Serogroup B Meningococcal Vaccine Update

Background
Meningococcal disease is caused by the bacterium Neisseria meningitidis and can involve meningitis, bacteremia, septicaemia, and death. The bacteria is spread person-to-person by respiratory droplets through close contact associated with activities like coughing or kissing, or shared living quarters, especially among young people living in the same household or dormitory suite. Approximately 10% to 15% of infected people die from the disease; of those that survive, 10% to 20% will suffer lifelong disabilities such as hearing loss, brain damage, amputations, and skin loss requiring skin grafts.

There are 12 serogroups of N. meningitidis; serogroup B accounts for approximately half of all meningococcal cases in persons aged 17–22 years in the United States and has caused several recent outbreaks in college settings. Until 2013, most meningococcal disease in Alaska was caused by serogroup B. There are two licensed vaccines that have been approved by the U.S. Food and Drug Administration (FDA) to protect against serogroup B meningococcal disease, MenB-FHbp (Trumenba, Pfizer, Inc.) and MenB-4C (Bexsero, GlaxoSmithKline Biologicals, Inc.). The Advisory Committee on Immunization Practices (ACIP) has not offered a preferential recommendation for either vaccine; however, they are not interchangeable, and the same product must be used for all doses in a series.

In 2016, ACIP updated their guidelines for vaccination against serogroup B meningococcal disease. The new guidance lists specific recommendations for different groups based on risk of serious meningococcal disease. Category A recommendations are made for all persons in an age- or risk-factor-based group, while Category B recommendations are considered “permissive” and rely on clinical decision-making.

Category A recommendations:
- vaccinate all persons aged ≥20 years who are at increased risk for serogroup B meningococcal disease, including the following:
  - anyone at increased risk because of a serogroup B meningococcal disease outbreak;
  - anyone with persistent complement component deficiency; and
  - anyone with a history of a meningococcal disease outbreak
- vaccinate all persons aged 17–23 years who are at increased risk for meningococcal disease, with doses administered at 0 and 1 month.

Trumenba or Bexsero may be administered concomitantly with other vaccines indicated for this age, but at a different anatomical site, if feasible.

Vaccine Effectiveness
Vaccine effectiveness was inferred based on an immunologic marker of protection. Immunogenicity was assessed as the portion of subjects who achieved a fourfold or greater increase in serum bactericidal activity using human complement (hSBA) for each of the serogroup B strains tested. The vaccine produces an immune response that is protective against multiple serogroup B strains.

Contraindications
Vaccination is not recommended if the patient has experienced a severe allergic reaction to a previous dose of serogroup B meningococcal vaccine, or to any component of the vaccine. Serogroup B meningococcal vaccine should be used during pregnancy only if clearly needed. Additionally, the tip caps of the Bexsero prefilled syringes contain natural rubber latex, which may cause allergic reactions in latex-sensitive persons.

Before administering serogroup B meningococcal vaccines, health care providers should consult the package inserts for precautions, warnings, and contraindications. Adverse events occurring after administration of any vaccine should be reported to the Vaccine Adverse Event Reporting System (VAERS). Additional information about VAERS is available by phone at 1–800–822–7967 or online (https://vaers.hhs.gov).

State-Supplied Vaccine
The Alaska Immunization Program offers Bexsero on its pediatric formulary and its adult formulary (for adults aged 19 and 20 years). Health care providers who are enrolled to receive state-supplied vaccines may now order Bexsero single dose syringes are available for order as a 10-pack or a 1-pack. Clinicians should screen patients for eligibility at each vaccination visit using guidance from the Alaska Immunization Program, and accurately document administration data intoVacTrAK, Alaska’s immunization information system.

References
1. CDC. Serogroup B Meningococcal (MenB) VIS. Available at: http://www.cdc.gov/vaccines/hcp/vis/vis-statements/mening-serogroup-b.html
3. CDC. Use of serogroup B meningococcal vaccines in adolescents and young adults: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2015;64(1):1171. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6441a3.htm
6. CDC. Use of serogroup B meningococcal vaccines in pregnant or lactating unless the woman is at increased risk for serogroup B meningococcal disease, and, after consultation with her health care provider, to determine whether the benefits outweigh the potential risks.