1997 CSTE ANNUAL MEETING

CSTE POSITION STATEMENT #ID-9

COMMITTEE: Infectious Disease

TITLE: Public Health Surveillance, Control, and Prevention of Pertussis

ISSUE: In the past 5 years, reported cases of pertussis have increased, especially in school-age and young adult age groups. Other factors potentially related to or influencing pertussis control have also changed, such as new or improved laboratory diagnostic tests, widespread use of synthetic macrolides by clinicians, and the introduction of DTaP. These changes create the need to reexamine strategies and priorities for the prevention and control of this disease.

The current case definition for pertussis surveillance states that a confirmed case is “a case that is laboratory confirmed or one that meets the clinical case definition and is either laboratory confirmed or epidemiologically linked to a laboratory-confirmed case” and may lead to misclassification of non-pertussis cases as confirmed pertussis cases and needs to be revised.

POSITION TO BE ADOPTED:

1. The confirmed pertussis case definition should read:
   
   “Confirmed: 1) a person with an acute cough illness of any duration who is culture positive; or
   2) a case that meets the clinical case definition and is confirmed by PCR; or
   3) a case that meets the clinical case definition and is epidemiologically linked directly to a case confirmed by either culture or PCR.”

2. CDC should support studies to identify effective outbreak control strategies in a variety of settings, including use of newer prophylactic antibiotics and the role of acellular pertussis vaccine in outbreak control.

3. CDC should provide technical and other support for pertussis surveillance, control, and prevention, including:
   a) developing and maintaining surveillance infrastructure;
   b) providing training in pertussis epidemiology and control;
   c) developing and maintaining laboratory capacity for pertussis; and
   d) evaluating the use and interpretation of new laboratory techniques.

4. CDC should convene a national meeting (including state and local health department representatives) within a year to develop interim strategies for the control of pertussis.
5. CDC should continue vaccine procurement policies that allow state immunization programs to choose among licensed DTaP products for purchase through the Federal contract for the Vaccines for Children Program or using 317 funds. This may facilitate the use of one type of vaccine for a child’s vaccine series.

BACKGROUND AND JUSTIFICATION:

More than 7,500 cases of pertussis were reported in the United States in 1997. Although cases continue to occur among children <6 months of age (who are too young to be protected by vaccination), older infants, and preschool children, an increasing proportion of cases now are occurring among older persons, especially children of middle and high school age. Large outbreaks have occurred in schools, and optimal control strategies remain unknown.

It is unknown whether the increasing trend in pertussis nationally and in selected states is due to increasing recognition of pertussis (especially among older school aged children), or a true increase in incidence, or both. A recent outbreak in the Netherlands has been attributed to changes in the organism with resulting low vaccine efficacy. Based on national surveillance data, vaccine effectiveness during the period 1992-1994 remained high in the United States. With the recent licensure of acellular pertussis vaccines for use in infants, continued monitoring of effectiveness is essential. While these vaccines have been demonstrated to be safe and effective in clinical trials in Europe, their effectiveness in the United States has not been demonstrated. Likewise, protective efficacy is unknown among children who receive mixed sequences of vaccines from different manufacturers.

In addition to vaccine effectiveness, more information is needed on circulating strains, to better define the role of microbial factors in the increasing incidence that is now being observed. Ongoing surveillance of antibiotic susceptibility patterns is also needed.

On May 2, 1997, CDC published “Case definitions for infectious conditions under public health surveillance” in MMWR (Vol. 46, No. RR-10). According to the revised pertussis case definition included in the MMWR (Vol. 46, No. RR-10) either culture or PCR positive cases can be called “confirmed” even if they do not have clinically compatible illness including >= 14 days of cough illness. Culture is a highly specific laboratory test and with this, a person with acute cough illness may be considered confirmed. However, PCR testing may not be as specific as culture. Based on the MMWR (May 1997) case definition (Vol. 46, No. RR-10), persons who do not meet the clinical case definition, but have a positive PCR and minor cough illness may be misclassified as confirmed pertussis cases. Therefore, CSTE endorses a change in the case definition as stated above. With this change, although culture positive cases with acute cough illness of any duration are considered confirmed, PCR positive cases need to meet the pertussis clinical case definition to be considered confirmed.

COORDINATION WITH OTHER ORGANIZATIONS:

Agency for Response: Centers for Disease Control and Prevention (CDC)
Agency for Information: Association of State and Territorial Health Officials (ASTHO)

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