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Varicella / Chickenpox 2024 Case Definition | CDC  
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Varicella / Chickenpox  
2024 Case Definition  
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NOTE:  
A surveillance case definition is a set of uniform criteria used to define a disease for public health surveillance. Surveillance case definitions enable public health officials to classify and count cases consistently across reporting jurisdictions. Surveillance case definitions are not intended to be used by healthcare providers for making a clinical diagnosis or determining how to meet an individual patient’s health needs.  
CSTE Position Statement(s)  
23-ID-09  
Background  
Varicella (chickenpox) is an acute infectious disease caused by primary infection with varicella-zoster virus (VZV).  Varicella is generally a mild disease, but severe complications can occur in any age group.  Fatalities are rare, but can occur, including in previously healthy persons. Following introduction of the 1-dose varicella vaccination program in 1995 and addition of a second dose in 2007  
1  
, varicella morbidity and mortality decreased dramatically in the U.S.  
2,3  
By 2019, overall incidence declined by >97% and hospitalizations and deaths declined by 94% and 97%, respectively, among persons aged <50 years.  
2,3  
After 25 years of varicella vaccination in the U.S., classic varicella, with hundreds of vesicular skin lesions, scabs, and complications, has become an uncommon occurrence.  
4  
However, varicella can occur in vaccinated persons (termed breakthrough varicella). Breakthrough varicella is usually modified, with fewer skin lesions (<50) that are mostly maculopapular, and has a milder presentation.  
4  
Diagnosis of breakthrough varicella is important because these cases are infectious. Clinical diagnosis is especially challenging in cases with mild rashes, few lesions, or no vesicles. Consequently, laboratory confirmation of varicella is becoming increasingly necessary to understand the true burden of disease and is now routinely recommended.  
As of 2022, case-based varicella surveillance is conducted by 40 states and the District of Columbia (D.C.), and outbreak surveillance is conducted by all jurisdictions.  
3  
Clinical Criteria  
In the absence of a more likely alternative diagnosis:  
An acute illness with a generalized rash with vesicles (maculopapulovesicular rash),  
OR  
An acute illness with a generalized rash without vesicles (maculopapular rash).  
Laboratory Criteria  
Confirmatory Laboratory Evidence:  
a  
Positive polymerase chain reaction (PCR) for varicella-zoster virus (VZV) DNA,  
b,c  
OR  
Positive direct fluorescent antibody (DFA) for VZV DNA,  
OR  
Isolation of VZV,  
OR  
Significant rise (i.e., at least a 4-fold rise or seroconversion  
c,d  
) in paired acute and convalescent serum VZV immunoglobulin G (IgG) antibody.  
c,e  
Supportive Laboratory Evidence:  
Positive test for serum VZV immunoglobulin M (IgM) antibody.  
c,f  
Note: The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.  
a  
A negative laboratory result in a person with a generalized rash with vesicles does not rule out varicella as a diagnosis.  
b  
PCR of scabs or vesicular fluid is the preferred method for laboratory confirmation of varicella. In the absence of vesicles or scabs, scrapings of maculopapular lesions can be collected for testing.  
c  
Not explained by varicella vaccination during the previous 6-45 days.  
d  
Seroconversion is defined as a negative serum VZV IgG followed by a positive serum VZV IgG.  
e  
In vaccinated persons, a 4-fold rise may not occur.  
f  
IgM serology has limited value as a diagnostic method for VZV infection and is not recommended for laboratory confirmation of varicella. However, an IgM positive result in the presence of varicella-like symptoms can indicate a likely acute VZV infection. A positive IgM result in the absence of clinical disease is not considered indicative of active varicella.  
Epidemiologic Linkage  
Confirmatory Epidemiologic Linkage Evidence:  
Exposure to or contact with a laboratory-confirmed varicella case,  
OR  
Can be linked to a varicella cluster or outbreak containing ≥1 laboratory-confirmed case,  
OR  
Exposure to or contact with a person with herpes zoster (regardless of laboratory confirmation).  
Presumptive Epidemiologic Linkage Evidence:  
Exposure to or contact with a probable varicella case that had a generalized rash with vesicles.  
Criteria to Distinguish a New Case from an Existing Case  
The following should be enumerated as a new case:  
Person with a new onset of symptoms that meets the criteria for a confirmed or probable case,  
OR  
Person was previously enumerated as a case followed by a documented period of recovery  
AND  
newly meets the criteria for a confirmed or probable case\*,  
OR  
Person was previously reported but not enumerated as a confirmed or probable case, then subsequently available information meets the criteria for a confirmed or probable case.  
\* Varicella generally confers life-long protection. There have been reports of second episodes of varicella, but in most cases the first episode was not laboratory-confirmed.  
Case Classification  
Probable  
Meets clinical evidence with a generalized rash with vesicles,  
OR  
Meets clinical evidence with a generalized rash without vesicles  
AND  
:  
Confirmatory or presumptive epidemiologic linkage evidence,  
OR  
Supportive laboratory evidence.  
OR  
Meets healthcare record criteria  
\*  
AND  
:  
Confirmatory or presumptive epidemiologic linkage evidence,  
OR  
Confirmatory or supportive laboratory evidence.  
\*  
A person whose healthcare record contains a diagnosis of varicella or chickenpox but no rash description.  
Confirmed  
Meets clinical evidence  
AND  
confirmatory laboratory evidence,  
OR  
Meets clinical evidence with a generalized rash with vesicles  
AND  
confirmatory epidemiologic linkage evidence.  
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Related Case Definition(s)  
Varicella / Chickenpox | 2010 Case Definition  
Varicella / Chickenpox | 1999 Case Definition  
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