Client: HMSA: PQSR 2007

Measure Title: CHILDHOOD IMMUNIZATION: MEASLES, MUMPS, AND RUBELLA (MMR)

Disease State: Measles, Mumps, Rubella

Indicator Classification: Prevention

Strength of Recommendation: A

Clinical Intent: To ensure that all eligible children receive their MMR vaccination at the clinically appropriate timeframe.

Physician Specialties: Refer to PQSR 2007 Specialty Matrix

Clinical Rationale: Disease Burden

- In the pre-vaccination era in the United States for measles (prior to 1963), rubella (prior to 1969), and mumps (prior to 1967), there were many more cases of these diseases than there are today due to the implementation of universal immunization programs.[1]
  - For measles, there were 400,000 reported cases per year compared with less than 0.5 per 1,000,000 during the period 1997 to 1999.[2]
  - For mumps, there were 186,000 reported cases compared with 906 in 1995.[1]
  - For rubella, there were 57,600 reported cases compared with 225 in 1988.[1]
- None of these diseases has been eradicated and severe complications require immunizations to continue to be administered. Complications include:
  - Diarrhea, middle ear infection, bronchopneumonia, encephalitis, subacute sclerosing panencephalitis, and multiple severe problems in pregnancy for measles;
  - Parotitis, fever, headache, malaise, myalgia, anorexia, respiratory symptoms, orchitis, aseptic meningitis, meningoencephalitis, and fetal death if the infection is contracted in the first trimester for mumps; and
  - Rash, lymphadenopathy, arthralgia, fever, polyarthritis, encephalitis, thrombocytopenia, and multiple severe problems in pregnancy for rubella.[3]

Reason for Indicated Intervention or Treatment

- Since monovalent vaccines containing measles, rubella, and mumps vaccine viruses – and subsequently combined measles-mumps-rubella (MMR) vaccine – were licensed, the numbers of reported cases of measles, mumps, rubella, and congenital rubella syndrome (CRS) have decreased by more than 99%.[1]
- Less than 20% of children are vaccinated based on clinical guidelines in a timely manner and one in three is under vaccinated for 6 months during their first 24 months of life.[4, 5]

Evidence supporting Intervention or Treatment

- The vaccine has been shown to be highly immunogenic, with seroconversion rates of 95 to 100% being achieved for each of the 3
component vaccines. This immunity appears to be long-lasting and may even be lifelong."[6, 7]

- Ninety-five percent of children vaccinated with the current measles vaccine at age 12 months and 98 percent vaccinated at age 15 months develop measles antibodies.[1]

Clinical Recommendations

- Children should get 2 doses of MMR vaccine: The first at 12-15 months of age and the second at 4-6 years of age. These are the recommended ages. But children can get the second dose at any age, as long as it is at least 28 days after the first dose.[4, 8]

- Some adults should also get MMR vaccine: Generally, anyone 18 years of age or older, who was born after 1956, should get at least one dose of MMR vaccine, unless they can show that they have had either the vaccines or the diseases.”[4, 8]

Source
Adapted from the HEDIS 2007 specification. HBI uses an 11-24 month vaccination period and the same period requirement for continuous enrollment. HEDIS allows the vaccination to occur anytime before the child’s second birthday.

Denominator
Continuously enrolled children whose second birthday fell during the measurement year.

Denominator Exclusion
Members with contraindications for MMR in the member’s history at any time prior to or on their 2nd birthday.

Relevant Billing Codes:
- ICD-9 diagnosis code(s): 042, 079.53, 200.xx-202.xx, 203.xx, 204.xx–208.xx, 279.xx, 795.71, 999.4x
- ICD-9 Status “V” code(s): V08

Numerator
Members with at least one MMR vaccination from 11 months of age through 24 months of age. Alternatively, a combination of either: (1) receipt of vaccination component between 11 months of age through 24 months of age or (2) history of disease diagnosis for measles, mumps, and rubella any time in available member’s history prior to or on the members’ 2nd birthday.

Relevant Billing Codes:
- ICD-9 diagnosis code(s): 055.xx, 056.xx, 072.xx
- CPT-4 codes: 90704, 90705, 90706, 90707, 90708, 90709, 90710

Interpretation of Score
High score implies better performance

Physician Attribution
Score all physicians (in the selected specialties) who saw the member between ages 11 – 24 months.
References


**Indicator Classification** (Adapted from Health Plan Employer Data Information Set (HEDIS®) technical specifications)

**Diagnosis**
Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g. evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain).

**Effectiveness of Care**

**Prevention**
Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g. immunizations).

**Screening**
Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g. pap smears; screening for elevated blood pressure).

**Disease Management**
Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g. cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).

**Medication Monitoring**
Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g. thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy).

**Medication Adherence**
Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g. adherence to lipid lowering medication).

**Utilization**
Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g. conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).
FIGURE 2. Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)