the contact time.

It is important that practitioners of hospital disinfection have this perspective when assessing reports such as that by Townsend et al. For example, their procedure consisted first of bottle-brush cleansing with detergent solution, followed by four water rinses and some air-drying. Their figures show that this physical disinfection step reduced the number of contaminated tubes from 92% to 72% and the mean survivor count by more than 99%. Yet, the article's title puts great emphasis on the chemical component even indicating its composition. Although the authors did mention the "detergent wash" in the text, they also said, "... our study design did not permit us to determine if the cleansing procedure was necessary..." The implication is clear that the chemical might have done as much without pre-cleansing. The writer from long experience with tests of this nature can attest that that is most unlikely.

Another reason for questioning the emphasis on chemical action is that the data fail to provide the information needed for the chemical efficacy evaluation that is part of the title. To be able to do this there should have been a control in which water was substituted for disinfectant. Consequently the role of the chemical component has to be surmised from other results. Following contact with chemical (followed by three rinses and air-drying) there were significant reductions in the number of contaminated tubes, but the proportionate reduction in the mean count was of the same order as that following the detergent-wash alone. And among the 30 different types of survivors were some that are generally quite susceptible to disinfectants (Neisseria, for example). This finding leads one to suspect that the level of chemical action may not have been high.

There is a great need for in-use studies on equipment disinfection that provide a balanced assessment of the whole decontamination procedure and compare two or more procedures one of which is in common use. The purpose of this communication is to encourage such studies.

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Dr. Timothy R. Townsend, who authored the article in question, was invited to respond.

Dr. Spaulding is correct in that to evaluate the specific contribution to the disinfection process of either the pre-cleansing procedure or the disinfectant itself, a different study design would be needed. It was not our intent to imply that pre-cleansing was not necessary. Our intent was quite the opposite, to caution the reader that our study design was such that the importance of pre-cleansing could not be properly evaluated.

I agree with Dr. Spaulding that there is a great need for more in-use studies that provide a balanced assessment of the entire decontamination procedure. Our hope was that our study might stimulate more and better studies. With Dr. Spaulding's permission, I would like to extend his plea for more studies to include controlled studies that directly compare different disinfectants available to hospitals. In this regard, it was very unfortunate that funding was withdrawn in 1981 for the Centers for Disease Control sponsored study (Microbiologic Evaluation of Chemicals and Methods Used for High-Level Disinfection of In-Use, Naturally Contaminated Respiratory Therapy Breathing Circuits, RFP No. 200-81-0628) which would have evaluated both manual and machine processing of ventilator tubing as well as many different types of disinfectants. Such a study would have been invaluable not only in providing practical in-use data to hospitals, allowing them to choose the best disinfectant for the job, but in furthering our understanding of which components of the disinfection process are most efficacious.

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Length of Sterility in Self Sealing Wrap

To the Editor:

Regarding the article in *Infection Control*, Vol. 2, No. 2, page 143, we use "Ameri-Wrap Self Sealing Wrap" of American Hospital Supply Corporation for gas and heat sterilization.

Have you done studies on length of sterility in this type of a wrap? At this time we allow six months sterility in a closed cabinet for the wrap.

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The preceding letter was referred to George F. Mallison, MPH, PE, for a reply.

I have seen no articles in medical or scientific literature on studies of the safe length of sterility using this particular product. However, the wrapper appears to be essentially the same as a number of other wrappers — it consists of transparent plastic (probably polypropylene or PVC) on one side bonded on the other to white kraft paper. Sold as a pouch, it has a press-on seal (that appears quite effective) on one end and easy-to-open tabs on the other end.

Studies on the safe storage times of pouch-type wrappers were reported by Dineen (*AORN Journal* 13:63-64, 1971). His work indicated that sterile storage for more than one year was possible.* Nonetheless it seems entirely inappropriate to me to keep in storage any sterile-wrapped item more than a few weeks: long-term storage represents an expensive, unused inventory. I recommend a considerably shorter time for safe use, to reduce both inventories as well as the chance of excessive handling of pouches causing cuts or tears in packaging. Three months would seem to be reasonable.

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**The 1981 CDC Guidelines for Hospital Environmental Control recommended that such types of wrappers (if heat sealed and, as indicated above, the press-on seal appears effective) should provide sterility for at least one year* (Infect Control *1981; 2:143.*).