Michigan State and Local Public Health COVID-19 Standard Operating Procedures

Interim May 2024

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Background

On December 31, 2019, an outbreak of pneumonia in Wuhan City, Hubei Province, China was reported to the World Health Organization (WHO). This outbreak is now known to be caused by the 2019 novel coronavirus. On February 11, 2020, the WHO announced the official name for the disease as COVID-19 and on March 11, 2020, the COVID-19 outbreak was characterized by the WHO as a pandemic. The federal Public Health Emergency (PHE) expired on May 11, 2023.

Patients with COVID-19 may experience fever, cough, dyspnea, chest tightness, pneumonia, chills, new loss of taste or smell, headache, sore throat, muscle pain, and gastrointestinal distress. Fever is defined as subjective fever or a measured temperature of 100.4°F (38°C) or higher. Fever may be intermittent or may not be present in some people (e.g., the elderly, immunocompromised, or people taking certain fever-reducing medications).

The Michigan Department of Health and Human Services (MDHHS) continues to work with Local Health Departments (LHDs) and the Centers for Disease Control and Prevention (CDC) on the COVID-19 response. The MDHHS Community Health Emergency Coordination Center (CHECC), was fully activated on February 4, 2020 and assisted the coordination of response efforts. Bureau of Infectious Disease Prevention (BIDP) staff were deployed to the EPI DESK to assist with guidance and communications and to liaise with State agencies. The CHECC was deactivated on February 15, 2023.

Guidance is subject to change. Visit: www.cdc.gov/coronavirus/2019-ncov and www.michigan.gov/coronavirus

Standardized Surveillance Case Definition for COVID-19

The CDC has approved the Council of State and Territorial Epidemiologist (CSTE) interim position statement for COVID-19: "Update to the standardized surveillance case definition and national notification for SARS-CoV-2 infection (the virus that causes COVID-19)". This interim position statement updates the standardized case definition for COVID-19, including asymptomatic infection caused by SARS-CoV-2, and retains COVID-19 as a nationally notifiable condition. This supersedes the April 2020, August 2020, and July 2021 CSTE COVID-19 interim position statements. The full position statement can be found at https://cdn.ymaws.com/www.cste.org/resource/resmgr/ps/ps2022/22-ID-01_COVID19.pdf. The complete case definition can be found at: https://ndc.services.cdc.gov/case-definitions/coronavirus-disease-2019-covid-19/

CSTE Case Classification

Laboratory Criteria

Confirmatory laboratory evidence:

- Detection of SARS-CoV-2 RNA in a clinical or post-mortem specimen using a diagnostic molecular amplification test performed by a CLIA-certified provider, **OR**
- Detection of SARS-CoV-2 RNA in a clinical or post-mortem specimen by genomic sequencing.

Presumptive laboratory evidence:

- Detection of SARS-CoV-2 specific antigen in a clinical or post-mortem specimen using a diagnostic test performed by a CLIA-certified provider.

Supportive laboratory evidence:

- Detection of SARS-CoV-2 specific antigen by immunocytochemistry **OR**
- Detection of SARS-CoV-2 RNA or specific antigen using a test performed without CLIA oversight.

Vital Records Criteria
A death certificate that lists COVID-19 disease or SARS-CoV-2 or an equivalent term as an underlying cause of death or a significant condition contributing to death.

Criteria to Distinguish a New Case from an Existing Case
The following should be enumerated as a new case:

- SARS-CoV-2 sequencing results from the new positive specimen and a positive specimen from the most recent previous case demonstrate a different lineage, **OR**
- Person was most recently enumerated as a confirmed or probable case with onset date (if available) or first positive specimen collection date for the classification >90 days prior, **OR**
- Person was previously reported but not enumerated as a confirmed or probable case (i.e., suspect), but now meets the criteria for a confirmed or probable case.

Case Classifications
Confirmed

- Meets confirmatory laboratory evidence.

Probable:

- Meets presumptive laboratory evidence.

Suspect:

- Meets supportive laboratory evidence **OR**
- Meets vital records criteria with no confirmatory or presumptive laboratory evidence for SARS-CoV-2*

Jurisdictions may opt to place suspect cases in a registry for other analyses or while evaluating criteria determine probable or confirmed status. Suspect cases should not be included in case counts.

Work-Related Case Classification

The CSTE Occupational Health Subcommittee created a workgroup to develop standardized surveillance guidance to improve exposure-associated classifications of confirmed or probable COVID-19 cases. Complete definitions can be found in this Position Statement (Appendix). OSHA reporting requirements can be found at: https://www.osha.gov/coronavirus/standards#enforcement

COVID-19-associated Hospitalizations

CSTE developed a standardized definition and criteria for incident case classification of COVID-19-associated hospitalizations. A COVID-19-associated hospitalization is defined as: a patient with a positive result on a SARS-CoV-2 laboratory test (nucleic acid amplification [NAAT] or antigen test) collected from 14 days before through three days after hospitalization (the hospital admission date would be considered day 0). The full definition can be found at Interim-CSTE-Guidance-for-COVID-Hospitalization.pdf.

Patients with Persistent or Recurrent Positive Tests

Interpreting test results in the first 90 days after a previous infection can be challenging. CDC has developed testing guidance explaining which type of tests should be used under different circumstances: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/testing.html

For individuals who have not had COVID-19 or a positive test within the past 90 days, either PCR or antigen testing can be used. If an antigen test result is negative, repeat testing following FDA recommendations.

After a positive test result, an individual may continue to test positive for some time. Some tests, especially PCR tests, may continue to show a positive result for up to 90 days. For persons who remain asymptomatic following recovery from COVID-19, retesting is not necessary during the first 3 months after symptom onset. However, reinfections can occur within 90 days, which can make it hard to know if a positive test indicates a new infection.

For individuals who tested positive for COVID-19 within 30 days or less:

- With symptoms: Use an antigen test. If negative, repeat testing following FDA recommendations.
- With no symptoms: Testing is not recommended.

For individuals who tested positive for COVID-19 in the previous 31-90 days:

- With symptoms: Use an antigen test. If negative, repeat testing following FDA recommendations.
- With no symptoms: Use an antigen test. If negative, repeat testing following FDA recommendations.

Surveillance Guidance for Individuals with Recurrent Positive Tests:

If there is a positive test in an asymptomatic person within 3 months of the initial symptom date (or specimen collection date if onset is not available), do not enumerate for surveillance purposes. Any information on a potential re-infection during this timeframe can be included in the existing case investigation in MDSS. If an individual tests positive and it has been at least 3 months since the previous symptom onset date (or specimen collection date if onset is unavailable), a new COVID-19 MDSS case should be created.

Inconclusive Test Results

COVID-19 cases with an inconclusive or indeterminate PCR test result are classified as suspect cases in MDSS. These results indicate that only one of two gene targets were detected in the specimen. This usually occurs when the viral levels are low and at the limit of detection. Inconclusive or indeterminate results are not the same as 'invalid' results. If a test is invalid, it means the assay failed. For invalid, inconclusive, and indeterminate results, a new specimen should be collected if clinically indicated.

If testing is negative and concern for COVID-19 remains or the specimen was collected prior to onset, the provider may order a repeat test. Surveillance case definitions are not intended to be used by providers for making clinical diagnoses or determining how to meet a patient's health needs.

Out-of-State Case Referrals

If an LHD has a confirmed or probable case in MDSS that is currently living in another state and needs to be investigated by that state, mark the Investigation Status as 'New' and Case Status as 'Non-Michigan Case.' Update the address to reflect the out-of-state address with valid 'to' and 'from' dates, encompassing the onset and/or referral date. This will ensure that the case is referred to the appropriate state for investigation.

Michigan Death Reporting and Investigation

LHDs should investigate potential COVID-19 associated deaths and complete the individual MDSS Case Report Form to the best of their ability through a proxy or medical records. In addition, MDHHS conducts enhanced mortality surveillance to assist in identifying deaths associated with COVID-19.

On November 22, 2022, CSTE released Revised COVID-19-associated Death Classification Guidance for Public health Surveillance Programs.

Revised COVID-19-associated death classification:

The death certificate indicates COVID-19 or an equivalent term as an immediate, underlying, or contributing cause of death.

OR

A case investigation for a confirmed, probable, or suspect SARS-CoV-2 infection case determined that COVID-19 was the cause of death or contributed to the death.

The CSTE 2022 Update to the Standardized Surveillance Case Definition and National Notification for SARS-CoV-2 Infection classifies a case as suspect if vital records criteria are met without confirmatory or presumptive laboratory evidence for SARS-CoV-2.

Case Classifications:

Confirmed Death: Meets confirmatory laboratory evidence.

Probable Death: Meets presumptive laboratory evidence.

Suspect Death:

- Meets supportive laboratory evidence, OR
- Meets vital records criteria with no confirmatory or presumptive laboratory evidence for SARS-CoV-2.

MDHHS COVID-19-Associated Mortality Surveillance Standard Protocol (as of July 2023)

- COVID-19-associated deaths that are identified during the public health investigation of cases that have been referred with laboratory results will continue to be counted as deaths based on the case definition associated with the investigation (confirmed, probable, suspect). This is standard public health practice for all communicable disease surveillance.
- The Electronic Death Registration System (EDRS) generates referrals to MDSS for deceased individuals with death certificates indicating COVID-19. Referrals are processed as follows:
    - If there is a matching record of a case in the MDSS, that individual's record will be updated to indicate COVID-19-associated death in MDSS.
        - If the death is within six months of the incident infection, the existing MDSS case will be updated as a COVID 19-associated death, **OR**
        - If the death occurred more than six months from the incident infection, a new **suspect** case will be created for that individual.
    - If there is no matching record in the MDSS for the newly reported death, the EDRS referral will create a new **suspect** case in the MDSS.

Previously, MDHHS had conducted active weekly reviews to identify COVID-19 associated deaths in individuals with a positive COVID-19 test result within 30 days of their date of death, with the added criteria that the death was listed as "natural". This aspect of the MDHHS death review was discontinued on February 1, 2023.

To identify COVID-19 associated deaths in the statewide dataset, two fields are reviewed: Case Disposition and Patient Died under the Clinical Information Section of the Case Report Form. If either of these two fields indicate the person has died, the death is counted as COVID-19 associated. The Patient Status field is no longer included in the COVID-19 MDSS death review, so it is important to mark Case Disposition as "Died" and Patient Died in the Case Report Form as "Yes" for a death to be identified and counted as COVID-19 associated. Special care should be taken with regards to the field, Patient Died, as it has been mismarked in the Case Report Form.

The MDSS Case Disposition field is specifically related to the reportable disease being investigated at the time. For example, for a COVID-19 investigation the Case Disposition status of inpatient, outpatient, or died is relative to their COVID-19 infection. If a patient dies from COVID-19 all three fields (Case Disposition, Patient Status, and Patient Died) should be marked in the COVID-19 Case Report Form indicating the patient is deceased. The Patient Status field is associated with the patient (rather than a specific reportable condition) across the entire system potentially for multiple conditions. For example, a patient who is hospitalized for COVID-19 but a year later dies from Hepatitis C, the Patient Status field will be updated to "Died" in all cases associated with that person in MDSS. However, the "Inpatient" Case Disposition status and the Patient Died Field on the Case Report Form should be marked as "no" for the COVID-19 investigation as the patient's death was not COVID-19 related.

If COVID-19 (or equivalent term) is indicated on the death certificate, an electronic version of the death certificate from the Electronic Death Registration System (EDRS) will be uploaded to the notes tab. Healthcare providers should provide requested components of the patient's electronic medical record to the LHD to be attached to the "Notes" tab of the MDSS record. Examples of relevant medical records include the admission history and physical (H&P), progress notes, and the discharge or death summary. If a patient was not hospitalized at the time of death, a copy of the emergency department notes, autopsy report, or other case summary may provide more information on the decedent's medical comorbidities. A sample death reporting form is provided in **Appendix 1**.

LHDs should also investigate suspect deaths that are residents of a high-risk facility (e.g., long-term care facilities, jails, or prisons) or that may have exposed healthcare workers without appropriate personal protective equipment (PPE). In these situations, testing should be encouraged, and LHDs should conduct contact tracing. Deaths that are clinically compatible for COVID-19 that reside in a high-risk facility should be investigated.

Deduplication and Case Classification for COVID-19 Cases

MDHHS is assisting LHDs with deduplication of COVID-19 cases in the MDSS Pending Work Queue. MDHHS also periodically reviews cases and their associated laboratory results to ensure correct case classification is recorded. If confirmatory results are merged to a probable case, the Case Status will be updated to 'Confirmed' and the Investigation Status will be changed to 'Review' if the case was already marked as 'Completed'; *if less than 2 weeks have passed since the referral date of the 'Probable' case, then the Investigation Status will be changed to New rather than 'Review*.' A note will also be added to the Notes Tab regarding the new confirmatory result. COVID-19-specific specific deduplication instructions can be found in **Appendix 4**. See **Appendix 5** for assistance with specific fields in the MDSS COVID-19 Case Report Form (CRF).

Multisystem Inflammatory Syndrome in Children (MIS-C) and Adults (MIS-A)

Multisystem Inflammatory Syndrome in Children (MIS-C)

Multisystem Inflammatory Syndrome in Children (MIS-C) is a rare but severe condition in children and adolescents associated with SARS-CoV-2, that usually occurs 2-6 weeks after infection. MIS-C causes multiple organ systems to become inflamed or dysfunctional, including the heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal tract.

MIS-C Resources can be found at: Information for Healthcare Providers about Multisystem Inflammatory Syndrome in Children (MIS-C) | CDC

Healthcare providers and LHDs are asked to maintain a high degree of suspicion for MIS-C in pediatric and adolescent patients presenting with symptoms similar to Kawasaki Disease or ill individuals who have been previously exposed to a suspect or confirmed case of COVID-19. Pediatric patients have presented with persistent fever, abdominal pain, vomiting, diarrhea, neck pain, rash, bloodshot eyes, and fatigue. Respiratory symptoms have been present in some but are not a common finding. The cause of MIS-C is not known. However, many children with MIS-C were infected with the virus that causes COVID-19 or had been around someone with COVID-19.

Healthcare providers with patients younger than 21 years of age meeting MIS-C criteria should report suspect cases to their LHD. Individuals who are being evaluated for MIS-C should be reported as both Multisystem Inflammatory Syndrome and COVID-19 in MDSS with case investigations completed for each condition. Each case's status (e.g., confirmed, probable) should be based on each condition's case definition.

The Council of State and Territorial Epidemiologists (CSTE) and CDC have developed a new CSTE/CDC MIS-C surveillance case definition to be used starting January 2023. The Position Statement can be found here: https://cdn.ymaws.com/www.cste.org/resource/resmgr/ps/ps2022/22-ID-02_MISC.pdf and additional information can be found at: https://www.cdc.gov/mis/mis-c/hcp_cstecdc/index.html

Multisystem Inflammatory Syndrome in Adults (MIS-A)

Since June 2020, there have been several reports of multisystem inflammatory syndrome in adults. CDC has published on cases that fit the description of MIS-A, indicating that the syndrome in adults may be more complicated than in children. CDC report: https://www.cdc.gov/mmwr/volumes/69/wr/mm6940e1.htm.

The MIS-A case definition can be found at: https://www.cdc.gov/mis-c/mis-a/hcp.html

Testing Interpretation, Strategies, and Reporting Requirements

Molecular: Laboratory tests that detect SARS-CoV-2 RNA using molecular amplification detection (e.g., polymerase chain reaction [PCR], rapid Abbott ID NOW) are diagnostic and provide confirmatory lab evidence.

Antigen: Point-of-care (POC) SARS-CoV-2 antigen tests are considered diagnostic and provide presumptive lab evidence (probable). Antigen tests are immunoassays that detect the presence of a specific viral antigen, which implies current infection.

- The FDA has granted emergency use authorization (EUA) for antigen tests that can identify SARS-CoV-2.
- Considerations for SARS-CoV-2 Antigen Testing for Healthcare Providers Testing Individuals in the Community: https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html
- Rapid turnaround time can augment other testing efforts, especially in settings where RT-PCR testing capacity is limited or testing results are delayed (e.g., >48 hours).
- There are increasing amounts of data to help guide the use of antigen tests as screening tests on asymptomatic persons to detect or exclude COVID-19, or to determine whether a person who was previously diagnosed with COVID-19 remains infectious.
- Antigen tests have lower sensitivity than molecular tests. Negative antigen test results should be confirmed with a molecular test when the pretest probability is relatively high, especially if the patient is symptomatic or has a known COVID-19 exposure. A molecular test may be used to confirm or invalidate an antigen test result if the molecular test specimen is collected within 2 days of the antigen test collection. That is, if an antigen test is positive, a negative molecular test result can only be used to rule out infection if collected within 48 hours of the initial antigen test.
- For specific guidance on when to repeat testing in the healthcare setting, refer to CDC's guidance at: https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html
- Antigen test results from healthcare providers or laboratories that are not already reported to public health via a pre-established mechanism (e.g., ELR transmission) must be reported. Results may be reported using the online antigen portal (retiring in August 2024) at https://newmibridges.michigan.gov/s/isd-antigen-testing-results?language=en_US) or using the Michigan Disease Surveillance System (MDSS). For assistance with MDSS reporting, contact your Regional Epidemiologist.

At-Home Antigen Tests

- At-home COVID-19 antigen tests are available to the public. The kits are designed to use a self-administered nasal swab and are used to detect current infection.

- Individuals who test positive should notify their healthcare provider, follow CDC's Respiratory Virus Guidance, and notify close contacts that they may have been exposed to COVID-19. Some self-tests have an app that will automatically report results to public health.
- A positive at-home test (i.e., not proctored) reported to MDSS should be classified as a "suspect" case.

Serologic: Serologic assays for SARS-CoV-2 can play a role in understanding the epidemiology of the general population. Serologic tests are not diagnostic and are not included as supportive lab evidence.

- Serological tests should NOT inform return to work for healthcare workers. The criteria should remain based on CDC guidance. Serologic testing is not a replacement for virologic testing and should not be used to establish the presence or absence of acute SARS-CoV-2 infection.
- Antibody testing is not currently recommended to assess for immunity to COVID-19 following COVID-19 vaccination or to assess the need for vaccination in an unvaccinated person.
- Only assays that have been issued an FDA EUA are considered supportive laboratory evidence. Information about the performance for those tests can be found at: https://www.fda.gov/medical-devices/emergency-situations-medical-devices/eua-authorized-serology-test-performance.

Testing Strategies

CDC's overview of testing for SARS-CoV-2 describes and compares different types of SARS-CoV-2 testing strategies, including their intended use and applications, regulatory requirements, and reporting requirements: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/testing.html.

Screening tests are intended to identify people with COVID-19 who are asymptomatic and do not have known, suspected, or reported exposure to SARS-CoV-2. Screening helps to identify unknown cases so that measures can be taken to prevent further transmission.

Pre-K-12 School Testing

Schools may consider broad or targeted testing of their students and staff, especially when case rates are rising, there are known exposures within the school, there are school outbreaks, or when returning to school after breaks and holidays.

MDHHS continues to make testing resources available to schools including COVID-19 antigen tests to be conducted by the school, at-home tests to be distributed to staff, parents, and guardians, testing vendors to assist with school testing, and health resource advocates to support keeping schools safe.

- MI Safe Schools Testing Program: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_104699_104700_105077---,00.html
- MI Backpack Home Test Program: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_104699_104700_105077-572622--,00.html
- Questions for MDHHS-supported school testing programs can be sent to MDHHS-COVIDTestingSupport@michigan.gov

Reporting Requirements

COVID-19, including SARS-CoV-2 variant identification, is reportable under the Michigan communicable diseases rules. Negative COVID-19 test reporting was discontinued with the end of the PHE on May 11, 2023.

Effective May 12, 2023, skilled nursing facilities, homes for the aged and adult foster care facilities licensed for 13 or more individuals, must return to standard communicable disease reporting. COVID-19 is a reportable communicable disease that requires reporting positive test results/cases and suspected outbreaks to a facility's respective local health department.

Skilled nursing facilities will be responsible for directly submitting their COVID-19 surveillance data into the National Healthcare Safety Network (NHSN) reporting platform as outlined by federal reporting guidelines. Information on COVID-19 reported by nursing homes to the CDC's National Healthcare Safety Network (NHSN) COVID-19 Long Term Care Facility Module can be found on the CMS COVID-19 Nursing Home Data web page.

Schools:

All schools **must** report COVID-19 aggregate counts of cases in staff and students to the LHD weekly (R 325.173 part 9). Individual-level, identifiable information on these cases must be documented by schools and may be requested by LHDs.

Further, if a school administers antigen testing as a CLIA-certified provider or under a CLIA certificate of waiver, a positive result meets the probable case definition and reporting of these results to public health is **mandatory**. Schools should report results to the local health department.

Case Investigation and Contact Tracing Realignment

Nationally, state, local, territorial, and tribal health departments have transitioned away from universal case investigation and contact tracing to a more strategic approach of outbreak investigations and targeted case investigations. The wide availability of safe and effective vaccines, better understanding of the epidemiology of the SARS-CoV-2 virus, and the emergence of the more infectious Omicron variants have promoted the need for a revised public health approach. More information about the transition away from universal case investigation and contact tracing can be found here: https://cdn.ymaws.com/www.cste.org/resource/resmgr/covid-19/4e509e47-08ec-4e93-a7be-f301.pdf

Michigan public health will continue to maintain COVID-19 case surveillance activities critical to describing the epidemiology of COVID-19 including: the number of cases and case rates by sex, age, race, and geography.

Shift to identification and mitigation of COVID-19 clusters and outbreaks

State and Local public health capacity will focus on targeted identification, response, and mitigation of COVID-19 clusters and outbreaks, especially for vulnerable populations and those associated with settings where persons congregate like long-term care facilities, group homes, jails/prisons, schools, shelters, and dormitories. This redirection of public health resources to a focus on outbreaks will maximize public health outcomes in an environment of limited staffing capacity. Under this model, MDHHS has formally retired large-scale support to LHDs for universal individual-level case investigation and contact tracing via TraceForce. MDHHS will continue to support LHD efforts around outbreak detection and response. LHDs may opt to continue performing individual level case investigation and contact tracing utilizing state systems like the Michigan Disease Surveillance System (MDSS) and the Outbreak Management System (OMS) as local resources and priorities allow. Of note, a small number of MDHHS staff continue to conduct contact tracing for contacts that are entered into the MDSS Case Report Form and are electronically transferred into OMS (outbreak name: COVID-19_2020_SALESFORCE or COVID-19_2020_VULNERABLEPOPULATIONS) or contacts that are manually entered into OMS (outbreak name: COVID-19_TF_REALTIME).

Case Investigation and Contact Tracing

Although universal contact tracing and case investigation are not required at this time, these activities may still be necessary during outbreak detection and response, or around specific settings and groups at increased risk. Additionally, LHDs may opt to continue performing individual-level case investigation and contact tracing

utilizing MDSS and OMS as local resources and priorities allow. For additional guidance or OMS assistance, please contact your Regional Epidemiologist and refer to Monitoring Contacts Using the OMS.

In February 2024, CDC released updated Respiratory Virus Guidance. The guidance provides practical recommendations and information to help people lower their risk from a range of common respiratory viral illnesses, including COVID-19, flu, and Respiratory Syncytial Virus (RSV). The guidance is intended for a general audience and community settings and does not apply to healthcare settings. CDC recommends that all people use core prevention strategies to protect themselves and others:

- Stay up to date with immunizations
- Practice good hygiene (practices that improve cleanliness)
- Take steps for cleaner air
- When you may have a respiratory virus:
    - Use precautions to prevent spread – stay home and away from others if you have respiratory virus symptoms. Return to normal activities when for at least 24 hours, both are true:
        - Symptoms are getting better overall AND
        - No fever (without use of fever-reducing medication)
        - When returning to normal activities, take added precaution over the next 5 days such as taking additional steps for cleaner air, hygiene, masks, physical distancing, and/or testing when you will be around other people indoors.
    - Seek health care promptly for testing and/or treatment if you have risk factors for severe illness; treatment may help lower your risk of severe illness.

Additional prevention strategies include masking, physical distancing, and testing.

There are a range of risk factors that can increase a person's chances of getting very sick. There are several specific considerations for people with certain risk factors for severe illness:

- Older adults
- Young children
- People with weakened immune systems
- People with disabilities
- Pregnant people

Special Settings

Schools: CDC states that schools should align their respiratory illness policies with the updated Respiratory Virus Guidance. CDC anticipates releasing general infection and control guidance for K-12 schools prior to the 2024-2025 school year. This guidance will align with the Respiratory Virus Guidance and include strategies schools can use to help prevent other types of infections, such as norovirus and strep pharyngitis. This guidance is being developed with education partners and will include considerations for children with special health care needs, disability, equity, and communities served. Additional updates to this SOP may be necessary after the release of school-specific CDC guidance. CDC guidance on mitigation measures for schools (October 4, 2023) includes a message that the content of the page will be updated soon: https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-childcare-guidance.html

Some schools may wish to use all available mitigation routinely, while other schools might elect to recommend specific mitigation measures at different points in time in response to an increasing number of cases in the school, school outbreaks, increases in community transmission, a new variant, etc. Michigan's school guidance is outlined in the MDHHS Managing Communicable Diseases in Schools.

Healthcare Settings: CDC offers separate, specific guidance for healthcare settings (COVID-19, flu, and general infection prevention and control) that is not currently changing: Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2 .

Correctional Facilities and Shelters: The February 2024 CDC Respiratory Virus Guidance applies to community settings, including non-healthcare portions of correctional and detention facilities and non-healthcare portions of shelters for people experiencing homelessness. These settings continue to have high risk for transmission of respiratory viruses due to congregate living conditions, and people living in these settings often have underlying health conditions that increase their risk of severe outcomes from respiratory illnesses. Healthcare workers who provide care in these settings should refer to the healthcare specific guidance provided above.

Because individuals' personal prevention decisions are often limited during confinement, many will rely on correctional and detention facilities to provide what they need to protect themselves. It is important for facilities to make sure that the populations in their care and custody can protect themselves from respiratory viruses through the listed core prevention strategies: providing recommended vaccinations and everyday hygiene supplies including soap and running water, cleaning frequently touched surfaces, taking steps for cleaner air in the facility, providing access to healthcare (including treatment for respiratory illness and monitoring for people at higher risk for severe outcomes), and providing spaces for people with respiratory illness to stay away from others to prevent spread (sometimes called "medical isolation").

It is important that shelter and essential services are available for people experiencing homelessness, and that people are not turned away when they have symptoms of respiratory illness. It is also important for homeless service sites to provide access to supplies for everyday hygiene, clean frequently touched surfaces, and take steps for cleaner air in their facilities.

Investigating a COVID-19 Case

- Case referrals may come from health care providers, LHDs, laboratories, or from OMS.
- Confirmed and probable cases should be advised to isolate immediately and until their symptoms are improving AND they have been fever free for at least 24 hours without the use of fever-reducing medicine.
- If, during the investigation, it is determined that the patient is hospitalized due to the COVID-19 infection, this should be indicated in the MDSS Case Disposition Field **and** under the "Hospital Information" Section of the Case Report Form. There are many underlying conditions that may make COVID-19 symptoms more severe, and it may be difficult to determine if the hospitalization is due to the underlying condition or due to the condition plus COVID-19 infection. If the reason for hospitalization is truly unrelated to COVID-19 infection (e.g., labor/delivery, gunshot, car accident, broken bone, pre-surgical, etc.), **'outpatient'** should be selected for Case Disposition and the "Patient Hospitalized" question in the "Hospital Information" Section should be marked **"No"**. Otherwise, the case should be marked as hospitalized. For additional guidance, reference COVID-19-associated Hospitalizations.
- Antigen positive cases that test negative by PCR within 2 days of the antigen test may be changed to 'not a case'. Antigen positive cases that test positive by PCR become 'Confirmed'. Antigen positive cases with no follow-up testing are 'Probable'.
- Case investigation and contact tracing in care facilities, other congregate living settings, and households with many people may be complex but should be prioritized. Appropriate engagement with infection control and occupational health programs is recommended. Examples include health care facilities including long-term care facilities, group homes, shelters, correctional facilities, and crowded-multigenerational housing.
- In addition to health care workers, it is important to assess interactions between residents and all staff (e.g., activity coordinators, food service staff, and sanitation management). Transitional case management plans should be put in place for patients in isolation and contacts who are separated for monitoring. Management plans should also be created for transitioning from one setting to another, such as transitions from hospitals to acute or long-term care facilities or home isolation, or from prison and jail to parole and probation.

ROLE OF LOCAL POLICIES
There may be local guidance, policies and/or orders from local health departments, organizations, and/or school districts that must be followed. Policies established by event organizers and businesses may be instituted to fit the specific needs of their customers and should be followed.

Outbreak Reporting and Investigation

Outbreak Definitions

COVID-19 outbreaks follow the general accepted public health outbreak definition which is defined as two or more cases with a link by place and time indicating a shared exposure outside of a household. Specific definitions of COVID-19 outbreaks are relative to the local context. While it is difficult to define an outbreak case definition that will encompass every scenario, CSTE has developed outbreak definitions and investigation considerations for three outbreak settings. These are available at: https://preparedness.cste.org/?page_id=211 These definitions are based on current scientific knowledge and are subject to change.

- **Non-Residential, Non-Healthcare Workplace Settings:** https://preparedness.cste.org/wp-content/uploads/2020/08/OH-Outbreak-Definition.pdf
- **Educational Settings**
    - There are 2 sets of guidance within education settings – one set of guidance for education settings, excluding K-12 and another set of guidance for specifically for K-12 settings:
        - **Outbreak Definition for Educational Settings (excluding K-12):** https://preparedness.cste.org/wp-content/uploads/2020/08/Educational-Outbreak-Definition.pdf
        - **Outbreak Definitions for K-12 settings (CSTE K-12 School Surveillance Guidance for Identification and Classification of Outbreaks, updated September 1, 2022):** https://preparedness.cste.org/wp-content/uploads/2022/09/CSTE-Interim-COVID-19-School-Surveillance-Guidance-2022-1.pdf
- **Correction and Detention Facilities:** Michigan Guidelines for Local and State Correctional Employees (January 13, 2022)
- **Healthcare Settings**: https://www.corha.org/wp-content/uploads/2024/01/COVID-19-HC-Outbreak-Definition-Guidance_January-2024.pdf

Outbreak Identification and Reporting to Local Public Health

Local Facilities: In addition to individual cases, long-term care facilities (including skilled nursing, assisted-living, adult foster care), jails, juvenile detention centers, shelters, schools, daycares, and camps must report **all** clusters of confirmed or suspected COVID-19 cases to the LHD. LHD authorities should investigate to determine if the cases meet the definition of an outbreak and how to proceed.

Statewide Analyses for Potential Cluster Identification: A weekly, geospatial statewide review of reported confirmed, probable, and suspect cases will be conducted by MDHHS staff, analyzing the potential for clusters in schools and settings that may be associated with vulnerable populations. While MDHHS will initially be using a list of known high risk addresses, LHDs are encouraged to suggest facilities to their Regional Epidemiologist (RE). When suspect collections of cases are identified by the geospatial statewide analyses or REs, relevant information will be distributed to LHDs via a MIHAN notification.

LHD Outbreak Investigations

In addition to assistance from the geospatial analyses and potential outbreaks identified by RE, LHDs should identify potential outbreaks based on available data and public reporting. LHDs should follow their local policies and procedures regarding outbreak investigations, but a potential tier-based prioritization could be used:

1. Report and investigate outbreaks reported to the LHD from settings with vulnerable populations such as healthcare (e.g., LTC/AFC/AL, dialysis centers, hospitals), corrections, schools, childcare, and shelters.
2. Report and investigate outbreaks that have been identified in other settings such as manufacturing or processing facilities, retail facilities, in-person workplace, or social gatherings.
3. Review MDSS case data (e.g., patient addresses, ordering provider affiliation/addresses, workplace/school, if available) to identify any clusters that were not reported to the LHD. Prioritize response to these according to the tiers above. If you need assistance in defining processes around this strategy, please contact your RE.

Within the tier-based prioritization:

1. Prioritize the investigation of individual cases that are known to be associated with an outbreak.
2. Regularly contact the outbreak facility for updates and to assess for further mitigation needs.
3. Conduct individual case investigations on outbreak-associated cases and enter information into MDSS. Priority fields depend on the outbreak setting, but may include:
    a. Demographic information
    b. Onset date (if available)
    c. Outbreak name
    d. Hospitalization status
    e. Specimen collection date
    f. Symptomatic and if so, list symptoms
    g. Co-morbidities/underlying conditions
    h. Vaccination status
    i. Information on contacts – contacts will still be transferred to OMS
4. Suspect cases (e.g., home test results) that are part of an outbreak investigation can be included in the summary unless they are ruled out.
5. Depending on COVID-19 activity level, and as resources allow, other individual cases can be investigated, either using a sampling strategy or using available demographics, such as age, to focus on cases that might be associated with outbreaks or those at risk for severe illness.

Additional guidance documents on prioritization and outbreak investigation are available at:

- Centers for Disease Control and Prevention. Managing Investigations During an Outbreak https://www.cdc. gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/outbreaks.html
- CSTE COVID-19 Outbreak Investigation and Reporting https://preparedness.cste.org/?page_id=211

Local Public Health Reporting Outbreaks to MDHHS

- Report all COVID-19 outbreaks in MDSS as an **Aggregate Case Report** using the Novel Coronavirus COVID-19 condition. Important preliminary information includes name and type of facility or event, onset date of first ill, number of confirmed and probable cases among employees and residents, students, or attendees and an outbreak name. (A section on Outbreak Nomenclature can be found below, which also addresses how to link individual cases).
    - Case counts and other associated fields should be updated regularly (weekly, if possible) as the outbreak progresses and should be updated at the end of the outbreak.

  - The Notes Tab can be used to document outbreak details (progression of outbreak, call attempts, additional updates) since total case counts will be overwritten and there are a limited number of available fields for other information.
- **MDHHS has not moved to aggregate reporting of cases in place of individual case reporting**. If an individual meets the confirmed or probable case definition, they should still be entered into MDSS as an individual case. If they are part of an outbreak, they should **also** be included in the case count in the aggregate case (outbreak) report.
- Guidance for reporting COVID-19 outbreaks into the MDSS aggregate form can be found at: COVID-19 Outbreak Reporting using the MDSS Aggregate Case Report Form 06/13/2022 (michigan.gov)
  - The 'Outbreak Y/N' field should be marked 'Yes' for all individual outbreak-associated cases.
    - Note: Aggregate cases marked as 'Outbreak = Y' will remain active so that edits can be made to the form.
    - Aggregate forms for outbreaks can be marked as 'completed follow-up' if there are no new associated cases in the past 14 days. Aggregate forms for outbreaks can be marked as 'completed' if there are no new associated cases in the past 28 days.
    - Aggregate case reports that were already entered into the system can be found using the "New Aggregate Search" function under Case Investigation.
- All individual cases associated with the outbreak should be entered into MDSS, using the same outbreak name from the Aggregate Case Report Form to help identify cases quickly. For more information on naming an outbreak, please see the section below on Outbreak Nomenclature.

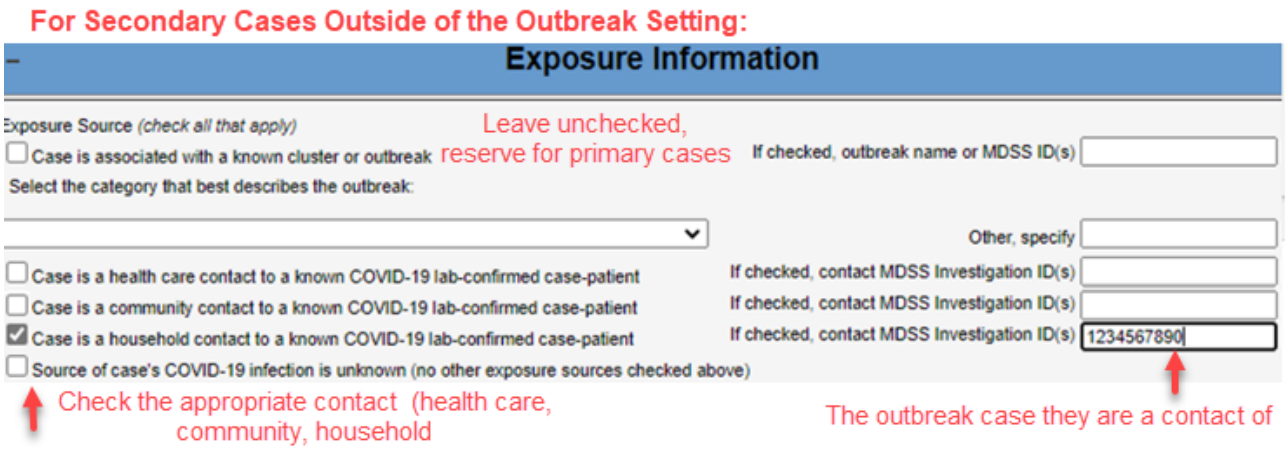
Outbreak Nomenclature

- Assign outbreak names that are specific (e.g., location/event, month/year) to prevent overlap with other outbreak names. Because Outbreak Name is a free text field, all cases associated with the outbreak should have the exact same name (e.g., same spacing or other punctuation) to assist in searching. The suggested structure is **FacilityNameMMYYYY**
  - Tip: To see if an outbreak name has already been created, a user can search the outbreak name field in MDSS using asterisks as wildcards, e.g., *CampExample* would pull up all cases containing CampExample anywhere in the Outbreak Name field.
- Within each individual outbreak-associated case, indicate that the case is associated with an outbreak (outbreak Y/N: Yes) and provide the outbreak name.
- To keep track of cases at colleges/universities:
  - Use a school outbreak name for student/staff not linked to sub-cluster (e.g., CollegeName)
  - Add the event/dorm/sorority/fraternity to link a sub-cluster and include the month/year the cluster was identified (e.g., CollegeName_SpruceHall_Aug2020)
- Your Regional Epidemiologist can provide technical expertise and investigation coordination support.
- Outbreak names can also be added to individual cases in MDSS even if not yet considered an outbreak as they can help associate cases with specific settings or events. To use the outbreak name field for non-outbreak settings, leave the 'Outbreak Y/N' field as 'U' for 'unknown'. Fields may be modified later.
- If the case does not have an outbreak name, the outbreak name field can be left blank. MDHHS no longer needs "FULLVACC" added to the outbreak name of vaccine breakthrough cases.

Secondary Cases

- Cases resulting from secondary transmission *within* the outbreak facility/school are considered outbreak cases (for e.g., cases resulting from secondary transmission to other students in school). Those cases should be included under the primary outbreak name.
- If there is secondary transmission to household contacts (or others) *outside* of the outbreak setting, the outbreak name can be modified (e.g., adding "HH," "Contact," or "Second" at the end of the outbreak

name) to indicate that the case is a contact to an outbreak-associated case. However, these secondary cases should not be counted as outbreak cases.



Where Outbreaks Are Counted

- Outbreaks are counted in the county where the exposure took place (e.g., worksite, restaurant, childcare, community gathering, college/university location, school).
- Individual outbreak cases are counted in the jurisdiction where the case resides.

Referring Outbreak-Associated Cases to Other Jurisdictions

General

Cases may be associated with outbreaks or events that occurred in another jurisdiction. The LHD that first receives the case may complete the initial interview with the case. If known, the outbreak ID associated with the event/gathering should be added to the outbreak field. Regional Epidemiologists can also assist with sharing outbreak identifiers and notifying jurisdictions about the location of the outbreak or event.

Outbreaks in a School with Students and Staff from Multiple LHD Jurisdictions

- The health jurisdiction in which the school district is predominately located OR in which the school building is located would be the outbreak jurisdiction.
- Affected students and staff would follow the guidance from the outbreak jurisdiction for school and school-related activities, while the individuals can use their home health department guidance, if different, as it applies to non-school-related restrictions.
- If school districts have buildings in two different counties or health jurisdictions, the LHDs should discuss when to make a district-based outbreak decision versus a building-based decision.

College or University Associated Cases: Home address and School address

The LHD that first receives the case referral may complete the initial interview. If interviewed by the Home LHD, inform case that they may be contacted by the School LHD for follow-up questions. After completion of interview, update case record to reflect school address, set the investigation status to New, and add the outbreak ID (if known). The Home LHD can manage the case in their jurisdiction but should still enter the school's outbreak ID for counting purposes. Decisions about case addresses are at the LHD's discretion.

Requesting MDHHS Assistance with Outbreak Investigations

The LHD will remain the lead on all outbreak investigations, even those supported by MDHHS staff. To request outbreak investigation assistance, the LHD should follow these steps:

1. Create new aggregate case report in MDSS using Novel Coronavirus COVID-19 as the condition and Outbreak Y/N: status as "Yes". Entering an Aggregate Case Report in MDSS guidance can be found at this link.
2. Create an Outbreak Name that will be used for all individual outbreak-associated cases. Outbreak name should be specific to prevent overlap with other outbreak names. Suggested structure: **FacilityNameMMYYYY**
3. Send an email to MDHHS-EmergingInfectionsFlex@michigan.gov, copying the Regional Epidemiologist, and Regional Support Epidemiologist with the subject of "Assistance Request-[insert county name][insert outbreak name]". The email should include the aggregate case Investigation ID and type of assistance being requested (examples below).

MDHHS Emerging Infections Flex Team/CT Team Assistance with Outbreaks

MDHHS Emerging Infections Flex Team will correspond with the requesting LHD by email (with RE copied) to collect any information needed and confirm whether assistance can be provided for the cluster/outbreak investigation. After email confirmation and documentation to the LHD that assistance can be provided, the Emerging Infections Flex Team will update fields within the Outbreak Tab. Any other information, including call attempts, will be entered in the Notes Tab. If there is any urgent information for the LHD, a note will be entered and email sent to the RE, RSE, and the LHD point of contact, if known. Once assistance is complete, MDHHS Emerging Infections Flex Team will notify the LHD and RE by email.

Example types of outbreak assistance MDHHS can provide:

- Search in MDSS for potentially related cases
- Add outbreak IDs to individual cases, if provided a list of cases. If cases are not yet entered into MDSS, contact RE to assist in secure data transfer. Outbreak ID in aggregate Case Report Form should match outbreak ID in all individual outbreak-associated cases.
- Individual case investigation of outbreak-related cases and updates to individual Case Report Forms
- Check immunization status of cases in the Michigan Care Improvement Registry (MCIR)
- Provide regular epi summary updates of outbreak (e.g., epi curve, cases by age, sex, race, ethnicity, percentage of cases vaccinated, hospitalized, died, etc.)
- In coordination with the LHD, contact facility (workplace, school, event)
    - Inquire about recent cases.
    - Review infection control practices.
    - Provide general public health recommendations in consultation with the LHD.
    - Assess any barriers / new needs.
    - NOTE: regarding questions necessitating local health jurisdiction authority (e.g., visitor policy changes, facility closures), refer requests to the LHD.
- Notify close contacts and provide recommendations.
- Refer contacts/cases to MDHHS website resources for testing sites, vaccination clinics, and treatment.
- Request MDHHS testing and vaccination support, if needed.

At this time, the Emerging Infections Flex Team may refer LTC/SNF/Adult Foster Care/Home for the Aged outbreak/cluster assistance to the MDHHS Infection Prevention Resource and Assessment Team (IPRAT) team, who has specialized training in these types of outbreaks. Outbreaks will be referred to them via MDHHS-IPRAT@michigan.gov

The MDHHS Contact Tracing Team can assist LHDs in the following ways:

- Help LHD notify cases of K-12 students or vulnerable setting cases that may not otherwise be interviewed (please send those cases to Erkia Smith at smithe61@michigan.gov)
- Help contact trace K-12 students and contacts associated with vulnerable settings. Please utilize the OMS upload for classroom lists. In addition, outreach to contacts under 19 years of age and those with the "contact live or work in a high-risk setting" designation in the MDSS CRF will be prioritized:

PEG (People.Health) Referrals

MDHHS has contracted with the company People.Health, formerly Patient Education Genius (PEG), to offer LHDs an opportunity to leverage technology in support of timely case investigations. PEG's Case Report Solutions is designed to reduce workload burdens, turnaround time for case completion, and human errors that affect data accuracy by facilitating data collection from individuals referred as COVID-19 cases directly into a web-based tool. This tool interfaces with the MDSS, receives case referrals to be sent for follow-up, and electronically transmits data entered by the patient and case investigators back into the MDSS. Currently, PEG supports both education and data collection. Confirmed and Probable cases from the LHD will receive a text message with education about their COVID-19 diagnosis and how they should inform close contacts about their exposure. A survey will be included as part of the message which will direct the case to complete a partial case investigation form. Data from the form will be sent to the PEG Local Public Health Dashboard and MDSS for LHD review.

If a case fills out the form, auto-transfer will take place to MDSS after 3 days, even if data are not reviewed. If the case never fills out the form, the case is removed from the PEG Dashboard and the link is no longer viable. This will not change MDSS status.

- Confirmed or probable cases with Investigation Status =New and Referral Date in the past 10 days will be transferred to PEG daily between 9-10 am daily.
- If updating the assigned investigator in MDSS prior to 9 AM, make sure it is assigned to an investigator that is on the PEG Dashboard, otherwise the form **will not** be sent to the case.
- Keep the case Investigation status as "New" until the MDSS audit trail has "sent to PEG" or they are on the PEG Dashboard.
- Once sent to PEG, the case receives an initial text at 9 AM, then a second treatment information text at 10 AM and reminder text.
- The auto-transfer (as well as any completed Patient Submissions (Pat Subs)) from PEG to MDSS occurs daily between 8 PM and 9 PM.
- Once the data have been transferred to MDSS, the case's PEG status will be marked Received and the case's investigation status will be updated to Review.

As resources permit, LHDs are recommended to review the case data received from PEG for any mentions of potential outbreaks, cases in congregate settings, high-risk exposures, concerning comments, etc. One way to review the PEG data in MDSS is to use a Disease Specific search for cases in your jurisdiction with Investigation Status = Review (or to only view cases with PEG data, also select PEG Status = Received), export the data, and review the line list of cases in Excel, scanning through key columns like worksite/school, live or work high risk settings, travel by plane, etc. These can be marked as Completed in MDSS individually or via a Batch Update.

- For general questions or concerns about the utilization of PEG or for training on the PEG dashboard, contact Smeralda Bushi, BushiS1@michigan.gov
- For issues with the PEG dashboard or to add investigators to the PEG dashboard, contact PEG staff at michiganlhd@patienteducationgenius.com

Emerging SARS-CoV-2 Variants and Whole Genome Sequencing

Multiple SARS-CoV-2 variants often co-circulate. In collaboration with a SARS-CoV-2 Interagency Group (SIG), CDC established classifications for the SARS-CoV-2 variants. Categories include Variant Being Monitored (VBM), Variant of Interest (VOI), Variant of Concern (VOC), and Variant of High Consequence (VOHC). The VBM class includes variants previously designated as VOIs or VOCs that are no longer detected or are circulating at very low levels in the US, and as such, do not pose a significant or imminent risk to public health in the U.S. Additional information about variant classifications and definitions can be found at: https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-classifications.html

Currently circulating VOC do not warrant traveler monitoring, active case monitoring, or enhanced public health investigation. Ongoing testing and VOC characterization are critical to understanding COVID-19 activity and the potential impact to public health. If new VOC are identified, enhanced follow-up may be indicated.

Acceptable Specimens and Prioritization

Specimens should be prioritized to both monitor the epidemiology of the current variant(s) in Michigan as well as identify any new variants of concern that may be introduced into the state. The following specimens should be considered for prioritized sequencing:

- Suspicion for variant infection based on domestic or international travel, or other exposure history, regardless of vaccination status.
- Specimens from outbreaks or clusters, regardless of vaccination status, particularly from outbreaks that are suspected to be super spread events, outbreaks among vulnerable populations, and outbreaks where there is prolonged spread.
    - Note: Not all outbreak related cases need to be sequenced. LHDs should consider sending up to 3 samples from outbreak-associated cases.
- Specimens from vaccine breakthrough cases that have an unusual presentation, hospitalization, or are a death (not all breakthrough cases need to be submitted for sequencing)

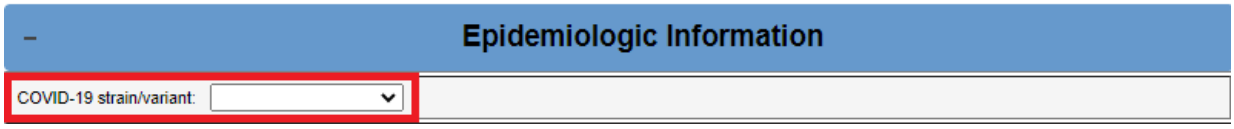
SARS-CoV-2 residual samples, at least 500 uL, to be frozen and sent to the state laboratory in the specimen tube on a weekly basis. Acceptable specimens for the Novel 2019 Coronavirus (SARS-CoV-2) sequencing analysis are:

- Nasopharyngeal swabs in viral transport medium, Amies Transport Media, or PBS;
- Nasal swabs in viral transport medium, Amies Transport Media, or PBS;
- OP swabs in viral transport medium, Amies Transport Media, or PBS;
- Nasal aspirates;
- Mid-turbinate swabs in viral transport medium, Amies Transport Media, or PBS;
- Sputum.

If a positive antigen needs sequencing, submit a new NP/OP/nasal specimen in appropriate transport media.

Variant Reporting in MDSS

The COVID-19 strain/variant field, found in the Epidemiologic Information Section of the Case Report Form, should be used to capture the strain type of variant cases. When a variant case is confirmed, select the appropriate variant strain type from the drop-down menu. MDSS will automatically update the variant field in the CRF for all VOCs when a variant lab result is added to a case as an electronic lab. This electronic lab may also be viewed in the lab tab. 'Suspected' should be used to denote variant cases among contacts of confirmed variant cases (i.e., epi-links). If suspect variants are later laboratory confirmed, the field should be updated to the appropriate confirmed variant strain.



Masks

Layered prevention strategies, including wearing a high-quality mask, vaccination, self-testing, and physical distancing, can help prevent severe illness and reduce the potential for strain on the healthcare system. Masks and respirators are effective at reducing transmission of COVID-19, when worn consistently and correctly and therefore, are a critical public health tool. Some masks and respirators offer higher levels of protection, and some may be harder to tolerate or wear consistently. Individuals may choose to wear a mask or respirator that offers greater protection in certain situations, including being at higher risk for severe illness, or being around others who are at higher risk. It is important to wear a mask or respirator when sick or caring for someone who is sick with COVID-19. When caring for someone who is sick with COVID-19, a respirator will provide the best level of protection. There are also considerations for specific groups of people, including those who are higher risk for severe disease, children, and people with disabilities. More information from The National Institute of Occupational Safety and Health (NIOSH) can be found at: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.html

COVID-19 Vaccine

For the most recent information on the COVID-19 vaccine in Michigan, go to www.mi.gov/COVIDVaccine. CDC vaccine information and recommendations can be found at: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html

Up-to-date Clinical information about COVID-19 vaccines can be found at: https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html

If an individual has a condition or is taking medication that weakens their immune system, they may NOT be protected even if up to date with COVID-19 vaccines. Those who are immunocompromised may have a reduced immune response to COVID-19 vaccines and should follow prevention measures (wearing a mask, distancing from others they do not live with, and avoiding crowds and poorly ventilated indoor spaces) regardless of their vaccination status to protect themselves against COVID-19 until advised otherwise by their healthcare provider. CDC vaccine guidance for moderately or severely immunocompromised people can be found at: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/immuno.html

Potential Vaccine Breakthrough / Failure Cases: Follow-up

Previously, CDC had monitored rates of COVID-19 cases and deaths by vaccination status but since the end of the Public Health Emergency in May 2023, CDC has discontinued breakthrough surveillance. Archived data can be found at: data.cdc.gov/Public-Health-Surveillance/Rates-of-COVID-19-Cases-or-Deaths-by-Age-Group-and/54ys-qyzm.

Although CDC is no longer collecting these data, MDHHS will continue to monitor trends of vaccine breakthrough cases reported in Michigan by linking case surveillance data in MDSS to vaccination data from the immunization registry, MCIR.

Definitions for COVID-19 cases and deaths by vaccination status can be found here: https://www.cdc.gov/coronavirus/2019-ncov/php/hd-breakthrough.html.

Information and studies on vaccine effectiveness can be found at: https://covid.cdc.gov/covid-data-tracker/#vaccine-effectiveness.

Appendix 1: Sample Death Reporting Form

Patient's Name _____

DOB _____ **Date of Death** _____

Gender: _____ Admit Date: _____

County of residence: _____

City of residence: _____

Hospital / Org.: _____

Location of Death (ED? ICU?) _____

☐ COVID-19 POSITIVE test by:

☐ reporting hospital test date _____

☐ other *(name):* _____

on (test date) _____

☐ COVID-19 SUSPECTED

☐ test pending, test by:

☐ current hospital, test date _____

☐ other *(name):* _____

on *(test date):* _____

☐ COVID-19 contact or travel history

Comorbidities

- ☐ Diabetes
- ☐ Hypertension
- ☐ Heart Disease
- ☐ Chronic Kidney Disease
- ☐ COPD / Emphysema
- ☐ Asthma
- ☐ OSA or Sleep Apnea
- ☐ Cancer
- ☐ HIV
- ☐ Transplant Recipient
- ☐ Pregnancy
- ☐ Other immune problem
- ☐ Alcohol Abuse or drug abuse

Comments

Date Reported _____

MRN _____

Patient came from *(mark all that apply)*

- ☐ Nursing Home
- ☐ Residential / Group Home
- ☐ Dormitory
- ☐ Shelter
- ☐ Prison
- ☐ Other Group setting:

Name of Residence / Building:

_____

Address _____

_____

Organization Contact name

_____

and role?_____

(_____) _____ -- _____

HEMS Operator *(Initials)* _____

Who can we call with questions?

Name _____

Role? _____

Phone: (_____) _____ -- _____

cell? office? Other? _____

Please fax medical records including H&P

Discharge Summery and any transfer notes to:

Appendix 2: Sample MIHAN Message for College/University Outbreaks

The [Local Health Department name] continues to conduct disease investigations related to a large increase in lab-confirmed COVID-19 cases in [County name], associated with the students and/or staff at [College/University name].

As of [insert Date], ### cases have been identified. Individuals are presenting as both symptomatic and non-symptomatic. [Brief description of cases, e.g., associated with athletics, fraternity, dormitory]

As a reminder, we are asking that local health departments help us in the following ways in an effort to best track the cases and close contacts associated with [College/University]:

- Use the outbreak identifier "**COLLEGE MONTH2024**" when conducting disease investigations related to GVSU. For secondary cases or cases in close contacts, use the case identifier "**COLLEGE MONTH2024 SECONDARY". This** will enable us and our local/regional EPI to get a complete and accurate picture of potential transmission.
- If the case you are investigating is currently living at or near [College/University in City], **please enter the student's local address (i.e., their college residence)** in MDSS. Once you change the student's address, please also change the case status to "**NEW**" so that we at [Local Health Department] can find it.
- If the case you are investigating is not living at or near the [College/University] campus, please use the student's permanent address (where they are currently living), but still use the outbreak identifiers described above if the student has substantial exposure to any [College/University] facility.

[Local Health Department] is working with [College/University] and our regional epidemiologist to be able to identify cases and close contacts related to this outbreak.

Whenever possible please limit calls to [Local Health Department] by conducting case transfers within MDSS. If you need to contact [Local Health Department], please email [LHD email] or call [LHD phone number]. Thank you for your assistance.

*** This alert is being sent to Roles and Organizations: Local Public Health EPC, Health Officer, Medical Director, LPH CD Role, MDHHS DEPR, Regional Epi, and Regional Coalitions ***

Appendix 3: Report of COVID-19 Positive Test Result to Public Health

Please fax completed form to the Local Health Department where the patient resides.
If interested in reporting results electronically, please visit www.michigan.gov/mdss

Patient Information
Full Name (First & Last): _____

Address: _____ City:_____ ZIP:_____

Phone (___)_____ Other Phone (___)_____ DOB ____/____/_____ Sex: ☐Male ☐Female ☐Unk

Check all that apply (at least one). Unknown may be selected if there is no feasible way to collect specific information.

Race: ☐ American Indian/Alaska Native ☐ Black/African American ☐ Asian ☐ Caucasian
☐ Hawaiian/Pacific Islander ☐ Other_____ ☐ Unk

Ethnicity: Hispanic/Latino: ☐Yes ☐No ☐Unk Arab/Middle Eastern: ☐Yes ☐No ☐Unk

Test Information
Type of Test (Choose one): ☐ PCR ☐ Rapid Molecular (i.e., Abbott ID Now) ☐ Rapid Antigen ☐ Antibody

Specimen Source: ☐ Nasal swab ☐ Nasopharyngeal (NP) swab ☐ Oropharyngeal swab ☐ Serum ☐ Other: _____

Test Ordered: _mm/dd/yyyy___ Specimen Collected: _mm/dd/yyyy___ Report Date: _mm/dd/yyyy___

Ordering Provider
Full Name (First & Last): _____ NPI: _____

Affiliation/Facility name: _____ Phone _(____)_____

Address: _____ City: _____ Zip: _____

Person Providing Referral
Full Name (First & Last): _____ Phone _(____)_____

Clinical Presentation

Asymptomatic ☐ Yes ☐ No ☐ Unk

Fever (subjective) ☐ Yes ☐ No ☐ Unk	Fever (measured) ____°F	Chills ☐ Yes ☐ No ☐ Unk	Muscle aches ☐ Yes ☐ No ☐ Unk	Runny nose ☐ Yes ☐ No ☐ Unk
Sore throat ☐ Yes ☐ No ☐ Unk	Cough ☐ Yes ☐ No ☐ Unk	Shortness of breath ☐ Yes ☐ No ☐ Unk	Nausea or vomiting ☐ Yes ☐ No ☐ Unk	Headache ☐ Yes ☐ No ☐ Unk
Abdominal pain ☐ Yes ☐ No ☐ Unk	Diarrhea ☐ Yes ☐ No ☐ Unk	Fatigue ☐ Yes ☐ No ☐ Unk	Congestion ☐ Yes ☐ No ☐ Unk	Wheezing ☐ Yes ☐ No ☐ Unk
Chest pain ☐ Yes ☐ No ☐ Unk	Loss of taste or smell ☐ Yes ☐ No ☐ Unk	Pneumonia ☐ Yes ☐ No ☐ Unk	ARDS ☐ Yes ☐ No ☐ Unk	Stroke/VTE ☐ Yes ☐ No ☐ Unk

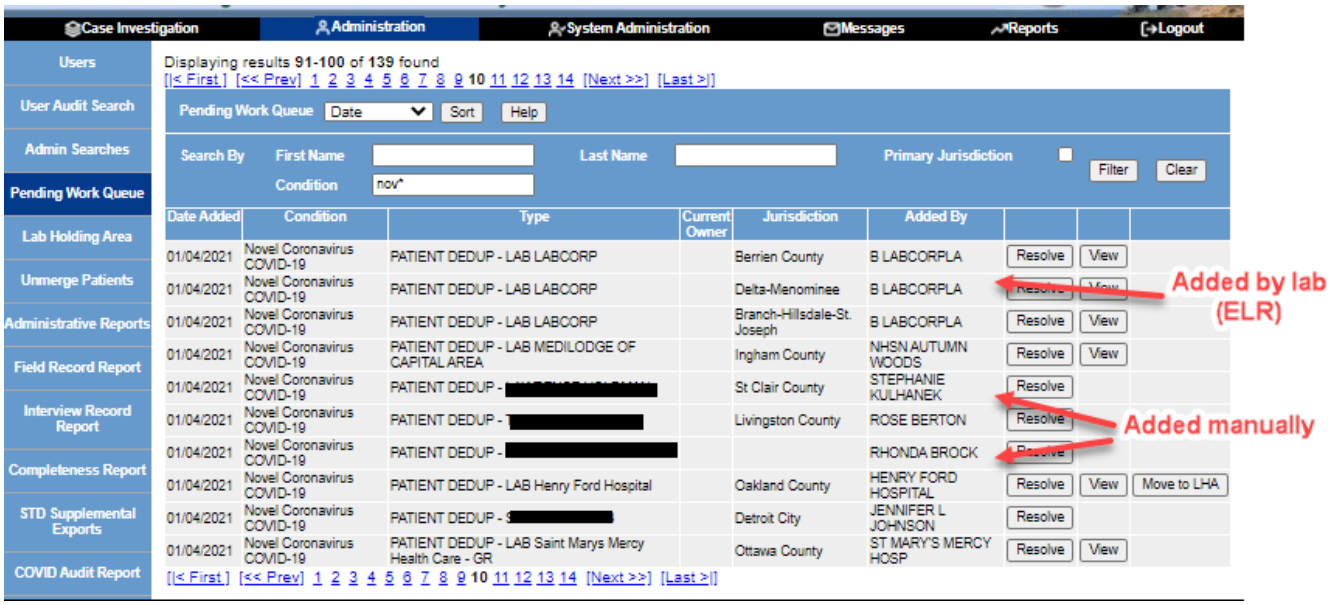
Appendix 4: Deduplication Instructions for COVID-19

Deduplication Instructions

These instructions are specific to case deduplication of COVID-19. Full instructions for patient and case deduplication may be found at www.mi.gov/mdss or directly at: https://www.michigan.gov/documents/mdch/Instructions_for_Deduplication_in_MDSS_06_2013_425623_7.pdf

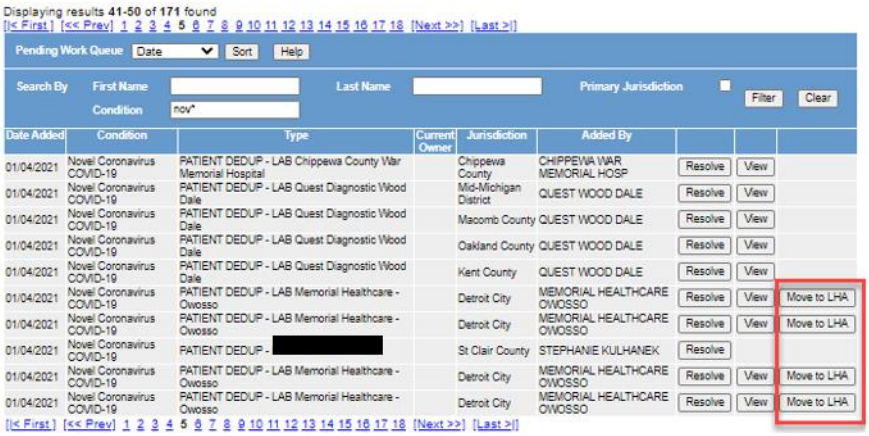
Manual vs Electronic Entry

Cases or lab results may be entered manually by individual MDSS users or via electronical laboratory reporting (ELR). The figure below shows examples of each type. Those that are added via ELR will go through an algorithm for MDSS to determine whether to 'Create' or 'Match Existing'. Those that are entered manually by users will need manual review, following the **Instructions for Case Deduplication** below.



Lab Holding Area (LHA)

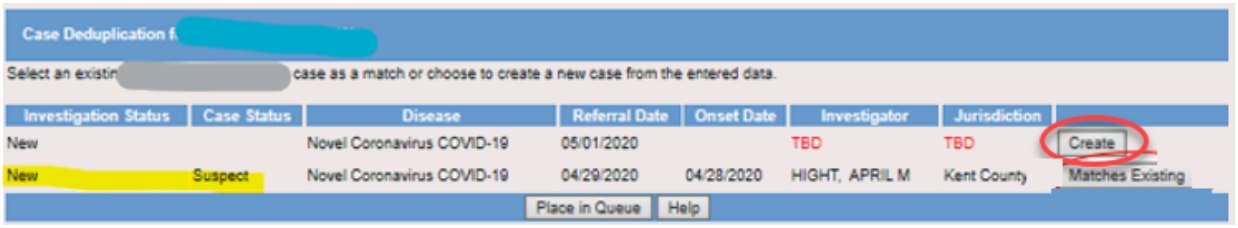
Some cases in the pending queue have a 'Move to LHA' option. This includes cases with negative laboratory results, cases with antibody results or cases with indeterminate or inconclusive results. **Only those with negative lab results may be moved to the LHA**. Click on 'View' to review results before moving the case. Cases created from OMS also have the 'Move to LHA' option but it should NOT be used for these cases.



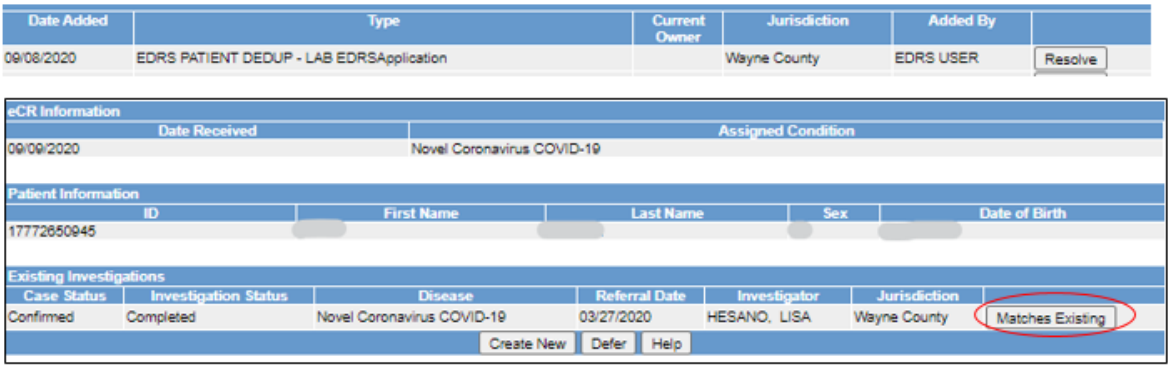
Instructions for Case Deduplication

1) If a case is previously reported as Confirmed or Probable and <90 days have passed since the initial referral date, choose **MATCHES EXISTING.**
NOTE: If merging into a probable case, note the case name so that it can be searched and reviewed. If confirmatory lab results were added to the case, update Case Status from Probable to CONFIRMED. If the Investigation Status was marked as Completed, switch to REVIEW and include a note in the note tab that new confirmatory results were added to the case. *If you find that the probable case was not investigated/interviewed and <2 weeks have passed since referral date, the Investigation Status may be changed to NEW rather than Review.*

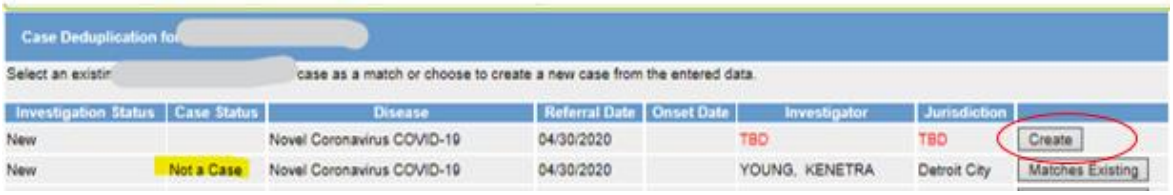
2) If a case is previously reported as Suspect or Unknown and the investigation status is new or active, choose **CREATE.** Note the case name so that it can be searched and reviewed for correct case status.



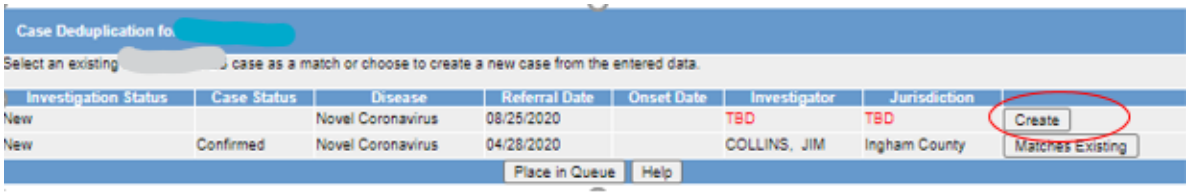
3) If a case was previously reported as Suspect, Probable, or Confirmed and a new record from EDRS is received, choose **MATCHES EXISTING**, even if >90 days since referral date *(as long as the condition matches).*



4) If a case was previously reported as Not a Case, and a new result is received, choose **CREATE**.

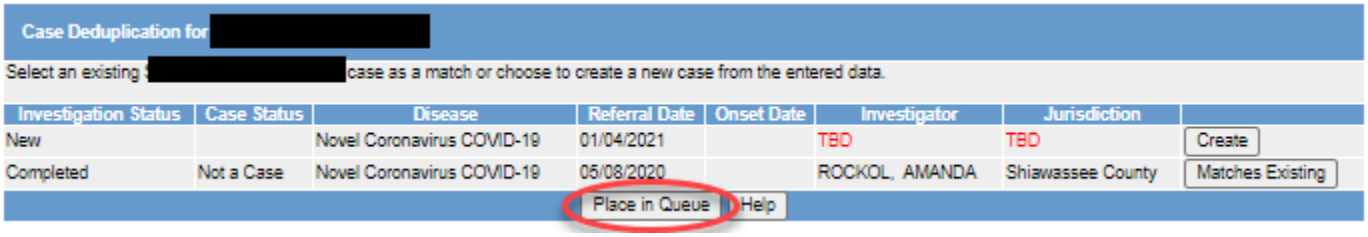


5) If a case was previously reported as Confirmed or Probable and >90 days have passed since referral date, choose **CREATE.** Note the case name so that it can be searched and reviewed. Only **confirmatory** results may create a new case/re-infection according to the case definition. If results were not confirmatory, the new case can be marked as 'superceded' or sent back through for deduplication.



NOTE

If you are ever unsure about when to select 'Create' or 'Matches Existing', you can send the case back to the pending queue by selecting 'Place in Queue'

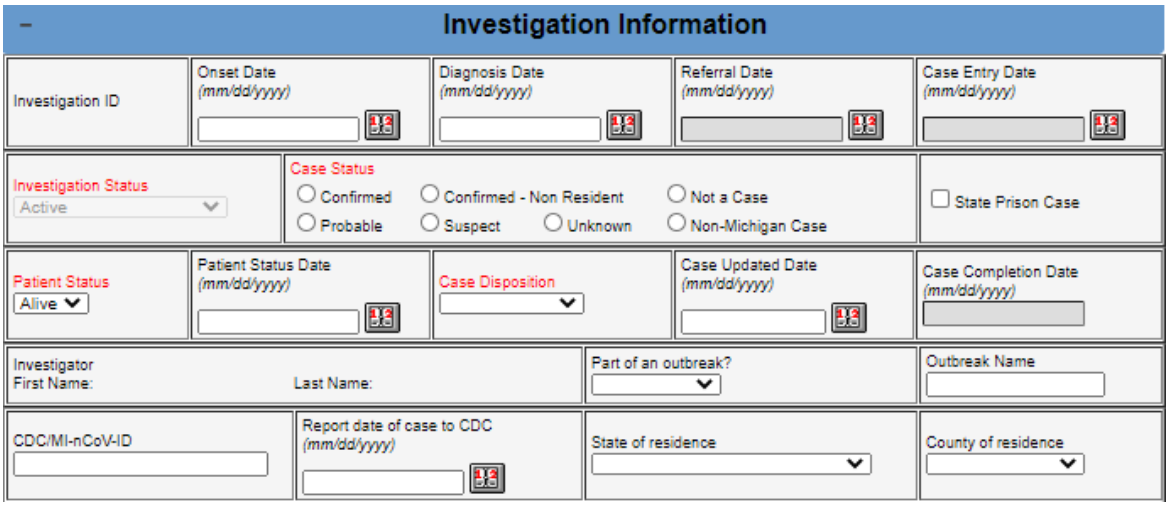


Appendix 5: COVID-19 Case Report Form (CRF) Interim Tip Sheet

This tip sheet highlights important fields, like demographics, and other variables that have received frequent questions. If you have other questions, please contact your Regional Epidemiologist.

Investigation Information

- **Onset Date**: If a case does not have an onset date (e.g., asymptomatic case), it should be left blank.
- **State Prison Case**: check box only for inmates in Michigan Department of Corrections (MDOC) facilities. Leave unchecked for inmates in county jails and Michigan Department of Corrections employees.
- **Case Disposition**: Select 'inpatient' if it is determined that the patient is hospitalized due to COVID-19.
    - **Note**: There are many underlying conditions that may make symptoms more severe. It may be difficult to determine if the hospitalization is due to the underlying condition or due to the condition plus COVID-19. If hospitalization reason is unrelated to COVID-19 (e.g., labor/delivery, gunshot wound, accident), '**outpatient'** should be selected for Case Disposition and the "Patient Hospitalized" question in "Hospital Information" should be "No." Otherwise, the case should be marked as hospitalized.
    - **In "Hospital Information", if 'Patient Hospitalized' is 'Yes', then Case disposition must be 'inpatient'**.
    - The person should remain as "Inpatient" status even after discharge since inpatient status reflects history of COVID-19 infection hospitalization and not current hospital stay.
- **Outbreak Name**:
    - For cases associated with outbreak, assign a specific outbreak ID (e.g., include condition, location/event, month/year). Outbreaks names can be added to individual cases even if not yet considered an outbreak as they can help associate cases with specific settings or events.
    - MDHHS is no longer using generic outbreak names (e.g., WUHAN-19, COVID-19); if a case is not associated with an outbreak, the field can be left blank.
- **CDC/MI-nCoV-ID:** leave blank, no longer necessary. This field was used in the beginning of the pandemic to indicate cases that were approved for testing.



Demographics

- **Sex at birth:** This is a required field.
- **Current gender:** Male, Female, Trans to Female, Trans to Male, and Unknown are options.
- **Race and Ethnicity:** Refused to answer is included in the options.

Demographics

Sex at Birth: ○ Male ○ Female ○ Unknown	Current Gender: ○ Male ○ Female ○ Trans to Female ○ Trans to Male ○ Unknown			
Date of Birth *mm/dd/yyyy*	Age	Age Units: ○ Days ○ Months ○ Years		
Race *(Check all that apply)*: ☐ White/Caucasian ☐ Black/African American ☐ American Indian/Alaska Native ☐ Hawaiian/Pacific Islander ☐ Asian ☐ Other (Specify) ☐ Unknown ☐ Refused to answer				
Hispanic Ethnicity: ○ Hispanic/Latino ○ Non-Hispanic/Latino ○ Unknown ○ Refused to answer	Arab Ethnicity: ○ Arab ○ Non-Arab ○ Unknown ○ Refused to answer			

Hospital Information

- **Patient Hospitalized**: If case disposition is 'inpatient' then select 'yes' (see case disposition above)

Hospital Information

Patient Hospitalized ○ Yes ○ No ○ Unknown	Hospital	Hospital City	Hospital Record No.	Days Hospitalized

Clinical Information

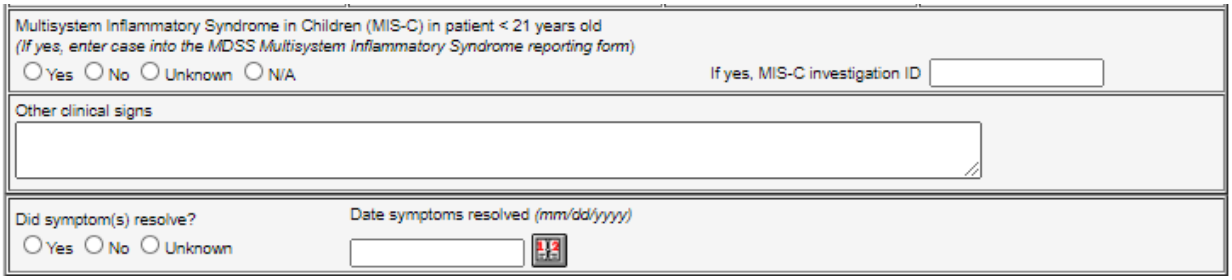
- **Patient Died**: If the case meets the criteria of a COVID-19 death (see Death Reporting and Investigation), mark 'Yes' in the 'Patient Died' field and fill in Date of Death. Please review this field for accuracy as it has a tendency to be mismarked.

Patient Died ○ Yes (Died) ○ No (Alive) ○ Unknown	Date of Death *(mm/dd/yyyy)*

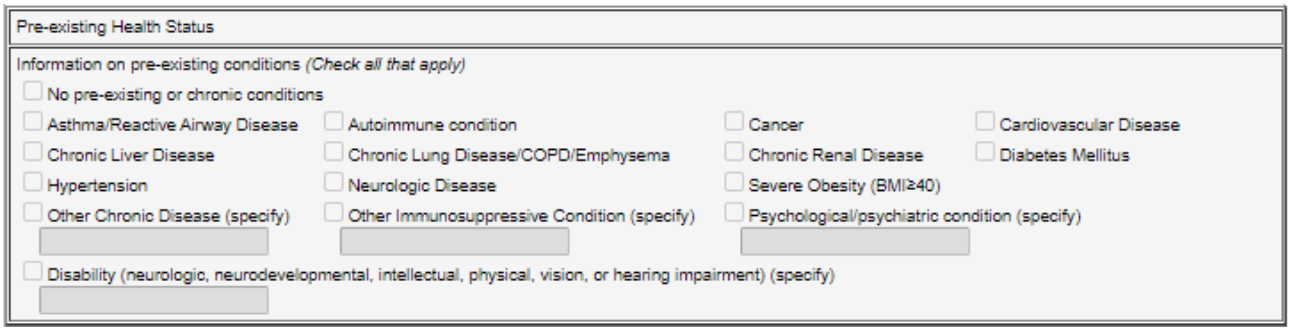
- **Information on Signs and Symptoms:**
  - Difference between **chills** and **rigors – Chills:** feeling cold; **Rigors:** shaking chills, shivering
  - Difference between **shortness of breath (dyspnea)** and **difficulty breathing -**
    - **Shortness of breath**: cannot catch your breath or get enough air in your lungs. Grasping for breath or unable to complete a sentence in one breath
    - **Difficulty breathing**: Winded, labored breathing

Information on signs and symptoms			
Fever (subjective or measured) ○ Yes ○ No ○ Unknown	If yes, specify highest temperature	Scale ○ Fahrenheit ○ Celsius	Chills ○ Yes ○ No ○ Unknown
Rigors ○ Yes ○ No ○ Unknown	Muscle aches (myalgia) ○ Yes ○ No ○ Unknown	Runny nose (rhinorrhea) ○ Yes ○ No ○ Unknown	Sore Throat ○ Yes ○ No ○ Unknown
Cough (new onset or worsening of chronic) ○ Yes ○ No ○ Unknown	Shortness of breath (dyspnea) ○ Yes ○ No ○ Unknown	Nausea ○ Yes ○ No ○ Unknown	Vomiting ○ Yes ○ No ○ Unknown
Headaches ○ Yes ○ No ○ Unknown	Abdominal pain ○ Yes ○ No ○ Unknown	Diarrhea (≥3 loose/looser than normal stools/24hr period) ○ Yes ○ No ○ Unknown	
Fatigue/Lethargy/Weakness ○ Yes ○ No ○ Unknown	Congestion (Coryza) ○ Yes ○ No ○ Unknown	Encephalopathy/Encephalitis ○ Yes ○ No ○ Unknown	Wheezing ○ Yes ○ No ○ Unknown
Difficulty Breathing ○ Yes ○ No ○ Unknown	Chest Pain ○ Yes ○ No ○ Unknown	Loss of Taste ○ Yes ○ No ○ Unknown	Loss of Smell ○ Yes ○ No ○ Unknown

- **MIS-C**: If a case (<21y) is also reported as MIS-C, check 'yes' and enter the MIS-C Investigation ID
- **Did Symptoms Resolve and Date**: at the time of last interview, did symptoms resolve or return to baseline, and date that symptoms resolved. If the case was asymptomatic or symptoms have not resolved at the time of the interview, leave blank.

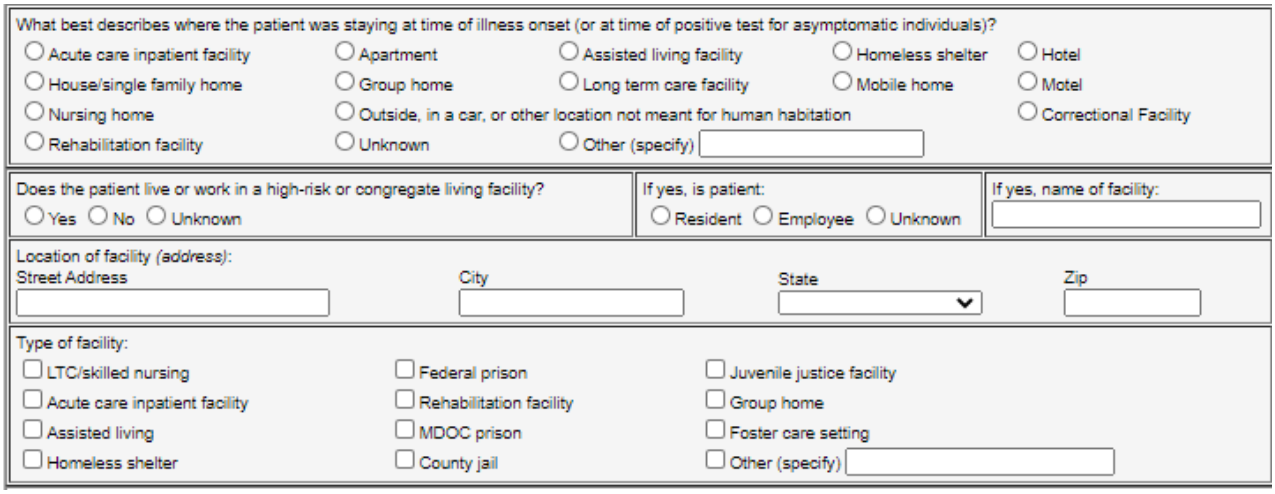


- **Pre-existing Health Status**: check all pre-existing conditions. Disability was added in February 2021



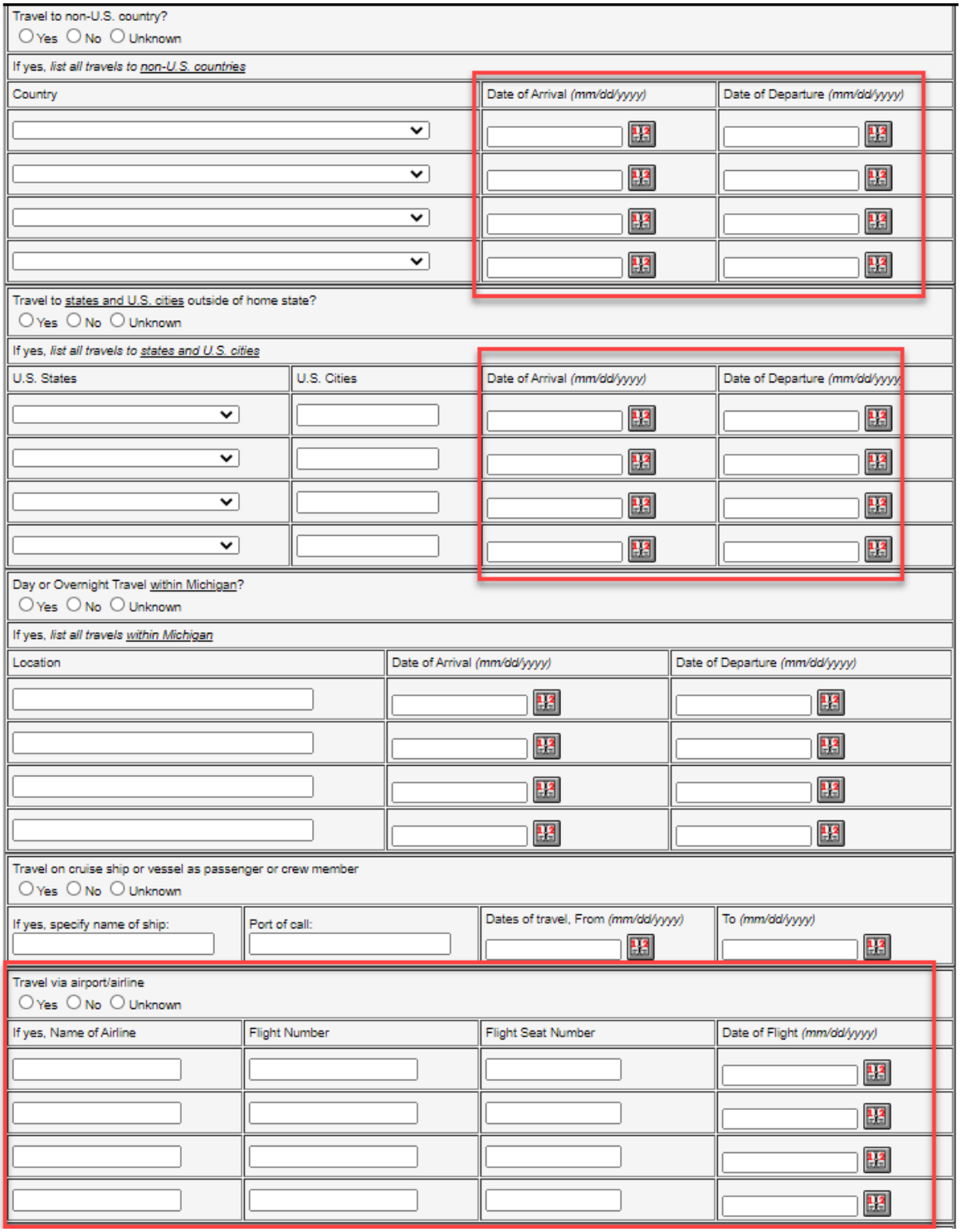
Epidemiologic Information

- **COVID-19 strain/variant**: Select the appropriate variant strain type from the drop-down menu. 'Suspected' should be used for variant cases among contacts of confirmed variant cases (epi-links).
- **Residence at time of onset**: indicate type of residence the case was staying at the time of onset or positive test – this helps determine number of people that may have been exposed.
- **High-risk setting**: indicate whether case lives or works in a high risk setting and complete fields for the type of facility. Additional facility types have been added based on prior case reports and to better characterize the role of congregate settings.



Travel

- For cases with international or domestic travel, please provide the arriving and departing flight information for any flights that occurred during the case's infectious period. Flight number and seat numbers are also helpful in the event contact tracing is necessary.
- Document travel by other mass conveyances (e.g., bus, train) in the case's notes tab (not shown)



Travel to non-U.S. country?
○ Yes ○ No ○ Unknown

If yes, *list all travels to non-U.S. countries*

Country	Date of Arrival *(mm/dd/yyyy)*	Date of Departure *(mm/dd/yyyy)*

Travel to states and U.S. cities outside of home state?
○ Yes ○ No ○ Unknown

If yes, *list all travels to states and U.S. cities*

U.S. States	U.S. Cities	Date of Arrival *(mm/dd/yyyy)*	Date of Departure *(mm/dd/yyyy)*

Day or Overnight Travel within Michigan?
○ Yes ○ No ○ Unknown

If yes, *list all travels within Michigan*

Location	Date of Arrival *(mm/dd/yyyy)*	Date of Departure *(mm/dd/yyyy)*

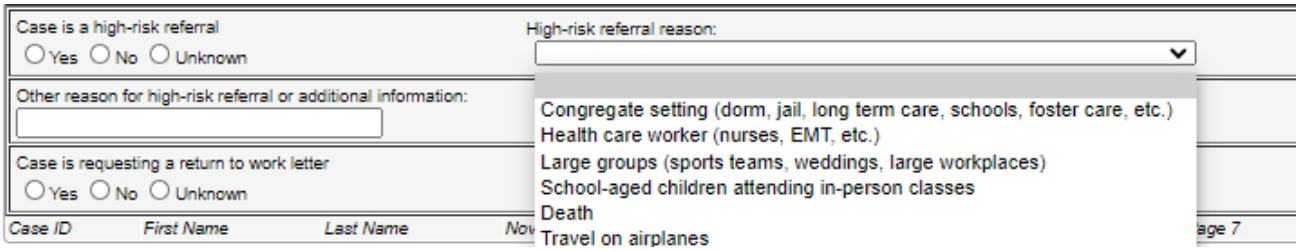
Travel on cruise ship or vessel as passenger or crew member
○ Yes ○ No ○ Unknown

If yes, specify name of ship:	Port of call:	Dates of travel, From *(mm/dd/yyyy)*	To *(mm/dd/yyyy)*

Travel via airport/airline
○ Yes ○ No ○ Unknown

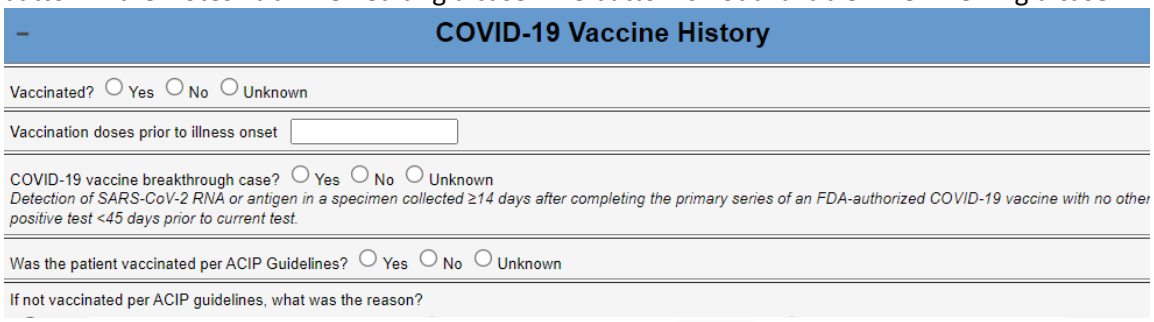
If yes, Name of Airline	Flight Number	Flight Seat Number	Date of Flight *(mm/dd/yyyy)*

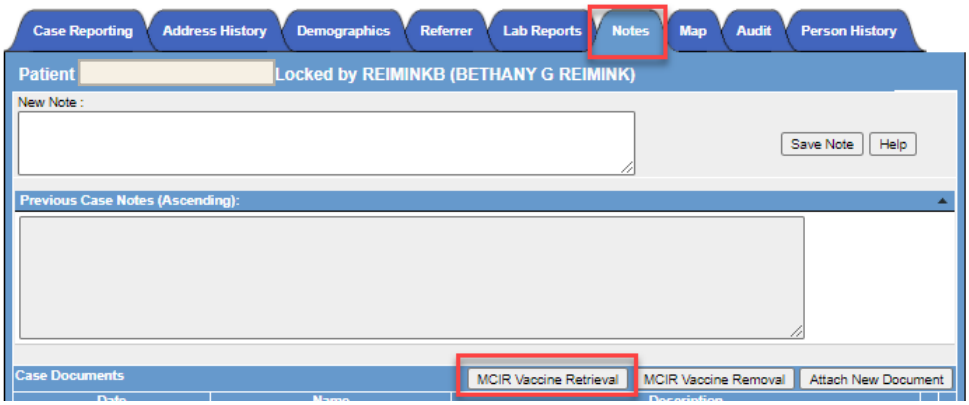
- **High Risk Referral**: If a case has a high risk, select 'yes' and the reason from the drop-down menu.



Vaccine History

- The section is used to document COVID-19 vaccine only, not other routine vaccinations.
- Note: vaccine information can be retrieved from the Michigan Care Improvement Registry (MCIR) if an exact match of last name, first name, and date of birth is found. This can be done through the button in the Notes Tab when editing a case. The button is not available when viewing a case.





Other Information

- **Local 1 & Local 2**: these fields are available for Local Health Departments to assign and use at their own discretion. If you do not have a local use for those fields, leave blank.
- **Date of first interview**: date that the investigator attempts outreach to the case.
- **Current interview status**: select status of interview.
- **Date of Interview**: Indicate date that the investigator has talked to case or proxy.