

# Meningococcal Meningitis Vaccination Algorithm (MenACWY and MenB)

This algorithm for MenACWY and MenB vaccination has been designed to facilitate meningococcal vaccination in clinical practice.

The Centers for Disease Control and Prevention (CDC) recommendations for meningococcal vaccination are:

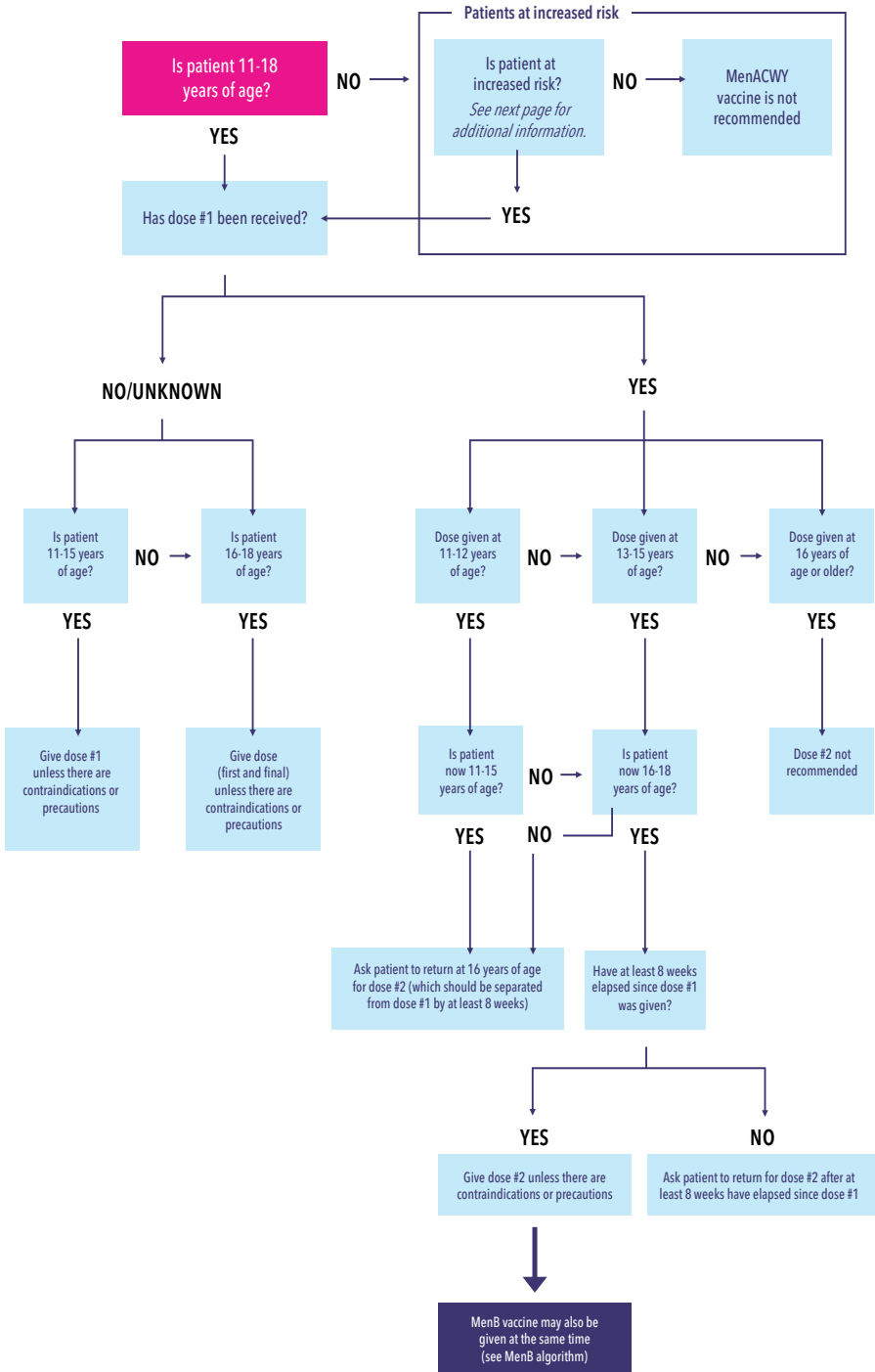
- **MenACWY:** All 11-12-year-olds should receive a meningococcal conjugate vaccine, followed by a booster dose at 16.<sup>1</sup>
- **MenB:** Healthy adolescents and young adults 16 through 23 years of age may also receive a serogroup B meningococcal vaccine. If given, the preferred age is 16 through 18 years.<sup>1</sup> For these individuals, MenB vaccination decisions should be made through shared clinical decision-making (SCDM) informed by discussions among the healthcare provider, patient, and/or parent or guardian.<sup>(1-2)</sup>

CDC also recommends meningococcal vaccination for other children and adults who are at increased risk for meningococcal meningitis.

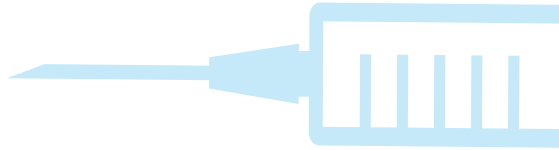
*This resource was developed by the Meningitis B Action Project. All information included has been reviewed by the Meningitis B Action Project medical council.*

# Algorithm for MenACWY Vaccination in Healthy Adolescents

## 11-18 Years of Age\*



\* Developed with reference to IAC MenACWY vaccine algorithm: <https://www.give2menacwy.org/pdfs/adolescent-algorithm.pdf>



### ADDITIONAL INFORMATION<sup>3</sup>

Menveo<sup>®</sup> is approved for 2 months to 55 years and MenQuadfi<sup>®</sup> is approved for  $\geq 2$  years. Some recommendations included herein are off-label.

#### Persons at Increased Risk for Whom MenACWY Immunization is Recommended

- First year college students living in a residential hall who have not had a dose of MenACWY since turning 16 or who received a dose after turning 16 but the dose was given 5 years or more before enrollment
- People living with a persistent complement component deficiency caused by an immune system disorder or by taking a complement inhibitor (eculizumab [Soliris<sup>®</sup>] or ravulizumab [Ultomiris<sup>®</sup>])
- People living with HIV
- People living with anatomic or functional asplenia
- Microbiologists routinely exposed to *Neisseria meningitidis* isolates
- Travelers to or residents of countries where meningococcal meningitis is hyperendemic or epidemic
- United States military recruits

#### Dosing

MenACWY vaccines are interchangeable; the same vaccine product is recommended, but not required for all doses.

- Administer MenACWY vaccines to adolescents as 1 primary dose at 11 to 12 years of age
- Administer 1 booster dose at 16 years of age. The minimum interval between doses is at least 8 weeks
- MenACWY may be given through 21 years

of age as a catch-up vaccination for those who have not received a dose after their 16th birthday

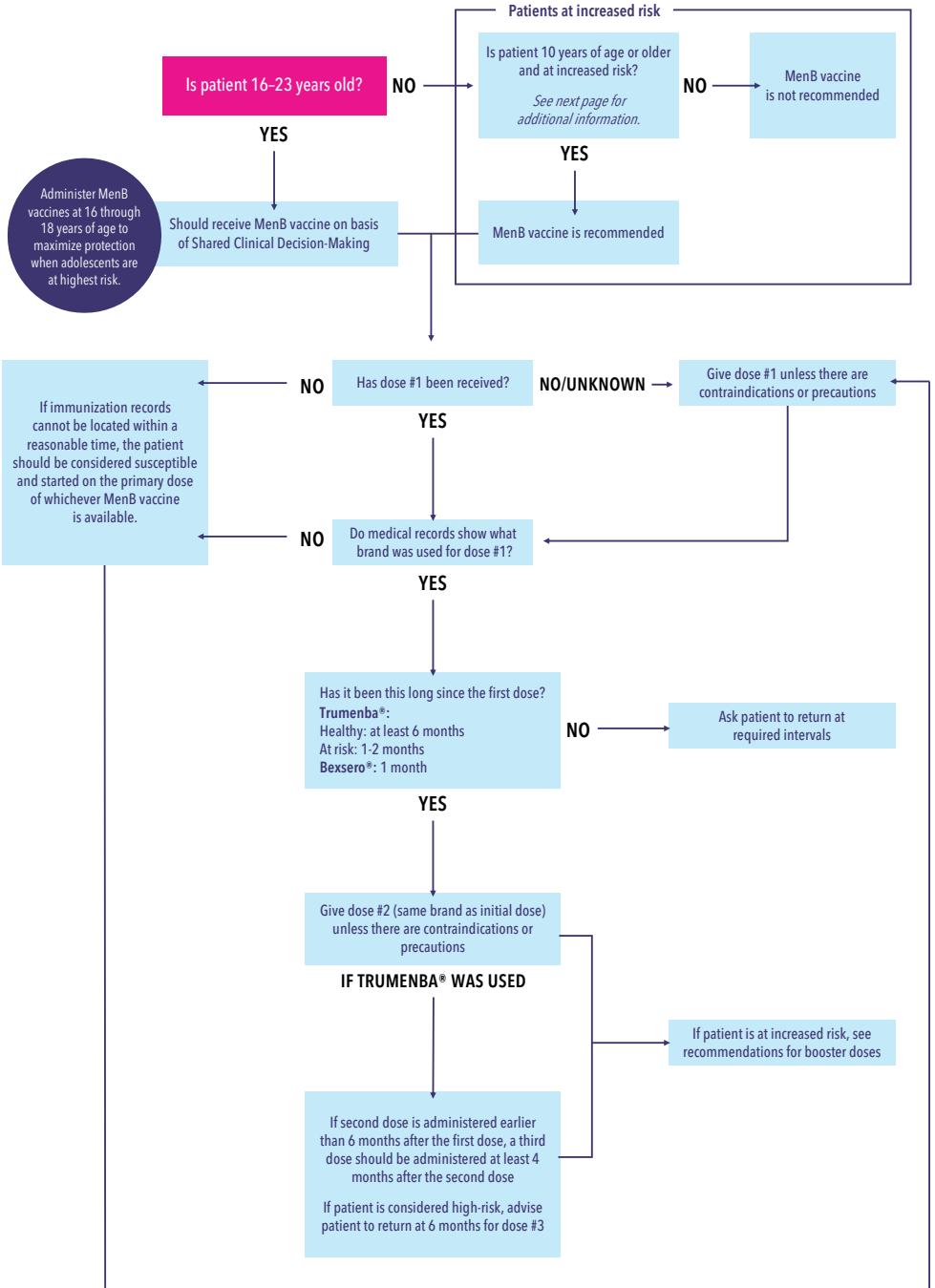
- Adolescents who receive their first dose of MenACWY vaccine at or after age 16 years do not need a booster dose
- For patients at prolonged increased risk for meningococcal meningitis, CDC recommends MenACWY booster doses after completion of the primary series. Vaccine product, number of doses, and booster dose recommendations are based on age and risk factors. *See reference 3 for additional information*
  - For patients who received their most recent dose before age 7, administer the booster dose 3 years later
  - For patients who received their most recent dose at age 7 or older, administer the booster dose 5 years later
  - Administer boosters every 5 years thereafter throughout life as long as the person remains at increased risk for meningococcal meningitis

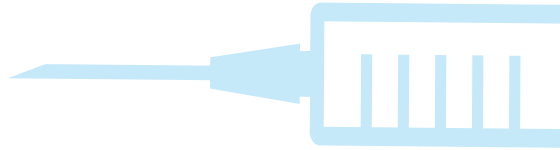
#### Contraindications and Precautions

- Do not administer meningococcal vaccines to a person who has ever had a severe allergic reaction (e.g., anaphylaxis) after a previous dose or who has a severe allergy to any vaccine component
- Vaccine providers may administer meningococcal vaccines to pregnant or breastfeeding women
- Vaccine providers may administer meningococcal vaccines to a person who has a moderate or severe acute illness with or without fever

# Algorithm for MenB Vaccination in Healthy Adolescents and Young Adults

## 10-25 Years of Age





### **ADDITIONAL INFORMATION<sup>3</sup>**

*Bexsero<sup>®</sup> and Trumenba<sup>®</sup> are FDA-approved for ages 10-25. Some recommendations included herein are off-label.*

### **Persons at Increased Risk for Whom MenB Immunization is Recommended**

Groups at increased risk include:

- Those having certain medical conditions: Complement component deficiency (e.g., C5- C9, properdin, factor H, factor D); Functional or anatomic asplenia (including sickle cell disease)
- People taking a complement inhibitor (eculizumab [Soliris<sup>®</sup>] or ravulizumab [Ultomiris<sup>®</sup>])
- Microbiologists routinely exposed to *Neisseria meningitidis* isolates
- Being a part of a community experiencing a serogroup B meningococcal meningitis outbreak

### **Dosing**

The CDC has no preference as to which MenB vaccine is used, but the same vaccine product must be used for all doses.

- MenB-4C (Bexsero<sup>®</sup>): 2 doses  $\geq$  1 month
- MenB-FHbp (Trumenba<sup>®</sup>):
  - Healthy adolescents (2 doses): One dose at 0 and one dose at 6 months. If the second dose is administered earlier than 6 months after the first dose, a third dose should be administered at least 4 months after the second dose
  - For persons aged  $\geq$  10 years who are in a MenB outbreak situation or at increased risk for meningococcal meningitis (3 doses): one dose at 0, one dose at 1-2 and one dose at 6 months

Those at increased risk need regular booster doses:

- Administer a booster dose of MenB vaccine 1 year after series completion and then every 2-3 years thereafter
- For those at increased risk due to an outbreak who previously received the MenB series, CDC recommends a booster dose if a year or more has passed since primary series completion

### **Contraindications and Precautions**

- Do not administer meningococcal vaccines to a person who has ever had a severe allergic reaction (e.g., anaphylaxis) after a previous dose or who has a severe allergy to any vaccine component
- Vaccine providers may administer meningococcal vaccines to pregnant or breastfeeding women
- Vaccine providers may administer meningococcal vaccines to a person who has a moderate or severe acute illness with or without fever

# Meningitis B Vaccination and Shared Clinical Decision-Making

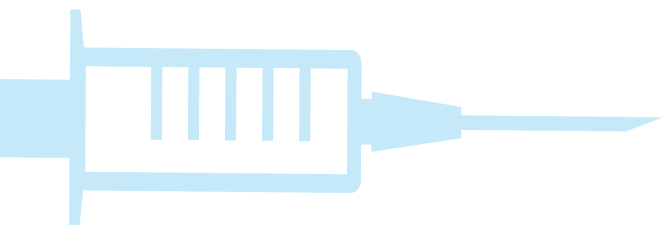
According to the CDC, MenB vaccination should be based on shared clinical decision-making (SCDM) for healthy teenagers and young adults. SCDM allows the clinician and patient to decide together if MenB vaccination is appropriate based upon the risks and benefits of vaccination for the individual patient.

To enhance SCDM for MenB vaccination, the Advisory Committee on Immunization Practices (ACIP) has recently highlighted several considerations:<sup>2</sup>

- Seriousness of invasive meningococcal meningitis, including the risk for death or permanent complications
- Low incidence of serogroup B meningococcal meningitis (approximately 34 cases annually in the US among adolescents and young adults)
- Elevated risk in college students, especially freshman, people

living on campus housing, those attending a 4-year school, or those in sororities or fraternities

- Protection provided by vaccination against most strains of disease-causing serogroup B
- Duration of MenB protection (antibodies wane 4 to 7.5 years after completion of vaccine series)<sup>4</sup>
- Evidence suggesting limited effects of MenB vaccination on meningococcal carriage (i.e., individual protection occurs, but herd immunity is unlikely)



## REFERENCES

- <sup>1</sup> Centers for Disease Control and Prevention. (2021, October 12). *Meningococcal vaccine recommendations*. Centers for Disease Control and Prevention. <https://www.cdc.gov/vaccines/vpd/mening/hcp/recommendations.html>
- <sup>2</sup> American Association of Nurse Practitioners. (2021, July 29). *Meningococcal Vaccine: Prevention of Serogroup B Meningococcal Disease in Adolescents and Young Adults* [Monograph]. [https://aanp.inreachce.com/Details/Information/30a13033-2c5f-445b-b2b2-b4b725283ccf?ref=featured&fbclid=IwAR2x8TGhQLWGLe2mahVH\\_nmrsLkfyXh8ZoeGCLAx7cGbCanDBN1XOXIJwg](https://aanp.inreachce.com/Details/Information/30a13033-2c5f-445b-b2b2-b4b725283ccf?ref=featured&fbclid=IwAR2x8TGhQLWGLe2mahVH_nmrsLkfyXh8ZoeGCLAx7cGbCanDBN1XOXIJwg)
- <sup>3</sup> Mbaeyi, S. A. (2020, September 24). *Meningococcal Vaccination: Recommendations of the Advisory Committee on Immunization Practices, United States, 2020*. Centers for Disease Control and Prevention. <http://dx.doi.org/10.15585/mmwr.rr6909a1>
- <sup>4</sup> Nolan, Terry et al. *Antibody persistence and booster response in adolescents and young adults 4 and 7.5 years after immunization with 4CMenB vaccine*. *Vaccine* vol. 37,9 (2019): 1209-1218. doi:10.1016/j.vaccine.2018.12.059



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**Meningitis B  
Action Project**  
a joint initiative by The Kimberly Coffey Foundation  
and The Emily Stillman Foundation