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## Suspected COVID-19 Fatalities: Guidelines for County Coroners

**Preface:** The purpose of this document is to provide guidance to county coroners if and when suspected COVID-19 related deaths are reported. By following these guidelines, the state's death investigation system will have a consistent and thorough response to this new challenge. As time goes on, more information about COVID-19 related deaths will be developed, and this document may need to be periodically updated.

**Background:** The Medical Examiner Section of the ASCL is responsible for performing postmortem examinations when requested by county coroners and other designated authorities. The Medical Examiner staff routinely handles fatalities due to infectious disease, and can provide guidance for coroners regarding suspected COVID-19 victims, including submission for examination, personal safety measures, and collection of specimens for testing. Deaths from infectious disease, whether viral, bacterial, or fungal in origin, are considered natural unless the infectious agent is introduced via trauma. These deaths do not occur suddenly and unexpectedly, and there is always a time interval between the moment when the microorganism enters the body and the onset of symptoms. Depending on the individual's susceptibility, the infectious agent, and whether or not treatment was received, the infection will ultimately either be neutralized by the immune system, or worsen to the point where critical body functions fail and cause death. COVID-19 is no different in this regard from other viruses. Current information suggests that the majority of individuals infected with this agent have mild symptoms, and do not require medical support. A minority of individuals will develop more serious respiratory disease which does require medical treatment; a fraction of these patients will develop respiratory failure and die. It appears that most fatal cases involve older individuals, particularly if they have significant underlying respiratory problems.

The CDC has issued guidance for handling decedents with potential COVID-19 infections for medical examiners, coroners, pathologists, other workers involved in the postmortem care of decedents with potential COVID-19 infections and local and state health departments. It can be found here: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html.

The CDC refers to people with potential COVID-19 infections as "Persons under Investigation (PUI)". In general, the CDC believes COVID-19 to be spread by passage of respiratory droplets from person-to-person that generally occur while sneezing and coughing. It is believed that the risk of a deceased person to be able to transmit COVID-19 to a person handling the deceased is low because of the lack of production of respiratory droplets via coughing or sneezing by the decedent. The CDC has issued guidance on the risk for health care providers associated with treating patients with COVID-19 infections, however it does not discuss autopsy personnel specifically; this can be found here: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html

The CDC believes that standard precautions including good hand hygiene and use of personal protective equipment (PPE) including gloves, face masks, protective eye wear, face shields, and protective clothing (e.g., reusable or disposable gown, jacket, laboratory coat) are sufficient to protect someone handling a deceased individual with possible COVID-19 infection from acquiring it. More information on CDC recommendations for Standard Precautions can be found here: https://www.cdc.gov/oralhealth/infectioncontrol/summary-infection-prevention-practices/standard-precautions.html

The CDC also offers a risk assessment for people encountering live persons with COVID-19 infection including offering definitions for "High Risk for Exposure", "Medium Risk for Exposure", and "Low Risk for Exposure". These definitions are intended for living individuals and do not translate exactly to deceased individuals who may have unknown past medical and social histories. Therefore this document has developed an alternative four-tier triage system

for classifying unattended deaths in people with flu-like symptoms prior to death. The CDC risk assessment document can be found here: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html

**Attended Deaths:** It is likely that many, if not most of the individuals who ultimately die from COVID-19, will seek medical attention at some point. If a clinical diagnosis of COVID-19 disease is established before death, then certification should be done by the treating physician, just like any other infectious disease. If death from a viral infection occurs before confirmation of any infectious agent, including COVID-19, the treating physician should still maintain responsibility for certifying the death, and finalize the cause of death when diagnostic tests results become available. The so-called "24 hour" rule should not apply when a physician has made a diagnosis of viral illness and started treatment measures; they have professionally committed themselves, and from a medical standpoint are going to have the best working knowledge about their patient's death.

**Overview of ASCL strategy for suspected COVID-19 fatalities that are medically unattended:**

It is anticipated that there will be some medically unattended fatalities associated with COVID-19. All cases referred to the Medical Examiner because of suspected COVID-19 infection will be reviewed and triaged by a member of the ASCL medical staff. These cases will be placed into one of four tiers:

Tier 1: Unattended deaths with potential COVID-19 infection (rule out COVID-19)
Tier 2: Unattended death with general "flu-like symptoms" / low risk for COVID-19
Tier 3: Unattended death without information on cause of death
Tier 4: Unattended death with very limited or no risk for COVID-19 infection

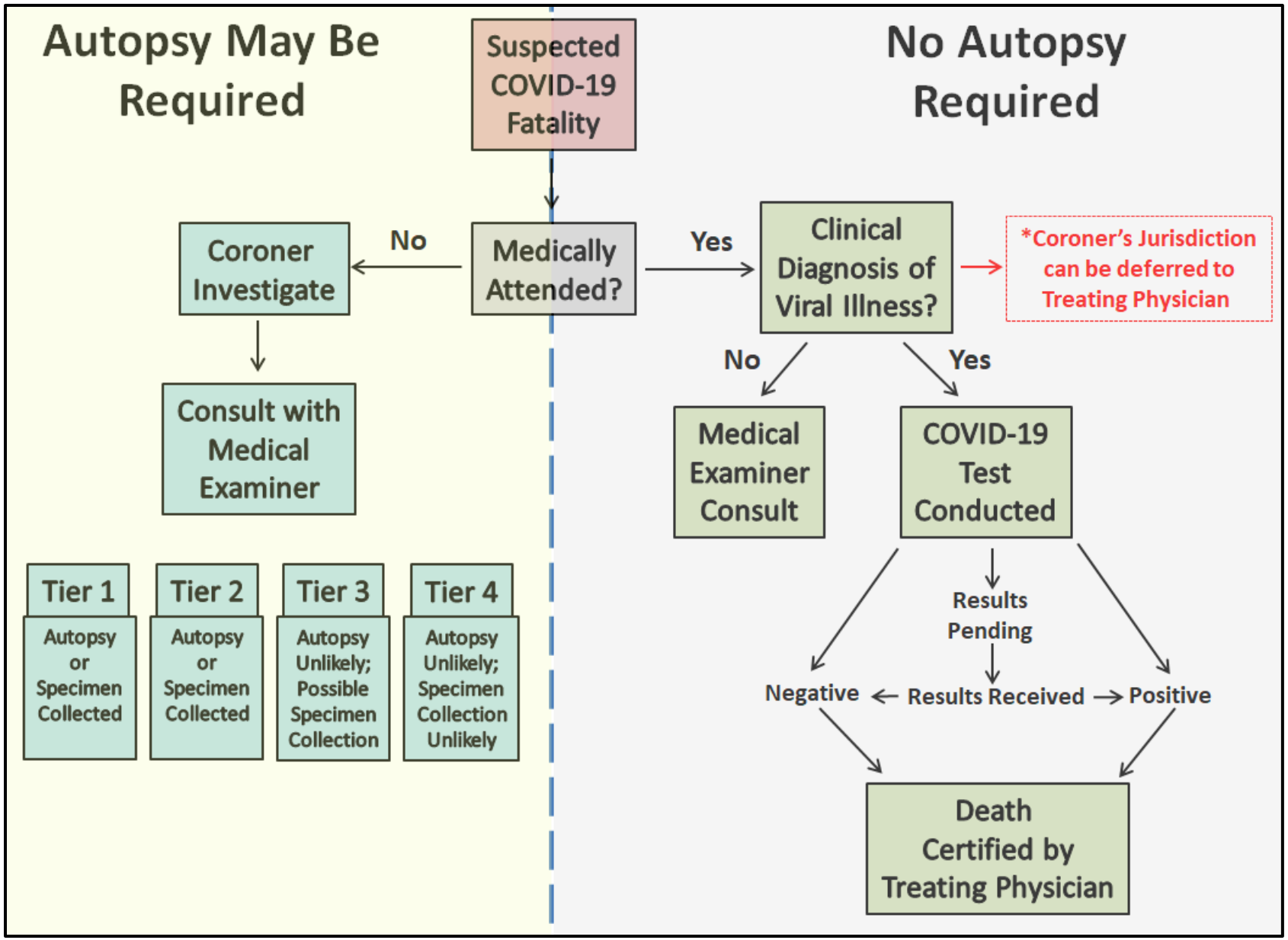
The criteria for a case being placed in a particular tier and its subsequent disposition are discussed below.

As with all case submissions to the ASCL, the Medical Examiner's Office relies heavily on the submitting agencies for pertinent investigative information. Prior to contacting the Medical Examiner:

1. Acquire all known information about decedent in order to be able to assign tier to case:
    a. Travel history? Domestic/Foreign, Plane travel, High-Risk countries (China, Japan, Iran, Italy, South Korea).
    b. Contact with persons with a known COVID-19 infection.
    c. Flu-like symptoms prior to death (headache, cough, sore throat, fever, shortness of breath / difficulty breathing, nausea, vomiting, diarrhea, chills). Document which ones.
    d. Contact with other people with flu-like symptoms (not known to be COVID-19 infections).
    e. Any medical history unrelated to potential infectious disease (e.g. cardiovascular disease, COPD, dementia)
2. Request all pertinent investigatory records (health, EMS, PCP, PD, etc.)

When the investigation is complete, the above-noted information along with a contact number should be provided to the forensic investigators at the ASCL. They will present the case to one of the Medical Examiners; the review will be prioritized. The reviewing Medical Examiner will make a follow up call to the county coroner or their deputy to potentially ask additional questions and discuss disposition of the case. The quality and quantity of available information, along with the case tier, will determine whether or not the body will need to be submitted to the ASCL for an autopsy. Overall, this triage system should prevent unnecessary case submissions. The only potential infectious disease cases that should be sent for exam, including COVID-19, are those that require an autopsy to determine the cause of death.

The Medical Examiner's Office will decide the disposition of individual cases. These cases can be quite complex, and the decision whether or not to perform an autopsy when faced with a potential COVID-19 fatality should be made by a forensic pathologist.


Autopsy May Be Required
Suspected COVID-19 Fatality
No Autopsy Required
Coroner Investigate
No
Medically Attended?
Yes
Clinical Diagnosis of Viral Illness?
*Coroner's Jurisdiction can be deferred to Treating Physician
Consult with Medical Examiner
No
Yes
Medical Examiner Consult
COVID-19 Test Conducted
Tier 1
Autopsy or Specimen Collected
Tier 2
Autopsy or Specimen Collected
Tier 3
Autopsy Unlikely; Possible Specimen Collection
Tier 4
Autopsy Unlikely; Specimen Collection Unlikely
Results Pending
Negative
Results Received
Positive
Death Certified by Treating Physician

**TIER 1: UNATTENDED DEATH WITH POTENTIAL COVID-19 INFECTION (RULE OUT COVID-19)**

Decedent had symptoms consistent with an acute infectious illness (such as a flu or cold) and died while experiencing those symptoms. Symptoms may include: fever, chills, cough, sore throat, runny/stuffy nose, muscle/body aches, fatigue, vomiting, and diarrhea. Furthermore, no sufficient explanation for this illness exists (such as medical testing diagnostic for influenza A infection); thus COVID-19 infection cannot be ruled out. An example of this would be a homeless individual with no other significant medical history who died his first night in a shelter after telling staff there that he had been suffering from chills, a fever, muscle aches, and was coughing for the past week.

Decedents who would otherwise be considered in Tiers 2-4 may also be elevated to Tier 1 status if they meet the CDC criteria for high risk or medium risk for COVID-19 exposure based on geography/travel and/or contact with persons with symptomatic laboratory-confirmed COVID-19 infection.

- ***(CDC) High Risk for Exposure:***
    1. Travel from Hubei Province, China.
    2. Living in the same household, being an intimate partner of, or providing care in a non-healthcare setting (such as a home) for a person with symptomatic laboratory confirmed COVID-19 infection without using recommended precautions for home care and home isolation.

- ***(CDC) Medium Risk for Exposure:***
    1. Travel from mainland China outside Hubei Province or Iran.
    2. Travel from a country with widespread transmission, other than China or Japan.
    3. Travel from a country with sustained transmission.
    4. Close contact with a person with symptomatic laboratory-confirmed COVID-19.

5. On an aircraft, being seated within 6 feet (two meters) of a traveler with symptomatic laboratory-confirmed COVID-19 infection; (i.e., approximately 2 seats in all directions).
6. Living in the same household, being an intimate partner of, or providing care in a non-healthcare setting (such as a home) for a person with symptomatic laboratory confirmed COVID-19 infection while consistently using recommended precautions for home care and home isolation.

Whether or not a Tier 1 case will require submission for autopsy will depend on the investigation; if investigative information is compelling, it may only be necessary for the coroner to collect appropriate swabs for viral testing per ADH/CDC guidelines. In instances where less information is available, an autopsy may be necessary to establish a cause of death. For cases that are sent for autopsy, ASCL staff will collect appropriate testing samples.

**TIER 2: UNATTENDED DEATH WITH GENERAL "FLU-LIKE SYMPTOMS" / LOW RISK FOR COVID-19**

Decedent had symptoms described as "flu-like", but has other significant co-morbidities (medical conditions) that most likely account for their death. There are no CDC conditions described in the Tier 1 section above for "medium risk" or "high risk" for COVID-19 exposure as described above. In particular, high and medium risk factors are excluded. A COVID-19 infection has not been definitively ruled out (for example, a person with an infectious illness has a laboratory diagnosed Influenza A infection, therefore presumptively ruling out COVID-19 as a potential cause of death). Examples of comorbid medical conditions can include heart failure due to cardiovascular disease, chronic alcoholism, cerebral stroke, etc. An example of an unattended death that would be considered a Tier 2 case would be a person who smokes a pack of cigarettes daily, has had stenting of the coronary arteries of the heart due to blockages (coronary artery atherosclerosis), has high blood pressure, and 2 days of "flu-like" symptoms including nausea and vomiting prior to death, without any recent travel or contacts with sick

people. In this case, the likely cause of death is a heart attack, however a COVID-19 infection cannot be absolutely excluded.

Decedents who would otherwise be considered in Tiers 3-4 may also be elevated to Tier 2 status if they meet the CDC criteria for low risk for COVID-19 exposure based on geography/travel and/or contact with persons with symptomatic laboratory-confirmed COVID-19 infection.

- **(CDC) Low Risk for Exposure:**
    1. Travel from any other country
    2. Being in the same indoor environment (e.g., a classroom, a hospital waiting room) as a person with symptomatic laboratory-confirmed COVID-19 for a prolonged period of time but not meeting the definition of close contact (high and medium risk criteria).

Like Tier 1 cases, disposition of Tier 2 cases will rely on investigation. If a cause of death is reasonably apparent from investigation, collection of specimens for viral testing can be done by the coroner. If a Tier 2 case requires an autopsy, ASCL personnel will collect testing samples.

**TIER 3: UNATTENDED DEATH WITHOUT INFORMATION ON CAUSE OF DEATH**

Decedent has no or very limited information regarding the circumstances of their death. An example of this would be a reclusive individual with limited social contact who was discovered deceased in their home after a neighbor notices their mail piling up; no further information about their health is known. No information to assess for “low risk”, “medium risk”, or “high risk” for COVID-19 exposure is available.

Once again, disposition will depend on investigation. The decision whether or not an autopsy should be performed, or if specimens for viral testing should be collected will vary from case to case.

**TIER 4: UNATTENDED DEATH WITH VERY LIMITED OR NO RISK FOR COVID-19 INFECTION**

Decedent does have a pre-death history available (due to review of medical records, acquaintance interviews, etc.) and did not experience flu-like symptoms prior to death. The decedent did not travel anywhere recently. The decedent either 1) did not have any interactions with any person with a known laboratory-confirmed COVID-19 infection, or 2) had an interaction with a person with a known laboratory-confirmed COVID-19 infection that did not meet any of the high-, medium- or low-risk conditions described in Tier 1 and Tier 2 above (for example, the maximum encounter was walking by an infected person or being briefly in the same room). An example of this would be a person who was otherwise healthy, did not recently travel, and had no known sick contacts who hanged himself.

This tier deals with instances where a non-infectious cause of death is readily apparent from the scene. These cases do not require examination by the Medical Examiner to determine the cause of death, and most likely will not require collection of samples for viral testing.

**Conclusion:** It is hoped that these general guidelines will be of assistance. All potential situations cannot be addressed by these guidelines, however, the Medical Examiner's Office will consult with any agency authorized to submit cases.

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Sincerely,

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