

aseptic transfer of the spore strip to growth medium problematic. The same methods used to evaluate BIs performance in this study can be used to develop standards for BIs used to monitor liquid chemical sterilants.

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Pertussis Outbreaks in Massachusetts and Maryland

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During November 1992, outbreaks of pertussis were reported among students in Massachusetts and Maryland. A total of 225 cases of pertussis were reported in Massachusetts and 95% (214 patients) were aged 10 to 19. In a separate investigation in Maryland following the identification of a ten-year-old elementary school student with culture-confirmed pertussis, four additional cases were identified from the school system.

Pertussis has been documented rarely in the United States as a cause of a large outbreak of cough illness among adolescents and young adults. Approximately half of reported pertussis cases in the United States occur among infants under one year and only

12% of cases occur among persons aged 10 to 19. However, in Massachusetts during 1992, 78% of reported cases occurred among persons aged 10 to 19. Possible explanations for this include increased awareness by clinicians and public health officials of pertussis as an etiology of cough illness among adolescents and young adults and the availability of serologic testing for diagnosis.

Laboratory diagnosis of pertussis is difficult. Cultures for pertussis require special media and techniques and may be positive only during the first two to three weeks of illness. Direct fluorescent antibody testing of nasopharyngeal secretions is unreliable because of its low sensitivity and variable specificity. Except in Massachusetts, serologic testing for pertussis is not widely available.

Vaccine-induced immunity to pertussis may wane with time; this waning immunity may have accounted for the higher attack rate among the high school students than among the middle school children in Massachusetts. This investigation underscores the need for pertussis to be considered in the differential diagnosis of prolonged cough illness among older children, adolescents, and adults, regardless of reported childhood vaccination status. New acellular pertussis vaccines that are immunogenic in adults and less reactogenic than whole-cell pertussis vaccines require further evaluation before use among adolescent populations.

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