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Protect your practice:

Steps to protect healthcare professionals from COVID-19 in the workplace

March 19th, 2020

Featuring

Michelle Leger, Acutis Director of Quality Assurance

Dr. Marjorie Bon Homme, Chief Scientist and Laboratory Director

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Lead by

Michelle Leger

Director of Quality Assurance

Featuring Q & A session with

Marjorie Bon Homme, PhD, DABCC

Chief Scientist and Laboratory Director

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Learning Objectives

- Discussion of the current COVID-19 environment and statistics, information on pathogen transmission, and potential future scenarios
- Explanation of actionable methods and policies to maintain a safe healthcare work environment and prevent the spread of infection
- Discussion of COVID-19 guidance for testing

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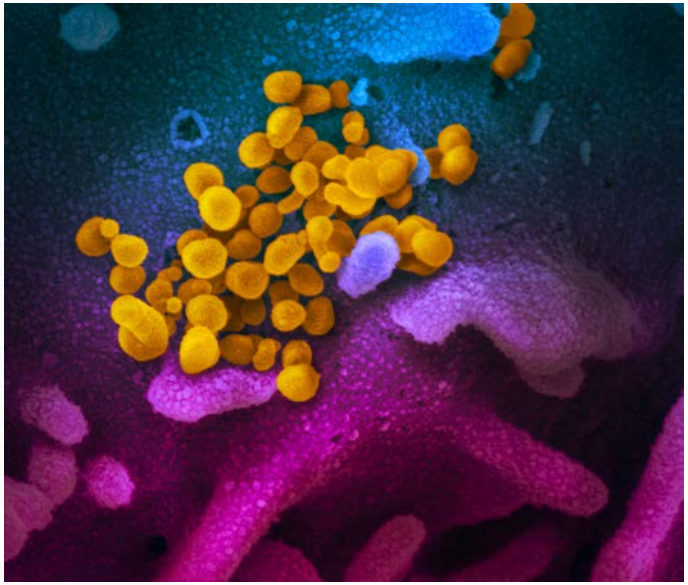
Protect your practice:

Steps to protect healthcare professionals from COVID-19 in the workplace



This scanning electron microscope image shows SARS-CoV-2 (yellow)—also known as 2019-nCoV, the virus that causes COVID-19—isolated from a patient in the U.S., emerging from the surface of cells (blue/pink) cultured in the lab.

Credit: NIAID-RML

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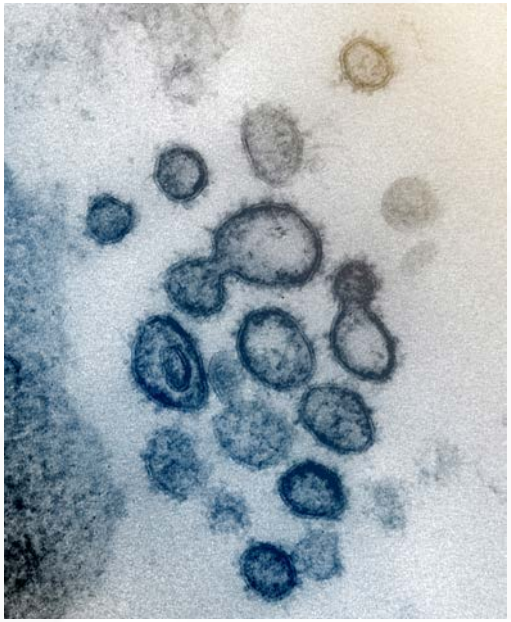
What is a coronavirus?

Researches first isolated a coronavirus in 1937. They found a coronavirus responsible for an infectious bronchitis virus in birds that had the ability to devastate poultry stocks.



Scientists first found evidence of human coronaviruses (HCoV) in the 1960s in the nose of people with the common cold. Common types include:

The name “coronavirus" comes from the crown-like projections on their surfaces. “Corona" in Latin means “halo" or “crown"

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What are the symptoms of COVID-19?

Reported illnesses have ranged from mild symptoms to severe illness and death for confirmed COVID-19 cases.

The following symptoms may appear **2 – 14 days after exposure:***

- Fever
- Cough
- Shortness of breath

*This is based on what has been seen previously as the incubation period of MERS-CoV viruses.

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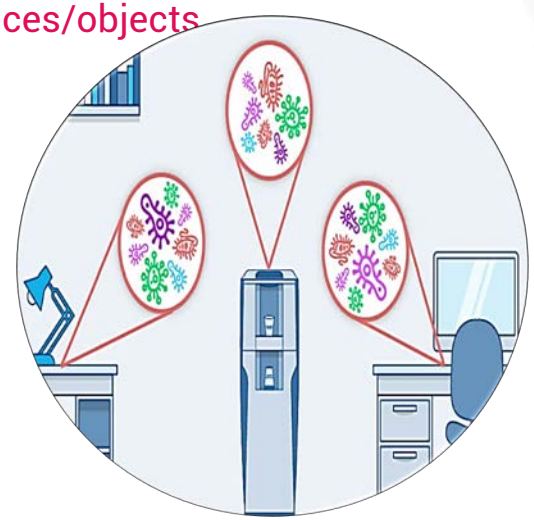
How does COVID-19 spread?

COVID-19 is a new disease and there is more to learn about how it spread, the severity of illness it causes, and to what extent it may spread in the United States.

Person-to-person spread

Contact from infected surfaces/objects



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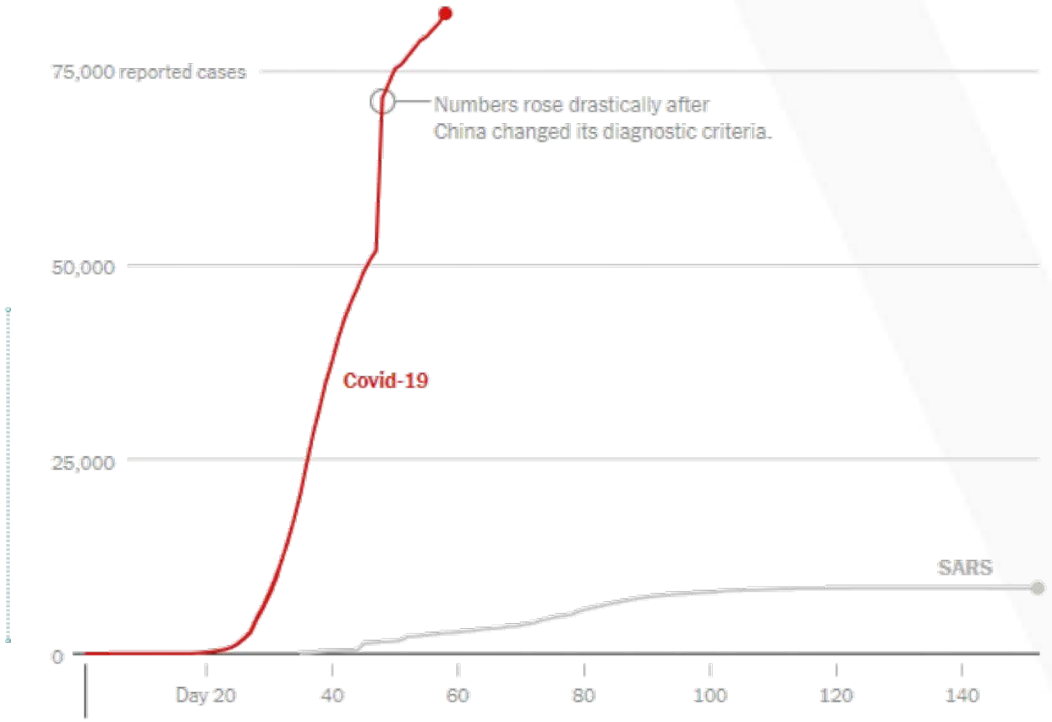
How contagious is COVID-19?

If 5 people with new coronavirus each infected 2.6 others ...

... there could be **5 people sick** after **1 cycle**.



Notes: The official World Health Organization case count for SARS was delayed at the beginning of the outbreak. Some cases were suspected but not confirmed; SARS is a diagnosis of exclusion, so previously reported cases may have been discarded after further investigation. New coronavirus data as of Feb. 27.

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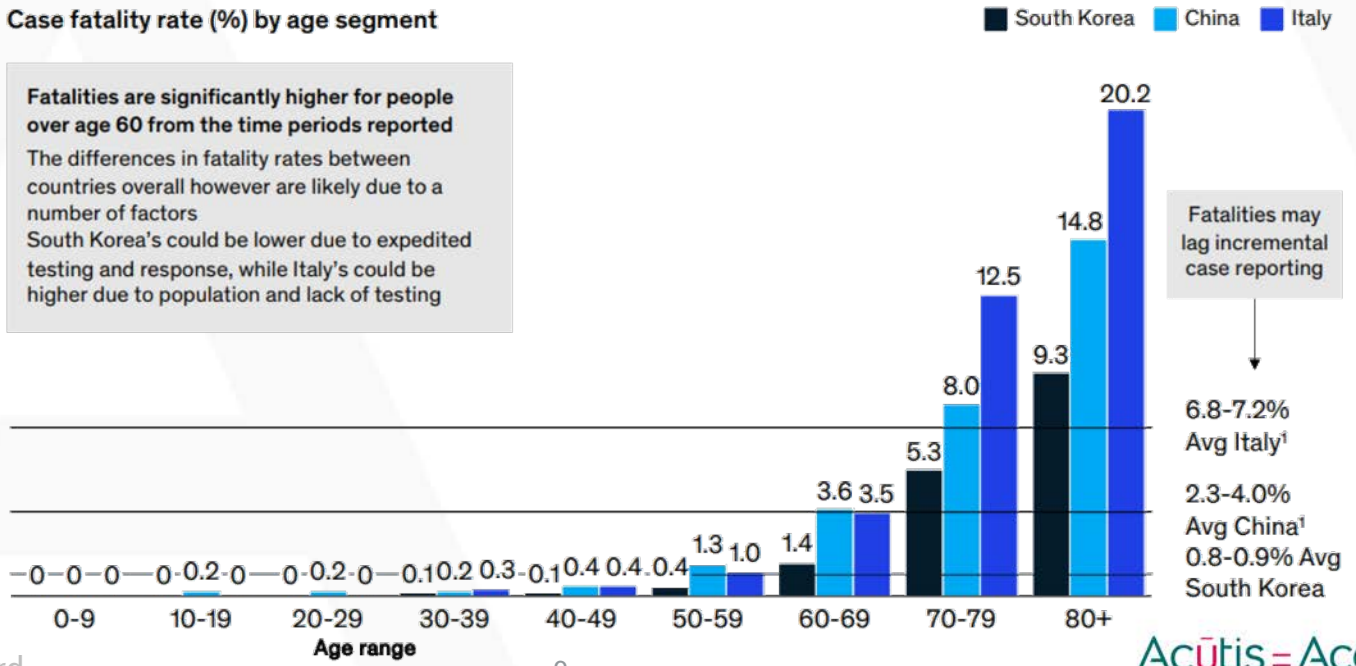
Who is at risk for Covid-19?

Currently, those at greatest risk of infection are persons who have prolonged, unprotected close contact with a patient with symptomatic, confirmed COVID-19 and those who live in or have recently been to areas with sustained transmission.



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COVID-19
the situation now.

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How dangerous is COVID-19?

COVID-19 appears to be more dangerous than the flu.

Features of the disease to date

1.5-2x Higher reproduction than the flu

Up to 20% Of cases have a severe/critical form of the disease

~3.4% Global fatality rate that varies significantly by various factors

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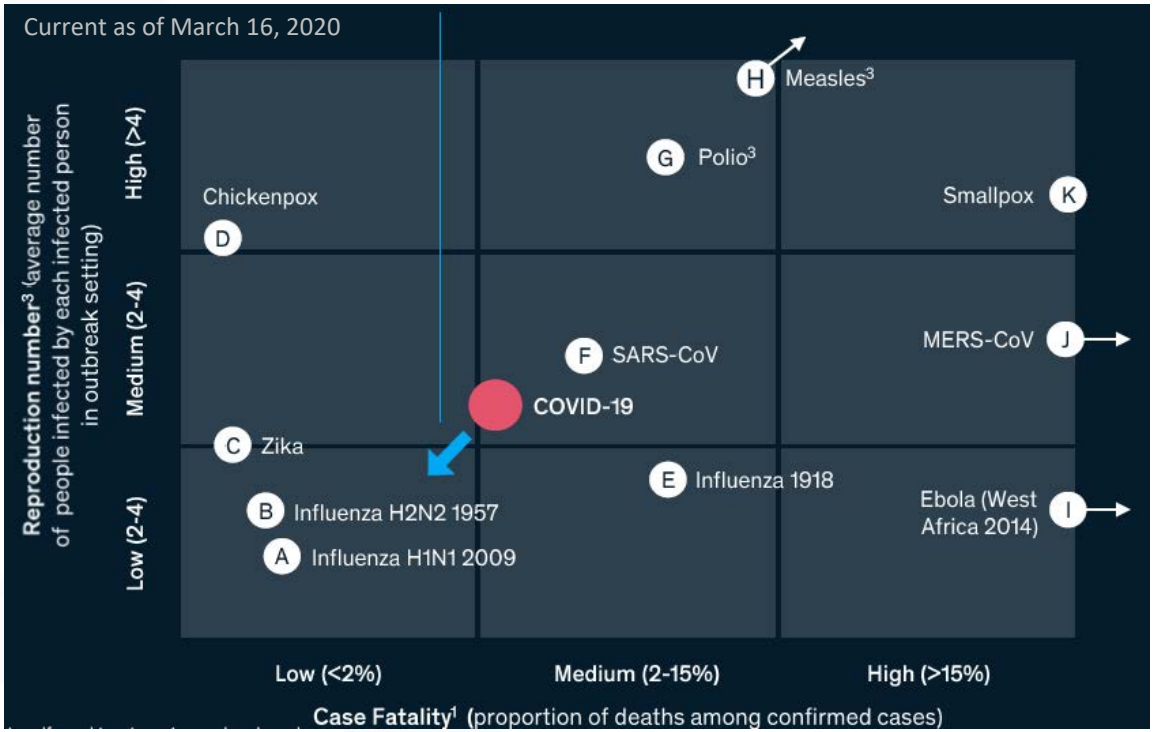
How dangerous is COVID-19?

Early identification of the disease, intensification of viral control, and treatment, when available, will reduce reproduction number and case fatality.



Sources: World Health Organization, CDC, Nature, The Lancet, PLOS One The Journal of Infectious Diseases, BMC Infectious Diseases, Infectious Disease Modelling, news reports

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COVID-19 impact to date.

The global spread is accelerating with more reports of local transmission.

Current as of March 15, 2020

1. Previously counted only countries; now aligned with new WHO reports; excluding cruise ship;
2. Previously noted as community transmission in McKinsey documents; now aligned with WHO definition

Sources: World Health Organization, CDC, news reports

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COVID-19 possible future scenarios.

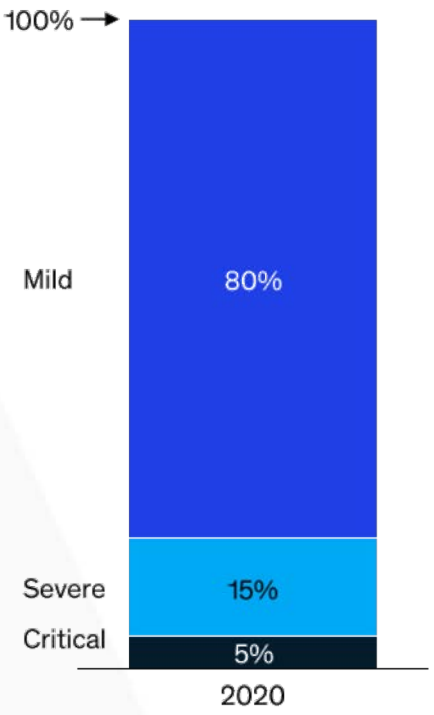
Overall, ~20% of cases are estimated to be severe/critical, requiring significant health capacity for testing and critical care infrastructure.

Context

WHO estimates ~20% of COVID-19 cases are severe (requiring oxygen) or **critical** (requiring ventilation)

This reflects a higher level of severity compared to influenza

At a country level, mild cases may go undiagnosed



WHO estimated global distribution by severity of symptoms

Source: JAMA, WHO March 6 reports, JAMA, WSJ and associated press interviews with Italian physicians

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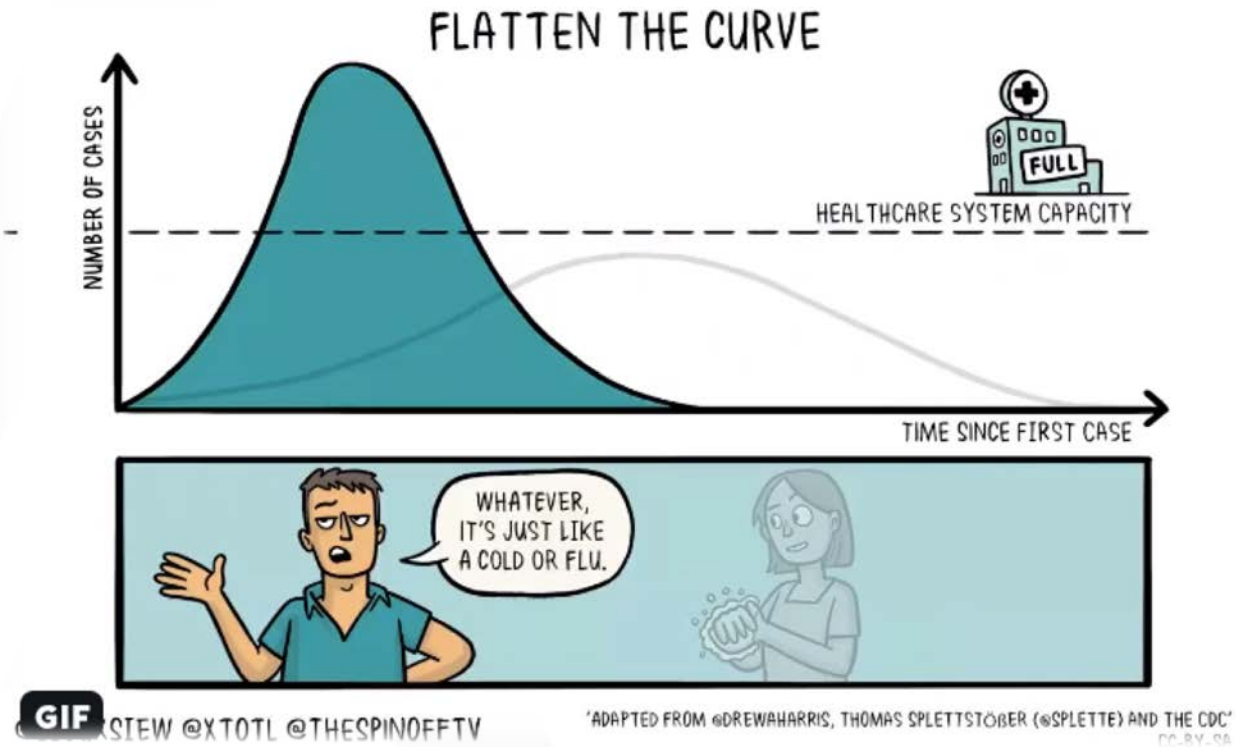
COVID-19
possible future scenarios.

What is "**Flatten the curve**"? The chart that shows how critical it is for everyone to fight coronavirus spread.



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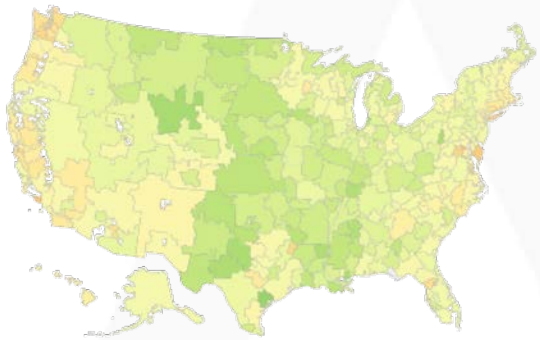
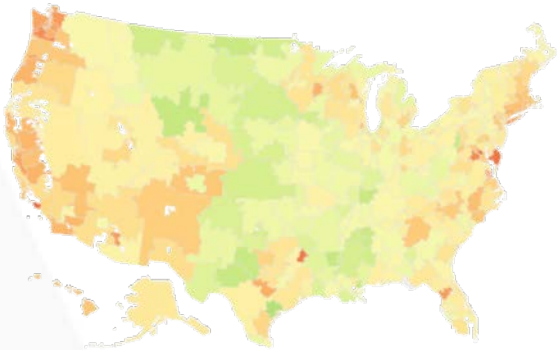
COVID-19
possible future scenarios.

Hospital regions would fill 0 — 100% — 200%+ **of their beds...**

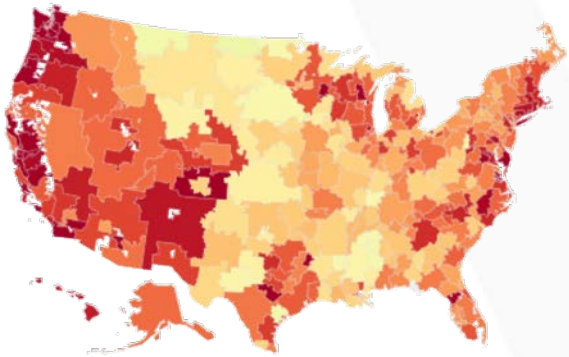
... if 20% of adults are infected over 18 months



20% over 12 months



20% over 6 months



Source: Harvard Global Health Institute, Hospital Bed Capacity & COVID Estimates

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COVID-19
possible future scenarios.

Hospital regions would fill 0 — 100% — 200%+ **of their beds...**

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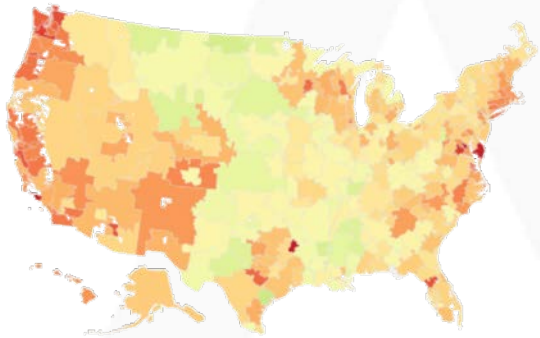

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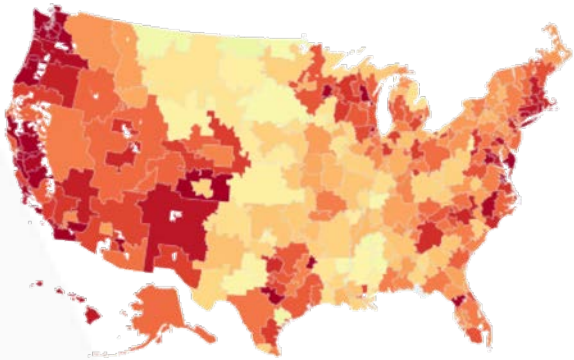

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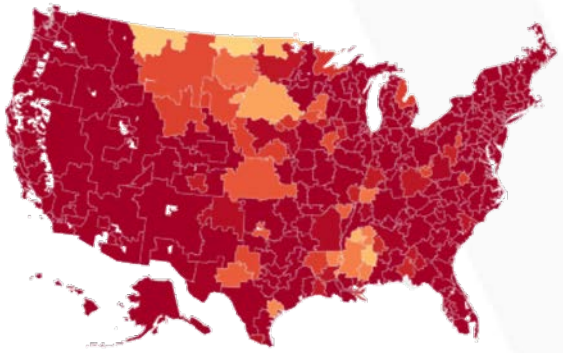

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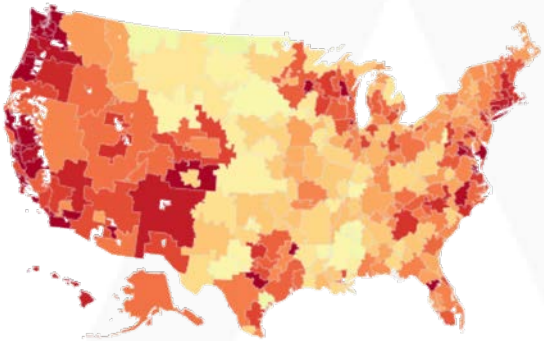
COVID-19
possible future scenarios.

Hospital regions would fill 0 — 100% — 200%+ **of their beds...**

60% over 18 months



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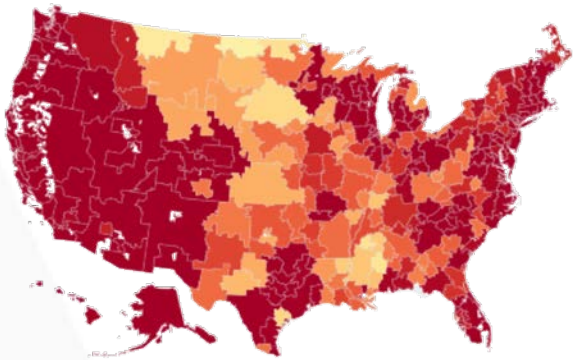
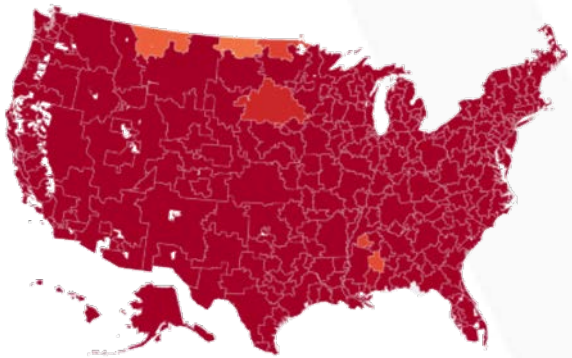


60% over 6 months



Source: Harvard Global Health Institute, Hospital Bed Capacity & COVID Estimates

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COVID-19
actions to consider.

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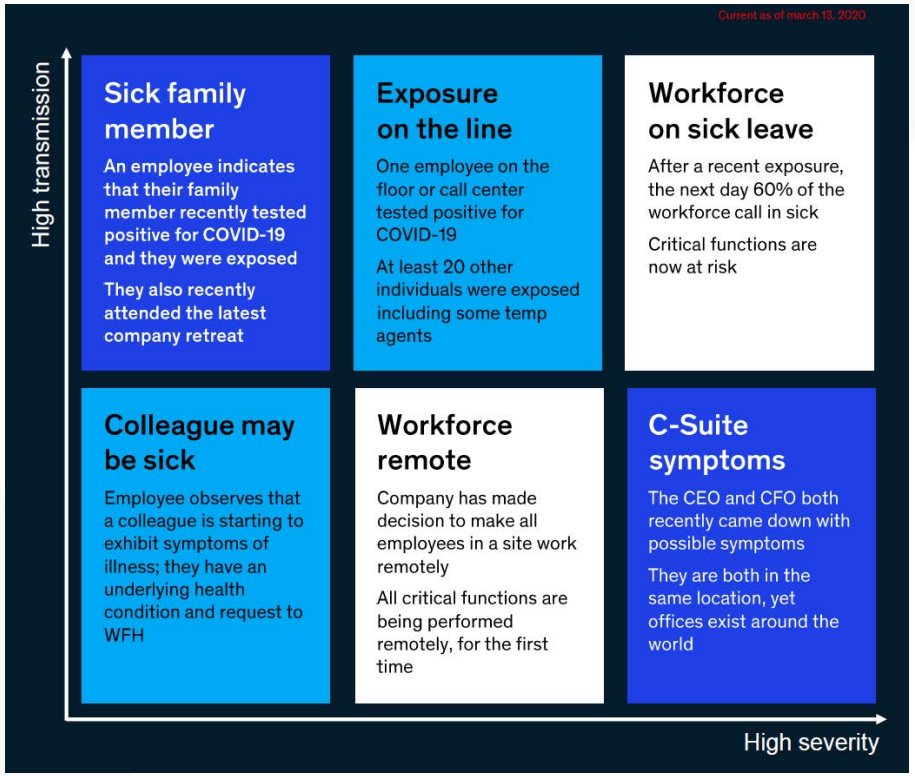
COVID-19 actions to consider.

Organizations should develop company-wide policies to each of these work scenarios.

Policies & Management



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COVID-19 actions to consider.

Review your infection prevention and control policies and CDC infection control recommendations for COVID-19

1. **Minimize Chance for Exposures**
2. **Adhere to Standard and Transmission-Base Precautions**
3. **Patient Placement**
4. **Take Precautions When Performing Aerosol-Generating Procedures (AGPs)**
5. **Collection of Diagnostic Respiratory Specimens**

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COVID-19 actions to consider.

Review your infection prevention and control policies and CDC infection control recommendations for COVID-19

6. **Manage Visitor Access and Movement Within the Facility**
7. **Implement Engineering Controls**
8. **Monitor and Manage Ill and Exposed Healthcare Personnel**
9. **Train and Educate Healthcare Personnel**
10. **Implement Environmental Infection Control**
11. **Establish Reporting within and between Healthcare Facilities and to Public Health Authorities**

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guidance for testing.

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COVID-19 guidance for testing.

New York State Department of Health has issued guidance to ensure that we prioritize resources to meet the most urgent public health need.

Testing for COVID-19 shall be authorized by a health care provider when:

- An individual has come within proximate contact (same classroom, office, or gatherings) of another person known to be positive; or
- An individual has traveled to a country that the CDC has issued a Level 2 or Level 3 Travel Health Notice, and shows symptoms of illness; or
- An individual is quarantined (mandatory or precautionary) and has shown symptoms of COVID-19 illness; or
- An individual is symptomatic and has not tested positive for any other infection; or
- Other cases where the facts and circumstances warrant as determined by the treating clinician in consultation with state and local department of health officials.

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COVID-19
guidance for testing.

Acutis Diagnostics will offer testing for COVID-19 (2019-nCoV) using the SARS-CoV-2 Real-time RT-PCR Diagnostic Panel.

For more information

844-522-8847

service@acutis.com

acutisdiagnostics.com/covid19

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Conclusion and take-home points

- Discussion of the current COVID-19 environment and statistics, information on pathogen transmission, and potential future scenarios
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Question & Answer Session

featuring **Dr. Marjorie Bon Homme**,

Acutis Chief Scientist and Laboratory Director

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Next steps

- To ask follow-up questions:

  karnold@acutis.com

- To take our feedback survey:

  https://www.surveymonkey.com/r/6CRQBDD

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