### Performance Measure: MMR Vaccination

Percentage of pediatric patients\(^1\) / children living with HIV infection who have had at least one dose of Measles, Mumps, and Rubella (MMR) vaccine administered between 12-24 months of age

<table>
<thead>
<tr>
<th>Numerator:</th>
<th>Number of children living with HIV who had at least one dose of MMR administered(^2) between 12-24 months of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator:</td>
<td>Number of children living with HIV &gt; 2 years and &lt; 3 years of age who had a medical visit with a provider with prescribing privileges(^3) at least once in the measurement year</td>
</tr>
</tbody>
</table>

**Patient Exclusions:**
1. Pediatric patients with CD4 < 15% between 12-24 months of age
2. Pediatric patients newly enrolled after 2 years of age

**Data Elements:**
- Is the pediatric patient (Child living with HIV) ? (Y/N)
  - If yes, was the patient > 2 years and < 3 years of age at any time in the measurement year? (Y/N)
    - If yes, was the patient seen by a provider with prescribing privileges during the measurement year? (Y/N)
      1. If yes, did the patient receive at least one dose of MMR vaccine between 12-24 months of age? (Y/N)
        - If yes, list the date of immunization or serology

**Data Sources:**
- Electronic Medical Record/Electronic Health Record
- CAREWare, Lab Tracker or other electronic database
- Medical record data abstraction by grantee of a sample of records
- Billing records

**National Goals, Targets, or Benchmarks for Comparison:**
Healthy People 2020 goal: \(^4\) In 2012, measles-mumps-rubella (MMR) vaccination rates for all states were above 84.6%. Thirty-six states had a vaccination coverage of 90% and above.

**Outcome Measures for Consideration:**
- Rate of measles in the clinic population
- Rate of mumps in the clinic population
- Rate of rubella in the clinic population

**Department of Health and Human Services Guidelines:**
*Panel on Guidelines for the Prevention and Treatment of Opportunistic Infections Among HIV-Exposed and HIV-Infected Children:* \(^6\) HIV-infected children should be protected from vaccine-preventable diseases. Most vaccines recommended for routine use can be administered safely to HIV-exposed or HIV-infected children. The recommended vaccination schedules for HIV-exposed and HIV-infected children aged 0 to 18 years correspond to the ACIP-approved schedule with ACIP-approved additions specific to HIV-infected children incorporated (see Figures 1 and 2). These schedules will be updated periodically to reflect additional ACIP-approved vaccine recommendations that pertain to HIV-exposed or HIV-infected children.

Measles, mumps, and rubella (MMR) vaccine. (Minimum age: 12 months for routine vaccination)

Routine vaccination:
• Administer a 2–dose series of MMR vaccine at ages 12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.

• Administer 1 dose of MMR vaccine to infants aged 6 through 11 months before departure from the United States for international travel. These children should be revaccinated with 2 doses of MMR vaccine, the first at age 12 through 15 months (12 months if the child remains in an area where disease risk is high), and the second dose at least 4 weeks later.

• Administer 2 doses of MMR vaccine to children aged 12 months and older before departure from the United States for international travel. The first dose should be administered on or after age 12 months and the second dose at least 4 weeks later.

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Catch–up vaccination:
• Ensure that all school–aged children and adolescents have had 2 doses of MMR vaccine; the minimum interval between the 2 doses is 4 weeks.

References/Notes:

1 “Pediatric patient”/ “Children living with HIV” includes all patients younger than 13 years.

2 Documentation of vaccination can include any of the following: 1) immunization record from another provider; 2) personal record of immunization; or 3) serologic evidence of antibody titers. If serology is used, titers must have been drawn before 2 years of age.

3 A “provider with prescribing privileges” is a health care professional who is certified in his/her jurisdiction to prescribe medications.

