

# **Are You Ready for the Next Pandemic?**



## **A Focus on Behavior and Communications for COVID-19 Planning & Preparedness**

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## Introduction

Speaking at the 2017 World Economic Forum in Davos, Switzerland, Bill Gates warned government and business leaders of the serious and growing risk of disease outbreaks and bioterrorism, as well as the global lack of preparedness to effectively respond to such events. The Bill and Melinda Gates Foundation is a part of the Coalition for Epidemic Preparedness Innovations focused on preventing future disease outbreaks. He went on to say, *"I think an epidemic, either naturally caused or intentionally caused, is the most likely thing to cause, say, 10,000 excess deaths."*<sup>i</sup> On February 28, 2020, Gates published an article in the New England Journal of Medicine saying, *"COVID-19 has started behaving a lot like the once-in-a-century pathogen we've been worried about."*<sup>ii</sup> Many other public health experts started to echo his concerns.

Many experts echoed Mr. Gates' concern that we are not prepared, and it is important to remember that there will always be a "next" pandemic. Pandemics, including influenza pandemics, are triggered by "novel" diseases. Over the past 60 years, the number of new diseases has increased fourfold, and the number of large scale outbreaks has more than tripled since 1980. Leaders, planners and decision-makers must always have the risk of a pandemic well on their radar; another one can occur at any time. Right now, the COVID-19 corona virus is rated as having the greatest potential to cause a pandemic, as well as potentially posing the greatest risk to severely impact public health.<sup>iii</sup>

On January 30, 2020, the WHO declared the outbreak of a novel coronavirus, first detected in China, to be a public health emergency of international concern.<sup>iv</sup> On January 31, 2020, US Health and Human Services Secretary Alex M. Azar II also declared a public health emergency for the United States.<sup>v</sup> On February 11, 2020, the 2019 coronavirus was officially renamed COVID-19 by the WHO.<sup>vi</sup>

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*Influenza ("the flu") and COVID-19, the illness caused by the new coronavirus, are both infectious respiratory illnesses. Although the symptoms of COVID-19 and the flu can look similar, the two illnesses are caused by different viruses.*

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## Pandemics as an Operational Risk

As a specific type of threat to safety, security and operational continuity it is important to stay ahead of the curve in planning for health emergencies. Once a pandemic begins it can move around the globe very quickly due to air travel. The emotional and economic reaction to this type of crisis can now move even faster because of the ubiquity of mobile communications and social media.

*Pandemics are predictably unpredictable.* It is impossible to forecast when the next pandemic will occur or its impact. Because we cannot predict how bad a future pandemic will be, advance planning is needed for multiple scenarios of a pandemic (e.g. moderate, severe, or very severe). Unlike other types of disasters and crises, pandemics are a threat that affects the human assets of an organization rather than

physical or technological assets. Many organizational business continuity and emergency management plans focus on physical and technology assets, and do not always fully integrate the human impact of an adverse or disruptive event. Health emergencies are very sensitive to human behavior, communication, and perception of risk. It is critical that planners have a thorough understanding of the pandemic risk and make accurate assumptions about the behavior of the workforce and the communities around them.

Organizations can better protect their workforce from the impacts of a pandemic disease, reduce risks to critical business functions, and minimize financial losses for the enterprise over the long-term through well-managed response and recovery efforts. Planners can expect that employees will become ill, and some may die. They should plan for the possibility of losing employee skills and knowledge, at least temporarily. It is important to prepare for disruption of supply chains, the loss of critical infrastructure, such as electrical power, transportation, and telecommunications. It is also important to remember that pandemics can be long-emergencies, so planners must anticipate a crisis that can span a year or longer. It will be important to understand the nature of pandemics and the key elements of a pandemic plan, but also to anticipate the various behavioral and communications challenges that will affect the public's perception and response to such an event.

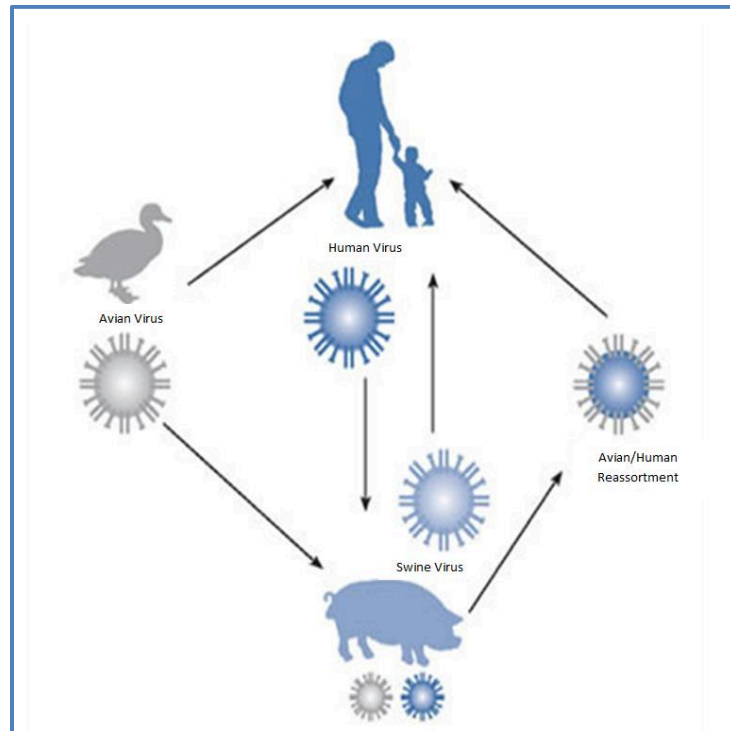
### **A Pandemic Primer**

Depending on the nature of the pandemic, the rate of spread and consequences could exceed anything we have encountered in the last century. The disease could spread easily, resulting in high rates of employee absenteeism. Viral infection and associated complications could lead to prolonged illness and death among a large portion of the population, and health services could be overwhelmed. Illness and death will have an emotional impact on family, friends, and colleagues.

To be designated as a pandemic by the World Health Organization (WHO), a disease must meet three criteria. They are:

1. A novel virus subtype must emerge to which the general population has little or no immunity;
2. The new virus must be able to replicate in humans;
3. The new virus must be efficiently transmitted from one human to another. Efficient human-to-human transmission is expressed as sustained chains of transmission causing community-wide outbreaks.

Coronaviruses are zoonotic. This means they first develop in animals before developing in humans. Novel viruses, those to which no one has immunity, arise from a process referred to as "*reassortment*," which involves swapping genes when bird flu (avian) and flu viruses in pigs (swine) co-mingle and emerge as a completely new strain. Pigs often serve as reservoirs for such viruses and can be infected by avian influenza and human influenza viruses, as well as swine influenza viruses. Like all influenza viruses, avian and swine flu viruses change constantly. Many of these strains developing from reassortment begin in regions of the world where people, chickens and pigs live in very close proximity, sometime residing inside the same dwellings. Researchers believe that COVID-19 may have been passed from bats to another animal, either snakes or pangolins, and then transmitted to humans. This transmission likely occurred in the open food market in Wuhan, China, where the disease originated.



Most people are very familiar with influenza (a.k.a. the “flu”). Having the flu can be a miserable experience, but in most instances is short-lived and not life-threatening. As a contagious respiratory disease, seasonal flu occurs every year, usually in the fall and winter. Seasonal flu is usually not severe in most people, because they are already partly protected by having had a similar flu virus at some earlier time. Pandemic flu is different and can be much worse. The term pandemic itself means that there is a recognized worldwide outbreak of a new strain which can spread quickly and widely from person to person because no one has immunity. Because it is a brand new strain of flu our immune systems are not prepared to defend against it.

There are typically three to four pandemics each century. During the 20th century, there were three serious influenza pandemics, including the Spanish Flu in 1918, the Asian Flu in 1957, and the Hong Kong Flu in 1968, and one lesser pandemic in 1977 referred to as the Russian Flu.<sup>vii</sup> These pandemics resulted in tens of millions of deaths worldwide, and in 2009 the WHO designated a strain of H1N1 as a pandemic, with that disease killing more than a quarter million people.<sup>viii</sup> Influenza pandemics are cyclical. Since there has not been another serious flu pandemic in many years, many experts believe that we are overdue for one. Health officials always operate with the assumption that the next one is out there and can emerge at any time.

Much has changed since the Spanish Flu in 1918, often referred to as the “*Great Pandemic*.” Some of those changes, such as advances in the medical field, would help mitigate the next pandemic, but others many escalate the risk. In the past 60 years the number of people on the planet has doubled, which means that more people would likely become infected and infect others. According to the United Nations

Department of Economics and Social Affairs, 54 per cent of the world's population now lives in urban areas, a proportion that is expected to increase to 66 per cent by 2050. Projections show that urbanization combined with the overall growth of the world's population could add another 2.5 billion people to urban populations by 2050, with close to 90 percent of the increase concentrated in Asia and Africa. With increased population density, the potential for the rapid spread of a disease increases. Lastly, the growth in air travel also facilitates the faster and wider spread of disease. Almost 4 billion trips were taken by air last year. Traveling along with those passengers are whatever contagious diseases they may have been exposed to. An infection in almost every corner of the world can find its way to a major city in less than a day.

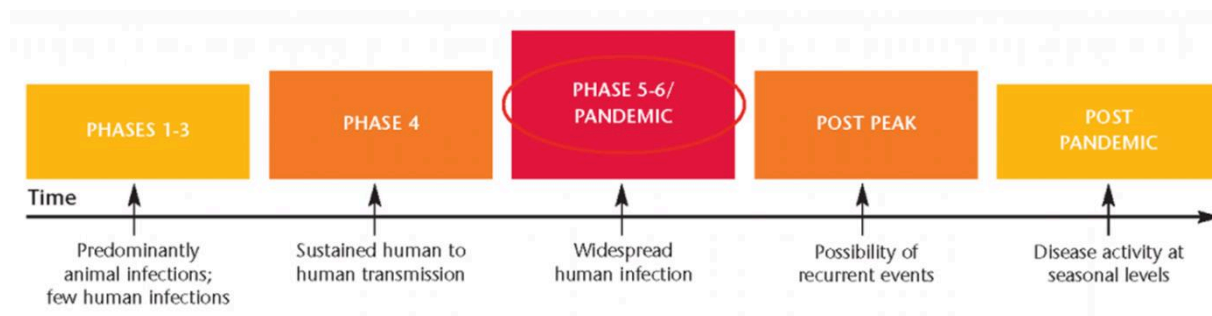
Most of the diseases that constantly circle the globe with travelers don't represent a great risk. Most flu viruses that moves about from region to region tends to be the less severe season forms of influenza. Seasonal flu and pandemic flu are different in several ways that create challenges for leaders and planners. More people are sick, people who get sick are sick longer, the symptoms are more severe and for several reasons, many more people die. Educating the public and the workforce about the differences between seasonal influenza and pandemic influenza is an important component of a larger communications strategy.

Seasonal Flu	Pandemic Flu
Outbreaks follow predictable seasonal patterns; occurs annually, usually in winter, in temperate climates	Occurs rarely (three times in 20th Century)
Usually some immunity built up from previous exposure	No previous exposure; little or no pre-existing immunity
Healthy adults usually not at risk for serious complications; the very young, the elderly and those with certain underlying health conditions at increased risk for serious complications	Healthy people may be at increased risk for serious complications
Health systems can usually meet public and patient needs	Health systems may be overwhelmed
Vaccine developed based on known flu strains and available for annual flu season	Vaccine probably would not be available in the early stages of a pandemic
Adequate supplies of antivirals are usually available	Effective antivirals may be in limited supply
Average U.S. deaths approximately 36,000/yr	Number of deaths could be quite high (e.g., U.S. 1918 death toll approximately 675,000)
Symptoms: fever, cough, runny nose, muscle pain. Deaths often caused by complications, such as pneumonia.	Symptoms may be more severe and complications more frequent
Generally causes modest impact on society (e.g., some school closing, encouragement of people who are sick to stay home)	May cause major impact on society (e.g. widespread restrictions on travel, closings of schools and businesses, cancellation of large public gatherings)
Manageable impact on domestic and world economy	Potential for severe impact on domestic and world economy

Once a pandemic emerges, its global spread is inevitable. A pandemic can potentially reach all continents within three months. At present, COVID-19 cases have been identified on six of the planet's seven continents; only Antarctica has been spared.<sup>ix</sup> Countries are likely to attempt to prevent its spread by closing borders and restricting travel, impacting global businesses and the economy. Based on patterns of past pandemics, it is expected that a new strain would circle the globe in three waves. Each wave could last several weeks, separated by months.

For multinational organizations it is important to note that different countries and continents may be in different phases at any one time. It may take 12-16 months for a pandemic to be fully resolved. It will not be as severe across the entire timeline. The time line used by health officials begins with pre-pandemics phases characterized by primarily infection in animals and few human cases, followed by transition to phases in which there is sustained human to human transmission. At it's peak, the most severe pandemic phases include widespread human to human transmission which often occurs in two or three discrete waves of illness.

The first wave tends to be the most serious since no one has immunity to the disease from prior exposure, and the mass production of a vaccine is not yet in full swing. The final post-peak and post-pandemic phases are characterized by the possibility of a spike in new cases through complete resolution and a return to the normal seasonal flu environment. It is important for planners to continue to monitor the progression of new influenza strains and pandemics across all phases, and to be aware and ready for the unique challenges each phase may hold.



As mentioned, one of the complicating factors in a pandemic is that vaccination would be possible only after several weeks or months. Since manufactures of those vaccines must have live samples of the new strain to begin production, and as a novel disease, they are not able to anticipate or pre-produce the right sort of vaccine. It is also unclear if currently used antiviral medication would be effective on a novel strain. In a significant pandemic, there would not be enough vaccine or antiviral medication to treat the majority of the global population. For most countries, pharmaceutical interventions will not be an option; therefore, a range of non-pharmaceutical interventions would be the primary method of defense. Non-pharmaceutical approaches include:

- Social distancing
- Closing schools
- Bans on mass gatherings: business, cultural and religious
- Bans on travel
- Isolation

- Quarantine

More accurately, even developed countries with robust healthcare systems would need to respond with a blend of pharmaceutical (vaccine, anti-viral medications, etc.) and non-pharmaceutical behavioral interventions to limit the spread of disease and resulting psychological, social and economic disruption.

## Planning Assumptions

Disease outbreaks, especially those as large and sweeping as a pandemic, can result in cascading social and economic disruption. Because pandemics are a type of crisis that primarily affects people, significant numbers of people are likely to be offline due to illness, and the impact can be dramatic. The major areas of impact include, but are not limited to:

### Livelihood

Income loss and decreased economic activity: Both earning and spending patterns can change radically during pandemics. The sick are not able to go to work; the well are often home caring for the sick, especially if they have children or elderly loved ones. This is particularly devastating to hourly workers. Sick time, vacation time and other time off can quickly be consumed leaving even salaried workers in a difficult financial situation.

Travel, entertainment, and retail sales reduction: In serious public health emergencies, officials may limit or ban travel, large public gatherings or close large shopping areas where people gather and can pass along a disease. Even absent of government intervention, many would be fearful of being out and around others who may be sick, and would self-isolate or limit unnecessary travel outside the home.

### Human Health

High illness and potentially higher death rates: By definition pandemics involve effective human-to-human transmission of a disease; therefore, there will be substantial numbers of sick and depending on the virulence of the unique strain, potentially many dead, especially in the first wave when vaccine is not available, and no one has yet to develop immunity.

Overstretched health facilities: In addition to those who are truly sick, hospitals and healthcare facilities can be overrun with the “*worried well*,” who by definition are people who do not need medical treatment, but who visit the doctor or hospital to be reassured. When the daily news is dominated by stories about a pandemic, anyone experiencing a sniffle or cough is likely to be concerned that they have a more severe illness and turn up at healthcare providers for testing or treatment.

During the 2009 H1N1 influenza pandemic, Dr. Mark Bell, principal of Emergent Medical Associates, which operates 18 emergency departments in Southern California, told CCN “*I haven't seen such a panic among communities perhaps ever*,” Bell said. “*We are spending significant time in the emergency department, calming people down. Right now, people think if they have a cough or a cold, they're going to die.*”<sup>ix</sup> In public health and emergency circles this response is often referred to as “*surge*,” a flood of people sick or just scared, demanding healthcare services.



Disproportionate impact on vulnerable populations: Those with limited resources, mobility or other barriers to accessing healthcare are often at greater risk. They tend to get sick in similar rates as other groups, but often stay at home or in the community longer without care, so they can become much sicker and also spread disease more widely. Immigration status is one concern that often prevents people from reaching out for healthcare and in a large-scale disease outbreak, this can have profound consequences for the community.

### **Governance and Security**

Increased demand for governance and security: Crimes of opportunity arise, in part, from an absence of capable guardians. Police and security personnel also get sick and die at the same rates as the general population, so there are likely to be less public safety workers available, including all types of first responders and public works employees. This may be happening at the same time that there is a sharp increase in demand for law enforcement and EMS assistance. As in other sectors, there is likely to be significant gaps between the need for services and availability of services simply because so many workers are not able or willing to report for work.

Higher public anxiety: Threats that are invisible, such as diseases, produce different types of fear and stress reactions, most notably acute anxiety. The public's perception of the risk and confidence in the government's ability to effectively respond are critical factors shaping the public's response.

### **Social and Humanitarian**

Deterioration of coping and support mechanisms: In typical disaster and emergency scenarios, people get through the crisis in their own time and on their own terms using their natural support systems. Family, friends and faith or personal beliefs are usually sufficient to help them cope and ride out the storm. But during health emergencies, people may not be able to connect in the same ways. In fact, social distancing is a common first line of defense in pandemics and reduces the support people can offer each other.

Isolation and quarantine policies: Isolation separates sick people with a contagious disease from people who are not sick, while quarantine separates and restricts the movement of people who were exposed to a contagious disease to wait and see if they become sick. Both approaches to limiting the spread of disease have social consequences. The most significant source of anxiety in disasters is separation from loved ones. Isolation and quarantine can dramatically increase levels of stress during a health crisis. It is also foreseeable that in severe pandemics, the large numbers of dead would require changes to funeral and burial practices that can affect grief and bereavement among loved ones, further complicating the emotional response to the crisis.

### **Economic Systems**

Trade and commerce disruptions: As previously mentioned when discussing the impact on livelihoods, a diminished workforce results in reduced earning and spending, not just by individuals and households, but also by businesses. Demand for consumer products can slow resulting in layoffs and decreased revenue. There may be an increased demand in healthcare services and goods, but businesses would likely

have difficulty meeting that demand due to reductions in the workforce and supply chain disruption. Beyond supply chain concerns, disruption or closure of financial markets and banking would affect investments and access to capital during a time when businesses may have an increased need for funds to shore up operations.

Interruption of regular supply systems: With fewer workers available, keeping up with production and delivery of materials and goods will result in the disruption of the supply chains. From loading ATMs with cash to treating sewage and waste removal, all type of business and infrastructure functions would be affected.

Levels of disruption are also determined by the phase of a pandemic, the number and severity of the different waves of disease, and how quickly vaccine can be made available. Planners should assume, at a minimum, the levels of disruption discussed here will be likely.

Unlike many disaster scenarios, a pandemic can devastate the workforce and leave physical structures and technologies untouched. Most Continuity Plans of Operations Plans (COOPs) or Business Continuity Plans (BCPs) are heavily biased towards recovery of properties and not people. Premises and systems will be largely unaffected; it is people who will be unavailable.

### **Key Elements of a Pandemic Plan**

In light of the wide reaching impact across all sectors, organizations may have to rapidly change the ways they operate. Some possible changes may include expanding remote capabilities to reach clients or provide services. Supporting the workforce through a long emergency that may involve social distancing and restricted travel may also mean increased telecommuting, expanding call center operations for customer service and support, and job-sharing to compensate for sick or deceased employees.

Due to the complexities of health emergencies, it is important that organizations develop, test and maintain pandemic plans even during times when there is not a virus with pandemic potential on the horizon. The U.S. Department of Homeland Security<sup>xi</sup> recommends that a bare bones pandemic plan should:

#### Identify essential functions:

- What tasks are essential to the continued operation of your business?
- Examine how essential functions would continue with reduced available workforce. (Plan on absentee rates of between 30 and 50%).
- Identify non-essential functions or tasks that could be deferred.
- Develop plan for prioritizing functions and reducing service or production levels.

#### Identify essential positions:

- Identify persons capable of filling each essential position. Triple redundancy is minimum goal.

Develop emergency staffing plan:

- Identify non-essential functions where the workforce could be assigned to essential functions.
- Identify contract labor sources for essential functions.
- Examine labor contracts for emergency clauses affecting staffing.
- Identify essential suppliers of goods and services.
- Determine how suppliers will provide goods and services if their workforce was impacted by pandemic illness.
- Examine stockpiles of essential materials.

Develop plan for emergency management.

- Outline decision-making process during times of emergency.
- Establish organizational structure for emergency operations.
- Plan for succession.
- Develop contact lists and update on a monthly basis.
- Communicate plan and train essential position holders.

Communications:

- Develop process for external communications (public and clients).
- Develop process for internal communications (Crisis Communication Plan).
- Develop plan to keep employees informed on pandemic news.
- Identify triggers that would cause management to consider reducing service or production.
- Examine fiduciary impact of reduced service or production.
- Develop recovery plan.

Examine operations for mitigation efforts:

- Ensure cleaning chemicals are appropriate for disinfecting properties.
- Provide anti-viral hand sanitizer where appropriate.
- Consider appropriate modifications to sick leave and return to work policies.
- Provide around the clock call in procedure for ill employees.
- Consider hygiene reminders in restrooms, locker rooms and food preparation areas.
- Identify “high contact” jobs (ticket takers, money handlers) where employees will routinely touch patrons. Focus disease prevention training in these areas.
- Consider providing sanitizer in public areas.
- Evaluate stores of consumable products and increase stock on hand.
- Review maintenance schedules for all life safety and emergency equipment.
- Establish accounting methods for all expenses related to pandemic preparedness and response.
- Examine the feasibility of telecommuting/work from home
- Schedule onsite flu vaccinations

### Training and Exercise:

- Provide refresher training on emergency procurement procedures.
- Provide refresher training on proper use of disinfecting cleaners on restroom surfaces.
- Provide refresher training on handling of bodily fluid clean up procedures.
- Exercise your Crisis Communication Plan
- Practice setting up your Emergency Operations Center
- Conduct a table top exercise

Communicate your plan to the appropriate outside agency or governing body, such as regulators, if necessary.

### Plan to monitor the impact of a pandemic.

- Establish a method for reporting on absentee employees.
- Establish a supervisor's authority to require ill employees to take leave.

### **Critical Behavioral Concerns**

All pandemic planning efforts must be informed by an understanding of health emergency-related behaviors. Members of the community and the workforce will not react to this type of crisis in the same ways that they respond to natural disasters or acts of violence. It is important to remember, regarding pandemics as well as other emergencies, that the human response to such events is both phase-specific and hazard-specific. It is helpful to consider the three common types of community and workplace responses to disasters and emergencies, and how they differ in health crises.

While the most common collective behavioral response can be summarized as *"neighbor-helps-neighbor"*, there are other event factors that can prevent this common response (i.e., high levels of fear) and in some situations create a competitive survival response that pits neighbor-against-neighbor, thereby eroding the community or co-worker cohesion that is so important to disaster recovery.

In the wake of a disaster or crisis people typically look for, and find ways to assist each other. Community and organizational cohesion plays an important role in both response and recovery. This *"neighbor-helps-neighbor"* impulse is referred to as a *"Type I"* behavioral response.

As fear escalates, it affects behavior in several important ways. For example, in a disaster or emergency involving the real or perceived risk of contagion or contamination, people who would otherwise reach out to help others may be prevented from doing so due to the possibility becoming ill or injured through contact with other. A *"Type II"* behavioral response characterized by this fear or concern can be understood as a *"neighbor-fears-neighbor"* reaction. This sort of reaction can quickly erode community and/or organizational cohesiveness; a cornerstone in resiliency and a necessity in recovery.

If fear increases to the level of panic, in which each individual is concerned with their own or their family's survival, they may disregard the needs or safety of others, as well as laws and social conventions. Panic although uncommon in most disasters, results in a condition in which *"neighbor-competes-with-neighbor"* for a chance to escape or to obtain critical supplies. This is referred to as *"Type III"* behavioral response.

Although panic is unlikely in most disaster scenarios, the potential for panic is greater in a pandemic. The possibility of a competitive, panicked reaction can be driven by economics, and how scarce assets are allocated. There are foreseeable triggers for competitive behaviors, including:

- Certain medical equipment, such as ventilators, may be in high demand and low supply.
- A likelihood of price gouging and the development of a “*black market*” for essential goods
- Vaccines, antiviral medications, hospital beds, and later perhaps basic necessities, will all likely be in tremendous demand.
- Other important goods, such as food, water, and power will be in short supply, as will critical medicines like insulin, heart drugs, and other prescription medications.
- Masks, gloves, antibacterial soaps, and other protective equipment, are all also likely to be hard to find.

In addition to the influences of economics and the scarcity of critical supplies, another important behavioral factor is the “*bookends effect*.” Bacteria and viruses are invisible to the naked eye. They are colorless, odorless, tasteless and silent. Unlike natural disasters or acts of violence, such as bombing or shooting incidents, the exposure to a contagious disease may be undetected until people become ill or injured. In disasters and emergencies in which the threat is invisible and cannot be seen, smelled, heard or tasted, it is likely that those who believe that they could have been exposed may present with a range of physical and psychological symptoms that can confuse and compound the demands on the emergency management and healthcare system. Planners, first responders and first receivers should be aware of and anticipate these reactions. They should also plan for the potential of disruptive and perhaps dangerous crowds at Points of Dispensing medication and supplies, or other healthcare venues.

More likely than the traumatic stress reactions commonly associated with other types of disasters, leaders and planners should anticipate the likelihood of members of the community and the workforce presenting one or more of the following:

Medically Unexplained Physical Symptoms (MUPS) / Multiple Idiopathic Physical Symptoms (MIPS): These interchangeable terms describe the phenomena in which individuals present with actual physical symptoms for which the physician or healthcare worker cannot find a medical cause. This does not necessarily imply that a physical cause does not exist, but rather that the cause for given symptoms is uncertain or unknown. The symptoms are real and often observable, but the cause is questionable therefore complicating decisions about medical intervention or treatment. MUPS or MIPS may be synonymous with the term “*psychosomatic*” or “*psychogenic*” complaints, where the cause or perception of symptoms is psychological in origin.<sup>xii</sup>

Misattribution of Normal Arousal: In a high state of emotional and physiological arousal, the person exposed or who believes they may have been exposed to a health hazard can misread their normal arousal response (i.e. elevated heart rate, blood pressure, respirations etc.) and interpret those reactions as confirmation that they have been exposed and may be ill or injured. This misinterpretation of their normal stress response, like MUPS/MIPS, can contribute to a surge in healthcare-seeking behavior and can create runs on hospitals, emergency medical services, and pharmacies.

Mass Sociogenic Illness (MSI): This term describes the situation in which psychological reactions or symptoms can spread within a group or community, but do not seem to have a common cause. Mass Sociogenic illness is a psychosocial reaction, sometimes referred to as “*mass hysteria*” or “*epidemic*”

*hysteria.*” People present with and seek medical care for physical reactions to a perceived hazard *en masse*, increasing demand on emergency responders and receivers, as well as potentially complicating disaster or emergency management operations.

Surge: Alone or in combination, the above reactions can drive a surge or sudden, dramatic increase in healthcare-seeking behavior. This can be witnessed as a run on pharmacies for medications or medical supplies, or as a “*worried well*” response in which many people, with and without actual symptoms of an illness overwhelm hospital emergency departments seeking examinations or treatment.

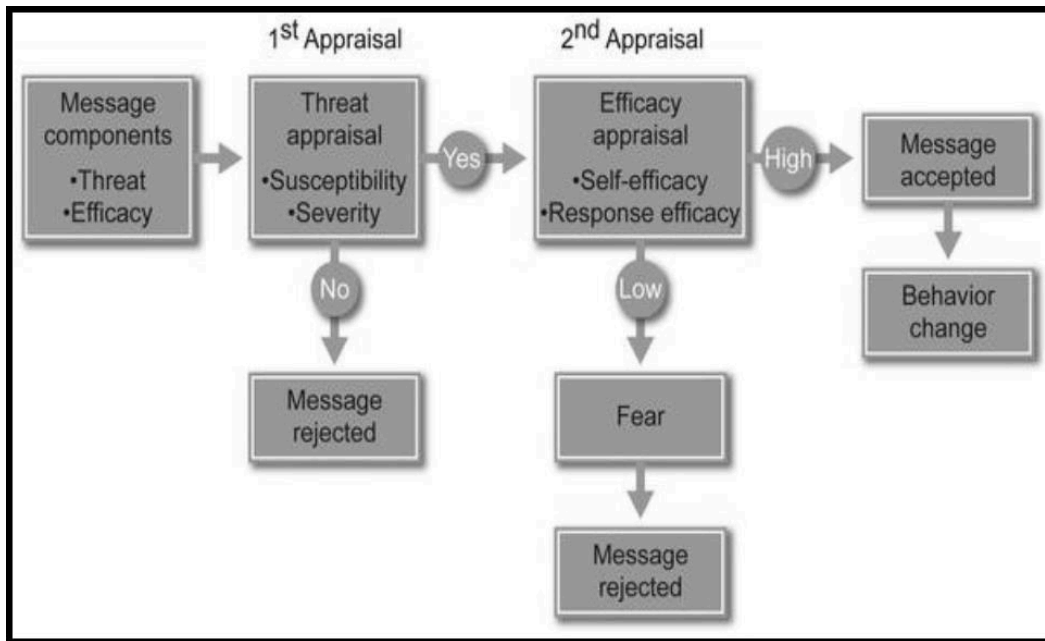
Distrust: Unfortunately, all of the above psycho-medical reactions are often accompanied by a greater distrust of public officials who may be perceived as withholding or manipulating information to shape the public’s response. As such, well developed communications become even more important and must take into account the complex behavioral reactions described here. During times of pre-existing doubt about the honesty or accuracy of reports from organizational or government leaders, distrust exacerbated by a disease outbreak can seriously complicate the overall situation.

Public health crises, such as pandemics or disease outbreaks, as well as acts of unconventional terrorism involving chemical, biological, radiological or nuclear (CBRN) materials, are likely to produce these reactions. Planners should consider the possibility that these and other behavioral reactions may require modification to existing plans or procedures.

### Key Communications Strategies

It is important for leaders and decision-makers remember that in situations characterized by fear and stress, people receive information differently, process information differently, and act on information differently. All of this suggests that messages must be therefore, be crafted and delivered differently. It can be difficult to find the right balance when sharing information about a frightening situation or hazard. One approach to discussing information about fearful situations is known as the Extended Parallel Process Model (EPPM)<sup>xiii, xiv</sup>. This is a framework which attempts to predict how individuals will react when confronted with fear-inducing stimuli.

Research demonstrates that people go through a sequential appraisal process in decision-making related to crisis situations. This screening or information filtering process occurs quickly and subconsciously. It involves two interrelated steps referred to as “*confidence*” and “*concern.*”



When presented with information about a potential threat to health or safety, the first level of appraisal involves “*susceptibility*,” the question of whether the threat may affect a given individual. If that individual does not believe that the current threat would affect them (perhaps due to age, health status or other factors) they reject the message. If they do in fact believe that they would be at risk, the next level of appraisal is “*severity*.” If the threat does not seem particularly dangerous or out of the ordinary, again the message is likely to be rejected, and the individual is unlikely to take any meaningful action to protect themselves. If the same person believes that the risk at hand does affect them and that it may be serious, they are likely to move on the next level of appraisal, referred to as “*confidence*.”

Confidence is assessed at two levels: the belief that the individual is prepared and knows what to do when confronted by the threat and the belief that their organization or community is prepared and knows how to handle the threat. The first is referred to as “*self-efficacy*,” the latter as “*response efficacy*.” When people understand the risk is real and applies to them, and also feel that both they and their organizations and communities are up to the challenge, they are in the best position to participate in an effective response to the threat.

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*Leaders should understand that sugarcoating or minimizing the threat to avoid frightening people can have an adverse effect. If there is not a realistic degree of concern, tempered with actionable information for protection, people are not likely to engage in productive response behaviors. Likewise, if there is a strong concern message, followed by poor confidence, the result is likely to be increased fear.*

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There are several other risk and crisis communications concepts that are also important in guiding information sharing about health-related risks. These include finding the right balance between communicating the technical or medical facts associated with a risk, and empathy. It is important for members of the workforce or community to feel that leaders “*get it*.”

As a general rule, the more frightening the information, the more important it becomes to lead with empathy. Whether in written or verbal communications, it is helpful to open with empathic statements such as, “*We recognize that any discussion of a disease outbreak can be very frightening...*” or “*When any of us is confronted with a risk to our health, it is natural and understandable to be concerned and frightened...*” Making such statements as a lead-in can convey compassion and let the audience know that you are tuned in to their thoughts and feelings about the situation. Although people may be clamoring for detailed information about the disease or what is being done to protect them, investing the first few seconds of any communication in addressing the emotions involved usually pays a good dividend.

Leaders must also remember that people tend to judge the messenger before the message. Under extreme stress and the powerful influence of fear, the messenger must understand the importance of being credible, sincere and genuine, as well as the reality that facts play virtually no role compared to perception. It is equally important to remember that speed counts, so having action-oriented shelf kits and phase-specific message templates ready can save critical time. Consistency and accuracy in messaging is vital, and messages must come from a trusted source. Leaders must never speculate about health risks; remember that it’s very difficult to “*unscare*” people! It is very important to get your message right the first time. Keep messages clear and simple. During health crises such as pandemics, communications can go wrong when there are mixed messages from multiple experts, information is released late, or leaders fail to counter rumors and myths in real-time.

### Summary & Conclusion: Uncharted Waters

Social media is a two-edged sword in public health emergencies. There have been many examples of social media apps and emergency notification technologies expediting the delivery of good information to a concerned public, but there have been an equal number of instances in which bad information, misinformation and rumor have moved through communities with lightning speed fueling the complex behavioral reactions described earlier. Social media in public health emergencies does not *cause* extreme psychosocial or psychophysiological reactions, but it can contribute to the rapid and potentially exponential fear reactions in the community.

The public’s response to the next pandemic will look nothing like the last. A pandemic at this particular moment would likely be characterized and greatly complicated by three cultural phenomena that were not present during the 2009 H1N1 or any prior pandemic:

- Ubiquitous social media
- Fake news
- Alternative facts

The confluence of these three factors with an actual pandemic event has the potential to create a social response which can be described as, “*hyperaccelerated epidemic hysteria.*”

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*This is a dynamic that emergency managers, business leaders, and public officials have never encountered in any previous health crisis. It is completely unique to this specific time and place in history, and may represent one of the most daunting challenges that governments and businesses have ever faced.*

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The intersection of the known psychosocial and psycho-physiological reactions to disease outbreaks with the lesser known impact of social media, fake news, and alternative facts can only serve as a force multiplier for the potential emotional and behavioral impact of a pandemic. Social media alone will likely serve as an accelerant, moving good information, bad information, misinformation, and rumor instantly through our communities and organizations. Efforts to inform, educate, and reassure a worried public may be badly undermined by the advent of fake news and alternative facts, as well as distrust of leaders.

### Are You Ready?

It is difficult to say with complete confidence that we can ever be completely ready for the next pandemic since unpredictability is such a critical aspect of this type of risk. There will be another pandemic and we cannot let our guards down. Even though the current COVID-19 virus is not yet classified as a pandemic, it does have pandemic potential. All concerned with health, safety and security in communities and organizations must continue planning and exercising “*as if*.” In the immortal words of President Kennedy, “*The time to repair the roof is when the sun is shining.*”

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