Toledo-Lucas County Health Department Standard Operating Procedure

Infectious Disease SOP— Middle East Respiratory Syndrome (MERS)

Original Effective Date:	Review / Revision Date:	Environmental Health Procedure:
4/2016	7/20/17	2017.07.010

Maintenance Steward: Epidemiology Supervisor History: ☐ New ☒ Revised ☐ Archived

Organizational Scope:

☐ Full Agency ☒ Administration ☒ Community Services ☒ Environmental Health ☐ Health Services

Frequency of Review:

☐ Annually ☒ Biennially ☐ 5 Years ☒ As Needed ☐ Other:

Location:

S-Drive: S: → Users → Common → Policies & Procedures

Website: www.lucascountyhealth.com/employee-login/

Hardcopy: Environmental Health and Community Services Director's Office

Archived Version(s): S:\CSRP\SOGs\Archives

Requisite Signatures

☒	MD *Medical Director*	7-20-17 *Date*
☒	*Health Commissioner*	07-20-17 *Date*
☒	*Director of Environmental Health & Community Services*	7/20/2017 *Date*

Infectious Disease SOP— Middle East Respiratory Syndrome (MERS)

I. Policy

It is the policy of the Toledo-Lucas County Health Department (TLCHD) to adhere to all state, federal, and local statutes governing the management and case investigation of individual communicable disease cases and outbreaks within Lucas County.

II. Scope

This standard procedure applies to the Infectious Disease Program when investigating one case of Middle East Respiratory Syndrome Coronavirus (MERS-CoV). When an outbreak occurs, call ODH ORBIT. In an outbreak, refer to the "Epi and Surveillance OB Procedure."

III. Purpose

This procedure/process establishes guidelines for Middle East Respiratory Syndrome Coronavirus (MERS-CoV) investigations. Per the Ohio Administrative Code (OAC) 3701-3, MERS-CoV is a Class A disease and must be reported immediately via telephone according to 3701-3-02, 3701-3-03, 3701-3-04, and 3701-3-05 of the Administrative Code.

IV. Background

Middle East Respiratory Syndrome Coronavirus (MERS-COV) is caused a species of Coronoviridae in lineage C of the genus beta-coronavirus. Genetic sequence data indicate that this new virus is similar to bat coronaviruses, but not similar to any other coronavirus previously described in humans. Symptoms from this disease ranged from asymptomatic to acute respiratory illness, rapidly progressive pneumonitis, respiratory failure, septic shock, and multi-organ failure resulting in death. In general, MERS-CoV begins with a high fever (>100.4°F [>38.3°C]). In some cases, diarrhea, headache, chills, myalgia, and nausea/vomiting have preceded the respiratory symptoms.

MERS-CoV was first identified and reported to cause severe acute respiratory illness in 2012. The majority of cases (~85%) have been reported from KSA and all reported cases have been directly or indirectly linked to travel or residence in nine countries: KSA, UAE, Qatar, Jordan, Oman, Kuwait, Yemen, Lebanon, and Iran. MERS-CoV is thought to be spread from an infected person's respiratory secretions, such as through coughing. Person-to-person spread of MERS-CoV, usually after close contact, such as caring for or living with an infected person has been well documented. Patients can shed the virus after resolution of symptoms, but the duration of infectivity is unknown. Patients are not contagious during the incubation period, which may range from 2-14 days (median of 5 days). Asymptomatic patients might not be contagious.

V. Case Definition

A. <u>Patient Under Investigation</u>

1. A person who has both clinical features and an epidemiologic risk should be considered a patient under investigation (PUI) based on one of the following scenarios:
    a. Fever AND pneumonia or acute respiratory distress syndrome(based on clinical or radiological evidence) AND EITHER:
        i. History of travel from countries in or near the Arabian Peninsula within 14 days before symptom onset, OR
        ii. Close contact with a symptomatic traveler who developed fever and acute respiratory illness within 14 days after traveling from countries in or near the Arabian peninsula, OR
        iii. Is a member of a cluster of patients with severe respiratory illness of unknown etiology in which MERS-CoV is being evaluated, in consultation with state and local health department

        OR

    b. Fever AND symptoms of respiratory illness AND being in a healthcare facility within the 14 days before symptom onset in a country or territory in or near the Arabian Peninsula in which recent healthcare-associated cases of MERS have been identified

        OR

    c. Fever OR symptoms of respiratory illness AND close contact with a confirmed MERS case while the case was ill.

Although the above criteria serve as guidance for testing, patients should be evaluated and their case discussed with public health departments on a case-by-case basis if their clinical presentation or exposure history is equivocal.

B. <u>Laboratory Criteria for Diagnosis</u>

1. A positive polymerase chain reaction on at least two specific genomic targets or a single positive target with sequencing on a second is required for confirmatory testing.
2. ODH Laboratory has the ability to test clinical respiratory, blood, and stool specimens.
3. If infection with MERS-CoV is suspected based on current clinical and epidemiological screening criteria recommended by public health authorities, please contact ODH.

VI. Case Classification

A. Probable:

1. A PUI with absent or inconclusive laboratory results for MERS-CoV infection who is a close contact of a laboratory-confirmed MERS-CoV case. Close contact is defined as: (a) any person who provided care for the patient, including a healthcare worker or family member, or had similarly close contact; or (b) any persons who stayed at the same place (e.g. lived with, visited) as the patient while the patient was ill.

B. Confirmed:

1. A person with laboratory confirmation of MERS-CoV infection irrespective of clinical signs and symptoms. This status requires a positive PCR on at least two specific genomic targets or a single positive target with sequencing on a second. Positive test results from another respiratory pathogen should not necessarily preclude testing for MERS-CoV.

C. Not a case:

1. This status is not generally used when reporting a case, but may be used to reclassify a report if investigation revealed it was not a case.

VII. Procedure

The procedure/process of the Infectious Disease Program is to ensure that all cases are investigated in the same format.

When a report is received, a member of the ID team will complete an interview of the contact using the CDC MERS Patient Under Investigation (PUI) Form, which can be found in S:\CSRP\SOGs\MERSCoV. Information collected from the form should be entered into ODRS and sent to ODH.

A. Outbreak Response

1. Call ODH ORBIT at 614-995-5599 for guidance

B. Public Health Investigation Process

1. ODRS:
    a. Check to see if the patient is entered into ODRS. If not, enter the patient into ODRS
2. Investigation
    a. Case investigation should start as soon as possible following notification.
    b. Contact the patient's provider and/or hospital to obtain demographic information, symptoms, date of onset of symptoms, pertinent test results and travel history for the three weeks prior to onset.
    c. Once the provider and/or hospital ICP has been contacted call the patient/parent and complete the interview.
        i. Provide education from the fact sheet on the IDCM website at http://www.odh.ohio.gov/pdf/IDCM/mers.pdf. This information is also located in S:\CSRP\SOGs\MERSCoV.
            1) If no one answers, leave a message requesting a call back.
            2) Mail an informational letter requesting a callback.
            3) Continue to attempt phone contact with the patient for three more times in the span of 48 hours after the informational letter was sent.
            4) After interview is completed, ask the patient/parent whether they would like more information. If they express an interest, ask what the best method to deliver the information would be (e.g. e-mail, mail, etc.)
3. Treatment
    a. No specific treatment is available for MERS-CoV. Care is supportive.
    b. WHO has posted guidance for clinical management of MERS patients at: http://www.who.int/csr/disease/coronavirus_infections/InterimGuidance_ClinicalManagement_NovelCoronavirus_11Feb13u.pdf?ua=1
4. Isolation/Follow Up Specimens

a. CDC recommends standard, contact, and airborne precautions be put into place while managing patients in healthcare settings who are PUIs or confirmed cases of MERS-CoV infection. Updated guidance on MERS-CoV infection control in healthcare settings is available at: http://www.cdc.gov/coronavirus/mers/infection-prevention-control.html
b. In addition to the CDC guidelines mentioned, the World Health Organization (WHO) also recommends added droplet precautions, since it is not always possible to identify patients with MERS-CoV early due to mild or unusual symptoms.

5. Prophylaxis
   a. No vaccinations currently available for this disease.
6. Contacts (Exclusion)
   a. A person who develops fever or symptoms of respiratory illness within 14 days of close contact with a confirmed MERS-CoV case while the case was ill should be evaluated for the disease as well.
   b. Evaluation and management of close contacts of a PUI should be discussed with state and local health departments. They should seek immediate medical attention if they develop symptoms such as fever, respiratory symptoms, or diarrhea.
7. Notification
   a. Notify TLCHD contacts immediately after investigation with patient (in sequential order)
      i. Supervisor of Epidemiology
      ii. Director of Community Services and Environmental Health
      iii. Medical Director
      iv. Health Commissioner
   b. Public health recommendations and interventions will be shared with the public by the PIO or to specific individuals within 6 hours of identification of the agent as determined by ODH and supervisory staff at the local health department. An OPHCS alert will be distributed within 12 hours of a positive test result as determined by supervisory local health department staff and ODH.
8. Documentation
   a. Enter information into ODRS as it is obtained.
   b. Include a note documenting investigation, education, and intervention.
      Sample: Spoke with mother by phone on [date]. EDUCATION: Reviewed disease facts, transmission, and symptoms. DISEASE COURSE: Client has history of [medical conditions] and started [symptoms] on [date]. Started [treatment] on [date]. HOUSEHOLD: HH contacts include [relationships]. All are [asymptomatic/symptomatic] [Include information about sensitive settings for HH contacts]. OCCUPATION: [job] TRAVEL HISTORY: [Include information about travel history within the past 2-3 weeks]. MAILING: Mailed fact sheet and cover letter to home address.
   c. Include a note for each occupation, activity, or other notification and any actions taken.
9. Closing a case

a. Ensure that all available information is entered into ODRS before closing. Close case and print record. Staple with investigation sheet and any related documents and file in the appropriate file drawer for the current year located in the CSRP office.

VIII. Appendices

None

IX. Reference/Investigation Forms

A. MERS-CoV Disease Factsheet is located in S:\CSRP\SOGs\MERSCoV.

B. For additional information please refer to the ODH IDCM at http://www.odh.ohio.gov/pdf/IDCM/mers.pdf

X. Maintenance

A. Review

1. The Infectious Disease standard operating procedures are to be reviewed every other year or as needed to ensure compliance with both agency and accreditation standards.

2. If guidance/recommendations from the Centers for Disease Control, Ohio Department of Health or law changes regarding this infectious disease, TLCHD will follow the most up-to-date guidance and adjust the SOP(s) as needed.

B. Revision

1. All changes made to this SOP are to be noted on the **Record of Change.** Substantial changes will require renewed signatures from all applicable parties. This includes changes to the intent, scope, procedures, or policy statement.

2. Changes in style, format, grammar or minor error correction will not require renewed signatures but must be indicated on the Record of Change.

Record of Change

(Required for all procedures)

Date of Change	Changes Made By	Changes Made/Notes	Approved By