

## Re-Use of Insulin Syringes

To the Editor:

Recently the Chief of Pharmacy at our hospital proposed that insulin syringes (disposable type) be re-used by the diabetic patients as a cost savings measure. The pharmacist cited two articles as references for the recommended change in procedure.<sup>1,2</sup>

### REFERENCES

1. Hodge RH, Krongaard L, Sande M, et al: Multiple use of disposable insulin syringe needle units. *JAMA* 1980; 244:266.
2. Greenough A, Cockcroft PM, Bloom A: Disposable syringes for insulin injection. *Br Med J* 1979; 1:1467-1468.

The questions that have been raised in regard to this issue are the following:

1. Do these articles have any merit?
2. Should disposable syringes be re-used?
3. Has there been any followup to the studies discussed in these articles?
4. Are there studies that indicate re-use of disposable syringes posing a threat of infection?
5. What are the legal implications to consider should this type of procedure be followed?
6. Are there articles that implicate the re-use of disposable items (syringes or other instruments) as a potential threat of infection?

I am concerned with this proposal in areas such as ours, where our patients do not have the best of sanitary

conditions (ie, no running water) in their homes. Any information regarding this matter would be appreciated.

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*The preceding letter was referred to Peter C. Fuchs, M.D. and Mark Eggleston, Pharm, D., for their replies.*

The generally acknowledged increased susceptibility to pyogenic infections of diabetics and the apparent increased incidence of *S. aureus* carrier status of diabetics are prominent among the many factors urging caution with respect to reducing the infection control practices standardly recommended for insulin injections in diabetic patients. The current incidence of infections traceable to insulin injections is extremely low, and it is tempting to attribute this, at least in part, to these recommended infection control practices. However, the basis for these practices is largely theoretical, and to my knowledge, the need for such procedures has never been satisfactorily documented.

On the other side of the coin, there is accumulating evidence from a variety of sources suggesting that some of these procedures may be relaxed (at least in some settings) without significantly increasing the risk of infection. It is commonly recognized that currently many diabetic patients do not follow the prescribed protocols for insulin injections — either occasionally or even routinely — including the

re-use of disposable or unsterilized reusable syringes and needles. Toal reported that 66% (101/153) of diabetic patients in a diabetic outpatient clinic did not routinely follow their recommended protocols for needle and syringe care and disposal.<sup>1</sup> Increased infection rates have not been attributed to such breaks in protocols. The above two studies referred to by Dr. Creamer<sup>2,3</sup> demonstrated that in the small number of patients studied, but involving a total of over 3,000 injections of insulin, no infections traceable to the injections occurred. Although these studies were uncontrolled, the infection rate of zero in the study group may make the absence of a control group less significant.

Because, in the studies to date, the numbers of patients have been small and have not included a control group, and because the current incidence of injection-related infections is so low, the question of the relative infection risk of the modified protocol compared to the standard protocol remains unanswered. Economic factors (cost savings) are usually foremost among the reasons given for re-use of disposable needles and syringes. Although the risk appears to be low, no firm figures are available on the cost savings/risk ratio. Thus, we are dealing with a procedure that could result in considerable cost savings, but the safety of which, though strongly suggested, is not proven. I do not know the legal ramifications of recommending