1999 CSTE ANNUAL MEETING

POSITION STATEMENT # ID- 9

COMMITTEE: Infectious Diseases

TITLE: Vaccine Preventable Disease Surveillance and Reporting

ISSUE: State and national surveillance guidelines and activities are designed to provide data for public health action. As new vaccines are added to the routine immunization schedule and other changes occur related to vaccine preventable diseases (e.g., changes in patterns of transmission, incidence, prevalence), timely adjustments and clarifications in surveillance guidelines and activities are needed.

POSITIONS TO BE ADOPTED:

The following revised case definitions for varicella is adopted:

1.) Varicella Case Definition:

Clinical Case Definition

An illness with acute onset of diffuse (generalized) maculo-papulovesicular rash without other apparent cause.

Laboratory criteria for diagnosis

- Isolation of varicella virus from a clinical specimen, or
- direct fluorescent antibody (DFA), or
- polymerase chain reaction (PCR), or
- Significant rise in serum varicella immunoglobulin G antibody level by any standard serologic assay

Case classification

Probable: a case that meets the clinical case definition, is not laboratory confirmed, and is not epidemiologically linked to another probable or confirmed case
Confirmed: a case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed or probable case.

Comments

Two probable cases that are epidemiologically linked would be considered confirmed, even in the absence of laboratory confirmation.

In vaccinated persons who develop varicella more than 42 days after vaccination (breakthrough disease), the disease is almost always mild with fewer than 50 skin lesions and shorter duration of illness. The rash may also be atypical in appearance (maculopapular with few or no vesicles).

Laboratory confirmation of cases of varicella is not routinely recommended; laboratory confirmation is recommended for fatal cases and in other special circumstances.

The following revised case definitions for mumps is adopted:

2.) Mumps Case Definition:

Clinical Case Definition

An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting greater than or equal to 2 days, and without other apparent cause

Laboratory criteria for diagnosis

- Isolation of mumps virus from clinical specimen, or
- Significant rise between acute- and convalescent-phase titers in serum mumps immunoglobulin G antibody level by any standard serologic assay, or
- Positive serologic test for mumps immunoglobulin M (IgM) antibody

Case classification

Probable: a case that meets the clinical case definition, has noncontributory or no serologic or virologic testing, and is not epidemiologically linked to a confirmed or probable case.

Confirmed: a case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed or probable case. A laboratory-confirmed case does not need to meet the clinical case definition.

3.) *Haemophilus influenzae* Surveillance

All isolates of invasive *Haemophilus influenzae* obtained from children < 5 years of age should be serotyped, and all cases of invasive Haemophilus influenzae in children < 5 years of age should be reported, including type b, non-type b and non-typable isolates.

BACKGROUND AND JUSTIFICATION:

A case definition has existed for varicella since the disease became nationally notifiable in 1972. Although varicella was deleted from the list of nationally notifiable diseases in 1982, 20 states still reported varicella cases to the National Notifiable Diseases System for Surveillance (NNDSS) in 1997. The varicella vaccine was licensed in March 1995, and in 1998 CSTE adopted a position statement recommending that states carry out some form of ongoing systematic morbidity surveillance to monitor the impact of varicella vaccination on disease incidence.

Since licensure of the mumps vaccine in 1967, the number of cases has decreased from about 160,000 per year to about 500 in 1997. With implementation of the second MMR among school-aged children (5-19 years), mumps incidence has been greatly reduced. As the number of cases decreases, laboratory confirmation becomes more important for each case. The clinical case definition is not specific for mumps, and although false positive IgM tests occur, there will be fewer false positive reports based on test results rather than clinical presentation.

Different serotypes (a, ,b c, d, e, f) and nontypeable isolates of *Haemophilus influenzae* (Hi) cause invasive diseases among both adults and children. However, only *Haemophilus influenzae* type b (Hib) can be preventable with vaccination; Hib vaccines are recommended for all children aged <5 years. Reports of Hib invasive disease cases among children can be monitored to evaluate the effectiveness of the vaccination program, while the reported incidence of non-type b Hi invasive disease among persons of all ages can be monitored to look for an increase in invasive disease caused by other serotypes or non-typeable strains, and to monitor surveillance effort. The expected rate of non-type b Hi (which is not prevented by vaccination) is approximately 1-2 per 100,000 children < 5 years of age; a rate lower than that may indicate inadequate surveillance rather than absence of disease. Absence of Hib in the presence of the expected rate of non-type b indicates that there is no Hib disease and gives assurance that the surveillance system could likely detect Hib if it were present.

COORDINATION WITH OTHER ORGANIZATIONS:

Agency for Response: Centers for Disease Control and Prevention (CDC)

Agency for Information: Association of Public Health Laboratories, APHL

CONTACTS:

David Fleming, MD
State Epidemiologist
Oregon Health Department
800 NE Oregon
Portland, OR 97232
Phone: (503) 731-4023
david.w.fleming@state.or.us

Stephen Waterman, MD, MPH
State Epidemiologist
California Department of Health Services
2151 Berkeley Way, Room 707
Berkeley, CA 94704
Phone: (510) 540-3503
Wate101w@cdc.gov