Stanislaus County HEALTH SERVICES AGENCY

Medical Provider Toolkit

MAY 2019

Stanislaus County Public Health Division | Communicable Disease Program

TABLE OF CONTENTS

MEDICAL PROVIDER TOOLKIT

RESOURCE

Introduction

Stanislaus County Public Health developed this toolkit to assist medical providers and facilities in identifying and addressing suspected or confirmed cases of measles in the healthcare setting. This toolkit contains material for medical facility staff.

The information in this toolkit is intended to familiarize clinicians, nurses and laboratory technicians with specific information regarding measles that can be seen in the urgent care and emergency rooms settings. The fact sheets can be easily photocopied for distribution to parents and guardians.

To contact the Communicable Disease (CD) Program, please call (209) 558-5678 or fax (209) 558-7531

HEALTH SERVICES AGENCY

Public Health Services
820 Scenic Drive, Modesto, CA 95350-6194

Phone: 209.558.7700
Fax:209.558.8184
www.schsa.org

Dear Colleagues:

The United States is seeing the highest number of measles cases since the year 2000 when the disease was considered eliminated in this country, with 764 individual cases confirmed in 23 states. As of May 8, 2019, a total of 44 cases have been confirmed in California. More adults, 18 years or older have been diagnosed, a total of 33 while 11 cases were diagnosed in children, less than 18 years of age. There have been no cases of measles diagnosed in Stanislaus County or in the San Joaquin Valley.

The purpose of this toolkit is to provide guidance for clinicians in the evaluation of patients with symptoms that could be consistent with measles, and to review measles reporting, infection control, testing, and vaccination recommendations.

Measles is a systemic infection with the respiratory epithelium of the nasopharynx the primary site of infection.

To prepare your facility for the possibility of patients with measles please see the recommendations below. See complete measles infection control guidance at: http://tinyurl.com/yxes3amk.

- Confirm measles immunity of all health care staff. Document either a positive measles IgG test or 2 doses of measles-containing vaccine given in 1968 or later, separated by at least 28 days, with the first dose on or after the first birthday. Confirming staff immunity now avoids having to exclude staff from work in the event of an exposure
- Ask patients to call ahead first if they have fever and rash
- Post signage directing patients with fever and rash to notify staff (see http://eziz.org/resources/measles
- Train staff to immediately implement airborne precautions if measles is suspected
- Do not allow suspect measles patients to remain in common areas; mask and isolate the patient in an airborne isolation room, or if unavailable then in a private room with door closed
- Do not re-use exam room for at least one hour after the patient has left the room

For patients who are not admitted to a medical facility, suspect measles cases should be instructed to remain in isolation at home until they are no longer infectious, or measles is ruled out.

Stanislaus County Public Health continues to monitor measles data in the county and will provide additional information if it becomes necessary.

Thank you for your work protecting the health of our community.

Sincerely,

Julie Vaishampayan, MD, MPH, FIDSA
Public Health Officer

Guidance for Clinicians

Check List: Managing Patients Suspected of Having Measles

The purpose of this checklist is to provide you step-by-step guidance when evaluating patients suspected to have measles, with the goal of a reduction in the spread of measles in the general community while also allowing for an expeditious investigation with Public Health.

For questions, please call the Stanislaus County Public Health Communicable Disease Program:
(209) 558-5678 from 7:00am – 5:30pm Monday to Friday
(209) 664-6032, Duty Officer after business hours/weekends/holidays

See "*Measles Fact Sheet for Clinicians*" for more information.

☐ Step 1. Immediately isolate the suspected patient with measles, using Airborne Transmissible Diseases precautions.[1, 2]

☐ 1a. Airborne precautions should be followed in healthcare settings.

☐ 1b. Regardless of prior immunity status, all healthcare staff entering the room should use respiratory protection consistent with airborne infection control precautions (use of an N95 respirator or a respirator with similar effectiveness in preventing airborne transmission).

★ *Note*: The preferred placement for patients who require airborne precautions is in a single-patient airborne infection isolation room (AIIR) or negative airpressure room. Patient should remain completely isolated from other patients to prevent possible exposure of measles.

☐ Step 2. Assess if the patient has measles-like symptoms.[3]

☐ 2a. Assess if patient has any of the following symptoms and obtain onset dates:

- Fever
- Cough
- Coryza
- Conjunctivitis
- Maculopapular rash: Determine rash progression on body

Inset 1. What are some common differential diagnoses to measles?

★ Kawasaki, rubella, scarlet fever, enteroviruses and other febrile rash exanthems.

☐ Step 3. Immediately call and report the patient suspected of having measles to Public Health while the patient is still at the clinic.[4]

☐ 3a. Call **(209) 558-5678** from 7:00am – 5:30pm Monday to Friday to speak to the CD nurse. After these business hours and on weekends, call **(209) 664-6032** and ask for the Duty officer.

☐ 3b. Inform the patient, Public Health may be in contact to further assist the patient and their family/friends as well as prevent the spread of measles in the general community.

☐ 3c. Complete a Confidential Morbidity Report (CMR) or fax the following information to Public Health at **(209) 558-7531**

- Medical Records
- All lab results assessing respiratory illness
- Patient Demographics:
  - o Name
  - o Date of birth
  - o Gender
  - o Address
  - o Telephone number(s)
  - o Place of birth
  - o Race/ Ethnicity
  - o Years lived in the US
- Immunization Records (if available)
- Travel History in the last 2 months

☐ Step 4. Collect appropriate measles specimen(s) for a timely diagnosis.[2]

☐ 4a. Obtain **all** the following three specimens for measles laboratory testing:

- **Throat for PCR**: Use sterile synthetic swab and place into liquid viral/universal transport media.
- **Urine for PCR**: 10 – 50 ml midstream, clean-catch (first morning void preferred).
- **Serum for IgM/IgG**: 7 - 10 ml in gold top serum separator tube, ideally 72 hours after rash onset.

☐ 4b. Complete Lab Forms available at Stanislaus County Public Health Communicable Disease page.

☐ 4c. Call the CD nurse at Stanislaus County Public Health to arrange arrange for specimen pick-up weekdays 7:00am –5:30pm: **(209) 558-5678 After business hours/weekends/holidays, call (209) 664-6032, and ask for the Duty Officer**. *Do NOT send urine and throat specimens to a non-Public Health lab for testing.*

☐ 4d. Store specimens at 4°C until pick-up and ship cold (do not place specimens directly against ice packs in order to avoid freeze during transport).

★ *Note:* If unable to ship within 48 hours and if feasible, freeze specimen immediately at -70°C (except for urine – centrifuge if feasible, store 4°C).

☐ 4e. **If specimens cannot be collected at the clinic, do not refer the patient to another facility to obtain specimens (i.e. commercial lab, other medical clinic). Notify Public Health.**

☐ Step 5. Assess for evidence of immunity in patient suspected for measles.[2]

☐ 5a. Determine whether patient has one of the following:

- At least 1 documented MMR dose from the United States that was administered ≥12 months of age.
- Documented IgG (+) test for measles.

☐ 5b. If documentation is not available, serum should be collected to measure measles IgG anibody levels. However, a positive IgG result in a symptomatic patient may indicate the patient is incubating measles.

☐ Step 6. Identify high-risk contacts/exposure sites to measles.[2]

☐ 6a. Identify if the patient has been in recent contact with any of the following:

- Infants <12 months of age
- Pregnant Women
- Persons unimmunized for measles
- Healthcare workers (including staff at facility)

☐ Step 7. Notify patient to remain isolated until no longer infectious.

☐ 7a. Regardless of measles immunity status, the case-patient should immediately not be allowed to attend school/work, participate in any social or academic activities and attend large public gatherings/venues until Public Health has determined the case-patient does not have measles or is no longer infectious.

☐ Step 8. Identify and address potential measles exposures in hospital/clinic.

☐ 8a. Contact Stanislaus County Public Health for **specific** guidance on exposures.

- Communicable Disease Nurse: **(209) 558-5678** from 7:00am-5:30pm M-F.
- Duty Officer: **(209) 664-6032** after business hours and on weekends.

★ Note: In the event of a measles exposure at a health care facility a specific measles health care facility protocol will be shared.

References:

1. Title 8 California Code of Regulations: ATD Standards. CDPH. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/Pages/ATDStd.aspx
2. Measles. For Healthcare Professionals. CDC. https://www.cdc.gov/measles/hcp/index.html.
3. Measles. Signs and Symptoms. CDC. https://www.cdc.gov/measles/about/signs-symptoms.html.
4. Title 17, California Code of Regulations (CCR) §2500, §2593, §2641.5- 2643.20, and §2800-2812 Reportable Diseases and Conditions. CDPH. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/ReportableDiseases.pdf

California Department of Public Health
Healthcare Facility Infection Control Recommendations for Suspect Measles Patients, April 2019

Suspect measles in patients with: febrile rash illness consistent with measles* and a history in the prior three weeks of contact with known or possible exposure to a measles case in the community, travel outside of North America, domestic travel via international airports, visiting US tourist attractions, or travel to areas in US with current measles transmission. **If measles is suspected, please use the infection control measures below.**

1. **If patient calls facility before arrival + measles is suspected + an airborne infection isolation (negative pressure) room is <u>not</u> available:**
   a. Refer patient to facility with airborne infection isolation room, if possible.
   b. If referral elsewhere is not possible and medical evaluation is necessary, but not urgent, try to schedule the patient at the end of the day.
   c. If measles testing is indicated, but patient does not require urgent medical evaluation, collection of a throat swab for PCR testing may be obtained while the patient is in their car or otherwise outside of the facility. A sterile collection cup should be given to the patient for collection of urine, also for PCR testing. A family member can return with the specimen on ice.
   d. Ask patient to alert you before entering the facility and provide a surgical mask to the patient before entry. If patient cannot wear a surgical mask, other practical means of source containment should be implemented (e.g., place a blanket loosely over the heads of infants and young children suspected to have measles as they transit through common areas.
   e. Bypass the waiting area if possible, and do not allow patient to remain in the waiting area or other common areas
   f. Immediately place patient in a private room and keep the door closed.
   g. Evaluate patient as quickly as possible and discharge patient home or transfer the patient to a facility with an airborne infection isolation room as soon as feasible.
   h. Do not keep the patient longer just to collect a urine specimen for PCR testing. A sterile collection cup can be given to the patient for collection of urine at home, and a family member can return with the specimen on ice.
   i. Depending on the number of air changes per hour (see information in the link below), do not use the examination room for up to one hour after the possibly infectious patient leaves.

2. **If patient does <u>not</u> call ahead before entering facility + measles is suspected + an airborne infection isolation room is <u>not</u> available:**
   a. Mask the patient immediately. If patient cannot wear a surgical mask, other practical means of source containment should be implemented (e.g., place a blanket loosely over the heads of infants and young children suspected to have measles while they are transiting through common areas).
   b. Bypass the waiting room if possible, and do not allow patient to remain in the waiting area or other common areas
   c. Immediately place patient in a private room and keep the door closed.
   d. Evaluate patient as quickly as possible and discharge patient home or transfer the patient to a facility with an airborne infection isolation room as soon as feasible.
   e. Do not keep the patient longer just to collect a urine specimen for PCR testing. A sterile collection cup can be given to the patient for collection of urine at home, and a family member can return with the specimen on ice.
   f. Depending on the number of air changes per hour (see information in the link below), do not use the examination room for up to one hour after the possibly infectious patient leaves.

3. **If measles is suspected + the facility has an airborne infection isolation room:**
   a. Mask the patient immediately prior to or upon entry to the facility. If patient cannot wear a surgical mask, other practical means of source containment should be implemented, e.g., place a blanket loosely over the heads of infants and young children suspected to have measles while they are transiting through common areas.
   b. Bypass the waiting area if possible, and do not allow patient to remain in the waiting area or other common areas.
   c. Immediately place patient in airborne infection isolation room.
   d. Patient may remove mask when in the airborne infection isolation room, but should don it again prior to leaving the room when exiting the facility or during transit to another part of the facility.

4. **For all suspect measles cases:**
   a. Allow only healthcare personnel with documentation of two doses of live measles vaccine or laboratory evidence of immunity (measles IgG positive) to enter the patient's room, if possible.
   b. Regardless of measles immune status, all healthcare personnel entering the patient room should use respiratory protection at least as effective as an N95 respirator per CalOSHA requirements.
   c. Do not allow susceptible people into the patient room, if possible.
   d. Notify any location where the patient is being referred or transferred for additional clinical evaluation or laboratory testing about the patient's suspect measles status and do not refer suspect measles patients to other locations unless appropriate infection control measures can be implemented at those locations.
   e. Instruct suspect measles patients and exposed persons to inform all healthcare providers of the possibility of measles prior to entering a healthcare facility so that appropriate infection control precautions can be implemented.
   f. If patient was not immediately placed in an airborne infection isolation room, patients, visitors, and staff who were in the same air space area as the measles patient during the time the patient was in your facility and for up to one hour after the patient left the area are considered possibly exposed even if the measles patient was masked.
   g. Make note of potentially exposed staff and patients. If measles is confirmed in the suspect measles patient, potentially exposed people will need to be assessed for measles immunity.

For more information on measles and measles testing, please see:
https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/measles.aspx

For additional infection control information, please see the CDC "Guideline for Isolation Precautions"
http://www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html

*****Measles typically begins with a mild to moderate fever accompanied by cough, coryza, and conjunctivitis. Two to three days later, Koplik's spots (tiny red spots with bluish-white centers inside mouth on the lining of the cheek), which are a characteristic sign of measles, may appear. At this time the fever spikes, often as high as 104-105°F. At the same time, a red blotchy maculopapular rash appears that may become confluent, first on the head or face – usually along the hairline and behind the ears. This slightly itchy rash rapidly spreads downward to the chest and back and, finally, to the thighs and feet. In approximately one week, the rash fades in the same sequence that it appeared.

TABLE 1. Air changes per hour (ACH) and time required for removal efficiencies of 99% and 99.9% of airborne contaminants*

	Minutes required for removal efficiency†	
ACH	**99%**	**99.9%**
2	138	207
4	69	104
6	46	69
12	23	35
15	18	28
20	7	14
50	3	6
400	<1	1

* This table can be used to estimate the time necessary to clear the air of airborne *Mycobacterium tuberculosis* after the source patient leaves the area or when aerosol-producing procedures are complete.
† Time in minutes to reduce the airborne concentration by 99% or 99.9%.

From: Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005 at: http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf (page 20)

State of California—Health and Human Services Agency
California Department of Public Health

KAREN L. SMITH, MD, MPH
Director and State Health Officer

GAVIN NEWSOM
Governor

Measles Clinical Guidance: Identification and Testing of Suspect Measles Cases
April 2019

Measles continues to circulate in much of the world, including Europe, Asia and Africa. International travel, domestic travel through international airports, and contact with international visitors can pose a risk for exposure to measles. When measles is imported into the United States, additional transmission can occur locally.

While providers should consider measles in patients with fever and a descending rash, measles is unlikely in the absence of confirmed measles cases in your community or a history of travel or exposure to travelers. This guidance discusses which patients should be prioritized for measles testing.

Testing for measles can be based on:

A) Measles symptoms

- *Fever,* including subjective fever (see page 2 for a more detailed description).
- *Rash that starts on the head and descends* (see page 2 for a more detailed description).
- Usually 1 or 2 of the "3 Cs" – *cough, coryza and conjunctivitis.*

B) Risk factors increasing the likelihood of a measles diagnosis

- In the prior 3 weeks: travel outside of North America, transit through U.S. international airports, or interaction with foreign visitors, including at a U.S. tourist attraction.
- Confirmed measles cases in your community.
- Never immunized with measles vaccine and born in 1957 or later.

Recent MMR vaccine recipients

Fever and rash occur in ~5% of MMR vaccine recipients, typically 6-12 days after immunization. Such reactions can be clinically identical to measles infection, and result in positive laboratory testing for measles. However, this reflects exposure to measles vaccine virus rather than the wild virus, and such patients are not infectious for measles. If a recently vaccinated patient has fever and rash but none of the risk factors for measles described above, measles is extremely unlikely and testing is usually unnecessary. If you have questions, please consult your local health department (http://tinyurl.com/y2pdcrzx).

If after consideration of symptoms and risk factors, you suspect measles, please contact your local health department (http://tinyurl.com/y2pdcrzx) immediately. **Polymerase chain reaction (PCR) is the preferred testing method for measles, and can only be performed in public health laboratories**. Measles IgM testing is frequently falsely positive and is not preferred. See below for more specific testing guidance.

- **With measles, FEVER typically**
  - Precedes the rash;
  - Is high;
  - Persists after the rash erupts; and
  - Peaks on day 2 or 3 after rash onset, but can persist with secondary infection.

- **With measles, the RASH typically**
  - Starts on the forehead at the hairline and behind the ears and then spreads downwards to the rest of the body; in vaccinated people the rash may be less intense and not spread to the entire body.
  - Is eythematous and maculopapular, progressing to confluence in the same order as the spread of the rash. Confluence is most prominent on the face.
  - Clears on the third or fourth day in the same order it appeared; duration is usually 6-7 days, but sometimes less in vaccinated people.
  - Is initially red and blanches with pressure, then fades to a coppery appearance, and finally to a brownish discoloration that does not blanche with pressure.
  - Not itchy until at least the fourth day after onset.
  - Consider taking a photo of the rash to share with the local public health department.
  - See page 3 for possible alternative diagnoses, includuing drug reactions.

- **Other symptoms may include**
  - At least one of the prodromal 3 Cs- cough, coryza and conjunctivitis.
  - White (Koplik) spots in the mouth early in illness.
  - Feeling miserable; especially for children.
  - In previously vaccinated persons, symptoms may be milder and all 3 Cs may not be present.

Laboratory testing for suspect measles patients (see: http://tinyurl.com/ydhh9u85)
→ If you suspect measles, please immediately contact your local health department (http://tinyurl.com/y2pdcrzx) per California reporting laws.

- PCR is the preferred testing method for measles, and can only be performed at public health laboratories. Serologic testing for measles infection can result in falsely positive IgM test results, and serologic testing performed at commercial laboratories may not provide timely results.
- **Specimen collection for measles testing**
  - For patients presenting ≤7 days of rash onset:
    - *PCR testing, rather than serologic testing, is recommended*
      - Obtain a Dacron throat swab (rather than NP swab) and place in viral transport media.
      - Collect 10-50 ml of urine in a sterile container.
  - For patient presenting >7 days after rash onset:
    - Obtain a Dacron throat swab (rather than NP swab) and place in viral transport media.
    - Collect 50-100 ml of urine for PCR testing in a sterile centrifuge tube or urine specimen container.
    - Serology: Draw 7-10 ml blood in a red-top or serum separator tube; spin down if possible. **Note**: capillary blood (approximately 3 capillary tubes to yield 100 µl of serum) may be collected in situations where venipuncture is not preferred, such as children <1 year of age.

Isolate suspect measles patients

If measles is suspected please isolate the patient according to public health guidance. See complete infection control guidance at: http://tinyurl.com/yxes3amk.

Alternative diagnoses to consider for patients with fever and rash

- **Drug eruption**: history of current or recent medication, especially an antibiotic
- **Other non-infectious rashes**: hives or atopic dermatitis with coincidental febrile illness
- **Varicella (chickenpox)**: vesicular lesions on erythematous base
- **Enteroviruses (e.g., hand-foot-and-mouth disease)**: oral ulcers, rash on hands, feet, buttocks
- **Mononucleosis syndrome (EBV, CMV, HIV)**: risk factors (young adulthood, MSM, IDU), sore throat or tonsillitis, prominent adenopathy, splenomegaly, atypical lymphocytosis
- **Parvovirus B-19 (also known as erythema infectiosum, or 5th disease)**: slapped cheek appearance in children, arthritis and diffuse rash in adults
- **HHV-6 (also known as roseola infantum, exanthem subitum, or 6th disease)**: disease of very young children (usually under 2 years of age), high fever followed by defervescence and the appearance of rash on trunk
- **Rubella (German measles)**: history of international travel; mild illness with low-grade fever; arthralgias prominent in adults; prominent postauricular, posterior cervical, and suboccipital adenopathy
- **Group A streptococcal infection (with scarlet fever rash)**: sore throat, “sandpapery” rash, circumoral pallor, strawberry tongue, positive strep test
- **Meningococcemia**: abrupt onset of flu-like illness with marked myalgias (especially the legs); skin evolves from pallid or mottled with cold hands to petechial then hemorrhagic rash, severe headache and mental status change if meningitis present
- **Kawasaki disease**: children <5 years, fissured lips, strawberry tongue, erythema and edema of hands and feet, periungual desquamation, adenopathy
- **Travel-, animal-, and tick-related**: broad differential diagnoses of fever and rash
- **Influenza**: influenza cases with rash have been reported

HEALTH SERVICES AGENCY

Public Health Services
820 Scenic Drive, Modesto, CA
95350-6194

Measles Specimen Collection

Please call the Stanislaus County Public Health Department for consultation and to coordinate sample collection and testing at (209) 558-5678, after hours (209) 664-6032.

Throat (Oropharyngeal), Nasal or NP Swab: Measles PCR

- Throat swab is the preferred sample.
- Collect within 2 weeks of rash onset.
- Use a sterile synthetic swab (e.g., Dacron).
- Throat swab is the preferred respiratory specimen. Vigorously swab tonsillar areas and posterior nasopharynx with sterile Dacron swab.
- Nasopharyngeal swab: firmly rub nasopharyngeal passage with sterile Dacron swab.
- Place swab into liquid viral or universal transport medium.

Urine: Measles PCR

- Collect 10-50 ml urine in a sterile container.
- Collect from the first part of the urine stream, within 2 weeks of onset. The first morning void is ideal.

Serum: IgG testing:

- Collect 7-10 ml of blood in a serum separator tube.
- Capillary blood (finger or heel stick) can be used for pediatric patients, if necessary; at least 3-5 capillary tubes are needed.

Specimen storage and shipping

- Store all specimens at 4°C and ship on cold pack within 24 to 72 hours.
- For any questions concerning measles specimen collection, please contact the Stanislaus County Public Health at (209) 558-5678.

820 Scenic Drive, Modesto, CA 95350
Phone: 209-558-7700; Fax: 209-558-8184

California Department of Public Health – September 2017

Immune Globulin for Measles Postexposure Prophylaxis

I. IMMUNE GLOBULIN (IG) FOR THE PROPHYLAXIS OF MEASLES*

1. Immune globulin should be administered ≤6 days of last exposure to measles.
2. IG intramuscular (IM) or IG intravenous (IV) may be used depending on recipient. Use formulation and dosage according to recipient's category in Section II. There is only one IGIM product in the U.S. (GamaSTAN®). There are multiple formulations of IVIG; any formulation is acceptable.
3. Screen for contraindications to immune globulin (IG). See Section III.
4. Provide product information and answering questions.
5. Administer IG intramuscular (IM) in the anterolateral aspects of the upper thigh (in adults with sufficient deltoid muscle mass, the deltoid muscle may be used).
    a. Do not administer more than 3 ml of IGIM per injection site in children or more than 5 ml of IGIM per injection site in adults.
6. IG and MMR vaccine should not be given at the same time. See Section II for interval.
7. IG can be administered simultaneously with, or at any interval before or after, any inactivated vaccine.

II. IMMUNE GLOBULIN DOSAGE FOR MEASLES EXPOSURE [1,2,3,4]

Indications	Dose	Interval before MMR vaccine administration
Infants <12months of age	0.5 ml/kg IM (max dose = 15mL)	6 months
Susceptible immunocompetent contacts <30 kg/66 lbs[5]	0.5 ml/kg IM (max dose =15mL)	6 months
Pregnant women without evidence of immunity	400 mg/kg IV (intravenously)	8 months and nonpregnant
Severely immunocompromised persons[6] (also see Section VI)	400 mg/kg IV (intravenously)	8months

[1] IGIM should be administered at room temperature and within 6 days of exposure.

[2] IG should be administered to susceptible infants and children <30 kg and high-risk persons (pregnant women and severely immunocompromised persons). See footnote 7.

[3] IGIM can be given to any person <30 kg who lacks evidence of measles immunity, but priority should be given to persons exposed in settings with intense, prolonged, close contact (e.g., household, child care, classroom, etc.) or persons who are more likely to develop severe measles (infants, immunocompromised children).

[4] The maximum intramuscular dose of IG is 15 ml for all persons.

[5] Persons weighing >30 kg/66 lbs are unlikely to receive an adequate amount of measles antibody from IGIM.

[6] Severely immunocompromised patients who are exposed to measles should receive IGIV prophylaxis regardless of immunologic or vaccination status because they might not be protected by the vaccine. Per CDC and IDSA, persons with high-level immunosuppression include those:

- with combined primary immunodeficiency disorder (e.g., severe combined immunodeficiency);
- who are receiving cancer chemotherapy;
- on treatment for ALL within and until at least 6 months after completion of immunosuppressive chemotherapy;
- within 2 months after solid organ transplantation;
- who have received a bone marrow transplant until at least 12 months after finishing all immunosuppressive treatment, or longer in patients who have developed graft-versus-host disease;
- with HIV infection with a CD4 T-lymphocyte count <200 cells/mm^3 (age >5 years) and percentage <15 (all ages) (some experts include HIV-infected persons who lack recent confirmation of immunologic status or measles immunity);

- receiving daily corticosteroid therapy with a dose ≥20 mg (or >2 mg/kg/day for patients who weigh <10 kg) of prednisone or equivalent for ≥14 days; and
- receiving certain biologic immune modulators, that is, a tumor necrosis factor-alpha (TNF-α) blocker or rituximab.

After HSCT, duration of high-level immunosuppression is highly variable and depends on type of transplant (longer for allogeneic than for autologous), type of donor and stem cell source, and post-transplant complications such as graft vs host disease (GVHD) and their treatments. Also see Section VI.

II. CONTRAINDICATIONS:

1. IG should not be given to people with immunoglobulin A (IgA) deficiency. Persons with IgA deficiencies have the potential for developing antibodies to IgA and therefore could experience an anaphylactic reaction when IG is administered.
2. IGIM should not be administered to persons with severe thrombocytopenia or any coagulating disorder that would contraindicate intramuscular injections.
3. History of anaphylactic reaction to a previous dose of IG.

IV. PRECAUTIONS:

1. Pregnancy: It is unknown whether IG can cause fetal harm when administered to a pregnant woman or if it could affect reproduction.
2. Careful administration in persons reporting a history of systemic allergic reaction following the administration of IG.

V. SIDE EFFECTS AND ADVERSE REACTIONS - IGIM:

Event	Frequency
Tenderness, pain, or soreness at injection site. Usually resolves within 24 hours.	Common

VI. OTHER CONSIDERATIONS:

1. IG may interfere with the response to live, attenuated vaccines (e.g., MMR, varicella) when the vaccines are administered individually or as a combined vaccine. Delay administration of live attenuated vaccines for 6 months after the administration of IGIM and 8 months after the administration of IGIV.
2. Ideally, IG should not be administered within 2 weeks following the administration of MMR vaccine or for 3 weeks following varicella vaccine. Should this occur, the individual should be revaccinated, but no sooner than 6 months after IGIM administration or 8 months after IGIV administration.
3. For persons already receiving IGIV therapy, administration of at least 400 mg/kg body weight within 3 weeks before measles exposure should be sufficient to prevent measles infection. For patients receiving subcutaneous immune globulin (IGSC) therapy, administration of at least 200 mg/kg body weight for 2 consecutive weeks before measles exposure should be sufficient.

VII. REFERENCES:

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Resources

CONFIDENTIAL MORBIDITY REPORT

PLEASE NOTE: Use this form for reporting all conditions except Tuberculosis and conditions reportable to DMV.

DISEASE BEING REPORTED

Patient Name - Last Name | ***First Name*** | ***MI***

Home Address: Number, Street | ***Apt./Unit No.***

City | ***State*** | ***ZIP Code***

Home Telephone Number | ***Cell Telephone Number*** | ***Work Telephone Number***

Email Address | ***Primary Language*** ☐ English ☐ Spanish ☐ Other: _____

Birth Date *(mm/dd/yyyy)* | ***Age*** | ☐ Years ☐ Months ☐ Days | ***Gender*** ☐ Male ☐ Female ☐ M to F Transgender ☐ F to M Transgender ☐ Other: _____

Pregnant? ☐ Yes ☐ No ☐ Unknown | ***Est. Delivery Date*** *(mm/dd/yyyy)* | ***Country of Birth***

Occupation or Job Title

Ethnicity (check one)
☐ Hispanic/Latino ☐ Non-Hispanic/Non-Latino ☐ Unknown

Race (check all that apply)
☐ African-American/Black
☐ American Indian/Alaska Native
☐ Asian *(check all that apply)*
- ☐ Asian Indian ☐ Hmong ☐ Thai
- ☐ Cambodian ☐ Japanese ☐ Vietnamese
- ☐ Chinese ☐ Korean ☐ Other *(specify)*: _____
- ☐ Filipino ☐ Laotian

☐ Pacific Islander *(check all that apply)*
- ☐ Native Hawaiian ☐ Samoan
- ☐ Guamanian ☐ Other *(specify)*: _____

☐ White
☐ Other *(specify)*: _____
☐ Unknown

Occupational or Exposure Setting (check all that apply): ☐ Food Service ☐ Day Care ☐ Health Care ☐ Correctional Facility ☐ School ☐ Other *(specify)*: _____

Date of Onset *(mm/dd/yyyy)* | ***Date of First Specimen Collection*** *(mm/dd/yyyy)* | ***Date of Diagnosis*** *(mm/dd/yyyy)* | ***Date of Death*** *(mm/dd/yyyy)*

Reporting Health Care Provider | ***Reporting Health Care Facility***

Address: Number, Street | ***Suite/Unit No.***

City | ***State*** | ***ZIP Code***

Telephone Number | ***Fax Number***

Submitted by | ***Date Submitted*** *(mm/dd/yyyy)*

REPORT TO:

Stanislaus County Public Health
Communicable Diseases Division
820 Scenic Drive
Modesto, CA 95350
Tel. # (209) 558-5678
Fax # (209) 558-7531

(Obtain additional forms from your local health department.)

Laboratory Name | ***City*** | ***State*** | ***ZIP Code***

SEXUALLY TRANSMITTED DISEASES (STDs)

Gender of Sex Partners *(check all that apply)*
☐ Male ☐ M to F Transgender
☐ Female ☐ F to M Transgender
☐ Unknown ☐ Other: _____

STD TREATMENT ☐ Treated in office ☐ Given prescription
Drug(s), Dosage, Route | **Treatment Began** *(mm/dd/yyyy)*

☐ ***Untreated***
- ☐ Will treat
- ☐ Unable to contact patient
- ☐ Patient refused treatment
- ☐ Referred to: _____

If reporting Syphilis, Stage:
☐ Primary (lesion present)
☐ Secondary
☐ Early latent < 1 year
☐ Latent (unknown duration)
☐ Late latent > 1 year
☐ Late (tertiary)
☐ Congenital

Neurosyphilis? ☐ Yes ☐ No ☐ Unknown

Syphilis Test Results | **Titer**
- ☐ RPR ☐ Pos ☐ Neg _____
- ☐ VDRL ☐ Pos ☐ Neg _____
- ☐ FTA-ABS ☐ Pos ☐ Neg
- ☐ TP-PA ☐ Pos ☐ Neg
- ☐ EIA/CLIA ☐ Pos ☐ Neg
- ☐ CSF-VDRL ☐ Pos ☐ Neg _____
- ☐ Other: _____

If reporting Chlamydia and/or Gonorrhea:
Specimen Source(s) *(check all that apply)*
☐ Cervical
☐ Pharyngeal
☐ Rectal
☐ Urethral
☐ Urine
☐ Vaginal
☐ Other: _____

Symptoms?
☐ Yes
☐ No
☐ Unknown

If reporting Pelvic Inflammatory Disease: *(check all that apply)*
☐ Gonococcal PID
☐ Chlamydial PID
☐ Other/Unknown Etiology PID

Partner(s) Treated?
☐ Yes, treated in this clinic
☐ Yes, Meds/Prescription given to patient for their partner(s)
☐ Yes, other: _____
☐ No, instructed patient to refer partner(s) for treatment
☐ No, referred partner(s) to: _____
☐ Unknown

VIRAL HEPATITIS

Diagnosis (check all that apply)
☐ Hepatitis A
☐ Hepatitis B (acute)
☐ Hepatitis B (chronic)
☐ Hepatitis B (perinatal)
☐ Hepatitis C (acute)
☐ Hepatitis C (chronic)
☐ Hepatitis D
☐ Hepatitis E

Is patient symptomatic? ☐ Yes ☐ No ☐ Unknown

Suspected Exposure Type(s)
☐ Blood transfusion, dental or medical procedure
☐ IV drug use
☐ Other needle exposure
☐ Sexual contact
☐ Household contact
☐ Perinatal
☐ Child care
☐ Other: _____

ALT (SGPT) Result: _____ Upper Limit: _____
AST (SGOT) Result: _____ Upper Limit: _____
Bilirubin result: _____

		Pos	Neg
Hep A	anti-HAV IgM	☐	☐
Hep B	HBsAg	☐	☐
	anti-HBc total	☐	☐
	anti-HBc IgM	☐	☐
	anti-HBs	☐	☐
	HBeAg	☐	☐
	anti-HBe	☐	☐
	HBV DNA: _____		

		Pos	Neg
Hep C	anti-HCV	☐	☐
	RIBA	☐	☐
	HCV RNA (e.g., PCR)	☐	☐
Hep D	anti-HDV	☐	☐
Hep E	anti-HEV	☐	☐

Remarks:

Title 17, California Code of Regulations (CCR) §2500, §2593, §2641.5-2643.20, and §2800-2812 Reportable Diseases and Conditions*

§ 2500. REPORTING TO THE LOCAL HEALTH AUTHORITY.

- **§ 2500(b)** It shall be the duty of every health care provider, knowing of or in attendance on a case or suspected case of any of the diseases or condition listed below, to report to the local health officer for the juridiction where the patient resides. Where no health care provider is in attendance, any individual having knowledge of a person who is suspected to be suffering from one of the diseases or conditions listed below may make such a report to the local health officer for the jurisdiction where the patient resides.
- **§ 2500(c)** The administrator of each health facility, clinic, or other setting where more than one health care provider may know of a case, a suspected case or an outbreak of disease within the facility shall establish and be responsible for administrative procedures to assure that reports are made to the local officer.
- **§ 2500(a)(14)** "Health care provider" means a physician and surgeon, a veterinarian, a podiatrist, a nurse practitioner, a physician assistant, a registered nurse, a nurse midwife, a school nurse, an infection control practitioner, a medical examiner, a coroner, or a dentist.

URGENCY REPORTING REQUIREMENTS [17 CCR §2500(h)(i)]

✆ ! = Report immediately by telephone (designated by a♦ in regulations).
† = Report immediately by telephone when two or more cases or suspected cases of foodborne disease from separate households are suspected to have the same source of illness (designated by a ● in regulations.)
FAX ✆ ✉ = Report by electronic transmission (including FAX), telephone, or mail within one working day of identification (designated by a + in regulations).
= All other diseases/conditions should be reported by electronic transmission (including FAX), telephone, or mail within seven calendar days of identification.

REPORTABLE COMMUNICABLE DISEASES §2500(j)(1)

Acquired Immune Deficiency Syndrome (AIDS)
(HIV infection only: see "Human Immunodeficiency Virus")
FAX ✆ ✉ Amebiasis
Anaplasmosis/Ehrlichiosis
✆ ! Anthrax
✆ ! Avian Influenza (human)
FAX ✆ ✉ Babesiosis
✆ ! Botulism (Infant, Foodborne, Wound)
✆ ! Brucellosis
FAX ✆ ✉ Campylobacteriosis
Chancroid
FAX ✆ ✉ Chickenpox (only hospitalizations and deaths)
Chlamydia trachomatis infections, including Lymphogranuloma Venereum (LGV)
✆ ! Cholera
✆ ! Ciguatera Fish Poisoning
Coccidioidomycosis
FAX ✆ ✉ Colorado Tick Fever
Creutzfeldt-Jakob Disease (CJD) and other Transmissible Spongiform Encephalopathies (TSE)
FAX ✆ ✉ Cryptosporidiosis
Cysticercosis or Taeniasis
✆ ! Dengue
✆ ! Diphtheria
✆ ! Domoic Acid Poisoning (Amnesic Shellfish Poisoning)
FAX ✆ ✉ Encephalitis, Specify Etiology: Viral, Bacterial, Fungal, Parasitic
✆ ! *Escherichia coli*: shiga toxin producing (STEC) including *E. coli* O157
† FAX ✆ ✉ Foodborne Disease
Giardiasis
Gonococcal Infections
FAX ✆ ✉ *Haemophilus influenzae* invasive disease (report an incident less than 15 years of age)
✆ ! Hantavirus Infections
✆ ! Hemolytic Uremic Syndrome
Hepatitis, Viral
FAX ✆ ✉ Hepatitis A
Hepatitis B (specify acute case or chronic)
Hepatitis C (specify acute case or chronic)
Hepatitis D (Delta)
Hepatitis, other, acute
Influenza deaths (report an incident of less than 18 years of age)
Kawasaki Syndrome (Mucocutaneous Lymph Node Syndrome)
Legionellosis
Leprosy (Hansen Disease)
Leptospirosis
FAX ✆ ✉ Listeriosis
Lyme Disease
FAX ✆ ✉ Malaria
FAX ✆ ✉ Measles (Rubeola)
FAX ✆ ✉ Meningitis, Specify Etiology: Viral, Bacterial, Fungal, Parasitic
✆ ! Meningococcal Infections
Mumps
✆ ! Paralytic Shellfish Poisoning
Pelvic Inflammatory Disease (PID)
FAX ✆ ✉ Pertussis (Whooping Cough)
✆ ! Plague, Human or Animal
FAX ✆ ✉ Poliovirus Infection
FAX ✆ ✉ Psittacosis
FAX ✆ ✉ Q Fever
✆ ! Rabies, Human or Animal
FAX ✆ ✉ Relapsing Fever
Rheumatic Fever, Acute
Rocky Mountain Spotted Fever
Rubella (German Measles)
Rubella Syndrome, Congenital
FAX ✆ ✉ Salmonellosis (Other than Typhoid Fever)
✆ ! Scombroid Fish Poisoning
✆ ! Severe Acute Respiratory Syndrome (SARS)
✆ ! Shiga toxin (detected in feces)
FAX ✆ ✉ Shigellosis
✆ ! Smallpox (Variola)
FAX ✆ ✉ *Staphylococcus aureus* infection (only a case resulting in death or admission to an intensive care unit of a person who has not been hospitalized or had surgery, dialysis, or residency in a long-term care facility in the past year, and did not have an indwelling catheter or percutaneous medical device at the time of culture)
FAX ✆ ✉ Streptococcal Infections (Outbreaks of Any Type and Individual Cases in Food Handlers and Dairy Workers Only)
FAX ✆ ✉ Syphilis
Tetanus
Toxic Shock Syndrome
FAX ✆ ✉ Trichinosis
FAX ✆ ✉ Tuberculosis
✆ ! Tularemia
FAX ✆ ✉ Typhoid Fever, Cases and Carriers
Typhus Fever
FAX ✆ ✉ *Vibrio* Infections
✆ ! Viral Hemorrhagic Fevers (e.g., Crimean-Congo, Ebola, Lassa, and Marburg viruses)
FAX ✆ ✉ Water-Associated Disease (e.g., Swimmer's Itch or Hot Tub Rash)
FAX ✆ ✉ West Nile Virus (WNV) Infection
✆ ! Yellow Fever
FAX ✆ ✉ Yersiniosis
✆ ! **OCCURRENCE of ANY UNUSUAL DISEASE**
✆ ! OUTBREAKS of ANY DISEASE (Including diseases not listed in § 2500). Specify if institutional and/or open community.

HIV REPORTING BY HEALTH CARE PROVIDERS § 2641.5-2643.20

Human Immunodeficiency Virus (HIV) infection is reportable by traceable mail or person-to-person transfer within seven calendar days by completion of the HIV/AIDS Case Report form (CDPH 8641A) available from the local health department. For completing HIV-specific reporting requirements, see Title 17, CCR, § 2641.5-2643.20 and http://www.cdph.ca.gov/programs/aids/Pages/OAHIVReporting.aspx

REPORTABLE NONCOMMUNICABLE DISEASES AND CONDITIONS §2800–2812 and §2593(b)

Disorders Characterized by Lapses of Consciousness (§2800-2812)
Pesticide-related illness or injury (known or suspected cases)**
Cancer, including benign and borderline brain tumors (except (1) basal and squamous skin cancer unless occurring on genitalia, and (2) carcinoma in-situ and CIN III of the cervix) § 2593)***

LOCALLY REPORTABLE DISEASES (If Applicable):

* This form is designed for health care providers to report those diseases mandated by Title 17, California Code of Regulations (CCR). Failure to report is a misdemeanor (Heatlh and Safety Code §120295) and is a citable offense under the Medical Board of California Citation and Fine Program (Title 16, CCR, §1364.10 and 1364.11).

** Failure to report is a citable offense and subject to civil penalty ($250) (Health and Safety Code §105200).
*** The Confidential Physician Cancer Reporting Form may also be used. See Physician Reporting Requirements for Cancer Reporting in CA at: www.ccrcal.org

Reportable Diseases and Conditions (Stanislaus County)

(Mandated by Title 17, California Code of Regulations)

Reportable IMMEDIATELY by calling (209) 558-5678 and CalREDIE

Anthrax, human or animal
Botulism, (infant, food borne, wound)
Brucellosis, human
Cholera
Dengue
Diphtheria
Escherichia-coli 0157
STEC (including *E-coli* 0157)
Flavivirus Infection of Undetermined Species
Hemolytic Uremic Syndrome
Influenza, novel strains (human)
Measles (Rubeola)
Meningococcal Infections
Novel Virus Infection with Pandemic Potential
Plague, human or animal
Rabies, human or animal
Seafood Poisoning
-Ciguatera
-Domoic Acid
-Paralytic Shellfish
-Scombroid
Smallpox (*Variola*)
Tularemia, human
Viral Hemorrhagic Fevers, human or animal (e.g. Crimean-Congo, Ebola, Lassa, and Marburg)
Yellow Fever
Zika Virus Infection

Occurrence of **Any** unusual disease
Outbreaks of any disease (including diseases not listed in §2500) Specify if institutional and/or open community)

Reportable within ONE DAY by phone, fax, or CalREDIE

Amebiasis
Babesiosis
Campylobacteriosis
Chickenpox (Varicella) outbreaks, hospitalizations and deaths
Cryptosporidiosis
Encephalitis, Specify Etiology: bacterial, fungal, parasitic, viral
Foodborne Disease
Haemophilus Influenzae, (Invasive <5 yrs. of age)
Hantavirus
Hepatitis A - acute
Listeriosis
Malaria
Meningitis, Specify Etiology: *bacterial, fungal, parasitic, viral*
Pertussis
Poliovirus infection
Psittacosis
Q. Fever
Relapsing Fever
Salmonellosis
Shigellosis
Staph Infections (ICU/death)
Streptococcal Infections (outbreaks of any kind and individuals cases in food handlers/dairy workers)
Syphilis
Trichinosis
Tuberculosis
Typhoid Fever, Cases and Carriers
Vibrio Infections
West Nile Virus
Yersiniosis

Reportable within 7 CALENDAR DAYS by phone, fax, mail, or CalREDIE

Brucellosis, animal (except *Brucella canis)*
Chancroid
Chikungunya
Chlamydia (including LVG)
Coccidioidomycosis
Creutzfeldt - Jakob disease (all TSE's)
Cyclosporiasis
Cysticercosis or taeniasis
Ehrlichiosis/Anaplasmosis
Giardiasis
Gonococcal Infections
Hepatitis B, acute and chronic
Hepatitis C, acute and chronic
Hepatitis D (Delta), acute and chronic
Hepatitis E, acute infection
HIV (reporting procedure below)
Influenza deaths, lab confirmed Cases (age 0-64yrs)
Legionellosis
Leprosy (Hansen's disease)
Leptospirosis
Lyme disease
Mumps
Respiratory Syncytial Virus (only deaths in patient < 5 yrs. of age)
Rickettsial Diseases (includes typhus)
Rocky Mountain Spotted Fever
Rubella (German measles)
Rubella Syndrome, Congenital
Tetanus
Tularemia, animal

Reportable Non-Communicable Conditions

Disorders characterized by lapses of consciousness
Pesticide illness or injury
Animal bites

REPORTING PROCEDURES

AIDS/HIV Reporting ONLY
DO NOT FAX - Call (209) 558-8052
or
Mail (traceable or courier service only – double envelope marked confidential)

STANISLAUS COUNTY HSA
PUBLIC HEALTH SERVICES
ATTN: Medical Investigator
820 SCENIC DR
MODESTO, CA 95350

Report electronically via CalREDIE: Connect to

http://www.cdph.ca.gov/data/informatics/tech/Pages/CalREDIEHelp.aspx

To report by phone: Business hours (209) 558-5678
After hours (24/7) (209) 664-6032

Mail: **OR** **Fax: (209) 558-7531**

Stanislaus County H S A
Public Health Services
Attn: Morbidity
820 Scenic Drive
Modesto, CA 95350

Stanislaus County HEALTH SERVICES AGENCY

Rev 12/07/16 ds

Should I Test For Measles?

A Guide for California Healthcare Providers

While suspecting measles in your patient, immediately mask and isolate the patient per airborne precautions.*

STEP 1 – HISTORY

In the 21 days prior to onset of illness, has patient had <u>any</u> of the following?

- Known exposure to a person with measles?
- International travel, contact with an international traveler, or been to an international airport in the US?
- Visited a venue popular with international visitors?
- Resided in or visited a US community with measles cases?

Current listings at bit.ly/2JqBbMW

If NO to all, measles very unlikely, testing not required.

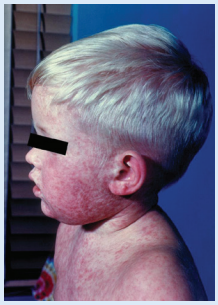
If YES to any, continue

STEP 2 – EXAM

Has the patient had a combination of...?

- **FEVER**
- And one or more of: **COUGH, CONJUNCTIVITIS,** or **RUNNY NOSE**
- And **RASH**†
  - Red-brown macules or papules - may become confluent patches
  - Begins on face and progresses downwards to the rest of the body
  - Typically appears within a few days after other symptoms begin

If no rash within 4 days after onset of illness, you may consult your local health department.



STEP 3

If YES

CALL your local health department to report illness and discuss testing.

COLLECT specimens for PCR testing.

- Urine (10-50 ml in sterile container) AND
- Dacron swab of throat (preferred) or nasopharynx in viral transport medium

If NO

Measles unlikely, testing not required.

As needed, call your local health department for consultation.

Local health department contact information: bit.ly/LHD-Reporting

*Place patient in a negative pressure room when available; if not, examine the patient outside the facility or in a private room with the door closed; minimize the time patient spends in the facility. Other precautions apply.

†Immunization in last month with MMR or MMRV can be a cause of measles-like rash - check immunization history. Testing is not indicated if immunized against measles in last month and answer is no to all questions in Step 1.

California Department of Public Health | Immunization Branch
Adapted with permission from Tennessee Department of Health
IMM-1269 (5/19)

Measles and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against measles is to get the measles-mumps-rubella shot (called the MMR shot). Doctors recommend that all children get the MMR shot.

Why should my child get the MMR shot?

The MMR shot:

- Protects your child from measles, a potentially serious disease, as well as mumps and rubella.
- Prevents your child from getting an uncomfortable rash and high fever from measles.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is the MMR shot safe?

Yes. The MMR shot is very safe, and it is effective at preventing measles (as well as mumps and rubella). Vaccines, like any medicine, can have side effects. But most children who get the MMR shot have no side effects.

What are the side effects?

Most children do not have any side effects from the shot. The side effects that do occur are usually very mild, such as a fever, rash, soreness or swelling where the shot was given, or temporary pain and stiffness in the joints (mostly in teens and adults). More serious side effects are rare. These may include high fever that could cause a seizure.

Is there a link between the MMR shot and autism?

No. Scientists in the United States and other countries have carefully studied the MMR shot. None has found a link between autism and the MMR shot.

What is measles?

Measles is a serious respiratory disease (in the lungs and breathing tubes) that causes a rash and fever. It is very contagious. In rare cases, it can be deadly.

What are the symptoms of measles?

Measles starts with a fever that can get very high. Some of the other symptoms that may occur are:

- Cough, runny nose, and red eyes
- Rash of tiny, red spots that start at the head and spread to the rest of the body
- Diarrhea
- Ear infection

Doctors recommend that your child get 2 doses of the MMR shot for best protection. Your child will need one dose at each of the following ages:

- 12 through 15 months
- 4 through 6 years

Infants 6 months to 11 months old should have 1 dose of MMR shot before traveling to another country.

CS HCVG15-CHD-122 05/30/2017

Is it serious?

Measles can be dangerous, especially for babies and young children. From 2001-2013, 28% of children younger than 5 years old who had measles had to be treated in the hospital.

For some children, measles can lead to:

- Pneumonia (a serious lung infection)
- Lifelong brain damage
- Deafness
- Death

How does measles spread?

Measles spreads when a person infected with the measles virus breathes, coughs, or sneezes. It is very contagious. You can catch measles just by being in a room where a person with measles has been, up to 2 hours after that person is gone. And you can catch measles from an infected person even before they have a measles rash. Almost everyone who has not had the MMR shot will get measles if they are exposed to the measles virus.

Where do measles cases in the United States come from?

Every year, unvaccinated U.S. residents get measles while they are abroad and bring the disease into the United States and spread it to others. Measles is common in other parts of the world, including countries in Europe, Asia, the Pacific Islands, and Africa. Worldwide, about 20 million people get measles each year. When people with measles travel into the United States, they can spread the disease to unvaccinated people including children too young to be vaccinated.

How many measles cases are there in the United States each year?

From year to year, measles cases can range from roughly less than 100 to a couple hundred. However, in some years like 2014, there were more measles cases than usual. In 2014, 667 people from 27 states were reported as having measles. Most of these people got measles in the United States after being exposed to someone who got measles while in another country.

Where can I learn more about the MMR shot and my child?

To learn more about the MMR shot, talk to your child's doctor, call 1-800-CDC-INFO, or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend children receive all vaccines according to the recommended schedule.

El sarampión y la vacuna que lo previene

Actualizado en abril del 2017

La mejor manera de protegerse contra el sarampión es con la vacuna contra el sarampión, las paperas y la rubéola (también llamada vacuna triple vírica o MMR). Los médicos recomiendan que todos los niños reciban la vacuna MMR.

¿Por qué mi hijo debe recibir la vacuna MMR?

La vacuna MMR:

- Protege a su hijo del sarampión, una enfermedad potencialmente grave, como también de las paperas y la rubéola.
- Evita que su hijo tenga un sarpullido incómodo y fiebre alta debido al sarampión.
- Evita que su hijo falte a la escuela o a la guardería infantil (y evita que usted falte al trabajo para cuidar a su hijo enfermo).

¿Es segura la vacuna MMR?

Sí. La vacuna MMR es muy segura y eficaz para prevenir el sarampión (así como las paperas y la rubéola). Las vacunas, al igual que cualquier otro medicamento, pueden tener efectos secundarios. Sin embargo, la mayoría de los niños que reciben la MMR no presenta ningún efecto secundario.

¿Cuáles son los efectos secundarios?

La mayoría de los niños no presenta ningún efecto secundario a causa de la vacuna. Los efectos secundarios que se producen son por lo general muy leves, como fiebre, sarpullido, dolor o hinchazón en el lugar de la inyección, o dolor y rigidez pasajeros en las articulaciones (mayormente en los adolescentes y adultos). Los efectos secundarios más graves son raros. Estos pueden incluir fiebre alta, la cual puede causar convulsiones.

¿Hay algún vínculo entre la vacuna MMR y el autismo?

No. Los científicos en los Estados Unidos y otros países han estudiado cuidadosamente la vacuna MMR y ninguno de ellos ha encontrado un vínculo entre el autismo y la vacuna MMR.

¿Qué es el sarampión?

El sarampión es una enfermedad respiratoria grave (en los pulmones y las vías respiratorias) que causa un sarpullido y fiebre. Es muy contagioso. En casos poco frecuentes puede ser mortal.

Los médicos recomiendan que su hijo reciba 2 dosis de la vacuna MMR para que obtenga la mejor protección. Su hijo necesitará una dosis en cada una de las siguientes edades:

- entre los 12 y los 15 meses
- entre los 4 y 6 años

Los bebés de 6 a 11 meses deberían recibir 1 dosis de la vacuna MMR antes de viajar a otro país.

CS HCVG15-CHD-123 10/30/2017

¿Cuáles son los síntomas del sarampión?

El sarampión empieza con una fiebre que puede ser muy alta. Algunos de los otros síntomas que pueden presentarse son

- Tos, moqueo o secreción nasal y ojos rojos
- Sarpullido de diminutos puntitos rojos que empieza en la cabeza y luego se extiende al resto del cuerpo
- Diarrea
- Infección de oído

¿Es grave?

El sarampión puede ser peligroso, sobre todo en los bebés y niños pequeños. Desde el 2001 hasta el 2013, el 28 % de los niños menores de 5 años a los que les dio sarampión tuvieron que ser tratados en un hospital.

En algunos niños, el sarampión puede causar lo siguiente:

- Neumonía (una infección pulmonar grave)
- Daño cerebral permanente
- Sordera
- Muerte

¿Cómo se transmite el sarampión?

El sarampión se propaga cuando una persona infectada con el virus del sarampión respira, tose o estornuda. Es muy contagioso. Usted puede contraerlo simplemente al estar en una habitación en la que haya estado alguien con sarampión, incluso 2 horas después de que esa persona se haya ido del lugar. Y usted puede contraer el sarampión de una persona infectada incluso antes de que ella presente el sarpullido. Casi todos los que no han recibido la vacuna MMR contraerán la enfermedad si se exponen al virus del sarampión.

¿De dónde vienen los casos de sarampión en los Estados Unidos?

Cada año, personas sin vacunar que residen en los EE. UU. contraen el sarampión en el extranjero, traen la enfermedad a los Estados Unidos y la transmiten a otras personas. El sarampión sigue siendo común en otras partes del mundo, inclusive en países de Europa, Asia, las islas del Pacífico y África. A nivel mundial, cerca de 20 millones de personas contraen el sarampión cada año. Cuando las personas con sarampión ingresan a los Estados Unidos, pueden propagar la enfermedad a aquellas que no se hayan vacunado, incluso a los niños que son demasiado pequeños para recibir vacunas.

¿Cuántos casos de sarampión hay en los Estados Unidos cada año?

De año a año, los casos de sarampión pueden variar de prácticamente menos de 100 a un par de cientos. Sin embargo, en algunos años —como el 2014—, hubo más casos de sarampión de lo habitual. En el 2014, se reportó que 667 personas de 27 estados tuvieron sarampión. La mayoría de estas personas contrajeron sarampión en los Estados Unidos después de haber estado expuestas a alguien que se contagió de la enfermedad en otro país.

¿Dónde puedo obtener más información sobre la vacuna MMR para mi hijo?

Para obtener más información acerca de la vacuna MMR, hable con el médico de su hijo, llame al 1-800-CDC-INFO o visite www.cdc.gov/spanish/inmunizacion.

Los Centros para el Control y la Prevención de Enfermedades, la Academia Estadounidense de Médicos de Familia y la Academia Estadounidense de Pediatría recomiendan enfáticamente que todos los niños reciban las vacunas de acuerdo con el calendario de vacunación recomendado.

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