get first dibs on pending surgeries
- Have a plan for identifying and recapturing delayed/ cancelled cases
- Prioritize provider wellbeing— accommodating pent-up demand will take a healthy, engaged workforce—right when everyone needs a vacation
- Keep receipts—$100B in federal funding available to reimburse surge capacity expenses

Advisory Board interviews and analysis.
The top 16 open questions we’re looking at now

How will COVID-19 impact…

…the demographic makeup of the US—and future demand?

…the purchaser landscape and the nation’s payer mix?

…the competitive landscape efforts to “disrupt” the industry?

…expectations about U.S. health care capacity?

…site-of-care shifts, including to virtual channels?

…perception of government’s role in health care?

…public perception of industry stakeholders?

…the structure of the U.S. health care supply chain?

…demand for behavioral health services?

…employers’ health benefits strategies?

…future fundraising and philanthropy efforts?

…the future of the clinical workforce?

…the U.S.’ approach to post-acute and long-term care?

…the future of value-based care and risk-based payment?

…perceptions of the value of systemness and scale?

…the pharma, device, and tech innovation pipelines?
Today’s focus

How will COVID-19 impact...

- ...the demographic makeup of the US—and future demand?
- ...the purchaser landscape and the nation's payer mix?
- ...the competitive landscape efforts to “disrupt” the industry?
- ...expectations about U.S. health care capacity?
- ...site-of-care shifts, including to virtual channels?
- ...perception of government's role in health care?
- ...public perception of industry stakeholders?
- ...the structure of the U.S. health care supply chain?
- ...demand for behavioral health services?
- ...employers’ health benefits strategies?
- ...future fundraising and philanthropy efforts?
- ...the future of the clinical workforce?
- ...the U.S.’ approach to post-acute and long-term care?
- ...the future of value-based care and risk-based payment?
- ...perceptions of the value of systemness and scale?
- ...the pharma, device, and tech innovation pipelines?
Telehealth is an essential tool against COVID-19
Virtual connections preserve capacity and prevent exposure

Patients and clinicians benefit from telehealth

**COVID-19 patients**
Tele-triage methods keep mild cases out of the hospital and give hospitals time to prep for high-risk cases.

**Non-COVID patients**
Virtual visits and RPM\(^1\) help patients continue non-COVID related care without risking exposure in hospital settings.

**Clinicians**
Remote care protects clinicians from additional exposure and allows quarantined clinicians to continue providing care.

**DATA SPOTLIGHT**

1 billion
Estimated number of U.S. telehealth visits in 2020

24%
Health care organizations with existing virtual care program in January 2020

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1. Remote patient monitoring

Is telehealth the future—or is it just having a moment?

Widespread adoption of telehealth will disappear without reimbursement parity

Reimbursement parity

Parity for in-person and virtual visits from payers is fundamental to continued utilization and broader adoption

Downstream implications

“Table stakes”

Telehealth becomes an essential component of basic patient engagement and retention strategies

Revision of care standards and pathways

- Capture vitals
- Access RPM and labs
- Integrate virtual visit data into EMR
- Add training and quality protocols

Site of care shifts

Expansion beyond checkups and e-consults to effective hospital-at-home
Record unemployment numbers from COVID-19
ACA changes options available to recently unemployed

Unemployment insurance claims by week, seasonally adjusted

- 6.6 million claims the week ending on 3/28/2020 and the week ending on 4/4/2020
- 3.3 million claims the week ending on 3/14/2020

12%–32%
Projected unemployment rate because of COVID-19, up from an unemployment rate of 3.5% before COVID-19

1,300
New enrollees in Washington state’s insurance marketplace in the first week it was reopened in response to COVID-19

How will health benefits weather this downturn?

Insurance landscape, employer attitudes different from 2008

Since 2008...
- Medicaid expansion in 36 states and DC
- Insurance exchanges, subsidies available nationwide
- Baby boom retirement

Quick history lesson:

Great Recession (Dec. 2007-June 2009): Employers cut benefits, betting that employees would tolerate cuts in exchange for limiting job cuts

Post-ACA (2010-present): Employers continued cost shifting, but declined to drop coverage entirely, despite new safety nets, betting that strong economy and labor market would continue to require competitive benefits offerings

Present-day considerations:
- First test of employer behavior in presence of downturn AND wider safety nets
- Deductibles and other cost sharing already nearing practical, legal limits; employers and payers increasingly skeptical of effectiveness in total cost control
- Cutting health benefits in a downturn caused by a health crisis, especially if COVID-19 becomes endemic, may not be politically feasible

<table>
<thead>
<tr>
<th>Source of Coverage</th>
<th>2008</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer-sponsored</td>
<td>53%</td>
<td>49%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Individual market</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Military</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Uninsured</td>
<td>15%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Implications: Less overall exposure to employment loss; softer landings in new safety nets
Mass shifts out of employer-sponsored insurance
Medicaid and the individual market to experience greatest growth

Projected change in payer mix for US adults from COVID-19 at low and high estimated unemployment rates

<table>
<thead>
<tr>
<th>Before COVID-19</th>
<th>73M</th>
<th>28M</th>
<th>19M</th>
<th>15M</th>
<th>37M</th>
<th>21M</th>
<th>25M</th>
</tr>
</thead>
<tbody>
<tr>
<td>12% unemployment rate</td>
<td>69M</td>
<td>26M</td>
<td>22M</td>
<td>15M</td>
<td>37M</td>
<td>21M</td>
<td>26M</td>
</tr>
<tr>
<td>32% unemployment rate</td>
<td>60M</td>
<td>23M</td>
<td>27M</td>
<td>16M</td>
<td>37M</td>
<td>21M</td>
<td>32M</td>
</tr>
</tbody>
</table>

- Large group insurance
- Small group insurance
- Medicaid
- Traditional medicare
- Medicare Advantage
- Uninsured
- Individual market

1. Methodology on subsequent slide.
What does COVID19 mean for value-based care?

Range of perspectives about future of value-based care

Set it back

We are just on the tip the iceberg of a global, public health pandemic that is out of ACOs’ control. We could see generated savings wiped out, massive penalties, and worst of all, ACOs dropping out of the program to avoid losses...In short, COVID-19 threatens to derail adoption of alternative payment models and the movement to value-based care.”

Clif Gaus, ScD, President and CEO
National Association of ACOs

Accelerate the transition

Many healthcare leaders are worried that the financial assistance that practices, hospitals and systems will receive from the Coronavirus Aid, Relief, and Economic Security (CARES) Act is going to come with strings attached. The CMS and HHS have been moving toward value-based care for some time and their philosophy is likely to be ‘don’t let a good crisis go to waste.”

Halee Fischer-Wright, MD, President and CEO
Medical Group Management Association

Projecting what this means for 2020
Payers likely to provide significant flexibility this year

Potential moves payers could deploy to mitigate COVID’s impact on risk-based contracts

**Government payers**
- Extend deadlines
- Reduce reporting burden by moving to pay-for-reporting instead of P4P\(^1\)
- Ignore 2020 performance when calculating benchmark for 2021
- Exclude COVID-related diagnoses\(^2\)
- Waive mandate to move to downside risk for 2020 and likely 2021\(^3\)
- Waive reporting requirements or penalties altogether for 2020

**Private payers**
- Extend 2020 performance period
- Exclude crisis period from performance evaluation
- Use previous year performance data when calculating 2020 payment
- Pause downside risk for 2020 and likely 2021
- Cap or reduce shared losses through risk corridors

**Advisory Board insight**
- Private payers will likely follow CMS’ lead in reducing operational burdens and negative financial implications from value-based care contracts
- Provider organizations should proactively reach out to payers to discuss options in amending contracts
- Provider organizations should identify which flexibility option suits them best
- Both providers and payers should document amendments to 2020 contracts for legal purposes via email or meeting minutes

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1. Pay-for-performance.
2. When calculating a provider’s cost performance.
3. For Medicare Shared Savings Program ACOs scheduled to move to downside risk.
## Longer-term implications for transition to value still unclear

### COVID19’s direct impacts on value-based care

#### Provider willingness to take risk

Provider willingness to take on risk likely to vary based on:
- Type of organization (health system vs. physician practice)
- Type of risk (bundled payments vs. total cost of care)
- Amount of risk taken to date

#### Payer willingness to push risk

- CMS may rely on risk models when pushed to manage costs post-COVID
- States likely to face pressure to manage Medicaid spending
- Employers could push patient steerage to manage health benefits spending

### COVID19’s indirect impacts on value-based care

#### Market consolidation

- Health systems could use mergers or acquisitions to grow fee-for-service market share
- Physician practices forced to seek financial partners may turn to systems, health plans or national practice firms, each with their own risk proclivity

#### Shifts in demand for care

- Telehealth’s increasing popularity may be more profitable under risk
- COVID19 could exacerbate need for chronic disease care and behavioral health in the future
COVID-19 to shine spotlight on value of systemness
So far, a lot of discussion but little action

State of systemness pre-COVID-19

- Many health systems discussing “systemness” but few making meaningful changes
- M&A, size largely being used to leverage payers for higher reimbursement
- Key systemness factors:
  - Governance and leadership – balance between local and central decision-making authority
  - Service distribution and service line rationalization
  - Operational efficiency
  - Clinical standardization
  - Information distribution and communication channels

Likely post-COVID-19 systemness questions

Did we act and respond as a cohesive enterprise or as individual care sites?

Did being part of a system help or hinder our crisis response efforts? In what ways?

Can we use the recovery period as an opportunity to re-build the system and achieve our systemness goals?

How will we confront an unwieldy governance structure to make the system more agile?

How will COVID-19 impact perceptions of the value of systemness and scale?
Are size and scale valuable in a crisis?
Scale is helpful in theory, but not without downsides

Can health systems leverage scale in a crisis?

Large systems should be able to:

- Use multiple sites of care to isolate patients and create surge capacity
- Flex large pools of staff across sites
- Share system resources
- Take advantage of capital and cash reserves to procure supplies and pay salaries

Or will size complicate health systems’ responses?

Large systems will suffer if:

- Multiple layers of governance slow down decision-making processes
- Disparate leadership structures hinder coordination across sites of care
- Bureaucracy and administrative complexities impede coordination efforts

Unknowns—will size and scale help or hinder:

- Ability to ramp up new programs (e.g., telehealth)
- Ability to find and disseminate best practices and novel ideas
Make strategic use of the recovery period

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

- **Rationalize services across sites of care.** Health systems will no longer be able to financially sustain multiple underperforming programs.
- **Re-evaluate the balance of inpatient and outpatient capacity.** While more outpatient capacity is needed, health systems will be even more reluctant to downsize acute inpatient capacity.
- **Accelerate the shift of procedures out of the hospital/HOPD setting.** After clinging to hospital-based reimbursement, hospitals will confront which services can safely move to alternative sites of care.
- **Make difficult decisions about outsourcing.** Financial pressure will jumpstart conversations about which business functions are essential to keep in-house and which can be outsourced to third parties.
- **Permanently expand the use of telehealth and virtual options.** After being forced to use telehealth, consumers (and some physicians) will expect continued availability of virtual care options.
- **Reorganize governance and leadership structures.** Emergency response efforts will have highlighted the aspects of organizational structure that slow down decision-making and hinder coordination.
How will COVID-19 impact expectations about U.S. health care capacity?

American public, media sound alarm over hospital capacity
Many predict US won’t be able to handle surge of patients

Potential impact from COVID-19

572,362
Projected total hospital admissions in the United States from COVID-19

141,000
Projected number of beds required per day at COVID-19 peak

Acute care beds per capita by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Acute care beds per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>7.79</td>
</tr>
<tr>
<td>Germany</td>
<td>6.02</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3.56</td>
</tr>
<tr>
<td>France</td>
<td>3.09</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.92</td>
</tr>
<tr>
<td>Italy</td>
<td>2.62</td>
</tr>
<tr>
<td>United States</td>
<td>2.44</td>
</tr>
<tr>
<td>Spain</td>
<td>2.42</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2.11</td>
</tr>
<tr>
<td>Canada</td>
<td>1.96</td>
</tr>
</tbody>
</table>

COVID-19 creating capacity questions:

► Will the U.S. response to COVID-19 lag behind other developed countries due to capacity constraints?

► Should the U.S. add more hospital beds to the system to handle future surges of patients?

Is per capita the right metric?
Low LOS\(^1\) translates to lower occupancy, in spite of fewer beds

Acute care metrics by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Excess bed capacity per 100,000 people(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>71</td>
</tr>
<tr>
<td>France</td>
<td>236</td>
</tr>
<tr>
<td>Germany</td>
<td>407</td>
</tr>
<tr>
<td>Italy</td>
<td>214</td>
</tr>
<tr>
<td>Japan</td>
<td>204</td>
</tr>
<tr>
<td>Netherlands</td>
<td>278</td>
</tr>
<tr>
<td>Spain</td>
<td>244</td>
</tr>
<tr>
<td>Switzerland</td>
<td>233</td>
</tr>
<tr>
<td>U.K.</td>
<td>85</td>
</tr>
<tr>
<td>U.S.</td>
<td>424</td>
</tr>
</tbody>
</table>


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1. Length of stay.
2. Over a one month period.
3. Average COVID-19 length of stay in the U.S. is 11.5 days.

US excess bed capacity per 100,000 people assuming typical length of stay

US excess bed capacity per 100,000 people assuming average COVID length of stay\(^3\)
Your top resources for COVID-19 readiness

**CDC and WHO Guidelines**
Compiles evidence-based information on hospital and personnel preparedness, COVID-19 infection control recommendations, clinical guidelines, and case trackers.

**Coronavirus scenario planning**
Explores twelve situations hospital leaders should prepare for and helps hospital leadership teams pressure test the comprehensiveness of their preparedness planning efforts and check for blind spots.

**Managing clinical capacity**
Examines best practices for creating flexible nursing capacity, maximizing hospital throughput in times of high demand, increasing access channels, deploying telehealth capabilities, and engaging clinicians as they deal with intense workloads.

**How COVID-19 is transforming telehealth—now and in the future**
Explores how telehealth is being deployed against COVID-19 and essential next steps for telehealth implementation.

To access the top COVID-19 resources, visit advisory.com/covid-19
Meet our experts

Christopher Kerns
Vice President, Executive Insights

Christopher oversees all senior executive research at Advisory Board, and is responsible for developing the research perspective, official point of view, and overall Advisory Board message to executives from across the health care sector.

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