LETTERS TO THE EDITOR

TREATING ACUTE BRONCHITIS

To the Editor:

I read with interest the article by King et al[1] on the treatment of acute bronchitis. As the authors point out, most of the literature does not support the current practice of treating acute bronchitis with antibiotics. Their numerous comparisons between the treatment and placebo groups increase the likelihood of finding positive findings by chance alone. Since there were no other demonstrable differences in outcomes between the two groups, the most likely explanation for their findings is a chance occurrence, rather than one of the potential biologic explanations that they cited. Furthermore, the lack of association between a positive antibody test and treatment outcome lessens the likelihood that the quicker return to work in the treatment group represents a real as opposed to a chance treatment outcome.

The tone of their discussion suggests a bias in favor of justifying current clinical practice. I wonder if they (or the Journal) would have been inclined to publish had they no positive findings to report (publication bias).

Even though the response to treatment did not differ by race when analyzed by logistic regression analysis, the significant difference in racial composition between groups suggests alternative possible explanations for the observed differences in the rate of return to work. Nonwhites and whites differ significantly in socioeconomic status, which influences in myriad ways the likelihood of taking time off from work for minor respiratory illness. Patients of lower socioeconomic status (both whites and nonwhites) may have been overrepresented in the erythromycin group and returned to work sooner because of less generous sick time, less remaining sick time because of poorer overall health status, or decreased ability to tolerate the economic costs of missed time at work.

Given the widespread overuse, if not abuse, of antibiotics in primary care,[2] medicine in general, and by the population at large; the increasing problems of antibiotic resistance in the community and hospitals; the self-limited nature of the illness; the marginal likely effectiveness of antibiotics in this group of illnesses; and the emerging data for the superior effectiveness of beta agonists over even erythromycin,[3] why not expend our research and clinical efforts in developing and evaluating nonantibiotic–based approaches to acute minor respiratory illnesses?

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.2. Mainous AG, Hueston WJ, Clark JR. Antibiotics and upper respiratory infection: do some folks think there is a cure for the common cold? J Fam Pract 1996; 42:357-61.
3. Hueston WJ. Albuterol delivered by metered dose inhaler to treat acute bronchitis. J Fam Pract 1994; 39:437-40.

The Journal welcomes letters to the editor. If found suitable, they will be published as space allows. Letters should be typed double spaced, should not exceed 400 words, and are subject to abridgement and other editorial changes in accordance with Journal style. All letters that reference a recently published Journal article are sent to the original authors for their reply. If no reply is published, the authors have not responded by date of publication. Send letters to Paul A. Nutting, MD, MSPH, Editor, The Journal of Family Practice, 1650 Pierce St, Denver, CO 80214. Telephone (303) 202-1543, Fax (303) 202-1539, e-mail nuttingp@usa.net

To the Editor:

The paper by King et al *(King DE, Williams WC, Bishop L, Shechter A. Effectiveness of erythromycin in the treatment of acute bronchitis. J Fam Pract 1996; 42:601-5)* continues a disappointing series of studies on the effect of varied therapies on this common and poorly defined clinical syndrome. The case definition of cough and sputum production within the previous 2 weeks may have been used by several previous studies, but is so vague as to be virtually useless. It represents a substantial portion of clinical practice during the winter months, and encompasses a host of ailments. The use of this broad definition would render any clinical application of their conclusions meaningless.

In the evaluation of the incidence of erythromycin side effects (to a dose that would be undertreating most adults), there is no breakdown in the follow-up pill count between placebo and treatment groups with respect to whether there was a difference among them as to who had taken more than half the medication. This compromises efficacy evaluation.

The overuse of antibiotics in the treatment of viral respiratory infections had been considered one of the reasons for the growing incidence of bacterial antibiotic resistence. Papers of this sort shed no light on this clinical dilemma, and have no place in a peer-reviewed journal.

David Kaufman, MD
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To the Editor:

A recent study by King et al[1] in the June issue of the Journal bases its results on a rapid test for *Mycoplasma pneumoniae* IgG/IgM antibodies. The manufacturer of the test (Remel, Inc, Lenexa, Kansas) states: "A positive reaction is comparable to an IgG titer of 1:32 or higher and/or an IgM titer of 1:16 or higher using a commercial serum IFA test,

and when correlated with clinical and laboratory findings is indicative of an active **or past infection** of *Mycoplasma pneumoniae* [emphasis my own]." The authors base their conclusion of a 25% prevalence of *M pneumoniae* in their study on a rapid detection method that can be positive for *M pneumoniae* antibodies as a result of past infection. I believe we are overdiagnosing the prevalence of *M pneumoniae* infection based on tests that do not rely on a gold standard. That gold standard is a fourfold rise in antibody titer over 2 weeks. Without that criterion, the accurate diagnosis of *M pneumoniae* is in doubt. Even cultures have been proven to inaccurately reflect the presence of acute *M pneumoniae* infection. In 1992, Gnarpe et al[2] reported that the throats of 102 (13.5%) of 758 healthy volunteers with no sign of respiratory infection were colonized with *M pneumoniae*. The conclusion of Gnarpe et al was that a throat culture positive for *M pneumoniae* should be confirmed by a fourfold rise in complement fixation titer to identify infection.

By relying on a test tht simply signifies the presence of IgM or IgG antibodies, King and colleagues overestimate the incidence of *M pneumoniae* as a causative agent even when there is a respiratory infection. The *M pneumoniae*–specific IgG antibody level can remain elevated for years postinfection and has not been useful in diagnosing acute infections. In one analysis, more than 90% of asymptomatic healthy blood donors had IgG antibodies to *M pneumoniae*, as detected by the indirect immunofluorescent test.[3]

It is known that the IgG antibody to *M pneumoniae* can remain elevated to 1:16 for as long as 2 to 3 years.[4] Therefore, this is also subject to misinterpretation when diagnosing acute infection of *M pneumoniae*.

Unless physicians take into account the weaknesses of rapid diagnostic tests for *M pneumoniae*, inaccurate data will continue to lead to overestimation of illness caused by *M pneumoniae*.

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2. Gnarpe J, Lundback A, Sundelof B, Gnarpe H. Prevalence of *Mycoplasma pneumoniae* in subjectively healthy individuals. Scand J Infect Dis 1992; 24:161-5.
3. Smith JL. *Mycoplasma pneumoniae* infections: diagnosis based on immunofluorescence titer of IgG and IgM antibodies. Mayo Clin Proc 1986; 61:830-1.
4. Murray HW, Tuazon C. Atypical pneumonias. Med Clin North Am 1980; 64:507-27.

The preceding letters were referred to authors King, Williams, Bishop, and Shechter, who respond as follows:

We appreciate the opportunity to respond to the comments of Drs Kimber, Kaufman, and O'Handley. Our study was actually designed to *reduce* the inappropriate use of antibiotics by directing therapy at a subset of patients who might truly benefit.[1] The rationale for the study proceeded from evidence in a study by Dunlay and colleagues[2] that showed modest improvement of symptoms using erythromycin in adult patients with acute bronchitis. It was our hypothesis that the rapid mycoplasma test might be helpful in identifying patients for whom erythromycin would be especially beneficial. Our approach was to design a prospective, randomized, placebo-controlled, double-blind clinical trial at three primary care practice sites.

In response to the comments regarding doing multiple comparisons, the study was designed to have the power to find 25% differences in cough or return-to-work status. The study results show significant findings in only one of those two variables. We would have sought publication of the trial whether the results were clearly in favor of erythromycin or not, since a negative study would have important implications for clinical practice.

Dr Kimber's comments regarding racial differences are interesting. We had not considered race as an explanation for differences in return-to-work status. Review of our data revealed no differences in return-to-work status by race.

Dr O'Handley raises an important issue about the accuracy of the rapid test for *M pneumoniae* IgG/IgM antibodies (*M pneumoniae* IgG/IgM antibody test system, Remel, Inc, Lenexa, Kansas). His letter points out the manufacturer's caution that a positive reaction may be indicative of active or past infection with *M pneumoniae*. In our experience, the test has performed well in differentiating acute from chronic infection. In the study "High Prevalence of *Mycoplasma pneumoniae* in Patients with Respiratory Tract Symptoms: A Rapid Detection Method,"[3] a previous version of the rapid test was found to be positive in 43% of patients with acute respiratory symptoms and in only 7% of patients without symptoms. In the context of patients with respiratory symptoms, a positive test most likely indicates acute rather

than previous infection.

There have now been several randomized controlled trials of antibiotics that demonstrate benefits for patients with acute bronchitis.[1,2,4] It seems reasonable to continue to pursue research that would enable physicians to direct such therapy more appropriately.

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1. King DE, Williams WC, Bishop L, Shechter A. Effectiveness of erythromycin in the treatment of acute bronchitis. J Fam Pract 1996; 42:601-5.
2. Dunlay J, Reinhardt R, Roi LD. A placebo-controlled, double-blind trial of erythromycin in adults with acute bronchitis. J Fam Pract 1987; 25:137-41.
3. King DE, Muncie HL. High prevalence of *Mycoplasma pneumoniae* in patients with respiratory tract symptoms. J Fam Pract 1991; 32:529-31.
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ZINC LOZENGES TO TREAT COLDS

To the Editor:

The Journal Club review in the October issue *(Stevermer JJ. A cure for the common cold? J Fam Pract 1996; 43:346)* of a recent study on the use of zinc lozenges to treat colds has prompted me to offer the following:

The program I used was to first find a brand of lozenge that tastes pleasant; second, break each tab into quarters; third, do not wait until you have two symptoms—start with the first sign of a scratchy throat and put a fragment of a lozenge under the tongue or in the cheek. When it is gone, put in a second fragment, and so on until bedtime. In the vast majority of cases, you feel normal the next day after a total course of perhaps less than three lozenges.

The idea is to keep the throat bathed continuously with a trace of zinc. The every-2-hour treatment described in the paper reviewed does not do it. I agree that zinc *tablets* taste bad. Also, an overdose of zinc will distort your sense of taste, if you had one to begin with; and if your sense of taste was gone, zinc will often restore it.

Robert Hawkins, MD
Santa Barbara, California

SOFTWARE UPDATE

To the Editor,

The September issue of the Journal: (page 303) had a review of the *Physicians' Online* network that was based on an outdated version of the software and did not reflect the network's addition of many new features. *Physicians' Online* (POL) is the only private online network offering health care communications for physicians. Now based entirely on Internet standards, POL provides access to the World Wide Web accompanied by the POL WebGuide, an interactive guide that saves physicians time by reviewing and rating medical sites on the Web. In addition to core applications, such as MEDLINE and drug databases, free e-mail, and physician-only discussion groups, POL now offers news, sports, and financial areas that include physician editions of the *Medical Tribune*, a daily online edition of *The Wall Street Journal*, and stock quote information updated every 20 minutes. The current Internet-based POL software is free to physicians and can be ordered by calling 1-800-332-0009.

Physicians' Online, Inc.
Tarrytown, New York

The preceding letter was referred to Dr Fox, who responds as follows:

In the "nanosecond 90s," some software is updated almost continuously. Additionally, there is an unavoidable lag between initiation of the review process and final publication of the review. Personally, I have had sufficient frustration with POL that I consider it no longer worth my attention (my Motorola Montana modem is not supported, I do not remember my screen name and cannot log on, POL's 14.4 modem speed is too slow for me, technical support has been less than useless, the newest version does not indicate which version of *Netscape Navigator* is on the disks, and I do not want to chance corrupting my currently installed *Netscape*).

Opinions abou POL differ, however, and there are physicians who swear by it. In fairness to the reviewers, they have word limitations and are supposed to give an overview, not list every feature of the software. One of the major purposes of the software section is to let readers know what is available—and the review certainly more than served that purpose. As with editorials and book reviews, software reviews represent an individual's opinion and should be regarded as such.

The review of POL was generally positive, with an qverall rating of "good" and a conclusion that "the system is worth investigating—generally, the cost is your time," with which I agree.

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PUBLISHER'S NOTE: The Publisher checked with POL about which version of *Netscape* was being used with the new updated service. The version is 3.0.