L/min or who complained of drying nares. All other hospital patients, on low-flow oxygen, did not receive prefilled disposable humidifier bottles. In the past five years, since our trial, we have not used these devices at all, except as previously stated. In this time, our patients have not experienced drying of the nares or thickening of secretions as a result of not using traditional humidification devices with low-flow oxygen. This approach, as compared with the one suggested in Henderson's article, would create greater cost savings as well as reduce risk of infection in hospital patients.

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The authors reply.

While we applaud the initiative in eliminating the use of routine humidification for oxygen therapy whenever possible, the operative phrase in the statement from the American College of Chest Physicians is "when environmental humidity is adequate."[1]

We agree that significant cost savings could be achieved by the elimination of oxygen humidification; however, this is not feasible under all conditions.[2,3] In Calgary, the average relative humidity ranges from 40% to 45% in summer and 55% to 60% in winter. In addition, cold temperatures in the winter that average -10°C in January and can drop to -35°C dictate extensive use of central heating, which produces very low humidity indoors. Environmental conditions combined with means of oxygen storage (147°C under high pressure) increase the need for humidification. In our acute care tertiary hospital, where the relative humidity is low, humidifiers are no longer used in situations where low-flow oxygen (<4 L/min) is administered for short periods of time (eg, <2 hours in the recovery room). Before making the commitment to eliminate oxygen humidification, it is important to consider both the local environmental conditions and the method of oxygen storage as well as the flow rate and duration of administration.

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Reducing Laundry Linen Sharps Contamination: Employee Safety Management

To the Editor:

The Perry Point (Maryland) Department of Veterans Affairs Medical Center is a 600-bed facility that has a regional consolidated laundry providing service to an additional six VA Medical Centers. Of the seven, four are tertiary care university-affiliated VA Medical Centers. Unfortunately, there has been persistent recovery of sharp and nonsharp foreign objects in the linen. There have been documented injuries (including needlesticks) reported to employee health, requiring bloodborne pathogen exposure evaluations.

The consolidated laundry staff has been tracking sharps recovery rates' among the seven member hospitals since 1988. This program initiative is most applicable to the model of continuous quality improvement (CQI) since the traditional quality assurance concept of "acceptable threshold" does not pertain to a situation where employees handling linen are being exposed to any dangerous occupational hazards such as sharp (or nonsharp) foreign objects. In this case, a zero-defect objective is warranted. However, administrative corrective actions had not been able to demonstrate meaningful improvements until a system for rapid feedback of incidents was established with the member facility (Center F) with the highest historical rates of linen sharps contamination.

INTERVENTION

On July 1, 1992, the Perry Point VAMC laundry used the national VA Medical Center computer network to initiate an electronic mail interface with

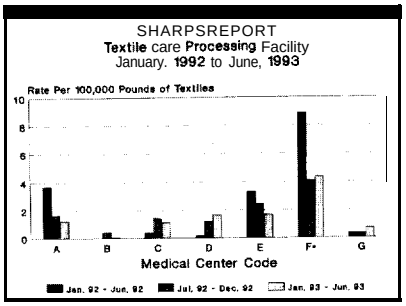

FIGURE. Intervention began July, 1992 at Medical Center F.

the Infection Control Program at Center F, so that recovered sharps could be reported immediately to the source facility. This reporting served as an adjunct to a set of biannual summary reports on sharp and nonsharp laundry contamination. Center F initiated an aggressive program of staff education via the Infection Control Committee, primarily directed at physicians, nurses, and housekeeping staff. Feedback on sharps contamination has been provided to nursing and housekeeping staff at the unit level on a monthly basis, and similar material is included in employee orientation programs. In addition, new medical students and housestaff have been oriented on a monthly and quarterly/biannual basis, respectively, using supplemental "attention sheets." Furthermore, this information was formally conveyed to key executive committees of the Medical Center, so as to enable an appropriate flow of information between clinical and administrative staff.

RESULTS

As shown in the Figure, during the period prior to intervention Center F laundry contained 68 sharps (8.91 100,000 lbs. of sorted linen); in the two six-month periods following intervention, the Center's laundry contained 34 and 33 sharps (4.1 and 4.4 per 100,000 lbs), respectively ($P<0.01$, Poisson).

The Perry Point VA director formally has notified all consolidated laundry Medical Centers of this presumptive success, since it can serve as a template for similar liaisons with the

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other six facilities. In fact, Center E had already reduced its own linen sharps contamination (by using techniques such as magnetic surgical drapes) during the past few years as a result of the data collection initiated in 1988,[1] and this valuable corrective action, in turn, recently has been shared with other members of the consolidated laundry program. Sharps data tracking will continue in the same format in the future, thus ensuring proper historical trending of recovered foreign objects.

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REFERENCE

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FDA Issues Regulations for Screening Tissues for Transplantation

by Gina Pugliese, RN, MS
Medical News Editor

The Food and Drug Administration (FDA) has stepped in for the first time to regulate the $100 million tissue-transplantation field, especially in the area of musculoskeletal tissue. The FDA issued interim rules in the *Federal Register* on December 14, 1993, that are effective upon publication and require all donors of tissue for human use to be evaluated with laboratory tests and risk factor screening related to infectious disease before the tissue is made available. The agency also will have the authority to conduct inspections of facilities that process, store or distribute such tissue. FDA has said that the rule is aimed at minimizing the risk of disease transmission from certain human tissues that are without direct or active federal oversight. Specifically, these materials include bone, ligaments, tendons, fascia, cartilage, corneas, and skin.

Following the interim rule, the agency is proposing a second regulation of the tissue banking community that would require all entities engaged in tissue banking to register with the FDA and be subjected to certain requirements for screening tissue and recordkeeping.

In issuing these regulations, the FDA recognizes the voluntary concerted effort within the private sector to develop voluntary quality assurance programs, such as the voluntary standards developed by the American Association of Tissue Banks (AATB) to improve testing and screening practices. According to the AATB, most tissues in the United States are procured and processed under these standards. Nevertheless, in issuing these regulations, the agency believes that mandated compliance with generally accepted practices is needed for tissue banking, particularly musculoskeletal tissue banking.

The rules do not affect physicians and hospitals that store tissue intended only for use in their facility. The FDA has cautioned the healthcare community not to use any tissues for transplantation unless adequate donor testing and adequate risk factor screening have been documented. In addition, no one should import tissues from abroad without first contacting the FDA's Office of Health Affairs at (301) 443-4480.

Written comments on the interim rule are due on March 14, 1994, and should be submitted to the Dockets Management Branch (HFA-305) Food and Drug Administration, Room l-23, 12420 Parklawn Dr., Rockville, MD 20857.

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