

Michigan State and Local Public Health Measles Standard Operating Procedures

April 2026

Version 4

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Background

In 2000, measles was declared eliminated from the United States. Measles cases and outbreaks still occur every year in the U.S., however, because measles is commonly transmitted in many parts of the world, including countries in Europe, the Middle East, Asia, the Pacific and Africa. Prompt recognition, reporting and investigation of measles is important, and laboratory confirmation is essential for all measles outbreaks. The spread of the disease can be limited with early case identification and public health response, including vaccination and quarantine of susceptible contacts without presumptive evidence of immunity.

In 2019, Southeast Michigan experienced a large measles outbreak, reflecting increased national measles activity that year. In 2019 there were 1,274 individual cases of measles confirmed in 31 states. At the time, this was the largest number of measles cases reported nationally since 1992. During 2025 there were a total of 2,285 cases of measles in the United States. During the previous five years from 2020-2024, cases ranged from 13 in 2020 to 285 cases in 2024. As of April 2, 2026, there are 1,671 confirmed cases of measles in the U.S.

Most of the U.S. cases since 2019 are among people who were not vaccinated against measles. Measles is more likely to spread and cause outbreaks in communities where groups of people are unvaccinated. Measles' elimination status in the U.S. has been maintained for more than 20 years. The risk for measles in much of the population is relatively low but pockets of unvaccinated individuals, an increase in the number of unvaccinated or under-vaccinated individuals, traveling abroad to areas with transmission or exposure to localized outbreaks within the U.S. have the potential to cause additional transmission and subsequent outbreaks.

Clinical Description

Measles symptoms usually appear seven to 14 days after contact with the virus (up to 21 days after exposure) and typically include high fever (may spike over 104°F), cough, runny nose and watery eyes. Koplik spots (tiny white spots) may appear inside the mouth two to three days after symptoms begin. The rash appears three to five days after the first symptoms and usually starts on the face, at the hairline or behind the ears, then spreads downwards to the neck, trunk and extremities. The rash is maculopapular, made up of small raised or flat red bumps (see [Appendix 1](#)). As the rash progresses, the spots may join or coalesce. The rash is not usually itchy. Fever often peaks around the time the rash starts. Patients who are immunocompromised do not always develop a rash. Individuals who contract measles who had previously been exposed to measles antigen (by infection or vaccination) may have a modified disease presentation typically milder than those seen in classic measles. This modified presentation may also be experienced by individuals who develop measles after receiving immune globulin (IG) as post-exposure prophylaxis. For additional guidance on clinical features, review: [Clinical Overview of Measles | Measles \(Rubeola\) | CDC](#).

Infectious Period

An individual is infectious from four days prior to rash development until four days after rash onset. For example, if rash onset was April 1, the individual would be considered infectious from March 28-April 5. In immunocompromised individuals without rash, the start of the infectious period is the prodrome onset.

Transmission

Measles is transmitted person-to-person via airborne transmission or droplets from respiratory secretions of infected individuals. Droplets from the infected person can be aerosolized and remain suspended in the air for up to two hours. Due to the highly contagious nature of measles, determining close contacts and where the case was during their infectious period is crucial to understanding who may have been exposed in public locations (e.g., doctor's office, hospital, grocery store, mall, school).

Evidence of Immunity for MMR Administration

The following are general immunity guidelines with regards to who would routinely be recommended for additional MMR doses. This is not the same criteria used for public health follow-up for exposed contacts to a measles case. Acceptable presumptive evidence of measles immunity typically includes at least one of the following criteria:

For the general public:

1. Written documentation of adequate vaccination: receipt of one or more doses of a measles-containing vaccine administered on or after the first birthday for preschool-age children and adults not at high risk, and two doses of measles-containing vaccine for school-age children and adults at high risk for exposure transmission (e.g., international travelers, students at post-high school educational institutions); **or**
2. Laboratory evidence of immunity; **or**
3. Birth before 1957; **or**
4. Laboratory confirmation of disease.

For health care providers:

1. Written documentation of adequate vaccination: receipt of two live measles-containing vaccine doses; **or**
2. Laboratory evidence of immunity; **or**
3. Laboratory confirmation of disease.

Resource: [Measles vaccine recommendations for non-pregnant adults aged 19 or older, by birth year in the United States](#)

Current Michigan MMR Vaccine Coverage

Statewide, up-to-date vaccine coverage for the MMR vaccination in children ages 19 through 35 months of age has decreased from 85.2% in March 2020 to 77.4% in February 2026. In children ages four to six years old, up-to-date vaccine coverage for the MMR vaccination has decreased from 75.5% in March 2020 to 71.0% in February 2026.

County immunization report cards may be accessed at <https://www.michigan.gov/mdhhs/adult-child-serv/childrenfamilies/immunizations/data-statistics/countyimmsreportcards>. Local health jurisdictions interested in additional data can visit here: [County Data – mcir.org](#) or fill out the [Immunization Data Request](#) form.

Standardized Measles Surveillance Case Definition

Measles/Rubeola 2013 Case Definition

Clinical Description

An acute illness characterized by:

- Generalized, maculopapular rash lasting ≥ 3 days; and
- Temperature $\geq 101^\circ\text{F}$ or 38.3°C ; and
- Cough, coryza, or conjunctivitis.

Case Classifications

Probable

In the absence of a more likely diagnosis, an illness that meets the clinical description with:

- No epidemiologic linkage to a laboratory-confirmed measles case; and
- Noncontributory or no measles laboratory testing.

Confirmed

An acute febrile rash illness[†] with:

- Isolation of measles virus[†] from a clinical specimen; or
- Detection of measles-virus specific nucleic acid[†] from a clinical specimen using polymerase chain reaction; or
- IgG seroconversion[†] or a significant rise in measles immunoglobulin G antibody[†] using any evaluated and validated method; or
- A positive serologic test for measles immunoglobulin M antibody^{†§}; or
- Direct epidemiologic linkage to a case confirmed by one of the methods above.

[†] Temperature does not need to reach $\geq 101^\circ\text{F}/38.3^\circ\text{C}$ and rash does not need to last ≥ 3 days.

[‡] Not explained by MMR vaccination during the previous 6-45 days.

[§] Not otherwise ruled out by other confirmatory testing or more specific measles testing in a public health lab.

Epidemiologic Classification

Internationally imported case: An internationally imported case is defined as a measles case resulting from exposure to measles virus outside the U.S. as evidenced by at least some of the exposure period (seven to 21 days before rash onset) occurring outside the U.S. and rash onset occurring within 21 days of entering the U.S. and no known exposure to measles in the U.S. during that time. All other cases are considered U.S.-acquired.

U.S.-acquired case: An U.S.-acquired case is defined as a case in which the patient had not been outside the U.S. during the 21 days before rash onset or was known to have been exposed to measles within the U.S. U.S.-acquired cases are subclassified into four mutually exclusive groups. See Case Definition for more information.

Resources: <https://ndc.services.cdc.gov/case-definitions/measles-2013/>

Measles Outbreak Definition

In a 2019 MMWR, the Centers for Disease Control and Prevention (CDC) defined an outbreak of measles as a chain of transmission of three or more cases linked in time and place as determined by local and state health department investigations. However, even a single case of measles requires an urgent public health response to prevent additional cases.

Epi-Linkage Case Counting for Community Transmission During Measles Outbreaks

In January 2026, the Council of State and Territorial Epidemiologists (CSTE) distributed operational guidance ([Appendix 2](#)) to provide a broader, standardized interpretation of epi-linkage criteria that public health authorities may use to count cases as confirmed when community transmission is occurring. Utilization of this guidance by public health authorities is optional. In the event of widespread community transmission, the use of this alternate case definition may be considered by the Michigan Department of Health and Human Services (MDHHS) in consultation with Michigan local health departments (LHD).

Resources:

[Public health responses during measles outbreaks in elimination settings: Strategies and challenges](#)

[National Update on Measles Cases and Outbreaks — United States, January 1–October 1, 2019 | MMWR](#)

MDHHS Case and Outbreak Investigation Guidelines

Measles is required to be [reported within 24 hours](#) of clinical or laboratory diagnosis. The MDHHS Division of Immunization has developed [the Measles Investigation Guidelines](#) for local public health to follow during the investigation of a case or outbreak of measles in their jurisdiction. The CDC has created the *Be Ready for Measles* toolkit for public health that addresses preparedness and outbreak response tools and communication for use before and during a measles outbreak. The toolkit can be found at:

<https://www.cdc.gov/measles/php/toolkit/index.html>.

Initial steps for LHDs after receiving a report of measles

- Collect a detailed clinical description, vaccination history and travel history.
 - Example images of individuals with measles can be viewed at [Photos of Measles and People with Measles | CDC](#) and at [Measles - NHS \(www.nhs.uk\)](#). Select images from these sites are provided in [Appendix 1](#).
 - Unless already in the Michigan Disease Surveillance System (MDSS), enter the information.
- Contact your [Regional Epidemiologist](#) and the MDHHS Division of Immunization at 517-335-8159.
- Ensure the proper collection and shipment of specimens to the MDHHS Bureau of Laboratories (BOL).
- Testing at BOL should be prioritized (e.g., weekend testing) for any suspect case with high clinical/epi suspicion OR any suspect case that, if positive, poses a heightened risk to the public.
- Collect a list of possible individual exposed contacts and public venues that the case was at during their infectious period (e.g., doctor's office, hospital, grocery store, mall, school, etc.).
 - Information requested/gathered for individual exposed contacts should include: first name, last name, date of birth, cell phone number (or landline, if no cell phone), residence address (or city/county of residence) and exposure date/time/location.
- Assign an outbreak ID and add it to the Outbreak Name field of each case in MDSS.

- Because Outbreak Name is a free text field, all cases associated with the outbreak should have the exact same name.
- A user can search that field in MDSS using asterisks, e.g., *CampEx* would pull all cases with CampEx anywhere in the Outbreak Name field.
- Assess immunity of contacts (immunization history, physician-certified disease history, or serology).

Specimen Testing Approval

Additional support and specimen testing approval for measles case investigations can be provided by your [Regional Epidemiologist](#) and the Vaccine Preventable Disease Epidemiologist, Thrishika Balasubramanian. To contact the Vaccine Preventable Disease Epidemiologist please call the MDHHS Division of Immunization at 517-335-8159. The MDHHS on-call program (517-335-9030) can also approve after-hour testing requests, including priority testing, and will notify BOL by emailing mdhhs-dashlab@michigan.gov and margulieuxk@michigan.gov with the patient's name, date of birth and risk-level if known.

Resources: [Measles Investigation Guidelines \(MDHHS\)](#)

Transmission and Exposure Definitions

Measles is a highly contagious virus that lives in the nose and throat mucus of an infected person. It can spread to others through coughing and sneezing. Infected people can spread measles to others from four days before through four days after the rash appears. Measles is so contagious that up to 90% of the contacts to the ill individual who are not immune will also become infected. Measles virus can remain infectious for up to two hours in an air space after an infected person leaves an area.

Generally, a person is considered exposed to measles if they spent any amount of time in the shared air space of an infected person (including up to two hours after the infected person left). Shared air space could, for example, include a single room or larger spaces that share a common air handling system. For more information, see the "Interim Infection Prevention and Control Recommendations for Measles in Health Care Settings", Appendix A: "Considerations when Evaluating a Person for Exposure to Measles in a Health Care Setting."

Resources:

<https://www.cdc.gov/infection-control/hcp/measles/appendix-a.html>

<https://www.cdc.gov/infection-control/hcp/environmental-control/appendix-b-air.html>

<https://www.cdc.gov/infection-control/php/measles-healthcare-response/index.html> (PH and health care)

Contact Investigation

Preparation Prior to Case Confirmation

While suspected and probable cases are investigated and while results are pending, postexposure prophylaxis of household contacts without presumptive evidence of immunity should not be delayed pending the return of laboratory results. Other high priority groups for contact investigation are:

- 1) Close contacts other than household (e.g., individuals who shared the same room or air space).
- 2) Health care settings because of the risk of transmission to individuals at high risk of serious complications.

- 3) Schools/childcare centers, colleges, or other close settings where a defined number of individuals have congregated (e.g., churches) because of high contact rates and transmission potential.

In particular, identify individuals at high risk for severe disease including infants who are not vaccinated, immunocompromised individuals and pregnant women.

Initial preparation for major control activities may need to be started before the laboratory results are known. However, it is reasonable to delay major control activities, such as enforcing student exclusion, pending the return of laboratory results, which should be obtained as quickly as possible (within 24 hours). For exposures at venues such as restaurants, stadiums and malls, communicating with the public through radio, TV, websites, or other media, may be used to reach potentially exposed individuals who cannot be individually identified (e.g., staff lists). Contact identification from health care setting exposures should include patients and staff, as well as any patient guardians, companions or visitors that may have also been on site. Exposed individuals can be directed to their provider or health department for assessment of immunity status and the need for postexposure prophylaxis.

Identification and Notification of Exposed Contacts

Upon case confirmation, LHDs should continue to identify exposure sites where unidentifiable contacts can still be notified via public messaging and to collect information on contacts who can be individually identified.

- Individuals who cannot be identified but can be notified may include customers at stores, restaurants or theaters.
- Individuals who can be identified may include household contacts, friend/family visits, employees at stores, restaurants or theaters, patrons of facilities who made reservations, school/day care staff and students and health care facility staff and patients.
 - For identifiable contacts, attempt to obtain full name, DOB, cell phone number (or landline, if no cell phone), residence address and exposure date/time/location.

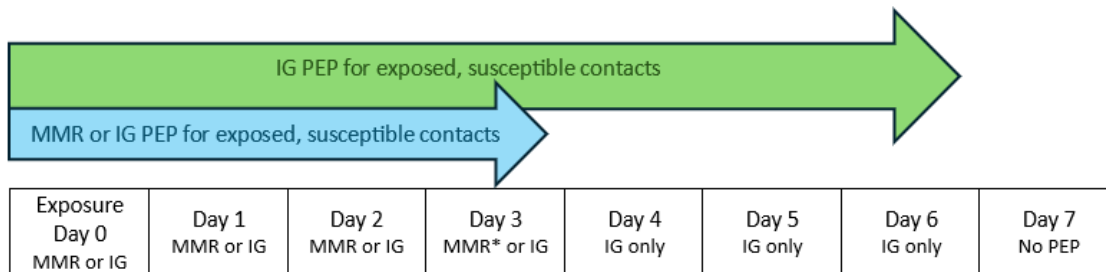
LHDs can securely share contact lists with MDHHS, who can assist with immunity status assessments through bulk and manual MCIR review.

Post-Exposure Prophylaxis (PEP) Recommendations

PEP Options and Timing

Susceptible contacts should be recommended to receive PEP with either:

- Measles (MMR) vaccine, if given within 72 hours of first exposure.
 - In most situations, MMR vaccine is preferable to the use of immune globulin (IG), provided vaccine can be given within 72 hours.
- IG, if given within six days of first exposure
 - IG, rather than vaccine, should be used for infants under 6 months of age, pregnant women and severely immunocompromised individuals.
 - IG is not recommended to individuals with isolated immunoglobulin A (IgA) deficiency or to individuals who have severe thrombocytopenia or any coagulation disorder that contraindicates intramuscular injections.



MMR must be given within 72 hours of first exposure; check time of exposure on day 0 to calculate cutoff time for MMR administration. For example, if the date of exposure was April 1 at 11 a.m., MMR can be administered from April 1 through April 4 at 11 a.m., and IG can be administered from April 1 through April 7. For more, see Control Measures in the [Measles Investigation Guidelines](#) and the [MDHHS Measles Guidance: Use of Vaccine and Immune Globulin](#).

MMR Early Dose in Children Six Months Through 11 months

MMR vaccine can be given to children as young as 6 months of age who are at high risk of exposure such as during international travel or a community outbreak. However, doses given BEFORE 12 months of age cannot be counted toward the two-dose series for the MMR vaccine.

MDHHS will work in consultation with LHDs to assess if an area should recommend an early dose due to a community outbreak.

MMR Second Dose for PEP in Children Under Four

The second dose of MMR vaccine is not routinely given until 4 to 6 years of age, but in outbreak situations involving day care, preschool, or other settings with children under 4 years of age, consideration should be given to requiring the second dose as a control measure, following appropriate minimum intervals between doses.

PEP Availability and Preparedness

LHDs are recommended to review their plans on how to locate or acquire IG. Plans usually include area hospitals, but inventories vary over time. LHDs should also review plans on how to hold time-sensitive clinics for administration of MMR or IG, including over weekends and holidays.

Monitoring and Exclusion of Contacts and Cases

Contact Monitoring and Exclusion

Contacts who [meet presumptive immunity](#) generally do not require monitoring or exclusion after an exposure. Please see the section below for more details on exposed contacts with one recorded dose of MMR.

All other contacts not meeting one of the above criteria should be monitored and excluded from all public and congregate settings (e.g. retail/grocery stores, work, restaurants) or group activities until 21 days after the last exposure. (See exception below for those receiving MMR within 72 hours). Other physical distancing measures, such as home quarantine should be considered based on the LHD's risk-assessment. When at home, individuals should avoid common areas and use an N-95 mask when common areas cannot be avoided.

See the MDHHS template Exposure Letter to Parents at [Communicable Diseases \(A-Z\)](#) by searching “measles.” CDC template exclusion letters for schools and camps can be found here: [Measles Notification Letter Template](#)

Exposed Contacts with One Recorded Dose of MMR

An LHD may choose to exclude a contact with one dose of MMR based on the exposure setting (e.g., community or household) and the risk of transmission to others (e.g., daycare attendee). Exposed contacts with one recorded dose of MMR should be monitored for 21 days following their last exposure.

Exposed Contacts Receiving Post-Exposure MMR Vaccine or IG

Contacts who receive their first dose of MMR **within 72 hours of first exposure** may not need to be excluded from public/congregate settings. However, the LHD may choose to exclude based on exposure setting and the risk of transmission to others. These individuals should be monitored for 21 days following their last exposure.

Although the second dose of MMR is not routinely given until 4 to 6 years of age, in outbreak situations involving day care, pre-school and other settings with children under 4 years of age, consideration should be given to administering the second dose as a control measure, following appropriate minimum intervals between doses.

If IG was received, contacts recommended for exclusion should still be excluded for 21 days; however, monitoring should be extended from 21 days to 28 days. Instruct these individuals to immediately report the onset of **any** symptoms and isolate pending testing results. Following administration of IG, MMR vaccination should be postponed for a minimum of six months after IMIG or eight months after IVIG.

Resource: [Timing and Spacing of Immunobiologics | Vaccines & Immunizations | CDC](#)

Contact Monitoring Cadence and Logistics

Ideally, all exposed contacts should receive an initial phone call informing them of their exposure and what to do if they start to experience illness. During this call, any applicable monitoring/exclusion information based on the contact’s immune status assessment should also be provided. LHDs should monitor non-immune exposed contacts daily, but at minimum as soon as possible, and then again on days 7, 10, 14 and 21 after last exposure. A sample monitoring script is available in [Appendix 3](#). LHDs may opt to use the contact’s risk assessment to decide monitoring frequency. The last exposure date is day zero. The Outbreak Management System (OMS) (see [Appendix 4](#)) is the recommended tool for monitoring as data can be securely stored and shared between LHDs and MDHHS. MDHHS is available to assist with OMS outbreak creation and contact entry, regardless of contact list format. If the LHD prefers to use a paper form for monitoring, see [Appendix 5](#). Any monitored contacts who develop even mild measles symptoms (e.g., localized rash, low-grade "fever" or upper respiratory tract infection) must immediately take action to avoid exposing others and should be strongly considered for testing. Clinical criteria do not need to be met to pursue testing for an individual with a known exposure.

MDHHS can facilitate automated text monitoring of exposed, susceptible contacts using the People. Health LHD Connect platform. Automated text messaging provides exposed individuals with a convenient way to report any symptoms daily during the 21-day monitoring period and allows public health to respond quickly to symptomatic individuals. If your LHD is interested in using LHD Connect during a response, please notify your Regional Epidemiologist who can coordinate with the MDHHS Bureau of Infectious Disease Prevention (BIDP) Flex Unit to initiate the process.

Case Exclusion

Cases meeting the probable or confirmed case definition should be excluded and isolated from public and congregate settings (e.g., stores, schools, daycare centers, workplace, camps) immediately and through the fourth day after the onset of rash to limit further exposures. Schools and other congregate settings should have planned spaces to isolate suspected or confirmed cases until their departure from the setting. Congregate living settings should also have planned spaces for quarantine. In a household setting, cases should avoid common areas and use an N-95 mask when sharing common areas cannot be avoided. In health care settings, the patient should be placed in a negative pressure room and use of airborne precautions is recommended. To limit spread in health care settings, health care providers should be advised not to use exam rooms for at least two hours after a suspected measles patient has left the room. See [Appendix 6](#) for a template **measles** exclusion letter.

Resources:

[Measles Investigation Guidelines \(Control Measures Section\)](#)

<https://www.cdc.gov/surv-manual/php/table-of-contents/chapter-7-measles.html>

[Public Health Preparedness Checklist: Measles Clusters and Outbreaks](#)

Laboratory Specimen Collection, Shipping, Testing and Interpretation

For more information, see the [Measles Investigation Guidelines](#), the [MDHHS VPD Investigation Guidelines Lab Test Summary](#) and BOL's Measles Specimen Collection [Instructions](#). Note: these instructions reference the retired DCH-0583; please use the Virology/Serology Test Requestion Form MDHHS-6084 (updated November 2025) found on the [Test Request Forms](#) site. If using DCH-0583, indicate "Measles virus by culture/PCR" in the "other" section of the test requested area.

- Collect BOTH serum and specimen(s) for PCR/viral isolation/molecular epidemiology testing (throat swabs are preferred, but nasopharyngeal swabs are also acceptable; also collect urine if more than 72 hours have elapsed since rash onset to enhance the likelihood of successful measles viral detection).
- Advise health care providers to collect both serum and viral specimen(s) at the same visit to avoid missed opportunities for specimen collection. If serum collection is not available at the provider's office, the provider should collect the swab and urine for PCR and arrange for the patient to have serum collected at the nearest laboratory. To minimize exposures to others, call ahead to the laboratory to inquire about their procedures for collecting specimens from patients with potential airborne transmitted infections such as measles (e.g., patient to use a separate waiting area or entrance).

Viral Specimens

- For PCR testing, collect throat swab (and/or NP swab) as soon after rash onset as possible, ideally within three days of rash onset. Submit in viral transport media (VTM). Also collect urine if it has been more than 72 hours since rash onset. Do not collect viral specimens for PCR testing if more than 10 days have elapsed since rash onset.
- PCR specimens should be sent to the MDHHS BOL. Turnaround time for throat (and/or NP) swab is expected to be 48 hours or less. Urine PCR turn-around time is approximately five days.
- Negative PCR tests do not necessarily rule out measles, especially if the throat/NP swab was collected more than three days after rash onset. To determine case classification and public health follow-up,

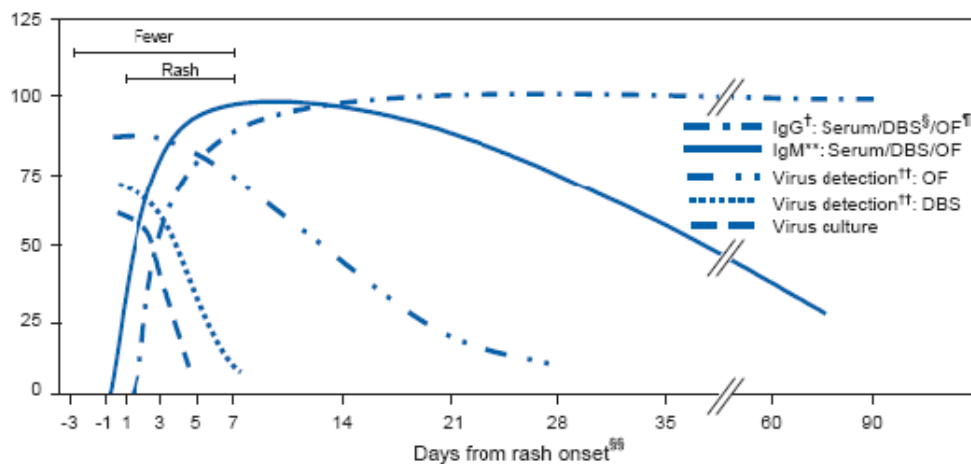
evaluate additional factors, such as clinical presentation and the presence or absence of epidemiological risk factors (e.g., a known exposure).

- **Testing at BOL should be prioritized (e.g., weekend testing) for any suspect case with high clinical/epi suspicion OR any suspect case who, if positive for measles, poses a heightened risk to the public.**

Serum Specimens

- For acute IgM testing, collect serum as soon after rash onset as possible, generally between the third and thirtieth day after rash onset. NOTE: Measles IgM tests that are negative and were collected less than 72 hours after the rash onset should be repeated using sera collected 72 or more hours after rash onset.
 - False (+) measles IgM results have been observed in individuals with rash-illness from rubella, roseola, herpesvirus, parvovirus B19, dengue or Rheumatoid factor. Attempt PCR testing.
- Any IgM serum specimens that are pre-approved by MDHHS to be sent to BOL must be frozen at $< -20^{\circ}\text{C}$ and shipped on dry ice to remain frozen during transport.
- Results from IgG serum testing may be helpful when evaluating a suspect case.

FIGURE 1: Pattern of test results among patients with wild measles virus infection, by day from rash onset and type of sampling method used – WHO Measles and Rubella Laboratory Network*



* Illustrative schematic based on data presented at the Measles and Rubella Alternative Sampling Techniques Review Meeting, convened in Geneva, Switzerland, in June 2007.
 † Immunoglobulin G.
 § Dried blood spots.
 ¶ Oral fluid.
 ** Immunoglobulin M.
 †† Virus RNA detection by conventional, nested, or real-time reverse transcription–polymerase chain reaction.
 §§ Incubation period: approximately 14 days.

Shipping Specimens to MDHHS BOL

Ship specimens “Overnight Delivery” to the MDHHS BOL. If shipping for weekend delivery, the shipment MUST specify “Saturday Delivery” and have a Saturday shipping label applied to the package (not supplied). Otherwise, the specimen will ship next business day and arrive the following Monday. If “Saturday Delivery” is not selected, the majority of samples shipped Friday will arrive on Monday and may be in an untestable condition. Overnight and Saturday delivery pre-paid labels are available from the MDHHS BOL, please email mdhhs@mdhhs.michigan.gov for more information.

The Western Upper Peninsula Health Department Regional Public Health Laboratory (WUP Lab) is also able to provide regional support for measles PCR testing. For approval, and to arrange testing on suspect cases in the Upper Peninsula through the WUP Lab, contact your [Regional Epidemiologist](#) and the MDHHS Division of Immunization at 517-335-8159.

Discordant Laboratory Results

If there are discordant laboratory results (e.g., negative PCR and positive IgM), evaluate additional factors to determine case classification and public health follow-up. These factors would include the clinical presentation, the presence or absence of epidemiologic risk factors (e.g., a known exposure, travel history) and specimen collection timing with regards to rash onset.

Resources:

[Recommendations from an Ad Hoc Meeting of the WHO Measles and Rubella Laboratory Network \(LabNet\) on Use of Alternative Diagnostic Samples for Measles and Rubella Surveillance \(cdc.gov\)](#)
[MDHHS Vaccine-Preventable Disease Investigation Guidelines – Lab test summary \(michigan.gov\)](#)
<https://www.michigan.gov/mdhhs/doing-business/providers/labservices/a-z-test-listing>

Alternative Diagnoses Testing

[Appendix 7](#) includes information from CDC on other febrile rash illnesses that could be considered for patients. Based on clinical presentation and epidemiologic risk factors, health care providers could also consider testing for rubella, parvovirus B-19 (fifth disease), roseola (sixth disease), Streptococcal infections (Scarlet Fever) and enteroviruses including coxsackieviruses.

Vitamin A Use

There is no specific antiviral therapy for measles. Medical care is supportive to help relieve symptoms and address complications such as pneumonia and secondary bacterial infections. Vitamin A levels fall during measles and vitamin A deficiency contributes to delays in recovery and increases the risk of complications from measles. Consistent with guidance from the American Academy of Pediatrics, vitamin A may be administered to infants and children in the United States with measles as part of supportive management. Children with severe measles, such as those who are hospitalized, should be managed with vitamin A. Vitamin A should be administered ONLY under the supervision of a health care provider and is not a substitute for vaccination. Overuse of vitamin A can lead to toxicity and cause damage to the liver, bones, central nervous system and skin. Pregnant women should avoid taking high levels of vitamin A as it has been linked to severe birth defects. While vitamin A supplementation may be beneficial for reducing measles severity and risk of complications, it has no role in preventing measles infection and the American Academy of Pediatrics advises against parents giving children vitamin A at home for prevention or treatment of measles.

Resources: <https://www.cdc.gov/han/2025/han00522.html>

Travel and Division of Global Migration Health (DGMH)

If an LHD determines that a confirmed measles case traveled by plane or vessel during their infectious period, additional details must be collected (see [Appendix 8](#)). To notify potentially exposed passengers and crew, MDHHS will work with the LHD to collect this necessary information and notify CDC's Port Health Station (PHS) via email. If a confirmed measles case traveled by train or bus during their infectious period, the LHD should obtain as much information as possible to assist with contact tracing investigations with the train or bus company. Confirmed cases and susceptible close contacts should not use any form of public transportation during their exclusion periods. If there are questions on case/contact compliance with this restriction, contact your Regional Epidemiologist.

Flight Exposures: If an investigation determines that an individual was infectious with measles on a plane, regardless of flight length, an automatic full-plane contact investigation will ensue if the plane seats less than 50 passengers OR if there is no assigned seating. Otherwise, for planes with more than 50 passengers, exposure is defined as the same row of passengers, plus two rows forward and two rows back, ANY infants in arms sitting anywhere on the plane and ANY flight crew. Investigations are conducted by DGHM for interstate flights and by MDHHS for intrastate flights.

When MDHHS receives DGMH Epi-X referrals from the One CDC Data Platform (1CDP) on individuals exposed to measles during a flight, LHDs will be notified via email. Contact information and risk assessments for exposed individuals will be provided to LHDs via the "MEASLES-INFLIGHT-EXPOSURES" outbreak in OMS. The CDC will provide a contact investigation form to be completed. These forms will be attached within each OMS contact. LHDs should determine susceptibility of exposed contacts, including reviewing MCIR to evaluate any documentation of immunity. Susceptible contacts should be recommended to receive PEP (if within appropriate timeframe) and should be monitored for the remainder of the 21 days after exposure (28 days if IG was received). For susceptible contacts, follow exclusion recommendations. LHDs should document monitoring outreach and outcomes in OMS. For any travel-associated questions, or for assistance with the CDC contact investigation forms, please contact your Regional Epidemiologist.

Resources:

<https://www.cdc.gov/measles/plan-for-travel.html>

<https://www.cdc.gov/quarantine/air/managing-sick-travelers/airline-recommendations.html>

<https://www.cdc.gov/quarantine/contact-investigation.html>

Measles Wastewater Monitoring

As part of Michigan's ongoing wastewater monitoring program, MDHHS partners with four laboratories across the state to monitor wastewater from approximately 30 wastewater treatment plants for wild-type measles virus. This community-level tool may provide an early signal of possible measles activity within a utility's sewershed and can help determine if transmission is emerging, ongoing or declining. Currently, wastewater data is only available in local health jurisdictions with participating utilities.

LHDs should continue to rely on clinical surveillance and case reporting as the primary means of detecting measles activity. However, in areas where wastewater data is available, LHDs should use this data alongside case-based surveillance, laboratory reporting and epidemiologic investigation.

A positive wastewater detection indicates that genetic material from the wild-type measles virus has been identified in the utility's sewershed, which can reflect recent shedding from one or more individuals in the community. While a positive signal warrants increased public health awareness and follow-up, wastewater data cannot identify infected individuals, determine the number of cases, or distinguish between isolated and widespread activity. A negative result does not rule out measles in the community, as detection is influenced by factors such as sewershed size, dilution, timing of shedding and overall level of activity.

Wastewater data alone should not drive case investigation, exclusion decisions or post-exposure prophylaxis recommendations. It may be used to support situational awareness and guide communication with providers, particularly when other surveillance indicators suggest possible activity. After detecting a positive signal, and when context-appropriate, LHDs may consider:

- Identifying health care facilities that have IG in stock.
- Sending health care providers messaging to encourage testing of patients with compatible symptoms or exposures.
- Messaging the public to call ahead of seeking health care if concerned about measles infection.
- Holding an MMR clinic or otherwise encouraging the public to get up to date on their MMR series.

For detailed signal interpretation and recommended actions by detection scenario, see [Appendix 9](#) (CDC Measles Wastewater Surveillance Checklist). The companion Michigan Wastewater Monitoring: Measles Interpretation Guide will be distributed with results. Current national wastewater data are also available through CDC's Wastewater Data for Measles dashboard: <https://www.cdc.gov/nwss/rv/measles.html>.

Communications

Communication resources are included in [Appendix 10](#) (Press Release template) and [Appendix 11](#) (MIHAN template). To facilitate access to a comprehensive listing of all identified exposure sites, MDHHS will maintain a public-facing list on: www.michigan.gov/measles. To assist with this effort and for overall awareness, please notify the MDHHS Public Information Officers, Lynn Sutfin (SutfinL1@michigan.gov) and Laina Stebbins (StebbinsL@michigan.gov), as soon as possible regarding LHD press releases or other public communications, and cc: your [Regional Epidemiologist](#).

Frequently Asked Questions

Local health departments often field questions from community members. Below are some answers to some of those commonly asked questions.

Child Care Settings

- **Q:** What happens if my child attends a daycare facility or school and is exposed to measles?
 - **A:** If public health is aware of a child with a measles exposure who attends daycare or school, their immunity status will be assessed. Post-exposure treatment may be recommended. Based

on the timing and immunity status of the child, the health department will determine if the child should be excluded from this setting and for how long.

- **Q:** What happens if my child who attends a daycare facility or school has a family member who was exposed to measles?
 - **A:** If public health is aware that a child's family member has been exposed to measles, their immunity status will be assessed. Post-exposure treatment may be recommended. Based on the timing and immunity status of that individual, the health department will determine if that person should avoid childcare settings. **The child will not be exposed from the setting, unless there is concern that the child has been exposed to an infectious case.**

Routine Pediatric Office Visits

- **Q:** Is my child, who is age-appropriately vaccinated, able to attend routine pediatric office visits after a measles exposure?
 - **A:** For a child who is exposed to measles, but is age-appropriately vaccinated with MMR, it is not necessary to postpone a routine visit. However, public health recommends that the provider's office check for any symptoms PRIOR to the family arriving for the appointment. Ideally, reschedule to have the exposed, but non-symptomatic child be seen at the end of the day (or, if possible, set appointments around others who are fully vaccinated). Providers should be informed about the exposure, but it should be reiterated that the child is being monitored, **not** excluded.

For more information, see [Measles Information for the Public](#) and [Measles Information for Health Care](#).

Summary of Changes

V2

- Immunization Data Request form link was updated.
- Removed Testing Window for Measles Diagnostics graph and replaced with MMWR Figure
- Added suggestion to test IgG serum and removed nasal swab language (not a preferred specimen type).
- Added a bullet about negative PCR under Laboratory Specimen Collection, Testing, and Interpretation.
- Added: Transmission and Exposure Definitions, Discordant Lab Results, Alternate Testing, Communications.
- Added: on-call can approve testing for after-hour requests.
- Added Appendix 9: Images of Koplik Spots and Measles Skin Rash.

V3

- Updated Appendix 1: OMS instructions.
- Added section on vitamin A.
- Added PEP timeline graphic.
- Added Appendix 8: Measles MI Provider Bulletin March 2025.
- Updated MDHHS BOL and PIO contact information.
- Added CDC Resource: Public Health Preparedness Checklist: Measles Clusters and Outbreaks

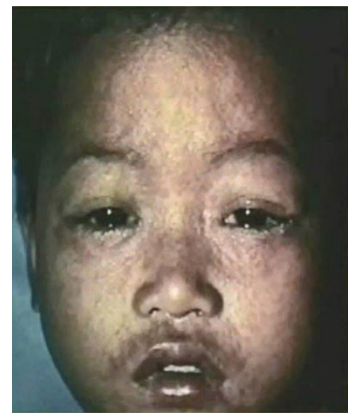
V4

- Reordered Appendices.
- Moved Evidence of Immunity section to Background.
- Added CSTE Community Transmission alternate case definition.
- Added Wastewater Monitoring section.

Michigan State and Local Public Health Measles Standard Operating Procedures

- Added Talking Points section.
- Clarified recommendations for monitoring contacts.
- Added language on prioritized testing for cases with an increased risk of exposing others.
- Added directions to view/add immune status in OMS.
- Link added: [Be Ready for Measles Toolkit | Measles \(Rubeola\) | CDC.](#)
- Link added: [Measles Preparedness and Response in Healthcare Settings | Infection Control | CDC.](#)
- Updated recommendations for IgM and urine specimen testing.
- Added language about congregate settings planning for isolation/quarantine spaces.
- Added Appendix 9: CDC Measles Wastewater Surveillance Checklist.
- Removed Measles MI Provider Bulletin March 2025.

Appendix 1: Images of Koplik Spots and Measles Skin Rash

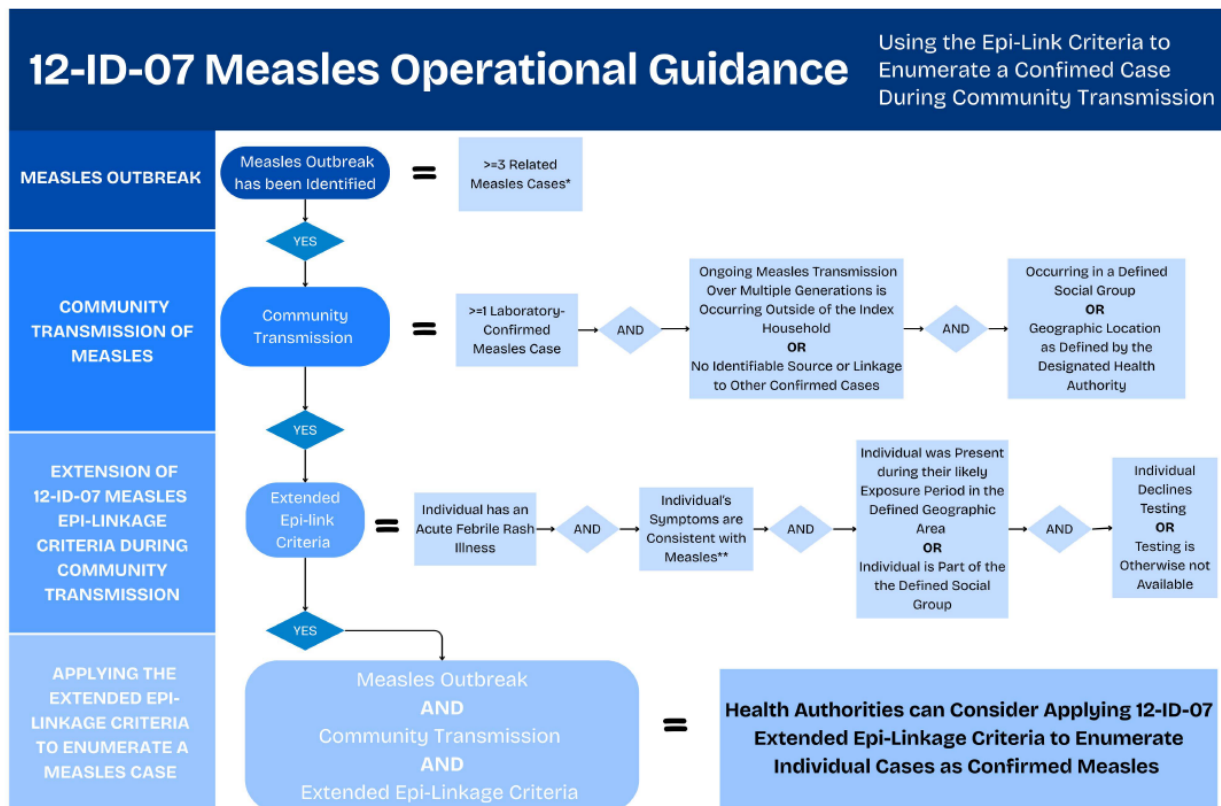


Appendix 2: CSTE Measles Position Statement Operational Guidance

Expanded Use of the Epi-Linkage Criteria for Confirmed Case Enumeration When Community Transmission is Occurring During Measles Outbreaks

Endemic circulation of measles was declared eliminated in the United States (U.S.) in 2000. From that time until 2012 when the current Measles Position Statement 12-ID-07 was proposed and approved, the number of confirmed measles cases reported in the U.S. averaged 83 per year. Since 2013, declining vaccine confidence and increased hesitance to follow public health measles prevention recommendations in some U.S. populations has led to increased risk of ongoing community transmission during measles outbreaks. During a large measles outbreak in the southwestern U.S. in 2025, public health authorities encountered decreased participation in measles testing and intervention measures. Fewer laboratory-confirmed measles cases made it challenging for public health authorities to use the 12-ID-07 epi-linkage criteria requiring a “direct epidemiologic linkage to a case confirmed [by a laboratory test].” This led to under-representation of the true burden of measles disease in those communities or jurisdictions.

This language is intended as *operational guidance* for the CSTE position statement *12-ID-07: Public Health Reporting and National Notification for Measles* for use while the U.S. is in elimination status. The purpose of this operational guidance is to provide a broader, yet standardized, interpretation of the current epi-linkage criteria that public health authorities can use to enumerate a case as confirmed when community transmission is occurring. Utilization of this guidance by public health authorities is **OPTIONAL**.



*at least one case must be laboratory confirmed.

**In some instances, measles presentation may vary. When community transmission is occurring, jurisdictions should evaluate the likelihood of measles as a potential etiology for any reported febrile rash illness. (Temperature does not need to reach 101°F/38.3°C and rash does not need to last ≥3 days.)

Appendix 3: Sample Monitoring Script

Note to Interviewer:

- Do **not** speak to minors directly; speak to a guardian when contact is aged < 18 years.
- Use Mr., Mrs. or Ms. YYY; preferable not to use their first name.
- Do **not** say the name of the case connected to the contact during the call or in voicemail.
- If contact is feeling unwell, ask follow-up questions about the symptoms; ask them to measure their temperature. If they have measles symptoms, create a suspect case in the Michigan Disease Surveillance System and refer for testing.
- Depending on the LHD, individuals with two MMRs (with the second at least 14 days prior to first exposure), will likely not need exclusion or monitoring. Individuals with one MMR may not need to be excluded (unless there is a high-risk setting) but will be monitored. Individuals with no evidence of any MMRs will be recommended for exclusion and monitoring.

First Contact: Introductory Script

Hello, my name is [insert name], I am calling from the [insert health department]. May I please speak to Mr./Mrs./Ms./Mx. [contact name or parent/guardian of contact name]?

We have been made aware that [you have/contact name has] been exposed to someone with measles. Because of this, we recommend that [you/they] stay voluntarily at home in case [you/they] become sick. By [you/them] staying home, this will potentially protect [your/their] community and prevent others from getting sick if [you/they] develop measles. We ask individuals who have been exposed to measles and do not have protection against measles, like prior vaccination, to stay home for 21 days (or 28 days if they received a medicine called Immunoglobulin or IG) from their last exposure.

The [insert health department] will be checking in during the next [21/28 days from last exposure] to see how [you are/contact name is] feeling, either by phone call or text. Do you have questions? How [are you/is contact name] feeling today? Any fever? Rash? Cough? Runny nose? Red eyes?

If at any point during the next [number of] days, [you/they develop(s)] any symptoms of illness, please let us know and take actions to avoid being around other people. If seeking medical attention, please contact the office/hospital prior to arriving.

Thank you for your time! We will speak again soon.

Subsequent Contact: Introductory Script

Hello, my name is [insert name], I am calling from the [insert health department]. May I please speak to [contact name or parent/guardian of contact name]?

We are conducting our daily call to see how [you are/contact name is] feeling and identify any health issues [you/they] may be having since [your/their] exposure to measles. How are [you/they] feeling today? As a reminder, if [you/they] start to feel ill, please let us know and take actions to avoid being around others. If seeking medical attention, please contact the office/hospital prior to arriving. Thank you for your time! We will speak again soon.

Appendix 4: Using the Outbreak Management System (OMS)

MDHHS and LHDs may use the Outbreak Management System (OMS) for monitoring or contact tracing. For additional guidance or OMS assistance, please contact your Regional Epidemiologist.

How to Access OMS

1. Log into MiLogin and select MDSS.
2. Select 'OMS Outbreak Management System'. If you do not see that option, contact your Regional Epidemiologist.

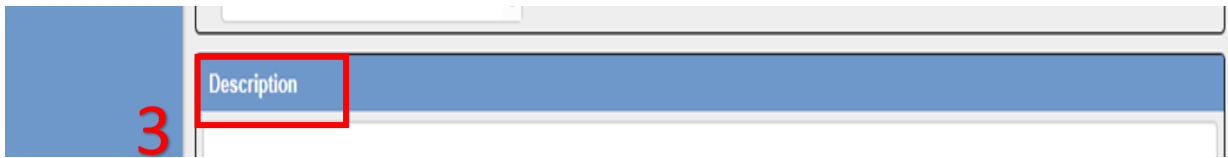


How to Enter a New Outbreak

1. For LHD administrators, click on the Outbreak Listing (top menu).
2. Click on New Outbreak (left menu) and choose Measles for condition and Monitoring for Outbreak Type. Name the outbreak with the Condition-Year-Location (e.g., Measles-2025-Washtenaw). If month is preferred, the suggested naming format would be Measles-04-2025-Washtenaw).
3. If all contacts are associated with a case, the MDSS Investigation ID can be entered in Description. Click Submit to save. Contacts can now be associated with this Outbreak (not shown).

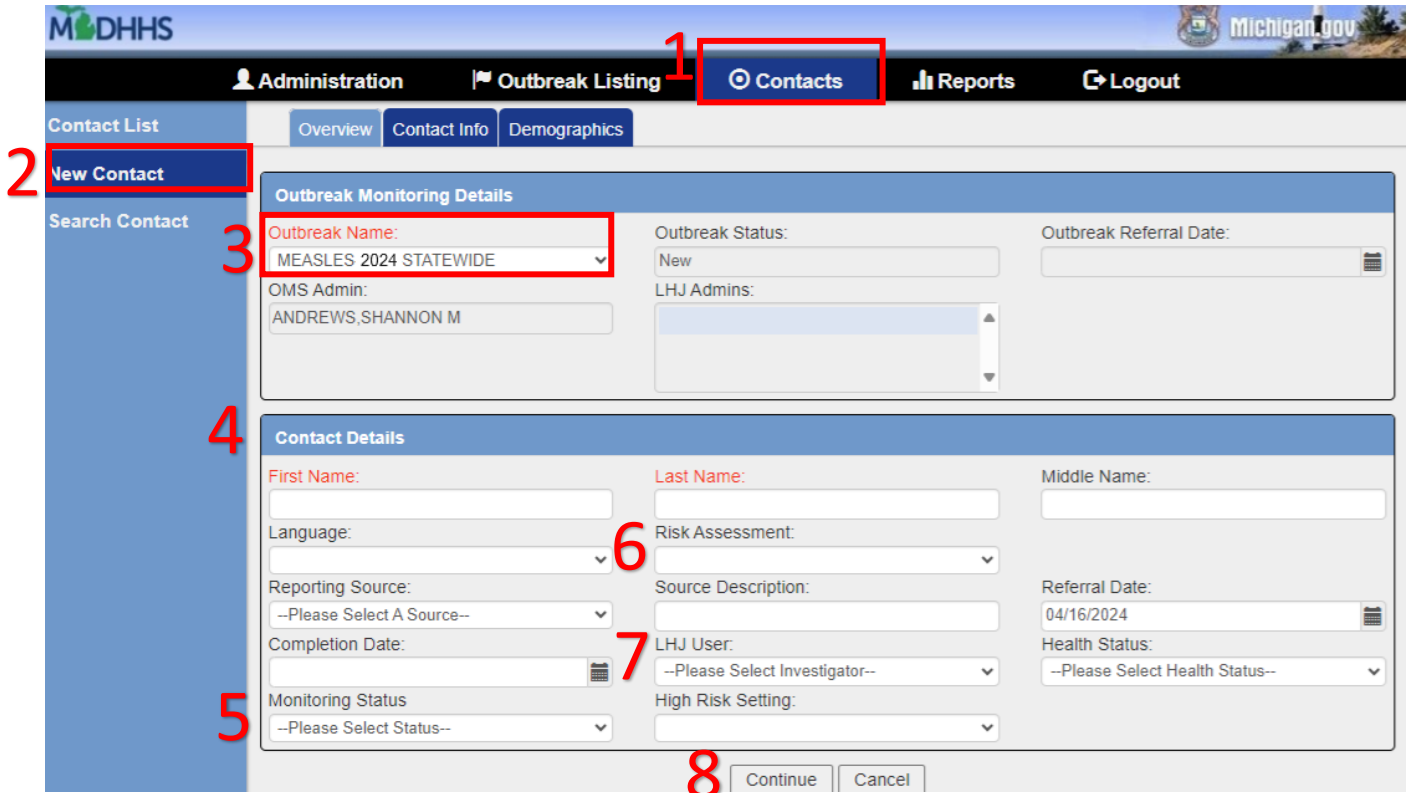
The screenshot shows the 'New Outbreak' form in the OMS interface. The top navigation bar includes 'Administration', 'Outbreak Listing' (highlighted with a red box and a '1'), 'Contacts', 'Reports', and 'Logout'. The left sidebar has 'Outbreak List' and 'New Outbreak' (highlighted with a red box and a '2'). The main form area is titled 'New Outbreak' and contains several sections:

- Outbreak Section:** Contains dropdowns for 'Condition' (Measles), 'Outbreak Name' (Condition-Year-Location), and 'Outbreak Status' (New). It also includes 'Outbreak Type' (Monitoring), 'Monitoring Period' (21), 'Unit' (DAYS), 'Outbreak Entry Date' (04/16/2024), 'Outbreak Onset Date', and 'Outbreak Referral Date'.
- Jurisdiction Section:** Includes radio buttons for 'Local', 'Multijurisdiction', and 'State-Level'.
- Monitored Symptoms Section:** Features a list of 'Default Symptoms' (Rash, unspecified; Rash, maculopapular; Fever; Diarrhea; Cough, unspecified; Conjunctivitis; Congestion/rhinorrhea (coryza)) and a 'Current Symptoms' list containing '1 Temperature'. Navigation arrows (>> and <<) are present between the lists.



How to Enter a New Contact

1. Click on the Contacts Tab (top menu). Some users will be on the Contacts Tab upon accessing OMS.
2. Click on New Contact (left menu).
3. Select the appropriate Outbreak Name.



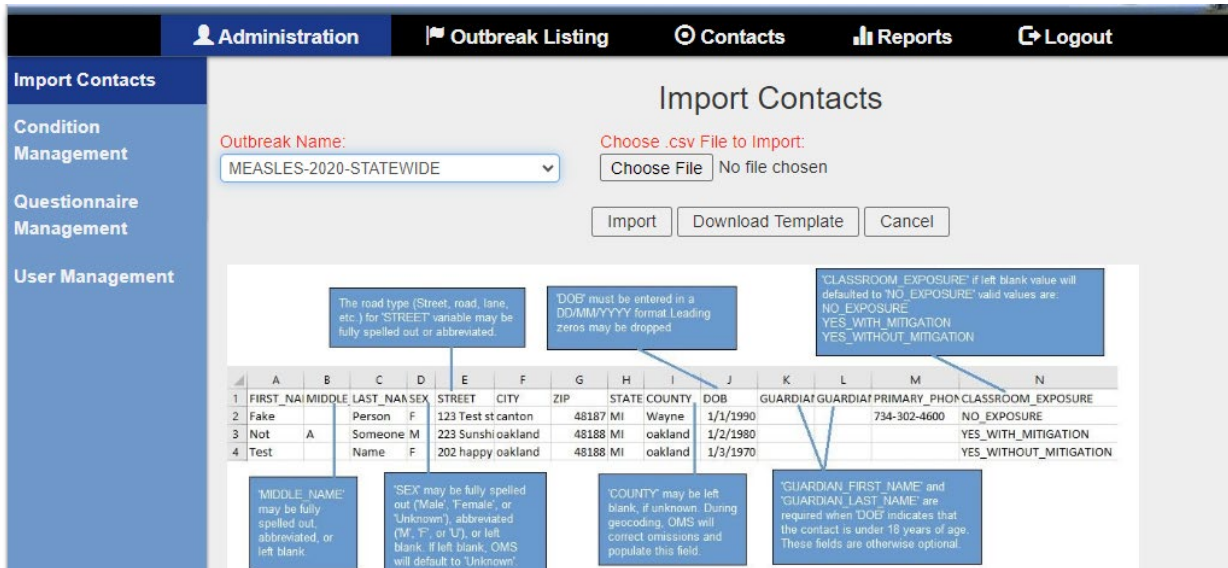
4. Enter the contact details. Required fields are in red text. Note: this is just the initial contact entry page; you will not be able to enter monitoring data at this point.
5. Monitoring Status can be selected for the contact and can be modified later to reflect any updates.
 - a. New: Entered, but not assigned to an investigator.
 - b. Active: Assigned to an investigator, investigation initiated and in monitoring.
 - c. Canceled: Additional information indicated person does not need monitoring.
 - d. Complete: Monitoring completed.
 - e. Left Jurisdiction: Contact transferred to another jurisdiction, likely out of state.
 - f. Loss to Follow Up: Contact cannot be reached.
6. Contacts' Risk Assessment can also be documented and modified later to reflect any updates.
7. Select LHJ User to assign a contact investigator.
8. Click 'Continue' to then enter Contact Information and then Demographics.
9. After entering Demographics, click 'Submit' to create the contact.
10. After submitting the contact, the user will be returned to the list of contacts.

How to Search for a Contact

1. Click on the Contacts Tab (top menu). Some users will be on the Contacts Tab upon accessing OMS.
2. Click on Search Contacts (left menu).
3. Search using Name, Contact ID, or Outbreak Name.

How to Import Multiple Contacts at Once

This function is only available to Administrators. This will only import basic contact demographics (not monitoring data). *If you need more assistance, contact your Regional Epidemiologist.*



1. Under the Administration tab (top menu), select Import Contacts (left). Select Download Template.
2. Open the downloaded csv file "ContactImport."
 - a. Add contact information to the template file, rename and save as a CSV file.
3. Select Outbreak Name.
4. Click Choose File and then click the browse button to navigate to your saved CSV file.
5. Once CSV file is selected, click Import.

How to Reference a MDSS Case within a Contact

Click "Edit" on the contact.

1. Within the contact, click on the 'Risk' tab.
2. Under Risk Information, select the radio button 'Yes' for "Has this person been around anyone else who is/was ill with this condition (dead/alive)? Enter MDSS ID in the open text box.

How to Add/View Immune Status for a Contact

Click "Edit" on the contact.

1. Within the contact, click on the 'Data Points' tab.
2. An "Immune Status" drop down appears at the bottom of the Monitoring Details section.
3. Use the drop down to select the appropriate immune status for the contact.
4. This data will be exportable in the Reports tab.

How to Add Monitoring Data to a Contact

Click “Edit” on the contact.

1. Within the contact, click on the ‘Data Points’ tab.
2. Click “Add a day” to add a monitoring line to the list.
3. Click ‘Edit’ next to the timepoint. A pop-up box will appear.
 - a. Date: Enter the date of contact. Monitoring Status can be listed as Active Monitoring.
 - b. Risk Level: For that point in time, choose the appropriate option; (“medium” risk = “mid”).
 - c. Action: Choose the appropriate option.
 - d. OMS Investigator: select the person who contacted the client.
 - e. Document the responses and click Save Changes in the pop-up box.
4. Click Submit to save.

Monitoring Details

Outbreak: MEASLES-2024-TEST
 Collection Freq: Once per Day
 Frequency Unit: per Day
 Monitoring Period: 21 Days
 Start Monitoring Date (mm/dd/yyyy)*: 08/06/2024
 End Monitoring Date (mm/dd/yyyy):
 Highest Monitoring Level: Active Monitoring
 Contact Reassessed?: Yes No
 Contact Deceased?: Yes No
 Highest Risk Level: High
 Was PEP vaccine offered?: Yes No Unknown
 Was PEP vaccine administered?: Yes No Unknown
 Individual contacted at least once by public health: Yes No Unknown
 Immune Status: None

Monitoring Symptoms

Add a day **+2** View All

Days List								
Day	Date	Investigator	Status	Risk Level	Action	Temp		
1	08/06/2024	HENDERSONT	Active Monitoring	High	Contacted	99.0	View	Edit

Additional Assessment

Don't forget this step! Data Points will not be saved without hitting this Submit button!

4 Submit Create MDSS Case Cancel

How to Close Out a Contact

1. Click on Overview tab in the contact.
 - a. For individuals who have completed their monitoring, enter Completion Date and change Monitoring Status to Complete.

- b. For individuals who cannot be reached, enter Completion Date and change Monitoring Status to Loss to Follow Up.
 - c. For individuals who were determined to have no risk of exposure, enter Completion Date and change Monitoring Status to Canceled.
2. Click Submit to save changes.

OMS FAQs

Why is a contact still showing up in my contact list even though I entered an out-of-jurisdiction address?

If the LHJ user assigned to the case (on the contact's Overview tab) is in your jurisdiction, the contact will still appear on your list. It will also appear in the jurisdiction of the contact's residence. If you no longer want it to appear in your jurisdiction list, you must re-assign the LHJ user.

Is there an OMS audit trail like in MDSS? How can I tell who entered this contact?

There is currently no audit trail in OMS. You cannot tell who entered the contact into OMS; we recommend LHDs add a note about why the contact was referred, date of last exposure and a point of contact at the LHD.

Does OMS notify jurisdictions when a new contact has been entered into OMS for their jurisdiction?

No, OMS does not have any notifications or alerting functions. The only way to tell if a new contact has been entered is to review the contact list.

Appendix 5: CDC Paper-Based Contact Monitoring Form

Note: It is highly recommended to use OMS for monitoring contacts, but this form is provided as an alternative tool.

Name (Contact): _____ DOB: _____ Age: _____ Gender: _____ Phone: _____			
Guardian Name (if applicable): _____ Relationship to Contact: _____			
Contact Vaccinated? <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Exposure Date(s) (one time=first date only; multiple=first and last date): ___/___/___ - ___/___/___			
IG Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Date IG Given: ___/___/___			
Monitoring Dates	Outcome	Symptoms (if applicable)	Initials of Monitor
1 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
2 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
3 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
4 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
5 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
6 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
7 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
8 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
9 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
10 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
11 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
12 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
13 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
14 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
15 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
16 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
17 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
18 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
19 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
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24 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
25 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
26 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
27 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		
28 ___/___/___	<input type="checkbox"/> Contacted <input type="checkbox"/> Left VM/Texted <input type="checkbox"/> Unable to Contact		

Appendix 6: Temporary Exclusion Letter for Measles Case

Date: [XX/XX/2026]

[MR./MS. NAME OF CASE]

[ADDRESS]

Re: Temporary Exclusion from Work and Public for [INDIVIDUAL] until [XX/XX/2026]

Dear [MR./MS. NAME OF CASE],

As we have discussed, you are [SUSPECTED/CONFIRMED] to have measles. Because this is a very contagious disease, all precautions need to be taken to prevent possible spread of infection to others. You are considered to be contagious from [XX/XX/2026] to [XX/XX/2026].

Your assistance is important to prevent spreading this disease to individuals who have not been immunized or who have not had the disease previously. This means that you are required to remain in your home (not to be out in public or at school/work) until [XX/XX/2026]. This also means that during this time, there cannot be visitors in the home. **Should you require medical attention, it is important to call ahead to your health care provider so they can plan to see you in a way that reduces the chance of exposing other individuals to measles.**

Thank you for your cooperation in identifying individuals and locations where people may have been exposed to measles and for your cooperation to remain home during this time. We appreciate that you are doing your best to prevent further spread of infection. Please feel free to call [XX Health Department] at [XXX-XXX-XXXX] as needed.

The Local Health Department Health Officer has authority under the Michigan Administrative Code Rule 325.175 to enforce this requirement.

Sincerely,

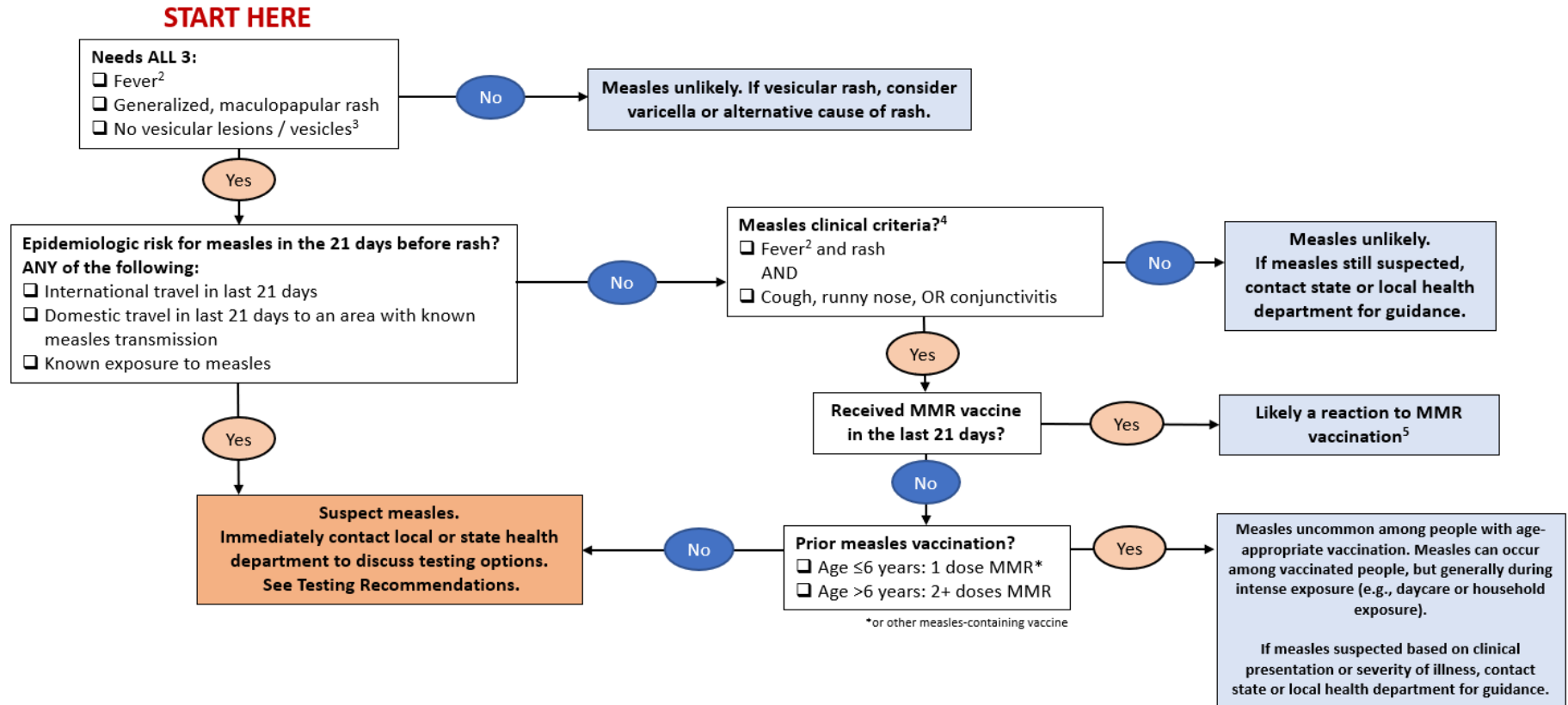
[NAME OF PUBLIC HEALTH DESIGNATE]

[TITLE]

cc: XX [Health Department] Health Officer

Appendix 7: CDC Toolkit Measles Clinical Provider Flowsheet

Evaluating a patient presenting with rash when there is no local measles transmission¹



Notes

1. This testing algorithm is intended to be used by bedside providers in settings where there is not local measles transmission. This assumes that the pre-test probability for most people without known epidemiologic risk for measles and who do not meet case criteria will be low. In settings with active measles transmission, the threshold at which to pursue testing may be lower, and a more permissive algorithm could be considered.
2. Either a measured or patient/family-reported fever is adequate; fever may not be measured at the time of healthcare evaluation due to normal fluctuation or to use of antipyretics (e.g., ibuprofen).
3. A vesicular rash is not consistent with measles, and should prompt consideration for other causes of rash (e.g., varicella/chickenpox)
4. Measles clinical criteria (per CSTE* case definition) include ALL of the following:
 - Generalized maculopapular rash
 - Fever
 - Cough, coryza (runny nose), or conjunctivitis (also known as the “3 C’s”)
5. Up to 5% of MMR recipients will get a short-lived, mild febrile rash. This is more common with the first dose of MMR. People who experience this vaccine reaction are not contagious to others around them. If a person has received MMR within 21 days before rash onset, but also has epidemiologic risk for measles, then specialized testing may be required and should be discussed with local or state public health authorities.

*CSTE: Council of State and Territorial Epidemiologists: <https://ndc.services.cdc.gov/case-definitions/measles-2013/>

Testing Recommendations

- ❑ Immediately contact the state or local health department to report a suspect measles case and arrange testing
- ❑ Collect a nasopharyngeal (NP) or oropharyngeal/throat (OP) swab for measles* RT-PCR
 - Follow state/local guidance for specimen collection (e.g., type of swab, media).
 - If directed by public health authorities, urine can also be obtained for measles PCR.
 - At least 50cc of urine should be voided into a sterile container and stored refrigerated (not frozen).
- ❑ Obtain serum for measles* IgM and IgG

*Measles virus is also referred to as “rubeola” in some lab orders, not to be confused with rubella virus

Measles Characteristics

- Classic symptoms
 - Fever (up to 105F) + generalized maculopapular rash + one of the “3 C’s”
 - 3 C’s: Cough, coryza (runny nose), conjunctivitis
 - Clues to measles:
 - Prodrome of fever and at least 1 of 3 C’s often starts 2–4 days before rash
 - Rash starts on head or face and spreads downwards
 - Fever continues through onset of rash, often peaking around the time when the rash starts
- Measles is rare in vaccinated people, especially with 2 prior doses of MMR
 - 1 dose generally provides 93% protection, and 2 doses provides 97% protection from measles infection

Other common causes of febrile rash in children

- **Parvovirus B-19 (“Fifth Disease”)**
 - Classic “slapped cheek” rash
 - More common in school-aged children than infants
- **Human Herpesvirus 6 (HHV-6, “Sixth Disease”, “Roseola”)**
 - Common cause of febrile rash in infants
 - Rash commonly starts on trunk (measles rash starts on face/hairline)
 - Fever often resolves before start of rash (measles fever peaks around time of rash onset)
- **Enteroviruses**
 - Common cause of Hand/Foot/Mouth, rash can involve hands/feet which are generally spared in measles
 - Rash can be urticarial, which is not typical for measles



“Slapped Cheek” rash



HFM

Appendix 8: Travel Questionnaire

If a confirmed measles case reported air or vessel transportation during their infectious period, please complete this questionnaire and upload as a document to the case's MDSS "Notes" section.

Infectious period: four days before through four days after rash onset

Incubation period: five to 21 days before rash onset

General Air or Vessel Travel

Were there any air/vessel travel dates during the infectious period? Yes | No | Unk

Were there any air/vessel travel dates during the incubation period? Yes | No | Unk

International travel during the infectious period OR incubation period? Yes | No | Unk

If yes, provide location details including city, country, dates, and any known exposures: _____

For Each Individual Flight or Ship Boarded

Flight/ship #1

Name and Number: _____

If unknown, answer the following:

Departing City:

Arriving City:

Departing Time:

Arriving Time:

Seat or Cabin Number: _____

If unknown, answer the following:

General Location (Front, Middle, or Back)?

Which side of plane or vessel when facing front
(Left, Right, or Center)?

Plane- Seat at window, center, or aisle? First
class, business, or economy?

Vessel – Cabin on interior or exterior? Floor level?

Was the case seated next to strangers? Co-travelers? Strangers | Co-travelers | Both | Unk

Was an infant sitting in lap of case or nearby passenger? Yes | No | Unk

If yes, provide details: _____

Did case sit in assigned seat? Yes | No | Unk

If no, provide details: _____

Flight/ship #2

Name and Number: _____

If unknown, answer the following:

Departing City:

Arriving City:

Departing Time:

Arriving Time:

Seat or Cabin Number: _____

If unknown, answer the following:

General Location (Front, Middle, or Back)?

Which side of plane or vessel when facing front
(Left, Right, or Center)?

Plane- Seat at window, center, or aisle? First
class, business, or economy?

Vessel – Cabin on interior or exterior? Floor level?

Was the case seated next to strangers? Co-travelers? Strangers | Co-travelers | Both | Unk

Was an infant sitting in lap of case or nearby passenger? Yes | No | Unk

If yes, provide details: _____

Did case sit in assigned seat? Yes | No | Unk

If no, provide details: _____

Other

Please share other locations the case may have visited within the ports/airports, such as restaurants, shops, or airport shuttles: _____

Was a mask worn? Yes | No | Unk

If yes, what type: _____

If yes, how often was the mask removed or pulled under the nose and/or mouth: _____

Are there photos of rash? Yes | No | Unk

If yes, please attach to MDSS Notes tab

Is traveler a USA Citizen? Yes | No | Unk

Were they vaccinated for measles? Yes (complete series) | Yes (incomplete series) | No | Unk

Received other immunizations for vaccine preventable diseases (i.e., chickenpox)? Yes | No | Unk

Any other travel-associated information: _____

Appendix 9: CDC Measles Wastewater Surveillance Checklist

Checklist For Measles Detection In Wastewater

At A Glance Checklist

- CDC will notify submitting jurisdictions of a positive **Measles wild-type (WT) Virus** detection in wastewater, as with prior detections of other pathogens in wastewater samples.
 - Follow-up actions by jurisdictions may include:
 - Checking wastewater data for reporting or analytical errors.
 - Reviewing relevant wastewater assay information, particularly the specificity of the assay used for WT virus.
 - Identifying confirmed or potential clinical cases reported in the jurisdiction with positive result(s) during the past 21 days, investigating any travel-associated cases, and reviewing Traveler-based Genomic Surveillance (TGS) data for any recent detections of measles in airports / aircraft in nearby communities.
 - Consider collaborating with CDC Division of Viral Diseases (DVD) - VVPDB laboratory for follow-up sequencing of positive nucleic acid extracts.
 - In coordination with jurisdiction clinical surveillance and epidemiologists:
 - Consider/prepare for vaccination and health education efforts in communities contributing to or neighboring the sewershed based on above investigation of positive result(s) and coordination with jurisdiction epidemiologists.
 - Consider/prepare for outreach and education to additional groups that may be at higher risk for measles infection based on individual and community-level vaccination status.
 - Immunocompromised persons
 - Families with infants too young to be immunized
 - Consider increasing communication and outreach to clinicians in the community.
 - Consider additional wastewater testing options, such as increasing sampling frequency.

Checklist for Jurisdictions: Positive Detections of Measles Virus in Wastewater

Step 1: Check data in the One CDC Data Platform (1CDP) to ensure there are no reporting or analytical errors in the **WT Virus** wastewater surveillance data. A positive detection would include wastewater detections above limit of detection (LOD). For information on the NWSS testing contract with Verily, or for information on contacts at WastewaterSCAN, please reach out to your CDC wastewater surveillance point of contact. [Responsible party/ies: CDC and jurisdiction].

- During development, validation, and early rollout of measles wastewater assays, careful review of results and contextual data (such as nearby clinical cases, step 3) will be important
- Note any relevant circumstances, such as delays in testing or data submission, that could impact interpretation. For instance, a delay in testing may impact understanding of when a community would have had an individual(s) shedding in the sewershed (the contributing area of a sampling point, such as a wastewater treatment plant).

- Note if pathogen concentration was below the assay LOD but above the limit of blank (LOB) (e.g., 1-3 positive partitions/droplets if using digital PCR). Assay target concentrations below LOD but above LOB would require further discussion with lab SMEs. Detections at or very near LOD would also benefit from additional discussion.
- Note where in the process the wastewater was sampled as this can impact interpretation of results. Sample type should also be noted (grab, composite, Moore swab, etc.).
- Note any recent changes in sampling methods (such as sampling frequency or type).

Step 2: Review relevant wastewater assay details [Responsible party: jurisdiction]

- Note which assay was used, the concentration of positive detection, and number of droplets/partitions (if using digital PCR).
 - Confirm that positive detection is specific to WT measles virus.
 - Note any changes in assays used in the past 4 weeks.
- If the positive wastewater result was obtained through use of a pan-measles assay (one which does not differentiate WT from vaccine strain measles), consider further testing of samples using an assay that is specific to WT measles virus.
 - Assays that specifically detect WT measles virus in wastewater are a high priority. Such assays may include those that only detect WT virus, and those that differentiate WT from vaccine strain measles virus. CDC highly discourages the use of a pan-measles wastewater assay. If differentiating testing using PCR is not available in a jurisdiction or at the initial commercial laboratory where testing was performed, CDC encourages specimen submission for additional testing to a public health laboratory with this capability. Please contact the CDC NWSS program (NWSS@cdc.gov) for assistance locating a testing laboratory.
 - CDC encourages submission of nucleic acid extracts from positive samples to CDC for genotyping.
 - In the future, consider using an assay that is specific to or differentiates WT Virus.

Step 3: Compare wastewater results with reported clinical measles cases during the last 21 days [Responsible party: jurisdiction].

- Determine if there are any reported measles cases in communities near the wastewater facility/within the sewershed or a recent increase in number of measles cases.
 - Include review of cases with symptom onset in the past 21 days. This 21-day window is reflective of the average incubation period of measles.
 - If no cases have been reported, consider active engagement with healthcare facilities and schools in the area to educate on measles, enhance prospective case-finding and encourage prompt testing of clinically compatible cases.
 - Coordinating with local health department staff, consider asking about any unexplained high fever, rash, cough, or respiratory symptoms that could be consistent with a measles infection and any connections to recent travel to areas with known measles outbreaks.
- Determine if the detection is in a county/region where immunization levels are below 95% (if vaccination data are available), which would indicate a greater risk of spread throughout the community.

- o Data sources for assessing vaccination coverage could include, but are not limited to, vaccination data from state immunization information systems and state- or local-level school vaccination coverage assessment reports.
- If no cases have been identified in the sewershed with the positive result(s) or nearby sewersheds, consider whether there are outbreaks occurring in other jurisdictions (i.e., states).
 - o Consider outreach to neighboring jurisdictions (including states, local, and tribal HDs) to review known clinical cases or wastewater detections.
- Review information on airport wastewater testing (from CDC Traveler-based Genomic Surveillance or any independent local/state efforts) or any recent detections of measles in airports/airplanes and how that may contribute to wastewater signals. CDC can assist with this review.
- In the absence of suspect, probable, or confirmed measles clinical cases ([definition](#)) with symptom onset in the 21 days prior to the detection, the health department may consider following up with reported cases from before the previous 21 days to identify cases with possible prolonged viral shedding and/or continued symptoms, or to ensure that clinical testing was performed (please see references [1](#), [2](#), and [3](#)).
- If there are no clinical cases of measles that could be linked to the wastewater result, consider whether the wastewater result may be intermittent or from a transient source.
 - o Consider if there are any persons who may contribute to the sewershed who may reside in communities that have low MMR vaccination rates (but temporarily enter the sewershed) and are at high risk of measles transmission, and who may also not present to healthcare providers.
 - o Consider whether there were any events, tourism centers, or transportation hubs, which attract visitors from outside the jurisdiction that coincide with the positive result and may provide context for an intermittent detection.
- Consider additional testing of the archived wastewater (or resulting total nucleic acid) sample that was positive for measles virus.
 - o If needed, positive nucleic acid extracts may be submitted to CDC for sequencing, coordinated through your state or local health department.
 - o If the sample was tested by a third party, consider outreach to coordinate the nucleic acid sample being sent to CDC (or jurisdiction lab) for sequencing. If confirmatory testing is being considered please contact the CDC NWSS program (NWSS@cdc.gov) for assistance locating a testing laboratory.
 - o It should be noted that transportation, storage, and repeated freeze-thaws may result in degradation of the sample. A subsequent negative test may result due to these factors.

The below steps may be considered proactively if there are repeated measles detections or if clinical surveillance indicates increased risk for potential measles transmission:

Step 4: Consider developing a proactive communication plan on measles wastewater surveillance. [Responsible party/ies: CDC and jurisdiction]. NOTE: CDC has developed talking points and can assist with additional communication needs.

Potential partners to include in communication plans are:

- The local HD and utility where the detection occurred, to leverage their local expertise and ensure that any communications are aligned with theirs and meeting their needs.
- Healthcare providers, in preparation of potential increases in testing and support of vaccination efforts.
 - At this time, wastewater surveillance results alone should not be used to alter the [recommended](#) schedule for vaccination (e.g., early dose of MMR vaccine for infants 6 to 11 months of age). Wastewater data may be used alongside epidemiological information to effectively allocate resources where appropriate (such as catch-up vaccination clinics).
- Schools/childcare centers in communities with low MMR vaccination rates to provide information on vaccination and resources for families at risk.
- The public, to provide information on how to access vaccines and how to seek measles testing if symptomatic.
- When developing communication plans, consider any privacy concerns when releasing information that could identify a sampling location where measles positive results were obtained. CDC does not post sampling location names or sewershed boundary (geographic) information on public dashboards. Publicly available information on any clinical cases in the community, when coupled with wastewater surveillance data, may be identifying.

Step 5: Consider MMR vaccination education and outreach in communities with measles detections (based on wastewater and/or clinical surveillance) [Responsible party: jurisdiction].

- Offer vaccination that considers needs of all communities and reduces barriers to uptake.
- Offer vaccination “catch-up” clinics for children and adults who are not up to date on MMR vaccine.
- Conduct clinician outreach and education regarding the MMR vaccine to facilitate patients being up to date on MMR vaccine.
- Assess, establish, and maintain communication with any close-knit communities with low vaccination rates in the area and proactively plan for additional precautions in addition to offering vaccination (e.g., staying at home and away from others when sick, not delaying clinical care in emergency situations).

Step 6: Considerations for additional wastewater testing [Responsible party: jurisdiction].

- If measles testing has been implemented at the site for 4 weeks or fewer, the wastewater surveillance coordinator should collaborate with the state measles team, local health department, wastewater utility, and CDC to consider whether retrospective testing of archived

wastewater samples (if available) could provide useful information on the timing of measles in the community.

- Upstream testing (e.g., testing from some of the major geographic sectors contributing to the wastewater facility, including manholes or lift stations) might help narrow focus for communities at increased risk of transmission, particularly if the positive detection was in a large sewershed (e.g. over 1 million individuals). If done, carefully consider any ethical concerns (e.g., identifying individuals or specific businesses) before testing from smaller scales (such as a manhole specific to a subset of a sewershed).
- Jurisdictions may consider increased frequency of sampling and testing from the site with a positive detection. This can provide more timely information to understand persistence of the positive detection. Neighboring sewersheds could also be sampled more frequently.
 - Increased frequency could include an increase from weekly sampling to twice weekly sampling.
 - ELC funds may be used to support outbreak response wastewater surveillance, including measles. Please reach out to your NWSS project officer to revise any workplans, as needed.
- Consider adding measles testing in additional wastewater sites in the jurisdiction.
- Consider sending residual total nucleic acid extracts from positive wastewater samples from measles detections to CDC to attempt sequencing.

Collaborative calls between the jurisdiction and CDC can be used to develop hypotheses about what might be responsible for this signal and to potentially plan for further investigation if warranted. This could include sub-sewershed testing to further isolate the source of the signal, addition of more specific wastewater testing assays, or additional field investigations.

CDC can provide technical assistance and either remote or field support when requested. Please include the NWSS Project Officer assigned to the jurisdiction(s):

Center of Excellence Region	Project Officer	ELC Jurisdictions Included
New York	John Person	CT, ME, MA, NH, RI, VT, NJ, NY
North Carolina	John Person	AL, FL, GA, KY, MS, NC, SC, TN
Wisconsin	Trevor McCoy	DE, MD, PA, VA, WV, IL, IN, MI, MN, OH, WI
Houston	Martha Johnson	AR, LA, NM, OK, TX, Houston, NYC, DC, Philadelphia, Chicago, LA County, Maricopa County
Colorado	Cristina Martinez	IA, KS, MO, NE, CO, MT, ND, SD, UT, WY
California	Heidi Cox	AS, AZ, CA, CNMI, FSM (Micronesia), GU, HI, NV, AK, ID, OR, WA

Traveler-based Genomic Surveillance (TGS) Point of Contact: Heather Reese, okn4@cdc.gov

Appendix 10: Measles Press Release Template

XX Health Department Reports Local Measles Case

Date: [XX/XX/2026]

XX Health Department is reporting a case of measles and alerting the public to the possibility of exposure on **DATE** at **LOCATION(S)**. The **XX Health Department** is working closely with the Michigan Department of Health and Human Services (MDHHS) and **OTHER PARTNERS** to investigate the situation and prevent additional cases. **The individual is following all isolation protocols.**

Because the measles virus can stay in the air for up to two hours after an infected person leaves the area, individuals who were present at the following may have been exposed:

LOCATION NAME, LOCATION ADDRESS, DATE, TIME (TIME SPENT AT LOCATION PLUS 2 HOURS AFTER)

Anyone present at the above time and date should receive the MMR (Measles, Mumps and Rubella) vaccine within 72 hours (no later than **DAY, DATE**) if they are not already considered immune to measles.

Exposed individuals who cannot receive the MMR vaccine or were exposed more than 72 hours ago may be able to receive post-exposure treatment, which may prevent measles if received within six days of the exposure.

Contact your health care provider, pharmacy or the **XX Health Department** at **XXX-XXX-XXXX** for vaccination and guidance. In addition, anyone potentially exposed should monitor themselves for symptoms for 21 days. If any symptoms develop, such as fever, respiratory symptoms or rash, stay away from others and call ahead before visiting a doctor, urgent care or emergency room so they can take precautions to avoid exposing others.

In general, individuals with two, appropriately spaced doses of measles vaccine (MMR) are considered immune. Additionally, adults born before 1957 or who have evidence of prior measles illness are considered immune. Health care providers have additional criteria to be considered immune. For children, the first dose of MMR vaccine is routinely given at about 12 months of age, and the second starting at four years of age.

Insert MEDICAL DIRECTOR OR HEALTH OFFICER QUOTE

Measles is a highly contagious, vaccine-preventable disease that is spread by direct person-to-person contact, and through the air. Measles is so contagious that 90% of unvaccinated people who are exposed to measles will become infected. Infected people can spread measles before noticing symptoms, including from four days before through four days after the rash appears.

Measles can lead to serious complications including hospitalization and long-term illness and death. About one in five people who get measles will be hospitalized. One in 20 children who contract measles will develop pneumonia and up to three children who contract measles in 1,000 will die. Symptoms of measles usually begin 7 to 14 days after exposure, but can appear up to 21 days after exposure and may include:

- High fever (may spike to over 104°F).
- Cough.

Michigan State and Local Public Health Measles Standard Operating Procedures

- Runny nose.
- Red, watery eyes (conjunctivitis).
- Tiny white spots on the inner cheeks, gums and roof of the mouth (Koplik Spots) two to three days after symptoms begin.
- A rash that is red, raised, blotchy; usually starts on face, spreads to trunk, arms and legs three to five days after symptoms begin.

If symptoms develop, call your doctor, urgent care or hospital before seeking treatment so steps can be taken to prevent exposure to other individuals.

Cases are increasing across the U.S., and outbreaks are occurring nationally and globally.

Measles Vaccine

The measles vaccine is highly effective, very safe and provides long-lasting protection. A single dose of measles vaccine is about 93% effective at preventing measles, while two doses are about 97% effective. It is also effective if used within 72 hours of measles exposure to prevent illness. However, some individuals with weakened immune systems may not be eligible to receive this vaccine. Getting vaccinated not only protects the individual receiving the vaccine but can also protect vulnerable individuals in our communities from being exposed to this illness.

With the risk for community spread, anyone not fully vaccinated against measles is encouraged to do so as soon as possible. To verify their vaccination status, residents are encouraged to contact their health care provider or the **XX Health Department**.

Across the U.S. and in Michigan, routine immunization coverage has dropped. Statewide, up-to-date vaccine coverage for the MMR vaccination in children ages 19 through 35 months of age has decreased from 85.2% in March 2020 to 77.4% in February 2026. In children ages four to six years old, up-to-date vaccine coverage for the MMR vaccination has decreased from 75.5% in March 2020 to 71.0% in February 2026.

Vaccination is available from health care providers, pharmacies and the **XX Health Department**. Children eligible for the Vaccines for Children program may receive the vaccine from a provider enrolled in that program at no-cost. The **XX Health Department accepts Medicaid and Blue Cross Blue Shield of Michigan. The XX Health Department does not decline services if individuals are unable to pay.** To learn more about measles resources and vaccines in **XX County**, please visit **XX County website at:**

Appendix 11: Measles MIHAN Message Template

XX County Public Health is alerting all providers about recent measles.

XX County Public Health has confirmed a case of measles associated with international travel in an adult residing in XX County. This is the # confirmed case of measles in the state in just over a week, though the cases are not connected. Cases are increasing across the U.S. and outbreaks are occurring nationally and globally. Please see attached press release for exposure location information.

MDHHS and XX HD is alerting all providers to consider measles in any patient presenting with a febrile rash illness, especially if unvaccinated or vaccination status is unknown or with international travel in the last 21 days. Immediate isolation, appropriate specimen collection and notification are crucial to expedite public health action, including post-exposure prophylaxis, that can limit and control disease transmission.

Clinical Features

- Prodrome of fever and the 3Cs (cough, coryza, conjunctivitis).
- Two to three days after symptom onset, tiny white spots on inner cheeks, gums and roof of the mouth might occur (Koplik spots).
- Three to five days after symptoms start, a maculopapular rash begins on the face and then descends to the trunk, arms and legs.
- Fever may spike to more than 104° F when rash appears.

Act immediately if you suspect measles. Isolate. Test. Report.

- Immediately mask and isolate the patient in a private room with a closed door (airborne infection isolation room if available). Follow airborne precautions.
- Permit only staff immune to measles to be near the patient. Wear N-95 masks.
- Collect a nasopharyngeal (NP) or oropharyngeal (OP) synthetic swab (e.g., flocked or polyester) in a viral transport medium for PCR testing AND blood specimen to detect IgM antibodies.
 - **All PCR specimens should be sent to Michigan Department of Health and Human Services Bureau of Laboratories (BOL). Turn-around time for PCR results is expected to be 48 hours or less. BOL is currently requesting that IgM serum specimen be sent to commercial laboratories for testing.**
- Immediately notify the Health Department of the patient's residence on any suspicion of measles to facilitate expedited testing at MDHHS BOL.
 - For XX LHD Communicable Disease call:
 - Working office hours: xxx-xxx-xxxx
 - For after hours and weekends: xxx-xxx-xxxx
- Contact infection control if available at your facility.
- Do not use exam rooms for at least two hours after a suspected measles patient has left the room.
- People with confirmed measles should isolate for four days after they develop a rash.

Vaccinations

Immunization is the best way to protect patients from measles. **Take every opportunity to ensure patients are up to date on measles, mumps, rubella (MMR) vaccine. Two doses are 97% effective in preventing measles.**

Across the U.S. and in Michigan, routine immunization coverage has dropped. Statewide, up-to-date vaccine coverage for the MMR vaccination in children ages 19 through 35 months of age has decreased from 85.2% in March 2020 to 77.4% in February 2026. In children ages four to six years old, up-to-date vaccine coverage for the MMR vaccination has decreased from 75.5% in March 2020 to 71.0% in February 2026.

- Children need two doses of MMR: one dose at 12 to 15 months and another dose at four to six years.
- Before any international travel:
 - Infants six to 11 months need one dose of MMR vaccine before departure and are recommended to receive an additional dose of MMR vaccine at 12-15 months and a final dose at four to six years of age.
 - Children 12 months and older need two doses separated by at least 28 days before departure.
 - Teens and adults with no evidence of immunity against measles need two doses separated by at least 28 days.

Additional Information

Measles is a highly contagious viral respiratory illness that spreads person-to-person by direct contact with infectious droplets or by airborne spread when an infected person breathes, coughs or sneezes. Ninety percent of people who are exposed to measles and not immune will become infected. Measles virus can stay in the air for up to two hours after an infected person leaves an area. Infected people can spread measles from four days before through four days after the rash appears. Symptoms typically appear seven to 14 days, and up to 21 days after exposure.

Measles can be serious in all age groups, especially children younger than five years of age, adults older than 20 years of age, pregnant women and people with immunocompromised conditions. Mild complications include ear infections and diarrhea. Severe complications include pneumonia and encephalitis that may lead to hospitalization and death. About one out of five people with measles will be hospitalized.

For more information, including guidelines for patient evaluation, diagnosis and management, visit: [For Healthcare Professionals – Diagnosing and Treating Measles | CDC](#) and [Measles Information for Healthcare](#).

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