Dear CCSU Students, Parents, and Guardians,

Please note that meningococcal vaccination is required for all those living in the residence halls and highly recommended for all students under the age of 25 years of age. Proof of this immunization must be submitted as part of your medical form prior to moving into CCSU dormitories.

Bacterial meningitis is a potentially fatal and highly contagious bacterial infection. Thankfully it is rare. However, when it strikes, its flu-like symptoms make diagnosis difficult. If not treated early, meningitis can lead to swelling of the fluid surrounding the brain and spinal column as well as severe and permanent disabilities, such as hearing loss, brain damage, seizures, limb amputation and even death.

First year college students, especially those living in dormitories, have an increased risk of catching bacterial meningitis. Because of this, the Center for Disease Control’s Advisory Committee on Immunization Practices (ACIP) recommends that college students be educated about meningitis and the benefits of vaccination. A vaccine is available that protects against the four types of the bacteria that cause nearly two thirds of meningitis cases among college students in the United States. Connecticut law requires that all students living in college dormitories provide proof of immunization against this disease. The meningococcal conjugate vaccine (MCV4) is widely available (brand name is Menactra). Prior to this, another vaccine was widely used; the meningitis polysaccharide vaccine (MPSV4) called Menomune. If it has been more than five years since receiving Menomune, a booster with MCV4 is recommended.

I encourage you and your child to learn more about meningitis and the vaccine. For more information, review the attached pages from the Immunization Action Coalition. Also, please feel free to contact our health service and/or consult your primary health care provider. Further information can be found at http://www.cdc.gov/meningitis. Remember that students will not be allowed to move in to CCSU residence halls without providing proof of this vaccination. We provide the vaccination for a charge of $21.00. If needed, please call 860-832-1926 for an appointment.

Sincerely,

Christopher Diamond, MD
Director, University Health Services
Meningococcal disease

Who is recommended to be vaccinated against meningococcal disease?

Groups for whom the CDC's Advisory Committee on Immunization Practices (ACIP) has recommended routine vaccination against meningococcal disease include

- All previously unvaccinated adolescents ages 11 through 18 years,
- All previously unvaccinated college freshmen who will be living in dormitories,
- All persons ages 2 years and older with anatomic or functional asplenia, or terminal complement component deficiencies,
- All persons ages 2 years and older anticipating travel to Mecca, Saudi Arabia, for the annual Hajj
- Any person working as a microbiologist with routine exposure to isolates of N. meningitidis,
- Military recruits, and
- Any other person wishing to decrease their risk for meningococcal disease

Who should receive meningococcal conjugate vaccine (MCV4 or Menactra) and who should be given the polysaccharide (MPSV4 or Menomune) vaccine?

MCV4 is preferred for all persons ages 2 through 55 years. MPSV4 should only be used if there is a permanent contraindication or precaution to MCV4. Only MPSV4 vaccine can be used for high-risk persons ages 56 years and older (i.e., who are not in the currently licensed age group for MCV4). MCV4 or MPSV4 may be used to control meningococcal outbreaks caused by serogroups A, C, W-135, and Y, depending on the age group that is targeted for vaccination.

What is the difference between the two meningococcal vaccines, MPSV4 and MCV4?

The conjugate vaccine (MCV4), licensed in 2005, is believed to have several advantages over the polysaccharide vaccine (MPSV4), such as reduction in bacterial carriage in the nose and throat, longer duration of immunity, and better immunologic memory with no need for booster doses. These advantages may result in better herd immunity. In addition, the ages for which each vaccine is licensed differ; MCV4 is licensed for persons ages 2-55 years and MPSV4 is licensed for persons ages 2 years and older.

How can children younger than age two years be protected from meningococcal disease?
Under special circumstances (e.g., where short-term protection against serogroup A meningococcal disease is needed), MPSV4 may be given to children ages 3 through 23 months. These children should get two doses, three months apart.

**If a student received MCV4 (Menactra; sanofi pasteur) before their eleventh birthday, does it need to be repeated at age 11?**

No. On October 17, 2007, FDA expanded the age indications for Menactra for use in children as young as age 2 years (i.e., it is now licensed for use in people ages 2 through 55 years). Right now only a 1-time dose of Menactra is recommended. ACIP will make recommendations for revaccination with Menactra as more data on duration of protection become available.

**I understand a second dose of meningococcal conjugate vaccine (MCV4) is now recommended for certain people. Please tell me more about this.**

When meningococcal conjugate vaccine (Menactra; sanofi pasteur) was licensed in January 2005, data were lacking on long-term efficacy and the need for additional vaccination. Since that time, studies indicate that antibody level declines over time. ACIP voted on June 24, 2009, to recommend a routine second dose of MCV4 for people at highest risk for meningococcal infection. This group includes people (1) with persistent complement component deficiencies, (2) with anatomic or functional asplenia, or (3) who have frequent prolonged exposure (e.g., microbiologists routinely working with Neisseria meningitidis, travelers to or residents of areas with high rates of meningococcal disease [African meningitis belt]). Children at continued high risk who received the first dose of MCV4 at ages 2 through 6 years should receive the second dose no sooner than 3 years after the first dose. People at continued high risk who received the first dose of meningococcal vaccine at age 7 years or older should receive the second dose no sooner than 5 years after the first dose. Because MCV4 is licensed only for people through age 55, adults 56 and older should instead receive meningococcal polysaccharide vaccine (MPSV4; Menomune; sanofi), as should people ages 2 through 55 years who have a precaution or contraindication to MCV4. Students living in on-campus housing are not included in the at-risk group to receive second doses of MCV4 vaccine.

**Should persons with continued high risk of meningococcal disease receive additional doses of meningococcal vaccine beyond the 3- or 5-year booster described above?**

Yes, all persons who remain at highest risk for meningococcal infection should receive additional doses if they continue to be at highest risk for meningococcal infection, as described in the answer to the previous question. If the person is age 55 years or younger, they should receive MCV4; if they are age 56 years or older, they should receive MPSV4.
**Will MCV4 provide protection against all serogroups?**

No. The conjugate vaccine, like the polysaccharide vaccine, contains antigen for serogroups A, C, Y, and W-135. Serogroups C and Y account for about two-thirds of invasive meningococcal disease in the United States. Serogroups A and W-135 are rare in this country. Serogroup B, which accounts for about a third of invasive disease, is not included in the vaccine. Work is underway to develop a vaccine for serogroup B.

**By what route should MCV4 and MPSV4 be administered?**

MCV4 should be administered IM. MPSV4 should be given SC.

**Why are college students at increased risk for meningococcal disease?**

A study in Maryland (JAMA 1999; 281:1906-10) found that the risk of meningococcal disease in college students was similar to that for persons of the same age in the general population (1.4-1.7 cases per 100,000 population). However, in that study, the risk among students who lived in on-campus housing was about 3 times higher (about 3 per 100,000 population) than students who lived off campus (about 1 per 100,000 population), and about twice as high as the general population of the same age.

**We have boarding school students in our practice who received MPSV4 vaccine (Menomune) in the past. Should we give them a dose of MCV4 (Menactra) before they go to college?**

ACIP currently recommends revaccination with MCV4 only if it has been at least 5 years since the MPSV4 dose and if the student is still in a high-risk category (e.g., freshman living in a dorm).

**Should a child or teen who received MCV4 (Menactra) at age 12 years receive a second dose if they will be a freshman in a college dorm?**

No, at this time only 1 dose of Menactra (MCV4) is recommended for students whose only risk factor is living in on-campus housing.

**What has been learned about a possible relationship between receipt of MCV4 and Guillain-Barr syndrome (GBS) that was reported in the summer of 2005?**

In October 2005, FDA and CDC issued alerts to healthcare providers of a possible association between GBS and MCV4. Healthcare providers or other persons with knowledge of possible cases of GBS (or other clinically significant adverse events) occurring after vaccination with MCV4 were requested to report them to the Vaccine Adverse Event Reporting System (VAERS).

Because of the ongoing known risk for serious meningococcal disease, CDC
recommended continuation of current vaccination strategies, including routine vaccination of all previously unvaccinated children ages 11-18 years and for college freshmen who will live in dormitories. In October 2006, an update was published in MMWR following an examination of additional reports of GBS to VAERS, the Vaccine Safety Datalink (VSD), and the Healthcare Cost and Utilization Act (used to estimate background incidence rate of GBS). The report concluded that "Because of the ongoing risk for meningococcal disease and the limitations of the data indicating a small risk for GBS after MCV4 vaccination, the additional cases reported here do not affect or change current CDC recommendations." CDC also indicated that a larger study over the next several years would be necessary to provide a more definitive assessment.

What do you do if an adult patient is in a high-risk situation for meningococcal disease (e.g., traveling to Sub-Saharan Africa) and doesn't know whether they received MCV4 or MPSV4 (Menomune; sanofi pasteur) in the past. Should we vaccinate them?

Yes. The ACIP recommendation is to vaccinate when vaccination is indicated and when you don't have adequate documentation.
CCSU Health Services thanks the Immunization Action Coalition.