



Medical Intelligence Report

Date: March 20, 2020

Topic: Summary of COVID-19 for Employers

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Summary of COVID-19 for Employers

Overview

On February 11, an international group of experts announced that the novel coronavirus, first identified in Wuhan, China, would be called severe acute respiratory syndrome coronavirus 2, which was shortened to **SARS-CoV-2**. The virus is related to the virus (called SARS-CoV) responsible to a previous coronavirus outbreak in 2003 that was referred to as SARS. The disease associated with SARS-CoV-2 has been named coronavirus disease 19, which was shortened to **COVID-19**. For expediency, most people refer to both the virus and the disease it causes as COVID-19.

On March 11, the WHO declared that the COVID-19 outbreak had progressed to a pandemic. This designation describes the spread of the disease around the world and does not affect the recommendations to prevent transmission. It allows for access to emergency funding and permits suspension of rules to expedite a response.

On March 13, a national emergency was announced for the outbreak in the United States. This declaration allows for emergency expansion of the actions allowed by public-health authorities, allows for the use of emergency funds to offset costs, and allows other parts of the government to suspend rules as needed.

Accessing Information on the Evolving Situation

As might be expected, there will be continuing updates on the spread of COVID-19 and changes in recommendations to fit the current situation. The following are reputable sources for getting updates of the changing situation.

As always, questions about the best course of action based on your specific needs is best answered by your own healthcare provider.

Sources for updated information on status of COVID-19

- The **Centers for Disease Control (CDC)**-
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- The **World Health Organization (WHO)**-
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- **Johns Hopkins Hospital** has set up a resource center with information and an interactive map to visualize and track reported cases of COVID-19 in real time-
<https://coronavirus.jhu.edu/>
- The **National Association of County and City Health Officials** has a site to assist in locating your local health department-
<https://www.naccho.org/membership/lhd-directory>

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

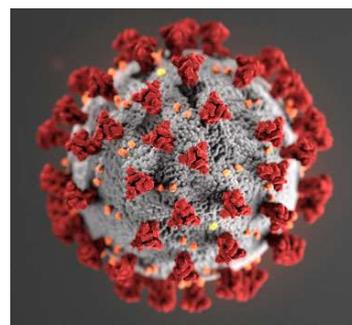
No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Description of Coronaviruses

There are four main coronaviruses that are widely present throughout the world, and these viruses cause mild, upper-respiratory diseases in healthy populations (Cui et al., 2019). There are now three other forms of coronaviruses that are sporadically present and cause severe respiratory illness, SARS, MERS, and COVID-19. There are numerous other forms of coronaviruses that infect other mammals, but are not normally communicable to humans.

The general anatomy of a virus includes an external shell (also called a **capsid**) made up of several different protein molecules. Inside the shell are additional proteins used to replicate the virus and the virus's genetic material. A virus can use either DNA or RNA to store its genetic material. **DNA** is the form cellular organisms utilize for permanent storage of genetic material. **RNA** is used to transport the information in DNA to the protein production machinery in a cell. Because RNA is only temporarily needed, it is more fragile than DNA.



Coronaviruses store their genetic information in the form of RNA.

When a virus infects a cell, the proteins on the outside of its capsid interact with proteins on the surface of the cell. The capsid merges with the cell's membrane and releases the contents into the cell. The viral components become active and begin production of new viral components from the genetic material. The components are then assembled into new viral particles and released from the cell.

Figure 1. Representation of the protein shell of a corona virus. Adapted from <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

General Guidance for Employers on COVID-19

Both the CDC and the WHO have issued guidelines for employers on steps to take to reduce transmission of COVID-19.

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>

WHO: https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6

Because of the newness of COVID-19, there are still unanswered questions about some of the particular characteristics of SARS-CoV-2. Some notable differences have been observed, such as the increased speed of transmission, but it is expected that the new virus will generally be similar to previous coronaviruses. The recommendations released by the CDC for employers

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



are mainly based on the information available from previous coronavirus outbreaks and methods to prevent workplace exposures to respiratory illnesses in general.

Recent Simulations of the Extent of the COVID-19 Pandemic

There have been several projections released recently to help determine the scope of the pandemic in both the short and long terms.

Research from Imperial College London

Researchers at the Centre for Infectious Disease Modelling at Imperial College in London released a simulation that showed the potential outcomes of using non-pharmaceutical interventions to reduce COVID-19 mortality and healthcare demand. The predictions in the simulation were compelling enough for multiple government organizations to stiffen their recommended and mandatory requirements in response to COVID-19.

The CDC lists some examples of non-pharmaceutical interventions:

- **Closures:** Temporarily closing child care centers, schools, places of worship, sporting events, concerts, festivals, conferences, and other settings where people gather.
- **Home Isolation:** Stay home when you are sick with respiratory disease symptoms.
- **Social Distancing:** Maintain a distance from others when you are in public.
- **Respiratory Etiquette:** Cover coughs and sneezes with a tissue, then throw it in the trash can.
- **Hand Hygiene:** Wash hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use an alcohol-based hand sanitizer with 60%-95% alcohol.
- **Environmental Action:** Routinely clean frequently touched surfaces and objects.

The researchers propose that there are two possible responses available to the pandemic at this time: **mitigation** and **suppression** (Ferguson et al., 2020).

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Mitigation is defined as slowing, but not stopping spread in the community, in order to reduce the peak healthcare demand while protecting those most at risk of severe disease from infection.

Suppression involves methods to reverse the epidemic by reducing the rate of new cases and maintaining that situation indefinitely.

The policies needed to mitigate the effects of COVID-19 include home isolation of suspected cases, home quarantine of those living in the same household as suspected cases, and social distancing of the elderly and others at most risk of severe disease. The timing of mitigation strategies is targeted to a three-month window around the expected peak of the epidemic.

When the researchers modeled the outcome of the pandemic using projected transmission if mitigation policies were enacted, they found that there would be a reduction in the peak healthcare demand by two thirds and the number of deaths by one half.

The total number of deaths would still be in the hundreds of thousands in Great Britain and around one million in the United States, and the usage of health care systems in general would be eight times over capacity with extremely overwhelmed intensive care units. Based on the negative projected outcome of mitigation strategies, countries with the ability to implement more intensive controls will need to attempt to attain suppression to prevent overwhelming of the healthcare system.

The goal of suppression measures is to reduce the average number of cases each infected individual generates through transmission (also called the reproduction number, R) to lower than one. In order to be effective, earlier action is required for suppression strategies than with mitigation strategies, and interventions need to be in place well before the healthcare capacity is overwhelmed. Reduction of transmission in this manner would lead to a reduction in the number of cases, or ideally, eliminate human-to human transmission. Suppression measures have been successful in both the SARS outbreak in 2003 and several Ebola outbreaks.

The minimal requirements for suppression of the COVID-19 outbreak include a combination of social distancing of **the entire population**, home isolation of cases, household quarantine of their family members, and potentially closure of schools and universities. These policies will need to be maintained as long as the virus is circulating in the population or a vaccine becomes available. The best-case scenario of a SARS-CoV-2 vaccine release is for twelve to 18 months and possibly longer if difficulties in production occur.

The following is an examination of the information extracted from the simulation assuming either a mitigation strategy or a suppression strategy.

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



In the simulation, the following variables were used to calculate outcomes based on the best estimates from available data:

- An incubation period of 5.1 days
- Infectiousness occurs from 12 hours prior to the onset of symptoms for those that are symptomatic and from 4.6 days after infection in those that are asymptomatic
- An infectiousness profile that results in a 6.5-day infection generation time
- A reproduction number (R) of 2.4 with examination of differences if the true values ranged from between 2.0 and 2.6.
- Symptomatic individuals are 50% more infectious than asymptomatic individuals

The rates of disease progression were estimated from information reported on the outbreak in China. The values used in the simulation were found to be reasonable as the researchers were able to reproduce the real-life observed number of deaths in Great Britain or the United States between early January and March 14, 2020.

Table 1. The non-pharmaceutical interventions included in the simulation

Policy	Description
Case isolation in the home	Symptomatic cases stay at home for 7 days, reducing non-household contacts by 75% for this period. Household contacts remain unchanged. Assume 70% of household comply with the policy.
Voluntary home quarantine	Following identification of a symptomatic case in the household, all household members remain at home for 14 days. Household contact rates double during this quarantine period, contacts in the community reduce by 75%. Assume 50% of household comply with the policy.
Social distancing of those over 70 years of age	Reduce contacts by 50% in workplaces, increase household contacts by 25% and reduce other contacts by 75%. Assume 75% compliance with policy.
Social distancing of entire population	All households reduce contact outside household, school or workplace by 75%. School contact rates unchanged, workplace contact rates reduced by 25%. Household contact rates assumed to increase by 25%.
Closure of schools and universities	Closure of all schools, 25% of universities remain open. Household contact rates for student families increase by 50% during closure. Contacts in the community increase by 25% during closure.

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



In the simulation, the mitigation strategies were in force for three months while suppression strategies were in place for five months or longer.

When the calculation was run to simulate suppression of the outbreak, it was possible to reduce the reproduction number to close to one or even below with a combination of case isolation, social distancing of the entire population, and either household quarantine or school and university closure for five months.

The simulation also suggests that closure of universities and schools was more effective at achieving suppression than household quarantine. Importantly, use of all four strategies kept the intensive care units from being overwhelmed. One potential real-life issue that the researchers weren't able to account for was the possibility that healthcare workers from intensive care units may have an increased absentee rate if their children were out of school.

Even with the uncertainties, the authors concluded that a combined strategy aimed at suppression is the most likely one to ensure that critical care bed requirements would remain within surge capacity.

There is a time limit past which suppression restrictions will no longer work. Based on the available information, it was determined that strategies need to be implemented before there are a total of 200 intensive care cases per week to keep peak demand below the Great Britain surge limits. While these policies seem restrictive, this type of combined strategy is not the same as a complete lockdown. In a lockdown, people are also prevented from going to work.

In the above simulation, the suppression strategies were in place for five months. Once restrictions were relaxed, a second epidemic peak emerged, starting about a month later. A second simulation was performed where after an initial five months of restrictions, social distancing and school closures are relaxed until new intensive care cases reach a threshold and are reinstated.

In this simulation, once the initial five months are over, full restrictions are in place about two thirds of the time over two years.

Because local outbreaks within a country are not synchronized, the periodic relaxation of restrictions would be easiest to implement on a local level. Local policies are also more efficient and can achieve comparable levels of suppression to national policies while being in force for a slightly smaller proportion of the time.

Because the information used for the simulation are approximations, the calculated duration needed for initial measures is not a definitive value. It is expected that these initial restrictions would need to be in place for several months, and decisions about possibly relaxing policies would be based on ongoing surveillance. If the suppression strategies are not maintained over time, any benefit will be eroded, and transmission would rebound to levels estimated if no interventions had been adopted.

Based on their study, the authors conclude that “epidemic suppression is the only viable strategy at the current time.”

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Research from the Harvard Global Health Institute

Researchers at the Harvard Global Health Institute have also released a report of a simulation of the possible outcomes within the United States healthcare system to determine regionalized capacity estimates (HGHI, 2020). The model utilizes the bed capacity data for each of 306 United States hospital markets, or Hospital Referral Regions (HRR).

The researchers state that the goal of the project was to “give hospital leaders and policy makers a clear sense of when they will hit capacity, and strategic information on how to prepare for rising numbers of patients with COVID-19 needing care”.

The results of the model were published in the *New York Times* (<https://www.nytimes.com/interactive/2020/03/17/upshot/hospital-bed-shortages-coronavirus.html>) and *ProPublica* (<https://projects.propublica.org/graphics/covid-hospitals>).

There are nine maps that illustrate possible scenarios. They show the percentage of occupied hospital beds that would need to be emptied or added for different hospital regions with a range of adults infected (between 20% and 60%) in relation to the time frame of infection for each group (from 18 to six months). The results show a dramatic shortage of capacity (Sanger-Katz et al., 2020).

In one of the moderate scenarios, where 40% of adults are infected over twelve months, 40% of markets would not be able to make enough room for all the patients who became ill with COVID-19, even if they could empty their beds of other patients.

In terms of numbers, 40% of the adult population is equivalent to 98.9 million Americans (Waldman et al., 2020). Many of this group would have mild or no symptoms and would not have their diagnosis confirmed by testing. Based on the rate of hospitalization seen in other countries, around 5% of those infected would need hospital care, requiring that hospitals in the United States double available hospital beds by freeing up existing beds or adding new ones. This model uses the “worst case” scenario that doesn’t take into consideration efforts hospitals can make to quickly increase capacity during an emergency. Interviews with hospital executives suggest that they expect to be able to increase their capacity by between 20% and 70%, depending on the institution.

The *ProPublica* site uses information from the report to compile the information from the region of your choice.

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Using Baltimore, MD as an example the ProPublica application predicts:

As of 2018, Baltimore, MD had **6,930 total hospital beds**, of which about **73% were occupied**, potentially leaving only **1,890 beds open** for additional patients. The bed count includes **840 beds in intensive care units**, according to data from the American Hospital Association and the American Hospital Directory. Intensive care units are best equipped to handle the most acute coronavirus cases.

The Baltimore, MD region has a population of about 2.6 million residents; **15% are over the age of 65**. The experience in other countries has shown that elderly patients have significantly higher hospitalization and fatality rates from the coronavirus.

In the moderate scenario, in which 40% of the adult population contracts the disease over 12 months, Baltimore, MD would be among the regions that would need to expand capacity.

It is estimated that about **8% of the adult population would require hospital care. In a moderate scenario where 40% of the population is infected over a 12-month period, hospitals in Baltimore, MD would receive an estimated 168,000 coronavirus patients.** The influx of patients would require 5,590 beds over 12 months, which is **3 times the available beds** in that time period. The Harvard researchers' scenarios assume that each coronavirus patient will require 12 days of hospital care on average, based on data from China.

In the Baltimore, MD region, intensive care units would be especially overwhelmed and require additional capacity. Without coronavirus patients, there are only 300 available beds on average in intensive care units, which is **4 times less** than what is needed to care for all severe cases.

In this study, one of the big factors influencing whether a region reached or exceeded capacity was how many people were older than 65 with highest risk of needing hospital care. There are areas that have more capacity than they might be expected to need, which are located mostly in rural and sparsely populated areas. There are similarities between Italy and parts of the United States in the number of older individuals, but one difference between the United States and Italy, is a smaller number of doctors per capita in the United States. This shortage could mean that rural areas have beds available, but a shortage of staff to care for patients. Additionally, as schools begin to close to prevent transmission, some of the staff may have trouble getting to work due to a lack of childcare.

In the New York Times article, the authors stress, “One thing is very clear from these numbers: The longer the disease takes to spread, the less severe the crunch that hospitals around the country will face. This effort to stretch out the infections over more time is why so many states and cities are closing businesses and schools and canceling large events.”

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Report from the Department of Health and Human Services

An internal report from the Department of Health and Human Services (HHS) discussing the United States government's plans for the COVID-19 outbreak was leaked to the *New York Times*. In the report, officials state that the "pandemic will last 18 months or longer and could include multiple waves of illness." The report also outlines that there could be shortages for government, private sector, and individual consumers (Hohmann, 2020).

Based on the definitions in the report, the United States is in the phase where response is "Transitioning from Containment to Community Mitigation Activities in Multiple Jurisdictions Across the Nation". This phase is defined as having more than three series of human-to-human transmission, or if there is detection of cases in communities without epidemiologic links in two or more non-contiguous jurisdictions in the United States (Department of HHS, 2020).

Recommendations for interventions during this phase include:

- Significantly limiting public gatherings
- Cancellation of almost all sporting events, performances, and public and private meetings that cannot be convened by phone
- Consider school closures
- Issue widespread "stay at home" directives for public and private organizations, with nearly 100% telework for some, although critical public services and infrastructure may need to retain skeleton crews

There are also a number of objectives listed for this phase: Reduce the acceleration of the number of cases; reduce the peak number of cases, which also affects availability of hospitals and functionality of infrastructure; and preserve the functioning of critical infrastructure and mitigate impact to the economy and functioning of society.

State governors have been critical of the federal response to requests for services such as tents to house quarantined patients, help building temporary hospital space from the Army Corps of Engineers, and access to emergency stores of respirators, gowns and gloves, face shields or goggles (Lipton et al., 2020). In the past, the emergency response has been organized by the Federal Emergency Management Agency (FEMA), but so far HHS is still coordinating efforts. FEMA is experienced at finding out where to obtain masks, ventilators, hospital beds and tents from either the military or the private sector and ensuring the supplies are delivered to states. Since the coronavirus outbreak, officials from both Oregon and New York City put in a request for N95 masks, and later received only a fraction of those requested (e.g. 76,000 out of 2 million requested), and all the supplies they received had passed their expiration date, making them unusable in surgical situations. Governor Kate Brown of Oregon told the *New York Times* "We've been contacting this administration every single day since then (March 3), and we have received nothing (March 17)."

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Other parts of the potential federal response have also not yet been deployed. For example, New York City has requested use of the Navy hospital ships, *Comfort and Mercy*, to supplement their hospital capacity, but they remain in their ports as of March 17. There has also been no discussion about how to use the resources of the Department of Veterans Affairs facilities, which are designated as the backup health care system in national emergencies. The National Disaster Medical System, which includes a system of emergency doctors and nurses that can be deployed by the Department of Health and Human Services, has not yet been given orders. However, many of these resources are designed to assist during natural disasters or for war-time injuries, and it is not known how much of an impact they will have on the response to COVID-19. For example, the *Comfort and Mercy* do have the facilities to implement quarantine on board, but officials envision them taking non-virus related hospital admissions to free up beds in the land-based hospitals.

Economic Impacts

There are world-wide economic impacts already occurring due to the COVID-19 outbreak and experts have been releasing reports of some of the expected disruptions in the days ahead.

Job Loss

There have already been large numbers of workers who have lost their jobs or had their hours cut drastically. The service industries, entertainment, and travel sectors are currently the hardest hit (Maidenberg et al., 2020). Other sectors are expected to also be affected, such as those in energy production as oil prices drop. Businesses that have seen an uptick in demand include supermarkets, stores that sell household goods, and delivery services like Amazon.

As people are laid off, there has been a large surge in filing for unemployment benefits. For example, the *Washington Post* reports that Kentucky typically receives about 2,000 new cases a week, but had 9,000 claims on just one day, March 17.

Detroit automakers announced plans to temporarily shut down factories (Naughton and Foldy, 2020). The shut-down is to slow the spread of the coronavirus, and is expected to affect 15,000 workers. Ford has also announced they are suspending factory work at other plants in the United States, Mexico, and Canada. Honda announced it was closing its American factories for six days due to both concerns about virus transmission and a drop in demand for new vehicles. Some automakers in Europe were stopping production due to problems with the supply chains and a lack of people buying cars.

The International Labour Organization from the United Nations reported March 18 in a press release that as many as 25 million workers could lose their jobs during the pandemic (ILO, 2020). The organization urged governments to plan for ways to help businesses hold onto workers and provide income to affected workers. The potential job losses are more than those experienced in the global financial crisis. Based on their predictions, they found that workers of the world could lose between \$860 billion and \$3.4 trillion in income in coming years.

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Treasury Secretary Mnuchin also warned that unemployment in the United States could spike to 20% without action from the federal government (Hohmann, 2020). As of March 18, legislators were still working on details of a bill to help individual Americans, small businesses, and industry bailouts. Included in the United States job losses are 4.6 million travel-related jobs, which is based on projections from the United States Travel Association. The American Hotel and Lodging Association reports that 4 million jobs have already been eliminated.

Electrical companies have also reported a reduction in the demand for electricity as people begin to work from home and shelter in place along the West Coast (Gold, 2020). Similar reductions have been seen in Italy's industrial region. Reports suggest that the contraction in energy use in northern Italy has been large and is down 18.1% from February 21 (the day before the quarantine began). Previous analysis of electricity demand indicates that it can be a good indicator of broad economic activity.

Supply Chain Disruption

There are reports of problems for truckers who are delivering needed supplies across the United States (Smith, 2020). The problems range from a lack of amenities on the road due to closure of restaurants and interstate rest stops to restrictions at loading docks to stop the interaction between individuals. Some of the companies have required drivers to sign affidavits that they are not sick. Due to tight demand from surges in purchasing of food and home goods, the rate to hire a truck on the spot increased 6.1% from February 29 to March 17.

The American Trucking Association has asked the administration to exempt truckers delivering essential goods from travel and other restrictions aimed at containing the pandemic, and also asked states to keep open rest stops. The Federal Motor Carrier Safety Administration, the main U.S. regulator of trucking operations, has waived hourly driving restrictions for those hauling critical medical goods and food for emergency restocking of stores in response to the pandemic. There is also a call for truck stops to remain open as usual to provide fuel, food, showers, repair services and opportunities to rest. Many of the restaurants had closed to patrons and were only offering take-out service.

A group of more than 100 business organizations has also recently asked for suspension of the tariffs on Chinese-made goods and global steel imports (Mauldin and Leary, 2020). On March 18, the President and officials from the administration stated they are planning on keeping the tariffs in place. United States officials also stated that they are seeking to keep the health and humanitarian issues separate from trade conflicts. According to the *Wall Street Journal*, there have been steps in recent weeks to drop tariffs on medical supplies from China, but many medical supplies and components continue to face tariffs.

Effects on State and City Budgets

With added expense from virus preparations, an increased need for social programs like unemployment insurance, and lost revenue from reductions in income tax as people lose their jobs, state and city governments are having trouble covering their budgets (Calvert and Kamp, 2020). Many are drawing millions of dollars from their reserves to cover costs. The Pew

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Charitable Trusts reported in the *Wall Street Journal* that states had been adding to their rainy day funds over the last two decades, and they estimate a pool of money around \$75 billion. This amount is projected to allow states to run government operations for a median of 28 days. This is an increase in savings since the 2007 to 2009 recession where states had enough money on hand for about 17 days.

Cities that rely heavily on tourism for tax income, such as New Orleans and Las Vegas, have been implementing travel and training freezes, and are making plans for possible 30% spending cuts that would cause layoffs, service reductions, and the closing of libraries.

Changes to Travel

Countries around the world are tightening travel restriction in an attempt to slow the transmission of COVID-19.

The CDC currently has the following recommendations for international travel.

Level 3: Avoid Nonessential Travel and Restrictions on Entry to the United States

- China
- Iran
- Most European countries
- United Kingdom and Ireland

Level 3: Widespread Transmission with No Restriction on Entry to the United States

- Malaysia
- South Korea

Level 2: Ongoing community transmission

- Older adults and people of any age with serious chronic medical conditions should consider postponing nonessential travel to most global destinations.

Additionally, the United States is suspending routine visa services in most countries world-wide in response to the outbreak of the new coronavirus (Donati, 2020). The State Department told the *Wall Street Journal* that the suspension applies to all routine immigrant and nonimmigrant visas, and will last until further notice. Emergency and urgent visa services will be continued where possible. As of March 18, the State Department had not indicated which countries might be exempt from the rule.

The halt of seasonal workers from Mexico with this order is of concern for farmers and other seasonal employers, such as landscapers, fisheries, county fairs, and holiday resorts who normally increase hiring of foreign workers ahead of the busy spring and summer seasons. The

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



American Farm Bureau Federation is suggesting that the State Department continue processing farm-worker visas to keep food prices low through the pandemic.

Practices Employers should consider during COVID-19

The overall recommendations from the CDC for employers during the COVID-19 outbreak have not changed dramatically (CDC Interim Guidance for Business, 2020). However, the scale and time period they may need to be in place has increased as more information has become available about the severity of the pandemic. Non-pharmaceutical interventions are being recommended as there are no treatments or vaccines available for infection. The following is an overview of these interventions, which are similar either in the workplace or for the public at large.

Public Health Measures to Prevent Exposure to Respiratory Illness

There are a number of accepted practices that can reduce the transmission of respiratory illness in a community of people (Wilder-Smith and Freedman, 2020). Below is a general description of actions that can be put in place.

Some of the types of actions that may be required include:

- **Isolation**- the separation of ill persons with contagious diseases from non-infected persons to protect non-infected persons.
- **Quarantine**- the restriction of movement of persons who are presumed to have been exposed to a contagious disease but are not ill, either because they did not become infected or because they are still in the incubation period.
- **Social distancing**- is designed to reduce interactions between people in a broader community, in which individuals may be infectious but have not yet been identified hence not yet isolated. As diseases transmitted by respiratory droplets require a certain proximity of people, social distancing of persons will reduce transmission.
- **Community-wide containment**- is an intervention applied to an entire community, city or region, designed to reduce personal interactions, except for minimal interaction to ensure access to vital supplies.

The two actions that would most likely be needed in a workplace environment are isolation and social distancing.

The Equal Employment Opportunity Commission has also compiled information about how these types of policies coincide with the **Americans with Disabilities Act** during a pandemic (EEOC, 2020).

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



The publication, entitled “Pandemic Preparedness in the Workplace and the Americans With Disabilities Act” can be found here:

https://www.eeoc.gov/facts/pandemic_flu.html.

The specific questions it addresses include how much information an employer can request about illness during a pandemic, when employers are allowed to take their employee’s temperatures, when employers can require employees to stay home, and how to formulate rules for workers returning to work after exposure or sickness. There is also a sample of a questionnaire that can be used to gather information about an employee’s availability if certain scenarios occur, such school closures, transit unavailability, or care for a member of their household. As the WHO has declared the current outbreak a pandemic, there is a specific section on what types of employer actions are acceptable.

The Occupational Safety and Health Administration (OSHA) has also provided a guide for preparing workplaces for COVID-19, which can be found here:

<https://www.osha.gov/Publications/OSHA3990.pdf>

The guide is described as providing guidance based on infection prevention and industrial hygiene practices for respiratory illness. It focuses on the need for employers to implement engineering, administrative, and work practice controls as well as a need for personal protective equipment in some instances. OSHA states that the COVID-19 outbreak could lead to absenteeism, changes in the patterns of commerce, and interrupted supply and demand. There are also steps that employers can take to reduce the risk of worker exposure to SARS-CoV-2. Plans for reduction of infectious disease should include consideration of the level of risk associated with worksites and job tasks in your business. Identification of the possible sources of exposure to SARS-CoV-2 is warranted, including the general public, customers, and coworkers. Workers who are likely or must come into contact with sick individuals should be given special consideration with appropriate personal protective equipment as needed by the situation.

Contingencies should be put into place for:

- Increased absenteeism
- The need for social distancing, staggered work shifts
- Downsizing operations, delivering services remotely, and other exposure-reducing measures
- Options for conducting essential operations with a reduced workforce, including cross-training workers across different jobs in order to continue operations or deliver surge services
- Interrupted supply chains or delayed deliveries

There are several layers to control for the possibility of COVID-19 in the workplace. The most effective protection measures, listed from most effective to least effective, include engineering controls, administrative controls, safe work practices, and personal protective equipment.

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Engineering controls are used to isolate workers from the hazard and can include high-efficiency air filtration, increased ventilation rates, physical barriers between workers and customers, drive-through service where customers do not have to leave their cars, or, for some specialized work, negative pressure rooms. Administrative controls require action by the workers or employer and can include encouraging sick people to stay home, reducing contact by replacing face-to-face meetings, alternating shifts, and stopping unessential travel. Safe work practices are used to reduce the duration, frequency, or intensity of exposure to a hazard and can include actions such as providing resources and a work environment that promotes personal hygiene, requiring regular handwashing or use of alcohol-based sanitizer, and posting reminders in the workplace.

Personal protective equipment may be needed in some cases to prevent exposure to the virus and include gloves, goggles, face shields, face masks, and respiratory protection.

Employers are obligated to provide their workers with personal protective equipment needed to keep them safe while performing their jobs.

Recommendations for protective equipment may change depending on geographic location, updated risk assessments for workers, and information on effectiveness in preventing the spread of COVID-19. Both the CDC and OSHA websites are updated with the recommendations as the situation evolves.

In order to be effective, personal protective equipment must be:

- Selected based upon the hazard to the worker.
- Properly fitted and periodically refitted, as applicable
- Consistently and properly worn when required
- Regularly inspected, maintained, and replaced as necessary.
- Properly removed, cleaned, and stored or disposed of, as applicable, to avoid contamination of self, others, or the environment

Specific OSHA standards for workers who are classified as lower risk, medium risk, high risk, or very high risk can be found in the guide for preparing the workplace mentioned above.

Isolation of Sick Workers

Sick employees should be **actively encouraged to stay home** (CDC Interim Guidance for Businesses, 2020). Making sure that the employees know the sick-leave policies, and that they align with public health guidance is key. This includes those who work in the same environment, but may not be directly employed by your company, such as vendors and contract workers. Additional flexibility may also be

The specific guidelines for isolation of sick workers include:

- Symptoms of respiratory illness, such as coughing or difficulty breathing
- Fever over 100°F

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



required to allow workers to care for family members who have become ill as a period of isolation after exposure to sick individuals is necessary to reduce transmission.

Changes to sick-leave policies to not require notification from a healthcare provider either for taking leave or returning to work are suggested because of the added burden placed on healthcare facilities that may be extremely busy.

Return to work should occur only after an individual has had a normal temperature for 24 hours without use of medication, and 24 hours after symptoms have subsided.

Experts have raised some concerns about the lack of paid sick leave in the United States deterring workers from staying home when they have respiratory symptoms (Goldstein, 2020). Based on national data, nearly one-third of workers do not get paid sick days, and for those classified as low-income workers, more than two-thirds do not get paid sick days. This means that the workers with the most direct contact with others, such as food service workers, elder care, and child care, have a financial disincentive to not isolate themselves when sick.

Social Distancing in the Workplace

As mentioned above, COVID-19 is spread through exposure to respiratory fluids. These fluids are heavy and do not remain suspended in the air after expulsion. Keeping a distance of around 6 feet from people exhibiting symptoms is thought to be sufficient to inhibit transmission of infection. However, there is evidence of people with COVID-19 who can pass the infection without having symptoms or whose symptoms are mild enough to be unnoticed. Therefore, reducing contact between people is recommended even if symptoms are not obvious.

Employees that appear sick upon arrival or become sick after arriving at work should be separated from other employees until they can be sent home (CDC Interim Guidance for Businesses, 2020). Use of respiratory etiquette and hand hygiene protocols should be followed, and any tissues or other material utilized should be enclosed in a plastic bag, refuse should be discarded so that it remains contained, and any surfaces in contact with the sick individual should be cleaned. The person handling refuse should thoroughly wash their hands after and refrain from touching their face during the cleaning process.

If possible, the increased use of telecommuting and teleconferencing can also be used to decrease interaction between employees. Teleconferencing may be possible to replace meetings of groups of people and to reduce the need for travel. Staggering shifts to reduce the number of people in a workplace at one time also reduces the contact between employees.

There are additional rules that have been enacted in China to reduce contact between workers. The government in Beijing has issued a “Notice on Further Clarifying the Epidemic Prevention Requirements for Office Units in Commercial Buildings” as more workers return to their jobs (Arnstein, 2020). For example, gathering for lunch can also increase the risk of transmission and is being discouraged. Workspaces must be at least 2.5 meters apart, and staff must maintain a distance of at least one meter from each other. Elevators are not allowed to be more than 50% full to reduce crowding. On March 18, New York Governor Andrew Cuomo enacted

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



similar restrictions for the state where employees should either allow workers to telecommute or keep half their workforce home at any one time (Berger and Vielkind, 2020). The rule exempts grocery stores, pharmacies, shipping companies and other essential services to keep essential services running.

Hand Hygiene and Respiratory Etiquette

The CDC has made several educational posters available to remind employees of respiratory etiquette and hand hygiene protocols that should be followed on a day-to-day basis. The posters are presented in English and Spanish at <https://www.cdc.gov/nonpharmaceutical-interventions/tools-resources/educational-materials.html>. Similar materials are also available from the WHO with advice of protecting yourself and others, how to cope with stress during the outbreak, food safety practices, and staying healthy while traveling at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>.

To facilitate good hygiene practices, employers can provide tissues and trash receptacles that do not require contact for disposal. Providing soap and water or alcohol based hand sanitizer (with at least 60% to 95% alcohol) will increase adherence. Frequent cleaning of devices and areas with high use is recommended. However, normal, day-to-day cleaning products are adequate, and no additional disinfection is required.

Stigma and Discriminatory Practices

While COVID-19 originated in a single region of the world, risk of infection by the virus is not influenced by race or country of origin. In order to avoid stigma and discrimination in the workplace, the risk of COVID-19 infection should be based solely on characteristics outlined by the CDC or WHO. As with any medical issue, confidentiality should be maintained for people who have a suspected exposure to COVID-19 or are confirmed to have the virus. For example, specific people should not be named as being sick if it is necessary to inform workers of exposure.

Based on incidents in China and neighboring countries, there has also been stigmatization of certain groups based on their profession (Koh, 2020). There was a high rate of transmission to healthcare workers in China, and there are reports of harassment of people wearing medical uniforms in public. This reaction was also observed in the 2003 SARS outbreak where healthcare professionals reported that they themselves, as well as their families, were shunned.

Occupational Safety and Health Administration (OSHA) also advises that there are additional workers that may be at an increased risk of exposure, which might also lead to increased stigma (OSHA, 2020). For example, people employed in deathcare, laboratories, airline operations, border protection, and solid waste and wastewater management.

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



References

- Arnstein T. Heading Back to the Office? Not Without Taking These Measures Says Beijing. *The Beijinger*. Published February 25, 2020. Accessed on March 2, 2020 at <https://www.thebeijinger.com/blog/2020/02/25/heading-back-office-not-without-taking-these-measures-say-beijing-government>
- Berger P, Vielkind J. Gov. Cuomo Orders New York Businesses to Keep Half Their Workforce at Home. *The Wall Street Journal*. Published March 18, 2020. Accessed March 18, 2020 at <https://www.wsj.com/articles/gov-cuomo-orders-new-york-businesses-to-keep-half-their-workforce-at-home-11584554773>
- Caldwell AA, Hackman M. U.S. Suspends Visa Processing in Mexico, Threatening Businesses Reliant on Seasonal Workers. *The Wall Street Journal*. Published March 17, 2020. Accessed on March 18, 2020 at <https://www.wsj.com/articles/u-s-suspends-visa-processing-in-mexico-threatening-businesses-reliant-on-seasonal-workers-11584487462>
- Calvert S, Kamp J. Coronavirus Hits State and City Budgets. *Wall Street Journal*. Published on March 19, 2020. Accessed on March 19, 2020 at https://www.wsj.com/articles/coronavirus-hits-state-and-city-budgets-11584610201?mod=hp_lead_pos2
- CDC. Interim Guidance for Businesses Employers to Plan and Respond to Coronavirus Disease 2019 (COVID-19), February 2020. Last Reviewed February 26, 2020. Accessed March 2, 2020 at <https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/guidance-business-response.html>
- CDC. Interim Guidance for Discontinuation of Transmission-Based Precautions and Disposition of Hospitalized Patients with COVID-19. Published on February 11, 2020. Accessed on February 28, 2020 at <https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html>
- Cui J, Li F, Shi ZL. Origin and evolution of pathogenic coronaviruses. *Nat Rev Microbiol*. 2019;17(3):181–192.
- Department of Health and Human Services. PanCAP Adapted U.S. Government COVID - 19 Response Plan. Published March 13, 2020. Accessed on March 19, 2020 from <https://int.nyt.com/data/documenthelper/6819-covid-19-response-plan/d367f758bec47cad361f/optimized/full.pdf#page=1>
- Donati J. U.S. Suspending Routine Visas in Most Countries in Response to Coronavirus Outbreak. *The Wall Street Journal*. Published on March 18, 2020. Accessed on March 18, 2020 at https://www.wsj.com/articles/u-s-suspending-routine-visas-in-most-countries-in-response-to-coronavirus-outbreak-11584566538?mod=article_inline
- Equal Employment Opportunity Commission. Pandemic preparedness in the workplace and the Americans with Disabilities Act. Published October 9, 2009. Accessed on March 2, 2020 at https://www.eeoc.gov/facts/pandemic_flu.html

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Ferguson NM, Laydon, Nedjati-Gilani, Imai, Ainslie, Baguelin, Bhatia, Boonyasiri, Cucunubá, Cuomo-Dannenburg, Dighe, Dorigatti, Fu, Gaythorpe, Green, Hamlet, Hinsley, Okell, van Elsland, Thompson, Verity, Volz, Wang, Wang, Walker, Walters, Winskill, Whittaker, Donnelly, Riley, Ghani. Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. *MRC Centre for Global Infectious Disease Analysis*. Published March 16, 2020. Accessed March 18, 2020 at <https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus/>

Gold R. U.S. Power Use Weakening After Plunging in Italy Amid Coronavirus. *The Wall Street Journal*. Published March 18, 2020. Accessed on March 18, 2020 at <https://www.wsj.com/articles/plunge-in-italys-electricity-use-hints-at-coronavirus-risks-facing-u-s-11584532801>

Goldstein A. Worries about medical bills and lost pay may hamper coronavirus efforts in the United States. *The Washington Post*. Published March 2, 2020. Accessed March 3, 2020 at https://www.washingtonpost.com/health/worries-about-medical-bills-and-lost-pay-may-hamper-coronavirus-efforts-in-the-united-states/2020/03/02/75825be0-5c9c-11ea-9055-5fa12981bbbf_story.html

Harvard Global Health Institute. Caring for COVID-19 patients. Published March 17, 2020. Accessed on March 19, 2020 at <https://globalepidemics.org/2020/03/17/caring-for-covid-19-patients/>

Hohmann J. The Daily 202: Six chilling estimates underscore danger of coronavirus to public health and the economy. *The Washington Post*. Published March 18, 2020. Accessed on March 18, 2020 at <https://www.washingtonpost.com/news/powerpost/paloma/daily-202/2020/03/18/daily-202-six-chilling-estimates-underscore-danger-of-coronavirus-to-public-health-and-the-economy/5e71d4f5602ff10d49ace866/>

International Labour Organization. Almost 25 million jobs could be lost worldwide as a result of COVID-19, says ILO. Published March 18, 2020. Accessed on March 18, 2020 at https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_738742/lang--en/index.htm

Lipton E, Kanno-Young Z, Cooper H. Trump Slowly Enlisting More Agencies in 'Whole of Government' Response to Virus. *The New York Times*. Published March 17, 2020. Accessed on March 19, 2020 at <https://www.nytimes.com/2020/03/17/us/politics/coronavirus-government-army-corps.html>

Maidenberg M, Cutter C, Feintzeig R. Call It a Layoff, a Furlough or a Cut Shift: Americans are Losing Work. *The Wall Street Journal*. Published March 18, 2020. https://www.wsj.com/articles/call-it-a-layoff-a-furlough-or-a-cut-shift-americans-are-losing-work-11584550057?mod=hp_lead_pos1&ns=prod/accounts-%E2%80%A61/5

Mauldin W and Leary A. Trump Spurns Business Plea to Ease Tariffs Amid Coronavirus. *The Wall Street Journal*. Published on March 18, 2020. Accessed on March 18, 2020 at <https://www.wsj.com/articles/trump-spurns-business-plea-to-ease-tariffs-amid-coronavirus-11584557598>

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.



Naughton N, Foldy B. Detroit Car Makers to Temporarily Close U.S. Plants Over Virus Concerns. *The Wall Street Journal*. Published March 18, 2020. Accessed on March 18, 2020 at https://www.wsj.com/articles/detroit-car-makers-to-temporarily-shut-u-s-plants-over-virus-concerns-11584551324?mod=hp_lead_pos3

Occupational Safety and Health Administration. COVID-19. Accessed on March 2, 2020 at <https://www.osha.gov/SLTC/covid-19/>

Occupational Safety and Health Administration. 2020 Guidance on Preparing Workplaces for COVID-19. Published March, 2020 Accessed on March 19, 2020 at <https://www.osha.gov/Publications/OSHA3990.pdf>

Sanger-Katz M, Kliff S, Parlapiano A. These Places Could Run Out of Hospital Beds as Coronavirus Spreads. *The New York Times*. Published on March 17, 2020. Accessed on March 19, 2020 at <https://www.nytimes.com/interactive/2020/03/17/upshot/hospital-bed-shortages-coronavirus.html?searchResultPosition=1>

Smith A. Coronavirus Concerns in the Workplace. *Society for Human Resource Management*. Published January 31, 2020. Accessed on March 2, 2020 at <https://www.shrm.org/resourcesandtools/legal-and-compliance/employment-law/pages/address-workplace-coronavirus-concerns.aspx>

Smith J. Truckers Facing Coronavirus Hurdles in Keeping Supply Chains Moving. *The Wall Street Journal*. Published March 18, 2020. Accessed on March 18, 2020 at <https://www.wsj.com/articles/truckers-facing-coronavirus-hurdles-in-keeping-supply-chains-moving-11584564327>

Waldman A, Shaw A, Ngu A, and Campbell S. Are Hospitals Near Me Ready for Coronavirus? Here Are Nine Different Scenarios. *ProPublica*. Published on March 17, 2020. Accessed on March 19, 2020 at <https://projects.propublica.org/graphics/covid-hospitals>

Wilder-Smith A, Freedman DO. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak [published online ahead of print, 2020 Feb 13]. *J Travel Med*. 2020;taaa020.

World Health Organization. Q&A on coronaviruses. Published on February 23, 2020. Accessed on February 27, 2020 at <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses>

The information provided in this report is not intended to represent a complete compilation of all treatment options available nor is it to be interpreted as medical advice. The information is intended to serve solely as a guide to facilitate a discussion between you and your medical provider(s). Medical decisions should be made only after consultation with and at the direction of your treating physician(s).

Copyright © 2020 PinnacleCare International, LLC. All rights reserved.

No part of this material may be reproduced in any form, or by any means, without the prior written consent of PinnacleCare International, LLC.