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PUBLIC HEALTH ADVISORY

To: Healthcare Providers
From: Isaac Benowitz, State Epidemiologist
Subject: Measles Exposure in Maine
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Maine's Health and Environmental Testing Laboratory has notified Maine CDC of a positive PCR test for measles in a child. The individual is now isolated at home. Potentially exposed individuals should check their immunization status and monitor for symptoms. The best protection against measles is vaccination. Maine CDC is asking clinicians to increase surveillance for rash illness suggestive of measles to identify early potential cases and prevent the spread of disease and to promptly see any patients seeking post-exposure prophylaxis.

Measles Exposure in Maine

Summary

Maine's Health and Environmental Testing Laboratory has notified Maine CDC of a positive PCR test for measles in a child. Because the child received a dose of measles, mumps, and rubella (MMR) vaccine, the sample is being sent to the U.S. Centers for Disease Control and Prevention (U.S. CDC) for confirmation of wild-type measles versus vaccine measles strain. Out of an abundance of caution, Maine CDC is considering the child to be infectious. The child became ill with fever and rash on Sunday, April 30, 2023. During the child's contagious period, they visited two health care facilities and two public settings (see location list below Table 1). Maine CDC has not identified a clear source of infection.

Potentially exposed individuals should check their measles immunization status and monitor for symptoms and contact a healthcare provider if symptoms develop. Those who are not immunized or do not know their measles immunization status should get vaccinated with at least one dose of MMR vaccine to protect from subsequent exposures. Maine clinicians should increase surveillance for rash

illness suggestive of measles to identify early potential cases and prevent the spread of disease. The best protection against measles is vaccination. Providers who suspect measles in a patient should contact Maine CDC immediately at 1-800-821-5821 for consultation and expedited transportation and testing of appropriate samples.

Background

Measles is a highly contagious, acute viral illness characterized by fever (as high as 105°F) and malaise, cough, coryza, and conjunctivitis followed by a maculopapular rash. The incubation period, the time it takes symptoms to appear after acquiring the virus, is typically 10-14 days but can be as long as 21 days. The rash usually appears about 14 days after a person is exposed. The rash spreads from the head to the trunk to the lower extremities. Measles can cause severe health complications including pneumonia, encephalitis, and death.

Measles spreads to others when an infected person coughs or sneezes. After an infected person leaves a location, the virus can live for up to two (2) hours in an airspace or on surfaces where the infected person coughed or sneezed. Measles is so contagious that if one person has it, 90% of the people close to that person who are not immune will become infected. Infected individuals can spread measles to others from four (4) days before the rash appears through four (4) days after the rash appears.

Individuals were potentially exposed to measles if they were at any of the locations during the defined time periods listed in Table 1. Maine CDC notified the facilities with potential exposures and is working with them to provide information and guidance for themselves and their clients.

Table 1. Exposure locations

Location	Date	Time
Family Time Dine and Play at Auburn Mall in Auburn	April 29, 2023	3pm to 7pm
Clear Choice MD in Scarborough (273 Payne Road)	May 1, 2023	1pm to 4pm
Hannaford on Cottage Road in South Portland (Mill Creek Hannaford)	May 1, 2023	2pm to 5pm
Mercy Fore River Emergency Department	May 2, 2023	7:45pm to midnight
Mercy Fore River Emergency Department	May 3, 2023	Midnight to 3:30am

Individuals potentially exposed (as defined by the table above) should:

- Review their vaccine history to determine if they are immune to measles. Individuals born before 1957 are considered immune to measles.
- Individuals not immune to measles should contact their healthcare provider to discuss vaccination and symptoms. U.S. CDC recommends that people exposed to measles, who do not have evidence of immunity, should be offered post exposure prophylaxis.
 - Vaccine is recommended for under or un-vaccinated individuals within 72 hours of exposure
 - Immunoglobulin (IG) can be given to unvaccinated individuals up to 6 days after an exposure (see Table 2).

Table 2. Post-exposure prophylaxis recommendations

Product	Notations	Age/Condition	Recommendation
MMR vaccine	Preferred if within 72 hours post exposure	for those ≥ 12 months old exposed to measles	
Immune Globulin	Administer within 6 days of exposure in persons nonimmune*.	Infants aged <12 months	IGIM should be administered to all infants aged <12 months who have been exposed to measles.

<p>Not indicated for post exposure prophylaxis for those who received 1 dose of measles-containing vaccine at age \geq 12 months, unless severely immunocompromised**</p> <p>Consider for administration to susceptible household contacts of measles patients, particularly those <1yo, pregnant women, or immunocompromised persons.</p>	<p>Infants aged 6-11 months</p>	<p>MMR vaccine can be administered in place of IG if administered within 72 hours of exposure.</p>
	<p>Pregnant women without evidence of measles immunity</p>	<p>IGIV should be administered to pregnant women without evidence of measles immunity who have been exposed</p>
	<p>Immunocompromised patients</p>	<p>Severely immunocompromised** patients who are exposed should get IGIV prophylaxis regardless of immunologic or vaccination status.</p>
	<p>Those already receiving IGIV therapy who were exposed</p>	<p>Administration of at least 400mg/kg body weight within 3 weeks before measles exposure should be sufficient to prevent measles infection.</p>
	<p>Those already receiving IGSC therapy who were exposed</p>	<p>Administration of at least 200mg/kg body weight for 2 consecutive weeks before measles exposure should be sufficient.</p>

Source: *Prevention of Measles, Rubella, Congenital Rubella Syndrome, and Mumps, 2013: Summary Recommendations of the Advisory Committee on Immunization Practices (ACIP)* (<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm>)

*Any nonimmune person exposed to measles who received IG should subsequently receive MMR vaccine, administered no earlier than 6 months after IGIM administration or 8 months after IGIV administration, provided the person is then aged \geq 12 months and the vaccine is not otherwise contraindicated.

** Severely Immunocompromised patients include: severe primary immunodeficiency, patients who have received a bone marrow transplant until at least 12 months after finishing all immunosuppressive treatment, or longer in patients who have developed a graft versus host disease, patients on treatment for ALL within and until at least 6 months after completion of immunosuppressive chemotherapy, and patients with a diagnosis of AIDS or HIV-infected persons with severe immunosuppression defined as CD4 percent <15% (all ages) or CD4 count <200 lymphocytes/mm³ (aged>5 years) and those who have not received MMR vaccine since receiving effective ART.

For patients who need immunoglobulin, Table 3 provides information on availability of immunoglobulin products at selected health systems in Maine. *Prior to directing a patient for care, please contact the facility in order to determine whether the needed product is currently available and to coordinate care.*

Table 3. Availability of selected immune globulin products at selected healthcare facilities.

Product Type	Product Name	Locations
IGIM	GamaSTAN	Maine Health facilities
		Northern Light Health facilities
		Maine General Medical Center
IGIV	Unknown	Maine Health facilities
	Octagam	Mercy Hospital
	Gamnux	Northern Light Health facilities
	Privigen	Northern Light Health facilities
	Hizentra	Northern Light Health facilities

Prevention Recommendations

The best protection against measles is vaccination. MMR vaccine provides long-lasting protection. Vaccination recommendations are below:

- **Children.** All children should receive two doses of MMR. The first dose should be given at 12 through 15 months of age and the second at 4 through 6 years of age. Children who are 6 through 11 months of age who will be traveling internationally should receive 1 dose of MMR vaccine. Every effort should be made to identify and vaccinate children who are not up-to-date.
- **Adults.** All adults should have acceptable proof of immunity to measles. For adults with no evidence of immunity to measles, 1 dose of MMR vaccine is recommended, unless the adult is in a high-risk group (e.g., international travelers, and college students), in which case 2 doses of MMR vaccine are recommended. Healthcare workers employed by Designated Healthcare Facilities are required to have [two doses of MMR](#). Women are advised to not receive any live virus vaccine during pregnancy, including MMR.

Key Points

- Consider measles as a diagnosis in anyone with a febrile rash illness and clinically compatible symptoms (cough, coryza, and/or conjunctivitis) who has recently traveled abroad or who has had contact with someone with a febrile rash illness.
- Asymptomatic patients should not be tested.
- Isolate suspect measles cases. Airborne precautions should be used until measles can be ruled out (surgical mask for patient, N-95 for provider, and negative pressure room, if available).
- Obtain specimens for testing and submit to HETL. Maine CDC prefers measles specimens are submitted to HETL so results can be better tracked; but they can be submitted to other laboratories. Specimen collection should include:
 - Oropharyngeal, nasopharyngeal, or nasal swab for polymerase chain reaction (PCR)
 - Serum for IgM serology
 - See Laboratory Submission Information Sheet:
<http://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/submitting-samples.shtml>

Reporting Requirements

- **All suspected cases of measles should be reported immediately by phone to 1-800-821-5821.**

For More Information

- Maine CDC's measles webpage: <http://www.maine.gov/dhhs/measles>
- Federal CDC's measles webpage for healthcare professionals: <https://www.cdc.gov/measles/hcp/index.html>
- HETL's webpage <https://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/>
- Maine Immunization Program webpage: <https://www.maine.gov/dhhs/mecdc/infectious-disease/immunization/>