



Measles

Investigation checklist for Local Health Departments

Local health department staff should follow these steps, not necessarily in order, when investigating measles reports. For more detailed information, refer to the measles disease webpage which can be accessed at: <https://www.nj.gov/health/cd/topics/measles.shtml>

- [Obtain/assess](#) clinical and epidemiologic information
 - Interview diagnosing medical provider(s), obtain:
 - Clinical presentation, specifically measles-like symptoms including onsets
 - Reason(s) provider specifically considering measles diagnosis
 - Level of measles suspicion (high vs low on differential)
 - Alternate diagnoses (e.g., possible drug reactions, influenza, other illnesses)
 - Pending laboratory tests?
 - Any known potential exposures to measles
 - Immune status (is measles immunity documented for the patient?)
 - Determine whether case was evaluated by a different provider at a different time; interview alternate provider for additional clinical information
 - Interview case/guardian/proxy, obtain:
 - Timeline and description of symptoms, be as detailed as possible (e.g., rash progression and specific description – consider requesting pictures – NO eyes/genitals)
 - Any new products or medications recently used (e.g., antibiotics)
 - Travel/visitors in the few weeks prior to illness onset (local/domestic/international) – include dates and locations
 - Assess immune status, attempt to obtain documentation/dates of measles-containing vaccine – review [NJIS](#) registry (for case and household contacts)
- Ensure case remains in isolation throughout infectious period (unless measles is ruled out)
- Provide [specimen collection guidance](#) to medical provider. If measles is highly suspected, provider may collect and hold viral specimens, **pending NJDOH approval** for submission (following assessment of epidemiologic information). ***PLEASE NOTE: Viral samples for measles cannot be tested commercially.
 - If provider refers case to another medical facility, provider must call ahead so arrangements can be made to prevent additional exposures (e.g., seen as last appointment)



- Provide [measles exposure guidance](#) to medical provider and request they begin to assess all staff present in office during exposure period for documented proof of measles immunity. Exposure period = time suspect case arrived in office plus two hours after leaving office (or being placed in negative pressure room).
- Assess potential exposures
 - Calculate infectious period based on rash onset date (4 days before rash onset through 4 days after rash onset, a total of 9 days)
 - Obtain a detailed [timeline](#) of potential exposures during case's infectious period (dates, times, locations, method of transportation, persons in attendance)
 - Inquire about exposure setting type (e.g., private home vs apartment building, stand-alone building vs multi-office building)
- Report
 - Notify NJDOH of suspect measles case by calling (609) 826-5964 during regular business hours or (609) 392-2020 after business hours or on the weekend.
 - Ensure case has been created and updated in the Communicable Disease Reporting and Surveillance System ([CDRSS](#)).

Please consult with NJDOH before proceeding with further public health response (additional actions may depend on level of suspicion)

- Notify exposed contacts of measles exposure
 - Educate on signs/symptoms of measles
 - Assess immune status of exposed contacts, attempt to obtain documentation of measles-containing vaccine dates
 - Recommend PEP, as appropriate
 - Quarantine, when necessary
 - Provide [Exposed to Measles?](#) document
 - Follow up with exposed individual at the end of a full incubation period to ensure they remained asymptomatic
- Finalize CDRSS data entry, assign appropriate [case classification](#), and LHD Close case when investigation is complete.

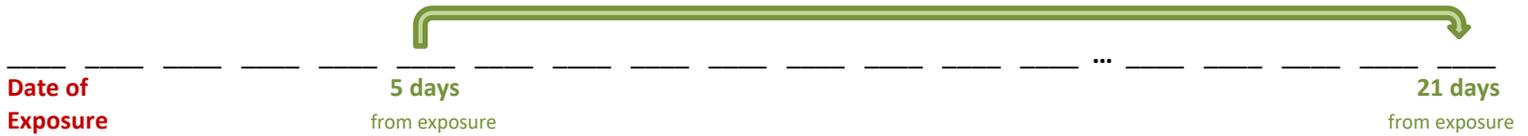
4) Other Information/Key Messages

- a) **Incubation period for contacts-** monitor contacts for symptoms from **5 days from first exposure through 21 days from last exposure**. **For assistance calculating incubation periods for exposures >1 day but less than the whole 9 day infectious period, please contact NJDOH.

i. Single exposure:

Incubation period is (Date of Exposure + 5) through (Date of Exposure + 21) = ___ / ___ to ___ / ___

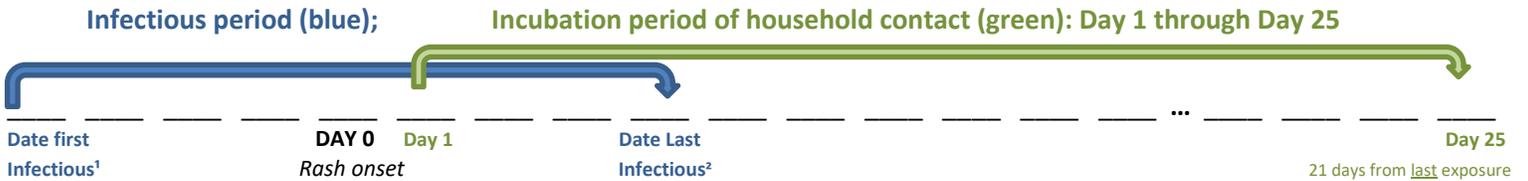
- Ex. If person has a single exposure to a case on the 1st of the month, their incubation period is the 6th-22nd.



ii. Exposure through whole infectious period (i.e. household contacts):

Incubation period is **Day 1** (Date first infectious¹ + 5) to **Day 25** (Date last infectious² +21) = ___ / ___ to ___ / ___

- Ex. If household contact has exposure to a case from 1st -9th of the month, their incubation period is the 6th-30th.



- b) **Exposed contacts:** For all contacts, verify immune status, exposure date, and calculate incubation period.

i. IMMUNE PERSONS

- Verify immune status- have them provide documentation (NJIIS is a good resource).
- Educate contacts on measles signs and symptoms.
- If immune, have person monitor himself/herself for symptoms,* but no restrictions on activity.
If they are feeling a little off one day, instruct them to try to stay home and take a sick day. They may end up feeling fine after a few hours, but if not, they can prevent future exposures and prevent people from going through the same process as they are now.

ii. NON-IMMUNE/QUESTIONABLE IMMUNITY (NON-HEALTH CARE PROFESSIONALS)

- Contacts can receive MMR as post-exposure prophylaxis within 3 days of **first exposure** and can return to normal activity in most circumstances, still monitoring for signs/symptoms.
- Contacts must **self-quarantine for the whole incubation period** unless MMR is appropriately administered within 3 days or immunization record or titers are provided (+ Measles [Rubeola] IgG) - no work, no school, no leaving home.
- Educate contacts on measles signs and symptoms, and the dates to monitor for them. *

iii. HEALTH CARE PROFESSIONALS (HCP)

- HCP without evidence of immunity should be given the first dose of MMR and excluded from work from 5 days after first exposure through 21 following last exposure. HCP can **NOT** return to work, even if they receive MMR or immune globulin following exposure.
- HCP with documentation of 1 dose of measles-containing vaccine may remain at work and should receive a second dose of measles-containing vaccine and monitor for any signs and symptoms. *
- Note: HCP with 2 documented doses have adequate evidence of immunity. Documented age-appropriate vaccination supersedes the results of subsequent serologic testing (which is not recommended in HCP with 2 documented doses).

* FOR ANYONE WHO STARTS FEELING SICK

- Instruct person to CALL THEIR HEALTH CARE PROVIDER FIRST and explain to doctor that they were contacted by the Department of Health and informed they were exposed to measles and are now symptomatic.
- If they need to go into the office or get specimens collected/ blood drawn, be sure they are the **LAST appointment** of the day with no other patients in the office and only HCP with documented measles immunity. If they are first, people who go to the office within two hours after they leave will be exposed as infectious particles may remain suspended in air for up to 2 hours.

c) Testing

- **Viral specimens are preferred** (nasopharyngeal swab, throat swab, or urine). It can and should be collected as soon as possible after onset of rash. For additional testing guidance, visit <https://nj.gov/health/cd/topics/measles.shtml#3>
- Viral samples for measles cannot be tested commercially. NJDOH approval is required prior to submission.
- Serology can be tested commercially but is extremely hard to interpret in vaccinated persons. Serology should be collected as soon as possible after rash onset, however if results are negative and blood was collected within 72 hours of rash onset/ there's still a high index of suspicion, a follow-up specimen may be requested.

MEASLES EXPOSURE TIMELINE | CDRSS ID _____

DATE	DAY OF WEEK	LOCATION NAME AND ADDRESS	PHONE NUMBER	ARRIVAL TIME	DEPARTURE TIME	MODE OF TRANSPORTATION	COMMENTS (ADDITIONAL CONTACTS, TYPE OF EVENT, ETC).
Day -4							
Day -3							
Day -2							
Day -1							
Onset Date							
Day +1							
Day +2							
Day +3							
Day +4							

