

Antibiotics still routinely prescribed in the ER for infants with viral lung infections

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Despite recommendations first issued more than a decade ago, antibiotics are still routinely prescribed in U.S. emergency rooms for infants with bronchiolitis, a common viral lung infection.

Published in the *Journal of the Pediatric Infectious Diseases Society*, the findings highlight a concerning lag in translating evidence-based guidelines into clinical practice and underscore the need to continue educating health care providers and the public about appropriate antibiotic use.

Bronchiolitis develops when the lung's small airways, or bronchioles, become inflamed and congested, usually because of a viral infection, for which antibiotics offer no benefit. The illness is the leading cause of hospitalizations for U.S. children in their first year of life. In 2006, guidelines from the American Academy of Pediatrics recommended against [antibiotic treatment](#) for [bronchiolitis](#) in children without a documented bacterial infection.

In the new study, researchers analyzed data from a nationally representative survey of U.S. [emergency room visits](#) conducted annually by the Centers for Disease Control and Prevention. Between 2007 and 2015, approximately 25 percent of children under the age of 2 with bronchiolitis who were seen in an emergency room received antibiotics, the analysis found, suggesting minimal improvement in antibiotic prescribing compared to previous years. There were no significant changes over time in antibiotic prescription rates during the nine years after the guidelines were published. Among the patients who received antibiotics, 70 percent had no documented [bacterial infection](#), for which an antibiotic may have been an appropriate treatment.

Antibiotics, like all medications, are not harmless and may cause side effects, including allergic reactions and adverse events. A previous study found that side effects from antibiotics result in approximately 70,000 [emergency room](#) visits among U.S. children each year. Overusing or

misusing antibiotics also contributes to the development of antibiotic-resistant bacteria, which can cause drug-resistant, and harder-to-treat, infections, a growing threat to public health in the U.S. and around the world.

"Targeted interventions to reduce inappropriate prescribing among clinicians are essential," said [Brett Burstein, MD, Ph.D., MPH](#), of the Montreal Children's Hospital and the Research Institute of the McGill University Health Centre in Montreal, Quebec, Canada, and senior author of the latest study. "But at the same time, informing the lay public about the potential downstream consequences and why it is important not to over-treat viral conditions are equally important."

The new analysis also found that increased antibiotic prescribing for children with bronchiolitis was associated with receiving treatment in hospitals that were not teaching hospitals or pediatric hospitals. The findings suggest that these types of facilities may benefit the most from efforts to more effectively translate guidelines for appropriate bronchiolitis treatment into changes in actual [clinical practice](#), the study authors noted.

Fast Facts

- Bronchiolitis is a common lung infection in young children, usually caused by a virus, in which the lung's small airways, or bronchioles, become inflamed and congested.
- Antibiotics continue to be routinely prescribed in U.S. emergency rooms for infants with bronchiolitis, despite guidelines issued in 2006 that recommend against doing so.
- From 2007 to 2015, one-fourth of children under age 2 with bronchiolitis who were seen in U.S. emergency rooms received [antibiotics](#), among whom 70 percent had no documented bacterial infections, suggesting

little improvement in [antibiotic prescribing](#) compared to previous years.

More information: *Journal of the Pediatric Infectious Diseases Society* (2018). [DOI: 10.1093/jpids/piy131](#)

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