01.44 Pertussis Infection Control Program

Purpose

To describe a Pertussis Infection Control Program

Audience

All employees of UTMB hospitals, clinics, Victory Lakes outpatient specialty care and surgical center, contract workers, volunteers and students.

Policy

It is the intent of this program to prevent the nosocomial transmission of pertussis between patients and between patients and healthcare workers (HCWs) and students. All HCWs who have patient contact or work in patient care areas must receive a one time dose of a tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine, adsorbed (Tdap). It shall be the responsibility of the employee health service or respective management group to assure that all HCWs who have patient contact have received one dose of Tdap.

New Employees

- At the time of the post hire employee health evaluation, a history of receipt of one dose of Tdap should be elicited.
- Employees with no history of having received a dose of Tdap should be offered a dose of this vaccine if they have none of the contraindications (see Immunization with Tdap vaccine below).
- Healthcare workers who have no contraindications to vaccination and have refused vaccination, and who are later exposed to pertussis in the course of their patient care duties, will immediately be offered antimicrobial prophylaxis (see antimicrobial prophylaxis below) and whether or not they start prophylaxis, will be furloughed without pay during their incubation/contagious period.

Current Employees

- Current employees will be notified of the need to receive one dose of Tdap vaccine as soon as possible.
- Vaccination records should be checked on every HCW visit to the Employee Health Service and required immunizations given as indicated including a one time dose of Tdap.
- Healthcare workers who have no contraindications to receipt of Tdap, have refused vaccination with Tdap and who are later exposed to pertussis will be offered antimicrobial prophylaxis and furloughed without pay during their incubation/contagious period.
- Employees with no history of having received Tdap should be offered a dose of this vaccine if they have none of the contraindications noted below:

Immunization with Tdap Vaccine

- Have received the Tdap vaccine previously
- Have had any one of the following:
  - A history of a serious allergic reaction (i.e., anaphylaxis) to any component of the vaccine
  - A history of encephalopathy (e.g., coma or prolonged seizures) not attributable to an identifiable cause within 7 days of administration of a vaccine with pertussis components
- Persons with the latter contraindications should receive Td instead of Tdap.
- Pregnancy (women who are pregnant should receive Tdap immediately postpartum).

- Tdap vaccine for adults is given only one time and may be given to all adults without contraindications. After the single dose of Tdap, vaccinees will then continue to receive only Td every 10 years.
- Administration of the vaccine
  - The vaccine shall be administered intramuscularly (IM) in one dose of 0.5 ml.
  - The vaccine must be stored at 2° to 8° C (35° to 46° F). The vaccine should not be frozen.
  - Vaccine must be used within 30 minutes of reconstitution. Vaccine remaining after this time shall be discarded.

Antimicrobial Prophylaxis for HCWs who have been Exposed to Pertussis

- Healthcare workers who have been exposed to pertussis will be offered antimicrobial prophylaxis whether or not they have been immunized with Tdap.
- Prophylaxis
  - Azithromycin 500 mg in a single dose on day 1, then 250 mg per day on days 2-5.*
  - Trimethoprim/sulfamethoxazole (TMP 320 mg/SMZ 1600 mg) per day in 2 divided doses for 14 days may be substituted for HCWs who are allergic to macrolides.
  - Pregnant HCWs may be prophylaxed only with azithromycin

* **Avoid prescribing azithromycin to patients or healthcare workers who have a history of heart disease, including a history of a prolonged QT interval or a family history of sudden death in a young adult first degree relative.**

Antimicrobial Prophylaxis for Patients

- Antimicrobial prophylaxis for susceptible patients exposed to pertussis in the hospital or clinics
  - Patients < 1 month of age azithromycin 10 mg/kg per day in a single dose for 5 days (only limited safety data available)∗
  - Patients 1 – 5 months of age 10 mg/kg per day in a single dose for 5 days∗
  - Infants (aged ≥ 6 months) and children 10 mg/kg in a single dose on day 1, then 5 mg/kg per day (maximum: 500 mg) on days 2 – 5∗
  - Adults 500 mg in a single dose on day 1, then 250 mg per day on days 2 – 5. ∗ Pregnant patients may be prophylaxed only with azithromycin.

Treatment of HCWs for Pertussis

- Same regimen used for prophylaxis∗

Treatment of Patients for Pertussis

- Same regimens used for prophylaxis∗

Isolation for Pertussis

- Patients with suspected or documented pertussis shall be placed on Droplet Precautions.
- Patients shall remain on Droplet Precautions until 5 days after they have been placed on effective therapy.

Exposure of Patients

- Definition of exposure for patients
  - **Immunocompetent** adults and children
    - Face-to-face exposure within 3 feet of a symptomatic patient or HCW
    - Direct contact with respiratory, oral or nasal secretions from a symptomatic patient or HCW
  - **Immunocompromised** adults and children and **immunocompetent** or **immunocompromised** infants (< 1 year old)
    - Face-to-face exposure within 3 feet of a symptomatic patient or HCW occurred or may have occurred
    - Direct contact with respiratory, oral or nasal secretions from a symptomatic patient or HCW occurred or may have occurred
- Prophylaxis will be offered to patients who meet the definition of exposure (see above Antimicrobial Prophylaxis for Patients)

∗ **Avoid prescribing azithromycin to patients or healthcare workers who have a history of heart disease, including a history of a prolonged QT interval or a family history of sudden death in a young adult first degree relative.**

Exposure of Healthcare Workers

- Definition of exposure for HCWs
  - Face-to-face exposure within 3 feet of a symptomatic patient or HCW and not wearing a mask
  - Direct contact with respiratory, oral or nasal secretions from a symptomatic patient or HCW whether or not wearing a mask
- Investigation and prevention for HCWs exposed to pertussis
  - Employee Health Service records will be reviewed for each HCW who meets the definition of pertussis exposure for documentation of immunization with Tdap
  - HCWs who have been immunized with Tdap will be permitted to work while on prophylaxis. HCWs who have been immunized with Tdap and decline prophylaxis will be furloughed for 3 weeks.
  - HCWs and students with no documentation for receipt of Tdap will be offered antimicrobial prophylaxis (see above Antimicrobial Prophylaxis for HCWs) and furloughed for 5 days if taking prophylaxis. The furlough will begin between 5 and 21 days after the exposure. If prophylaxis has been declined, the furlough will be for 3 weeks after the last exposure. HCWs will be furloughed without pay. For HCWs and students who develop pertussis, clearance must be obtained from Employee Health or Student Wellness prior to returning to patient contact.

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