Varicella and Healthcare Personnel Vaccination Recommendations

COMMUNICABLE DISEASE NEWSLETTER

Fall 2013

Varicella

Varicella (Chickenpox) is a highly contagious disease caused by the Varicella Zoster Virus (VZV). The virus is transmitted through the air when an infected person coughs or sneezes and also by direct contact with the fluid of the classic blisters associated with chickenpox disease. The incubation period is 14-16 days with a range of 10-21 days, after which an affected person may present with an itchy rash. The rash generally appears first on the face/head and progresses to the chest, back, and extremities. Fluid-filled blisters, resulting from the rash, usually break and crust over within a period of 5-10 days. Although rash is often the first sign of disease, a mild episode of fever and malaise may exist for 1-2 days prior to the rash onset. Complications of chickenpox include (but are not limited to): bacterial infection of the skin and underlying tissues, pneumonia, meningitis, and encephalitis.

Chickenpox can be prevented through vaccination. During the pre-vaccine era, it is estimated that approximately 4 million people were infected, 10,000-13,000 were hospitalized, and 100-150 died annually as a result of VZV. Since the introduction of the chickenpox vaccine in 1995, the occurrence of disease has decreased by approximately 90%. The chickenpox vaccine is administered routinely to children at 12-15 months of age, and again at 4-6 years of age. Individuals 13 years of age and older may receive 2 doses of vaccine separated by 28 days. While vaccination has made great strides in reducing the prevalence of disease, some people who receive the vaccine may still get the disease; however, it is usually a very mild case with a quick recovery. It is important to note that pregnant women and those with a severely weakened immune system are not candidates for the chickenpox vaccine.

For more information on chickenpox disease, visit the Centers for Disease Control and Prevention website: www.cdc.gov.

For more information on the chickenpox vaccine, contact your primary care physician or the Saginaw County Department of Public Health Immunization Program at (989) 758-3840 or www.saginawpublichealth.org.

Healthcare Personnel Immunization Recommendations[1]

Vaccine	Recommendations in brief
Hepatitis B	Give 3-dose series (dose #1 now, #2 in 1 month, #3 approximately 5 months after #2). Give IM. Obtain anti-HBs serologic testing 1-2 months after #3.
Influenza	Give 1 dose of influenza vaccine annually. Give inactivated injectable vaccine intramuscularly or live attenuated influenza vaccine (LAIV) intranasally.
MMR	For healthcare personnel (HCP) born in 1957 or later without serologic evidence of immunity or prior vaccination, give 2 doses of MMR, 4 weeks apart. For HCP born prior to 1957, see below. Give SC.
Varicella	For HCP who have no serologic proof of immunity, prior vaccination, or history of varicella disease, give 2 doses of varicella vaccine, 4 weeks apart. Give SC.
Tetanus, diphtheria, pertussis	Give dose of Tdap as soon as feasible to all HCP who have not received Tdap previously and to pregnant HCP with each pregnancy (see below). Give Td boosters every 10 years thereafter. Give IM
Meningococcal	Give 1 dose to microbiologists who are routinely exposed to isolates of *N. meningitides* and booster every 5 years if risk continues. Give MCV4 IM; if necessary to use MPSV4, give SC

Healthcare Personnel Immunization Recommendations cont.

Hepatitis B

Healthcare personnel (HCP) who perform tasks that may involve exposure to blood or body fluids should receive a 3-dose series of hepatitis B vaccine at 0-, 1-, and 6-month intervals. Test for hepatitis B surface antibody (anti-HBs) to document immunity 1–2 months after dose #3.

• If anti-HBs is at least 10 mIU/mL (positive), the patient is immune. No further serologic testing or vaccination is recommended.

• If anti-HBs is less than 10 mIU/mL (negative), the patient is unprotected from hepatitis B virus (HBV) infection; revaccinate with a 3-dose series. Retest anti-HBs 1–2 months after dose #3.

Source: Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases 12th ed. Atkinson, W., Wolfe, S., & Hamborsky, J. eds. Washington DC: Public Health Foundation, 2011.

– If anti-HBs is positive, the patient is immune. No further testing or vaccination is recommended.

– If anti-HBs is negative after 6 doses of vaccine, patient is a non-responder.

For non-responders: HCP who are non-responders should be considered susceptible to HBV and should be counseled regarding precautions to prevent HBV infection and the need to obtain HBIG prophylaxis for any known or probable parenteral exposure to hepatitis B surface antigen (HBsAg)-positive blood.1 It is also possible that non-responders are people who are HBsAg positive. Testing should be considered. HCP found to be HBsAg positive should be counseled and medically evaluated.

Note: Anti-HBs testing is not recommended routinely for previously vaccinated HCP who were not tested 1–2 months after their original vaccine series. These HCP should be tested for anti-HBs when they have an exposure to blood or body fluids. If found to be anti-HBs negative, the HCP should be treated as if susceptible.[2]

Influenza

All HCP, including physicians, nurses, paramedics, emergency medical technicians, employees of nursing homes and chronic care facilities, students in these professions, and volunteers, should receive annual vaccination against influenza. Live attenuated influenza vaccine (LAIV) may be given only to non-pregnant healthy HCP age 49 years and younger. Inactivated injectable influenza vaccine (IIV) is preferred over LAIV for HCP who are in close contact with severely immunosuppressed people (e.g., stem cell transplant patients) when patients require protective isolation.

Measles, Mumps, Rubella (MMR)

HCP who work in medical facilities should be immune to measles, mumps, and rubella.

•HCP born in 1957 or later can be considered immune to measles, mumps, or rubella only if they have documentation of (a) laboratory confirmation of disease or immunity or (b) appropriate vaccination against measles, mumps, and rubella (i.e., 2 doses of live measles and mumps vaccines given on or after the first birthday and separated by 28 days or more, and at least 1 dose of live rubella vaccine). HCP with 2 documented doses of MMR are not recommended to be serologically tested for immunity; but if they are tested and results are negative or equivocal for measles, mumps, and/or rubella, these HCP should be considered to have presumptive evidence of immunity to measles, mumps, and/or rubella and are not in need of additional MMR doses.

• Although birth before 1957 generally is considered acceptable evidence of measles, mumps, and rubella immunity, healthcare facilities should consider recommending 2 doses of MMR vaccine routinely to unvaccinated HCP born before 1957 who do not have laboratory evidence of disease or immunity to measles and/or mumps, and should consider 1 dose of MMR for HCP with no laboratory evidence of disease or immunity to rubella. For these same HCP who do not have evidence of immunity, healthcare facilities should recommend 2 doses of MMR vaccine during an outbreak of measles or mumps and 1 dose during an outbreak of rubella.

Varicella

It is recommended that all HCP be immune to varicella. Evidence of immunity in HCP includes documentation of 2 doses of varicella vaccine given at least 28 days apart, history of varicella or herpes zoster based on physician diagnosis, laboratory evidence of immunity, or laboratory confirmation of disease.

Tetanus/Diphtheria/Pertussis (Td/Tdap)

All HCPs who have not or are unsure if they have previously received a dose of Tdap should receive a dose of Tdap as soon as feasible, without regard to the interval since the previous dose of Td. Pregnant HCP need to get repeat doses during each pregnancy. All HCPs should then receive Td boosters every 10 years thereafter.

Meningococcal

Vaccination with MCV4 is recommended for microbiologists who are routinely exposed to isolates of N. meningitidis. Use MPSV4 only if there is a permanent contraindication or precaution to MCV4.

References

1. CDC. Immunization of Health-Care Personnel: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR, 2011; 60(RR-7).

2. See Table 3 in Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis, MMWR, 2001; 50(RR-11).

For additional specific ACIP recommendations, refer to the official ACIP statements published in MMWR. To obtain copies, visit CDC's website at www.cdc.gov/vaccines/pubs/ACIP-list.htm; or visit the Immunization Action Coalition (IAC) website at www.immunize.org/acip.

Communicable Disease
REPORTED FOR SAGINAW COUNTY
For the Quarter
06/01/2013-09/30/2013

Disease	No. Reported
AIDS, AGGREGATE	3
ANIMAL BITE	12
CAMPYLOBACTER	8
CHICKEN POX (VARICELLA)	**2**
CHLAMYDIA (Genital)	266
COCCIDIOIDOMYCOSIS	3
CRYPTOSPORIDIOSIS	2
ENCEPHALITIS, EASTERN	1
FLU LIKE DISEASE	495
GIARDIASIS	2
GASTROINTESTINAL ILLNESS	207
GONORRHEA	89
GUILLAIN-BARRE SYNDROME	1
HEAD LICE	38
HEPATITIS-UNSPECIFIED	1
HEPATITIS A	3
HEPATITIS B ACUTE	3
HEPATITIS B CHRONIC	6
HEPATITIS C ACUTE	15
HEPATITIS C CHRONIC	46
HISTOPLASMOSIS	4
INFLUENZA	2
LEGIONELLOSIS	2
LYME DISEASE	1
MENINGITIS-ASEPTIC	7
MUMPS	1
SALMONELLOSIS	5
SHINGA TOXIN-PRODUCING ESCHERICHIA COLI-(STEC)	3
STREP THROAT	81
STREPTOCOCCUS PNEUMONIA, INVASIVE	4
SYPHILLIS-EARLY LATENT	1
SYPHILLIS-LATE LATENT	2
SYPHILLIS-LATENT OF UNKNOWN DURATION	5
SYPHILLIS-PRIMARY	1
TUBERCULOSIS	3
VZ INFECTION/UNSPECIFIED	4

This newsletter is provided to all Saginaw County healthcare providers, hospitals, schools, local colleges, universities, urgent care facilities and local media centers.

If you would like to receive this newsletter by e-mail please submit your e-mail address to: kburlingame@saginawcounty.com

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Please visit our website at www.saginawpublichealth.org

Communicable Disease
REPORTED FOR SAGINAW COUNTY
Year to Date
01/01/2013-09/30/2013

Disease	No. Reported
AIDS, AGGREGATE	13
ANIMAL BITE	26
CAMPYLOBACTER	9
CHICKEN POX (VARICELLA)	**9**
CHLAMYDIA (Genital)	877
COCCIDIOIDOMYCOSIS	4
CRYPTOSPORIDIOSIS	5
DENGUE FEVER	3
ENCEPHALITIS, EASTERN EQUINE	1
FLU LIKE DISEASE	8568
GIARDIASIS	5
GASTROINTESTINAL ILLNESS	3692
GONORRHEA	198
GUILLAIN-BARRE SYNDROME	1
HEAD LICE	346
HEPATITIS—UNSPECIFIED	1
HEPATITIS A	7
HEPATITIS B ACUTE	7
HEPATITIS B CHRONIC	20
HEPATITIS C ACUTE	77
HEPATITIS C CHRONIC	142
HISTOPLASMOSIS	11
H. INFLUENZA DISEASE –INV.	1
INFLUENZA	343
KAWASAKI	1
LEGIONELLOSIS	4
LYME DISEASE	3
MEASLES	1
MENINGITIS-ASEPTIC	20
MUMPS	1
MYCOBACTERIUM-OTHER	1
NOROVIRUS	3
PERTUSSIS	2
Q FEVER ACUTE	2
SALMONELLOSIS	13
SHINGA TOXIN-PRODUCING ESCHERICHIA COLI- (STEC)	5
STREP THROAT	865
STREPTOCOCCAL PNEUMONIA, INVASIVE	9
STREPTOCOCCAL DIS. INV. GROUP A	1
SYPHILLIS-EARLY LATENT	3
SYPHILLIS-LATE LATENT	3
SYPHILLIS-LATENT OF UNKNOWN DURATION	29
SYPHILLIS-PRIMARY	10
SYPHILLIS-SECONDARY	1
TUBERCULOSIS	5
VZ INFECTION, UNSPECIFIED	15
WEST NILE VIRUS	1

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