American Petroleum Institute

PANDEMIC PLANNING GUIDE

API GUIDANCE DOCUMENT 1180

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Suggested revisions are invited and should be submitted to the Director of Operations Security & Emergency Response Policy, API, 200 Massachusetts Ave, NW, Washington, DC 20001.

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INTRODUCTION

The oil and natural gas industry supports 10.9 million jobs in America.[1] Therefore, it is important that oil and natural gas companies are aware of and plan for the potential threats that could directly or indirectly impact their employees and operations. The Department of Homeland Security's Strategic National Risk Assessment identified human pandemic outbreaks as one of "the types of incidents that pose the greatest threat to the Nation's homeland security." More specifically, the assessment describes the potential impacts of a virulent strain:

> ***A virulent strain [...] could kill hundreds of thousands of Americans, affect millions more, and result in economic loss. Additional human and animal infectious diseases, including those previously undiscovered, may present significant risks."***[2]

Planning for such an event, including understanding strategies to limit the spread of a disease, the operating changes that might need to be considered if an outbreak were to occur, and challenges that both employers and employees may face should be considered for inclusion in a company's business continuity and emergency preparedness responsibilities. Recognizing the unique challenges and operating considerations present in the oil and natural gas industry, API provides the following document to assist companies in the creation of their infectious disease or pandemic plans, as well as for those who are updating existing plans in light of changing information or threats. This is general information and both science and methods change over time; individual companies are responsible for the evaluation of the recommendations and creation of their own guidance.

This guide has been issued to assist companies to develop relevant content, define their scope and identify potential sources of information. Concepts that are discussed include resources and resource staging, communications, transmission routes, and how to work with other organizations (such as contractors and joint venture partners) during an event. While this guide is not meant to be comprehensive, it may provide a roadmap for plan development that includes many considerations pertinent to the oil and natural gas industry.

[1] https://www.api.org/news-policy-and-issues/american-jobs/powering-the-workforce-of-the-future

[2] http://www.dhs.gov/xlibrary/assets/rma-strategic-national-risk-assessment-ppd8.pdf

[3] http://www.dhs.gov/xlibrary/assets/rma-strategic-national-risk-assessment-ppd8.pdf

DEFINING REGIONS 1

DEFINING REGIONS

With the mobility of workers, consider the overlap between the regional impact of a pandemic disease and employees. Depending on the work location, a region may be easily defined; however, a multifaceted approach is needed if a company has several locations or its employees come from a large region.

- The region of a company with one discrete location may be easily defined. However, even in such cases, the work location, as well as the regional sources for employees, contractors, and supporting organizations need to be considered.
- Defining the region of companies with multiple locations or multiple lines of business can be more challenging.
    - Multiple discrete locations in the same localities with no or little overlap will likely require separate plans.
    - Discrete locations that are in different localities may require additional planning because laws may differ.
    - Multiple locations with overlap may increase the size of the area that employees will come from, but the ability of locations to share resources may make planning easier.
    - Some companies have extended rotational work that allows employees to live hundreds of miles away from the work site and fly in and out. These worksites can either consider the entire U.S. as a region or may want to break the region into subregions. Considerations include:
        - » Providing care across state/territory lines without operations in those states.
        - » Effectively communicating with the workers may provide challenges.
        - » Employees traveling from an affected location may bring diseases with them to a location that is not yet affected.
        - » In a severe pandemic, transport may be disrupted.

SOURCES OF INFORMATION 2

1. THE WORLD HEALTH ORGANIZATION
2. THE CENTERS FOR DISEASE CONTROL AND PREVENTION
3. THE INTERNATIONAL SOS
4. THE INTERNATIONAL MARITIME ORGANIZATION

SOURCES OF INFORMATION

It is important to rely on and provide accurate and timely information. Determining the best sources of information can be challenging, particularly when there are widely different approaches taken by public authorities. Checking with the specific jurisdiction's health authority to understand current pandemic conditions, options, and any economic or travel restrictions is a typical starting point.

Below is a list of official government organizations and institutions that are generally known to disseminate reliable information:

- The Centers for Disease Control (CDC) website will be the best source of authoritative information related to pandemic response in the U.S. While much of the legal authority for infectious-disease response rests at the state and local level, states and local public health agencies will often base their responses on the scientific guidance provided by the CDC. Often, the CDC will establish an incident-specific web page that will include all the latest information and public health guidance related to a specific pandemic incident.

http://wwwnc.cdc.gov/travel/notices

- The World Health Organization has put in place an international travel and health information site that includes updates for travelers, prevention measures, and disease distribution maps.

http://www.who.int/ith/en/

- The Overseas Advisory Council (OSAC) is a program in the U.S. Department of State that provides relevant and timely threat information specific to countries, operations, and personnel to private-sector partners. This program can often provide information regarding country evacuations, enhanced security procedures, or emergency response operations.

https://www.osac.gov/Pages/Home.aspx

- International SOS is a worldwide medical and travel security services company with locations across the globe. Their website has a dedicated pandemic preparedness section that provides up-to-date information for its members.

Pandemic Preparedness (internationalsos.com)

- The International Maritime Organization (IMO) has provided pandemic-related guidance and information via circular letters for IMO Member States, seafarers, and shipping.

https://www.imo.org/en/MediaCentre/HotTopics/Pages/C19CLs.aspx

- The International Chamber of Shipping (ICS) is a global trade association for shipowners and operators. The organization provides its perspective on shipping industry best practices and guidance on many topics, including seafarer health and wellness.

www.ics-shipping.org

- The Occupational Safety and Health Administration (OSHA) is a regulatory agency overseeing workplace safety in the U.S. There may be applicable workplace standards and requirements as it relates to pandemics and infectious diseases (some states, such as California, have their own such agency and rules may differ).

https://www.osha.gov/laws-regs
https://www.osha.gov/stateplans/

- The Environmental Protection Agency (EPA) regulates pesticides, including antimicrobial pesticides. EPA maintains list of products registered in the U.S. to be used against common pathogens (some states have their own environmental agencies and lists).

https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants

- The U.S. Food and Drug Administration (FDA) regulates drugs and medical devices that may be utilized in the U.S. during a pandemic and provides advice and guidance. FDA may issue an emergency use authorization (EUA) to facilitate the availability and use of medical countermeasures, including vaccines, tests, and medicines during public health emergencies.

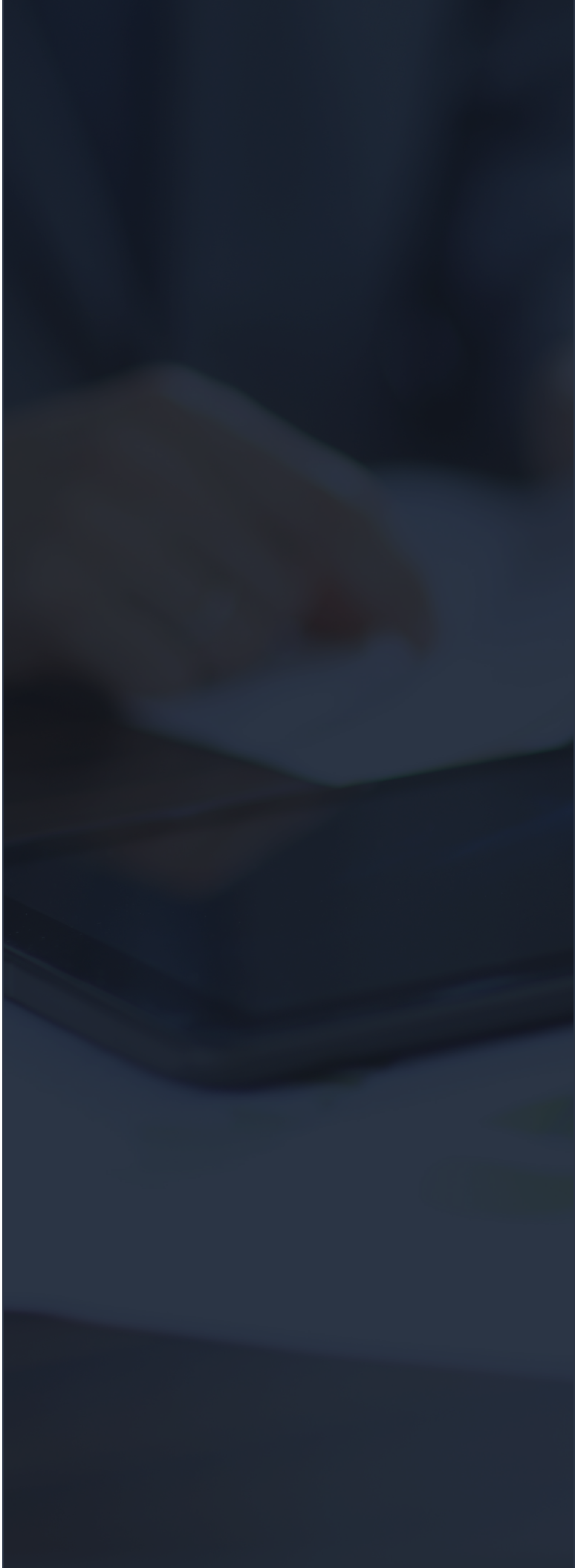
https://www.fda.gov/

- The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) writes and publishes standards, conducts research, and provides education related to heating, ventilation, and air conditioning systems. ASHRAE has guidelines and resources it recommends for reducing infectious aerosol exposures—typically through ventilation and various air-cleaning strategies and measures.

https://www.ashrae.org/technical-resources/resources

- The International Association of Oil & Gas Producers (IOGP) and IPIECA are international oil and gas industry associations that provide guidance documents and resources related to pandemics.

https://www.iogp.org/
https://www.ipieca.org/



INFECTIOUS DISEASE TYPES AND PLANNING PREPARATION

3

INFECTIOUS DISEASE TYPES AND PLANNING PREPARATIONS

3.1 GENERAL

Planning for infectious diseases may involve both internal and external parties to the organization. Consider developing an infectious disease plan that identifies and includes major stakeholders affected by this plan, as well as a process to mitigate, prepare for, respond to, and recover from an infectious disease or pandemic event. This section contains factors that organizations may want to consider in their plan.

Transmission Routes

- In the context of pandemic planning, transmission is defined as how a pathogen is passed from an infected individual to another individual not currently infected with the same pathogen. The term usually refers to the movement of a biological agent from one person to another by one or more of the following means:
- **Direct transmission** takes place when an infectious agent is directly transferred from an infected person, or its natural reservoir, to a susceptible person via the following routes:
  - Droplet spread—direct spray of organisms, from an infected person to a susceptible one, in relatively large, short-range droplets generated via coughing, sneezing, or talking. Droplets are heavy and fall to the ground after traveling a short distance.
  - Direct contact— physically touching an infected person or their bodily fluids, or making direct contact with soil or vegetation harboring infectious organisms
- **Indirect transmission** is the transfer of an infectious organism from the source via contaminated intermediaries. Examples of indirect transmission include:
  - Vectors—an organism that by itself does not cause disease; it transfers the pathogen from an infected host to a susceptible individual, such as a mosquito transmitting the West Nile virus from an infected person to a susceptible one.
  - Vehicles—an infectious agent that is transmitted via contaminated animals or objects. The vehicle can be food, water, biologic products, and fomites (inanimate objects contaminated with pathogen after being in contact with an infected source).
  - Airborne—an infectious agent is carried by dust or droplet nuclei suspended in air, including material that has settled on surfaces and become resuspended by air currents or particles blown from the soil by the wind. Droplet nuclei are small in size and may remain suspended in air for a long time and be blown over long distances, compared to droplets that fall to the ground after a short distance.

3.2 PLANNING TEAM

The planning team may be responsible for prevention and preparedness activities and is comprised of key departmental and subject-matter representatives. This team may also serve as a subject-matter resource to the relevant company emergency response elements when responding to hazards posed by a virus. Consider involving stakeholders that may have valuable input, including members from inside and outside of the organization. The planning team may also report

regularly to senior leadership on prevention and preparedness activities related to their objectives and strategies. The following are examples of individuals or teams to consider for a planning team, as well as objectives and strategies that the planning team may want to consider:

3.2.1 INTERNAL STAKEHOLDERS

- **Occupational Health, Safety, and Medical Team:**

- Infectious diseases can come in all shapes and sizes. An organization's medical director or advisor may help develop pandemic-related policies and strategies to improve employee health and can act as a subject-matter expert (SME) to identify, communicate, and advise on potential risk factors, including:
  - type of disease (virus, bacteria, fungus, etc.);
  - transmission routes;
  - severity;
  - preparedness of occupational health and medical programs and resources.
- Pandemic events often require specialized personal protective equipment (PPE) to prevent the spread of the infectious disease. An occupational health, safety, and/or medical team may be able to assist in identifying the right PPE for the right situation. Occupational health personnel can also advise and help with case management, including providing guidance related to infectious disease exposure, illness symptoms, testing, the return-to-work process, and additional safeguards. Consider using occupational hygienists who can perform risk assessments and recommend control measures by applying the hierarchy of controls, including ventilation measures.

- **Emergency Manager and Business Continuity Specialist:**

- Depending on the circumstances of the infectious disease or pandemic event, it may be helpful to activate the emergency response organization, which may include corporate, regional, and local teams. Including an emergency manager in the planning process may help shape organizational and coordination efforts.
- During a pandemic event, review emergency and/or business continuity plans. Emergency managers are typically familiar with such plans and how they interface with an infectious disease response process. Business continuity specialists often work directly with emergency managers to create protocols and develop alternatives for business leaders.

- **Suppy Chain Specialist:**

- Infectious diseases and pandemic events can spur a high demand in resources that may be in limited supply. The supply chain specialist may be able to assist in identifying these short lead items for possible stockpile or focused procurement. Expedited contracting processes may be required to enable quick turnaround of procurement activities.
- Travel services may be an important component during any pandemic preparedness plan.

- **Business Unit Leader:**

- Most infectious disease or pandemic events will impact an organization's business units. Keeping business unit leaders well informed can lead to better decision making and resolution of issues.

- **Human Resources Specialist:**

- During a pandemic or infectious disease event, normal work routines will most likely be altered. Human resources staff often have a significant role in ensuring efforts impacting personnel are aligned with internal policies.

- Human resources staff also add value as reviewers to any messaging that is distributed to employees or contractors

- **Information Technology Specialist:**

- Remote work is a new tool available to employers. IT may be able to provide employees with additional equipment and services needed to transition to this option.

- **Legal Specialist:**

- Many legal issues and risks can arise from any major response. An organization's legal team can help with interpreting changes to regulations and provide counsel on policy development and alternatives. Consider seeking legal review of documents and communications prior to their finalization.
- Developing and implementing infectious disease plans and safeguards will require the review of internal legal personnel. This review process will ensure that both company and regulatory liabilities are addressed.

- **Facilities Management:**

- Changes to building access, pre-entry protocols, sanitation/cleaning, ventilation, working arrangements, and more are all possible during a pandemic. Consult with facility management early when changes are contemplated.

- **Public Relations/Government Affairs:**

- Public relations and/or government affairs teams can assist in communicating to the planning team actions and regulations proposed or enacted by federal, state, or local governments. Additionally, these teams or individuals can communicate with media or federal, state, or local partners, if needed.

- **Technical Writers/Communications:**

- During a pandemic, technical writers can assist with reviewing, drafting, editing, organizing, and retaining documents, as well as developing communications for different audiences.

3.2.2 EXTERNAL STAKEHOLDERS

- **Local Emergency Planning Committee (LEPC):**

- Many communities use LEPCs to assist with overall preparedness during emergencies. They may be a valuable source for identifying local hospitals, clinics, ambulance services, and other municipal resources that could assist an organization during an event.
- LEPCs may also provide a means to communicate concerns as they arise.
- Consider using the emergency manager as the point of contact within the organization to establish this connection.

- **State/Federal Agencies:**

- Organizations in the U.S., such as the Centers for Disease Control and Prevention or a state's National Guard may prove to be valuable partners for resources and contingency planning. These agencies can be contacted directly or through the Sector Specific Agency for the Energy Sector.
- State and local public health agencies are often a key source of information and may issue public health orders and be able to provide assistance.
- Workplace safety agencies like OSHA may develop regulations pertaining to infectious diseases. Regulatory agencies may engage in enforcement and rulemaking activities with potential impact to business operations. These agencies may also have additional resources and guidance to help mitigate and prevent the spread of infectious agents.

3.2.3 OBJECTIVES STRATEGIES

The planning team can develop objectives and strategies under which to operate and benchmark progress made toward those goals. The following are examples of objectives and strategies related to an infection or pandemic response.

- Ensure the safety and security of employees, embedded contractors, and visitors.
  - Monitor the virus/disease and gather information concerning the cause, spread. and prevention.
  - Create, distribute, and communicate the necessary prevention information and response plans.
  - Identify and coordinate prevention and preparedness activities.
- Ensure continuity of operations regarding impacts from the virus/disease.
  - Develop contingency plans for possible work disruptions due to social distancing.
  - Identify and coordinate preparedness activities.
- Ensure enterprise-wide coordination of prevention and preparedness activities.
  - Conduct regular planning team meetings.
  - Share plans and guidance with departmental and asset teams.
- Ensure communication to relevant stakeholders.
  - Develop approved enterprise-wide messaging and updates.
  - Develop regular updates to senior management.

3.3 PLANNING PROCESS

This guidance is not meant to be a rigid format for a plan, but a general roadmap to help assist with a plan's composition. Each region or organization will have its own specific risks or challenges.

Consider establishing a schedule to periodically review plans to help them remain effective and accurate. In addition, consider reviewing plans after significant changes in conditions, regulations, or effectiveness of the existing procedures.

API PANDEMIC PLAN THRESHOLD 4

4 API PANDEMIC PLAN THRESHOLD

The timing of any response can be important. Triggering a plan too late may leave employees and operations vulnerable to infection, while implementing a plan too early may waste resources that could be critical later in the event.

All pandemics and emergencies differ. The following are examples of areas one should consider assessing when activating mitigation techniques and responses. Companies can also consider these areas to determine when to de-escalate their response.

Community spread: Community spread information can be gathered from local, state, and federal health authorities. Information is typically used to understand the % test positivity rate and seven-day cumulative cases per 100K population for the area.

Medical services: This information can be gathered from local or state sources. Factors for medical services include the cancellation of outpatient services, elective procedures, and similar measures. Facilities refusing new patients and closing emergency services may elevate this risk.

Business-essential services: This information can also be gathered from local or state resources and constitutes remote-work guidance, curfews, suspension of public services, required closures, and shelter-in-place orders from health officials.

Business disruptions: These considerations relate to the number of personnel in the office, worksite, or operational area that are unavailable due to sickness or other related disease factors. Personnel is typically critical to conduct the required business of the assets and will depend on the type of work and business criticality of that work.

Infection risk: This information can be gathered as it relates to the personnel in the office, worksite, or operational area, and is measured as the number of people that have either been infected and recovered or have been immunized.

As a company assesses its pandemic plan triggers, Table 1 outlines a modifiable list of potential response strategies to that assessment.

Table 1 - Suggested Mitigation Triggers		
Phase	Description	Response
0	No pandemic concerns.	• Implement normal good health practices (washing hands frequently, common areas cleaned routinely, hand sanitizer available in public areas, etc.)
1	News of a specific potential pandemic threat is circulated by the World Health Organization (WHO) or the Centers for Disease Control (CDC) with reports of human cases outside of countries of operation.	• Monitor disease progress. • Review/update company pandemic plan. • Provide generic disease information to employees as deemed appropriate.
2	News of a specific potential pandemic threat is circulated by the World Health Organization (WHO) or the Centers for Disease Control (CDC) with reports of human cases within countries of operation.	• Enact company pandemic plan • Begin non-invasive mitigation measures (e.g., wash hands more frequently, distribute hand sanitizer, clean common rooms more frequently, etc.)
3	WHO or CDC reports that a pandemic disease is present within the country of operation, but no reported cases are present in the region/area of operation.	• Begin mitigation measures (e.g., limit face-to-face meetings, reduce use of public transportation, etc.)
4	WHO or CDC reports that a pandemic disease is present within the region/area of operation.	• Continue mitigation measures (e.g., stop face-to-face meetings, restrict use of public transportation, implement PPE, etc.)
5	Cases have been confirmed within company/location and/or community/ local transmission is occurring	• Implement aggressive mitigation measures (e.g., exercise work-from-home plans, reduce human interfaces, etc.)

5 PREPARING FOR AN INFECTIOUS DISEASE CRISIS

5 PREPARING FOR AN INFECTIOUS DISEASE CRISIS

Prior to implementing any pandemic plan, it is important to be prepared before triggering the organization's action plan. This section discusses ways that organizations can better prepare themselves should they need to trigger their pandemic plan.

5.1 GENERAL

In order to maintain the health and welfare of the workforce, it is important for the company to consider doing the following.

- **Have an infection control plan.**

- Establish a partnership with the local public health authority and, as applicable, establish a location as a point-of-dispensing site so that the location has access to the national stockpile for medications and vaccinations as needed during a public health emergency.
- Recommend and/or require masking or respiratory protection as needed. Provide information on the appropriate type of mask or respirator to provide protection against respiratory infections and reduce transmission of infections.
- Utilize testing, questionnaires, thermal screening, or other similar measures to identify potential infections.
- Raise awareness about infection control methods for the new infectious agent through health advisories, webinars, town halls, automated messages, networks, etc.
- Implement entry screening appropriate for alert level and location.
- Identify resources for obtaining PPE/masks, cleaning supplies, hand sanitizers, and procuring and stockpiling supplies.
- Designate a space for people who may become sick and cannot leave the workplace immediately.
- Develop a contact tracing plan in the event it is necessary.
- Utilize internal cross-functional teams to help break down silos and better achieve objectives and strategies.
- Partner with internal or external employee assistance and mental health programs and communicate those resources to the workforce.
    - Communicate to staff the importance of appropriate coughing etiquette and good hand hygiene.
    - Provide clean handwashing facilities.
    - Offer waterless alcohol-based hand sanitizers when regular facilities are not available (or to offsite personnel).
    - Provide boxes of tissues and encourage their use.
    - Remind staff not to share cups, glasses, dishes, and cutlery. Be sure that dishes are washed in soap and water after use.
    - Remove non-essential, high-touch objects such as magazines and papers from waiting areas or common rooms (such as tea rooms and kitchens).
    - Test to make sure ventilation systems are working properly.
    - Provide personal protective equipment and antiviral or other types of medication as deemed appropriate.

5.2 PANDEMIC PLANNING PARTNERS

An infectious disease or pandemic event does not recognize borders or companies. Oil and gas companies use a myriad of contractors and partners during operations. Each of these entities must be equally as prepared as the facility or asset they are working within. Consider how the company will engage with its partners (including joint ventures, contractors, and other partners) in the event of a pandemic, and what agreements need to be in place in advance to ensure that the company's needs are met. An organization may want to inquire if partners have created a pandemic preparedness plan to minimize impacts to workers, reduce risks to critical business functions, and minimize financial losses for the company over the long term. Figure 1 provides a reference checklist that planning teams can use to ensure that the organization is prepared in the event a pandemic plan is triggered and/or use to ask partners about their own pandemic preparedness.

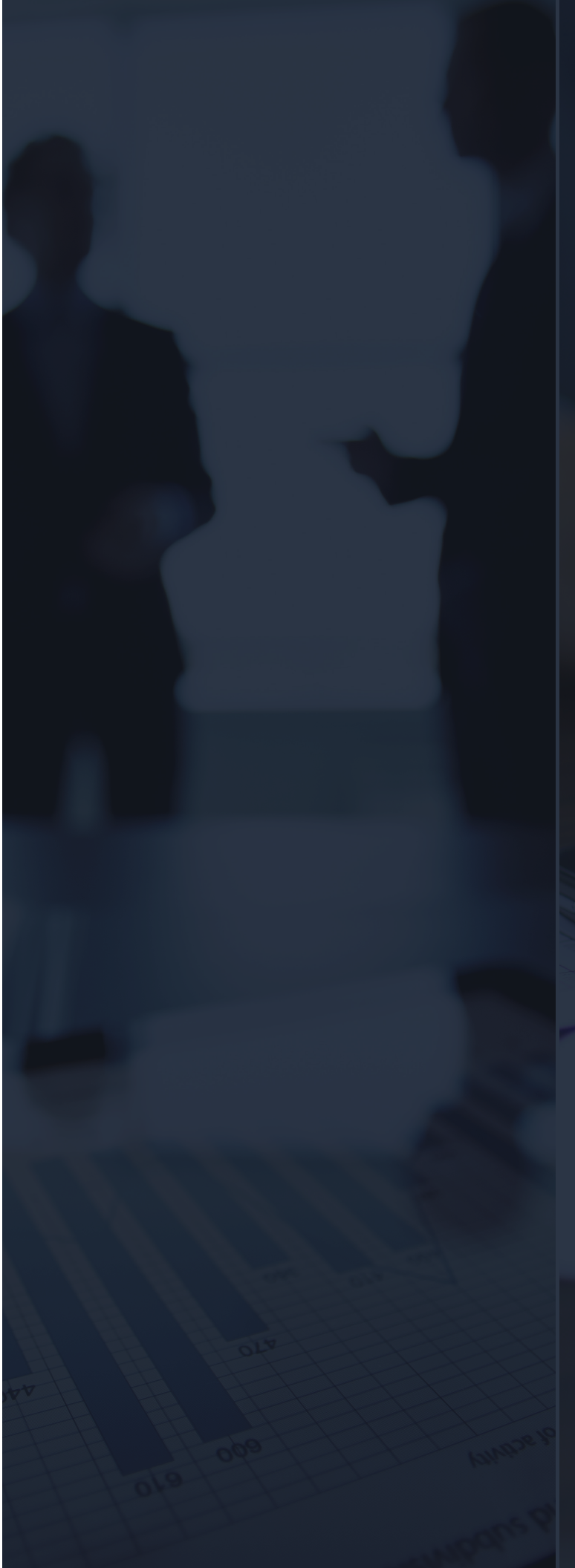


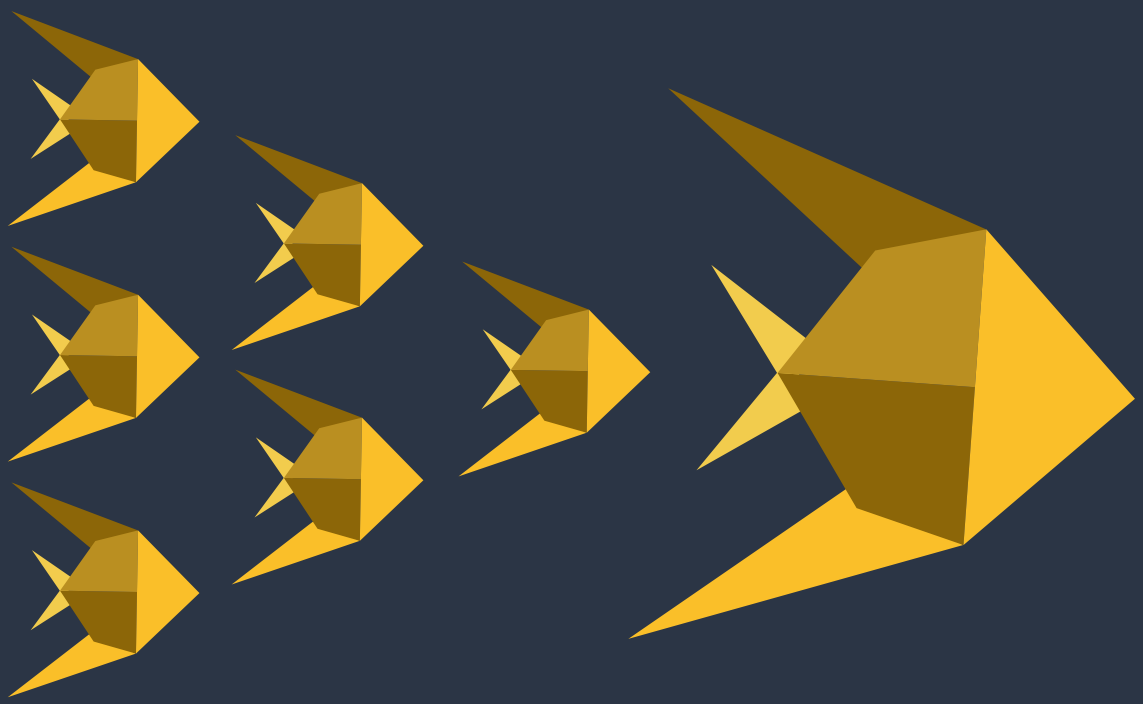
FIGURE 1

PANDEMIC PREPAREDNESS CHECKLIST

✓	**Company Coordinator:** A pandemic preparedness plan or related disease containment plan should be developed for the company/facility and a coordinator appointed. Identify a workplace coordinator who will be responsible for dealing with infection issues and their impact on the workplace. This may include contacting local health departments and health care providers in advance and developing and implementing protocols for response to ill individuals.
✓	**Personal Protective Equipment and Masking:** Provide or require the use of respiratory protection and/or masks to protect against or reduce the number of infectious aerosols that can be inhaled. Masking also provides source control by limiting the number of respiratory droplets that can escape. Provide dermal protection or protective clothing if there is potential exposure to infectious bodily fluids.
✓	**Ventilation Optimization:** Ensure that heating, ventilation, and air conditioning (HVAC) systems are operational and maintained. Consider increasing outdoor air; recirculated air filtration levels; and implementing portable air cleaners or other air cleaning technologies if feasible and as necessary.
✓	**Illness Prevention:** Employees should be trained in health issues of the pertinent disease to include prevention of illness, initial disease symptoms, preventing the spread of the disease, and when it is appropriate to return to work after illness. Infection containment plans and expectations should be shared with employees. Communicating information with non-English speaking employees or those with disabilities must be considered.
✓	**Screening and Testing:** Use questionnaires/signs/forms, temperature checks, and/or diagnostic measures to reduce symptomatic and pre-symptomatic workers in the workplace and to detect infections in the workforce.
✓	**Business Continuity Planning:** Business continuity plans should be prepared so that if significant absenteeism or changes in business practices are required, business operations can be effectively maintained.
✓	**Internal Communications:** Key contacts, a chain of communications and contact numbers for employees, and processes for tracking business and employees' status should be developed.
✓	**External Communications:** A procedure should be developed to notify key contacts, including customers and suppliers, in the event an outbreak has impacted a company's ability to perform services. This procedure can also include notifications to customers and suppliers when operations resume.
✓	**Drills:** The plan and emergency communication strategies should be periodically tested (annually, for example) to ensure that they are effective and workable.
✓	**Contact Tracing:** Monitors cases and close contacts to advance infection mitigation measures, including testing, isolating, and quarantining

STRATEGIES DURING OUTBREAK

6



6 STRATEGIES DURING OUTBREAK

Consider developing screening processes based on the signs and symptoms of the infection or disease to assist with exposure control.

Reasons to determine "fitness to work" may depend on several issues, such as size or type of organization, job responsibilities of employees, and ease of working from home (via Internet connections, etc.).

It is recommended that the company outline and communicate to workers how absences will be managed should a worker become ill or is asked to stay home (salary continuation, short-term disability, etc.). Additionally, organizations may want to restrict people that are showing signs and symptoms of an infection. On declaration of a pandemic, the facilities department or local management may prohibit staff and visitors from entering if they have signs and symptoms of an infection and/or come in close contact with a positive case.

Generally, employees may be allowed and encouraged to stay at home if they are not feeling well. However, in the event of a pandemic or other disease outbreak, use screening tools or a list of symptoms as a checklist. If employees are showing symptoms, allow them to go or remain at home and remain isolated until symptoms are resolved. If there is doubt that a person is sick, they may want to stay home until they feel well and are able to resume their regular activities. They may also be encouraged to consult with a physician and/or information on the websites of health service providers.

6.1 INFECTION CONTROL

Establishing regular disinfection/cleaning protocols for a facility is important. Additional measures may be required when there is an increase in illnesses among personnel. This is especially necessary when dealing with highly contagious viruses to minimize the virus from transmitting by hard surfaces (sinks, door and cupboard handles, railings, objects, counters, etc.). The length of time a virus survives on hard surfaces depends on the type of virus. Disinfection protocols will need to be established based on the type of virus that is causing the disease to ensure effectiveness.

In most workplaces and homes, cleaning floors, walls, doorknobs, etc., with regular detergents and water may be adequate. Use of disinfectants may be warranted when there are suspected or confirmed cases among personnel. Facilities with onsite medical clinics often require specific cleaning and disinfection steps.

Companies may want to run periodic health/wellness campaigns that provide education, tools, and actionable safeguards to employees. This can reduce or slow the spread of infection/disease.

- Encourage maintaining up-to-date vaccinations and immunizations, or appropriate medication prophylaxis as recommended.
- Wash your hands frequently–especially after coughing, sneezing, or using tissues. When soap

and water are not available, use alcohol-based disposable hand wipes or sanitizers to neutralize the pathogen causing the disease.

- Stay home if you are sick. Get plenty of rest and check with a healthcare provider as needed.
- Cover your mouth and nose with a tissue when coughing or sneezing. Use a tissue, or cough and sneeze into your arm, not your hand. Turn away from other people.
- Use single-use tissues. Dispose of the tissue immediately.
- Use physical distancing to reduce short-range transmission risk.
- Do not share cups, glasses, dishes, or cutlery.
- Avoid touching your eyes, nose, or mouth. Germs are often spread when a person touches something that is contaminated with germs and then touches their eyes, nose, or mouth.
- Practice other good health habits. Get plenty of sleep, be physically active, manage stress, drink plenty of fluids, eat nutritious foods, and avoid smoking, which may increase the risk of serious consequences if you do contract the flu.
- When possible, avoid close contact with people who are sick.

6.2 PHYSICAL DISTANCING

Physical distancing, also referred to as social distancing, is a strategy to try to avoid crowded places, large gatherings of people, or close contact with a group of people or individuals. In these situations, viruses can easily spread from person to person. In general, physical distancing will slow the spread of a disease, particularly against larger respiratory droplets that quickly settle out of the air.

Should physical distancing be recommended, steps can include the following.

- Use telephone, video conferencing, or the Internet to conduct as much business as possible (including within the same building).
- Allow employees to work from home or to work flexible hours to avoid crowding the workplace.
- Cancel or postpone any travel, meetings, workshops, etc., that are not necessary.
- Drive, walk, or cycle to work, but try to avoid public transit. Alternatively, companies can consider allowing staff to arrive early/late so they can use public transit when it is less crowded.
- Allow staff to eat at their desks or have staggered lunch hours to avoid crowded lunchrooms.
- Spend as little time as possible in crowded indoor spaces, especially if they are poorly ventilated.
- When meetings are necessary, have them in larger rooms where people can sit farther apart.
- Avoid shaking hands or hugging.
- Encourage staff to avoid social gatherings outside of work where they might come into contact with infected people.
- Optimize ventilation by ensuring continued operation and maintenance of HVAC systems, increasing outdoor air ventilation, increasing filtration, and/or implementing additional air cleaning technologies.

6.3 CONTACT TRACING

Contact tracing is a process for monitoring and supporting confirmed cases of an infection or those displaying symptoms of an infection—and their close contacts—to test, monitor, or isolate if necessary. Contact tracing is commonly regulated by the local public health authority. Some authorities may ask or require that employers conduct contact tracing. Contact tracing may also be mandated by other regulatory agencies.

The goal of contact tracing is to interrupt ongoing transmission and reduce spread of an infection, alert contacts to the exposure, offer preventive counseling or prophylactic care, and, if appropriate, make referrals for treatment of infected individuals.

Where permitted, contact tracers work with an "index case" to help them identify any close contacts and minimize further exposure of others to the disease. Given the vast differences in country size, geographies, and population characteristics, public health authorities (PHA) typically conduct contact tracing. However, they may become overwhelmed and a company's contact tracing program could support their efforts. The members of the company contact tracing team will be based on local organizational capabilities.

Data privacy can be a vital component to contact tracing programs. Many countries have specific data privacy laws; companies will want to take care not to violate this right or any applicable laws. PHAs typically disclose the minimum amount of information required to achieve the objectives of contact tracing. For example, contacts are only told that they have been exposed to an infected person but are not given that person's name or identifiable information.

6.4 VACCINATION PLANS

Workplace vaccination policies may be put in place during a pandemic. Such policies may be influenced by the availability of vaccinations, the relative risk of different work environments, regulations and more. Plans might identify when and under what circumstances the organization may require vaccinations. Procurement of commonly used supplies and medications from trustworthy sources may be important in pre-planning considerations. Pre-planning for transportation and storage/security/refrigeration contingencies may also be worthwhile.

CONSIDERATIONS FOR ASSESSING POTENTIAL SPREAD

7

7 CONSIDERATIONS FOR ASSESSING POTENTIAL SPREAD

The oil and natural gas industry requires a unique and diverse work environment that interfaces with numerous categories of workers and requires the transportation of raw and processed materials, resulting in the complex interaction between a variety of personnel and locations.

Pandemics and the spread of emerging infectious diseases have the potential to impact business operations and the individuals working in the oil and gas industry because of its highly integrative and interactive nature. Proper planning should intentionally address the unique set of interfaces to assure business continuity.

Incoming Resources Considerations:

External transportation services of raw materials to business locations

- The transportation of raw material to oil and natural gas facilities routinely involves domestic and international shipments.
- Managing transportation workers and logistics is an important consideration when emerging diseases come into play. Depending on the infectious agent, consideration of screening transportation workers at point of departure may be reasonable. Additionally, transportation worker facility access should be taken into consideration up to and including establishment of screening protocols as permitted by law.
- Screening of materials brought in for sustenance of site personnel (e.g., food, water, supplies) may be considered to determine the potential for transmission depending on the particular infectious agent.

Employees

- Employee population management at an oil and natural gas facility may be considered to address a variety of factors. Planning may help determine essential job functions to maintain operations. The development of alternative work arrangements and locations may be reasonable for a variety of functions and individuals.
- Communications to employees can be aimed at different levels and functions within the workforce, and messages can be modified according to the audience and using a “need to know” approach. Communications may contain current and useful information and could include recommendations regarding managing illnesses in employees and family members, recommendations regarding isolation at home if consistent with the pandemic disease, and regular updates on changing directives or plans.

Contract employees

- The types and number of contract employee resources utilized in the oil and natural gas industry will depend on the particular business, as well as the business activities needed. Establishing screening protocols with contracting agencies could be considered or establishing screening prior to plant/location entry may be reasonable depending on the particular infectious agent. Actions taken if a contractor screens positive for a particular illness could be considered at the planning stage, and coordination with the local health agency or public health guidelines may be needed. Maintaining the confidentiality of screening results may be required depending on the jurisdiction.

- Establishing an effective communication process with contract agencies and employees during a pandemic or emerging disease event could help maintain a cohesive and well-organized response.
- Contract agency pandemic plans may be reviewed and aligned with core business requirements.

Offshore Facilities

- Offshore operating platforms create another unique work circumstance that requires the consideration of screening prior to the on-platform work rotation, as well as while working on-platform. Crew members may be working for a continuous period of time on the platform, and the availability of adequate facilities to isolate, protect, treat, and screen personnel may be considered and would depend on the particular infectious agent.
- The ability to evacuate on-platform individuals who develop disease may be limited by the medical evacuation service availability and willingness to perform activities. Medical evacuation plans may need consideration to prearrange service with these specialty companies. Given the inability to predict future emerging infectious diseases, consideration of isolation and treatment-in-place may be reasonable. Tools such as telemedicine may facilitate these types of circumstances.

Onshore Facilities

- Onshore operations involve the control of people that travel to and from the work location or may work in remote locations (pipelines, wind farms, etc.). Control of entrance and egress to and from the work location may be necessary in order to implement appropriate screening programs/processes.
- Mechanisms to account for employee location are other important considerations; this is especially pertinent in remote work or isolated work circumstances.
- Processes to communicate with employees can be established, and employees can be permitted to communicate business-pertinent information (such as illness or symptoms).
- Local support of plant or business utility services and municipal support (police, fire) to the business may be established during the pre-pandemic phase and reinforced/maintained during the pandemic response phase. The oil and natural gas business is considered to be part of critical infrastructure. As such, there are considerations regarding security, threats, and interfaces between local agencies for both disasters and breaches of security. Managing these outside agencies could be considered in the pandemic plan.

Screening Tools and Resources

Screening

Screening poses unique challenges for the oil and natural gas industry due to the variety of locations where business is conducted.

Refineries operate as controlled limited-access facilities, with personnel arriving to work during their assigned shift and then returning to their home and social community environments when not working. Refineries also operate with a mix of workers including employees and contract services personnel (often security, trade workers, logistics personnel, DOT operators for pickup and delivery of products).

Offshore installations present additional workforce challenges that require consideration

of transportation vessel crew (air and ship), workers with rotating work assignments that necessitate extended periods of work in isolated conditions, limited health facility resources, and transport of potentially infectious personnel).

Oil transportation requires an interface between domestic, international, and maritime locales layered with the compositional diversity of the vessel's crew members. Personnel are often recruited at the vessel's origin. Third-party transportation (trucking, railway) companies may be enlisted to bring product to refineries or transport refined crude to supply chain distribution sites.

Screening Tools

The particular infectious or pandemic agent will dictate the methods—and practicality—of screening. Screening tools could include thermal scanners, questionnaires to identify symptoms and infectious disease exposures, collection of epidemiological data such as travel and exposure histories, and diagnostic screening tests to detect potential infections. Screening and assessment resources are outlined in this guide to assist in identifying appropriate resources. Positive-exposure histories can prompt consideration of a self-monitored isolation period. The length of self-quarantine periods may depend on the recommendation of federal, state, or local health guidelines to mitigate the spread of the disease. It is recommended that the oil and natural gas industry determine local public health resources and assess capabilities at critical operation sites. In the case of operations in countries lacking public health infrastructure, the operating business should consider working with local, federal, and NGO officials to develop programs that would augment community programs and facilitate care of the potential workforce.

REGIONAL RESOURCES 8

8 REGIONAL RESOURCES

Evaluating regional resources requires a good understanding of the region (see Section 1). These resources will be affected by the operational asset location (proximity to population centers, geographic distribution of its workers, mobility, accessibility, etc.) and breadth of the operation if expanding across multiple regions. As a result, the company needs to consider several issues related to the resources in each region. The following are resources companies can consider enlisting:

Co-located medical staff:

- These may include licensed staff (physicians, midlevel providers, and nurses) and emergency medical responders.
- Companies must understand the abilities and/or limitations of each of these types of medical staff and the local laws that affect their ability to provide care.
    - Physicians can diagnose and make treatment plans.
    - In general, nurses and paramedics operate using standing orders but cannot diagnose or prescribe medications.
    - Emergency medical responders are limited to using standing orders and are often restricted by state law on functioning outside of these standing orders.
    - In certain areas, especially outside of the U.S., the only medical professionals in a region are those provided by the oil and natural gas company.

Community resources:

Communities are often supported by a wide range of organizations that interact and partner with each other to provide services to different groups of residents. Supporting these organizations and partnerships during pandemics could help ensure that resources benefiting the communities and their residents are maintained. Understanding public health capacity and presence in the region is important as it may help determine type of interaction and involvement with company or business units when responding to a pandemic. Furthermore, alignment with local authorities on public health measures, policy, and procedures could help provide adequate and lawful protection to the workforce and communities. Multiple organizations provide several services to the communities in a region, especially to vulnerable and marginalized groups. These services can assist during life-disruptive events, and their support and engagement can be considered when developing a preparedness plan. Working with communities to create spaces where community leaders can have a say in decisions can help align objectives during a pandemic.

- Hospital resource considerations:
    - The number of total hospital beds.
    - The number of intensive care beds.
    - The availability of isolation rooms for infectious disease.
    - The number and type of physician specialists on staff.
    - Specialized PPE availability.
    - Isolation hospitals in the area.
    - Appropriate decontamination and biohazard disposal procedures in hospitals.
    - Local medical providers and specialists.
    - Emergency and urgent care centers located

near the operations site and/or near where the workers live.

- Ambulances (including air ambulances) or, if appropriate, plans to transport ill workers by other areas.
- Public health authorities or representatives that can help with current information and recommendations.

- **Regional resources:**

- In some cases, workers may need to be referred to larger regional centers, such as university hospitals.
- Air ambulance capability.
- Military and National Guard personnel may be able to assist in critical events.

- **Federal/national resources that can provide current information on the infectious disease outbreak, as well as potential response options:**

- Centers for Disease Control and Prevention
- World Health Organization

- **If vaccines or other treatments are available:**

- Vaccine/pharmaceutical suppliers.
- Licensed health care providers in the state where the treatment is being given.
- Government ability to acquire vaccines and limits on who can receive the vaccine (potential for a phased approach), the ability for some to get the vaccine, and the government's ability to distribute the vaccine.

When considering regional resources, it is essential to contact the resource authorities to learn what services they can provide. Additionally, the contacts can be made periodically to receive an update on their services and capabilities. In the event of an outbreak, the resources need to be contacted again to ensure they are able to address issues related to the specific disease or illness.

COMMUNICATIONS 9

9 COMMUNICATIONS

Early development of communication channels is essential. Companies may want to ensure communication is aligned at corporate, regional, and local levels while also acknowledging specific communications channels for specialized work functions and audiences. Messaging can be created in advance of an event to address the concerns of the following key stakeholders, although the dynamic nature of infectious diseases requires each message to be customized depending on the specifics of the event:

- Regional team
- Senior management
- Employees/contractors
- Suppliers
- External parties/stakeholders/community
- Customers

Communication is a critical component of any incident response, as personnel need to be apprised of actions during a disease outbreak. This is especially true for communication with the workforce throughout the pandemic at the local and regional levels and may occur early in the pandemic response phase. Additionally, engagement, input, and feedback should be consistent and occur throughout all levels of an organization. This guidance recommends addressing each of the following message components:

- What is the incident?
- What is the organization doing?
- What does the organization want the recipient to do?
- Where can more information be obtained?
- When will the next update be distributed?

External and internal communication should follow the corporate vetting process established by the organization and ensure senior management is kept up-to-date.

Misinformation and Disinformation

The World Health Organization (WHO) differentiates between misinformation and disinformation. Misinformation is false information shared by people who do not intend to mislead others. In this instance, this may be a family member sharing information on social media that they see from a news source. Disinformation is false information deliberately created and disseminated with malicious intent. For example, an unvetted news source may publicize a story knowing the information is false to influence others to take a certain action. (https://www.who.int/news-room/spotlight/let-s-flatten-the-infodemic-curve).

Federal partners, including the Department of Health and Human Services and the Department of Homeland Security, publish materials on how to analyze and address misinformation and disinformation, including toolkits and graphics to use within an organization.

The following are recommended strategies for addressing misinformation and disinformation within an organization:

- Be alert to and analyze misinformation that may be spreading within the organization, community, or the country or defined region of the pandemic.
- Engage with and listen to the organization and workforce to see what information they are looking for and where there are potential information gaps.
- Share accurate, clear, and easy-to-understand information. This will largely come from government entities or local trusted health organizations. Information from these sources should be easy to find and readily available.
- Use trusted messengers to disseminate information. Some in an organization may not trust certain news sources or government entities. Therefore, it may help to have trusted messengers such as the head of the organization or others in leadership positions relate news and updates.

While this is not an exhaustive list of ways to address the spread of misinformation and disinformation, companies should consider ways to accurately vet and disseminate information regarding pandemics and vaccinations and provide steps for employees to do their own research for accurate information.

RETURN-TO-WORK 10

10 RETURN TO WORK

The company will have to assess return-to-work protocols based on the type of infection or disease. Organizations may want to develop criteria to protect the workforce and the public for when employees, vendors, and contractors return to normal operations. Organizations may want consider return-to-work in a phased approach.

Planning Phase

Prior to allowing the remote workforce to return to work, the planning team can develop a set of criteria and evaluate data to determine which phase to implement and when to scale back. These measures can include temperature screenings, questionnaires, testing, and personnel rotations. Organizations can advance phases as they monitor progress and infection levels.

- Personnel:
  - Return-to-work requirements may affect personnel differently. For instance, field-based personnel may see a different approach to testing or separate questionnaires than office-based personnel. Companies will need to consider the number of personnel returning to a workspace and the ability to follow medical guidance and business practices in a safe and healthy environment. Additionally, companies can set in place guidance for reporting possible or confirmed cases to Human Resources or other departments, as well as government entities, if applicable. Personnel may be apprehensive or have concerns about returning to work and re-entering their place of business. Organizations can consider establishing enhanced cleaning schedules and continued communications with the workforce to alleviate some of the concerns. Also, companies can discuss and communicate the extent of the workforce's return to the office, including remote work options, hybrid schedules, or personnel rotations.
- Environment:
  - Prior to allowing personnel to return, organizations may want to consider the readiness of public services to support the workforce. Areas to consider may include the availability of public transit, the availability of medical services, school or childcare facility closures, or the availability or closure of other government or business facilities. Additionally, organizations can look at establishing enhanced cleaning schedules and continued communications with the workforce.

Phase One—Initial Return

The move to this phase will likely be based on local, state, or federal government re-entry regulations or protocols, and infection rates in the given area or country. During this phase, limited personnel may return to the workplace in order to limit interaction so that the possible spread of the disease in the community is reduced. Organizations may also want to develop a return-to-work questionnaire to gather information from those in the workplace.

While many companies will differ in their approaches, they may want to develop an operational plan to help ensure the initial return phase is successful and prepare for the next phase of personnel returning to work.

The following are considerations for the Phase One operational plans:

- Encourage remote work whenever possible and feasible.
- Implement an approved testing program, as available.

- Implement a contact tracing program.
- Implement social distancing protocols when possible.
- Suggest face coverings be worn when social distancing cannot be achieved.
- Promote good hygiene and cleanliness practices through wall posters, digital signage, and email messaging.
- Keep health centers and gyms closed.
- Dining services should only provide takeout meals.
- Large meetings are not allowed.
- All visitors to offices require prior leadership authorization.
- All travel requires leadership authorization.

Phase Two—Re-entry

Phase Two will likely see more personnel return to the workplace and continue some of the plans originating in Phase One. This phase may also reduce some of the protocols and controls put in place during the initial return to work. While many companies may differ in their specific approach, companies may want to consider updating their operational plans as more personnel return.

The following are considerations for the Phase Two operational plans:

- Encourage remote work whenever possible and feasible.
- Implement an approved testing program, as available.
- Implement a contact tracing program.
- Implement social distancing protocols when possible.
- Suggest face coverings be worn when social distancing cannot be achieved.
- Promote good hygiene and cleanliness practices through wall posters, digital signage, and email messaging.
- Keep health centers and gyms closed or adhere to strict physical distancing and sanitation protocols. This requires physical distancing and enhanced cleaning of equipment after each use.
- Dining services should only provide takeout meals or adhere to strict physical distancing and sanitation protocols. This requires physical distancing, no self-services or buffet-style food presentations, and enhanced cleaning of tables after each use.
- Large meetings may be allowed on a case-by-case basis.
- All visitors to offices require prior leadership authorization.
- All travel requires leadership authorization.

Phase Three—Final Stages

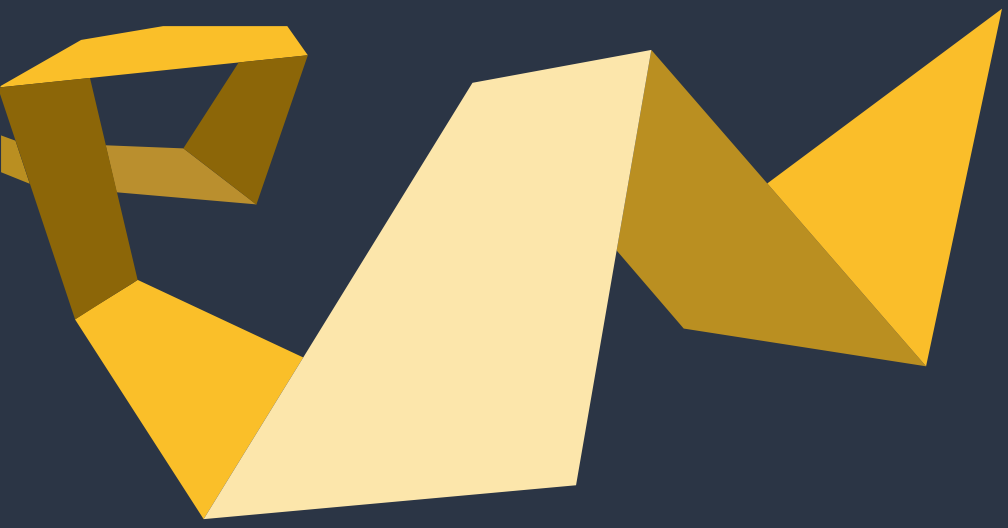
Phase Three will likely see a significant reintroduction of the remaining office workforce to their places of business. This phase may also see further reductions in screening measures and controls for re-entry.

As companies move into this final stage, organizations may want to further update their operational procedures and plans.

The following are considerations for the Phase Three operational plans:

- Health centers and gyms may re-open, with continued emphasis on good personal hygiene and cleanliness guidance.
- Dining services may resume normal operations, with continued emphasis on good personal hygiene and cleanliness guidance.
- Meeting sizes may not be restricted.
- Travel may follow normal business rules for authorization.

CONCLUSION 11



Pandemic and infectious disease planning is essential to health, safety, and business continuity. An oil and gas organization should be as prepared for this type of event as any of its other identified risks. As with any incident, proper planning is the key to a successful response.

This document is meant to guide the planner by providing a process of developing a comprehensive infectious disease or pandemic plan. Each operator or asset will need to address issues that are specific to those locations and operations, and this guidance encourages the operator to do so.

Infectious disease and pandemic planning will help assure that an oil and gas operator is prepared for such an event and minimize disruption to the business unit. Resiliency is an important aspect of any operation, and maintaining a pandemic or infectious disease plan provides the processes necessary for an oil and gas operator to maintain safe, reliable operation.