

**GET SMART
COLORADO**
USE ANTIBIOTICS WISELY

Provider Newsletter

A resource for Colorado health care providers about antibiotic resistance and efforts to promote the judicious use of antibiotics throughout the state.

Pertussis and Judicious Antibiotic Use

Both Colorado and nationwide, the numbers of reported pertussis cases have substantially increased since 2004. In contrast to the average of 427 cases reported yearly from 2000-2003 in Colorado, 1,185 cases were reported in 2004 and 1,392* cases were reported in 2005. Figure 1 shows pertussis rates in Colorado from 1996 to 2005.

The increased use of antibiotics caused by the pertussis outbreak may be frustrating for clinicians who desire to both avoid antibiotic use for viral cough illnesses and appropriately respond to a genuine public health need.

In this issue we'll look at the judicious use of antibiotics during a pertussis outbreak. We'll also look at the public health effort to control the spread of the disease.

Pertussis is a highly communicable, bacterial disease that lasts for many weeks. Infants and young children are at greatest risk for complications from the disease.

Fully immunized children and adults can develop pertussis. Protection from

pertussis immunization wanes after about five years; natural protection from pertussis infection may be somewhat longer.

The Centers for Disease Control and Prevention now recommends that persons between 11 and 64 years of age be given a single Tdap booster in place of the tetanus-diphtheria booster.

Information about vaccination as well as disease stages, case definition, instructions for nasal wash collection, and pertussis antibiotic treatment can be found on the Colorado Department of Public Health and Environment (CDPHE) website: <http://www.cdphe.state.co.us/dc/Epidemiology/Pertussis/index.html>.

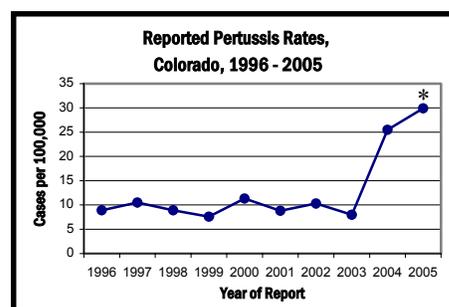


Figure 1 * provisional numbers

Do Patient Expectations for Antibiotics Vary with Ethnicity?

By Jen Myers

Patient misconceptions concerning the appropriate use of antibiotics remain prevalent. However, consumer knowledge and beliefs about antibiotics may vary widely among different ethnic groups. Research is limited, but recent studies involving Latino and Asian communities underscore the need for providers to discuss antibiotic use in the context of a patient's ethnicity and background.

In 2003, the Oregon AWARE project with the Oregon Department of Human Services conducted focus group inter-

views with recently arrived Spanish-speaking Latinos to examine attitudes, knowledge and expectations associated with antibiotic use for upper respiratory infections.¹ The study revealed several key points that clinicians should be mindful of when communicating with Latino patients, including:

- Penicillin is available without a prescription in most of Latin America and is used for treating a variety of ailments.
- The word antibiotic, or *antibiotica*, is

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By reading this issue, you will:

- Understand the recommended guidance for the antibiotic treatment and prophylaxis of pertussis cases and close contacts.
- Understand the clinician's role in pertussis disease control.
- Learn 5 key points to consider when communicating with Latino patients about antibiotics.

Patient Expectations (continued)

loosely interpreted in many Spanish-speaking countries. Study participants referred to Nyquil and muscle relaxants as antibiotics.

- Use of specific drug names such as *Penicilina* will facilitate communication and understanding between patients and providers.
- The words virus and bacteria are not meaningful to many first-generation Latino immigrants.
- Patients may worry about conditions becoming chronic if Penicillin is not prescribed.

A 2004 study published in *Pediatrics* examined ethnic differences in parental expectations for antibiotics; Latino and Asian parents were 17% more likely than non-Hispanic whites to feel that antibiotics were necessary to treat their child's illness.² Although the reasons for these differences are not entirely clear, researchers suspect that varying cultural beliefs about the effectiveness of antibiotics are contributing factors.²

As Colorado's Hispanic population continues to grow, health care providers have a unique opportunity to promote judicious antibiotic use among Spanish-speaking communities. Ozzie Lozano, clinic manager at Clínica Tepeyac in Denver, describes patients coming to the clinic who state that they have already taken Penicillin and it did not help. As a result, they came to the clinic looking for something stronger. Situations such as this are not uncommon in Latin American countries where antibiotics can be obtained without a prescription.

If a patient tells you that they have self-medicated with

antibiotics, it may not be helpful to pass judgment on their decision to do so. Instead, take time to talk about possible reasons why the drug isn't working. Explain that not all infections or "germs" can be killed by Penicillin. Provide specific examples and allow patients to ask about symptoms that are of concern to them. If appropriate, suggest that they try OTC medications the next time they develop a similar illness. Also, discuss symptoms that should not be ignored or treated with medications they have at home.

Antibiotic education campaigns are an effective means of promoting the judicious use of antimicrobial drugs. However, materials must be culturally appropriate. Get Smart Colorado has a variety of educational materials available to providers, most of which are available in Spanish and targeted to Latino patient populations. Free materials are available at: www.GetSmartColorado.com

... consumer knowledge and beliefs about antibiotics may vary widely among different ethnic groups.

References

1. Sola A. and Sadler L. *Penicilina y Remedios Caseros. Attitudes, Expectations & Behaviors Related to Use of Antibiotics for Upper Respiratory Infections Among Latinos in Oregon. A Report on Four Focus Group Discussions.* Oregon AWARE, Oregon Department of Human Services, August 2003.
2. Mangione-Smith R, Elliot MN, Stivers T, McDonald L, Heritage J, and McGlynn EA. *Racial/Ethnic Variation in Parent Expectations for Antibiotics: Implications for Public Health Campaigns.* *Pediatrics* 2004; 113: 385-394.

Pertussis-A regional perspective from Mesa County

By Virginia Simonetti, RN, BSN, MA

As a local health department, we are responsible for investigating and controlling the spread of pertussis.

Health care providers are also an essential part of communicable disease control by providing testing and treatment as well as reporting cases of disease. Reporting initiates our investigation, further helping to decrease the spread of infection.

A challenge we face with the control of pertussis is the underreporting of clinical cases. Clinical cases of pertussis need to be reported to the health department so an investigation can be completed, additional cases referred for testing and appropriate prophylaxis recommended for close contacts. Pertussis should be reported based on a health care provider's clinical evaluation, with or without a confirming lab test.

Unreported clinically diagnosed cases have caused confusion in school settings and have resulted in close contacts not receiving prophylaxis. If a school notifies us that a parent has reported his or her child is being treated for pertussis, we contact the health care provider to verify the pertussis diagnosis. However, if we find the patient was treated for pertussis, but not diagnosed, disease control measures will not continue.

Also, we often find a family member of a case who was

earlier diagnosed with bronchitis and covered for pertussis "just in case." This person could have been the source of infection for the reported case. Early identification and reporting of pertussis provides a better opportunity for disease control.

The diagnosis and treatment of pertussis has ramifications with disease control efforts, which affect the health and well being of communities. If a patient's diagnosis warrants antibiotic treatment for pertussis, then this probable case should be reported. If diagnosis is uncertain, test.

Contributors

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Pertussis Disease Control

By Sandy Rios and Denise Woods-Stout

The appropriate diagnosis and treatment of pertussis is entirely consistent with judicious antibiotic use. Pertussis is a highly contagious bacterial disease. Early identification and treatment of pertussis cases and antibiotic prophylaxis of close contacts prevent the spread of infection.

Identifying cases: A pertussis diagnosis should be considered after obtaining a thorough history, including recent cough illness and possible exposure to pertussis. Pertussis evaluation is recommended for persons with:

- Severe cough, paroxysmal cough, or prolonged cough illness, OR
- Cough associated with post-tussive vomiting or whoop, OR
- Any acute cough illness in the setting of possible pertussis exposure.

The following patients are unlikely to have pertussis:

- Persons with culture or PCR confirmed pertussis in the last 1 to 2 years are unlikely to contract it again this year.
- Persons with cough as a secondary symptom to congestion, headache, fever and earache. These persons are more likely to have a viral infection and can be treated symptomatically.
- Persons with the sudden onset of a cough illness accompanied by fever and malaise. These persons may need evaluation for influenza or pneumonia.

The following patients are more likely to have pertussis:

- Infants and children who are unimmunized.
- Persons who are under immunized.
- Persons who have not had a pertussis vaccination in the past 5 years.
- Persons exposed to a pertussis case.

Testing: Testing should be done to verify diagnosis and facilitate investigation of close contacts.

- Test all patients with pertussis symptoms by collecting a nasal wash for pertussis PCR testing.
- If you are unsure of a pertussis diagnosis, collect a nasal wash on the patient for pertussis PCR testing.
- Pertussis may be detected for up to 10 weeks after cough onset using PCR testing.
- Pertussis serology testing is available; however, it is not routinely recommended for diagnosing acute disease. In addition, pertussis serology testing is not standardized.

Treatment: Refer to the insert for guidance on the antibiotic treatment and prophylaxis of pertussis cases and contacts. (Note the recommended azithromycin dosage for infants less than 6 months of age has changed from previous CDPHE recommendations.)

- While awaiting test results, provide antibiotic treatment for patients highly suspected of having pertussis (e.g., exposed to pertussis, paroxysmal cough associated with post-tussive vomiting, etc.).
- Pertussis patients should be isolated until completing five days of appropriate antibiotic treatment, unless they have coughed for 3 weeks or more.
- Pertussis cases are noninfectious after 5 days of appropriate antibiotic treatment.
- Cough will usually continue after appropriate antibiotic treatment, unless antibiotics were administered early in the illness.
- Antibiotic treatment is not necessary for persons who have coughed for 3 weeks or more, as the patient is no longer considered infectious.

Reporting: Report all patients clinically suspected to have pertussis to your local public health department.

Summary of Pertussis Disease Control
Prevent – Vaccinate with DTaP or Tdap
Assess – Evaluate symptoms and exposure
Test – Nasal wash for pertussis PCR
Treat – Azithromycin, Clarithromycin, Erythromycin, or TMP-SMZ
Report – To local health department/nursing service or CDPHE
Prophylaxis of close contacts – Same antibiotics and dosages as for treatment

- Reporting is essential for preventing the spread of infection. It allows the disease to be tracked, investigated and contacts to be identified.
- Patients clinically diagnosed with pertussis, but not tested, should still be reported. Unreported, clinically diagnosed cases have caused confusion in school settings and have resulted in infant household contacts not receiving prophylaxis.

Prevention: Vaccinate. Vaccinate. Vaccinate.

- DTaP (diphtheria, tetanus and pertussis) vaccine is routinely administered at 2 months, 4 months, 6 months, 12 to 18 months, and a booster dose at 4 to 6 years of age.
- In 2005, the FDA licensed two new Tdap (tetanus, diphtheria, and pertussis) vaccines, BOOSTRIX[®] for adolescents 10 through 18 years of age, and ADACEL[™] for persons 11 through 64 years of age.
- The Centers for Disease Control and Prevention now recommends that persons between 11 and 64 years of age be given single Tdap booster in place of the tetanus-diphtheria booster.
- For additional immunization information, see February 23, 2006 and March 2, 2006 *Morbidity and Mortality Weekly Reports*, www.cdc.gov/mmwr/preview/mmwrhtml/rr55e223a1.htm and www.cdc.gov/nip/vaccine/tdap/tdap_adult_recs.pdf.

Even with the increase in pertussis incidence, it is important to continue educating patients that most acute cough illnesses are usually viral and do not require antibiotics. More information about pertussis can be found on the CDPHE website: <http://www.cdphe.state.co.us/dc/Epidemiology/Pertussis/index.html>.

Free Educational Materials!

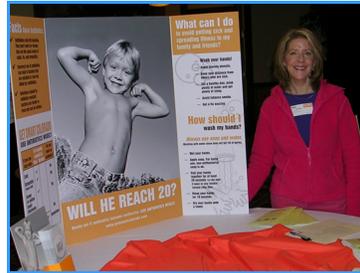
Free patient educational materials are available for use in your office. Most materials are available in Spanish and English and can be ordered from the GSC website, www.GetSmartColorado.com.

Examples of materials include:

- Waiting room posters
- Exam room posters
- Brochures
- 4 x 6" patient information cards
- Wallet-sized OTC guides

Additional materials can be downloaded from the website free-of-charge.

If you have any questions about the educational materials, please do not hesitate to contact the GSC office.



Candace Lacey, with the CO Academy of PAs, volunteering at a 2005 9Health Fair.



Judy Harrigan, with the CO Department of Education, volunteering at a 2005 9Health Fair.

What's New!

- **9Health Fairs.** GSC volunteered at five 9Health Fairs this spring to talk with communities about antibiotic resistance and the careful use of antibiotics. Volunteers were in Pueblo April 22nd, Littleton April 23rd, Westcliffe April 28th, Boulder April 29th and Aurora April 30th. Many thanks to all the 2006 GSC volunteers!
- **Guest editorial in the Rocky Mountain News.** GSC worked with Dr. Jeffrey Cain to author a guest editorial for the Rocky Mountain News. His article appeared in the April 7th edition of the newspaper. Dr. Cain is Chief of Family Medicine at The Children's Hospital and Board Member of the Colorado Academy of Family Physicians.
- **CE program for community pharmacists.** GSC presented a continuing education program to King Soopers and City Market community pharmacists on April 23, 2006 during their annual expo.

If you would like to become involved with the activities of GSC or would just like additional information, please contact the GSC office.



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WE'RE ON THE WEB!
WWW.GETSMARTCOLORADO.COM



Get Smart Colorado is a coalition dedicated to minimizing the problem of antibiotic-resistant bacteria in Colorado by providing education about and support for the appropriate use of antibiotics through collaborative efforts. We are funded by The Colorado Health Foundation and the Centers for Disease Control and Prevention. We are located at the Colorado Department of Public Health and Environment.