MENINGOCOCCAL VACCINE RECOMMENDATIONS

Updated September 28, 2016

Meningococcal Disease

- Bacterial infection caused by *Neisseria meningitidis*
- CDC estimates 5-10% of people carry the bacteria in their nose and throat but are not sick
- Sometimes, the bacteria can invade the body and cause certain illnesses, known as meningococcal disease

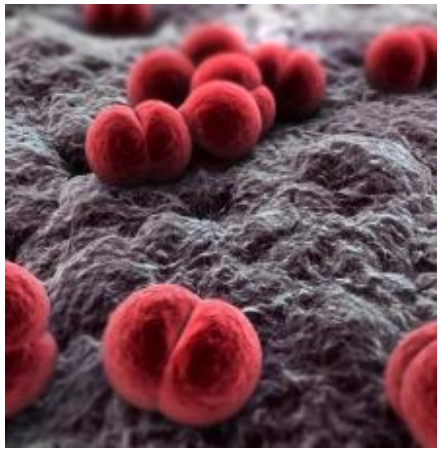


Image: www.bioquell.com

Meningococcal Disease

- Most commonly causes meningitis (protective membranes covering the brain and spinal cord, known as the meninges, become infected and swell).
- May also cause septicemia (where bacteria enters the blood stream and damages blood vessels and causes bleeding into the skin and organs). May be fatal.
- Overall case-fatality ratio is 10-15%.
- Approximately 11–19% of recovering patients have hearing loss, mental retardation, loss of limbs, or other serious health problems.

Meningococcal Disease – Symptoms

- Severe headache
- Nausea, vomiting
- Petechial / purpuric rash
- Seizures

- Sudden onset of high fever
- “Stiff neck” (rigid or immobile)
- Photophobia (aversion to light)
- Confusion/combativeness

Symptoms can develop over several hours, or take 1 – 2 days.

Meningococcal Disease

- Spread though the exchange of respiratory and throat secretions like spit (e.g., sharing eating utensils or water bottles, kissing, living in close quarters).
- Not spread through casual contact.
- First-year college students living in residence halls are at slightly increased risk for disease.

Meningococcal Disease

- The meningococci bacteria are classified into 13 distinct serogroups.
- Almost all invasive disease is caused by 1 of 5 serogroups: A, B, C, Y, and W.

Meningococcal ACWY

Three conjugate vaccines are licensed in the U.S.:

- Menactra (Men ACWY-D),sanofi pasteur
  - Age indication: 9 months-55 years
- Menveo (MenACWY-CRM),Novartis
  - Age indication: 2 months-55 years
- MenHibrix (Hib-MenCY-TT), GlaxoSmithKline
  - Also contains Hib
  - Is licensed as a 4-dose series for children aged 12-18 months

ACIP Recommendations- MenACWY

- Routine vaccination of all individuals with either MenACWY vaccine at:
  - One dose administered at 11-12 years of age, as part of the adolescent platform (which includes Tdap and HPV)
  - A booster dose should be administered at age 16 years.

  - For adolescents who receive their first dose at age 13-15 years, a one-time booster should be given at age 16-18 years.
  - Adolescents receiving their first dose at or after 16 years do not need a booster dose unless they become at increased risk for disease.

  - Is also the polysaccharide vaccine, MPSV4, which is for use in individuals 56 years of age and older.

MenACWY High Risk Recommendations (1)

Individuals at high risk of disease include those with:

- Persons aged ≥2 months with certain medical conditions such as functional or anatomical asplenia (including sickle cell disease) and persistent complement deficiencies.
- Special populations such as unvaccinated first year college students living in residence halls and military recruits.

MenACWY High Risk Recommendations (2)

Individuals at high risk of disease include those with:

- Travelers aged ≥9 months to countries where *N. menigitidis* is hyperendemic or epidemic.
- Microbiologists routinely exposed to *N. menigitidis*.

WIR Forecasting: MenACWY

- MenACWY: WIR will recommend a dose for all clients once they turn 11 years, and will forecast the booster dose.
- Vaccine group: “Meningo”
- WIR does not forecast high risk schedules

WIR Forecasting: MenACWY

Current Age: 11 years, 5 months, 24 days

Vaccines Recommended by Selected Tracking Schedule | Authorize Overrides | Add Selected

Select	Vaccine Group	Vaccine	Earliest Date	Recommended Date	Overdue Date	Latest Date
☑	HepA		01/27/2006	01/27/2006	**01/27/2007**	
☑	HepB		01/27/2005	01/27/2005	**04/27/2005**	
☑	HPV		01/27/2014	**01/27/2016**	01/27/2031	01/26/2032
☐	Influenza		**07/27/2005**	08/01/2016	**01/27/2006**	
☑	Meningo		01/27/2007	**01/27/2016**	01/27/2024	01/26/2027
☑	MMR		01/27/2006	01/27/2006	**01/27/2009**	
☑	Pertussis/Tdap	**Tdap**	01/27/2015	**01/27/2016**	01/27/2018	
☑	Polio		03/10/2005	03/27/2005	**04/27/2005**	
☑	Td	**Tdap**	01/27/2012	01/27/2012	**02/27/2012**	
☑	Varicella		01/27/2006	01/27/2006	**01/27/2009**	01/26/2018

MenB Vaccines

Two vaccines are licensed in the U.S.:

- Trumenba (MenB-Fhbp) by Wyeth
  - 3-dose series, administered at 0, 2 and 6 months
  - A 2-dose series is FDA approved, but there currently is no recommendation from ACIP regarding this schedule.
- Bexsero (MenB-4C) by Novartis
  - 2-dose series, administered at least 4 weeks apart

Licensure- age indication:

Routine use: individuals aged 10-25 years

High risk use: individuals aged ≥10 years

ACIP Recommendations-MenB

- In June 2015, the ACIP recommended that adolescents and young adults aged 16-23 years may be vaccinated with a serogroup B meningococcal (MenB) vaccine to provide short-term protection against most strains of serogroup B meningococcal disease.
- Recommendation is a GRADE B.

ACIP Recommendations-MenB

"The current low prevalence of disease, coupled with the fact that important data for making policy recommendations for MenB vaccines are not yet available, resulted in ACIP determining that insufficient evidence exists to make a routine public health recommendation that all adolescents be vaccinated with MenB vaccine.

Given the seriousness of meningococcal disease and the availability of licensed vaccines, ACIP agreed that sufficient evidence exists to encourage individual clinical decision making[1]."

[1]Excerpted from ACIP statement, MMWR 2015;64:1171-1175

MenB Vaccines

- The preferred age for MenB vaccination is 16-18 years.
  - Based on the available data, administering the vaccine in later adolescence was preferable to maximize the likelihood that protection would last into the highest age-related risk period.

- Vaccines are **not** interchangeable; the same product must be used for all doses.

MenB- High Risk Recommendations

Certain persons aged ≥10 years who are at increased risk should receive MenB vaccine, including:

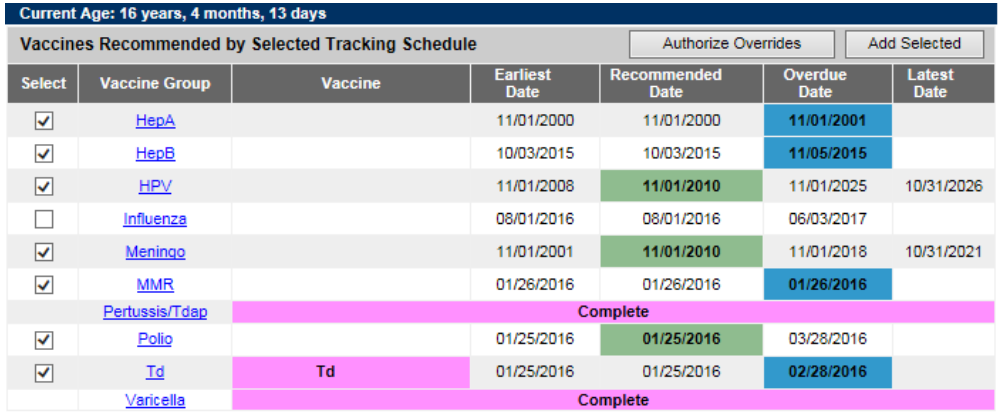
- Persistent complement component deficiencies
- Anatomic or functional asplenia
- Microbiologists routinely exposed to *N. meningitidis*
- Persons identified as at increased risk because of a serogroup B outbreak

  Note: these vaccines are not licensed or recommended for high risk individuals aged 2 months-9 years

WIR Forecasting- MenB

- Once a dose of MenB is administered and entered into WIR, WIR will forecast subsequent doses, and will indicate which product should be used (since the two brands are not interchangeable)
- Vaccine group: Meningo B
- WIR does not forecast high risk schedules

WIR Forecasting- MenB



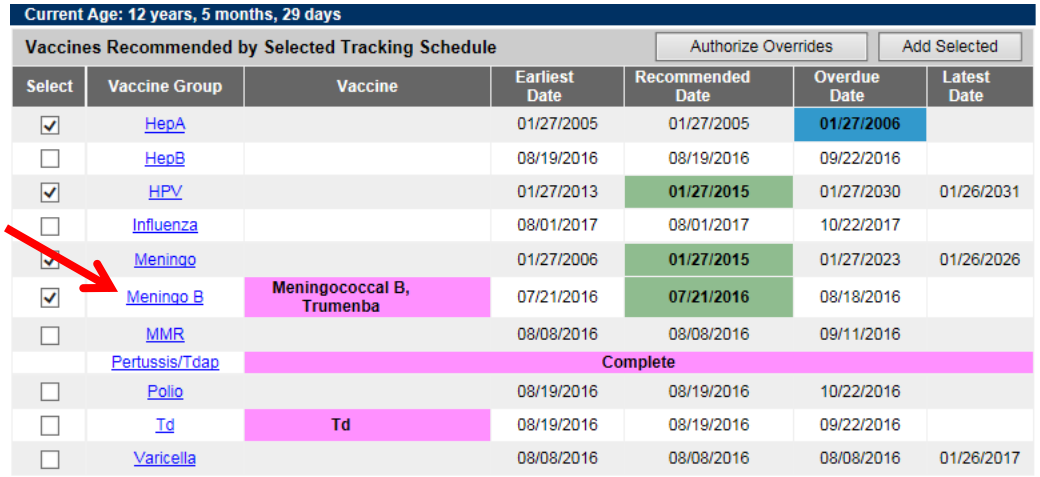
Current Age: 16 years, 4 months, 13 days

Vaccines Recommended by Selected Tracking Schedule — Authorize Overrides | Add Selected

Select	Vaccine Group	Vaccine	Earliest Date	Recommended Date	Overdue Date	Latest Date
☑	HepA		11/01/2000	11/01/2000	**11/01/2001**	
☑	HepB		10/03/2015	10/03/2015	**11/05/2015**	
☑	HPV		11/01/2008	**11/01/2010**	11/01/2025	10/31/2026
☐	Influenza		08/01/2016	08/01/2016	06/03/2017	
☑	Meningo		11/01/2001	**11/01/2010**	11/01/2018	10/31/2021
☑	MMR		01/26/2016	01/26/2016	**01/26/2016**	
	Pertussis/Tdap	Complete				
☑	Polio		01/25/2016	**01/25/2016**	03/28/2016	
☑	Td	**Td**	01/25/2016	01/25/2016	**02/28/2016**	
	Varicella	Complete				

WIR does not currently recommend Category B vaccines such as Meningococcal B vaccine.

Those vaccines are ‘invoke on use’ and will display in the recommendations once the series has started.



Current Age: 12 years, 5 months, 29 days

Vaccines Recommended by Selected Tracking Schedule — Authorize Overrides | Add Selected

Select	Vaccine Group	Vaccine	Earliest Date	Recommended Date	Overdue Date	Latest Date
☑	HepA		01/27/2005	01/27/2005	**01/27/2006**	
☐	HepB		08/19/2016	08/19/2016	09/22/2016	
☑	HPV		01/27/2013	**01/27/2015**	01/27/2030	01/26/2031
☐	Influenza		08/01/2017	08/01/2017	10/22/2017	
☑	Meningo		01/27/2006	**01/27/2015**	01/27/2023	01/26/2026
☑	Meningo B	**Meningococcal B, Trumenba**	07/21/2016	**07/21/2016**	08/18/2016	
☐	MMR		08/08/2016	08/08/2016	09/11/2016	
	Pertussis/Tdap	Complete				
☐	Polio		08/19/2016	08/19/2016	10/22/2016	
☐	Td	**Td**	08/19/2016	08/19/2016	09/22/2016	
☐	Varicella		08/08/2016	08/08/2016	08/08/2016	01/26/2017