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## Letters to the Editor

### □ TETANUS-DIPHTHERIA-ACELLULAR PERTUSSIS (TDAP): TAP THE RESOURCES OF THE EMERGENCY DEPARTMENT TO FIGHT PERTUSSIS

#### □ To the Editor:

In 2007, the American Council of Immunization Practice (ACIP) revised its recommendation for booster immunizations against tetanus-diphtheria (Td) for adults to incorporate the growing evidence of pertussis cases among adults secondary to waning immunity with age (1). The new recommendations call for one booster dose of the tetanus-diphtheria-acellular pertussis (Tdap) to be administered to an adult as the next administered “tetanus shot” (1). As a substantial proportion of people receive their Td at emergency departments (EDs), it is vital that EDs transition from ordinary Td to the Tdap to protect patients from pertussis infection and foster the herd immunity necessary for disease control.

#### PERTUSSIS OFTEN TRIGGERS VISITS TO HEALTH CARE PROVIDERS

Pertussis is the result of infection with the Gram-negative coccobacillus *Bordetella pertussis*. Pertussis, though often dismissed as a childhood illness, causes disease severe enough that 63% of infants afflicted with it are hospitalized, many with pneumonia (1). Adults with the disease often make several visits to health care providers over the course of their illness, and complications such as rib fractures and pneumonias occur (1).

#### ADULTS AS VECTORS OF PERTUSSIS SPREAD

In addition to the fact that pertussis confers a substantial burden of illness on adults, adults also serve as a reservoir for spread of the disease to children via respiratory droplets (1). Immunization with Tdap begins at the age of 2 months, leaving a substantial period of vulnerability in infants. High degrees of immunity in adults, especially in pregnant and nursing women, are necessary to fully

protect infants too young to receive the vaccine themselves. Mathematical modeling studies have estimated that by vaccinating 90% of adolescent and adult household contacts of infants, 75% of infantile cases of pertussis can be prevented (2). Moreover, vaccination of parents of a newborn before hospital discharge may prevent 38% of infant cases and deaths (3).

#### PERTUSSIS RESURGENT

In 2005, 25,616 cases of pertussis were reported to the Centers for Disease Control and Prevention, a tripling of the caseload since 2001 (1). Of the vaccine-preventable diseases, pertussis is considered the one least controlled, as the persistent spread of the disease results from the waning of immunity with age (1).

Given this scenario, it was prudent for ACIP to recommend boosting adults with Tdap to augment immunity and forestall spread of pertussis, an illness with the potential to cause significant disease in adults and fatal disease in children.

#### THE ED AS A MAJOR TD VACCINATION CENTER

As EDs are adept at ascertaining tetanus immunity and offering boosters when required, transitioning from Td to Tdap is a simple method that capitalizes on the adeptness and infrastructure of EDs that already exists with Td immunization practices. Although the switch to Tdap will incur additional costs, as Tdap costs approximately double the amount of Td (\$36 vs. \$18), it is a feasible method to optimize vaccination practices and combat the spread of this infectious disease (4,5).

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