that while triclosan is effective at reducing the bacterial level on skin, it does not eliminate all resident bacterial microflora on the skin, thus one-way pressure for the proliferation of a competing organism does not exist. Furthermore, many experts agree that normal dry skin is not a hospitable environment for the survival of gram-negative species. Long-term studies measuring the consequences of exposure to triclosan, through frequent use of handwash products, failed to generate evidence that gram-negative bacteria would colonize and proliferate on the skin of the test subjects.[5-7]

In May 1982, Ciba-Geigy received notification from the Division of OTC Drug Evaluation, Office of Drugs recommending that the status for use of triclosan in surgical scrubs, personnel health care handwashes, and patient pre-operative preparations be changed from a not approved (Category II) to a conditional approval (Category III) (W. Gilberston, personal communication, 1982). Since receiving this notification, Ciba-Geigy has generated (and submitted to the FDA) additional data to support our position that triclosan is safe and efficacious for use in the clinical environment[4,8] (Cox AR, unpublished data, 1981).

The antimicrobial effectiveness of a topically applied product is a function of the total formulation rather than a single ingredient. Based on the facts we have presented, it is clear that the conclusions of Barry et al are unsubstantiated.

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The authors of the article in question respond to Findley and Spainhour's concerns.

Dr. Findley and Mr. Spainhour appear concerned that our findings with OR Scrub® (Huntington Laboratories), a product containing 1% triclosan, may have implications for their product Irgasan DP-300 (Ciba-Geigy). We agree with their conclusion that topical antiseptic agents should be evaluated as a function of their total formulation rather than on the basis of the active ingredient. For that reason, we carried out our investigations with OR Scrub®, rather than triclosan alone. Our data emphasized three points: 1) "In-use" OR Scrub® was contaminated with *Serratia marcescens*, 2) In vitro studies clearly indicated that OR Scrub® had limited activity against *S. marcescens* and *Pseudomonas aeruginosa*, 3) OR Scrub® was not only more expensive but less effective against *S. marcescens* than a non-antiseptic soap (Wash®), also produced by Huntington Laboratories. OR Scrub was reformulated after our manuscript was in press, and we added the addendum to demonstrate that the "new" OR Scrub® was improved. However, we remain concerned over its low activity against *S. marcescens*, a common nosocomial pathogen. Our manuscript contained no data on other products containing triclosan.

The importance of testing the final formulation rather than the active antimicrobial ingredient is emphasized in our manuscript. Because 1% triclosan was the only ingredient in OR Scrub® claimed to be antimicrobial, we assumed that the product's lack of activity was due to the triclosan rather than the "inert" ingredients added as preservatives. We did not provide data or draw any specific conclusions regarding the efficacy of Irgasan DP-300, and we invite Dr. Findley and Mr. Spainhour to provide specific data on the efficacy of their product against *S. marcescens* and *P. aeruginosa*. We, and other readers of *Infection Control*, do not have ready access to unpublished reports, master files, or FDA docket numbers to which they refer. However, of the two medical literature references cited,[6,8] triclosan was used in concentrations greater than 1%, or was combined with another agent that had antimicrobial activity. Unfortunately, neither of these reports used *S. marcescens* as a test organism.

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IV Administration and Tracheostomy Care in the Home

To the Editor:

Please notify me if you have information concerning intravenous administration and tracheostomy care in the home. Our home health agency feels the frequency of changing IV tubing in the hospital might not be necessary in the home. Reimbursement sources are stressing resterilization and aseptic technique in the home for trach care.

We have not been able to locate durable supplies to withstand resterilization.

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Sue Crow, RN, MSN, Nurse Epidemiologist at Louisiana State University Medical Center offers the following reply.

There have been no studies relating infection control practice to home health care. National organizations have not addressed appropriate infection control guidelines for this area. With this in mind, we must make judg-

ments as to how practices may differ in the home than in the hospital. Each patient care practice and procedure must be evaluated on its own merit. For example, tracheostomy care may be different in the home than the hospital because most tracheostomies in hospitals are new wounds. A new wound needs to be treated with sterile aseptic technique, whereas a long-term patient with a tracheostomy probably could have clean technique used without an increased infection risk. Clean technique may include cleaning the inner cannula with soap and water and soaking in 70% alcohol for 5 minutes followed by a thorough rinsing with normal tap water.

On the other hand, infection control policies for IV care should not be altered because the blood stream is such an opportune media for microbes to grow. The patient is at increased risk of infection in the home as well as the hospital when he is receiving IV fluids. We need to continue changing sites, dressings, and tubing every 48 to 72 hours until studies prove otherwise.

Each home health agency needs to look closely at their practices. It is a good idea for them to consult infection control practitioners when making infection control-related decisions.

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Infection Control Measures for the Use of Amniotic Membranes

To the Editor:

With the planned opening of a burn unit at our institution, concern has been present over the use of amniotic membranes for coverage of burn wound surfaces. Review of recent studies examining the use of such biologic membranes do not go into great detail discussing infection control-related issues.[1,2]

I would be grateful for advice and/or references that deal with topics such as risk of transmission of such diseases as hepatitis B, syphilis, etc. with the use of such products.

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William M. Valenti, MD and Florence Jacoby, RN of Strong Memorial Hospital, Rochester, New York, respond to Dr. Baddour's query.

Amniotic membranes have proven useful as temporary biologic dressings on wounds prior to grafting. In full thickness injuries, the membranes have gained immediate adherence and have decreased pain and bacterial contamination of wounds.

If these membranes are procured, stored and used appropriately, they can prove life saving for patients with full thickness wounds both thermal and nonthermal. We are not aware of any reports of disease transmission associated with amniotic membranes. However, as with any material donated from humans, the potential for transmission of infection is present and the infection control policy for the burn unit should attempt to minimize the risk to recipients. Robson et al used fresh amniotic membranes obtained from "seronegative" mothers who had no history of either premature rupture of the membranes or endometritis.[1] Although the authors do not define seronegative, we suggest that the donors have negative serologies for syphilis and hepatitis B surface antigen. According to most protocols for amniotic membranes, the material is cultured at the time of procurement and before use. In addition, Robson did not use material after 6 weeks of storage. The donor should also be in good health without any acute or chronic underlying disease or history of drug or substance abuse. As testing for the human T-cell lymphotropic virus (HTLV-III) becomes more specific and more widely available, protocols for organ transplant may include this type of screening as well.

The policy should include details regarding procurement, storage and processing of membranes as well as guidelines for acceptable donors. If certain aspects of the procedure are planned in advance, the use of amniotic membranes should carry a low risk of infection to the recipient.

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Use of Personal Items Could Present Problems

To the Editor:

A patient who had been hospitalized at our institution for several months developed new respiratory symptoms suggestive of an allergic pneumonitis. The patient unknown to the staff had recently begun using in the hospital her personal humidifier brought from her home. Culture of the humidifier (spout, mist, tank, water, etc.) revealed multiple species of bacteria usually associated with water or hospital surfaces—*Flavobacterium* sp., *Pseudomonas* sp., *Bacillus* sp., and staphylococci. In addition, cultures of the mist and several other sites of the humidifier grew *Aspergillus* species. The patient's symptoms ended when she discontinued use of the humidifier.

In light of this incident it is important to remember that items patients bring into the hospital for personal use could be a potential source of contamination that would not be anticipated. Humidifiers can be a source of bacteria or fungi. Hospital staff should be alerted to the dangers of these devices which patients may elect to use at their own discretion.

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