



Novel Coronavirus Infection (SARS/MERS)

Human coronaviruses (HCoVs) are common viruses that cause mild to moderate upper-respiratory tract illnesses that were first identified in the mid-1960s¹. People worldwide are commonly infected with 4 human coronaviruses: 229E, NL63, OC43, and HKU1¹⁻². Other coronaviruses have been found that naturally infect animals (usually only infecting one animal species, or other closely related species); however in the past two decades, two novel coronaviruses, specifically Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) and Middle East Respiratory Syndrome Coronavirus (MERS-CoV), have been newly identified to infect both humans and animals¹. Both SARS-CoV and MERS-CoV have caused global outbreaks with great morbidity and mortality rates (especially among the healthcare population)^{1,3}.

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV)

SARS-CoV was first identified in early 2003 as a new disease, thought to originate in southern China from the spread of the virus from small mammals¹⁻⁴. The first cases were identified in Southeast Asia, but the disease quickly spread to other continents³⁻⁵, following global transportation patterns⁵. During the 2003 outbreak (November 2002 - July 2003), over 8,000 people were diagnosed with SARS accompanied by either pneumonia or respiratory distress syndrome and 774 cases died (case fatality rate = 9.6%)²⁻⁵. No new cases were reported by late July 2003, and WHO declared the outbreak over³⁻⁴. China had by far the most cases, followed by Hong Kong, Taiwan, Canada, Singapore, and Vietnam³. Eight people in the U.S. were diagnosed with laboratory-confirmed SARS-CoV, and all survived⁴. All eight cases had traveled to areas with known SARS-CoV transmission⁴⁻⁵.

In the spring of 2004, additional cases were identified in China, thought to be laboratory-acquired infections^{2,5}. No known SARS-CoV transmission has occurred in the world since then².

During the 2003 epidemic, healthcare workers accounted for a significant number of identified cases³. Most SARS cases occurred in young adults, largely reflecting the age of healthcare workers, their family members and social contacts, and international travelers³.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

MERS-CoV was first identified in Saudi Arabia in 2012 and has caused illnesses in hundreds of people from a number of countries in the Middle East, Europe, Asia, North Africa and North America; however all cases to date have been linked to countries (directly or indirectly) in and near the Arabian Peninsula^{2,5-8}. The current case fatality rate is approximately 28–30% (most people who have died also reported an underlying medical condition)⁵⁻⁷.

Virus genome analyses have been conducted and suggest there have been multiple introductions into the human population, rather than a single common source introduction; therefore the level of undetected circulation in humans is unknown⁵. Currently, CDC is working with global partners to better understand the risks, the source, how it spreads and how infections might be prevented.

A. Agent:

Coronaviruses are a group of viruses that have a halo or crown-like (corona) appearance when viewed under a microscope, and are common causes of mild to moderate upper-respiratory illness in humans, including the common cold¹. They are enveloped, single-stranded positive strand RNA viruses^{2,5}.

B. Clinical Description:

The four common HCoVs usually cause a mild to moderate upper respiratory tract illness with a short duration. In immunosuppressed and elderly populations, HCoVs may cause lower-respiratory tract infections such as pneumonia¹⁻².

SARS-CoV⁴ – In general, a SARS-CoV infection begins with a high fever (temperature >100.4°F [>38.0°C]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10% to 20% of patients have diarrhea. After 2 to 7 days, SARS-CoV patients may develop a dry cough and most patients develop pneumonia. At this time, most patients will need to meet the requirements for severe acute illness (including radiographic evidence of pneumonia or acute respiratory distress syndrome) in order to be considered as suspected cases.

MERS-CoV⁸ – There has been limited clinical data collected for MERS patients, with most of the published information to date coming from critically ill patients (usually hospitalized); however, a wide clinical spectrum has been reported (ranging from asymptomatic infections to respiratory failure, septic shock and death). Clinical illness in immunosuppressed individuals may be atypical (e.g., including gastric involvement). Normally, MERS begins with fever, cough and shortness of breath, while other symptoms may include chills/rigors, headache, dyspnea, myalgia, sore throat, coryza, nausea, vomiting, diarrhea, dizziness, sputum production and abdominal pain. Cases requiring admission to the intensive care unit (ICU) often reported a febrile upper respiratory tract illness with rapid progression to a pneumonia illness.

C. Reservoirs:

Coronaviruses can infect a wide range of mammals, including humans, and birds^{1-2,5}.

SARS-CoV⁵ – Masked palm civets in southern China were identified as the likely origin of the virus in the 2003 outbreak. Other small wild mammals may also be reservoirs for SARS-CoV or similar coronaviruses.

MERS-CoV⁷⁻⁸ – Currently, the reservoir of MERS-CoV is still under investigation; however it is most likely humans became infected after contact with an animal source. MERS-CoV antibodies have been found in dromedary camels and closely related beta-coronaviruses have been found in numerous bats in the Middle East region, but more information is needed to figure out the possible role animals play in the transmission of MERS-CoV.

D. Mode of Transmission:

Transmission of common human coronaviruses has not been studied very much¹⁻². However, transmission is believed to occur primarily through person-to-person transmission, via respiratory tract droplets produced when an infected person coughs or sneezes¹⁻². The viruses may also spread when a person touches a surface or object contaminated with infectious respiratory tract droplets and then touches his or her mouth, nose, or eye(s)¹. “Close contacts” are those people caring for or living with an infected person (including in the hospital setting), or having direct contact with a patient’s respiratory secretions or body fluids⁴.

SARS-CoV – It is possible that the SARS-CoV might also be spread by airborne transmission or other ways that are not currently known².

MERS-CoV – At this time, there has been no ongoing spread of MERS-CoV in the community and all reported cases have been linked to countries in and near the Arabian Peninsula⁷⁻⁸.

E. Incubation Period:

The incubation period for a novel coronavirus may be unknown until more information regarding human infections becomes available⁹. The incubation period for common HCoVs are approximately 2 to 5 days, with a median incubation of 3 days².

SARS-CoV – The incubation period for SARS is approximately 2 to 10 days, with a median incubation period of 4 days².

MERS-CoV – The incubation period for MERS in person-to-person transmission events can range from 2 to 14 days, with a median incubation period of 5–6 days^{2,5}.

F. Period of Communicability:

The period of communicability for coronaviruses is unknown^{2,5}.

G. Susceptibility and Resistance:

Seroprevalence data shows that approximately 90% of adults are seropositive for 229E, NL63 and OC43, while approximately 60% are seropositive for HKU1². This suggests that exposure and infection with the four common HCoV's may occur early in childhood².

Previous infection is rare in most of the population to SARS-CoV and MERS-CoV. In the event of a novel coronavirus, the susceptibility of the population will be high.

H. Treatment:

No specific treatment for the four common HCoV's; however pain and fever reducing medications can be taken¹.

SARS-CoV – No specific treatment for SARS-CoV infection is currently available⁵. Clinical management includes treatment similar to patients with serious community-acquired atypical pneumonia⁴. Antiviral treatments have not been shown to be effective^{2,5}.

MERS-CoV – No specific treatment for MERS-CoV infection is currently available^{5,7-8}. Clinical management includes supportive management of complications and implementation of recommended infection prevention and control measures⁷⁻⁸.

Only novel coronaviruses (e.g., SARS-CoV and MERS-CoV) require public health notification and investigation¹⁰.

I. Clinical Case Definition:

SARS-CoV

Clinical Criteria ^{4,10}	
Early Illness	Presence of two or more of the following features: fever (might be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, rhinorrhea
Mild-to-moderate respiratory illness	<ul style="list-style-type: none"> • Temperature of >100.4° F (>38° C)¹; AND • One or more clinical findings of lower respiratory illness (e.g., cough, shortness of breath, difficulty breathing).
Severe respiratory illness	<ul style="list-style-type: none"> • Meets clinical criteria of mild-to-moderate respiratory illness; AND • One or more of the following findings: <ul style="list-style-type: none"> - Radiographic evidence of pneumonia; OR - Acute respiratory distress syndrome; OR - Autopsy findings consistent with pneumonia or acute respiratory distress syndrome without an identifiable cause.

Epidemiologic Criteria ^{4,10}	
Likely exposure to SARS-CoV	One or more of the following exposures in the 10 days before onset of symptoms: <ul style="list-style-type: none"> • Close contact^x with a person with confirmed SARS-CoV disease; OR • Close contact^x with a person with mild-to-moderate or severe respiratory illness for whom a chain of transmission can be linked to a confirmed case of SARS-CoV disease in the 10 days before onset of symptoms.

^xClose contact is defined as having cared for or lived with a person with SARS or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a person with SARS (during encounters with the patient or through contact with materials contaminated by the patient) either during the period the person was clinically ill or within 10 days of resolution of symptoms. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, close (i.e., <3 feet) conversation, physical examination, and any other direct physical contact between persons. Close contact does not include activities such as walking by a person or sitting across a waiting room or office for a brief time.

Case Classification ^{4,10}		
Confirmed	Clinically compatible illness (i.e., early, mild-to-moderate, or severe) that is laboratory confirmed.	
Probable	Meets the clinical criteria for severe respiratory illness and the epidemiologic criteria for likely exposure to SARS-CoV.	
Suspected - Report Under Investigation (RUI)	Reports in persons from areas where SARS-CoV is NOT known to be active:	Cases compatible with SARS in groups likely to be first affected by SARS-CoV if SARS-CoV is introduced from a person without clear epidemiologic links to known cases of SARS-CoV disease or places with known ongoing transmission of SARS-CoV.
	Reports in persons from areas where SARS-CoV activity IS occurring:	Cases meeting the clinical criteria for mild-to-moderate illness and the epidemiologic criteria for possible exposure*.
		Cases meeting the clinical criteria for severe illness and the epidemiologic criteria for possible exposure*.
		Cases meeting the clinical criteria for early or mild-to-moderate and the epidemiologic criteria for likely exposure to SARS-CoV.

*Spring 2003 CDC definition for probable cases.

MERS-CoV

A person who has both clinical features and an epidemiologic risk should be considered a MERS patient under investigation (PUI) based on one of the following scenarios:

Clinical Features		Epidemiologic Risk ^{8,10}
Severe Illness Fever ¹ AND pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence)	AND	A history of travel from countries in or near the Arabian Peninsula ² within 14 days before symptom onset, or close contact ² with a symptomatic traveler who developed fever and acute respiratory illness (not necessarily pneumonia) within 14 days after traveling from countries in or near the Arabian Peninsula ² . -OR- A member of a cluster of patients with severe acute respiratory illness (e.g., fever ¹ and pneumonia requiring hospitalization) of unknown etiology in which MERS-CoV is being evaluated, in consultation with state and local health departments in the US.
Milder Illness Fever ¹ AND symptoms of respiratory illness (not necessarily pneumonia; e.g., cough, shortness of breath)	AND	A history of being in a healthcare facility (as a patient, worker, or visitor) within 14 days before symptom onset in a country or territory in or near the Arabian Peninsula ¹ in which recent healthcare-associated cases of MERS have been identified.
Fever ¹ OR symptoms of respiratory illness (not necessarily pneumonia; e.g., cough, shortness of breath)	AND	Close contact ³ with a confirmed MERS case while the case was ill.

¹ Fever may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain medications. Clinical judgement should be used to guide testing of patients in such situations.

² Countries considered in the Arabian Peninsula and neighboring include: Bahrain; Iraq; Iran; Israel, the West Bank, and Gaza; Jordan; Kuwait; Lebanon; Oman; Qatar; Saudi Arabia; Syria; the United Arab Emirates (UAE); and Yemen.

³ Close contact is defined as a) being within approximately 6 feet (2 meters), or within the room or care area, of a confirmed MERS case for a prolonged period of time (such as caring for, living with, visiting, or sharing a healthcare waiting area or room with, a confirmed MERS case) while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection); or b) having direct contact with infectious secretions of a confirmed MERS case (e.g., being coughed on) while not wearing recommended personal protective equipment. See CDC's Interim [Infection Prevention and Control Recommendations for Hospitalized Patients with MERS](#). Data to inform the definition of close contact are limited; considerations when assessing close contact include the duration of exposure (e.g., longer exposure time likely increases exposure risk) and the clinical symptoms of the person with MERS (e.g., coughing likely increases exposure risk). Special consideration should be given to those exposed in healthcare settings. For detailed information regarding healthcare personnel (HCP) please review [CDC Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Middle East Respiratory Syndrome \(MERS-CoV\) Exposure](#). Transient interactions, such as walking by a person with MERS, are not thought to constitute an exposure; however, final determination should be made in consultation with public health authorities.

Case Classification ^{8,10}	
Confirmed	A person with laboratory confirmation of MERS infection.
Probable	A person meeting the clinical and epidemiological criteria listed above, with absent or inconclusive laboratory results for MERS infection, who is a close contact ³ of a laboratory-confirmed MERS case. Examples of laboratory results that may be considered inconclusive include a positive test on a single PCR target, a positive test with an assay that has limited performance data available, or a negative test on an inadequate specimen.

J. Laboratory Criteria for Diagnosis:

SARS-CoV^{4,10} – The following are general criteria for laboratory confirmation of SARS-CoV:

- Detection of serum antibody to SARS-CoV by a test validated by CDC (e.g., enzyme immunoassay)
- Isolation in cell culture of SARS-CoV from a clinical specimen
- Detection of SARS-CoV RNA by a reverse transcription polymerase chain reaction test validated by CDC and with subsequent confirmation in a reference laboratory (e.g., CDC).

MERS-CoV^{8,10} – Confirmatory laboratory testing requires a positive PCR on at least two specific genomic targets or a single positive target with sequencing on a second.

K. Classification of Import Status:

Import status reflects where the coronavirus infection was acquired: in county, in state, international, out of county but in Arizona, out of state but in U.S., or location is unknown.

L. Laboratory Testing:

SARS-CoV – Since 2004, there have not been any known cases of SARS-CoV reported anywhere in the world; therefore any laboratory testing for a suspect case will need to be in consultation with the CDC. CDC has an enzyme immunoassay (EIA) for the detection of serum antibody and a reverse transcription-polymerase chain reaction (RT-PCR) for the detection of viral RNA.

Recommended Specimens for Evaluation of Potential Cases of SARS-CoV ⁴			
	Outpatient	Inpatient	Fatal
Upper Respiratory	- Nasopharyngeal wash/aspirate - Nasopharyngeal and oropharyngeal swabs	- Nasopharyngeal wash/aspirate - Nasopharyngeal and oropharyngeal swabs	- Nasopharyngeal wash/aspirate - Nasopharyngeal and oropharyngeal swabs
Lower Respiratory	Sputum	- Sputum - Bronchoalveolar lavage, tracheal aspirate, or pleural fluid tap	Bronchoalveolar lavage, tracheal aspirate, or pleural fluid tap
Blood	- Serum – acute and convalescent (>28 days post onset) - Blood (plasma)	- Serum – acute and convalescent (>28 days post onset) - Blood (plasma)	- Serum - Blood (plasma)
Stool			
Tissue			- Fixed tissue from all major organs (e.g., lung, heart, spleen, liver, brain, kidney, adrenals) - Frozen tissue from lung and upper airway (e.g., trachea, bronchus)

MERS-CoV – Currently, laboratory testing for MERS-CoV can be done at most state public health laboratories using the CDC's real-time RT-PCR (rRT-PCR) assay on respiratory specimens and serum. Respiratory specimens should be collected as soon as possible after symptom onset, ideally within 7 days and before the patient receives any antiviral medication.

Recommended Specimens for Evaluation of Potential Cases of MERS-CoV ⁸	
Lower Respiratory	- Bronchoalveolar lavage, tracheal aspirate, pleural fluid - Sputum
Upper Respiratory	- Nasopharyngeal and oropharyngeal swabs - Nasopharyngeal wash/aspirate or nasal aspirate
Serum	- Serum for serologic testing – (>2 weeks after onset) - Serum for rRT-PCR

M. Assessing Laboratory Results:

SARS-CoV⁴

- A positive RT-PCR test result for SARS-CoV is presumptive until confirmatory testing by a second reference laboratory is performed.
- A negative test result for SARS-CoV may not rule out SARS-CoV disease and should not affect patient management or infection control.

MERS-CoV⁸ - When testing is being done at approved state public health laboratories:

- Negative test results should be reported through the CDC Laboratory Response Network (LRN) within 24 hours.
- If “Presumptive Positive” or “Equivocal” test results are obtained, CDC must be contacted immediately as per the assay protocol, and the result must also be reported to the LRN within 6 hours.
- Confirmation of a “Presumptive Positive” result by CDC is required; however this should not delay the local investigation and response, including the contact investigation.

N. Outbreak Definition:

One case of a novel coronavirus (e.g., SARS and MERS) should be treated as an outbreak.

O. Time Frame¹¹:

Providers	Submit a report to the Local Health Department by telephone or electronic reporting system authorized by ADHS within 24 hours after a case or suspect case is diagnosed, treated, or detected or an occurrence is detected.
Laboratories	Submit a report to ADHS within 24 hours after obtaining a positive test result.
Local Health Agencies	<ul style="list-style-type: none"> - Notify ADHS within 24 hours after receiving a report. - Submit an epidemiologic investigation report to ADHS within 30 calendar days after receiving a report.

P. Forms:

- [SARS Case Reporting Form](#)
- [MERS Patient Under Investigation \(PUI\) Short Form](#)

Q. Investigation Steps:

For a local health agency¹¹:

A.A.C. R9-6-361. Novel Coronavirus (e.g., SARS or MERS)

A. Case control measures:

1. A local health agency shall:

- a. Upon receiving a report under R9-6-202 of a novel coronavirus case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
- b. In consultation with the Department, ensure the isolation of and the institution of both airborne precautions and contact precautions for a severe acute respiratory syndrome case or suspect case to prevent transmission;
- c. Conduct an epidemiologic investigation of each reported novel coronavirus case or suspect case; and
- d. For each novel coronavirus case, submit to the Department, as specified in Table 2.4, the information required under R9-6-206(D).

B. Contact control measures: A local health agency, in consultation with the Department, shall determine which novel coronavirus contacts will be quarantined or excluded, according to R9-6-303, to prevent transmission.

Confirm Diagnosis

Use the current [PUI guidance and case definitions](#) from CDC.

Conduct Case Investigation

- Epidemiological investigation report should be submitted in MEDSIS by filling out the full DSO and attaching an investigation form.
- Collect case's demographic and contact information:
- Obtain information from the provider or medical chart.
 - Obtain medical records, including admission notes, progress notes, lab report(s), and discharge summary.
 - Make a note of any tests being performed and the expected turn-around time.
- Examine the symptoms and clinical history, especially:
 - Date of illness onset, type of disease syndrome, hospitalization records (reason, location and duration of stay), and outcome status (survived or date of death).
- Examine the laboratory testing that was done:

- Collection date, type of specimen that was collected, which tests were ordered.
- Collect any information on travel outside of the United States.
 - Travel history should be captured in the travel table in MEDSIS including all dates associated with travel.

Conduct Contact Investigation

- Identify all close contacts. Close contact is defined as:
 - Being within approximately 6 feet (2 meters), or within the room or care area, of a confirmed MERS case for a prolonged period of time (such as caring for, living with, visiting, or sharing a healthcare waiting area or room with, a confirmed MERS case) while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection); OR
 - Having direct contact with infectious secretions of a confirmed MERS case (e.g., being coughed on) while not wearing recommended personal protective equipment.

Initiate Control and Prevention Measures

Standard, contact and airborne precautions should be used for management of suspect novel coronavirus patients in healthcare facilities.

Action ⁸	Details ⁸
Isolate in an Airborne Infection Isolation Room (AIIR)	<ul style="list-style-type: none"> - If an AIIR is not available, the patient should be transferred as soon as is feasible to a facility where an AIIR is available. <ul style="list-style-type: none"> • Pending transfer, place a facemask on the patient and isolate him/her in a single-patient room with the door closed. • The patient should not be placed in any room where room exhaust is recirculated without high-efficiency particulate air (HEPA) filtration. - Once in an AIIR, the patient's facemask may be removed. <ul style="list-style-type: none"> • When outside of the AIIR, patients should wear a facemask to contain secretions. - Limit transport and movement of the patient outside of the AIIR to medically-essential purposes. - Implement staffing policies to minimize the number of personnel that must enter the patient's room. - After a potentially infectious patient leaves a room, unprotected individuals, including healthcare personnel (HCP), should not be allowed in the room until sufficient time has elapsed for enough air changes to remove potentially infectious particles.
Personal Protective Equipment (PPE) for Healthcare Personnel (HCP)	<ul style="list-style-type: none"> - Recommended PPE should be worn by HCP upon entry into patient rooms or care areas. <ul style="list-style-type: none"> • Gloves, gowns, eye protection (goggles or face shield) • Respiratory protection that is at least as protective as a fit-tested NIOSH-certified disposable N95 filtering face piece respirator. <ul style="list-style-type: none"> ○ If a respirator is unavailable, a facemask should be worn. In this situation respirators should be made available as quickly as possible. - Upon exit from the patient room or care area, PPE should be removed and either <ul style="list-style-type: none"> • Discarded, OR • For re-useable PPE, cleaned and disinfected according to the manufacturer's reprocessing instructions - Hand hygiene should be performed after removal of PPE.

Aerosol Generating Procedures	<ul style="list-style-type: none"> - Use a combination of measures to reduce exposures from aerosol-generating procedures when performed on novel coronavirus patients. - Limiting the number of HCP present during the procedure to only those essential for patient care and support. - Conduct the procedures in a private room and ideally in an AIIR when feasible. <ul style="list-style-type: none"> • Room doors should be kept closed except when entering or leaving the room, and entry and exit should be minimized during and shortly after the procedure. - HCP should adhere to PPE precautions (i.e., gloves, a gown, and either a face shield that fully covers the front and sides of the face or goggles, and respiratory protection that is at least as protective as a fit-tested N95 filtering face piece respirator [e.g., powered air purifying or elastomeric respirator]) during aerosol-generating procedures. - Conduct environmental surface cleaning following procedures.
Hand Hygiene	<ul style="list-style-type: none"> - HCP should perform hand hygiene frequently, including before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE, including gloves. <ul style="list-style-type: none"> • Hand hygiene in healthcare settings can be performed by washing with soap and water or using alcohol-based hand rubs. If hands are visibly soiled, use soap and water, not alcohol-based hand rubs. - Healthcare facilities should ensure that supplies for performing hand hygiene are available.
Environmental Infection Control	<ul style="list-style-type: none"> - Follow standard procedures, per hospital policy and manufacturers' instructions, for cleaning and/or disinfection of: <ul style="list-style-type: none"> • Environmental surfaces and equipment • Textiles and laundry • Food utensils and dishware - Use EPA-registered hospital disinfectants to disinfect hard non-porous surfaces. <ul style="list-style-type: none"> • Follow label instructions for use.
Duration of Infection Control Precautions	<ul style="list-style-type: none"> - At this time, information is lacking to definitively determine a recommended duration for keeping patients in isolation precautions. - Duration of precautions should be determined on a case-by-case basis, in conjunction with local, state and federal health authorities. - Factors that should be considered include: presence of symptoms related to a novel coronavirus, date symptoms resolved, other conditions that would require specific precautions and available laboratory information.

Isolation, Work and Child Care Restrictions⁵

- People who are confirmed to have, or being evaluated for, a novel coronavirus infection should stay home from work or school and delay future travel to reduce the possibility of spread. Currently, isolation precautions should be determined on a case-by-case basis, in conjunction with local, state, and federal health authorities.
- People who are confirmed to have, or being evaluated for, a novel coronavirus infection and do not require hospitalization for medical reasons may be cared for and isolated in a residential setting after a healthcare professional determines that the setting is suitable.
- CDC may detain individuals arriving in the U.S. or traveling between states that are believed to be infected with a quarantinable disease (including MERS) as of July 31, 2014, per amended U.S. Executive Order 13295.

Case Management⁵

- Obtain clinical specimens (i.e. respiratory specimens and serum) for testing.
- Potential prescription of antibiotics used for community acquired pneumonia.

Contact Management, including Susceptible Contacts⁵

- Provide information regarding signs and symptoms of the novel coronavirus to all contacts.
 - Contacts should perform self-monitoring techniques for fever and respiratory symptoms for 10–14 days.
 - Public health may contact (via in-person or phone) each contact daily to monitor development of symptoms.
- If the contact becomes symptomatic, provide assistance to determine a suitable healthcare facility with appropriate levels of infection control.
- Voluntary home quarantine of asymptomatic contacts may be suggested.
- If the suspect coronavirus case is removed from surveillance due to an alternative diagnosis, contacts can be removed from follow-up.

Notifications

- ADHS is responsible for notifying CDC upon identification of a confirmed case.
- ADHS is responsible for submitting information from the investigation form to CDC.
- ADHS and the local health department will jointly decide whether to send a health alert notice to providers, create a press release, or provide other public notifications.

R. Outbreak Guidelines:

Refer to Outbreak Section of the Disease Investigation Manual.

S. Special Situations⁵:

Medical Settings -

- Early detection and strict infection control is critical for reducing exposures in healthcare facilities (including healthcare workers, patients and into the wider community).

References

1. About Coronavirus [Internet]. Coronavirus. Centers for Disease Control and Prevention; 2016 [cited 2016Dec20]. Available from: <https://www.cdc.gov/coronavirus/about/index.html>
2. Kimberlin DW, Brady MT, Jackson MA, Long SS. Coronaviruses, including SARS and MERS. In: Red Book: 2015 report of the committee on infectious disease. 30th ed. Elk Grove, IL: American Academy of Pediatrics; 2015. p. 306–309.
3. (SARS) Severe Acute Respiratory Syndrome [Internet]. World Health Organization; [cited 2016Dec20]. Available from: <http://www.who.int/ith/diseases/sars/en/>
4. Severe Acute Respiratory Syndrome (SARS) [Internet]. Centers for Disease Control and Prevention; 2013 [cited 2016Dec20]. Available from: <https://www.cdc.gov/sars/index.html>
5. Schneider E, Bermingham A, Pebody R, Watson JS. SARS, MERS, and Other Coronavirus Infections. In: Heymann DL, editor. Control of communicable diseases manual. 20th ed. Washington, DC: American Public Health Association; 2015. p. 539–549.
6. Investigation of cases of human infection with Middle East respiratory syndrome coronavirus (MERS-CoV) – Interim Guidance. World Health Organization; 2015 [cited 2016Dec20]. Available from: http://apps.who.int/iris/bitstream/10665/178252/1/WHO_MERS_SUR_15.2_eng.pdf
7. Middle East Respiratory Syndrome Coronavirus (MERS-CoV) [Internet]. World Health Organization; [cited 2016Dec20]. Available from: <http://www.who.int/mediacentre/factsheets/mers-cov/en/>
8. Middle East Respiratory Syndrome (MERS) [Internet]. Centers for Disease Control and Prevention; 2016 [cited 2016Dec20]. Available from: <https://www.cdc.gov/coronavirus/mers/index.html>
9. Coronavirus infections [Internet]. World Health Organization; [cited 2016Dec20]. Available from: http://www.who.int/topics/coronavirus_infections/en/
10. Case definitions. In: Case Definitions for Reportable Communicable Morbidities – 2017 [Internet]. Arizona Department of Health Services. [cited 2017Mar27]. Available from: <http://www.azdhs.gov/documents/preparedness/epidemiology-disease-control/disease-investigation-resources/case-definitions.pdf>
11. Arizona Administrative Code [Internet]. 2018Sep30 [cited 2019June7]. Available from: http://apps.azsos.gov/public_services/Title_09/9-06.pdf