1. **What is Menactra™(MCV4)? What is Menomune®(MPSV4)?**

MCV4 is a quadrivalent *conjugate* vaccine and MPSV4 is a quadrivalent *polysaccharide* vaccine. MPSV4 was originally licensed in the U.S. in 1981. MCV4 is new to the vaccine market. Both vaccines are effective in preventing serogroup types A, C, Y, and W-135.

2. **What is the difference between MCV4 and MPSV4?**

MCV4 is a capsular polysaccharide of serogroups A, C, Y, and W-135 conjugated to diphtheria toxoid. MCV4 is designed to stimulate cell-mediated as well as humoral immunity and it will likely result in longer immunity due to anamnestic response. Thus, it is not anticipated that individuals who receive MCV4 will require a booster shot. MPSV4 is licensed for use among individuals \( \geq 2 \) years of age while MCV4 is currently licensed only for use among persons 11-55 years of age.

3. **What are the national Advisory Committee on Immunization Practices (ACIP) recommendations for MCV4?**

The ACIP recommends:

- Routine vaccination of young adolescents (11-12 year olds) with MCV4 at the pre-adolescent health-care visit;
- Vaccination before high school entry (at approximately age 15 years) for those who did not receive the vaccine at ages 11 or 12.

By 2008, the goal will be routine vaccination with MCV4 of all adolescents beginning at age 11 years. Other adolescents who wish to decrease their risk for meningococcal disease may elect to receive vaccine.

ACIP also recommends MCV4 for certain persons who have an increased risk for meningococcal disease, including:

- College freshmen living in dormitories;
- Microbiologists who are routinely exposed to isolates of *N. meningitidis*.
Military recruits;
Persons who travel to or reside in countries in which *N. meningitidis* is hyperendemic or epidemic, particularly if contact with the local population will be prolonged;
Persons who have terminal complement component deficiencies; and
Persons who have anatomic or functional asplenia.

Use of MCV4 is preferred among persons aged 11-55 while the use of MPSV4 is recommended for children aged 2-10 years and persons aged >55. If MCV4 is unavailable, MPSV4 is an acceptable alternative for person aged 11-55 years. Specific recommendations are available at [http://www.cdc.gov/mmwr/PDF/rr/rr5407.pdf](http://www.cdc.gov/mmwr/PDF/rr/rr5407.pdf).

4. **What is the distribution of meningococcal serogroup causing disease in Oregon, and how do they compare to serogroup distribution nationally?**

Figures 1 and 2 show the distribution of meningococcal disease serogroups, nationally (Figure 1) and in Oregon (Figure 2).

**Figure 1. Meningococcal Serogroup Distribution, United States, 2003**

- B: 42%
- C: 19%
- Y: 14%
- W: 25%
- Other: 15%

**Figure 2. Meningococcal Serogroup Distribution, Oregon, 2004**

- B: 75%
- C: 8%
- Y: 2%
- W: 135/Other

Source: CDC’s ABC Program

Source: Oregon Department of Human Services
5. **Do Oregon’s meningococcal disease rates differ from U.S. rates?**

Oregon’s incidence rate for meningococcal disease has steadily declined since its peak in 1994. However, Oregon continues to have a higher meningococcal incidence rate (1.7/100,000), overall and by serogroups, than the U.S. (~1.0/100,000). The Oregon rate for serogroup B is 4.5 times the U.S. rate.

Rates* of Meningococcal Disease by Serogroup

<table>
<thead>
<tr>
<th>Serogroup</th>
<th>Oregon 2000-2004</th>
<th>United States 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>1.15</td>
<td>0.24</td>
</tr>
<tr>
<td>C</td>
<td>0.21</td>
<td>0.14</td>
</tr>
<tr>
<td>Y</td>
<td>0.23</td>
<td>0.11</td>
</tr>
</tbody>
</table>

* Per 100,000 population, CDC, ABC surveillance data


Oregon data, DHS 2000-2004

6. **What is the risk of meningococcal disease among college students in Oregon and nationally?**

Nationally, college students at the highest risk of meningococcal disease are college freshmen who reside in dorms. U.S. surveillance data from 1998-1999 indicated that college freshmen, in general, have a rate of 1.9/100,000 compared to the rate of 5.1 for college freshman residing in dormitories.¹

Of the 1039 meningococcal cases that occurred in Oregon from 1993-2004, only 10 (<1%) occurred in four-year college students (0.7/100,000 students). Of these cases, six were serogroup B and four were serogroup C; the single death was due to serogroup B.

7. **Is Menactra™ cost-effective?**

A recent study published in May 2005 showed that routine vaccination of children in the United States would reduce meningococcal disease; however, this would be at the expense of a relatively high net financial cost to society.² Routine adolescent vaccination would cost $633,000 per case prevented and $121,000 per life-year saved. In comparison, routine childhood vaccinations with varicella and hepatitis B are cost
saving and routine infant pneumococcal conjugate vaccination costs society $80,000 per life-year saved.

In Oregon, the predominance of serogroup B disease might reduce the vaccine’s cost effectiveness. However, because Oregon also has higher rates of non-B serogroup B disease than the rest of the country, MCV4 may reduce Oregon’s overall meningococcal disease rates as part of a routine vaccination strategy.

8. What does the Oregon Immunization Program recommend regarding the use of MCV4 in Oregon?

The Oregon Immunization Program supports the new ACIP recommendations. Persons wanting to reduce their risk for meningococcal disease may consider receiving this safe and immunogenic meningococcal vaccine.

There is VFC money to pay for vaccine for VFC eligible children. However, for those not VFC eligible, we do not have extra funds, and given its high cost per case and death prevented, we will not be paying for it with funds used to purchase other vaccines.

9. Can you explain Vaccines for Children (VFC) coverage and allocation criteria for Oregon?

Under the VFC program, children aged 11, 12, and 15, as well as 18 year olds who are or will be college freshmen living in dorms may be vaccinated, if they also meet VFC criteria. VFC eligibility is for children ages 0-18 who are Medicaid eligible, completely uninsured, or Native American/Alaskan Native.

10. How are MCV4 and MPSV4 supplied for the VFC program? Is there a minimum order?

MCV4 is packaged with five vials per box. MPSV4 is packaged with one vial per box. There is a five dose minimum order for both MCV4 and MPSV4.

11. Does Oregon require meningococcal vaccination for entry into college?

There is no state requirement for meningococcal vaccination. Colleges have the right to set their own requirements.
References:
