

NJDOH Communicable Disease Forum

Spring 2017

Namitha Reddy

Acting Manager, Regional Epidemiology Program

Namitha.Reddy@doh.nj.gov



New Procedures for Testing Animal Specimens for Rabies

- Beginning in May 2017, the Public Health and Environmental Laboratories (PHEL) will suspend testing of animal rabies specimens. Rabies testing will be conducted by another certified laboratory.
- All test results will be faxed directly to Health Officers in the same manner as is currently done.
- The shipping arrangements will change, once an agreement is finalized with another laboratory.

New Procedures for Testing Animal Specimens for Rabies

- PHEL is planning to conduct a webinar in the near future to fully explain the new procedures for submitting rabies specimens. They will also provide a telephone number and website to address questions from rabies specimen submitters.
- Health Officers are asked to ensure that all rabies specimens are correctly packaged and shipped promptly in order to prevent samples from decomposing in-transit and being unsatisfactory for testing. Improper packaging may also delay testing.
- Health Officers will be updated as the procedures become finalized. For additional information, contact the PHEL at 609-406-6860

Emerging Infections Educational Kit

Purpose:

Designed to harness an innovative platform to engage New Jersey's Public Health System

Vision:

Strengthening Information Management and Sharing on Emerging Infectious Diseases (EIDs)

Mission:

To prepare those within New Jersey's Public Health System for the fight against EIDs, including the Zika Virus, through dissemination of multimedia information and resources



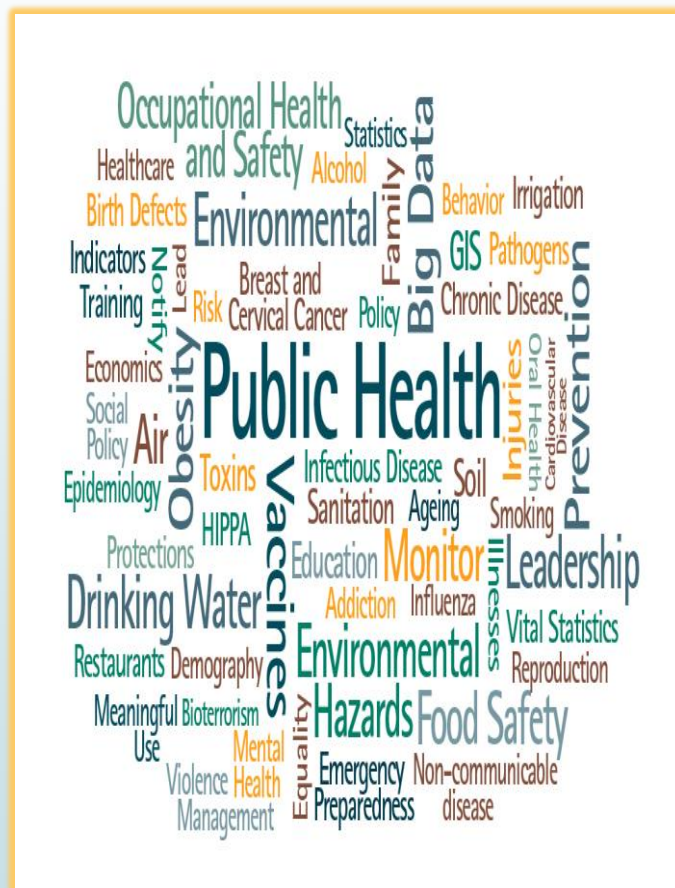
About the Emerging Infections Educational Kit

Conceived May 2016

- Funding support from CDC Cooperative Agreement with NJDOH
- Partnered with QuickSeries Publishing
- Convened NJDOH subject matter experts for development and review of kit materials
- Hosted Ad-Hoc Meeting with LHD representatives from the five public health regions to garner feedback and discuss dissemination

Launch March 2017

- Execution of dissemination strategy



Inside the Emerging Infections Educational Kit

- ▶ **What does the eGuide provide?**
- ▶ Basic epidemiological information on twelve (12) EIDs.
- ▶ Guidance on how to prevent the spread of emerging infections.
- ▶ Information on how to prepare for a disease outbreak.
- ▶ Online resources from CDC, NJDOH, WHO, and more.
- ▶ **How can I use the eGuide?**
- ▶ Develop infectious diseases training.
- ▶ Use as a teaching aid for interactive workshops.
- ▶ Access EID information from NJDOH's Communicable Disease Service*.

NOTE: The eGuide is not intended to supersede information in the existing NJDOH Communicable Disease Manual.

Questions about the Kit:

Luis E. Torrens, MPH

Division of Public Health Infrastructure, Laboratories,
and Emergency Preparedness

Luis.Torrens@doh.nj.gov

Corynna Limerick, MPH

Office of Local Public Health

Corynna.Limerick@doh.nj.gov



What To Do When You Get “The Call”: Measles Investigations & Public Health Response

Noelle Bessette, MPH
Surveillance Specialist
New Jersey Department of Health
Vaccine Preventable Disease Program

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Public Health Response

- ▶ Isolation of case
- ▶ Collection of appropriate specimens for laboratory testing
- ▶ Notification to LHD/NJDOH
- ▶ **Contact investigations and other response efforts**




After We Get “The Call”

- ▶ Assess likelihood that it could be measles
 - ▶ Symptoms
 - ▶ Vaccine status
 - ▶ Travel/foreign visitors/exposure
- ▶ Determine “level” of public health response
 - ▶ Modified response vs. full response
- ▶ Every situation is different so decisions are made on a case-by-case basis in collaboration with LHD/NJDOH



“Modified” Public Health Response

- ▶ When measles can't be ruled out, but suspicion is lower
- ▶ Response will differ case-by-case
- ▶ Collect more information via patient interview, confirm symptoms, have patient start compiling timeline of everywhere they went during infectious period (4 days before rash onset through 4 days after rash onset- total of 9 days)
- ▶ MD office/ hospitals should also identify exposed individuals (i.e. everyone in ED including all staff while suspect case was there through 2 hours after he/she left) and confirm proof of immunity for healthcare workers (HCW)
- ▶ Hold information pending additional testing and patient interviews




“Full” Public Health
Response: If measles is
confirmed or highly
suspected



Contact Investigation: Exposed Individuals

- Identify persons exposed during infectious period
 - Includes individuals in exposure location through 2 hours after case left
- Establish presumptive evidence of immunity for contacts
- Consider post-exposure prophylaxis (PEP)
 - Vaccine (within 72 hours from 1st exposure) or Immune globulin (IG -within 6 days from 1st exposure)
 - Note: healthcare workers who receive PEP can NOT return to healthcare setting
- Quarantine contacts without presumptive evidence of immunity
 - Starting day 5 from 1st exposure through 21 days after last exposure
 - Includes exposed healthcare workers, household contacts, other close contacts
 - Consult with NJDOH before recommending quarantine
- Educate contacts on symptoms/ what to do if they become symptomatic



Question # 1: Which of the following is considered an acceptable form of proof of immunity?

- 1) Lab confirmation of measles infection or immunity
- 2) Verbal history of vaccination
- 3) Written documentation of age-appropriate vaccination
- 4) All of the above
- 5) 1 & 3

Measles Proof of Immunity

- Written documentation of adequate vaccination:
 - 1 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
 - 2 doses of measles-containing vaccine for school-age children and adults at high risk, including college students, healthcare personnel, and international travelers
- Laboratory evidence of immunity
- Laboratory confirmation of measles
- Birth before 1957
 - HCP born before 1957 who do not have laboratory evidence of immunity, laboratory confirmation of disease, or 2 documented doses of measles-containing vaccine should be vaccinated
 - In the case of an exposure, HCP born before 1957 with no other proof of immunity will be excluded until able to provide acceptable proof of immunity

Note: Healthcare providers should not accept verbal reports of vaccination without written documentation as presumptive evidence of immunity <http://www.cdc.gov/measles/hcp/>



Contact Investigation: Exposure Settings

- ▶ Compile list of all places suspect case visited during infectious period (4 days before rash onset through 4 days after rash onset- total of 9 days)
 - ▶ Patient should begin compiling timeline upon first LHD contact
 - ▶ Will need minute-by-minute breakdown of the 9 days
 - ▶ Important details to request: time arrived, time left, name of location, address, transportation method to/from
- ▶ Get this info ahead of time so that if a press release is going to be issued, it is ready to go



Exposures at Medical Facilities

- ▶ If exposures occur at medical facilities (MD offices, hospitals, etc.), make contact with MD office
 - ▶ Confirm dates and times of visit (inquire specifically about additional visits)
 - ▶ Facility should begin to confirm HCW proof of immunity (furlough if no proof of immunity or until it can be provided) and pull patient records for all patients who would have been exposed
- ▶ Facility will be tasked with contacting exposed patients
 - ▶ Timing of mailing letter vs. phone call



The Buildings

- ▶ Once you have timeline, it is important to determine the type of building each is in (standalone store vs. large high rise)
- ▶ If the exposure setting is in a larger building, you will need to contact the manager to get information on the building's air supply
 - ▶ This information can be obtained from the property's management- some individuals will speak to management, and some others will want you to contact the property's management directly
 - ▶ If the location has its own air supply and entrance, others in the building would not be considered exposed
 - ▶ If the location shares air, or has a shared entrance (i.e. a central lobby), all others in the air exchange are considered exposed- must obtain information on other businesses in the building (particularly medical offices/daycares/other high risk settings)



Will there be a press release?

- ▶ Depends on exposures
 - ▶ If only exposure is a location where every individual can be identified and contacted, press release is less likely
 - ▶ If there are exposures in a setting where not everyone would be able to be identified (i.e. Walmart), a press release is more likely
- ▶ Timing will depend on level of suspicion/ case confirmation



What happens after the decision to issue a press release is made?

- ▶ NJDOH press office will communicate with LHD press office and other press offices as requested (i.e. hospital)
- ▶ All entities that will be named should know ahead of time
 - ▶ All-hands-on-deck response
 - ▶ Start with store manager, will likely end up being transferred to someone at the company's headquarters/legal office
 - ▶ Can offer to provide a copy of the press release as soon as it is posted



Recent Measles Investigations



Case #1 Details

- ▶ Non U.S.-born adult male in Hudson County
- ▶ Recent travel to India (12/3/16- 1/15/17)
- ▶ Unknown vaccination status
- ▶ Reported to LHD (unsuccessful LHD phone call, then by fax) on 1/22, received morning of 1/23

Case #1 Timeline

- ▶ 12/3/16- 1/15/17: Travel to India
- ▶ 1/17: Dry cough
- ▶ 1/18: Fever (103)
- ▶ 1/19: Walk-in clinic, prescribed azithromycin
- ▶ 1/20: Red eyes, vomiting, rash all over body
- ▶ 1/20: ED visit, diagnosed as drug allergy and given different antibiotic and prednisone
- ▶ 1/22: ED visit for worsening rash all over body, negative rapid flu and strep testing, blood collected for measles and Rocky Mountain Spotted Fever testing
- ▶ 1/23: LHD becomes aware of case and begins follow up



Question #2: Based on the available information, what type of public health response would you recommend?

- 1) Full public health response
- 2) Modified public health response
- 3) No public health response
- 4) None of the above

Case #1 Timeline (cont'd)

- 1/23: LHD becomes aware of case and begins follow up (including patient interview)
 - Case begins compiling timeline of everywhere he was from 4 days before rash onset through 4 days after– rash onset was 1/20, so from 1/16 through 1/24
- 1/23: LHD went to patient's house to collect blood on 3 household contacts (no PMD, titers done at PHEL) and get urine sample from suspect case for viral testing at Wadsworth (CDC VPD Reference Lab)
- 1/26: Late PM received verbal positive PCR results from Wadsworth
- 1/27: Press release issued



Case #1: Public Health Response

- ▶ Public exposures included:
 - ▶ Hospital
 - ▶ MD office
 - ▶ PATH stations/ trains
 - ▶ Work
 - ▶ Mall
 - ▶ Lab
 - ▶ Pharmacy
- ▶ Restaurant
- ▶ Non-public exposures included:
 - ▶ Ride sharing services
 - ▶ Taxi
 - ▶ 2 households

Many large buildings- needed to determine air exchanges/ identify & notify exposed individuals

Case #1: Exposure Setting Follow Up

Hospital

- ▶ Employees' immunity confirmed
- ▶ Patients notified
- ▶ NJDOH press release

MD office

- ▶ Employees' immunity confirmed
- ▶ Patients notified
- ▶ NJDOH press release for building- shared atrium

PATH stations/ trains

- ▶ NJDOH press release

Work

- ▶ Notified employees
- ▶ NJDOH press release

Mall

- ▶ NJDOH press release

Lab

- ▶ Employees' immunity confirmed
- ▶ Ordering providers notified
- ▶ NJDOH press release (own air exchange/entrance)

Pharmacy

- ▶ Employees' immunity confirmed
- ▶ NJDOH press release

Restaurant

- ▶ Employees notified
- ▶ NJDOH press release



Case #1 Wrap Up

- No additional cases identified during 21 day incubation period
- Case **confirmed** based on positive PCR testing and symptoms

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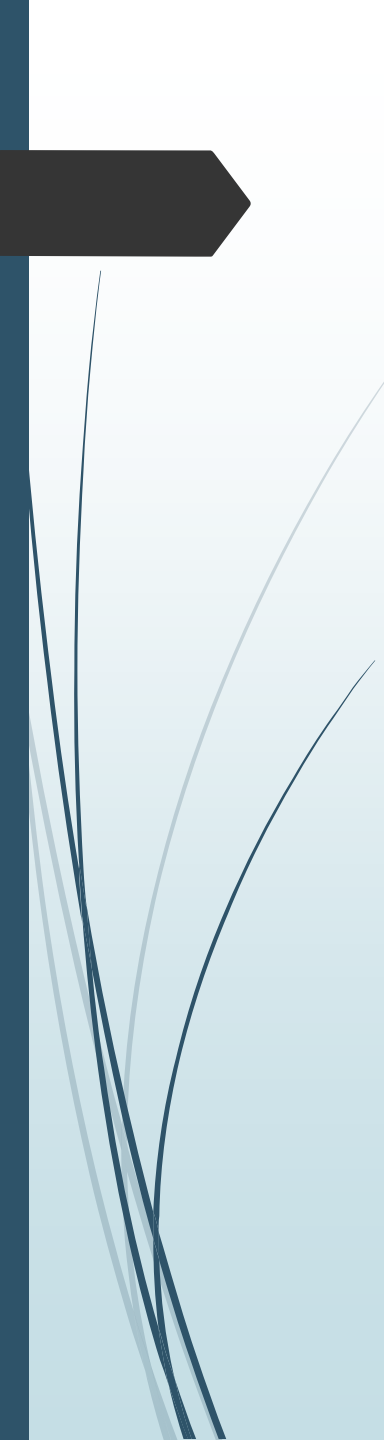
Case #2 Details

- ▶ 7 month old female in Passaic County
- ▶ Recent travel to Bangladesh (12/19/16- 1/10/17)
- ▶ **Unvaccinated**
- ▶ LHD notification via positive IgM entered into CDRSS on 1/27
 - ▶ Blood collected on 1/23



Case #2 Timeline

- ▶ 12/19/16- 1/10/17: Travel to Bangladesh
- ▶ 1/18: Runny nose, temp of 101
 - ▶ MD visit- pediatrician's office
- ▶ 1/20: Fever (max- 104.5)
- ▶ 1/21: Anorexia, congestion, cough, vomiting
 - ▶ ED visit #1- ED notes small papular rash on face, negative for strep and flu
- ▶ 1/23: Rash spreads to trunk, arms and legs, no longer on face
 - ▶ ED visit #2- bloodwork ordered for measles, **taken right into private room**
- ▶ 1/27: LHD becomes aware of case via positive IgM in CDRSS and begins follow up



Question #3: Based on the available information, what type of public health response would you recommend?

- 1) Full public health response
- 2) Modified public health response
- 3) No public health response
- 4) None of the above

Case #2 Timeline (cont'd)

- ▶ 1/27: LHD becomes aware of case and begins follow up (including patient interview and trying to obtain vaccination records for parents)
 - ▶ Begins compiling timeline of everywhere patient was from 4 days before rash onset through 4 days after– rash onset was 1/21, so from 1/17 through 1/25
- ▶ 1/28: Contacted neighbor (multi-family home)
 - ▶ 1 child vaccinated, 1 unvaccinated (12 months)- quarantined for whole incubation period
 - ▶ 2 adults have proof of immunity from NJ schools
- ▶ 1/30: Case's mom and dad have blood collected for titers at the end of the day at MD office (both positive on 1/31)
- ▶ 1/30: Press release issued



Case #2: Public Health Response

- ▶ Public exposures included:
 - ▶ Hospital
 - ▶ MD office
- ▶ MD office is in a small strip mall, but was able to quickly establish that MD office has its own entrance and air exchange
 - ▶ MD office pulled records for and contacted all patients who could have been exposed in the office in a timely fashion (all were vaccinated)
 - ▶ Not in press release as all potentially exposed individuals were promptly contacted
- ▶ 2 ED visits- 2 different campuses of the same hospital system
 - ▶ 1st visit- not in negative pressure
 - ▶ 2nd visit- put into private room, but not negative pressure. Moved to a negative pressure room shortly before discharge
 - ▶ Press release issued- no way to know everyone in the ED during the 2 visits



Case #2 Wrap Up

- ▶ No additional cases identified during 21 day incubation period
- ▶ Case **confirmed** based on positive measles IgM and symptoms



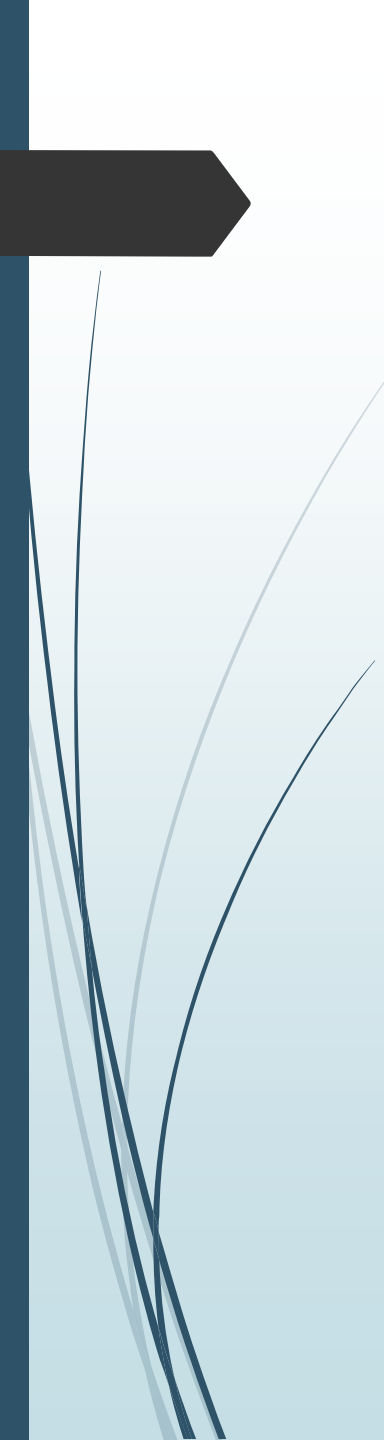
Case #3 Details- 2015 Case

- ▶ 46 year old female in Middlesex County
- ▶ No recent travel
- ▶ Unknown vaccination status (verbal report of 2 doses but no dates or records)
- ▶ No known measles cases in NJ; limited exposures- family member was ill and passed away, most of case's time was spent at a hospital with the family member or at home
- ▶ Reported by Infection Control by phone as a "rule out measles"
- ▶ Blood collected and patient discharged from ED



Case #3 Timeline

- ▶ 5/12/15: Dry cough
- ▶ 5/15/15: Took a Xanax for the first time, ordered by provider
- ▶ 5/15/15: High fever (102.8) and maculopapular rash
- ▶ 5/16/15: ED visit, taken into negative pressure room
 - ▶ No fever at ED
 - ▶ Blood collected for testing
- ▶ 5/17/15: LHD coordinates with hospital to have viral specimens collected for testing at CDC (2 NP swabs and urine collected)
- ▶ ED begins pulling records for exposed individuals/employees



Question #4: Based on the available information, what type of public health response would you recommend?

- 1) Full public health response
- 2) Modified public health response
- 3) No public health response
- 4) None of the above



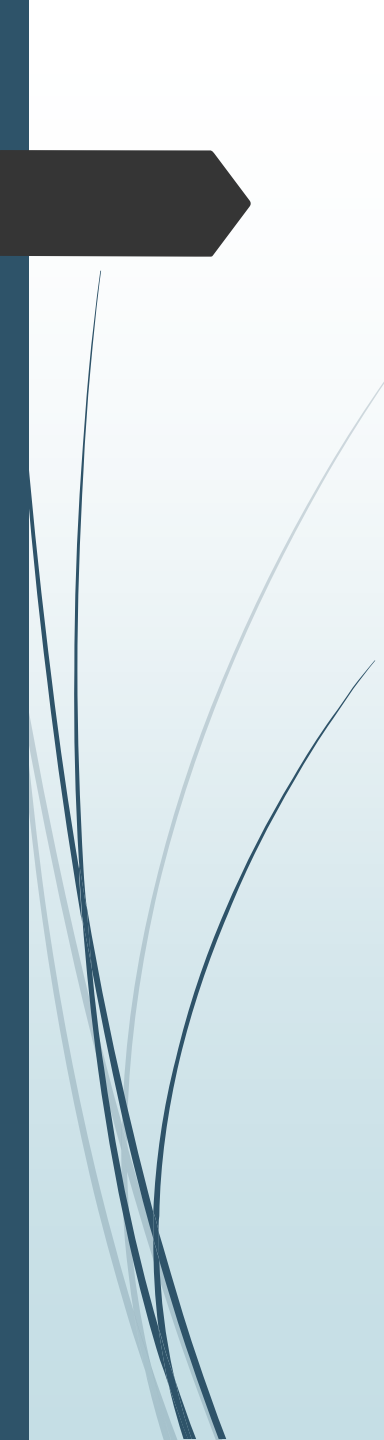
Case #3 Timeline (cont'd)

- ▶ 5/22: Blood from 5/16 collection comes back IgM and IgG positive
- ▶ 5/26: 2 NP swabs and urine all come back PCR positive for measles
- ▶ 5/26: Public health response, all-hands-on-deck
 - ▶ All exposed in ED have proof of immunity, patient put directly into negative pressure
- ▶ 5/27: LHD able to re-interview case to get exact times/ locations/ contacts
- ▶ 5/28: LHD collects blood from case's partner for IgG (+ on 6/1)
- ▶ 5/28: Press release issued



Case #3: Public Health Response

- ▶ Public exposures included:
 - ▶ Hospital
 - ▶ Funeral home
- ▶ Hospital was able to identify all exposed and confirm proof of immunity
- ▶ Funeral home exposures (5/11 and 5/14)
 - ▶ 5/11: Arrangements being made, 2 additional families exposed (6 month old and mother who had no proof of immunity quarantined for 21 day incubation period)
 - ▶ 5/14: 2 concurrent funerals at funeral home, unable to identify all exposed individuals
 - ▶ Press release issued



Question #4: Based on the available information, what type of public health response would you recommend?

- 1) Full public health response
- 2) Modified public health response
- 3) No public health response
- 4) None of the above



Case #3 Timeline (cont'd)

- ▶ 5/22: Blood from 5/16 collection comes back IgM and IgG positive
- ▶ 5/26: 2 NP swabs and urine all come back PCR positive for measles
- ▶ 5/26: Public health response, all-hands-on-deck
 - ▶ All exposed in ED have proof of immunity, patient put directly into negative pressure
- ▶ 5/27: LHD able to re-interview case to get exact times/ locations/ contacts
- ▶ 5/28: LHD collects blood from case's partner for IgG (+ on 6/1)
- ▶ 5/28: Press release issued



Case #3: Public Health Response

- ▶ Public exposures included:
 - ▶ Hospital
 - ▶ Funeral home
- ▶ Hospital was able to identify all exposed and confirm proof of immunity
- ▶ Funeral home exposures (5/11 and 5/14)
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 - ▶ 5/14: 2 concurrent funerals at funeral home, unable to identify all exposed individuals
 - ▶ Press release issued



Potential Location Where Case Could Have Been Exposed

- ▶ On 5/26 the hospital that the family member was in during patient's incubation period (not infectious period) was notified so it could monitor for other cases that may arise
 - ▶ Also inquired as to whether there was anyone there during that time period who had a rash that could have been misdiagnosed
 - ▶ No potential source of infection identified



Case #3 Wrap Up

- No additional cases identified during 21 day incubation period
- Case **confirmed** based on positive PCR testing and symptoms



Lessons Learned from Recent Cases

- ▶ Importance of suspect cases being reported **upon suspicion**
- ▶ Importance of making contact with a person from LHD or NJDOH- leaving a message or sending a fax is not sufficient if measles is being suspected
- ▶ Infants aged 6–11 months should receive 1 dose of MMR vaccine before traveling abroad
 - ▶ Will still need MMR or MMRV vaccine at 12–15 months (≥ 28 days after the initial dose) and again at 4–6 years
- ▶ Importance of putting suspected case in a negative pressure room if possible (as opposed to a private room)
- ▶ Importance of collecting and confirming exposure details up front in preparation for a timely response



Thank you!

Noelle Bessette

Noelle.Bessette@doh.nj.gov

(609) 826-5964