

# *epi*TRENDS

A Monthly Bulletin on Epidemiology and Public Health Practice in Washington

## Rare Diseases of Public Health Importance

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Notifiable conditions reporting in Washington State is governed by state regulations. The Washington Administrative Code indicates the conditions that should be reported to the local health jurisdiction, which has responsibility for investigation and disease control. The Washington State Department of Health in turn receives local jurisdiction case reports and assists with investigations and control measures.

### Notifiable Conditions Reporting in Washington



Diphtheria [www.cdc.gov](http://www.cdc.gov)

Washington Administrative Code (WAC) 246-101 addresses notifiable conditions reporting including acute communicable diseases of public health concern. Some specific conditions that occur rarely are listed as notifiable in Washington State, for example cholera (state's last case 2002), plague (last case 1985), toxigenic diphtheria (last case 1979), and human rabies (last case 1997). These conditions are of concern because of severity or need for rapid public health actions. There is also separate reporting for the category Unexplained Critical Illness or Death.

In addition to specified conditions there are general categories of conditions that should be reported such as Other Rare Disease of Public Health Significance. As defined by the WAC, this means "a disease or condition, of general or international public health concern, which is occasionally or not ordinarily seen in the state of Washington including, but not limited to, spotted fever rickettsiosis, babesiosis, tick paralysis, anaplasmosis, and other tick borne diseases". The rare disease category covers reporting in accordance with International Health Regulations. For example, smallpox is considered eradicated so even a single case would

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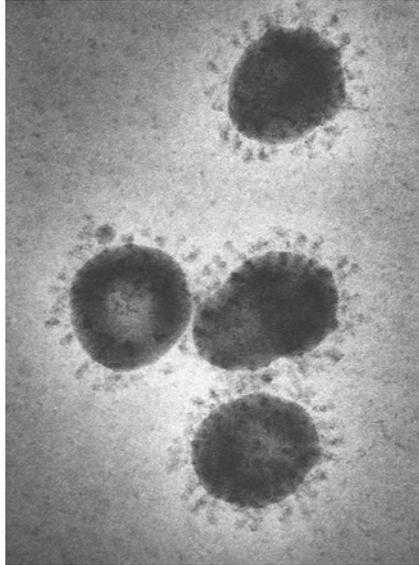
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merit global concern. Similarly, a single confirmed case of SARS (severe acute respiratory syndrome) would likely represent an international outbreak.



SARS coronavirus [www.cdc.gov](http://www.cdc.gov)

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### **Rare Diseases Reporting**

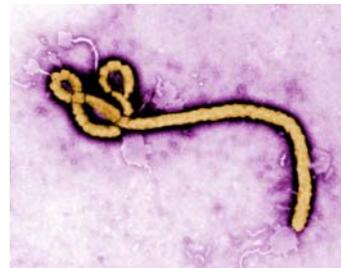
The reasons for reporting cases of rare diseases are to improve the understanding of emerging and uncommon diseases in Washington, to assist in the diagnosis and treatment of cases, to identify any potentially exposed persons, to identify sources of transmission and prevent further transmission, and to recognize a possible bioterrorism event if no natural exposure source is identified. Prompt investigation of exposures, both for the case and for any contacts of the case, is needed for some rare conditions such as polio, SARS, transmission of vaccinia (smallpox vaccine virus), or viral hemorrhagic fevers (e.g., Ebola). In such situations, isolation and quarantine measures might be established.

Other conditions should be reported as rare diseases of public health significance because investigations are needed to determine the geographic location of exposure, specifically whether the infection could have been acquired in Washington State. Such conditions include tick-borne infections, coccidioidomycosis, *Cryptococcus gattii* infection, and organisms with high antibiotic resistance. Some rare conditions are known to be endemic elsewhere in the country, such as amoebic meningitis and histoplasmosis. Others conditions are clearly due to international exposures, such as African tick bite fever, *Burkholderia* infection, viral hemorrhagic fever, or monkeypox.

Health care providers and health care facilities should report to a local health jurisdiction a case or suspected case of any emerging condition with outbreak potential. There may not be definitive laboratory diagnosis initially, but a case may be suspected based on preliminary

testing or an unusual clinical syndrome. With rare diseases, public health resources may be able to arrange testing not readily available at commercial laboratories.

Immediate reporting is appropriate for rare conditions that are readily communicable among people, have high mortality, or have potential for deliberate release. These include *Burkholderia* infection, novel influenza, monkeypox, SARS, smallpox, viral hemorrhagic fever, and emerging conditions with outbreak potential. Other rare conditions should be reported within 24 hours.



Ebola virus [www.cdc.gov](http://www.cdc.gov)

### Rare Diseases Reported in Washington

Each year different rare conditions are diagnosed in state residents and reported to local health jurisdictions. Some of the conditions reported in the last five years follow.

Melioidosis, due to the bacteria *Burkholderia pseudomallei*, results from skin exposure to contaminated soil or surface water in tropical or subtropical areas. A case in 2011 resulted from exposure in Mexico. The fungus *Histoplasma* caused an infection reported in 2009, with presumed exposure in Vietnam. Coccidioidomycosis (Valley fever), due to the soil fungus *Coccidioides* species, occurs mainly in semi-arid climates such as southwestern United States and parts of Central and South America but may be present in Washington State. Two cases in 2010 and a case in 2011 were likely exposed in this state. Case reporting is important to track exposures to this agent.



Dermacentor [www.cdc.gov](http://www.cdc.gov)

Tick paralysis in the Pacific Northwest is associated with the American dog tick (*Dermacentor variabilis*) or the Rocky Mountain wood tick (*D. andersoni*). One case was reported in 2011 and one in 2010, both from eastern Washington. Infection due to *Ehrlichia chaffeensis* (previously known as human monocytic ehrlichiosis or HME) is a tickborne infection primarily of south and south-central United States. An ehrlichiosis case in 2011 followed a tick bite while in North Carolina. A case of tick-borne babesiosis acquired in Massachusetts was reported in 2008. In the past, babesiosis cases have been acquired within Washington including a species (*B. duncani*) first discovered here.

An infection with the cestode *Diphyllobothrium latum* (the fish or broad tapeworm) in 2009 was associated with consuming sushi containing raw fish. Paragonimiasis, due to infection with a trematode in the genus *Paragonimus*, resulted in a 2009 case following consumption of ceviche (raw fish) in Mexico.

Although varicella (chickenpox) is not a notifiable condition in Washington State, deaths due to primary infections with varicella should be reported. An adult varicella death was reported in 2007 and another in 2011.

A case of African trypanosomiasis (sleeping sickness) due to *T. b. rhodesiense* was reported in 2009 after a tsetse fly bite in Tanzania. Three cases of African tick bite fever occurred over the five years. There was a case of Mediterranean spotted fever in 2011 after travel to South Africa.

Rare cases of communicable diseases can result from various exposures such as travel within or outside the United States, consumption of high risk foods, or deliberate release of an agent. Recognizing early cases of unusual conditions followed by prompt reporting and public health investigation can identify and mitigate potential threats to the public's health.

## **Resources**

Washington Administrative Code: <http://apps.leg.wa.gov/wac/default.aspx?cite=246-101>

Disease surveillance reports:

<http://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/CommunicableDiseaseSurveillanceData/AnnualCDSurveillanceReports.aspx>

Notifiable conditions guidelines:

<http://www.doh.wa.gov/PublicHealthandHealthcareProviders/NotifiableConditions/ListofNotifiableConditions.aspx>