

Antibiotics Still Overprescribed for Sore Throats, Bronchitis

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SAN FRANCISCO — Doctors are writing 6 times as many antibiotic prescriptions for sore throats as they should, and are prescribing antibiotics for bronchitis despite no evidence of a benefit, 2 new studies show.

Efforts to reduce the unnecessary prescription of antibiotics for sore throats have had only modest effects, and for bronchitis have had no effect, said Jeffrey Linder, MD, from Harvard Medical School in Boston.

"We're still very far away from the right prescribing rate," he told reporters attending a news conference.

Results from the studies on sore throat and bronchitis prescribing were presented here at IDWeek 2013.

The sore throat analysis was [published online](#) October 3 in *JAMA Internal Medicine* to coincide with the presentation.

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To measure the success of efforts to moderate antibiotic use, Dr. Linder and his team analyzed the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey.

They estimated that there were 94 million visits to primary care physicians and emergency departments for sore throats from 1997 to 2010.

Doctors prescribed antibiotics at 60% of visits for sore throats and 73% of visits for acute bronchitis during the study period. The antibiotic prescribing rate should be about 10% for sore throats and 0% for acute bronchitis, Dr. Linder said.

Not only are physicians prescribing too often for sore throats, they are usually prescribing the wrong antibiotics; many are prescribing newer antibiotics. Streptococcus bacteria have resistance to some of these newer antibiotics, but are still not resistant to penicillin, said Dr. Linder.

Only 9% of sore throat visits resulted in a penicillin prescription. This proportion didn't change over the study period. Meanwhile, prescription rates for azithromycin climbed from 5% to 15% for sore throat visits.

Efforts to moderate antibiotic prescriptions have not been a complete failure, Dr. Linder said. Antibiotic prescriptions for sore throats declined from 80% of visits in 1990 to 70% in 2000, he reported, but they have not improved since.

"I would characterize that as a mild to moderate improvement," he said.

Some Improvement

Dr. Linder noted that "one shred of good news was that the rate of sore throat visits declined."

There were fewer visits for sore throats in 2010 than in 1997 (4.3% vs 7.5%; $P = .006$), he reported. "We're hopeful that this represents patients being more selective about seeking care."

However, neither patients nor physicians appear to be getting the message about bronchitis.

Dr. Linder and his colleagues estimated that the number of visits for acute bronchitis to primary care doctors increased from 1.1 million in 1996 to 3.4 million in 2010.

Acute bronchitis involves swelling and inflammation of the bronchial tubes in the lungs, and typically follows a head cold or flu, which are viral infections.

"An acute bronchitis cough should last about 3 weeks, but most people seek care in 5 to 8 days," said Dr. Linder.

Physicians might be prescribing antibiotics because they think their patients want them. "If you take a few minutes to explain to patients why antibiotics can cause more harm than good, they walk away satisfied," said Dr. Linder.

The overprescription of antibiotics is taking a toll on public health, said news conference moderator Edward Septimus, MD, clinical professor of internal medicine at the Texas A&M Health Science Center in Houston.

Unnecessary antibiotic use is causing adverse effects, such as allergies, nausea, and yeast infections, and antibiotic-resistant bacteria, such as *Clostridium difficile*, Dr. Septimus explained.

Dr. Linder noted that, according to the Centers for Disease Control and Prevention, about 2 million people each year are infected with microbial-resistant bacteria, and about 25,000 die because of the infections.

He added that there is increasing evidence of an association between antibiotic use and some diseases not traditionally associated with infections, such as irritable bowel syndrome.

However, "despite many, many efforts on multiple levels," Dr. Linder noted, "the misuse of antibiotics has seen very little improvement."

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