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**Table 1. Results of 200 Pregnancy Tests Performed by Experienced and Inexperienced Personnel.\***

RESULTS	TESTS BY EXPERIENCED TECHNOLOGIST		TESTS BY NONTECHNICAL PERSONNEL		RETESTING BY EXPERIENCED TECHNOLOGIST†	
	ICON II	SURECELL	e-p-t plus	ADVANCE	e-p-t plus	ADVANCE
Positive	155	155	143	138	155	153
Negative	45	45	57	62	45	43
Indeterminate						4

\*A total of 200 urine samples were analyzed.

†When discrepant results were obtained, the test was repeated by the experienced technologist.

and their families. As better accuracy is available in a good professional laboratory, the question then arises whether home pregnancy-test kits should be on the market.

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#### COOLING OF METERED-DOSE INHALERS DECREASES PRESSURE OUTPUT FROM CANISTERS

*To the Editor:* Cold air has long been known to exacerbate exercise-induced asthma, and cold weather has been related temporally to an increased frequency of asthmatic complaints.<sup>1-3</sup> Aerosolized  $\beta_2$ -adrenergic agonists are recommended as first-line therapy for both acute and chronic bronchospasm,<sup>4</sup> and these products are frequently delivered by metered-dose inhalers. Since metered-dose inhalers are commonly used in cold environments during the winter months, we investigated the effect of cooling on pressure output from five brands of albuterol, metaproterenol, and terbutaline inhalers (Alupent, Brethaire, Metaprel, Proventil, and Ventolin). Together these brands represent more than 90 percent of the  $\beta_2$ -adrenergic metered-dose inhalers prescribed in the United States.

Pressure generated by activation of the metered-dose inhalers was measured with an inhaler adapter, a pressure transducer, and a strip-chart recorder. Canisters of each brand were cooled for five minutes at 32°F (0°C), and the effect on peak pressure output was measured. Cumulative data from all brands tested demonstrated a mean ( $\pm$ SE) fall in peak pressure of  $28 \pm 2$  percent after cooling ( $P < 0.001$ ). Cooling affected each of the brands, with decrements in pressure output ranging from 20 to 38 percent. Rewarming of the cooled canisters at room temperature resulted in rapid recovery of peak pressure output.

We conclude that cooling of the canister affects the peak pressure output of five of the most commonly prescribed brands of  $\beta_2$ -adrenergic metered-dose inhalers. The effect of such a drop in pressure output on particle size and drug delivery is not yet known, but it is under investigation. It may, however, be important for patients to avoid canister cooling or to rewarm cooled canisters when using metered-dose inhalers in a cold environment, especially if they note decreased efficacy of the product in the cold.

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#### MAKING LABORATORY REPORTS EASIER TO READ

*To the Editor:* In Greek legend, Procrustes was the villainous innkeeper who offered only one size of bed; with rack or sword, he fitted travelers to the available accommodations.

Clinicians must absorb oceans of data that flood out of laboratories. To work effectively, care givers need clear, well-organized, legible reports, arranged the way clinicians think. Unfortunately, programmers have not consulted clinicians when designing laboratory reports. There are many problems: complete blood counts are reported in a sequence driven by the automated counter — “WBC, RBC, HGB, HCT, PLTS, POLYS, LYMPHS. . . .” However, when clinicians discuss cases, we say “HCT, WBC, diff, platelets. . . .” Other examples: clinicians consider chemistry values according to organ system, not alphabetically; abnormal values are lost in a sea of monotonous typeface, and outpatient charts bulge with uncoordinated slips of paper.

Are laboratory reports easy to read? Are reports arranged for the convenience of computer programmers or that of care givers? Is that why clinicians feel like Procrustes' customers, forced to use reports that don't match their thought processes?

Better lab-report programs would be easy to write; no technological breakthrough is needed. Many computer vendors do not believe that there is a problem. Clinicians, as well as clinical pathologists, must state clearly what works on the wards and teach programmers how we sift through data. We hope that they will listen, and solicit ideas from those who make rounds.

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#### MALPRACTICE INSURANCE: CAUGHT BY THE TAIL

*To the Editor:* Few physicians realize how severely the recent decrease in the availability of medical malpractice liability insurance of the occurrence type has restricted our freedom to move from state to state. Occurrence policies provide future coverage for events that occurred during the period of insurance. In contrast, physicians who are covered by claims-made policies are discovering that in order to terminate their policy and remain protected with respect to events that occurred previously, they must purchase extended or tail coverage, which may be so expensive that changing location or insurance carrier is unfeasible.\*

On completing my orthopedic training in Boston, I moved to Connecticut with my wife, a physician, who recently began fellowship training in this state. I discovered that occurrence policies are no longer generally available in Connecticut. If I were to work here and then leave after my wife completed her fellowship, I would be required to purchase tail coverage for a claims-made policy in order to remain protected for past events. The cost of tail coverage for a third-year practitioner in orthopedic surgery who has a claims-made policy with the major malpractice insurance carrier in Connecticut is \$141,000 (1988 rates, \$5 million per claim/\$5 million aggregate policy).

Every orthopedic group with which I interviewed offered “full malpractice insurance” coverage as a benefit of employment. However, none of these offers included full tail coverage.

Ironically, at a time when orthopedists are leaving Massachusetts in droves, I may return because it is one of the few states where occurrence policies are still available. Physicians in Massachusetts should fight vigorously to maintain the availability of such policies, in order to prevent themselves from being trapped in the state because of the potential burden of tail coverage.

Furthermore, young physicians should be wary of any offer of employment that “guarantees” malpractice insurance coverage. If

\*Owens A. Can you ease the burden of malpractice tail coverage? *Med Econ* 1988; 65(September 5):81-92.