



TETRA TECH

# COVID-19

## Coronavirus Disease

March 2020

TETRA TECH PREPAREDNESS SERVICES



complex world | CLEAR SOLUTIONS™



**Tetra Tech has successfully responded to more than 2,000 natural, man-made, and technological events, allowing our emergency management practitioners and responders to infuse real world experience into our plans, trainings, and exercises.**

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# What is Coronavirus?

Recently, a novel (“new”) coronavirus – COVID-19 – that had not been previously found in humans was detected in China. The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) are actively monitoring thousands of confirmed cases in China and additional cases in a growing number of countries internationally, including the United States.

Diseases like influenza and COVID-19 can spread quickly from sick people to others who are nearby at home, school, work, and public events.

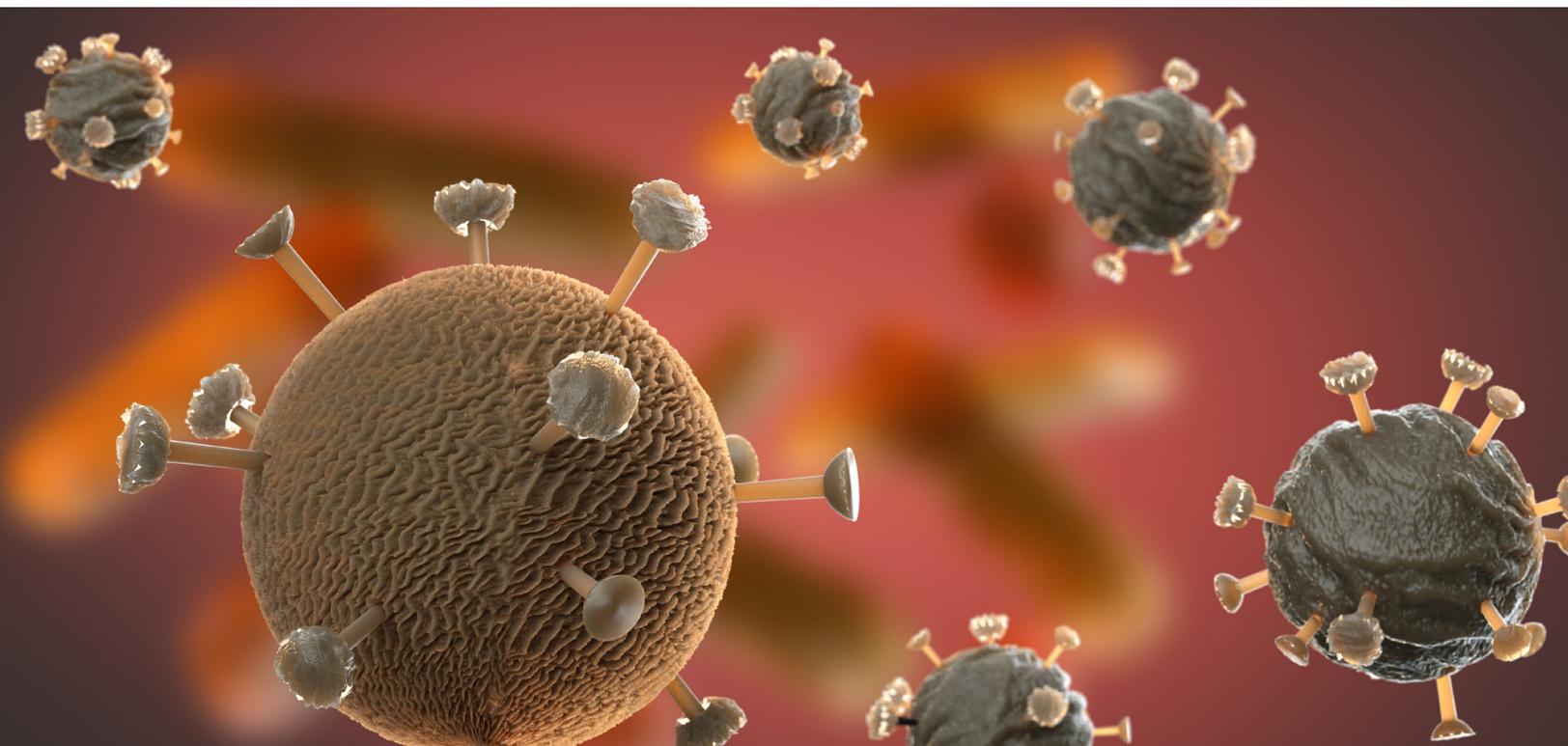
Most people are familiar with seasonal influenza (“the flu”), which spreads by:

- being exposed to respiratory droplets containing flu viruses that travel through the air (up to 6 feet) when an infected person coughs or sneezes; or
- touching surfaces or objects that have been exposed to respiratory droplets containing flu viruses.

Coronavirus spreads in a similar way.

## We Live with Coronaviruses Everyday

There are many common types of human coronaviruses that usually cause mild-to-moderate upper-respiratory tract illnesses, like the common cold. Most people get infected with one or more of these viruses at some point in their lives. Most human coronaviruses usually cause mild-to-moderate illness in people.





## What is COVID-19?

The current understanding of how COVID-19 spreads is largely based on what is known about similar coronaviruses, such as Middle East Respiratory Syndrome (MERS-CoV) and SARS.

Understanding that there is still much to study about COVID-19, the CDC has been able to develop the following characteristics about the virus and how it is transmitted:

- COVID-19 is spread between people who are in close contact with one another (within about 6 feet) via respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- It may be possible to contract COVID-19 by touching a surface or object that has been exposed to the virus and then touching one's own mouth, nose, or eyes, but this is not thought to be the main way the virus spreads.
- People are thought to be most contagious when they are most symptomatic (the sickest).
- Some spread might be possible before people show symptoms, but this is not thought to be the main way the virus spreads.

## What are the symptoms of COVID-19?

The CDC estimates, based on all the information available, that the symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after a person has been exposed to the virus. This is based on what has been seen previously as the incubation period of MERS-CoV viruses.

Patients with confirmed COVID-19 have reported illnesses ranging from mild symptoms to severe illness and death. Symptoms can include:

- Fever
- Cough
- Shortness of breath

*If a person has traveled to China, or another affected country and develops symptoms they should call their doctor.*

# What can Government and Business do to prepare for COVID-19?

## Actively encourage sick employees to stay home:

- ✓ Ensure that your sick leave policies are flexible and consistent with public health guidance and that employees are aware of these policies.
- ✓ Employees who have symptoms of acute respiratory illness are recommended to stay home and not come to work until they are free of fever (100.4° F) or any other symptoms for at least 24 hours.
- ✓ Do not require a healthcare provider's note for employees who are sick to validate their illness or to return to work.
- ✓ Employers should maintain flexible policies that permit employees to stay home to care for a sick family member.

## Separate sick employees:

- ✓ CDC recommends that employees who appear to have acute respiratory illness symptoms (i.e., cough, shortness of breath) at work or become sick during the day should be sent home immediately.

## Emphasize staying home when sick, respiratory etiquette and hand hygiene by all employees:

- ✓ Place posters that encourage staying home when sick, cough and sneeze etiquette, and hand hygiene at the entrance to your workplace and in other workplace areas where they are likely to be seen.
- ✓ Provide soap and water and alcohol-based hand rubs, as well as tissues and no-touch disposal receptacles for use by employees.

## Perform routine environmental cleaning:

- ✓ Routinely clean all frequently touched surfaces in the workplace, such as workstations, countertops, and doorknobs.
- ✓ Provide disposable wipes so that commonly used surfaces (for example, doorknobs, keyboards, remote controls, desks) can be wiped down by employees before each use.

## Advise employees before traveling to take certain steps:

- ✓ Check the CDC's Traveler's Health Notices for the latest guidance and recommendations for each country to which your employees will travel.
- ✓ Advise employees to check themselves for symptoms of acute respiratory illness before starting travel and notify their supervisor and stay home if they are sick. If they are already traveling they should notify their supervisor and should promptly call a healthcare provider for advice if needed.
- ✓ If outside the US, sick employees should follow your company's policy for obtaining medical care or contact a healthcare provider or overseas medical assistance company to assist them with finding an appropriate healthcare provider in that country.

## Additional Measures in Response to Currently Occurring Sporadic Importations of the COVID-19:

- ✓ Employees who are well but who have a sick family member at home with COVID-19 should notify their supervisor and refer to CDC guidance for how to conduct a risk assessment of their potential exposure.
- ✓ If an employee is confirmed to have COVID-19, employers should inform fellow employees of their possible exposure to COVID-19 in the workplace but maintain confidentiality.
- ✓ Employees exposed to a co-worker with confirmed COVID-19 should refer to CDC guidance for how to conduct a risk assessment of their potential exposure.

# How Tetra Tech can help

Our subject matter experts include former local, state, and federal public health leaders and expert clinicians with infectious disease prevention and control expertise. Additionally, we are able to expertly support healthcare disaster and pandemic operations with just-in-time planning, training, and exercises. Our team has the capacity to support comprehensive emergency management goals throughout the continuum of health emergency preparedness and response.



## Our expansive service portfolio to meet a variety of needs

Tetra Tech has the capability to support comprehensive emergency management goals throughout each phase of emergency planning, from public health and health care preparedness to emergency response, and recovery and mitigation. Our services include:



### PLAN

- All-Hazards Preparedness and Response Plans
- High Consequence Disease (HCD) & Special Pathogens
- Business Continuity/Continuity of Operations (COOP)
- Medical Surge
- Evacuation Planning



### PREPARE

- Full Program Evaluation
- Access and Functional Needs Analysis
- Gap Analysis
- Road Mapping for Success
- Sustainability Planning
- Emergency Planning
- Meeting Facilitation
- Issue Resolution



### TRAIN

- Emergency Preparedness 101
- Computer-Based Training Solutions
- Incident Command (ICS) and Hospital Incident Command (HICS)
- Personal Protective Equipment (PPE) Training



### EXERCISE

- Homeland Security Exercise Evaluation Program (HSEEP) Compliant Exercises
- Tailored Solutions to Meet all Budgets
- Customized Exercise Toolkits
- Compliance with Public Health Preparedness Capabilities

# Relevant services portfolio include:

## Health Emergency Preparedness and Response

Tetra Tech's dedicated Public Health and Health Care Practice professionals bring real-world knowledge of the response challenges facing public health and the health care community.

- Our subject matter experts offer extensive experience in the programmatic, planning, training, and exercise needs associated with current guidelines.
- Our team includes former federal, state, and local public health, health care, and emergency management leaders.
- Our team brings decades of real-world experience and expertise to meet the varied needs of state and local public health organizations and health care facilities, including long-term care facilities, rural facilities, and large integrated health systems.

### INTEGRATING PEOPLE WITH DISABILITIES AND INDIVIDUALS WITH ACCESS AND FUNCTIONAL NEEDS INTO WHOLE COMMUNITY PLANNING

Tetra Tech recognizes the critical need for Whole Community planning. Our subject matter experts guide local, state, and federal governments and private entities through the complexity of meeting state and federal requirements. Our team builds inclusive plans that integrate considerations for people with disabilities and individuals with access and functional needs into the planning process.



## Training and Exercises

- Our methodology prioritizes quality, flexibility, and responsiveness, which leads to a straightforward and convenient planning process for our clients.
- We offer a cadre of FEMA-recognized Master Exercise Practitioners (MEP), Certified Emergency Managers (CEM), business continuity professionals, and experts with extensive real-world experience in emergency management.
- We maintain relationships with state, county, local, private, and nonprofit stakeholders that strengthen program engagement.
- We promote the use of state-of-the-art tools in exercise planning, delivery, and evaluation. These tools improve ease of use, enhance realism, and increase participant engagement.

Tetra Tech designs, develops, and delivers training and exercise programs that test our clients' capabilities in all phases of emergency management. While each exercise is customized to our client's unique objectives, some of our thematic exercise areas include:

- |                                       |   |
|---------------------------------------|---|
| • Public Health and Mass Care         | • Natural Hazards and Recovery              |
| • Healthcare and Mass Decontamination | • Technological Hazards                     |
| • Social and Civil Disturbances       | • Critical Infrastructure and Key Resources |

# Sample Projects

New York City Department of Health and Mental Hygiene, New York City, NY | Tetra Tech has been contracted by NYCDOHMH to manage multiple infectious disease exercises including:

- U.S. Health and Human Services Region II Transport Plan for Confirmed Ebola Patients Functional Exercise (2018)
- Special Pathogens Functional (2019) and Full-Scale Exercises (2019-20)
- Medical Countermeasures (MCM) Distribution (Full Scale 2020) and Dispensing (Full Scale – 2021)

Additionally, Tetra Tech has maintained a multi-year Public Health Emergency Evaluation standby contract for the evaluation of real-world emergencies.

**Note: Due to the current COVID-19 crisis, the MCM Distribution exercise was tabled and real-world operations were implemented to deliver over 1 million masks to 169 healthcare facilities and key stakeholders. Tetra Tech will continue to support this project through a contract scope change to evaluate the real-world response.**

California Medical Mutual Aid Region VI Highly Contagious Disease Patient Transportation Plan, Workshop, and Tabletop, Riverside, CA | Tetra Tech was contracted by the Riverside County Emergency Management Department to develop an operational California Medical Mutual Aid Region VI Highly Contagious Disease Patient Transportation Plan. The plan incorporated a regional approach for emergency medical services and healthcare response in a coordinated fashion during an Ebola or infectious disease outbreak to transport suspected or confirmed infectious patients to an assessment/treatment facility within Mutual Aid Regions I or VI. Collectively, these regions include the counties of Imperial, Inyo, Los Angeles, Mono, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura. The plan included specific objectives, related tasks, agency/organization roles and responsibilities, healthcare system preparedness, transport provider safety, communications, information sharing, and infection control measures. Upon development of the plan, Tetra Tech supported the design, conduct, and evaluation of an HSEEP-consistent workshop and tabletop to ensure the plan met the needs of the Regional Disaster Medical Health Coordination (RDHMC) Program.

Mount Sinai Health System PPE Training 2014 Ebola Epidemic | Tetra Tech was contracted to provide training covering new CDC guidance for the 2014 Ebola epidemic, for wearing personal protective equipment (PPE), this included Fit Testing and training on the Powered Air Purifying Respirator (PAPR) for thousands of clinical staff members across all 6 acute care facilities and 45 ambulatory practice centers. The Tetra Tech team worked closely with the hospital system to modify existing programs and develop disease-specific training to deploy to all clinical staff within the network. Over 9 weeks, the Tetra Tech team delivered training programs onsite at the 6 hospital locations to over 3,000 clinical staff.

State Medical Countermeasures Receipt, Stage, and Store (RSS) Warehouse Support, OH Department of Health (ODH), Columbus, Ohio | Tetra Tech was retained by ODH to evaluate existing RSS plans, policies, procedures, and protocols to validate them and identify gaps and areas for improvement. The goal of the project was to develop a user-friendly Warehouse Management Manual (WMM) for ODH's Medical Countermeasures Program. Tetra Tech conducted a thorough review of available documentation and developed numerous "Quick Guides" and "Just-In-Time" training videos on topics such as warehouse access, system usage (i.e. alarm system, cameras, etc.), inventory management, resource deployment, use of equipment, and warehouse safety. Tetra Tech also provided RSS-specific warehouse safety training for ODH staff who may serve in an Incident Command System position or other support role, in the RSS warehouse during an emergency.

## Business Continuity and Emergency Preparedness Technical Support

National Railroad Passenger Corporation (Amtrak) | Tetra Tech supported Amtrak with development of an enterprise-wide Business Continuity Framework as well as supporting plans and procedures for a variety of risks faced by a national railroad. Specifically, we developed their Business Continuity Framework based on applicable government and business best practices for ensuring continuing operations when an organization faces disruption due to natural disasters, disease, accidents, and terrorism. We conducted a Business Impact Analysis (BIA) and Business Process Analysis (BPA) applying standards such as American Society for Industrial Security (ASIS) Continuity of Business Systems: Requirements with Guidance for Use, ASIS.BSI BCM.01-2010 and the Federal Emergency Management Agency (FEMA) Continuity Guidance Circular 1-2 (CGC 1-2). Following approval of the framework, we developed station-level Emergency Action Plans and Continuity of Operations Plans for application across Amtrak's national rail network. We then developed procedures and training for stations to establish disaster Friends & Relatives Centers to temporarily aid displaced rail passengers and crewmembers in the event of a railroad emergency incident.

Horizon Hazard Vulnerability and Risk Analysis Horizon Blue Cross Blue Shield of New Jersey | Tetra Tech assisted Horizon Blue Cross Blue Shield of New Jersey (Horizon BCBSNJ) with revision of its emergency management plans and implementation strategy. Tetra Tech conducted a hazard, vulnerability, and risk analysis (HVRA) for the Horizon BCBSNJ Headquarters and Data Center. Tetra Tech's HVRA included:

- Breaking down the Horizon BCBSNJ facilities into more manageable critical assets for assessment;
- Establishing Horizon's hazards of concern through interviews, open source research, and subject matter expertise;
- Adopting measures of impact assessing the consequences of a hazard that affects a critical asset; and
- Assessing the vulnerabilities at the appropriate facilities through site visits, qualitative assessment, and modeling.

The resultant analysis enabled Horizon's emergency management and business continuity professionals to target the organization's limited time and resources to addressing the most significant risks that the organization faces. Horizon used this report to conduct further risk reduction measures to better protect its assets (employees, visitors, facilities, property, and business) across the entire enterprise from natural, technological, and intentional hazards.

## About Us

Tetra Tech is a leading provider of emergency management and community resilience services across the entire continuum of devastating impacts of natural and man-made events. We help public and private sector clients address preparedness, mitigation, response, and short- and long-term recovery needs.

During steady-state conditions, our disaster preparedness strategies include developing and applying technology to better inform clients about the wide array of hazards they face; prioritizing, scoping, and implementing projects designed to mitigate risks; and planning, training, and exercising organizations to enhance their readiness to respond. Post-disaster, Tetra Tech offers a wide range of incident management support including augmenting staff and personnel; facilitating and monitoring rapid infrastructure repair and debris management; and advising and guiding clients through comprehensive financial management, community resilience, and economic redevelopment phases of disaster recovery.

### Tetra Tech's Global Reach

Tetra Tech has offices and operational infrastructure throughout the United States, Canada, and abroad. With 20,000 associates in more than 450 offices in more than 120 countries on seven continents, Tetra Tech's technical knowledge and hands-on site work is broad and deep. Our staff is supported by a uniform administrative and management system that project teams can access immediately to ensure work is completed effectively.

Tetra Tech has expanded its geographic presence significantly in recent years through strategic acquisitions and internal growth, especially in Canada, Latin America, and Australia. We also have considerable operations in Asia, Europe, and the Middle East.





**Tetra Tech, Inc.**  
**Emergency Management Community Resilience**

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