Letters to the Editor

Institutional Liability for Needlestick Injury

To the Editor:

A Connecticut jury recently found Yale University School of Medicine negligent in its training and supervision of a first-year resident who was infected with human immunodeficiency virus after sustaining an injury from a needle used on an acquired immunodeficiency syndrome patient in 1988. The jury awarded the infected physician $12.2 million (*Rocky Mountain News.* December 9, 1997:A27; *Doe v Yale University.* Superior Court of New Haven, CT. Docket no. CV 90-0305365 S). This verdict illustrates the catastrophic consequences a needlestick injury can have on both the injured party and the affiliated training institution.

This is a landmark case not only because of the verdict but also because of the legal means by which the verdict was obtained. Generally, workers' compensation is the exclusive remedy available to employees who contract a disabling occupational disease and who are covered under workers' compensation programs.[1-3] In return for guaranteed benefits for qualifying diseases, regardless of fault or an omission on the employee's part, state laws preclude employees from bringing civil suit against their employers.[1,2] In this case, the physician was able to circumvent workers' compensation exclusivity provisions by bringing suit against Yale University School of Medicine, rather than the hospital where she was a contractual employee covered under workers' compensation.

Because the residency program was advertised under the university's name and correspondence related to the residency program was sent under Yale University School of Medicine's name, the plaintiff successfully argued that the university also had a duty to assure that she was trained and supervised adequately and that it was negligent in meeting that obligation.

In the past, university-affiliated medical schools considered that they assume limited liability for employees who contracted bloodborne pathogens as a result of an occupational exposure.[1] Following this verdict, the potential for liability is increased significantly if residents in training can circumvent the exclusivity provisions of workers' compensation laws, which apply to the hospital where they are employed, by bringing suit against the affiliated university.

This verdict underscores (1) the importance of adequate training and supervision in the appropriate use of needle devices that have the potential for transmitting bloodborne pathogens; (2) the need for institutions to reduce the risk of injury by using safer needle devices that have become available recently; and (3) the immediate need for universities to seek legal counsel in carefully structuring promotion of their residency programs.

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Statewide Program for Infection Control and Epidemiology Spreads Computer Virus

To the Editor:

Your response may be, "Computer virus! Why should readers of *Infection Control and Hospital Epidemiology* be concerned about that type of virus?" However, as infection control professionals increasingly depend on computers for word processing, surveillance data analysis, maintaining policies, and other job tasks, they must ensure that important information on computers is not lost because of computer viruses.

The North Carolina Statewide Program for Infection Control and Epidemiology (SPICE) offers education, consultation, and assistance in the prevention of transmission of infections. We take pride in having resources and knowledge available to assist people all across the state. However, we admit, with great regret, that our diligence in preventing infections has not been practiced as far as our office computer is concerned.

When our office computer began exhibiting inappropriate responses, we undertook an investigation of the cause of the computer's malfunctioning. We spent many hours checking the software program, evaluating the computer users' work habits, and finally confirmed the diagnosis that our computer was infected with a virus. Using virus detection software, we identified the agent as a Word macro virus and applied appropriate treatment, disinfection of the computer. But we were faced with the questions of how our computer became infected, and whether we had been responsible for transmitting this virus to other computers. A careful investigation revealed that the source of the infection was a disk containing a manuscript that was sent to us by the largest infection control professional organization in the country, the Association for Professionals in Infection Control National. Once our computer was infected, disks we shared with other users then infected their computers. We discovered that we were guilty of transmitting the virus statewide from Orange County to Brunswick County. We notified these contacts and recommended appropriate postexposure strategies.

By February 1996, the US Department of Energy Computer Incident Advisory Capability reported that Word macro viruses no longer

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were an isolated threat but were a substantial hazard to the information on a computer. They indicated in their risk assessment that vulnerability of systems to this type of virus is high because most computer users are not in the habit of scanning documents. Documents are much more mobile than executable files, passing from machine to machine. Word macro viruses replicate themselves by infecting Microsoft Word's "normal template," so that when a new document is created, the new document has the virus. The macro viruses were not detected by earlier anti-virus software, but most anti-virus scanners now include macro virus detection.

The SPICE surveyed infection control professionals in 169 hospitals in North Carolina to determine the extent of computer viruses detected by them and the level of use of virus protection programs. There were 111 responders to the survey, 9 of whom were not computer users.

Of the 102 computer users, 80 had a personal computer, 20 had access to a departmental computer, and 1 had access only to a secretary's computer. Computers were used primarily for word processing (93%), surveillance data (76%), and policies and procedures (86%). Twenty-six had experienced a computer virus, and 8 had files lost or damaged. Seventy-one acknowledged having a virus protection program installed (eg, F-Prot, Norton Anti-virus, McAfee, Microsoft Anti-virus, VirusScan). Only 23% scanned every floppy before using it; 45% had updated their virus protection program; 24% of the users knew that their programs had been updated within the last 6 months. Of those who had experienced a computer virus, 77% knew the source. The source for 90% was a floppy disk from either their facility or outside the facility.

After completing the questionnaire, 46 (45%) planned to implement a change or changes (23 will scan disks more frequently, and 23 [79%] of the 29 that did not have a virus protection program installed said they would install one). Although the purpose of the survey was to gather information, the results indicate that it served as a reminder of danger and will produce changes in practice.

Are you at risk? Yes, if you're a computer user, you are at risk and should practice appropriate prevention and control: (1) install virus detection software, and use it regularly (eg, scan when computer reboots each morning); (2) update the virus protection program regularly; (3) never use a disk on file from someone else unless you scan it first for viruses; (4) back up your computer on a regular basis, so that when it crashes—and sooner or later, for one reason or another, it *will* crash—you will have copies of your documents.

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False-Positive Tuberculin–Skin-Test Results Caused by Dosing Error

To the Editor:

A major screening tool for contact investigation in a tuberculosis (TB) control program is the Mantoux tuberculin skin test.[1] However, false-positive tuberculin test results causing pseudoepidemics of tuberculous infection are being reported. We read with interest the report of a pseudo-outbreak of tuberculin test conversions caused by dosing error during routine annual tuberculin testing among residents of an adult facility.[2] A similar problem occurred recently during routine annual employee testing.[3] The approximate cost for these pseudo-outbreaks was estimated at several thousand dollars. We would like to report an additional outbreak of false-positive conversions due to dosing error occurring during contact investigation of a presumptive case of TB in our facility. Infection control policy of our 750-bed Veterans' Affairs hospital requires health employees to undergo a yearly tuberculin test unless they have a history of a previous positive test result. A dose of five TU of purified protein derivative (PPD) is applied intradermally on the volar aspect of the forearm with subsequent reading of results at 48 to 72 hours by trained healthcare workers. Tuberculin testing also is required for all individuals with possible workplace TB exposure. In June 1993, one newly admitted patient was found to have chest radiograph findings suggestive of TB. He was placed on isolation precautions in an environmentally sound room. While awaiting sputum results, contact investigation was initiated with tuberculin testing of all exposed employees. Of 11 subjects, all with prior negative tests, three (27%) had positive skin tests greater than 10 mm induration. However, after 4 weeks of incubation, *Mycobacterium szulgai* was isolated from the patient's sputum. Given the low prevalence of TB in our institution, the findings of an increased incidence of tuberculin converters was unexpected. None of the recent tuberculin converts had known exposure to TB. The unexpected high incidence of tuberculin converters prompted an investigation including a review of the testing procedure. It was found that the testing had been performed with a 250 TU solution of PPD (Tubersol, Connaught Laboratories, Swiftwater, PA) instead of the standard dose of 5 TU. It was felt that the dosing error was the reason for the unexpected increase in tuberculin conversions among our employees. No chest radiographs were done, and no isoniazid prophylaxis was initiated. During a 6- to 10-month period, all three subjects with positive PPD with 250 TU were retested with 5 TU and found to have a negative test with induration less than 10 mm. After 1 year, repeated testing with 5 TU remained negative.

Skin testing with PPD has been standardized at 5 TU, but currently tuberculin is also available in concentrations of both 1 TU and 250 TU per 0.1 mL of solution. Given the labeling similarities between 5-TU and 250-TU vials, a dosing error cannot always be excluded as a possibility. In our hospital, the testing error was discovered rapidly due to the prompt action of the infection control nurses in a setting with low TB incidence and low prevalence of positive tests among employees. However, dosing errors can be overlooked easily in a population with high prevalence of TB, especially because persons with positive tuberculin results usually are not retested. As in the two previous reports,[2,3] such false-positive tests may lead to unnecessary chest radiographs and inappropriate initiation of chemoprophylaxis with a potential for adverse reactions and costly diversion of healthcare resources for follow-up of these patients. We agree with the authors and question the necessity of having the 250 TU/0.1 mL

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