US Virgin Islands Classroom Handbook of Vaccine Preventable Diseases

Revised July 2017
Vaccine Preventable Diseases Surveillance Program

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Introduction

The classroom handbook of vaccine preventable diseases for school nurses is intended as a brief overview of infectious diseases which are of public health importance.

This handbook contains reportable vaccine preventable disease summaries listed alphabetically and containing key information on symptoms, modes of transmission, measures of control, and other pertinent information.

This handbook is authored and provided by the **Epidemiology Division (EPID) of the US Virgin Islands Department of Health (VIDOH)** and is available on the Vaccine Preventable Diseases section of Epidemiology Program page at http://doh.vi.gov/epidemiology/vpdsp

We hope that all school staff members find this reference handbook to be a valuable resource. For further information on vaccine preventable diseases and their control, school nurses can call VIDOH staff as follows:

Influenza Coordinator
Office: (340) 718-1311 Ext. 3840

Tuberculosis Coordinator
Office: (340) 774-9000 Ext. 4664

Vaccine Preventable Diseases Coordinator
Office: (340) 774-7477 Ext. 5646
Cellphone: (340) 690-4633

Territorial Epidemiologist
Office: (340) 718-1311 Ext. 3841
Cellphone: (340) 626-1654

Reportable Diseases in the US Virgin Islands

Disease Reporting General Instructions

WHAT: Notifiable vaccine preventable diseases (VPDs) in the US Virgin Islands (USVI). In addition to these conditions, any outbreaks, exotic diseases, and unusual group expression of disease must be reported. All diseases shall be reported by name, age, sex, race/ethnicity, DOB, address, telephone number, disease, date of onset, method of diagnosis, and name, address, and telephone number of physician.

WHEN: The Notification of Infectious Disease Form (EPI-1) in addition to the current year's list of notifiable diseases indicate when to report each condition. Cases or suspected cases of illness considered to be public health emergencies, outbreaks, exotic diseases, and unusual group expressions of disease must be reported to the VIDOH immediately. Other diseases for which there must be a quick public health response must be reported within one working day. All other conditions must be reported within four working days.

HOW: Paper reporting forms can be downloaded here as indicated above. As a last resort or in case of emergency (Category A, select Category B conditions or major outbreak/incident), reports can be made by telephone to the Territorial Epidemiologist office at (340) 718-1311 Ext. 3841 or cellphone at (340) 626-1654 as indicated in the EPI-1 form instructions.

Summary

• Disease reporting of notifiable diseases to the VIDOH is required by law in the USVI.

• Unusual diseases or outbreaks of any kind should be reported immediately.

• Disease reporting is mediated by following instructions in the EPI-1 form. EPI-1 can be downloaded from the VIDOH website.

• **VPDs span all three tiers of disease severity classification**: Category A (report immediately), Category B (report within 48 hours), and Category C (report within 96 hours).

US Virgin Islands Notifiable Conditions, 2017

For a print-ready version of this list click the link above. Entries marked with a ☎ require immediate telephone report to VIDOH-EPID: (340) 718- 1311 Ext. 3841 or (340) 626-1654 as instructed in the EPI-1 form.

A — H	When To Report	I — T	When To Report
¤**Acute flaccid myelitis (AFM)**	☎ **Immediately**	Influenza:	*Varies:*
¤**Anthrax**	☎ **Immediately**	▪ **Influenza-associated pediatric mortality**	☎ **Immediately**
*__Arboviral infections__[1]	*See footnote:*	▪ **Novel influenza A virus infection**	
▪ **Neuroinvasive**	☎ **Immediately** to within 4 work days	▪ ¤Seasonal	☎ **Immediately** Within 4 work days
▪ **Non-neuroinvasive**			
Babesiosis	Within 4 work days	Invasive ¤pneumococcal disease (*Streptococcus pneumoniae*)	Within 2 work days

A — H	When To Report	I — T	When To Report
Botulism: ▪ **Foodborne** ▪ **Infant** ▪ **Other (wound and unspecified)**	☎ **Immediately**	**Legionellosis**	☎ **Immediately**
		Leptospirosis	Within 4 work days
		Listeriosis	Within 4 work days
		Lyme disease	Within 4 work days
Brucellosis	☎ **Immediately**	Malaria	Within 4 work days
Campylobacteriosis	Within 4 work days	¤**Measles (rubeola), total**	☎ **Immediately**
Canchroid	Within 2 work days	¤**Meningococcal disease (*Neisseria meningitides*)**	☎ **Immediately**
Chlamydia trachomatis infection	Within 2 work days	¤Mumps	Within 4 work days
Cholera	☎ **Immediately**	¤**Pertussis**	☎ **Immediately**
¤Chickenpox (varicella)	Within 4 work days	**Plague**	☎ **Immediately**
Childhood diabetes mellitus (age <20)	Within 4 work days	¤**Poliovirus:** ▪ **Poliomyelitis, paralytic** ▪ **Poliovirus infection, non-paralytic**	☎ **Immediately**
Ciguatera	Within 2 work days		
Coccidioidomycosis	Within 4 work days		
Coronavirus, novel, including SARS	☎ **Immediately**	Psittacosis (ornithosis)	Within 2 work days
Cryptosporidiosis	Within 4 work days	**Q fever:** ▪ **Acute** ▪ **Chronic**	☎ **Immediately**
Cyclosporiasis	Within 4 work days		
¤**Diphteria**	☎ **Immediately**		
Ehrlichiosis/anaplasmosis: ▪ *Ehrichia chafeensis* ▪ *Ehrlichia ewingii* ▪ *Anaplasma phagocytophilum* ▪ Undetermined	Within 2 work days	¤**Rabies:** ▪ **Human** ▪ **Animal**	☎ **Immediately**
		¤**Rubella:** ▪ **Rubella infection** ▪ **Congenital syndrome**	☎ **Immediately**
***Escherichia coli* (O157)**	☎ **Immediately**		
Encephalitis: ▪ **Amebic** ▪ **Bacterial** ▪ **Viral, including ¤Japanese encephalitis**	☎ **Immediately**	Salmonellosis	Within 4 work days
		Shigellosis: ▪ Shiga toxin-producing Escherichia coli (STEC)	Within 4 work days
		¤**Smallpox**	☎ **Immediately**
Enterovirus D-68	☎ **Immediately**	Spotted fever rickettsiosis	Within 4 work days
Giardiasis	Within 4 work days	*Staphylococcus aureus* (drug resistant)	Within 2 work days
Gonorrhea	Within 2 work days	*Streptococcus pneumoniae* (drug resistant)	Within 2 work days
¤***Haemophilus influenzae*, invasive disease**	☎ **Immediately**	Syphilis: ▪ Congenital ▪ Early latent ▪ Late latent ▪ Late with clinical manifestations ▪ Primary ▪ Secondary	Within 2 work days
Hansen's disease (leprosy)	Within 2 work days		
Hantavirus infection: ▪ Non-Hantavirus pulmonary syndrome ▪ Hantavirus pulmonary syndrome	Within 4 work days		
Hepatitis: ▪ ¤Hepatitis A, acute ▪ ¤Hepatitis B, acute ▪ Hepatitis B virus infection, chronic ▪ Hepatitis B virus infection, perinatal ▪ Hepatitis C, acute ▪ Hepatitis C virus infection, chronic	Within 2 work days	¤Tetanus	Within 4 work days
		Toxic-shock syndrome: ▪ Streptococcal ▪ Staphylococcal	Within 4 work days
		Trichinellosis	Within 2 work days
*Human immunodeficiency virus[2]: ▪ HIV/AIDS	Within 2 work days	¤**Tuberculosis**	☎ **Immediately**
		Tularemia	☎ **Immediately**
		¤**Typhoid fever (*Salmonella typhi*)**	☎ **Immediately**
		Vancomycin resistant: ▪ Enterococcus ▪ *Staphylococcus aureus* (VISA, VRSA)	Within 2 work days

I — T	When To Report
Vibriosis, excluding cholera	Within 4 work days
Viral hemorrhagic fevers (HFs): ▪ **Crimean-Congo HF** ▪ **Dengue HF** ▪ **Ebola HF** ▪ **Guanarito HF** ▪ **Junin HF** ▪ **Lassa HF** ▪ **Lujo HF** ▪ **Machupo HF** ▪ **Marburg HF** ▪ **Sabia-associated HF**	☎ **Immediately**
¤**Yellow fever**	☎ **Immediately**

***See condition-specific footnote for reporting contact information**

[1] ***A.*** Please refer to the EPI-2 "Dengue, Chikungunya and Zika Reporting Form" available at doh.vi.gov/forms/pdf/EPI-2.pdf to report these conditions. *All other arboviral disease including additional flaviviral or alphaviral infections must be reported as "other" and* ***immediately*** *using EPI-1 form*.

[2] ***B.*** All diseases should be reported using EPI-1 "Notification of Infectious Disease Form" available at doh.vi.gov/forms/pdf/EPI-1.pdf.

Please send HIV/AIDS reports to the HIV/STD Program at Charles Harwood Complex on St. Croix (Fax: 712-6209) or Knud Hansen Complex on St. Thomas (Fax: 776-5466).

¤ Vaccine preventable diseases.

Acute flaccid myelitis (AFM)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Productive cough (3 weeks or longer), chest pain, fatigue, unexplained weight loss, night sweats, loss of appetite, chills, and fever. Additional symptoms may include: facial droop/weakness, difficulty moving the eyes, drooping eyelids, or difficulty with swallowing or slurred speech. Rare symptoms include numbness or tingling in the limbs and being unable to pass urine. In rare cases, a patient may have difficulty breathing due to muscle weakness and require urgent ventilator support.
Infectious Agent	AFM can be caused by a variety of pathogens, including several viruses: enteroviruses (polio and non-polio), West Nile virus, Japanese encephalitis virus, Saint Louis encephalitis virus, herpesviruses (e.g. cytomegalovirus, Epstein-Barr virus), and adenoviruses.
Mode of Spread	AFM is not spread from person to person. The viruses that are believed to cause AFM may be contagious from one person to another or may be spread by a mosquito or other vector depending on which virus causes the AFM.
Incubation Period	Varies depending on the infectious agent.
Period of Communicability	Varies depending on the infectious agent.
Control Measures	Appropriate infection control measures vary depending on the infectious agent.
Contact Investigation	There is no specific management for contacts of AFM cases. Contacts should be educated regarding the specific etiology if one is suspected (e.g. vectors for arbovirus or lack of symptoms or non-specific symptoms associated with uncomplicated enterovirus infection) and advised about when they should seek medical care.
Duration of Illness	The severity, duration and outcome of AFM are different for each patient depending on the cause of the AFM.
Exclusion and Readmission Criteria	Varies depending on the infectious agent.
Additional Resources	CDC Website – Acute Flaccid Myelitis CDC Fact Sheet Notification of Infectious Disease Form (EPI-1)

Diptheria

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Sore throat, low-grade fever, and an adherent grayish membrane of the tonsil(s), pharynx, and/or nose. Large tender cervical lymph nodes and marked swelling and edema of the neck ("bull neck").
Infectious Agent	*Corynebacterium diphtheriae*
Mode of Spread	Person-to-person transmission by droplets or through direct contact with the respiratory secretions of an infected person. Fomites and raw milk may also serve as a source of transmission.
Incubation Period	Usually 2 to 5 days, with a range from 1 to 10 days.
Period of Communicability	Variable; usually less than 2 weeks and seldom more than 1 month. Antibiotic therapy can reduce communicability to fewer than 4 days. Carriers may shed organisms for more than 6 months.
Control Measures	All contacts should receive antibiotic treatment. Previously immunized contacts should receive a booster dose of diphtheria toxoid if >5 years have elapsed since their last dose. Non-immunized contacts (those with <3 doses or unknown histories) should begin and/or continue with a primary series according to published recommendations for routine immunizations. Each household contact and all other close contacts shall have nose and throat specimens tested and be monitored for symptoms for seven days from the time of last exposure to the disease. Healthy carriers with diphtheria shall be treated.
Contact Investigation	Contacts are defined as those who sleep in the same house or who share food, drink, or eating/drinking utensils with the case as well as healthcare workers in contact with the case's oral or respiratory secretions.
Duration of Illness	Duration of illness is case specific.
Exclusion and Readmission Criteria	Each infected person shall remain in isolation for 14 days or until two consecutive negative pairs of nose and throat cultures are obtained at least 24 hours apart and not less than 24 hours after discontinuation of antibiotic therapy.
Additional Resources	CDC Website – Diphtheria CDC Fact Sheet: Kids CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)
Visual Aid	 © CENTERS FOR DISEASE CONTROL AND PREVENTION

Haemophilus influenzae (invasive)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Onset is frequently sudden with symptoms of fever, vomiting, lethargy, and /or meningeal irritation. Invasive Hib disease occurs when the infecting bacterium is able to enter a normally sterile site where bacteria are not normally present, such as the bloodstream, soft tissues, or cerebrospinal fluid. Invasive disease may produce various syndromes, including septicemia, pneumonia, epiglottitis, pericarditis, peritonitis, and sceptic arthritis.
Infectious Agent	*Haemophilus influenzae*
Mode of Spread	By droplet infection and direct/indirect contact with discharges from nose and throat during infections.
Incubation Period	Unknown; probably 1 to 4 days.
Period of Communicability	Communicable as long as organisms are present. Communicability ends within 24 to 48 hours of the initiation of effective antibiotic therapy.
Control Measures	Implement control measures for type B or unknown serotypes. Each person with meningitis caused by *Haemophilus influenza*e shall remain in isolation for 24 hours after initiation of antibiotic therapy.
Contact Investigation	There's a vaccine that can prevent *Haemophilus influenzae* type b (Hib) disease, but not the other types ("strains") of *Haemophilus influenzae* bacteria. Some close contacts will need antibiotics, but all should be informed about their risk of disease and benefits of vaccination, educated on the incubation period and the need to seek medical care if symptoms develop, and remain under active surveillance for at least seven days after their last contact with the case to monitor for symptoms.
Duration of Illness	Disease brought on by *Haemophilus influenzae* will last until an appropriate treatment regimen has been completed.
Exclusion and Readmission Criteria	Each infected person shall remain in respiratory isolation for 24 hours after initiation of antibiotic therapy. Droplet precautions should be implemented for hospitalized patients until 24 hours have passed following initiation of antibiotic therapy.
Additional Resources	CDC Website – *Haemophilus influenzae* CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)
Visual Aid	

Hepatitis A

CATEGORY B Report within 48 HOURS	This disease is reportable in USVI and must be reported to VIDOH within 2 days of knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Abrupt onset with fever, malaise, anorexia, nausea, abdominal pain, and sometimes diarrhea. Jaundice, dark urine and clay-colored stool follow a few days later.
Infectious Agent	Hepatitis A virus
Mode of Spread	Direct and indirect person-to-person spread via the fecal-oral route. Rarely, blood-borne transmission can occur during the viremic phase of the disease.
Incubation Period	Usually 28 to 30 days, with a range from 15 to 50 days.
Period of Communicability	Most infectious one to two weeks before symptom onset continuing until two weeks after non-jaundice symptom onset or one week after jaundice onset.
Control Measures	Contacts who are not immune to hepatitis A should be administered a single dose of hepatitis A vaccine (12 months–40 years) or immunoglobulin (Ig). Prophylaxis should be given within 14 days of exposure if possible.
Contact Investigation	Any close person contact including household and sexual contacts, persons who have shared illicit drugs with an infectious case, daycare contacts. Schools, hospitals, long term care facilities and other work settings with at-risk contacts of a case only when there is epidemiological evidence of transmission. Food service workers sharing the same shift as the infected food handler and in some instances persons eating food prepared by the infected food handler.
Duration of Illness	Duration of acute illness is usually less than 2 months but some may be ill as long as 6 months.
Exclusion and Readmission Criteria	School attendees should be excluded from school for one week following onset of jaundice or, with no jaundice, 14 days after onset of other symptoms. Each infected person shall be excluded from food handling, patient care, and any occupation involving the care of young children and the elderly until 14 days after the onset of illness.
Additional Resources	CDC Website – Hepatitis A CDC Fact Sheet: Parents FoodSafety.gov – Hepatitis A Notification of Infectious Disease Form (EPI-1)
Visual Aid	

Hepatitis B

CATEGORY B Report within 48 HOURS	This disease is reportable in USVI and must be reported to VIDOH within 2 days of knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Infection may be acute or chronic, both of which may be asymptomatic. If symptoms are present, onset is usually subtle with loss of appetite, vague abdominal discomfort, nausea, vomiting and sometimes arthralgia and rash often progressing to jaundice. Fever may be absent or low-grade. Liver enzyme levels can be markedly elevated.
Infectious Agent	Hepatitis B virus (HBV)
Mode of Spread	HBV is transmitted through blood or body fluids. The highest concentrations of the virus are in blood; lower titers are in semen and even lower titers in saliva. Infection is spread through sexual contact, sharing needles, and perinatal transmission from mother to infant.
Incubation Period	Usually 60 to 90 days, with a range from 45 to 160 days.
Period of Communicability	A person is considered infectious as long as Hepatitis B surface antigen (HBsAg) is detectable. Most people are infectious from 1-2 months before to 1-2 months after the onset of symptoms. Persons who have chronic Hepatitis B (i.e. carriers) remain infectious indefinitely.
Control Measures	For contacts that are fully vaccinated no testing or treatment is needed. For those contacts that have not completed the hepatitis B series the remaining doses should be administered. Unvaccinated contacts should receive the full series of hepatitis B vaccine. For those contacts with sexual exposure 14 days prior or initial percutaneous exposure seven days prior should also receive a dose of hepatitis B immune globulin.
Contact Investigation	Contacts are household members, persons with mucosal or percutaneous exposure to infectious body fluid of an infectious person, and sexual partners.
Duration of Illness	Duration of acute illness is usually several weeks, but can persist up to 6 months.
Exclusion and Readmission Criteria	Persons should not be excluded from work, school, play, child care, or other settings. There is no evidence of HBV transmission from food handlers, teachers, or other service providers in the absence of blood-to-blood contact.
Additional Resources	CDC Website – Hepatitis B CDC Fact Sheet: Parents CDC Emergency Needlestick Information Notification of Infectious Disease Form (EPI-1)
Visual Aid	Refer to Hepatitis A virus visual aid.

Influenza

CATEGORY A **Report IMMEDIATELY**	An influenza outbreak or a case of novel influenza are reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases or outbreak.
CATEGORY C **Report within 96 HOURS**	Individual cases of seasonal influenza must be reported to VIDOH within 4 days following knowledge of the case.
Signs and Symptoms	Abrupt onset of fever, headache, muscle aches, cough, sore throat, and malaise; some people have vomiting and diarrhea.
Infectious Agent	Influenza virus
Mode of Spread	Influenza is spread from person-to-person, primarily by respiratory tract droplets created by coughing or sneezing. Contact with respiratory tract droplet-contaminated surfaces is another possible mode of transmission.
Incubation Period	Usually 1 to 4 days, with an average of 2 days.
Period of Communicability	One day before symptoms develop and up to seven days after onset of symptoms.
Control Measures	Yearly influenza vaccination is recommended for everyone six months and older. Students should be taught about importance of hand washing and covering nose and mouth when sneezing and coughing. Antiviral drugs can be administered if warranted to exposed individuals.
Contact Investigation	Contact investigation for influenza is only needed in the event of an outbreak situation. Focus on individuals who are in a setting where there was a high likelihood of contact with respiratory droplets and/or body fluids of an infected person. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, physical examination, or any other contact between persons that is likely to result in exposure to respiratory droplets.
Duration of Illness	Usually 2 to 7 days.
Exclusion and Readmission Criteria	Children with influenza or individuals symptomatic with influenza like illness should stay home from school, child care, or other public settings until 24 hours after fever has resolved (without use of fever-reducing medicines).
Additional Resources	CDC Website – Influenza CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)

Japanese encephalitis

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Less than 1% of infected people develop clinical illness. Initial symptoms often include fever, headache, and vomiting. Mental status changes, neurologic symptoms, weakness, and movement disorders might develop over the next few days. Seizures are common, especially among children.
Infectious Agent	Japanese encephalitis virus
Mode of Spread	Japanese encephalitis virus is transmitted to humans through the bite of infected *Culex* species mosquitoes. These species are not present in the US Virgin Islands.
Incubation Period	Typically 6 to 16 days in persons who develop symptoms.
Period of Communicability	There is no evidence of transmission from person to person.
Control Measures	Japanese encephalitis virus patients should be protected from further mosquito exposure (staying indoors and/or under a mosquito net) until fever has subsided. Hospitalized patients should be cared for using standard precautions.
Contact Investigation	Identify other persons who traveled with the case. If these contacts have symptoms consistent with Japanese encephalitis virus, refer them to a health care provider and arrange for laboratory testing.
Duration of Illness	Up to one in every three people who develop these more serious symptoms will die as a result of the infection. In those who survive, these symptoms tend to slowly improve. However, it can take several months to make a full recovery and up to half of those who do survive are left with permanent brain damage.
Exclusion and Readmission Criteria	There is no exclusion for an individual who has been exposed to Japanese encephalitis virus.
Additional Resources	CDC Website – Japanese Encephalitis Notification of Infectious Disease Form (EPI-1)

Measles (Rubeola)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Typically begins with a high fever, cough, runny nose (coryza) and red, watery eyes (conjunctivitis). Two to three days later tiny white spots (Koplik spots) may appear inside the mouth. Within two to four days after onset of symptoms a red blotchy rash first appearing on the head then spreading downward to the neck, trunk, arms, legs, and feet.
Infectious Agent	Measles virus
Mode of Spread	Airborne by droplet spread or direct contact with nasopharyngeal secretions.
Incubation Period	Most commonly 10 days, but may be 7 to 18 days from exposure to onset of fever; rash usually develops 14 days after exposure, but rarely as long as 19 to 21 days.
Period of Communicability	Cases are contagious from 1 day before onset of symptoms (4 days before the onset of rash) to 4 days after the rash appears.
Control Measures	All susceptible contacts should be vaccinated with a measles containing vaccine (MMR) within 72 hours of exposure. Immune globulin (Ig) should instead be given to those that are too young to be vaccinated, pregnant, immunocompromised, or if the exposure was more than 72 hours. Ig can be given within 6 days of exposure to measles. Identify those contacts that are susceptible; those that do NOT have documentation of receipt of a measles containing vaccine (MMR), laboratory evidence of immunity, or born before 1957.
Contact Investigation	Exposure is defined as direct contact with a person infectious for measles and/or sharing the same confined airspace with a person infectious for measles. This includes classrooms, a home, clinic waiting room, examination room, airplane, etc., or in these areas up to two hours after the infectious person was present.
Duration of Illness	Duration of illness is usually 5 to 12 days.
Exclusion and Readmission Criteria	Each infected person shall remain in isolation for 4 days after the onset of rash. Each susceptible person in a school, a child care facility, or a family day care home shall be either vaccinated within 24 hours of notification to the secretary or excluded from the school, child care facility, or family day care home until 21 days after the onset of the last reported illness in the school, child care facility, or family day care home.
Additional Resources	CDC Website – Measles CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)
Visual Aid	 

Meningitis, bacterial (meningococcal)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	An invasive infection with *Neisseria meningitidis* may cause several clinical syndromes, including meningitis, bacteremia, and sepsis. Symptoms of meningitis typically include the sudden onset of a stiff neck, high fever and an intense headache; a petechial rash may be present. Nausea, vomiting and mental confusion are often present. The case-fatality rate for meningococcal meningitis is between 5-15%. Meningococcemia (i.e. infection of the blood) typically presents with the abrupt onset of fever, chills, malaise, prostration and rash (e.g. urticarial, maculopapular, purpuric or petechial). Fulminant cases present with purpura, disseminated intravascular coagulation, shock, and/or coma and may lead to death within hours despite appropriate therapy. In fulminating disease, the death rate remains high despite prompt antibacterial treatment.
Infectious Agent	*Neisseria meningitidis*
Mode of Spread	Direct contact with an infected person's oral and/or nasal secretions, including but not limited to: kissing, sharing a toothbrush or eating utensil and other markers of close social contact.
Incubation Period	Usually 3 to 4 days, with a range from 2 to 10 days.
Period of Communicability	As long as *Neisseria meningitidis* are present in the nasopharynx; seven days prior to illness onset to 24 hours after initiation of an appropriate antibiotic treatment.
Control Measures	Treatment with antibiotics is recommended for all close contacts regardless of immunization status if exposures were within the last 14 days. Contacts should be actively monitored for symptoms for at least 10 days after their last contact with the infectious person.
Contact Investigation	Identify contacts based on activities seven days prior to illness onset until 24 hours after appropriate antibiotic treatment. The following are considered close contacts: household contacts, child care or day care contacts, individuals with direct exposure to the ill person's secretions, persons performing mouth-to-mouth resuscitation or unprotected contact during endotracheal intubation or suctioning, persons that frequently slept or ate in same dwelling as patient, or passengers seated directly next to the infectious person during airline flights lasting more than eight hours.
Duration of Illness	Duration of illness depends on type of illness and treatment.
Exclusion and Readmission Criteria	Each infected person shall remain in respiratory isolation for 24 hours after initiation of antibiotic therapy.
Additional Resources	CDC Website – Bacterial Meningitis WHO Website – Meningococcal Meningitis CDC Fact Sheet: Preteens and Teens Notification of Infectious Disease Form (EPI-1)

Meningitis, bacterial (non-meningococcal)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	The symptoms of meningitis may not be the same for every person. Common symptoms are high fever, severe headache, stiff neck, drowsiness, nausea, and vomiting. Additional symptoms include rashes and sensitivity to light. In infants, the symptoms are difficult to identify and may include fever, irritability, lack of appetite and difficulty waking the infant up.
Infectious Agent	Various bacteria can cause meningitis, but the common causes will vary by age group. Vaccine preventable diseases causing meningitis by age group → Infants and children: *Streptococcus pneumoniae*, *Haemophilus influenza* type B. Adolescents and young adults: *Streptococcus pneumoniae*. Older adults: *Streptococcus pneumoniae*.
Mode of Spread	Direct contact with an infected person's oral and/or nasal secretions, including but not limited to: kissing, sharing a toothbrush or eating utensil and other markers of close social contact. Close contact may result in becoming infected with the pathogen that made that person sick, but contacts are not likely to develop meningitis as a complication.
Incubation Period	Varies depending on the infectious agent.
Period of Communicability	Varies depending on the infectious agent.
Control Measures	Bacterial meningitis caused by invasive streptococcal infection does not require prophylactic measures, but requires investigation led by VIDOH with disease-specific guidelines.
Contact Investigation	There is no contact investigation requirement for individuals with non-*Neisseria meninigitidis* bacterial meningitis.
Duration of Illness	Duration of illness depends on type of illness and treatment.
Exclusion and Readmission Criteria	Children with non-*Neisseria meninigitidis* bacterial meningitis should be kept out of school or childcare until they are fever free for 24 hours without the use of fever suppressing medications.
Additional Resources	CDC Website – Bacterial Meningitis WHO Website – Meningococcal Meningitis Notification of Infectious Disease Form (EPI-1)

Meningitis, viral

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Sudden onset of fever, headache, and stiff neck, nausea, vomiting, sensitivity to light, and altered mental status (confusion).
Infectious Agent	Various viruses can cause meningitis. Vaccine preventable viral infections that may result in meningitis include: mumps virus, measles virus, and influenza virus.
Mode of Spread	Varies depending on the virus.
Incubation Period	Dependent upon the virus causing meningitis.
Period of Communicability	Dependent upon the virus causing meningitis.
Control Measures	Wash your hands often with soap and water, especially after changing diapers, using the toilet, or coughing or blowing your nose. Avoid touching your face with unwashed hands. Avoid close contact such as kissing, hugging, or sharing cups or eating utensils with people who are sick. Cover your coughs and sneezes with a tissue or your upper shirt sleeve, not your hands. Clean and disinfect frequently touched surfaces, such as toys and doorknobs, especially if someone is sick. Stay home when you are sick.
Contact Investigation	There is no contact investigation requirement for individuals with viral meningitis.
Duration of Illness	Duration of illness is usually 7 to 10 days.
Exclusion and Readmission Criteria	There are no exclusion requirements. Ill persons should remain at home until no longer symptomatic.
Additional Resources	CDC Website – Viral Meningitis Notification of Infectious Disease Form (EPI-1)

Mumps

CATEGORY C Report within 96 HOURS	This disease is reportable in USVI and must be reported to VIDOH within 4 days of knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Fever and swelling of one or more of the salivary glands (e.g. parotid, sublingual or submandibular glands). Asymptomatic infections occur in 20% of persons with mumps. Orchitis, usually unilateral, occurs in 20-30% of post-pubertal males and oophoritis in approximately 5% of post-pubertal females; sterility is extremely rare. Symptomatic meningitis occurs in up to 10% of cases. Pancreatitis, neuritis, arthritis, mastitis, nephritis, thyroiditis and pericarditis may occur.
Infectious Agent	Mumps virus
Mode of Spread	Direct contact with an infected person, droplet spread, and indirectly by items contaminated by the saliva of an infected person.
Incubation Period	Usually 16 to 18 days, with a range from 12 to 25 days.
Period of Communicability	From 7 days before the onset of illness until 9 days after. Maximum infectiousness occurs between 2 days before and 4 days after onset of illness with the initial day of swelling counted as day 0.
Control Measures	High risk contacts require referral: pregnant women -- refer to their obstetrician, immunosuppressed individuals - refer to their healthcare provider, and infants <12 months of age -- refer to their pediatrician. Immunize all other susceptible contacts immediately. This includes those who do NOT have documentation of receipt of a mumps containing vaccine (MMR), laboratory evidence of immunity, or born before 1957. Provide education to all contacts on the benefit of vaccination, the incubation period for mumps, symptoms of the disease, and precautions to take if symptoms develop.
Contact Investigation	Identify and record all of the case's occupations and activities while infectious. Identify a list of all contacts which can include household, daycare, school, work and social contacts, and those providing direct patient care. Collect immunization status for all contacts. Refer high risk contacts to their healthcare providers.
Duration of Illness	Duration of illness is usually 7 to 10 days.
Exclusion and Readmission Criteria	Each infected person shall remain in respiratory isolation for 5 days after onset of illness. Each susceptible person in a school, child care facility, or family daycare home shall be vaccinated within 24 hours of notification to the secretary or excluded from the school until 26 days after the onset of the last reported illness in the school, child care facility, or family day care home.
Additional Resources	CDC Website – Mumps CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)
Visual Aid	 

Pertussis (whooping cough)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Runny nose, sneezing, low-grade fever and an occasional cough. The cough gradually worsens and one to two weeks after onset, paroxysms of coughing, inspiratory "whoop," or posttussive vomiting occur.
Infectious Agent	*Bordetella pertussis*
Mode of Spread	Most commonly occurs through contact with airborne droplets of respiratory secretions, which generally travels three feet or less when an infected person talks, coughs, or sneezes. Indirect spread through contaminated objects rarely occurs.
Incubation Period	Usually 7 to 10 days, with a range from 4 to 21 days.
Period of Communicability	Pertussis is highly communicable during the first two weeks of the disease. Communicability gradually decreases and becomes negligible about 3 weeks after the onset of the paroxysmal cough. When treated with erythromycin, clarithromycin, azithromycin, or other appropriate antibiotic patients are no longer contagious after five days of treatment.
Control Measures	High risk contacts are those close contacts at risk for developing severe disease or those who may expose persons at high risk for severe disease including infants under 12 months, pregnant women in the 3rd trimester of pregnancy, all persons with pre-existing health conditions that may be exacerbated by a pertussis infection (for example, but not limited to immunocompromised persons and patients with moderate to severe medically treated asthma), and contacts who themselves have close contact with either infants under 12 months, pregnant women, or individuals with pre-existing health conditions at risk of severe illness or complications. All high risk and household contacts should be treated with antibiotics and monitored for symptoms for 21 days.
Contact Investigation	Identify and record all of the case's occupations and activities while infectious, especially involvement with high risk individuals (individuals in contact with infants, pregnant women, health care workers, and child care workers). Exposure is defined as shared confined space in close proximity for greater than one hour with a person who is symptomatic and coughing or direct face-to-face contact and direct contact with respiratory secretions of a person who is coughing.
Duration of Illness	Duration of illness is 6 to 10 weeks.
Exclusion and Readmission Criteria	Each infected person shall remain in respiratory isolation for 3 weeks if untreated or for 5 days following initiation of antibiotic therapy. Close contacts should not be excluded, regardless of immunization status, but monitored for 21 days for signs and symptoms of pertussis.
Additional Resources	CDC Website - Pertussis CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)

Pneumococcal disease, invasive

CATEGORY B Report within 48 HOURS	This disease is reportable in USVI and must be reported to VIDOH within 2 days of knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	There are many types of pneumococcal disease. Symptoms and complications depend on the part of the body that is infected. Pneumococcal pneumonia (lung infection) is the most common serious form of pneumococcal disease. Symptoms include: fever and chills, cough, rapid breathing or difficulty breathing, and chest pain. Pneumococcal meningitis** is an infection of the covering of the brain and spinal cord. Symptoms include: stiff neck, fever, headache, pain when looking into bright lights, and confusion. In babies, meningitis may cause poor eating and drinking, low alertness, and vomiting. Pneumococcal bacteremia** and sepsis are blood infections. Symptoms include: fever, chills, and low alertness.
Infectious Agent	*Streptococcus pneumoniae*
Mode of Spread	Pneumococcal bacteria is spread from person-to-person by direct contact with respiratory secretions, like saliva or mucus. Many people, especially children, have the bacteria in their nose or throat at one time or another without being ill.
Incubation Period	Usually 1 to 3 days for pneumococcal pneumonia (most common clinical presentation).
Period of Communicability	The period of communicability for pneumococcal disease is unknown, but presumably transmission can occur as long as the organism appears in respiratory secretions.
Control Measures	Bacterial meningitis caused by invasive streptococcal infection does not require prophylactic measures, but requires investigation led by VIDOH with disease-specific guidelines. Disinfect or destroy articles contaminated with discharges from the nose and throat, or from other infected sites.
Contact Investigation	There is no specific management for contacts of pneumococcal disease cases.
Duration of Illness	Duration of illness depends on type of illness and treatment.
Exclusion and Readmission Criteria	Children with pneumococcal disease should be kept out of school or childcare until they are fever free for 24 hours without the use of fever suppressing medications.
Additional Resources	CDC Website – Pneumococcal Disease CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)

***** Meningitis and bacteremia are considered invasive pneumococcal disease.***

Poliomyelitis

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Symptoms include fever, headache, nausea and vomiting, stiffness in neck and back, with or without paralysis. Paralysis is typically flaccid, asymmetric, and most commonly affects the lower extremities.
Infectious Agent	Poliovirus
Mode of Spread	Transmission is primarily through the fecal-oral route. However, the virus can be transmitted by indirect contact with infectious saliva or feces, or by contaminated sewage or water.
Incubation Period	Usually 7 to 14 days for paralytic poliomyelitis, with a range from 3 to 35 days.
Period of Communicability	Infectivity is greatest 7-10 days before and after onset of symptoms. In symptomatic and asymptomatic cases, poliovirus is found in pharyngeal secretions 36 hours and in the feces 72 hours after exposure. Poliovirus can remain present in the stool from 3 to 6 weeks.
Control Measures	Immunization is effective in controlling poliomyelitis. Isolation of infected persons is required. Active surveillance community-wide should be initiated for 2 incubation periods (i.e., 70 days) beyond the onset of the last case in the area.
Contact Investigation	Identify a case's activities 10 days prior to and after onset of symptoms. Identify contacts and their immunization status. Exposure is defined as contact with the stool or oral secretions (e.g. saliva) of an infectious person. A susceptible contact is defined as an individual with no written record of a complete polio immunization series. Identify potential transmission settings.
Duration of Illness	Any recovery from paralysis usually begins within 1 month. Between 25 - 40% of persons who contracted paralytic poliomyelitis in childhood may develop "post-polio syndrome" 30 - 40 years later. This syndrome is characterized by muscle pain, exacerbation of existing weakness, and/or development of new paralysis or weakness.
Exclusion and Readmission Criteria	Each infected person shall remain in isolation for 10 days from the onset of illness. Enteric precautions shall be followed for 6 weeks.
Additional Resources	CDC Website - Poliomyelitis CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)

Rabies

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Disease progression results in inflammation of the brain and/or meninges.
Infectious Agent	Rabies virus signs and symptoms can include slight or partial paralysis, anxiety, insomnia, confusion, agitation, abnormal behavior, paranoia, terror, and hallucinations, progressing to delirium, and coma. The person may also have hydrophobia.
Mode of Spread	The rabies virus is found in the brain, spinal cord, and saliva of an infected animal and is spread when these items touch broken skin, open wounds, or the eyes, mouth, or nose. In most cases, rabies is spread by the bite of an infected animal. No endemic rabies transmission is present in the US Virgin Islands.
Incubation Period	Typically 1–3 months but may vary from 1 week to 1 year. Incubation tends to shorten with increased severity of exposure.
Period of Communicability	Varies by species; dogs, cats, and ferrets can shed the virus in their saliva up to 10 days before onset of clinical signs and throughout the course of the disease. Wild animals may have virus present in saliva for longer periods before onset of symptoms.
Control Measures	Post-exposure prophylaxis (PEP) is the immediate treatment of a bite victim after rabies exposure. This prevents virus entry into the central nervous system, which results in imminent death. PEP consists of extensive washing and local treatment of the wound as soon as possible after exposure, a course of rabies vaccine, and the administration of rabies immunoglobulin (RIG), if indicated.
Contact Investigation	Investigate animal or human exposures to potentially rabid animal. Transmission between humans is extremely rare.
Duration of Illness	The acute period of disease typically ends after 2 to 10 days. Once clinical signs of rabies appear, the disease is nearly always fatal, and treatment is typically supportive.
Exclusion and Readmission Criteria	There is no exclusion for an individual who has been exposed to rabies. Post-exposure prophylaxis is strongly recommended.
Additional Resources	CDC Website – Rabies CDC Interactive Fact Sheet: Kids Notification of Infectious Disease Form (EPI-1)

Rubella (German measles)

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Rash that starts on the face and spreads to the rest of the body and a low fever (less than 101 degrees). Older children and adults may also have swollen glands and symptoms like a cold before the rash appears. Aching joints occur in many cases, especially among young women. Birth defects if acquired by a pregnant woman include deafness, cataracts, heart defects, mental retardation, and liver and spleen damage (at least a 20% chance of damage to the fetus if a woman is infected early in pregnancy).
Infectious Agent	Rubella virus
Mode of Spread	Contact with nasopharyngeal secretions of infected persons through droplet spread or direct contact with cases.
Incubation Period	Usually 14 to 17 days, with a range from 14 to 21 days.
Period of Communicability	From about 7 days before to 4 days after onset of rash. Infants may shed the virus for several months.
Control Measures	VIDOH will exclude from school any children on medical or religious exemptions. These children will be excluded until 21 days after the onset of the last reported illness in the school or child care setting; unless the child is immunized or shows proof of immunization within 24 hours of notification to the secretary. Pregnant women should be referred to their obstetrician. Susceptible contacts include those who do NOT have documentation of receipt of a rubella containing vaccine (MMR), laboratory evidence of immunity, or born before 1957.
Contact Investigation	Individuals would be considered to be exposed by sharing a confined space in close proximity to an infectious case for longer than one hour, which includes all close person contacts, educators, and classmates of the case at school and all direct caregivers and classmates of a case in a daycare.
Duration of Illness	Rash occurs 14 to 17 days after exposure and usually lasts about 3 days.
Exclusion and Readmission Criteria	Each infected person shall remain in respiratory isolation for seven days after the onset of rash. Each susceptible person in a school shall be vaccinated within 24 hours of notification to the secretary or shall be excluded from the school until 21 days after the onset of the last reported illness in the school.
Additional Resources	CDC Website – Rubella CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)
Visual Aid	 

Tetanus

CATEGORY C Report within 96 HOURS	This disease is reportable in USVI and must be reported to VIDOH within 4 days of knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Painful muscular contractions, primarily of jaw, neck muscles, and muscles of the trunk. A common first sign is abdominal rigidity, though rigidity is sometimes confined to the region of injury. Generalized spasms may occur and are frequently induced by sensory stimuli.
Infectious Agent	*Clostridium tetani*
Mode of Spread	There is no person-to-person transmission. Tetanus spores usually enter the body through injuries, puncture wounds, lacerations, burns, or by injected contaminated drugs.
Incubation Period	Usually 3 to 21 days but can range from 1 day to several months. Shorter incubation periods are generally associated with severe disease and a poor prognosis.
Period of Communicability	None.
Control Measures	Immunization represents the best method for prevention of tetanus. Following a primary series in childhood with DT or Tdap/DTaP, tetanus-diphtheria (Td) booster doses are recommended at 10-year intervals. A booster dose is recommended after a tetanus-prone injury if the last immunization was not within the preceding 5 year.
Contact Investigation	There is no contact investigation requirement for individuals with tetanus.
Duration of Illness	Spasms brought on by infection with *Clostridium tetani* continue for 3 to 4 weeks; complete recovery may take months.
Exclusion and Readmission Criteria	There is no exclusion for an individual with tetanus.
Additional Resources	CDC Website – Tetanus CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1)

Tuberculosis

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Productive cough (3 weeks or longer), chest pain, fatigue, unexplained weight loss, night sweats, loss of appetite, chills, and fever.
Infectious Agent	*Mycobacterium tuberculosis*
Mode of Spread	By airborne transmission from individuals with active TB disease. Infected (i.e. skin or blood test-positive) individuals without active TB cannot transmit infection.
Incubation Period	Highly variable; from the time of exposure to a positive skin or blood test, the incubation period is usually 2 to 10 weeks. Developing active tuberculosis may take several years.
Period of Communicability	Individuals with active tuberculosis may be infectious as long as viable bacteria are present. Effective antimicrobial therapy usually eliminates communicability within 2 to 4 weeks.
Control Measures	Isolation of active cases is required until three consecutive sputum tests are negative by microscopic examination and the person has been on appropriate chemotherapy for at least two weeks and clinical improvement of symptoms is evident. Close contacts should be medically evaluated and tested. Contacts with a negative test should be retested 10-12 weeks after their last exposure to an infectious case.
Contact Investigation	Contact investigation often begins with testing of the innermost circle of contacts defined as family and household members. If there is evidence of transmission within this circle the investigator will increase the scope of the contact investigation to include testing of close friends, co-workers and other close social contacts. This process is repeated until an outer limit of transmission has been established.
Duration of Illness	Active TB can last from 4 months to 2 years.
Exclusion and Readmission Criteria	Persons who have positive skin or blood tests, but no evidence of active disease, are not infectious and should not be excluded from school. Each infected person with active TB should be in respiratory isolation until three consecutive sputum tests are negative by microscopic examination and the person has been on appropriate chemotherapy for at least two weeks and clinical improvement of symptoms is evident. Close contacts should be medically evaluated.
Additional Resources	CDC Website - Tuberculosis CDC Fact Sheets Notification of Infectious Disease Form (EPI-1)

Typhoid fever

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	Highly variable, ranging from fever with little other morbidity, to sepsis and complications involving many body systems. Persons with typhoid fever usually have a sustained fever as high as 103° to 104°F (39° to 40°C). Additional symptoms include weakness, stomach pain, headache, or loss of appetite. In some cases, patients have a rash of flat, rose-colored spots. Diarrhea is uncommon, and vomiting is not usually severe.
Infectious Agent	*Salmonella enterica* serotype Typhi
Mode of Spread	Contaminated drinking water or food.
Incubation Period	Usually 8 to 14 days, but this depends on the infective dose and can vary from 3 days to 2 months.
Period of Communicability	Typhoid is communicable as long as *Salmonella typhi* is being excreted in stools or urine, usually from one week after symptom onset, through convalescence, and for a variable period thereafter.
Control Measures	All methods of control of typhoid fever must rest on the proper disposal of human excreta (urine and stool).
Contact Investigation	Consider the following contact types during a contact investigation: household, close contacts and sexual partners of a case (general); all employee direct caregivers and enrolled roommates of a case (day care); close contacts of a case with evidence of transmission in the school setting (school); food service workers and patrons (food).
Duration of Illness	Usually about 3 to 4 weeks.
Exclusion and Readmission Criteria	Infected person has to be diarrhea-free and fever-free, antibiotic treatment must have been completed, and three consecutive stool specimens have tested negative for *Salmonella typhi*.
Additional Resources	CDC Website – Typhoid Fever Notification of Infectious Disease Form (EPI-1)

Varicella (chickenpox)

CATEGORY C Report within 96 HOURS	This disease is reportable in USVI and must be reported to VIDOH within 4 days of knowledge of the case. Please use the EPI-1 and the varicella report form (VPD-23) to report cases.
Signs and Symptoms	Fever and fatigue followed by generalized, itchy rash. This rash usually appears first on the face, chest and back then spreads to the rest of the body. Varicella in a vaccinated person maybe mild, without fever and with an atypical rash with papules that do not progress to vesicles.
Infectious Agent	Varicella-Zoster virus
Mode of Spread	Person-to-person by direct contact, droplet or airborne spread of respiratory tract secretions; indirectly through articles freshly contaminated with secretions from infected persons.
Incubation Period	Usually 14 to 16 days, with a range from 10 to 21 days.
Period of Communicability	From 1 to 2 days before the rash appears until lesions are crusted.
Control Measures	Identify all susceptible contacts and recommend the varicella vaccine be given if within three days of exposure. Non-immune contacts that are unable to receive varicella vaccine within 3-5 days of exposure should isolate themselves at home.
Contact Investigation	In the school setting, close personal contacts, teachers, other staff, and classmates would be considered as potentially exposed individuals. Susceptible individuals are those who have neither documented history of varicella disease nor any immunizations against chickenpox. U.S.-born individuals who were born before 1980 are considered immune. Provide education to susceptible contacts on the benefits of vaccination, incubation period, symptoms and precautions to take if symptoms develop. For school settings, active surveillance should be conducted for 21 days after the last confirmed or probable case was reported.
Duration of Illness	Duration of illness is usually 5 to 10 days.
Exclusion and Readmission Criteria	Each infected person shall remain in isolation for 6 days after the first crop of vesicles appears or until the lesions are crusted, whichever comes first.
Additional Resources	CDC Website – Chickenpox (Varicella) CDC Fact Sheet: Kids CDC Fact Sheet: Parents Notification of Infectious Disease Form (EPI-1) Varicella Case Report Form (VPD-23)
Visual Aid	 

Yellow fever

CATEGORY A Report IMMEDIATELY	This disease is reportable in USVI and must be reported to VIDOH immediately following knowledge of the case. Please use the EPI-1 form to report suspect or confirmed cases.
Signs and Symptoms	The majority of persons infected with yellow fever virus have no illness or only mild illness. Initial symptoms include sudden onset of fever, chills, severe headache, back pain, general body aches, nausea, and vomiting, fatigue, and weakness. Most persons improve after the initial presentation. After a brief remission of hours to a day, roughly 15% of cases progress to develop a more severe form of the disease. The severe form is characterized by high fever, jaundice, bleeding, and eventually shock and failure of multiple organs.
Infectious Agent	Yellow fever virus
Mode of Spread	Bite from an infected *Haemagogus* or *Aedes* species mosquito. No endemic Yellow fever transmission is present in the US Virgin Islands.
Incubation Period	Usually 3 to 6 days.
Period of Communicability	People infected with yellow fever virus are infectious to mosquitoes (viremic) shortly before the onset of fever and up to 5 days after onset. Yellow fever is not directly transmitted person-to-person, however it can be transmitted through blood, body fluid, or tissue.
Control Measures	Yellow fever patients should be protected from further mosquito exposure (staying indoors and/or under a mosquito net) for up to 5 days after the onset of fever. Hospitalized patients should be cared for using standard precautions.
Contact Investigation	Identify other persons who traveled with the case. If these contacts have symptoms consistent with yellow fever, refer them to a health care provider and arrange for laboratory testing. Determine if the patient donated blood during the communicable period. If the patient donated blood, other body fluids, or tissues, inform the agency of the potential exposure.
Duration of Illness	About a week if uncomplicated, weeks if hemorrhagic disease.
Exclusion and Readmission Criteria	There are no exclusion requirements. Ill persons should remain at home until no longer symptomatic.
Additional Resources	CDC Website – Yellow Fever Notification of Infectious Disease Form (EPI-1)

Disease Outbreaks

An outbreak is any clustering of cases in time and space. For schools in particular, outbreaks focus on illness clustered in time among students and staff beyond normal illness rates. **All outbreaks are reportable to the US Virgin Islands Department of Health (VIDOH) Epidemiology Division (EPID).** These reports can be made through the Notification of Infectious Disease Form(EPI-1). Diseases which are reportable have specific requirements to be deemed an outbreak, for example:

Pertussis Outbreak Definition: Two or more cases clustered in time (e.g. cases occurring within 42 days of each other) and space (e.g. in one building) where transmission is suspected to have occurred in that setting (e.g.,school or daycare). If all cases occur among members of the same household, it would **not** be classified as an outbreak.

Varicella Outbreak Definition: The occurrence of ≥5 varicella cases that are related in place and epidemiologically linked. If all cases occur among members of the same household, it would **not** be classified as an outbreak.

Outbreak investigation is an essential component to the control of infectious diseases. Early detection of an outbreak and thorough investigation of both cases and contacts may help prevent the disease from spreading. This translates into less time children and staff spend absent from school and less work for disease investigators and school nurses in terms of following up on cases.

When investigating an outbreak of any kind, creating a line list, a table that summarizes information about persons associated with an outbreak, will assist disease investigators in understanding the scope of the outbreak. These line lists will collect information such as the name, age, date/time of disease onset, symptoms experienced, vaccination status, and recovery date/time (if applicable). The following page has examples of line lists, which may be used in an outbreak investigation. Coordinate any disease investigation with the VIDOH-EPID.

Line List Examples

Below are examples of line lists created for an outbreak. The section in blue is general demographic information we would collect for any outbreak, regardless of the illness associated with the event. This helps us keep tabs on the individuals experiencing illness and makes contact investigation easier. Below the general information are examples of line list additions which we would include on disease-specific outbreaks. The section in red represents the questions we would add for an outbreak of gastrointestinal illness while the section in green represents the questions we would add for an outbreak of varicella. VIDOH-EPID epidemiology staff might add additional questions to accompany those below for specific information, depending on the situation and the infectious agent. **VIDOH-EPID epidemiology staff will provide guidance before the creation of a line list to ensure all pertinent information is being collected.**

Information to be collected on <u>all</u> outbreaks:

Last Name	First Name	Race	Ethnicity	DOB	Sex	Student or Staff?	Grade	Healthcare		
								Healthcare provider visited	Visited ER	Hospitalized
Bear	Yogi	White	Non-Hispanic	5/15/1958	M	Staff	2	Y	N	N
Jetson	Elroy	White	Non-Hispanic	6/7/2006	M	Student	2	N	N	N

*****Varicella Outbreak – Additional Questions**

Rash Onset Date	Number of Lesions				Diagnosed By				Vaccination History		Lab work done?
	<50	50-249	250-500	>500	Parent	Physician/Nurse	School	Self	Dose 1 date	Dose 2 date	
10/22/14		X				X			3/15/2006	3/8/2010	N
10/25/14			X				X		6/22/2001	7/1/2005	N

Reporting Vaccine Preventable Diseases with EPI-1

The Notification of Infectious Disease Form (EPI-1) can be found in the next page. Vaccine preventable diseases have been highlighted. For a video tutorial on how to correctly complete this form, please visit the Vaccine Preventable Disease Surveillance Program webpage or click here.

EPI-1
Revised July 2017

Notification of Infectious Disease Form

Form is published at http://doh.vi.gov/forms
Click here for direct download

This form may be used to ***report suspected cases and cases of notifiable conditions*** in the US Virgin Islands (USVI), listed with their reporting time frames on the current USVI Notifiable Conditions List 2017, available here. In addition, **any outbreak, exotic disease, or unusual group expression of disease** that may be of public health concern should be reported by the most expeditious means available. A Health Department epidemiologist will contact you if further investigation is required.

Source of Information: ☐ Private Physician ☐ Private Laboratory ☐ Hospital ☐ Clinic ☐ School	**Today's Date:** (mm/dd/yyyy)	**Island:** ☐ St. Croix ☐ St. John ☐ St. Thomas ☐ Water Island
Physician Name	Physician Address ☐ See Facility address below	Physician Phone ☐ See Facility phone below (_____) _____ - _____ extension _____
Admitted to Hospital: ☐ No ☐ Yes Date Admitted: _____ Date Discharged: _____	**Parent/Guardian (if applicable):**	
Patient Name (Last)	**(First)**	**(MI)** Telephone: (_____) _____ - _____
Address (indicate ESTATE)	City	State / Zip Code / Country
Date of Birth (mm/dd/yyyy) / Age	**Gender:** ☐ M ☐ F ☐ Other	**Ethnicity:** ☐ Hispanic ☐ Not Hispanic **Race:** ☐ Black ☐ White ☐ Asian ☐ Unknown ☐ Other:
*Notes, comments, or additional information such as **pregnancy status (EDD), occupation (food handler), school name/grade, daycare facility, travel history***		

Category A -- Report IMMEDIATELY to the USVI Department of Health

SERIOUS PUBLIC HEALTH RISK. Make an IMMEDIATE telephone report to the USVI Department of Health at 712-6210 or 718-1311 Ext. 3841 then send the completed form IMMEDIATELY (within 24 hrs) by fax to 718-1508. If an immediate report is required after regular working hours, please call 626-1654.

- ☐ Accute Flaccid Myelitis
- ☐ Anthrax
- ☐ Botulism
- ☐ Brucellosis
- ☐ Cholera
- ☐ Coronavirus, novel, including SARS
- ☐ Diptheria
- ☐ *E. coli* (O157)
- ☐ Encephalitis
- ☐ Enterovirus D-68
- ☐ *Haemophilus influenzae*
- ☐ Influenza, novel
- ☐ Legionnaires
- ☐ Measles
- ☐ Meningitis
- ☐ Pertussis
- ☐ Plague
- ☐ Poliomyelitis
- ☐ Rabies
- ☐ Rubella
- ☐ Q Fever
- ☐ Smallpox
- ☐ Tuberculosis
- ☐ Tularemia
- ☐ Typhoid
- ☐ Typhus
- ☐ Viral Hemorrhagic Fever, including Ebola
- ☐ Yellow Fever

Category B -- Report WITHIN 48 HOURS to the USVI Department of Health

SIGNIFICANT PUBLIC HEALTH RISK. These should be reported within 48 hours to the USVI Department of Health. A completed copy of the form must be faxed to 718-1508. A telephone report to 718-1311 Ext. 3841 is only required for those diseases indicated by the (*).

- ☐ Canchroid
- ☐ Chlamydia
- ☐ Ciguatera
- ☐ Ehrlichiosis
- ☐ Gonorrhea
- ☐ Granuloma Inguinale
- ☐ Hansen's Disease*
- ☐ Hanta Virus Pulmonary Syndrome*
- ☐ Hemolytic Uremic Syndrome
- ☐ Hepatitis A*
- ☐ Hepatitis B
- ☐ Hepatitis C
- ☐ HIV/AIDS
- ☐ Lymphogranuloma
- ☐ Malaria*
- ☐ Psittacosis
- ☐ *Staph. aureus* (drug resistant)
- ☐ *Streptococcus pneumoniae* (drug resistant)
- ☐ Syphilis*
- ☐ Trichinosis
- ☐ West Nile Virus*

Vancomycin Resistant:

- ☐ *Enterococcus*
- ☐ Staph

Category C -- Report PROMPTLY WITHIN 96 HOURS to the USVI Department of Health

Should be reported promptly to the USVI Department of Health. A completed form must be faxed to 718-1508. Reporting by phone is not required.

- ☐ Amebic Dysentery
- ☐ Chickenpox (varicella)
- ☐ Childhood Diabetes Mellitus (age <20)
- ☐ Coccidioidomycosis
- ☐ Cryptosporidiosis
- ☐ Cyclosporiasis
- ☐ Giardia
- ☐ Influenza
- ☐ Listeriosis
- ☐ Mumps
- ☐ Salmonellosis
- ☐ Shigellosis
- ☐ Tetanus
- ☐ Toxic Shock Syndrome

☐ **Other, please specify:**

Diagnosis Status?

☐ Suspect Case ☐ Probable Case
☐ Confirmed Case
Diagnostic Criteria: ☐ Symptoms ☐ Laboratory
Other:

Clinical Information

Treatment Provided? ☐ No ☐ Yes Specify Treatment:

Earliest Symptom Onset Date: _____ (mm/dd/yyyy)

Clinical Symptoms:

Disease Fatal? ☐ No ☐ Yes
Date of Death (mm/dd/yyyy)

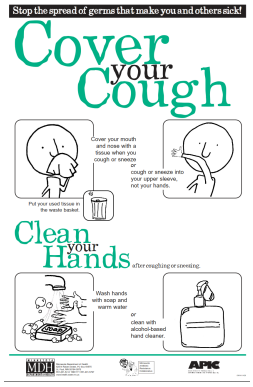
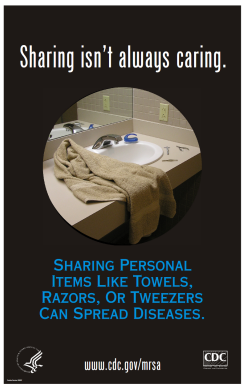
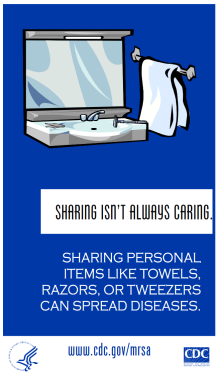
Laboratory Results:

Date 1 (mm/dd/yyyy)	Test Name 1	Result 1
Date 2 (mm/dd/yyyy)	Test Name 2	Result 2
Date 3 (mm/dd/yyyy)	Test Name 3	Result 3

Name of Reporting Facility	Address	
Name of Person Reporting	Title	Phone Number (____) _____ - _____ extension _____
Date of Report (mm/dd/yyyy)	E-mail	

Information collected is confidential pursuant to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and reports will be maintained by the US Virgin Islands Department of Health. All reports other than HIV should be faxed to Dr. Esther Ellis at 718-1508 (Charles Harwood Complex, 3500 Estate Richmond, Christiansted, St. Croix, VI 00820). **HIV/STD reports should be forwarded to the HIV/STD Program Charles Harwood Complex on St. Croix (Fax: 712-6209) and to the HIV/STD Program Knud Hansen Complex on St. Thomas (Fax: 776-5466)**. PLEASE NOTE: THE REPORTING OF NOTIFIABLE DISEASES TO THE DEPARTMENT OF HEALTH IS REQUIRED BY LAW IN THE US VIRGIN ISLANDS. Fulfilling this requirement will by no means negate your responsibility to report similar information to other agencies or programs with which you have collaborative agreements.

General Educational Information and Posters

	*"Cover your cough"* Purpose: Avoid the spread of germs. English Version Spanish Version French Version		*"Don't give bacteria a free ride"* Purpose: Promote Hand Washing English Version Spanish Version
	*"Don't open the door to infection"* Purpose: Keep cuts, scrapes, and scratches clean, dry, and covered. English Version Spanish Version		*"Sharing isn't always caring"* Purpose: Do not share personal items. English Version Spanish Version
	*"Don't give bacteria a free ride"* Purpose: Promote Hand Washing English Version Spanish Version		*"Sharing isn't always caring"* Purpose: Do not share personal items. English Version Spanish Version

Additional References and Resources

Books

1. American Academy of Pediatrics. Pickering L, ed. *2015 Red Book: Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015.

2. Heymann D, editor. Control of Communicable Diseases Manual. 19th ed. Washington, DC: American Public Health Association; 2008.

3. All images obtained from www.cdc.gov

Online Resources

Teaching Children About the Flu ~ Lesson Plans and Activities for Child Care and Early Childhood Programs (CDC)

Easy-to-read Immunization Schedules ~ Children From Birth to 6 Years Old (CDC)

Easy-to-read Immunization Schedules ~ Preteens and Teens

CDC Pink Book Webinar Series

VIDOH Vaccine Preventable Diseases Surveillance Program Website