**MEASLES-MUMPS-RUBELLA (MMR) VACCINE RECOMMENDATIONS**

**Routinely Recommended for Children:**
- 12-15 months (first dose)
- 4-6 years of age (second dose), or at least 28 days following first dose.

**Before International Travel:**

<table>
<thead>
<tr>
<th>Infants 6-11 months:</th>
<th>Unvaccinated children 12+ months, including teens and adults with no evidence of immunity:</th>
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<tbody>
<tr>
<td>• Receive 1-dose early.</td>
<td>• Receive first dose immediately.</td>
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<tr>
<td>• Follow recommended schedule.</td>
<td>• Receive second dose at least 28 days following first dose.</td>
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<td>Receive another dose at 12-15 months and a final dose at 4-6 years.</td>
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**DISEASE PROGRESSION:**
- **Incubation Period:** 10-14 days
- **Prodromal Phase:** 2-4 days before rash onset
- **Infectious Period:** 4 days before rash to 4 days after rash

**MEASLES INFECTION AND PREVENTION FOR CLINICIANS**

**CLINICAL FEATURES**

**Case Definition:**
- Fever (up to 105°F), and
- Rash, and
- Cough, coryza (runny nose), or conjunctivitis.

**Measles Rash:**
- Starts on face, at hairline, or behind ears.
- Spreads downwards to neck, trunk, and extremities.
- Maculopapular (small raised or flat red bumps, spots may join together as rash spreads).
- Not usually itchy.
- Koplik spots may be present on buccal mucosa.

**Disease Progression:**
- Incubation Period: 10-14 days
- Prodromal Phase: 2-4 days before rash onset
- Infectious Period: 4 days before rash to 4 days after rash

**DIAGNOSIS**

Consider measles in patients presenting with febrile rash illness and clinically compatible measles symptoms, especially if the patient recently traveled internationally or was exposed to a person suspected to have measles.

**Specimen Testing**
Collect both from suspected case(s):
- Serum sample for IgM antibody testing, and
- Throat or nasopharyngeal (NP) swab for real-time polymerase chain reaction (RT-PCR) testing.

**Report Suspected and Confirmed Cases**
Healthcare providers are required to report to their local health department.
- Complete Confidential Morbidity Report.
- Fax to (619) 692-5677, or
- Email to PHS-IZPHN.HHSA@sdcounty.ca.gov, or
- Call (866) 358-2966 option 5, or
- **Afterhours & weekends** call 858-565-5255

**Resources:**
- San Diego County Epidemiology & Immunization Services Branch
- Centers for Disease Control and Prevention