Infectious Disease *Bulletin*

VERMONT DEPARTMENT OF HEALTH

Guidance • Support • Protection • Prevention

Division of Health Surveillance – Infectious Disease Epidemiology Section January 2011

New Vaccine Recommendations - Meningococcal Disease

The leading cause of bacterial meningitis in children and young adults in the U.S. is infection with the bacterium *Neisseria meningitidis*. Meningitis caused by this bacterium accounts for 50% of all invasive meningococcal disease. The case fatality rate for invasive meningococcal disease is between 10% and 14%, and 11% to 19% of survivors have long-term effects, including neurologic disability, limb loss and hearing loss.[1] The disease peaks in December and January and has an annual incidence of 1,000-2,000 cases, which has been trending lower in recent years. Twenty percent of cases occur among adolescents and young adults 14-24 years of age.[2]

In 2005, the CDC first published recommendations of the Advisory Committee on Immunization Practice (ACIP) for the use of a tetravalent A, C, Y, W-135 meningococcal conjugate vaccine to enhance existing meningococcal disease prevention efforts. In 2007, the ACIP expanded their recommendations to include meningococcal vaccine for all 11-12 year olds at their pre-adolescent vaccination visit and for all 13-18 year olds who have not been previously vaccinated.

It was assumed the vaccine would protect most adolescents for ten years, during the period of greatest risk. Five years after the initial recommendation, rates of meningitis are at historic lows. Most disease in late adolescence is caused by serogroup C, and a clear benefit from immunization is seen in 11-14 year olds (see Table).

Average Annual Number of Cases of C,Y,W-135 Meningococcal Disease

Age Group	2000-2004	2005-2009	Percent Change
11-14 yrs	46	12	-74%
15-18 yrs	106	77	-27%
19-22 yrs	62	52	-16%
Total(11-22 yrs)	214	141	-34%

Cohn, A. "Optimizing the Adolescent Meningococcal Vaccine Program" ACIP slide. Oct 2010.

In 2010, new data indicated that protection from the vaccine wanes within five years after vaccination. Because of this, the ACIP convened a working group to consider additional recommendations. The concern was that if protection wanes after five years, children vaccinated at 11 to12 years will have waning immunity just as they reach the age of highest risk, ages 16 to18 years, or children vaccinated at 13 to14 years will have waning immunity as their risk increases when they move into dormitories at college. The ACIP considered either adding a booster or delaying timing of a single dose to age 14-15 years and decided to go with the former. The following recommendation, passed by the ACIP by a vote of 6-5, is expected to be released by CDC this month. The Immunization Program will support these new recommendations.

> New ACIP Recommendation: Continue routine vaccination of adolescents beginning at age 11-12 years, with a booster dose at 16 years. For adolescents vaccinated at age 13 through 15 years, a one-time booster should be given 5 years after the first dose.

The meningococcal conjugate vaccine Menactra (Sanofi Pasteur) is provided by the Vermont Department of Health to providers enrolled in the Vaccines for Children program. According to the 2009 National Immunization Survey, 44% of Vermont adolescents 13-17 years of age had received a meningococcal vaccine, up from 20% in 2008.

The *Infectious Disease Bulletin* can be viewed at: http://healthvermont.gov/pubs/IDB/index.aspx
For questions & comments, please contact Patsy Kelso at (802) 863-7240

[1] CDC, 2005. MMWR, Vol 54. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5407a1.htm
[2] CDC Factsheet: Meningococcal Diseases and Meningococcal Vaccines. Aug 2009. http://www.cdc.gov/vaccines/vpd-vac/mening/vac-mening-fs.htm

Vermont – Selected Reportable Diseases – 2010

(Data through MMWR Week 52 – 1/1/2011) – Provisional

	Campylobacter	Cryptosporidium	E. coli*	Giardia	Group A Strep Inv	Hepatitis A	Hepatitis B - Acute	Hepatitis B - Chronic	Hepatitis C - Acute	Hepatitis C - Chronic	Legionellosis**	Listeriosis	Lyme §	Meningococcal Inf.	Pertussis	Salmonella	Shigella	Tuberculosis**	Varicella §
Age																			
<5	22	19	10	20	0	0	0	1	0	7	0	0	8	3	2	9	0	0	33
5-14	14	10	6	32	3	0	0	1	0	1	0	0	49	0	10	9	0	0	84
15-24	39	24	2	18	0	0	0	5	1	49	0	0	26	0	5	18	0	1	9
25-39	38	6	1	34	3	0	0	27	1	168	0	1	45	0	0	12	0	1	3
40-64	62	11	1	61	6	0	2	21	0	302	3	1	158	2	1	21	1	2	1
65+	20	0	2	20	14	0	0	0	0	12	6	2	59	0	0	12	0	1	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total (YTD)	**195**	**70**	**22**	**185**	**26**	**0**	**2**	**55**	**2**	**539**	**9**	**4**	**345**	**5**	**18**	**81**	**1**	**5**	**130**
5-yr Median (YTD)	**158**	**64**	**22**	**191**	**18**	**2**	**3**	**†**	**2**	**†**	**8**	**2**	**†**	**3**	**18**	**81**	**5**	**5**	**319**
County of Residence																			
Addison	18	24	2	14	4	0	0	1	0	21		0	20	1	0	5	0		2
Bennington	6	0	0	3	1	0	0	2	0	22		1	88	1	0	2	0		3
Caledonia	12	5	1	7	1	0	0	2	0	43		0	2	0	0	2	0		4
Chittenden	39	1	4	54	9	0	0	30	1	190		0	30	0	6	15	1		58
Essex	1	0	0	5	0	0	0	0	0	1		0	0	0	0	1	0		2
Franklin	20	3	3	9	0	0	0	2	0	33		0	6	1	3	8	0		0
Grand Isle	2	0	0	0	0	0	0	0	0	1		0	1	0	0	1	0		1
Lamoille	11	1	1	9	2	0	0	1	0	14		1	4	0	0	2	0		26
Orange	11	10	2	12	2	0	0	0	0	15		0	9	0	1	6	0		5
Orleans	5	8	1	4	1	0	0	0	0	20		0	1	0	1	7	0		2
Rutland	15	2	1	14	2	0	1	2	0	46		1	70	0	0	9	0		4
Washington	19	13	5	20	1	0	0	5	0	43		0	7	1	4	5	0		14
Windham	13	0	0	16	0	0	1	6	1	50		0	58	1	2	10	0		4
Windsor	23	3	2	18	3	0	0	4	0	40		1	49	0	1	8	0		5
Unknown	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0		0
Total (YTD)	**195**	**70**	**22**	**185**	**26**	**0**	**2**	**55**	**2**	**539**	**9**	**4**	**345**	**5**	**18**	**81**	**1**	**5**	**130**
VDH District Office																			
Barre	24	14	5	24	1	0	0	2	0	0		0	0	1	4	6	0		15
Bennington	6	0	0	3	1	0	0	2	0	0		1	0	1	0	2	0		3
Brattleboro	11	0	0	16	0	0	0	5	0	0		0	0	1	1	8	0		3
Burlington	36	1	4	54	0	0	0	24	0	0		0	0	0	5	14	1		58
Middlebury	18	24	2	17	4	0	0	1	0	0		0	0	1	0	5	0		2
Morrisville	10	4	1	11	2	0	0	1	0	0		1	0	0	0	2	0		27
Newport	5	5	1	6	0	0	0	0	0	0		0	0	0	1	7	0		3
Rutland	15	2	1	11	2	0	1	2	0	0		0	0	0	0	9	0		4
St. Albans	22	3	3	9	0	0	0	2	0	0		0	0	0	3	9	0		1
St. Johnsbury	12	5	1	9	0	0	0	2	0	0		0	0	0	0	3	0		4
Springfield	10	0	1	11	1	0	0	1	0	0		0	0	0	1	4	0		3
White River	24	12	3	14	1	0	0	2	0	0		1	0	0	1	10	0		7
Central Office	5	0	0	0	14	0	1	11	2	539		1	345	1	2	2	0		0
Total (YTD)	**195**	**70**	**22**	**185**	**26**	**0**	**2**	**55**	**2**	**539**	**9**	**4**	**345**	**5**	**18**	**81**	**1**	**5**	**130**

(802)863-7240 **1(800)640-4374 (VT)** **FAX: (802)865-7701**

Shiga toxin-producing Escherichia coli (STEC)

****This column partially obscured to protect patient confidentiality***

§ Includes both confirmed & probable cases

†Data captured differently in previous years; no 5-year median available

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