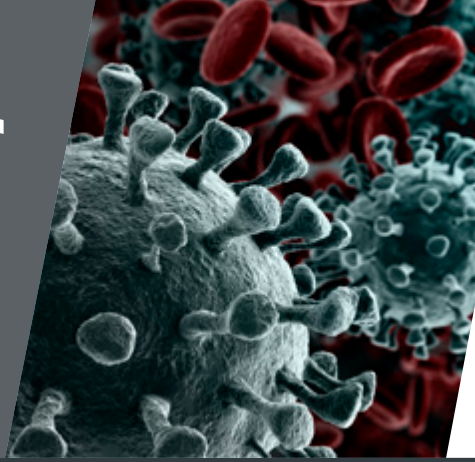


Preparing Your Workplace for an Epidemic



By Natalie Egnot, DrPH, and Alex Sundermann, MPH, CIC

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Overview

In late 2019, the suspicious occurrence of several pneumonia cases of unknown origin in Wuhan City, Hubei Province drew the attention of Chinese authorities and the World Health Organization (WHO). By January 7th 2020, Chinese authorities confirmed that a novel coronavirus, temporarily named 2019-nCoV, was responsible for the pneumonia cases. As of January 30, 2020, 7,818 cases of 2019-nCoV had been confirmed by the WHO, including 170 deaths and 82 travel-associated cases have been confirmed outside of China (WHO 2020). Similar to prior epidemics like SARS (below) or influenza pandemics (Table 1), 2019-nCoV has the potential for significant business disruption. In the United States, businesses should begin preparations now for 2019-nCoV and future potential infectious disease threats in view of a regulatory obligation under federal law to provide a “reasonably safe” workplace.

Table 1: Ways Pandemic Influenza Might Affect Your Workplace (OSHA, 2009)

Absenteeism	Up to 40% of workers sick or caring for the sick in a peak influenza illness
Commerce Patterns	Changes in patterns of consumption of goods and services
Logistics	Delayed shipment or availability of items

Spotlight on SARS

The 2019-nCoV outbreak has naturally drawn comparison to the 2003 Severe Acute Respiratory Symptom (SARS) epidemic, which was similarly caused by a novel coronavirus, and resulted in over 8,000 cases and 774 deaths. Since the 2003 SARS epidemic, public health infrastructure and reporting in China has improved in order to prevent widespread transmission of similar viruses. Despite the fact that 2019-nCoV has mostly been contained to China thus far, the human and economic costs of this outbreak are undeniable. It is crucial for governments and public health agencies to have sound, evidence-based preparedness measures to reduce the likelihood of a pandemic. While federal agencies are preparing for potential spread of 2019-nCoV, it is similarly essential that businesses implement disease prevention/mitigation procedures and training to reduce the risk of worker illness and the resulting decreased productivity.

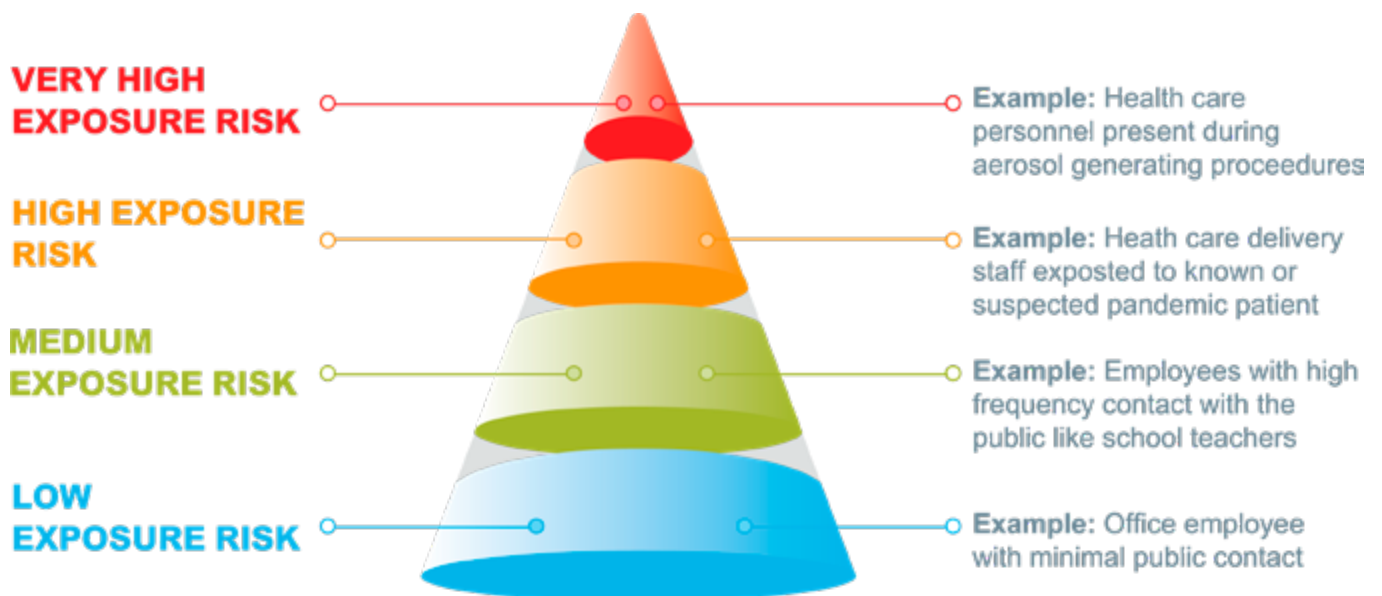
Why are Health Professionals Concerned about 2019-nCoV?

Preliminary evidence suggests that the virus is capable of human-to-human transmission, and that those infected are contagious prior to symptoms arising (Hui et al. 2020). Reported symptoms of the confirmed cases include fever, dry cough, and difficulty breathing, which appear to be more severe in those with underlying medical conditions. Health professionals are concerned about 2019-nCoV in part because of the potential for an inverse relationship between severity and spread of disease. Depending on the balance of symptoms, severity, and incubation time (which are still under study), 2019-nCoV might escalate from a regional event, to an epidemic, or even internationally to a pandemic (Walker 2020).

Infectious Disease Workplace Responsibility

As the 2019-nCoV outbreak unfolds, businesses should consider their existing policies (if any) for communicating disease risk to employees, reducing communicable disease transmission among employees, and decreasing risk of profit loss due to disease outbreaks and epidemics. The 2019-nCoV outbreak has the potential to cause significant global macroeconomic disruption. Economic analyses have estimated the impact of the 2003 SARS epidemic to be USD 30 – 100 billion (Smith 2006). Of note, significant losses were reported across manufacturing, tourism, food, and travel sectors in mainland China, throughout Southeast Asia, as well as in North America and Australia (Keogh-Brown and Smith 2008; Qiu et al. 2018). In the United States, the Occupational Safety and Health Administration (OSHA) provides guidance on training, control measures and risk communication as part of influenza pandemic response or awareness, which provides a general framework for approaching novel viral threats, such as 2019-nCoV (OSHA 2014). For example, OSHA provides an occupational risk pyramid to help assess individual worker risk (Figure 1). While most workers fall into a low or medium risk category, it is advisable to seek guidance from an environmental health & safety practitioner when classifying employees and developing a risk management plan.

Figure 1: Exposure risk zones recommended by OSHA for influenza pandemic



Leading Actions

While the transmission route of the 2019-nCoV has not yet been definitively determined, respiratory viruses are often spread via droplet particles, e.g. through coughing, sneezing, contact with infected individuals, and/or contact with contaminated surfaces. Standard methods of infection prevention, such as hand washing with soap and water for at least 20 seconds, disinfecting frequently touched objects and surfaces with agents effective against viruses, encouraging sick individuals to stay home, avoiding touching of the face (eyes, nose, and mouth), and staying current on recommended vaccinations are effective methods of protecting of worker health.

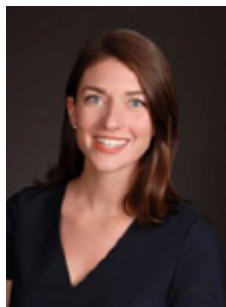


Developing Your Workplace Preparedness Action Plan

When there is an outbreak of a novel virus or the potential for an epidemic or pandemic, companies face unique challenges planning and implementing responsive programs to protect worker health and minimize the negative effects on their business. Fortunately, resources exist to help business leaders plan for and respond to these circumstances through the development of planned strategies to guide businesses through the necessary decisions and actions that must take place in the event of an epidemic. A comprehensive plan should address training, control measures and risk communication (see checklist). Cardno has expertise in infectious disease control and prevention, occupational medicine, and environmental health and safety. We are closely following the rapidly changing circumstances and potential global impact that surrounds the 2019-nCoV outbreak. Our multidisciplinary team can ensure that employers and clients are complying with regulations while also safeguarding the health of their employees. For more information, please contact: natalie.egnot@cardno.com or alexander.sundermann@cardno.com.

2019-nCoV Preparedness Checklist	
<input checked="" type="checkbox"/>	Employee Health program offering vaccination and health evaluations
<input checked="" type="checkbox"/>	Establish contingency plans based on worker illness
<input checked="" type="checkbox"/>	Disseminate education to employees on outbreak updates
<input checked="" type="checkbox"/>	Understand impact on global partners from a potential pandemic

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Cardno ChemRisk is a scientific consulting firm that specializes in helping clients characterize and respond to occupational, environmental, and community health risks associated with complex exposures involving chemicals, and biological and pharmaceutical agents. Our professional staff of 100 scientists – including epidemiologists, engineers, industrial hygienists, toxicologists, and statistical analysts – serve commercial, government, legal, and policy clients from 20 offices across the United States.

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