

# Reduce Pertussis Rates With Vaccination and Antibiotics

Questions will come up about **proper vaccination and antibiotics for pertussis**...since US cases in 2024 climbed past pre-pandemic levels.

We know pertussis is most serious in infants under 1 year old...and can lead to apnea, hospitalization, and death.

Cases decreased during the COVID-19 pandemic...but the recent rebound to 2019 levels may be due to waning immunity after vaccination.

**Review immunization histories during admission** to look for vaccination opportunities. Kids need pertussis vaccine at the same time as most tetanus immunizations...it's combined with tetanus vaccine (DTaP, Tdap, etc).

Advise nonpregnant adults get at least one Tdap dose at age 19 or over...followed by Td or Tdap boosters every 10 years. Also recommend a single Tdap dose at age 65 or over.

For pregnant patients, advise a Tdap dose in the third trimester of EVERY pregnancy regardless of past doses.

Reserve DTaP...even in combo vaccines...for patients under age 7. Older patients should only receive Tdap. To help remember, think about the capital "T" in "Tdap" as meaning it's used in TALL patients.

**Be prepared for inpatients to need antibiotic treatment**, especially patients less than 1 year old.

Start antibiotics ASAP...to limit infection severity and spread. Advise starting within 3 weeks from cough onset...or within 6 weeks for pregnant patients OR kids less than 1 year old.

Recommend azithromycin daily for 5 days as a first-line option. It has fewer age restrictions, less GI side effects, and a shorter regimen than other macrolides.

Turn to trimethoprim/sulfamethoxazole (TMP/SMX) bid for 14 days as an alternative for patients 2 months and up with a macrolide allergy.

Consider giving meds IV if needed...severe coughing can make po admin tricky. But watch for fluid overload with IV azithromycin and TMP/SMX in small patients...both require dilution in larger volumes.

Support antibiotic stewardship. Switch IV meds to po when appropriate...such as when the patient has a feeding tube. And reinforce adding order stop times to limit excessive antibiotic durations.

At discharge, encourage nondrug options for cough...humidifiers, up to 2 tsp of honey prn for kids over age 1, etc. In general, steer away from antitussives. Evidence is limited and they may cause harm in kids.

Also advocate post-exposure prophylaxis.

For example, advise the patients' household members start prophylaxis within 21 days after the patient began coughing. Antibiotic choices and regimens are the same for prophylaxis and treatment.

## Key References:

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