Situation Report - Coronavirus Disease COVID-19 #17

27 March 2020

Synopsis

On March 27 the US federal government passed a $2 trillion COVID-19 financial relief package, which will give direct payments to many Americans impacted by unemployment and wage loss, expand jobless aid, provide loans to small businesses, provide lending for distressed corporations, airlines, hospitals and more. A different aid package has already been signed into law that expands federal food programs for needy families and low-income seniors and ensures paid sick leave for workers who must stay home. The World Health Organization designated the COVID-19 outbreak a pandemic on March 11, citing the virus’ “alarming levels of spread and severity” (WHO Director-General Tedros Adhanom Ghebreyesus). The outbreak has had negative impacts on the global economy and global supply chain operations, and economists worldwide predict the epidemic will lower China’s GDP growth in 2020. The Organization for Economic Co-operation and Development (OECD) estimates in its March 2020 interim economic assessment that
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The annual global GDP will drop to 2.4% in 2020 as a whole, down from 2.9% in 2019. Despite the declining number of domestic Chinese COVID-19 cases global manufacturing is slow to recover. There is also increasing global concern about a second wave of infections after restrictions are eased, as places like China and Hong Kong are seeing new coronavirus cases imported from travelers coming from affected countries. Multiple industries are experiencing economic hits and some companies have decided to close operations within and outside of mainland China to prevent further virus spread. Public and business events are also increasingly being canceled or postponed. The US Cybersecurity and Infrastructure Agency (CISA) published a document on March 19 detailing how to determine which critical infrastructure employees should be considered essential for the COVID-19 pandemic response. On March 13 President Trump declared a national emergency and also invoked the Defense Production Act to expand manufacturing of vital personal protection equipment and respirators. On March 16 the White House announced a program called “15 Days to Slow the Spread”, which encourages Americans to practice social distancing, and several states ordered nonessential businesses to close unless 100% of the workforce can telework. Beginning March 13, US President Trump issued a 30-day travel ban for European travelers coming to the US (see Travel Advisory below). The US State Department also issued a Global Health Advisory Level 4: Do Not Travel advising Americans not to travel abroad. The CDC also raised the threat level for travel to the US to Level 2: Practice Enhanced Precautions. The European Union announced restrictions on nonessential travel to and from the EU, excepting essential staff and European nationals’ family members. An updated list of travel bans worldwide can be found here. In addition, on March 25 the White House coronavirus task force asked anyone who has traveled recently to New York City to self-quarantine for 14 days due to that city’s rapidly spreading infections. For reference, the Johns Hopkins Global Outbreak Tracker provides daily updated numbers about confirmed cases worldwide.

The CDC’s public health risk assessment says:

- For the general American public, who are unlikely to be exposed to this virus at this time, the immediate health risk from COVID-19 is considered low. Risk will increase with instances of community spread as the outbreak expands.
- People in communities where ongoing community spread with the virus that causes COVID-19 has been reported are at elevated risk dependent on their location.
- Healthcare workers caring for patients with COVID-19 are at elevated risk of exposure.
- Close contacts of persons with COVID-19 also have elevated exposure risk.
- Travelers returning from affected international locations where community spread is occurring are at elevated risk.
- People should avoid long plane rides and cruises, especially if they are elderly or have an underlying medical condition.

Clinical Trials and Coronavirus Treatments

- Current treatments and vaccines proposed to fight COVID-19 pandemic
  - The US head of infectious diseases institute reported that a vaccine may be at least a year and a half away but human clinical trials are likely to start in one month or two.
  - The National Institute of Allergy and Infectious Diseases provides news releases on clinical trials of investigational vaccines.
  - US President Trump has expressed optimism in the effectiveness of the drug chloroquine, used to treat malaria, for treating COVID-19; however, evidence of the drug’s effectiveness at this point is anecdotal.
    - Chloroquine has potentially negative side effects, so health officials warn against self-medicating. It may also affect the heart and could cause heart failure.
    - A less toxic version of the drug, hydroxychloroquine, combined with the antibiotic azithromycin has been associated with positive patient outcomes.
  - The US FDA will allow patients with serious or immediately life-threatening infections to access convalescent plasma therapy, which uses blood from a recovered COVID-19 patient to help a sick patient’s immune system develop antibodies.
  - The Milken Institute offers a free online treatment tracker of the treatments and vaccines being considered for fighting COVID-19.
  - In conjunction with the CDC and White House Coronavirus Task Force, Apple has developed a tool for users to screen themselves for COVID-19 symptoms. The tool is available as a website or app.

Travel Advisory

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Travel Advisory
As of March 13, 2020, a Presidential Proclamation in effect for 30 days suspends the entry of most foreign nationals who have visited countries in the Schengen region of Europe, or the United Kingdom or Ireland, at any point during the **14 days prior to their scheduled arrival in the US**.

- The proclamation does not affect US citizens, US green card holders, or families of US citizens.
- Countries in the **Schengen Area** are Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and Switzerland.

- It is advisable to double check flight times and schedule for cancelations or postponements.
- Travel delays at airports should be expected due to COVID-19 symptom screenings.
- Reconsider taking cruises, long plan flights, and any non-essential travel to avoid of getting and spreading infection.
- **Self-quarantine** for at least 14 days after traveling to areas with confirmed COVID-19 outbreaks.
- The CDC has elevated the **risk level** of travel to the US to Level 2: older adults and those with chronic medical conditions should consider postponing travel.
- The US State Department Global Health Advisory is at **Level 4: Do Not Travel**.
- Mainland China and **Hong Kong** have banned all foreign arrivals.
- Countries with restrictions on entry to the US can be found on this [CDC map](https://www.cdc.gov/coronavirus/2019-ncov/traveler-precautions/entry-restrictions.html).
- A list of all US states currently under stay-at-home orders can be found [here](https://www.cbsnews.com/830_36103_36106-1000/90227477/). 

**Current CDC COVID-19 Travel Health Notices**

- All countries are now at **Level 3 Avoid Non-Essential Travel**.

**Critical Infrastructure Impacts**

*This situation is fluid and information can frequently change*

- Interconnectivity affects how COVID-19 impacts infrastructure sectors. The interdependency of all critical infrastructure sectors means that instability in one is likely to cause cascading impacts to others.
- Workforce absenteeism could become a major cause of instability for all sectors, but especially for...
sectors that need high levels of niche expertise to sustain operations.

- Transportation, retail, manufacturing, and hospitality services are under severe stress from global and domestic travel restrictions and lack of tourism.
- The negative impacts of pandemics on critical infrastructure increase during global economic downturns or recessions, seasonal weather damages and emergency response needs, and risks from unnecessary travelers further straining healthcare infrastructure.
- General known impacts of COVID-19 include decreased demand for oil, global market instability, the cancelation or postponement of public and business events, pharmaceutical shortage concerns, quarantines, lockdowns, and supply chain disruptions.

### Awareness and Resiliency Resources

- [WHO How to Prepare Businesses for Outbreaks](#)
- [CDC Interim Guidelines for Healthcare Professionals](#)
- [Ready.gov Pandemic Prep & Response Resources](#)
- [Risk, Resilience, and Continuity Considerations for 2019-nCOV](#)
- [Protect yourself and employees from Getting Sick](#)
- [WHO Technical Guidance on PPE](#)
- [WHO Situation Reports](#)
- [Johns Hopkins University Global Outbreak Tracker](#)
- [Johns Hopkins University Center for Health Security](#)
- [Large Event Cancelations](#)

### Recent GRF Portal Resources and Analysis

- GRF Portal #09ce286b & FS-ISAC Report ID #955308
- GRF Portal #316783d7 & FS-ISAC Report ID #955272
- GRF Portal #f549afe4 & FS-ISAC Report ID #955234

### Best Practices

- Wash hands frequently with soap and water or alcohol-based rub (at least 60% alcohol).
- Consider telework options or leave-taking for at-risk individuals (those who have encountered infected persons, traveled in affected areas, are elderly or with underlying health conditions, or feel ill).
- Cover your mouth and nose with tissue or elbow when coughing or sneezing.
- Consider obtaining and maintaining supplies for this and other possible outbreaks (as infection spreads demand for personal protective equipment like surgical face masks and hand sanitizer rises but supplies may not meet demand during a crisis).

### Sector Impacts

#### Energy, Oil & Natural Gas

- Crude oil demand has fallen because of the COVID-19 outbreak in Asia.
  - Saudi Arabia and Russia have reportededly decided to ramp up oil production and cut prices, especially for Asian purchasers, to protect their global market shares.
  - Current low prices will likely impact the US and global energy sectors by stifling the American shale oil industry’s production and making global energy companies less profitable.
  - The S&P energy sector fell in the past month and oil prices continue to decline. OPEC revised its global oil demand growth projections for 2020 to be less than anticipated. Projections for supply, however, were raised.
This means the problematic situation now is higher supply than demand, which will likely have ongoing negative implications for OPEC+, energy companies, and service companies and communities supported by oil revenue (whether directly or via taxes).

If gasoline and products made from oil see price drops, it could benefit consumers and potentially affect the outcomes of upcoming political events like the 2020 US election.

Zero-carbon energy growth is likely to be negatively impacted by the COVID-19 outbreak

- The world’s largest solar, battery, and wind manufacturers are in China, but travel bans and manufacturing stoppages make it unclear how quickly Chinese production will return to full capacity.
- Manufacturing production did pick up again in China at the end of February as less COVID-19 cases were reported, but energy sector organizations with supply chains wholly reliant on China might still need contingency plans to diversify supply chains to other regions to mitigate long-term risks.

Carbon dioxide emissions in China have fallen dramatically due to manufacturing shutdowns but this emissions decline might not last. To stimulate the economy, it is likely the Chinese government will put money into heavy-industry sectors that require lots of energy but will help regain financial stability.

- Decreased global political focus on reducing carbon emissions could inspire increased climate change activism and environmental extremist actions against the energy sector.

The energy sector needs to consider impacts that could occur if companies invoke force majeure to not be held liable for business disruptions from unforeseen forces beyond their control.

- Supply chains might break contractual obligations, potentially affecting business operations worldwide.
- Organizations might need to reevaluate equipment procurement plans and consider impacts to projects’ scheduled timelines as energy industry price volatility continues.

Multiple US states have announced stay-at-home orders for all non-essential businesses to close or allow 100% of their employees telework.

- On March 19 CISA released a document detailing which employees should be considered essential for COVID-19 pandemic response.
  - Only companies in 16 critical infrastructure sectors are allowed to continue working, until further notice.
  - Those sectors are the chemical, commercial facilities, communications, critical manufacturing, dams, defense industrial base, emergency services, energy, financial services, food and agriculture, government facilities, healthcare and public health, information technology, nuclear, transportation, water and wastewater systems.

- A list of all states currently with stay-at-home orders can be found here.

The potential for cyberattacks increases as more people work from home.

- Security firms, law enforcement and the FBI all warn of increased phishing and cybercriminal scams targeting teleworkers and the healthcare industry.
  - Threat actors have capitalized on coronavirus fear and panic by creating malicious applications with convincing GUI that is actually and information stealer. This malicious app also used subcomponents linked to the AZORult trojan.
  - As of March 5, notable increase in domain names using the word “corona” and “covid” has been seen, according to Bit Discovery. 22 of those were confirmed as malicious by Trend Micro researchers.

- On March 15 a cyberattack was launched against the US Health and Human Services department.
  - The attack was reportedly meant to slow the department’s systems and overloaded HHS servers for several hours.
  - The hack circulated disinformation about the COVID-19 pandemic and no threat actor has yet been identified as the perpetrator of the attack.
  - Critical infrastructure healthcare organizations should review cybersecurity policies to mitigate potential risks.

- Critical infrastructure sectors and the general public may be vulnerable to cyber threats based around companies selling fraudulent cures and treatments for COVID-19 or using phishing emails to gain access to private financial information.

The oil industry will not receive financial aid from the recently passed $2 trillion stimulus package and neither will cruise companies. Previously the Trump Administration announced it wanted to seek $3 billion from Congress to prop up US oil producers in the face of crude oil price drops.

Resources

- CISA Guidance on the Essential Critical Infrastructure
Consumer trust in financial instruments and markets could be weakened as some financial firms, especially firms with low liquidity, react to disruptions of inputs and production due to supply chain and market slowdowns.

The FFIEC has issued a pandemic planning statement providing guidance about actions financial institutions can take to minimize the potential adverse effects of a pandemic.

- Financial firm members of FS-ISAC that were polled have all reviewed and begun activating pandemic plans.
- Many organizations are banning travel to countries identified by the CDC as high-risk.
- Many organizations are requiring supervisor approval for domestic travel.
- The Federal Reserve’s FedCash services follow standard quarantine procedures for cash coming into the US. According to guidance about COVID-19’s surface survivability, these procedures are likely sufficient to mitigate risk of viral transmission through cash, but is being debated throughout the community.

The US, Germany, Italy, and other parts of the European economy could fall into recession. Parts of Latin America are also particularly vulnerable.

If the COVID-19 outbreak continues through the year, the UN predicts that the automotive, airline, and energy industries will be hit hardest by COVID-19 impacts and that global foreign direct investment could shrink by 5-15% causing financial flows to reach the lowest levels seen since the 2008-2009 financial crisis. This and shocks to consumer demand could lead to declining private investment prospects around the world.

Many financial firms (and organizations not finance-related) have implemented remote work schedules for employees.

- Telework can help prevent infection spread among organizations.
- Financial firms allowing telework should be sure policies are in place to protect sensitive and confidential information that could be accessed outside the organization’s network.

The US federal government passed a financial stimulus package on March 27 that will provide $2 trillion in economic relief to American businesses and taxpayers.

- The deal will be the largest congressional bailout in US history.
- It includes billions of dollars in loans and grants for businesses, hospitals, cities and.
- US and European stocks rose after the announcement a deal had been reached but if the stimulus plan does not create sustained economic rebound, financial analysts are uncertain what policies will be able to.

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nuclear, transportation, water and wastewater systems.

- Central European banks in Europe, the UK, Japan, and the US are greatly involved in economic regulation following the 2008 global financial crisis but are also inhibited by political pressures as to how much they can independently maneuver.
  - The interconnectedness of global markets means that changes in one market might have drastic impacts to other markets. Actions to protect domestic markets could create difficulties for foreign markets.
  - Financial sector organizations can mitigate risk by focusing on supply chain management and considering how debts in one currency might affect returns in another.
  - The US Federal Reserve slashed rates to nearly zero and has announced several actions it will take to ease markets by buying government debt and mortgage-backed securities.
    - Previously the Federal Reserve lowered its loan borrowing rate and gave $500 billion to short-term lending markets. This move could help credit markets continue operating and help banks continue to provide loan access for borrowers.

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- Resources
  - CISA Guidance on the Essential Critical Infrastructure
  - UN Report: Coronavirus Could Shrink Global FDI
  - FFIEC pandemic planning statement
  - Telework and the COVID-19 Outbreak
  - CDC Travel Advisories
  - Be Careful Downloading COVID-19 Tracker Maps
  - Forbes: Watch Out for These COVID-19 Scams
  - How Threat Actors Capitalize on COVID-19 Fears
  - FBI Warning About Cyber Scams

Retail

- Italy has extended emergency quarantine measures nationwide due to rapidly increasing community COVID-19 spread. Milan, Italy’s economic engine and important global retail hub, is in the epicenter of the country’s COVID-19 outbreak.
  - Italian distribution markets have decreased rapidly but the total impact of COVID-19 on retail markets is yet to be determined.
  - Quarantines like those in Italy and Wuhan, China shortly after the outbreak began cause serious disruptions for physical shops since less people outside means less customers to make purchases at
physical shop locations.
- Many mall-based specialty retailers in the US have temporarily closed stores or reduced hours.
- Online retailers could see a business increase if people opt to shop online from home, but large online retailers have also reported supply shortages due to COVID-19 panic.

- **Supply chain issues** globally have impacted retail manufacturing, including key components of smart phones and other electronic devices.
  - Disruptions could continue through the retail sector’s traditionally busiest times: back-to-school and the holiday season.
  - Factories in China are becoming operational again as COVID-19 cases decline but outbreaks in other parts of the world are now affecting supply chains in those regions, and the regions that rely on them.
- Four out of 10 respondents in a *National Retail Federation Survey* released March 5 stated that they have already seen supply chain disruptions due to COVID-19, and 26 percent of survey participants said they expect to see disruptions in the **near future**.
  - Manufacturers of disinfectants and face masks have experienced demand surges, but those same surges lead to supply shortages and sometimes price-gouging, which can negatively affect public opinion of retailers, both direct and of third-party vendors.

- Consumer-facing brands have adapted business operations to mitigate infection risk: banning reusable mugs, increasing frequency of cleaning, switching to tamper-proof packaging on fast food delivery items, limiting how much hand sanitizer/cleaning products can be purchased by a customer, and cleaning checkout lanes and touchscreens every half hour.
  - Companies have also implemented new emergency leave procedures to allow employees to stay home if they are unable to work or feel uncomfortable working. Some companies also provide two weeks of paid leave if a store/office/distribution center is mandated by the government to quarantine due to a confirmed infection.
- Stores are limiting physical store hours and the amounts of certain items customers are allowed to purchase in one shopping trip to reduce virus exposure and try to prevent inventory shortages due to panic purchasing.
  - Leisure retailers are especially hard-hit; large cruise ship companies and destination theme parks are suspending services, some for at least the next two months.
  - The food and entertainment industries will also see financial declines as states and countries enact public curfews and bans on restaurants and bars to reduce public exposure and possible spread of infection.
- Retailers might consider new kinds of on-demand delivery, drone-based delivery or other driverless and no-contact delivery options, and technologies like **blockchain** to help with supply chain transparency and inventory awareness.

- **Reducing hours**, prioritizing sanitization, and focusing on just the essential maintenance projects can help maintain operations continuity despite disruptions.
- The US federal government passed a *financial stimulus package* on March 27 that will provide $2 trillion in economic relief to American businesses and taxpayers.
  - The deal will be the largest congressional bailout in US history.
  - It includes billions of dollars in loans and grants for businesses, hospitals, cities and.
  - US and European stocks rose after the announcement a deal had been reached but if the stimulus plan does not create **sustained economic rebound**, financial analysts are uncertain what policies will be able to.
  - Retailers, restaurants, and other companies in the hospitality industry will be allowed to deduct from their taxes any property improvements and file amended refunds from previous years.
- Multiple US states have announced stay-at-home orders for all non-essential businesses to close or allow 100% of their employees telework.
  - On March 19 CISA released a document detailing which employees should be considered **essential for COVID-19 pandemic response**.
    - Only companies in **16 critical infrastructure sectors** are allowed to continue working, until further notice.
    - Those sectors are the chemical, commercial facilities, communications, critical manufacturing, dams, defense industrial base, emergency services, energy, financial services, food and agriculture, government facilities, healthcare and public health, information technology, nuclear, transportation, water and wastewater systems.
  - A list of all states currently with stay-at-home orders can be found [here](#).
• The potential for cyberattacks increases as more people work from home.
  o Security firms, law enforcement and the FBI all warn of increased phishing and cybercriminal scams targeting teleworkers and the healthcare industry.
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• Resources
  o CISA Guidance on the Essential Critical Infrastructure
  o Quartz: What Hand Sanitizer Shortages on Amazon Reveal about Global Supply
  o National Retail Federation: Retailers’ Perspectives on the Initial Impacts of the Coronavirus
  o CDC Travel Advisories
  o Be Careful Downloading COVID-19 Tracker Maps
  o Forbes: Watch Out for These COVID-19 Scams
  o How Threat Actors Capitalize on COVID-19 Fears
  o Brookings Institute: COVID-19 will Upend Retain Market but Steps can be Taken to Save it
  o FBI Warning About Cyber Scams

Legal

• The legal sector has been affected by organizations’ increasing needs to address employment issues like state and local paid sick leave laws and the Family and Medical Leave Act of 1993.
  o A growing number of companies worldwide recommend or require employees to telework if they are ill, are at risk of becoming ill, or have been in contact with or visited regions with COVID-19 outbreak.
• The CDC has advised against nonessential travel to China, South Korea, Italy, and Iran due to their large viral outbreaks.
  o To avoid third party liability, many organizations are choosing to comply with COVID-19 preparation guidance from regulatory bodies even when that guidance is nonbinding.
• Large-scale event cancelations to prevent coronavirus spread will likely raise legal questions about liability risks and financial losses, which legal sector organizations affiliated with events planning should be prepared to address.
• The legal sector may also need to consider impacts of companies invoking force majeure to ensure they cannot be held liable for disruptions due to unforeseen forces beyond their control.
  o Supply chains could break contractual obligations, potentially affecting business operations worldwide.
• Questions are circulating publicly about Human Resources policies and what legal factors affect how organizations protect their assets and operations from COVID-19 spread. All critical infrastructure sector organizations should consult their legal departments to determine the best way to answer and act on these kinds of questions.
• The legal sector could see long-term operational changes due to the pandemic if organizations redesign alternative work policies to transition to more virtual workforces.
  o Telework could improve use of company resources by saving money on overhead costs.
  o Many law firms (and organizations not law-related) have implemented remote work schedules for all
employees.
  o Telework can help prevent infection spread among organizations.
  o Law firms allowing telework should be sure policies are in place to protect sensitive and confidential information that could be accessed outside the organization’s network.
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  o It includes billions of dollars in loans and grants for businesses, hospitals, cities and.
  o US and European stocks rose after the announcement a deal had been reached but if the stimulus plan does not create sustained economic rebound, financial analysts are uncertain what policies will be able to.
  o Businesses will receive a tax credit for keeping workers (even if they are not actively working) on payrolls during the COVID-19 pandemic.
  o State and local governments will receive $150 billion and $8 billion set aside just for local governments.
• Resources
  o CISA Guidance on the Essential Critical Infrastructure
  o CDC Travel Advisories
  o CDC Interim Guidance for Businesses and Employers to Comply with Safety Recommendations Related to COVID-19
  o What You Need to Know About Canceling an Event and Liability Risks
  o Events Industry Council: About COVID-19
  o Telework and the COVID-19 Outbreak
  o Be Careful Downloading COVID-19 Tracker Maps
  o Forbes: Watch Out for These COVID-19 Scams
How Threat Actors Capitalize on COVID-19 Fears

Force Majeure and Impacts on the Energy Economy

FBI Warning About Cyber Scams

Transportation

- Authorities are encouraging social distancing, recommending that people stay at least 6 feet away from each other to prevent infection spread, and self-isolate if they have traveled to places affected by outbreaks or have been in contact with infected people.
  - Airlines, cruises, and other hospitality/leisure/travel industries are taking economic hits because of fearful consumers and government or private sector travel restrictions.
  - US airline companies have asked for more than $50 billion in government assistance to help offset record declining numbers of travelers domestically and globally.
  - The International Air Transport Association reported that COVID-19 might cost global airliner companies near $113 billion in revenue in 2020 due to canceled flights and drastic drops in flight bookings.
- Amtrak announced it will suspend nonstop Acela service from Washington D.C. to New York beginning March 10 through March 26 due to reduced demand for travel.
- On March 20, New York Governor Cuomo announced a stay-at-home executive order mandating all non-essential businesses to close or allow 100% of their employees to telework.
  - CISA released a document on March 19 detailing which employees should be considered essential for COVID-19 pandemic response.
- The state of California has also ordered all businesses (exempting the essential) to close and all citizens to stay at home.
  - Only companies in 16 critical infrastructure sectors are allowed to continue working, until further notice.
  - Those sectors are the chemical, commercial facilities, communications, critical manufacturing, dams, defense industrial base, emergency services, energy, financial services, food and agriculture, government facilities, healthcare and public health, information technology, nuclear, transportation, water and wastewater systems.
  - A list of all states currently with stay-at-home orders can be found here.
- Major cruise ship lines have enforced mandatory temperature screenings before boarding and some are requesting that passengers self-quarantine for 14 days after disembarking.
- Public transportation metro and bus systems are reducing hours of operations in multiple cities/states/countries, limiting workers’ options for essential travel, which could have cascading impacts on businesses’ operating hours and financial stability.
  - As public transportation usage declines, there could be an increase in road congestion.
  - Cities might need to focus on congestion management rather than public transit capacity issues.
- The World Transport Organization estimates a global road transport activity decline in 2020 of up to 20% and a possible loss of at least $800 billion in global operator revenues.
  - Over the road transportation companies and maritime shipping organizations should prioritize driver health and safety standards, especially for the handling of goods in quarantine areas.
  - Implementing traceability for worker and shipment movements could speed up solutions-making processes when supply chains are disrupted or damaged.
- Global railroad industry events have been postponed or canceled and many operators have enacted stricter sanitization measures and offered ticket refunds to travelers who experience service cancelations.
  - Hong Kong’s Mass Transit Railway will use cleaning robots to disinfect train depots and stations. This might protect human workers from possible virus infection.
  - Train companies operating between countries have suspended services depending on location and associated government travel restrictions affecting border control.
  - Travel restrictions designed to keep foreigners from entering other countries are not meant to prohibit the transportation of goods across borders; however, border crossing restrictions in Europe have caused traffic jams and delays for delivery drivers going cross-country and this could create further disruptions and delays in the global supply chain.
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of their employees telework.
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• TSA has a website that is updated with information about confirmed COVID-19 cases among TSA officers so that people who have traveled recently can take appropriate precautions if they may have visited airport locations where infections were confirmed.
• New US House and Senate coronavirus bills will include funding for essential public transit services.
• Airlines worldwide are facing bankruptcy due to travel restrictions and declining tourism and revenue.
  o The White House and Senate leaders have reached a deal for a stimulus package that will include millions of dollars in financial aid for airlines and air cargo carriers.
• The US federal government passed a financial stimulus package on March 27 that will provide $2 trillion in economic relief to American businesses and taxpayers.
  o The deal will be the largest congressional bailout in US history.
  o It includes billions of dollars in loans and grants for businesses, hospitals, cities and.
  o US and European stocks rose after the announcement a deal had been reached but if the stimulus plan does not create sustained economic rebound, financial analysts are uncertain what policies will be able to.
  o Airlines will receive $29 billion in grants and $29 billion in loans in addition to a tax reprieve from ticket, fuel, and cargo taxes.
• The potential for cyberattacks increases as more people work from home.
  o Security firms, law enforcement and the FBI all warn of increased phishing and cybercriminal scams targeting teleworkers and the healthcare industry.
    ▪ Threat actors have capitalized on coronavirus fear and panic by creating malicious applications with convincing GUI that is actually and information stealer. This malicious app also used subcomponents linked to the AZORult trojan.
    ▪ As of March 5, notable increase in domain names using the word “corona” and “covid” has been seen, according to Bit Discovery. 22 of those were confirmed as malicious by Trend Micro researchers.
  o On March 15 a cyberattack was launched against the US Health and Human Services department.
    ▪ The attack was reportedly meant to slow the department’s systems and overloaded HHS servers for several hours.
    ▪ The hack circulated disinformation about the COVID-19 pandemic and no threat actor has yet been identified as the perpetrator of the attack.
    ▪ Critical infrastructure healthcare organizations should review cybersecurity policies to mitigate potential risks.
  o Critical infrastructure sectors and the general public may be vulnerable to cyber threats based around companies selling fraudulent cures and treatments for COVID-19 or using phishing emails to gain access to private financial information.
• Resources
  o CISA Guidance on the Essential Critical Infrastructure
  o International Air Transport Association COVID-19 Financial Impacts Prediction
  o Be Careful Downloading COVID-19 Tracker Maps
  o Forbes: Watch Out for These COVID-19 Scams
  o How Threat Actors Capitalize on COVID-19 Fears
  o CDC Travel Advisories
  o Coronavirus Impact on Airline Industry
  o Shipping Operations and Port Impacts Worldwide
  o FBI Warning About Cyber Scams
Healthcare and Public Health

- Healthcare systems are struggling to get access to COVID-19 testing kits and therapeutics developed by private industry that could help reduce virus impact are very high cost.
  - The US federal government has reached out to the private sector to help finance and catalyze drug development, so healthcare systems could soon have more ready access to medical products.
  - A Phase 1 clinical trial has begun in the US to evaluate doses of an experimental vaccine developed by the National Institute of Allergy and Infectious Diseases.
  - Several drugs are being considered worldwide as potential COVID-19 treatments including the anti-Malaria drug chloroquine and hydroxychloroquine
- Another potential treatment for the virus is using the blood of people who have recovered from COVID-19 to treat those who still have it. Disease survivors have antibodies in their plasma that might be able to help treat severe cases.
- Insurance companies, if they have not already done so, might review crisis management plans and coordinate emergency decision-making teams to set safety protocols and help address challenges related to alternative work arrangements. A helpful resource for insurers responding to COVID-19 pandemic can be found here.
- The rapid spread of COVID-19 in China, Italy, and South Korea overwhelmed those countries’ healthcare systems.
  - US state officials continue to collaborate with the CDC and other health agencies, and several local governments have declared emergencies to receive federal assistance with combatting the outbreak.
  - Some schools in the US and globally have been closed to reduce COVID-19 spread but this will likely strain other economic sectors as parents must determine how to continue working while also caring for children at home.
  - To mitigate impacts from education postponement, UNESCO updated its distance learning guide.
- Supply chain disruptions, especially from India and China, have caused shortages of critical pharmaceutical ingredients for some US drug companies.
  - At the beginning of March, the FDA announced it is working with a drug manufacturer (name undisclosed) to find alternatives to the active pharmaceutical ingredient the company cannot get access to due to COVID-19 supply chain disruptions.
  - The FDA also reminded US drug companies of legal requirements to notify the FDA of any anticipated supply disruptions. US hospitals are becoming increasingly overwhelmed by patients and lack of medical supplies.
  - A nationwide lockdown in India may exacerbate medical supply chain disruptions.
- Telemedicine is being used by members of the healthcare sector for infection control.
  - Tele-assessments mean physicians spend less physical time with infected patients, which also reduces the need for personal protective equipment. Telehealth could be a positive solution for organizations facing personal protective equipment supply shortages.
  - Telehealth limitations exist: the inability to listen to a patient’s lungs and still requiring a laboratory test to conclusively confirm whether someone has COVID-19.
  - Some hospitals have asked patients to use online healthcare chats and telemedicine, depending on the severity of their symptoms, rather than coming to a facility in person, to help prevent people who are not sick but just worried about being at risk from visiting healthcare locations where they could actually become infected.
- Multiple US states have announced stay-at-home orders for all non-essential businesses to close or allow 100% of their employees telework.
  - On March 19 CISA released a document detailing which employees should be considered essential for COVID-19 pandemic response.
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• The CDC will award more than $560 million to local US jurisdictions and states to support their coronavirus pandemic responses.

• **PPE theft** is affecting hospitals worldwide
  - Organizations might mitigate theft by re-examining what should currently be considered high value equipment
  - Security personnel should watch for behavioral indicators of theft and policies for PPE distribution to staff should be strictly adhered to
  - Healthcare facilities might limit public access to PPE and store it in locations with access controls or video surveillance and alarm capabilities.

• Modern Healthcare will hold a webinar on April 2 about how US healthcare providers are transforming operations to address the pandemic.

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  - It includes billions of dollars in loans and grants for businesses, hospitals, cities and.
  - US and European stocks rose after the announcement a deal had been reached but if the stimulus plan does not create sustained economic rebound, financial analysts are uncertain what policies will be able to.
  - The stimulus stipulates $200 million for the Trump administration to invest in telemedicine services and devices.

• Resources
  - CISA Guidance on the Essential Critical Infrastructure
  - FDA Supply Chain Update
  - Johns Hopkins Bloomberg School of Public Health: What US Hospitals Should Do Now to Prepare for a COVID-19 Pandemic
  - Be Careful Downloading COVID-19 Tracker Maps
- Forbes: Watch Out for These COVID-19 Scams
- How Threat Actors Capitalize on COVID-19 Fears
- CDC Travel Advisories
- Telemedicine Strategies Help Hospitals Address COVID-19
- US HHS Systems Hacked
- Public Health Emergency Coronavirus Response Guides
- CDC Monetary Award to State and Local Jurisdictions
- CDC Guidelines for COVID-19 Testing
- What to Know about COVID-19 Testing
- Public Health Emergency COVID-19 Healthcare Planning Checklist
- CDC Guidance for Healthcare Professionals
- FBI Warning About Cyber Scams