

ed on German filters is not reflective of US conditions.

Finally, the Brita Baby Water Filter referenced in the letter was never sold in the United States. This product was *voluntarily* withdrawn from the German market due to limited market potential. There are no plans to sell this product here.

The Brita Water Filtration System remains a safe, simple, and effective way to improve the taste and quality of municipally treated tap water.

Charles M. Couric, President
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The above reply and the original letter from Drs. Daschner and Rüden reflect issues that have been debated vigorously in Germany. Rather than extend that debate here, we have urged both parties to submit original manuscripts reporting scientific investigations of the issues in question. Dr. Daschner informs us that a manuscript reporting his results, "Microbiological Contamination of Drinking Water in a Commercial Household Water Filter System," has been published in the European Journal of Clinical Microbiology & Infectious Diseases (1996; 15:233-237).—Ed.

Pseudoepidemic of Nontuberculous Mycobacteria in a Community Hospital

To the Editor:

We read with interest the report entitled "Pseudoepidemic of Nontuberculous Mycobacteria in a Community Hospital" by Mehta JB, Kefri M, Soike DR,¹ which appeared in your journal, *Infection Control and Hospital Epidemiology* (1995;16:633-634), since we recently experienced a similar pseudo-outbreak from acid-fast bacilli (AFB) at our institution. We do not use the BACTEC System implicated in Mehta's report. Our pseudo-outbreak probably was due to water contamination during the acid-fast smear and culture process.

In the fall of 1995, five patients were reported to infection control as growing AFB-positive organisms. All had been smear negative on September 13, 14, and 15, yet grew AFB-positive organisms 3 weeks later (October 5, 1995).

Clinical investigation of the five patients involved was begun to determine if this unusual occurrence truly represented five cases of tuberculosis. If so, contact investigation of potentially exposed personnel would have to be undertaken.

Two of the patients involved had been on special respiratory isolation, which was discontinued when the AFB smears were reported as negative. Three of the patients were bronchoscoped, one had submitted sputum, and one had colonic washings and stool tested for AFB.

We found that the clinical picture of the patients did not substantiate a high index of suspicion for pulmonary tuberculosis. We therefore entertained the thought that this might be a pseudoepidemic.

While awaiting identification of the AFB-positive organism, those patients who still were hospitalized were placed on special respiratory isolation. The laboratory identified the organism as *Mycobacterium fortuitum* (October 18, 1995) 2 weeks after the initial AFB-positive diagnosis was made. Special respiratory isolation was discontinued at this time.

Pseudoinfections often are difficult to recognize and may go on for weeks or months. Recognition requires alertness on the part of infection control and laboratory personnel to unusual increases in the recovery of microorganisms from a particular body site. Discrepancies between the patient's actual condition, expected clinical findings, and positive cultures or Gram stain from clinical specimens should provide assistance in determining that the problem is pseudo-infection and not infection. This is important in preventing the use of unnecessary therapy.²

Unexpected AFB-positive smears of sputa or bronchial washings force clinicians to weigh the benefits of initiating antitubercular therapy while waiting for final laboratory confirmation of AFB cultures.

Most outbreaks of pseudo-infection due to *Mycobacteria* have been associated with water-contaminated solutions or instruments, which we believe also was the case in our recent outbreak.³⁻⁵ Therefore, it is important, with the current resurgence of tuberculosis, that the clinician be aware that the initial positive mycobacteriology report for tuberculosis may be a false alarm. Quality control improvement programs are of utmost importance in

maintaining vigilance in this area.

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Analysis of Infection Control Surveillance Data in a Long-Term-Care Facility: Use of Threshold Settings

To the Editor:

The study by Dr. Mylotte,¹ based on a statistical approach proposed by Drs. JA Childress and JD Childress,² selects threshold levels at an arbitrary distance above endemic levels, but reports neither sensitivity nor specificity with that approach. Other research has attempted to determine the statistical distance required to optimize sensitivity and specificity.³ Moving averages also have been considered as another refinement.⁴ These studies make use of only one or two of eight possible run tests for interpreting statistical process control (SPC) charts.⁵ Threshold levels based on binomial- or poisson-derived warning limits can improve the efficiency of infection surveillance; the calculations are simple, and the predictive accuracies are attractive. However, further work is needed to confirm optimal threshold distances and to determine the relative contribution of the different SPC decision rules. Future "Statistics for Hospital Epidemiology"

columns will address these and other related issues.

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The author replies.

Dr. Birnbaum importantly points out that, in my paper, no sensitivity or specificity data were reported for the threshold testing method. One reviewer of the manuscript also raised this issue. This is an important consideration, and I have the following comments.

As I noted in the paper, most outbreaks (eg, diarrheal illness, influenza-like illness, conjunctivitis, gastroenteritis) in nursing homes can be identified without resorting to special methods

for detection. More commonly, however, infection control practitioners in nursing homes are faced with, for example, a frequency of skin and soft-tissue infection that exceeds the endemic level during 1 month. The concern is not so much about an outbreak, but that existing regulations require that "excessive" infection occurrences be evaluated and reported. For example, in the past 5 years, thresholds for various types of infections have been exceeded 15 to 20 times in several nursing homes for which I serve as a consultant; after investigation, none of these episodes were found to be outbreaks requiring special interventions. Nevertheless, all were reported to the regulatory agency. The concern on the part of the nursing home administration is that, if these situations are not reported, it could lead to an investigation by the regulatory agency later, resulting in fines or public reprimand; on the other hand, excessive and unnecessary reporting overburdens the understaffed regulatory agency. Compounding the problem is that regulators have not provided a uniform method for evaluation of surveillance data. This lack of methodology has resulted in confusion among nursing homes about how to analyze data and when to report. Threshold testing or methods like it may help to reduce confusion and unnecessary reporting by establishing a consistent and simple method for evaluating surveillance data.

Given the very low prevalence

of outbreaks in individual nursing homes, but the very real need to deal with occasional high infection frequencies, determining the "optimal" threshold distance for evaluation of surveillance data *in the nursing home setting* may be difficult and unnecessary. Endemic infection levels of various types are usually ≤ 4 per month, but fluctuations occur frequently, as demonstrated in my paper. For endemic levels of ≤ 4 , there are only small increments in the threshold numbers for each probability level, and the "distance" of these threshold numbers above the endemic level is relatively small in magnitude.

It is encouraging that Dr. Birnbaum agrees that the statistical approach underlying threshold testing is appropriate for evaluating nosocomial infection surveillance data. I am looking forward to future comments in *Infection Control and Hospital Epidemiology* that provide insights into how to "fine tune" threshold testing. Focusing on this area will, I hope, engender interest in methods such as threshold testing for evaluating surveillance data and provide the impetus for regulatory agencies to standardize the analysis of such data, especially for nursing homes.

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