Shasta County Health & Human Services Agency | Public Health Branch

COVID-19 Health Advisory #13
May 27, 2020

Please distribute to all providers in the facility

Go to: https://tinyurl.com/ShastaCOVID-19 for an electronic version of this Health Alert

The purpose of this health advisory is to provide healthcare providers with information on the following topics:

- Multisystem Inflammatory Syndrome in Children (MIS-C)
- Updated public health laboratory testing criteria
- Retesting of COVID-19 positive individuals
- Universal source control in healthcare facilities
- COVID-19 specific Confidential Morbidity Report (CMR)

Multisystem Inflammatory Syndrome in Children (MIS-C)

On April 26, a multi-system inflammatory syndrome was reported by authorities in the United Kingdom in previously healthy children presenting with persistent fever and a constellation of symptoms shared by Kawasaki Disease (KD) or Toxic Shock Syndrome (TSS). The cases occurred in children testing positive for current or recent infection by SARS-CoV-2, the novel coronavirus that causes COVID-19, based on reverse-transcriptase polymerase chain reaction (RT-PCR) or serologic assay, or who had an epidemiologic link to a COVID-19 case. Patients presented with a persistent fever and a constellation of symptoms including hypotension, multiorgan (e.g., cardiac, gastrointestinal, renal, hematologic, dermatologic and neurologic) involvement, and elevated inflammatory markers. Respiratory symptoms were not present in all cases. Cases have since been reported elsewhere, including over 140 cases in New York City.

Case Definition for Multisystem Inflammatory Syndrome in Children (MIS-C):

- An individual aged <21 years presenting with fever[1], laboratory evidence of inflammation[2], and evidence of clinically severe illness requiring hospitalization, with multisystem (≥2) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological); **AND**
- No alternative plausible diagnoses; **AND**
- Positive for current or recent SARS-CoV-2 infection by RT-PCR, serology, or antigen test; or COVID-19 exposure within the 4 weeks prior to the onset of symptoms

Consider MIS-C in any pediatric death with evidence of SARS-CoV-2 infection.

[1]Fever ≥38.0 °C for ≥24 hours, or report of subjective fever lasting ≥24 hours

[2]Including, but not limited to, one or more of the following: an elevated C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), fibrinogen, procalcitonin, d-dimer, ferritin, lactic acid dehydrogenase (LDH), or interleukin 6 (IL-6), elevated neutrophils, reduced lymphocytes and low albumin

Actions requested of healthcare providers:

- Report cases meeting the MIS-C case definition to SCPH using a Confidential Morbidity Report (CMR) within 1 working day. Some individuals may also meet full or partial criteria for Kawasaki disease but should be reported if they meet the case definition for MIS-C.
- Monitor children with confirmed COVID-19 for potentially serious complications.
- Test children with potential MIS-C, including with symptoms and signs of Kawasaki Disease or Toxic Shock Syndrome , by both a RT-PCR test and by a serologic assay approved or given Emergency Use Authorization by the U.S. Food and Drug Administration. If positive for SARS-CoV-2, report to SCPH immediately on COVID-19 CMR (see below) and by phone.
- Immediately refer patients with MIS-C or features of TSS or KD to a specialist in pediatric infectious disease, rheumatology, and/or critical care, as indicated. Early diagnosis and treatment of patients is critical to preventing long-term complications.

Public Health Laboratory testing criteria

More testing is now available in Shasta County. Shasta County Public Health (SCPH) continues to recommend that patients with symptoms consistent with COVID-19[3] be tested. With emerging evidence supporting the potential for asymptomatic transmission of SARS-CoV-2 and the recent detection of asymptomatic cases in Shasta County, SCPH is urging more testing of asymptomatic individuals via the OptumServe site and expanded criteria for Public Health laboratory testing to include testing asymptomatic contacts of suspected or confirmed COVID-19 cases. Additionally, symptomatic individuals 65 and older with comorbidities may also be tested using the public health lab.

Actions requested of all clinicians with patients testing for COVID-19 infection:

1. **Collect** respiratory specimens: nasopharyngeal (NP) specimens are recommended.[4] For assistance with specimen collection supplies, please email DOC45@co.shasta.ca.us.
2. **Remind** patients with symptoms consistent with COVID-19 to self-isolate pending test results.
3. **Tier 1:**
    a. **Send** specimens along with a completed Lab Requisition Form to Shasta County Public Health Lab (SCPHL); see address on form.
    b. Specimens may be **delivered** directly or by courier Monday-Friday 8am-5pm and weekends 9am-10am. To arrange for delivery times outside of these hours call 530-395-0132. For questions about specimen collection supplies or packaging, call the SCPHL at 530-225-5072.
    c. **Complete** the **COVID-19 Tier 1 Criteria Form** on pg. 5 and fax to 530-229-8301 by 10 AM daily. **Specimens received without this corresponding form will be delayed. The form will be reviewed for Tier 1 criteria; specimens that do NOT meet Tier 1 criteria will be returned to medical provider for testing at commercial lab.**
    d. Results are typically available within 2 business days.
4. **Tier 2:** Send specimens to commercial laboratories (LabCorp, Quest, etc.).
5. **Call** ahead to imaging provider when ordering CT or chest X-ray to alert provider of patients' suspected COVID-19 status.
6. **Report** all positive cases to SCPH by phone at (530) 225-5591 AND confidential fax at (530) 229-8301. After hours, call 530-395-0132 to report positive cases.[5]

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[3] COVID-19 symptoms include fever (objective or subjective), cough, shortness of breath or difficulty breathing, chills, muscle pain, sore throat, and new loss of taste or smell.

[4] Acceptable specimens include NP, OP, or mid-turbinate swab by HCP collection, or mid-turbinate or anterior nares by either onsite self-collection or HCP collection. Multiples specimens may be taken with a single swab and swabs from two anatomic locations may be placed in the same vial. See FDA FAQ on Diagnostic Testing for SARS-CoV-2 and CDC Interim Guidelines for Collecting, Handling and Testing Clinical Specimens for COVID-19.

[5] The California Department of Public Health has updated Title 17 Sections 2500 and 2505 of the California Code of Regulations to include COVID-19 on the lists of reportable conditions.

Who to test:

Priority		Criteria
Tier 1	Shasta County Public Health Laboratory	**Patients with signs/symptoms compatible with COVID-19 AND one of the priority criteria below:** • Patients who are hospitalized, regardless of age or comorbidities • Health care workers, including emergency medical services (EMS) and other first responders • Individuals with pneumonia • Individuals residing or working in congregate living facilities (e.g. jails, shelters, long-term care facilities) • Persons 65 and older with comorbidities, especially those with cardiovascular disease, diabetes mellitus, chronic respiratory disease, hypertension, and cancer **Any patient, regardless of symptom status:** • Individuals with known exposure to a suspected or confirmed COVID-19 case
Tier 2	Commercial Lab	All other patients

Retesting of COVID-19 positive individuals

There have been reports of prolonged detection of RNA in COVID-19 positive cases without direct correlation to viral culture. The longest period for which virus was able to be cultured after symptom onset is reportedly nine days.[6] For this reason, the Centers for Disease Control and Prevention (CDC) updated its recommendations for discontinuation of isolation in persons with COVID-19[7] and return to work criteria for healthcare personnel[8] with confirmed COVID-19 to include both a symptom-based strategy for symptomatic individuals and a time-based strategy for asymptomatic individuals. Due to the potential for prolonged shedding of non-infectious SARS-CoV-2 RNA and the inability of PCR to distinguish between infectious and non-infectious virus, SCPH does not recommend preferential use of testing for clearance purposes except for severely immunocompromised individuals.

Symptom-based strategy

- At least 3 days (72 hours) have passed *since recovery* defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms (e.g., cough, shortness of breath); **and,**
- At least 10 days have passed *since symptoms first appeared*.

Time-based strategy

At least 10 days have passed since the date of their first positive COVID-19 diagnostic test assuming they have not subsequently developed symptoms since their positive test. If they develop symptoms, then the symptom-based or test-based strategy should be used. Note, because symptoms cannot be used to gauge where these individuals are in the course of their illness, it is possible that the duration of viral shedding could be longer or shorter than 10 days after their first positive test.

[6] Wölfel R, Corman VM, Guggemos W, Seilmaier M, Zange S, Müller MA, et al. (2020). Virological assessment of hospitalized patients with COVID-2019. Nature. doi:10.1038/s41586-020-2196-x

[7] https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html

[8] https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhealthcare-facilities%2Fhcp-return-work.html

After returning to work, HCP who are COVID-19 positive should:

- Wear a facemask for source control at all times while in the healthcare facility until all symptoms are completely resolved or at baseline. A facemask instead of a cloth face covering should be used by these HCP for source control during this time period while in the facility. After this time period, these HCP should revert to their facility policy regarding universal source control during the pandemic.
    - A facemask for source control does not replace the need to wear an N95 or higher-level respirator (or other recommended PPE) when indicated, including when caring for patients with suspected or confirmed COVID-19.
    - Of note, N95 or other respirators with an exhaust valve might not provide source control.
- Self-monitor for symptoms, and seek re-evaluation from occupational health if respiratory symptoms recur or worsen

Universal source control in healthcare facilities

Continued community transmission has increased the number of individuals potentially exposed to and infectious with SARS-CoV-2. Fever and symptom screening have proven to be relatively ineffective in identifying all infected individuals, including HCP. Symptom screening also will not identify individuals who are infected but otherwise asymptomatic or pre-symptomatic; additional interventions are needed to limit the unrecognized introduction of SARS-CoV-2 into healthcare settings by these individuals. As part of aggressive source control measures, SCPH recommends that healthcare facilities implement policies requiring everyone entering the facility to wear a cloth face covering (if tolerated) while in the building, regardless of symptoms. This approach is consistent with a recommendation to the general public advising them to wear a cloth face covering whenever they must leave their home.[9]

COVID-19 Confidential Morbidity Report

The California Department of Public Health has released a Confidential Morbidity Report (CMR) to be used specifically for reporting of COVID-19 diagnosed using RT-PCR. Completion of as much information as possible on this form enables faster follow up and investigation by SCPH. Send completed COVID-19 CMRs to confidential fax at (530) 229-8301. This document may be found at https://tinyurl.com/ShastaCOVIDCMR**.** In addition, report all lab confirmed cases to SCPH by phone at (530) 225-5591. After hours, call 530-395-0132 to report positive cases.

References:

CDC Health Advisory 00432: Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with Coronavirus Disease 2019 (COVID-19) https://emergency.cdc.gov/han/2020/han00432.asp

Riphagen S, Gomez X, Gonzales-Martinez C, Wilkinson N, Theocharis P. Hyperinflammatory shock in children during COVID-19 pandemic. *Lancet*. 2020. Advance online publication, doi: 10.1016/S0140-6736(20)31094

Verdoni L, Mazza A, Gervasoni A, Martelli L, Ruggeri M, Ciuffreda M, Bonanomi E, D'Anitga L. An outbreak of severe Kawasaki-like disease at the Italian epicentre of the SARS-CoV-2 epidemic: an observational cohort study. Lancet. 2020. Advance online publication, doi: 10.1016/ S0140-6736(20)31129-6 https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31103-X/fulltext

[9] https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html

Fax this page along with face sheet/demographics and medical records (required) to Shasta County Public Health Communicable Disease Program: 530-229-8301

Patient Last Name	Patient First Name	Patient Date of Birth
Provider/Clinic Name	Clinic Contact Name and Direct Phone Number	

Please check all criteria below that apply for Tier 1 testing.

Symptomatic individuals[10] AND one of the criteria below.

□ Hospitalized
Hospital: _____ MRN:_____

□ Health care worker, emergency medical services (EMS), or other first responder
Hospital or agency: _____ City: _____

□ Individual with pneumonia
Hospital/Facility Name: _____ MRN:_____

□ Congregate living facility
Facility Name: _____ City: _____

□ 65 and older with comorbidities
Comorbidities:_____

Symptomatic or asymptomatic individuals meeting criteria below.

□ Known exposure to a suspected or confirmed COVID-19 case

If none of the above, send to commercial lab (LabCorp, Quest, etc.) for testing.

[10]COVID-19 symptoms include fever (objective or subjective), cough, shortness of breath or difficulty breathing, chills, muscle pain, sore throat, and new loss of taste or smell.