Communications to the Editor

Medical Personnel's Knowledge of the Ability to Use Inhaling Devices

To the Editor:

Dr. Hanania and her colleagues correctly emphasize that many patients are not able to use inhalation devices and report the expertise of medical personnel. They assessed 30 respiratory therapists, 30 registered nurses, and 30 house medical physicians in respect of their knowledge of and ability to use a metered-dose inhaler (MDI), an MDI and Aerochamber, and a Turbuhaler. The participants ability to use these devices was assessed without them being allowed to refer to package inserts or other printed instructions. It is, therefore, not surprising that the Turbuhaler, which the authors admit is not currently available for drug delivery in the United States, scored lower than the MDI and the Aerochamber.

In the Abstract the authors state, "... newer inhaling devices designed to obviate problems of technique are at present less likely to be used well by medical personnel soon after their introduction." A similar statement could be made about old devices if the medical personnel had not had any previous experience with them and were not allowed to read instructions, etc. Forgive me for not being able to appreciate the basic educational or academic message of this paper.

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REFERENCE


To the Editor:

Dr. Crompton expresses two concerns about our study. First, he is troubled that house staff and others being tested were not offered the opportunity to review a package insert before demonstrating their ability to use an inhalation device. Second, he is troubled that the Turbuhaler is not currently available in the United States.

The second concern is the most easily addressed. If Dr. Crompton will turn once again to our published article (Chest 1994; 105:111-16), he will find that the study was done in Toronto, Canada, not in the United States. The Turbuhaler has been available in Canada for several years and is widely prescribed. Thus, the medical staff we surveyed would almost certainly have encountered patients currently using the Turbuhaler device. Moreover, as noted in our article, the Turbuhaler is on the formulary of our hospital and is potentially prescribed or dispensed by the medical personnel whose knowledge we tested.

The concern that medical personnel were not invited to read the package insert immediately before testing strikes us as absurd. In clinical practice, a patient arriving in the emergency room or ambulatory clinic for assessment of asthma is unlikely to be carrying a package insert as well as his or her inhalers. Thus, the caregiver is charged with assessing inhaler technique without immediate reference to resource materials. We believe that our survey was as close to a realistic assessment of knowledge needed as could be conducted.

It is regrettable that patient care is often suboptimal for lack of simple instruction in inhaler use. We believe that much of the blame lies with academic medicine, which regards such a prosaic skill as beneath its dignity.

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Aging Effects on Cough Reflex

To the Editor:

Aspiration pneumonia is a common and serious complication, especially among elderly patients. Cough reflex is an important respiratory defense mechanism and the marked depression of this reflex has been shown in patients suffering from aspiration pneumonia. No study in the last 30 years has shown that the progressive loss of protective reflexes in the airway with age is one of the reasons for aspiration pneumonia which is often seen in older people. Therefore, we have examined the cough reflex to citric acid in relation to age.

A total of 110 subjects (60 men, 50 women) were tested. All were healthy volunteers. Patients with cardiovascular, respiratory, or nervous system diseases were screened out. Their ages ranged from 20 to 78 years. The subjects were divided into six groups from the third to eighth aged decades. Each group consisted of 10 men and 10 women except for 10 men only in the eighth decade; collaboration from women in the eighth decade was not obtained.

To eliminate any diurnal variation in cough response, the challenges were done at the same time of day. Subjects tidally breathed a nebulized saline solution (control) and citric acid delivered by an ultrasonic nebulizer. Citric acid was dissolved in saline solution providing incremental concentrations from 0.03 to 36%: Cough was recorded on a pneumotachograph (Fleisch) mounted at the expiratory ports of the valve. The cough thresh-