CLINICAL PATHWAYS – INTRODUCTION

Clinical Pathways are guidelines used to assist in the delivery of high-value, effective, efficient, safe, and family-centered care. Pathways have been shown to improve the quality of care for hospitalized children with many conditions and in different settings (1)

A definition of a clinical 'pathway' needs to satisfy four criteria (2)

(1) It is a structured multidisciplinary plan of care.
(2) It is used to translate guidelines or evidence into local practices.
(3) It details the steps in a course of treatment of care in a plan, pathway, algorithm,guideline, protocol, or other "inventory of actions."
(4) It is aimed to assist in standardizing care of a specific population.

These Clinical Decision-Support (CDS) tools are aimed to assist clinicians at the bedside to deliver evidence-based care. The **Algorithm (SECTION 2**) is a visual aid that helps guide clinicians, step-by-step through the timing, indications, and details of recommended tests and treatments for managing specific conditions.In this case, **Measles** is being addressed.

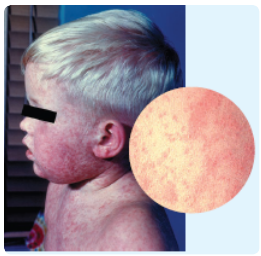
These PATHWAYS and their specific SECTIONS were developed by a consensus of a subject-matter-expert (SME) team, organized by the Clinical Effectiveness and Pathways (CEP) program at Nicklaus Children's Health System (NCHS). The SME team included clinicians from multiple disciplines and pediatric sub-specialties (see SECTION 7).

These clinical pathways are intended to be used as a compilation of best practice recommendations for practitioners. The practice of evidence-based pediatric medicine involves the use of pathways, the clinicians' experiences and judgment, and finally the patient's perspectives and values.
However, these clinical pathways are not intended to constitute specific medical recommendations for treatment. The practitioners must exercise their own independent judgment in applying these tools. These clinical pathways are not a script or 'cookbook' applicable to all patients. NCHS cannot certify that CDS documents are accurate or complete in every aspect. NCHS is not responsible for any errors or omissions in the use of clinical pathways or for any outcomes a patient might experience where a clinician consulted or followed these CDS in providing clinical care.

1-Rising utilization of inpatient pediatric asthma pathways.Kaiser SV, et al. J Asthma. 2017.
2-Lawal AK RT, Kinsman L, Machotta A, Ronellenfitsch U, Scott SD, Goodridge D, et al. What is a clinical pathway? Refinement of an operational definition to identify clinical pathway studies for a Cochrane systematic review. BMC Med 2016;14)

Measles

Resources (Click on links below)
CDC Clinical Overview of Measles
CDC Measles Clinical Features and Diagnosis
Photos of Measles



UCC/ED Phase

Patient meeting screening criteria

Minimize Risk of Transmission
- Ensure patient is wearing a **mask**
- Identify febrile rash illnesses prior to, or immediately upon arrival, to expedite evaluation in a **private room** (negative pressure room if available)
  - Have the patient avoid the waiting room (use a side/back entrance)
  - Initiate airborne precautions (don N95)
- Conduct patient evaluation in a room that can be **left vacant for at least 2 hours after the patient's visit**
- Vital signs as per nursing protocol
- History and PE
- Social History including epi risk factors

Report Immediately
- Clinician must notify Department of Health local to the patient. Refer to contact list.
- Report to NCHS Infection Prevention and Control (IPC) 786-624-2399
  - If afterhours- dial "0" for operator and ask to be transferred to IPC on-call immediately
- Urgent Care Centers Only: Call OPC OA 786-495-7712 AND IPC on-call by dialing "0"
- Consider ID consult

Specimen Collection and Testing
- If accepted by the DOH, labs are sent there. If not accepted and still a strong suspicion for measles, send labs to Quest.
- Notify the lab when a specimen for measles rule out is being collected/sent
- Include on the manual slip whether it was approved by the DOH or not
- Must obtain ALL of the following (contact lab if any issues with test orders):
  - Nasopharyngeal (NP) or oropharyngeal (OP) swab in universal transport media/viral transport media (PCR test)
  - Urine in sterile cup (PCR test)
  - Serum for measles-specific IgG and IgM (must be collected ≥72 hours after rash onset)

Clinical Assessment

Mild
- No respiratory distress or oxygen requirement
- Able to self-hydrate

Upon patient discharge, provide the following instructions:
- **Exclude**: patient contact from others for at least 4 days after the onset of rash
- **Provide** supportive treatment and vitamin A supplementation
- **Follow up** with virtual visit if possible

Discharge Patient

Moderate
- Mild/moderate respiratory distress
- Requiring ongoing IVF support

Admit to medical floor
- **Place patient under airborne precautions**
- **Supportive treatment**
- **Vitamin A supplementation**

Severe
- Rapidly worsening respiratory distress despite O2 support
- Sepsis/Shock

Admit to ICU
- **Place patient under airborne precautions**
- **Supportive treatment**
- **Vitamin A supplementation**

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Screening Criteria
Signs and Symptoms of Measles
Early onset of:
- High Fever
- Cough
- Coryza
- Conjunctivitis

2-3 days after symptoms begin:
- Koplik spots

3-5 days after:
- Descending maculopapular rash

Plus any of these Epi Risk Factors:
- International travel
- Domestic travel to an area with known measles transmission
- Known exposure to measles

Risk Factors for Severe Disease
- Children younger than 5 years
- Pregnancy
- Immunosuppression

Complications
- Severe Disease
  - Pneumonia
  - Encephalitis
- Long-term Complications
  - Subacute sclerosing panencephalitis (SSPE)

Management of Case and Exposed Contacts (See post-exposure prophylaxis Section 3)
- If measles lab test is **positive** (PCR of IgM) **OR** if there is a **high suspicion** for active measles infection
  - Notify NCHS IPC
  - Review immunity status of patient
    - Provide vaccine within 3 days or immunoglobulin within 6 days of exposure, as indicated
- Were staff and other patients potentially exposed to this patient?
  - Identify patients/visitors that have shared the same air space within 2 hours of case
  - **Charge nurse/supervisor**: contact NCHS IPC and Employee Health on-call for further information

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Visual Aid to Measles Clinical Recognition

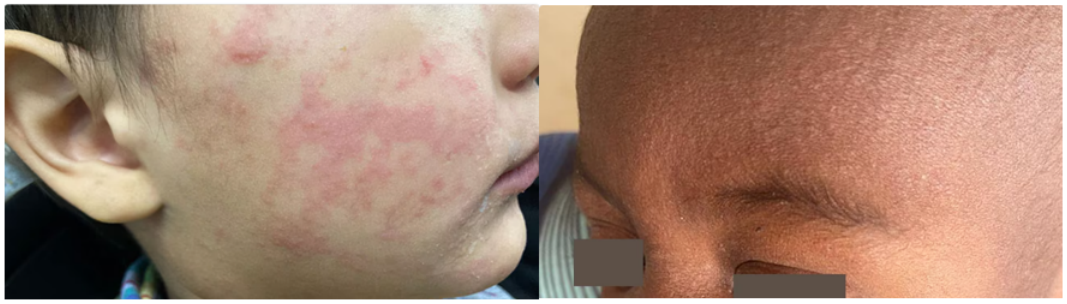
For Clinical Overview, see: Clinical Overview of Measles | Measles (Rubeola) | CDC

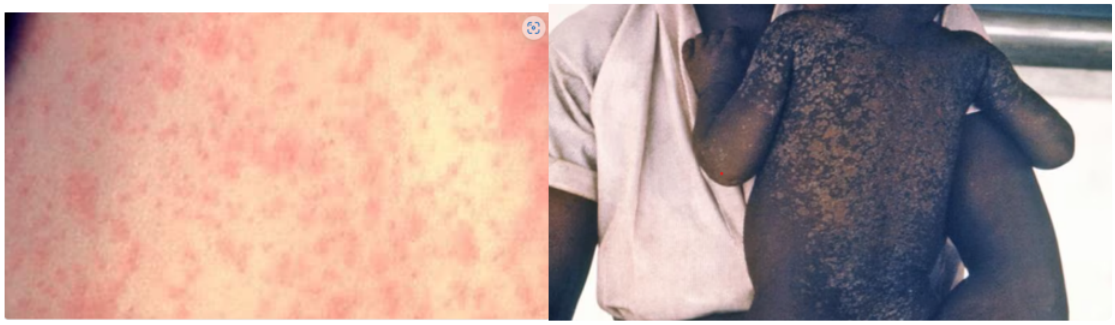
Key Points

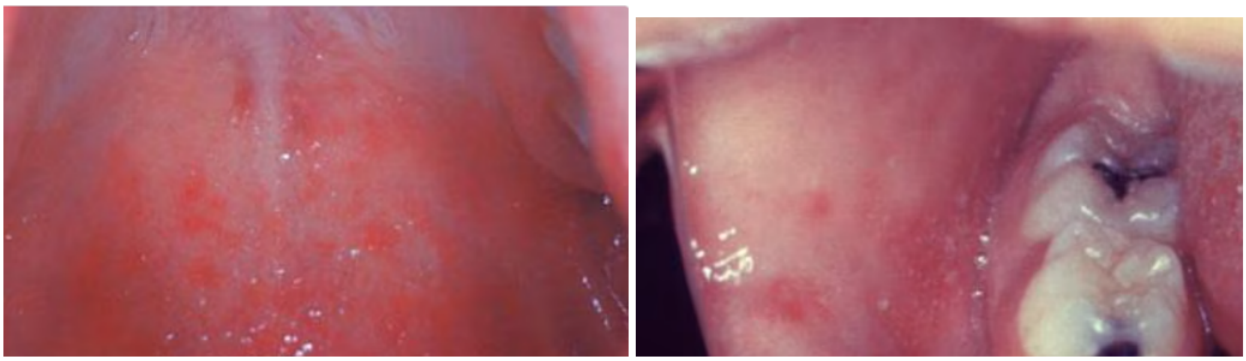
- Patients are considered to be contagious from 4 days before to 4 days after the rash appears.
- Isolate infected patients for 4 days after they develop a rash and follow airborne precautions in healthcare settings.
- Report suspected measles cases to your local health department. Testing requires prior approval from Regional Epidemiology and notification to the testing lab. Contact local County Health Department (CHD) to start the process for approval.
- Laboratory confirmation is essential for all sporadic measles cases and all outbreaks.

Examples of Measles Rashes

Photo credit: Photos of Measles | Measles (Rubeola) | CDC







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Measles Postexposure Prophylaxis Protocol

A. POSTEXPOSURE PROPHYLAXIS (PEP) FOR MEASLES EXPOSURE IN *IMMUNOCOMPETENT* PATIENTS

		PEP Type Depending on Time After Initial Exposure		
Age Range	**Measles Immune Status[a]**	**≤ 3 days (≤ 72 hours)**	**4-6 days**	**> 6 days**
All ages	Immune	• PEP not indicated. Exposed person has documented immunity		
< 6 months	Non-immune (due to age[b])	• Give intramuscular immunoglobulin (IMIG)[c] or intravenous immunoglobulin (IVIG) • Home quarantine[d]		• PEP not indicated (too late) • Home quarantine[d]
6-11 months	Non-immune	• Give MMR vaccine (MMR vaccine preferred over IG) • No quarantine needed[e]	• Give intramuscular immunoglobulin (IMIG)[c] or intravenous immunoglobulin (IVIG) • Home quarantine[d]	• PEP not indicated (too late) • Home quarantine[d]
≥ 12 months	Non-immune	• Give MMR vaccine • No quarantine needed[e]	• IG PEP usually not administered[f] • Home quarantine[d] then give MMR vaccine to protect from future exposures	
	1 dose of MMR vaccine	• Give 2nd MMR vaccine dose if ≥ 28 days from last dose of live vaccine • No quarantine needed[b] (person had 1 dose when exposed)		

[a]Acceptable evidence of immunity includes written documentation of age-appropriate vaccination, laboratory evidence of immunity, laboratory confirmation of disease, or birth before 1957.
[b]MMR vaccine is not indicated in this age group.
[c]Dosing of IGIM is 0.5 mL/kg of body weight (max dose 15 mL).
[d]The quarantine period is 21 days after the last exposure; most health departments would extend the monitoring period to 28 days if IG is administered as PEP, because IG can prolong the incubation period. Decisions on whether exposed persons who received IG as PEP appropriately (i.e., within 6-day window) should return to settings such as child-care, school, or work (i.e., not be quarantined) should include consideration of the immune status and intensity of contacts in the setting and presence of high-risk individuals. These persons should be excluded from health care settings.
[e]Quarantine is not needed for persons who received MMR as PEP appropriately (i.e., within the 3-day window), although these persons should be excluded from health care settings for 21 day.
[f]IGIM is recommended for infants <12 months of age, and IG administered intravenously is recommended for nonimmune pregnant people and severely immunocompromised persons. IGIM can be given to other persons (e.g., greater than or equal to 12 months of age) who do not have 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).

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A. POSTEXPOSURE PROPHYLAXIS (PEP) FOR MEASLES EXPOSURE IN *IMMUNOCOMPROMISED* AND/OR PREGNANT PATIENTS

Category	Measles Immune Status[a]	PEP Type Depending on Time After Initial Exposure		
		≤ 3 days (≤ 72 hours)	4-6 days	>6 days
Severely Immunocompromised	Will need IG regardless of measles immune status	• Give intravenous immunoglobulin (IVIG)[e] • Home quarantine[d]		• PEP not indicated (too late) • Home quarantine[d]
		• Give intravenous immunoglobulin (IVIG)[c,d] • Home quarantine[e] for 28 days after last exposure		
Pregnant	Immune	PEP not indicated		
	Non-immune	• Give intravenous immunoglobulin (IVIG)[e] • Home quarantine[d]		• PEP not indicated (too late) • Home quarantine[d]

[a]Acceptable evidence of immunity includes written documentation of age-appropriate vaccination, laboratory evidence of immunity, laboratory confirmation of disease, or birth before 1957.

[b]The degree of altered immunocompetence in a patient should be determined by a physician. Severely immunocompromised patients include patients with severe primary immunodeficiency; patients who have received a hematopoietic cell transplant until at least 12 months after finishing all immunosuppressive treatment, or longer in patients who have developed graft-versus-host disease; patients on treatment for acute lymphoblastic leukemia (ALL) within and until at least 6 months after completion of immunosuppressive chemotherapy; and patients with HIV with severe immunosuppression, which for children ≤5 years is defined as CD4+ T-lymphocyte percentage 5 years and adolescents is defined as a CD4+ T-lymphocyte percentage <15% or a CD4+ T-lymphocyte count <200 lymphocytes/mm3, and those who have not received MMR vaccine since receiving effective antiretroviral therapy. Additional severely immunocompromising conditions and medications are provided in Rubin LG, Levin MJ, Jungman P, et al. 2013 IDSA Clinical practice guideline for vaccination of the immunocompromised host. *Clin Infect Dis.* 2014;58(3):e44-e100

[c]Dosing of IVIG is 400 mg/kg of body weight

[d]The quarantine period is 21 days after the last exposure; most health departments would extend the monitoring period to 28 days if IG is administered as PEP because IG can prolong the incubation period. Decisions on whether exposed persons who received IG as PEP appropriately (ie, within 6-day window) should return to settings such as child care, school, or work (ie, not be quarantined) should include consideration of the immune status and intensity of contacts in the setting and presence of high-risk individuals. These persons should be excluded from health care settings.

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C. IMMUNE GLOBULIN (IG) DOSAGE FOR MEASLES EXPOSURE [1,2,3,4]

- Immune globulin should be administered ≤ 6 days of last exposure to measles
- There is only one IGIM product in the US (GamaSTAN®). Nicklaus Children's Hospital's formulation is GammaGARD®. **IVIG is an acceptable alternative to IMIG for patients < 12 months or < 30 kg if IMIG is contraindicated or not tolerated.**
- Screen for contraindications to IG. See Section D.
- Split doses to accommodate max volume based on age, site, and body habitus.
- Can administer more than 1 injection in single limb if separated by > 1 inch (preferred site Vastus Lateralis)
- IMIG orders must be entered as non-formulary and require consent. Round IM orders to the nearest measurable dose (e.g., to the nearest 0.1 mL).
- Administer IG intramuscular (IM) as per the table below. Do not administer more than the listed volumes per injection site.
- **Use clinical judgment when choosing site, max volume.**

Age	Location of Injection	Suggested maximum	Suggested Needle
Term newborn to 2 months	Vastus lateralis (Anterolateral thigh)	1 mL*	25-gauge x 5/8 inch
Infant (2 to 12 months old)		1 mL*	23-gauge x 1 inch
Toddler (1 to 3 years old)	Deltoid if muscle mass adequate	1 mL*	25-gauge x 5/8 inch
	Vastus lateralis (Anterolateral thigh)	2 mL*	23-gauge x 1 inch
Children 3 to 10 years old	Deltoid if muscle mass adequate	1 mL*	25-gauge x 5/8 inch or 23-gauge x 1 inch
	Vastus Lateralis (Anterolateral thigh)	3 mL*	23-gauge x 1 inch

*Evaluate size of muscle mass before administration

- IG and MMR vaccine should not be given at the same time. See below for interval.
- IG can be administered simultaneously with, or at any interval before or after, any inactivated vaccine.

Indications	Dose	Interval before MMR vaccine administration
Infants <12 months of age	0.5 mL/kg IM (max dose = 15 mL) OR 400 mg/kg IV (intravenously)	6 months if IM product given 8 months if IV product given
Susceptible Immunocompetent contacts <30 kg (66 lbs)[5]	0.5 mL/kg IM (max dose = 15 mL) OR 400 mg/kg IV (intravenously)	6 months if IM product given 8 months if IV product given
Susceptible Immunocompetent contacts ≥30 kg (66 lbs)[5]	400 mg/kg IV (intravenously)	8 months
Pregnant women without evidence of	400 mg/kg IV (intravenously)	8 months and nonpregnant
Severely immunocompromised persons[6] (also see section D)	400 mg/kg IV (intravenously)	8 months

[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)
[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 IVIG 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/mm3 (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 weight <10 kg) of prednisone or equivalent for ≥14 days
- Receiving certain biologic immune modulators (e.g., TNF-alpha 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.

CONTRAINDICATIONS:
- 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.
- IMIG should not be administered to persons with severe thrombocytopenia or any coagulating disorder that would contraindicate intramuscular injections.
- History of anaphylactic reaction to a previous dose of IG

PRECAUTIONS:
- Pregnancy: It is unknown whether IG can cause fetal harm when administered to a pregnant female or if it could affect reproduction
- Use caution in persons reporting a history of systemic allergic reaction following the administration of IG

SIDE EFFECTS AND ADVERSE REACTIONS (IGIM):
- Tenderness, pain, or soreness at injection site
- Usually resolves within 24 hours

OTHER CONSIDERATIONS:
- 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 IMIG and 8 months after the administration of IVIG.
- 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 IMIG administration or 8 months after IVIG administration.
- For persons already receiving IVIG 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 (SCIG) therapy, administration of at least 200 mg/kg body weight for 2 consecutive weeks before measles exposure should be sufficient.

D. VITAMIN A SUPPLEMENTATION FOR MEASLES INFECTION

Age	Route	Dose
Infants <6 months	Oral	50,000 units/day x 2 days (15,000 mcg RAE/day)
Infants 6 to 11 months	Oral	100,000 units/day x 2 days (30,000 mcg RAE/day)
Infants ≥ 12 months and Children	Oral	200,000 units/day x 2 days (60,000 mcg RAE/day)

RAE: Retinol Activity Equivalents
1 unit retinol = 0.3 mcg RAE = 0.3 mcg retinol

REFERENCES:
1. CDC. Prevention of Measles, Rubella, Congenital Rubella Syndrome, and Mumps, 2013: Summary Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR. June 14, 2013 / 62(RR04);1-34. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm
2. CDPH. Measles Investigation Quicksheet. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/Measles-Quicksheet.pdf
3. CDC. Measles: Postexposure Prophylaxis. In: Epidemiology and Prevention of Vaccine Preventable Diseases ("Pink Book"). Atkinson W, Hamborsky J, Wolfe S, eds.12th ed Second Printing. Washington, DC: Public Health Foundation, 2012: 186. Available at: http://www.cdc.gov/vaccines/pubs/pinkbook/meas.html
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5. Greenway K. Using the ventrogluteal site for intramuscular injection. Nurse Stand 2004; 18:39–42.
6. Nicholl LH & Hesby A. Intramuscular injection: an integrative research review and guideline for evidence-based practice. Appl Nurs Res 2002;15:149-62.
7. GamaSTAN® Immune Globulin package insert. Available at: www.talecris-pi.info/inserts/gamastans-d.pdf

Approved by Antibiotic Subcommittee of P&T March 2024
Approved by P&T April 2024

Measles – Recommendations for Testing for Clinicians

Measles is a mandatory, immediately notifiable disease. Please report confirmed and probable cases of measles to your local health department.

	Preference	Test	Specimen	Indication	Timing	Notes
ACUTE DISEASE	Preferred Test	RT-PCR	**Nasopharyngeal (NP) or throat (OP) swab** *(preferred)* Urine can be collected in addition to an NP/OP swab	Acute Disease	• A specimen for detection of virus should be collected as soon as possible upon suspicion of measles. • Specimen should be ideally collected within 3 days after rash onset but can be collected up to 10 days. • If >10 days since rash onset, PCR testing is generally not recommended.	• NP/OP swab collected <3 days after rash onset is the preferred specimen. Ideally, RT-PCR should be performed for all suspect measles cases identified within 10 days of rash onset. • Collecting a urine specimen along with an NP/OP swab may improve test sensitivity, especially if at the end of the RT-PCR detection window. • Contact your health department regarding where to send specimens for testing and genotyping, if appropriate.
	Preferred Test	IgM (with IgG)	Serum	Acute Disease	• Ideally, serology will be obtained for suspect measles cases, in addition to RT-PCR. • IgM is most sensitive 3+ days after rash onset and may be negative days 0–3 after rash onset. IgM can be detected for 6–8 weeks after acute measles.	• Detection of measles IgM can aid in the diagnosis of measles and can increase the detection window for acute cases. • Testing IgG for acute cases can provide evidence of pre-existing immunity, which can be helpful to differentiate rare instances of vaccine failure. • People with a history of measles vaccination may not have detectable IgM during an acute measles illness.
IMMUNITY	Only test for immunity	IgG only	Serum	Evidence of Immunity	• IgG can be detected approximately 2 weeks after measles vaccination.	• The presence of measles-specific IgG indicates a recent or prior exposure to measles virus or measles vaccine. • **IgM is not an appropriate test for immunity.**

* Viral culture is a valid way to confirm cases of acute measles disease; however, is not generally recommended as it takes longer to receive results than RT-PCR, which is widely available. Specimen collection and timing is similar to that for RT-PCR.
** Acute and convalescent phase serum specimen collection (separated by at least 2 weeks) to demonstrate a 4-fold increase in IgG titer can confirm measles infection but is generally not required to confirm measles infection.

Useful References:

- CDC Vaccine Preventable Disease Surveillance Manual: VPD Manual | Measles | CDC
- CDC Measles page for Healthcare Providers: Measles | For Healthcare Providers | CDC
- CDC Measles Serology Webpage: Measles Serology | CDC
- CDC Measles Laboratory Information: Measles | Lab Testing | CDC

Florida Department of Health Contact Information
For Providers to Report Diseases and Conditions

COUNTY MAILING ADDRESS	DAYTIME PHONE FOR REPORTING	AFTER-HOURS PHONE	CONFIDENTIAL FAX
DOH-Alachua Attn: Epidemiology P.O. Box 5849 Gainesville, FL 32627	352-225-4181 352-334-8842	352-334-7900	352-955-6464
DOH-Baker Attn: Epidemiology 480 W. Lowder Street Macclenny, FL 32063	904-653-5259	904-259-6291	904-428-5620
DOH-Bay Attn: Epidemiology 597 W. 11th Street Panama City, FL 32401	850-872-4720 Ext. 0-9547 Ext. 0-9664	850-872-4720	850-747-5475
DOH-Bradford Attn: Epidemiology 1801 North Temple Avenue Starke, FL 32091	904-964-7732 Ext. 1118	904-964-7732	904-964-3829
DOH-Brevard Attn: Epidemiology 2565 Judge Fran Jamieson Way Viera, FL 32940	321-454-7101	321-454-7101	321-454-7128
DOH-Broward Attn: Epidemiology 780 SW 24th Street Ft. Lauderdale, FL 33315	954-213-0710	954-734-3046	954-467-4870 954-713-3169
DOH-Calhoun Attn: Epidemiology 19611 SR 20 West Blountstown, FL 32424	850-674-5645	850-643-6048	850-674-5420
DOH-Charlotte Attn: Epidemiology 1100 Loveland Blvd. Port Charlotte, FL 33980	941-624-7236 941-915-3699	941-204-7915	941-624-7277
DOH-Citrus Attn: Epidemiology 3700 West Sovereign Path Lecanto, FL 34461	352-527-0068	352-527-0068	352-527-0393
DOH-Clay Attn: Epidemiology P.O. Box 578 Green Cove Springs, FL 32043	904-529-2924 904-529-2800	904-529-2800	904-529-1043 904-529-2802
DOH-Collier Attn: Epidemiology 3339 Tamiami Trail East, Suite 145, Bldg. H, Naples, FL 34112	239-252-8226	239-293-3010	239-896-1905

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COUNTY MAILING ADDRESS	DAYTIME PHONE FOR REPORTING	AFTER-HOURS PHONE	CONFIDENTIAL FAX
DOH-Columbia Attn: Epidemiology 217 NE Franklin Street Lake City, FL 32055	386-758-1068 386-758-1069	386-758-1068	386-758-2180
DOH-DeSoto Attn: Epidemiology 34 South Baldwin Avenue Arcadia, FL 34266	863-993-4601 Ext. 106	863-303-3701	863-491-7584
DOH-Dixie Attn: Epidemiology 149 NE 241st Street Cross City, FL 32628	352-498-1360	786-942-3253 352-363-0121 352-221-2655	352-498-1363
DOH-Duval Attn: Epidemiology 921 N. Davis Street Bldg A Suite 215, MC-28 Jacksonville, FL 32211	904-253-1850	904-434-6035	904-253-1851
DOH-Escambia Attn: Epidemiology 1295 West Fairfield Drive Pensacola, FL 32501	850-595-6683	850-418-5566	850-595-6268
DOH-Flagler Attn: Epidemiology P.O. Box 847 301 Dr. Carter Blvd Bunnell, FL 32110	386-313-7101 386-313-7088	386-986-7749	386-437-8207
DOH-Franklin Attn: Epidemiology 139 12th Street Apalachicola, FL 32320	850-653-2111	850-653-5980 850-370-0803	850-653-2160
DOH-Gadsden Attn: Epidemiology 278 Dr. LaSalle Leffall Drive Quincy, FL 32351	850-875-7200 Ext. 6030	850-743-7273	850-875-7216
DOH-Gilchrist Attn: Epidemiology 119 First Avenue, NE Trenton, FL 32693	352-463-3120	786-942-3253 352-363-0121 352-221-2655	352-463-3124
DOH-Glades Attn: Epidemiology P.O. Box 489 Moore Haven, FL 33471	863-674-4041 Ext. 103	863-673-2072	863-674-4606

Florida Department of Health Contact Information
For Providers to Report Diseases and Conditions

COUNTY MAILING ADDRESS	DAYTIME PHONE FOR REPORTING	AFTER-HOURS PHONE	CONFIDENTIAL FAX
DOH-Gulf Attn: Epidemiology 2475 Garrison Avenue Port St. Joe, FL 32456	850-227-1276	850-227-1276	850-227-1766
DOH-Hamilton Attn: Epidemiology P.O. Box 267 209 SE Central Ave. Jasper, FL 32052	386-792-1414	386-792-1414	386-792-2352
DOH-Hardee Attn: Epidemiology 115 K.D. Revell Road Wauchula, FL 33873-2051	863-519-8300	863-519-8300 863-413-2620	863-519-8306
DOH-Hendry Attn: Epidemiology P.O. Box 70 1140 Pratt Blvd. LaBelle, FL 33975-0070	Labelle: 863-674-4041 Clewiston: 863-983-1408	863-673-2072	863-674-4606
DOH-Hernando Attn: Epidemiology 300 South Main Street Brooksville, FL 34601	352-540-6897	352-279-3733	352-688-5067
DOH-Highlands Attn: Epidemiology 7205 South George Blvd. Sebring, FL 33875	863-382-7224	863-446-1108	863-382–3970
DOH-Hillsborough Attn: Epidemiology P.O. Box 5135 1105 East Kennedy Boulevard Tampa, FL 33675-5135	813-307-8010	813-307-8000	813-276-2981
DOH-Holmes Attn: Epidemiology P.O. Box 337 603 Scenic Circle Bonifay, FL 32425	850-547-8500	850-547-8500	850-547-8515
DOH-Indian River Attn: Epidemiology 1900 27th Street Vero Beach, FL 32960	772-794-7472	772-794-7472	772-794-7482
DOH-Jackson Attn: Epidemiology 4979 Healthy Way Marianna, FL 32446	850-526-2412	850-526-2412	850-718-0477
DOH-Jefferson Attn: Epidemiology 1255 West Washington Street Monticello, FL 32344	850-342-0170	850-342-0170	850-342-0257

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COUNTY MAILING ADDRESS	DAYTIME PHONE FOR REPORTING	AFTER-HOURS PHONE	CONFIDENTIAL FAX
DOH-Lafayette Attn: Epidemiology 140 SW Virginia Circle Mayo, FL 32066-1806	386-294-1321 Ext. 233	386-294-1321	386-294-3876
DOH-Lake Attn: Epidemiology P.O. Box 1305 Tavares, FL 32778	352-771-5500 Ext. 2375	352-630-7805 352-801-3735 352-250-7329	352-669-3166
DOH-Lee Attn: Epidemiology 3920 Michigan Avenue Ft. Myers, FL 33916	239-332-9580	239-872-0349	239-332-9553
DOH-Leon Attn: Epidemiology 2965 Municipal Way Tallahassee, FL 32316	850-404-6299	850-404-6299	850-921-9855
DOH-Levy Attn: Epidemiology 66 West Main Street Bronson, FL 32621	352-486-5300	786-942-3253 352-363-0121 352-221-2655	352-486-5307
DOH-Liberty Attn: Epidemiology 12832 North Central Avenue Bristol, FL 32321	850-643-2292 Ext. 110	850-643-6048	850-643-2306
DOH-Madison Attn: Epidemiology 218 SW Third Avenue Madison, FL 32340	850-973-5000	850-973-5000	850-973-5007
DOH-Manatee Attn: Epidemiology 410 6th Avenue East Bradenton, FL 34208-1968	941-748-0747 Ext. 1266	941-748-0747	941-714-7164
DOH-Marion Attn: Epidemiology 1801 SE 32nd Avenue Ocala, FL 34471	352-629-0137	866-568-0122	352-620-6848
DOH-Martin Attn: Epidemiology 3441 SE Willoughby Blvd. Stuart, FL 34994	772-221-4000 Option 6	772-221-4000	772-223-2533
DOH-Miami-Dade Attn: Epidemiology 1350 NW 14th Street, Annex Building Miami, FL 33125	305-470-5660	305-470-5660	786-732-8714
DOH-Monroe Attn: Epidemiology 1100 Simonton Street Key West, FL 33041	305-317-9120 305-797-0351	305-293-7500	305-433-9145

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DOH-Nassau Attn: Epidemiology 1620 Nectarine Street Fernandina Beach, FL 32034	904-875-6100	904-813-6801	904-428-5630
DOH-Okaloosa Attn: Epidemiology 221 Hospital Drive NE Fort Walton Beach, FL 32548	850-833-9065	850-833-9065	850-833-7577
DOH-Okeechobee Attn: Epidemiology 1728 NW 9th Avenue Okeechobee, FL 34972	863-462-5800	863-462-5800	863-462-5821
DOH-Orange Attn: Epidemiology 6101 Lake Ellenor Drive Orlando, FL 32809	407-858-1420	407-383-0185	407-858-5517
DOH-Osceola Attn: Epidemiology 1875 Fortune Road Kissimmee, FL 34744	407-343-2155	407-343-2155	407-343-2145
DOH-Palm Beach Attn: Epidemiology 800 Clematis Street – 2nd Floor West Palm Beach, FL 33401	561-671-4184	561-840-4500	561-837-5330
DOH-Pasco Attn: Epidemiology 13941 15th Street Dade City, FL 33525	352-521-1450 Option 5	727-207-7104	352-521-1435
DOH-Pinellas Attn: Epidemiology 205 Dr. MLK Jr. Street North St. Petersburg, FL 33701	727-824-6932	727-824-6932	727-484-3865
DOH-Polk Attn: Epidemiology 2090 E. Clower Street Bartow, FL 33830	863-519-8300	863-519-8300 or 863-413-2620	863-519-8306
DOH-Putnam Attn: Epidemiology 2801 Kennedy Street Palatka, FL 32177	386-326-3201	386-937-3563	386-326-3350
DOH-Santa Rosa Attn: Epidemiology P.O. Box 929 5527 Stewart St. Milton, FL 32572	850-983-5200 Ext. 2284	850-418-5566	850-983-4504

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COUNTY MAILING ADDRESS	DAYTIME PHONE FOR REPORTING	AFTER-HOURS PHONE	CONFIDENTIAL FAX
DOH-Sarasota Attn: Disease Intervention Services PO Box 2658 Sarasota, FL 34230-2658	941-861-2873	941-861-2900	941-526-1534
DOH-Seminole Attn: Epidemiology 400 West Airport Blvd. Sanford, FL 32773-5496	407-665-3243 Option 2	407-665-3000 Option 1	407-845-6055
DOH-St. Johns Attn: Epidemiology 200 San Sebastian View, St. Augustine, FL 32084	904-506-6081 Option 3	904-506-6081	904-823-2380
DOH-St. Lucie Attn: Epidemiology 5150 NW Milner Drive Port St. Lucie, FL 34983	772-462-3883	772-462-3800	772-873-8593
DOH-Sumter Attn: Epidemiology P.O. Box 98 415 E. Noble Avenue Bushnell, FL 33513	352-569-3115	352-303-6237	352-512-6555
DOH-Suwannee Attn: Epidemiology 915 Nobles Ferry Road Live Oak, FL 32060	386-362-2708 Ext. 235 or Ext. 214	386-362-2708	386-362-6301
DOH-Taylor Attn: Epidemiology 1215 North Peacock Street Perry, FL 32347	850-584-5087	850-672-1570	850-584-7335
DOH-Union Attn: Epidemiology 495 East Main Street Lake Butler, FL 32054	904-964-7732 Ext. 1115	386-496-3211	386-496-1599
DOH-Volusia Attn: Epidemiology P.O. Box 9190 Daytona Beach, FL 32120	386-274-0633	386-316-5030	386-274-0641
DOH-Wakulla Attn: Epidemiology 48 Oak Street Crawfordville, FL 32327	850-926-0400	850-745-4143	850-412-1444
DOH-Walton Attn: Epidemiology 362 State Hwy. 83 DeFuniak Springs, FL 32433	850-833-9065 Ext. 6094	850-689-5755	850-892-8457
DOH-Washington	850-638-6240	850-638-6245	850-638-6244

Nicklaus Children's Health System

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Return to UCC Phase

Return to ED Phase

Return to Inpatient Phase

Approval and Citation

Nicklaus Children's Health System

UCC/ Emergency Department

1. Frequency of patients treated according to the pathway

ICD-10 Codes

- Measles B05.9
- Measles keratitis B05.81
- Measles pneumonia B05.2
- Measles screening Z11.59
- Measles complication, myocarditis, central nervous system B05.89
- Measles uncomplicated B05.9
- Measles vaccine poisoning T50.B91A
- Measles, German (rubella) B06.9
- Mealses keratoconjunctivitis B05.81
- Measles complicated by otitis B05.3
- Measles vaccination administered Z23
- Measles complicated by meningitis B05.1

Nicklaus Children's Health System

CLINICAL EFFECTIVENESS / PATHWAYS PROGRAM

SUBJECT-MATTER EXPERTS (SME) TEAM

ID: Otto Ramos, Carolina Sanchez-Vegas
Infection Prevention Control: Cassandra Scarfone, Samantha Baudin
Pharmacy: Rebeca Calderon

Clinical Effectiveness & Pathways (CEP) program Lead TEAM

Mario A. Reyes: CE Program Director
Danielle Sarik: Director Nursing Research
Jose Rosa-Olivares: CMIO
Maria Ramon-Coton: UCC Director
David Lowe: Emergency Medicine
Beatriz Cunill: Residency Program Director
Melissa Clemente: Hospitalist
Kassandra Ramos: Clinical Specialist
Natalia Lopez-Magua: Clinical Nurse
David Taska: Clinical Pharmacist Specialist
Donna Lewis Lee: Systems Analyst
William Smit: Data Scientist
Veronica Etinger: CE Program Director
Jenna Lang: CE Program Manager
Rodney Baker: Director Hospital Operations
Richmond Darko: UCC
Pritvi Raj Sendi: PICU
Sophia Hassor: Hospitalist
Ana Bandin: Clinical Practice Specialist
Sheree Mundy: Clinical Specialist-UCC
Rebeca Calderon: Clinical Pharmacist Specialist
Rosa Braceras Padron: Pharmacist Systems Analyst
Lourdes Lopez-Fernandez: Supervisor Clinical Informatics
Roberto Gonzalez Jr: Designer

Executive Approval

Marcos Mestre: SVP and Chief Clinical Operations Officer

Approval by CE Program : 4/9/24
NCHS- SYSTEM-WIDE Go-live Date: 4/24/24
Revisions with updated guidelines: 3/5/25