

NECOEM Reporter

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Special points of interest:

- Fall Dinner Meeting, Thursday October 4, 2001 at the Burlington Marriott, topic TBA
- NECOEM/MaAOHN Annual Conference 2001 at the Sheraton Boston, December 6 and 7. Features include: hot topics in OH, Death from Dimethylmercury, Workplace Stress and Violence, Infomatics in OH. For more information, call NECOEM at 978/373-5597 or email to NECOEM@aol.com
- ACOEM SOTAC 2001, October 26-November 1, Seattle. "What's New in Occupational Medicine—Recent Advances in Research and Practice." Note: the ACOEM HOD has voted to eliminate the SOTAC meetings within the next few years.
- MMS Earth Day 2001 audio tapes are available. Call MMS Dept of Education, 781-434-7445.

HEALTH CARE WITHOUT HARM

Health Care Without Harm is a broad-based coalition of 300 non-profit member organizations in the United States. The coalition includes hospitals, healthcare professionals, public health groups, religious organizations, environmental health professionals and health affected groups that are concerned with the environmental impact of the healthcare sector. The coalition is dedicated to transforming the health care industry so it is no longer a source of environmental harm by eliminating pollution in health care practices without compromising safety or care.

Some of the par-

ticipating organizations include: the American Nurses Association, Massachusetts Nurses Association, Oncology Nursing Society, Intravenous Nursing Society, California Nurses Association, Physicians for Social Responsibility, Mount Sinai School of Medicine, Massachusetts Breast Cancer Coalition, Learning Disabilities Association, Endometriosis Association, and over 80 hospitals.

Over the last four years, HCWH has worked at the national, regional, & local levels to educate and assist the healthcare industry to

address problems of mercury, PVC use and emissions. At the national level, HCWH is a leading participant in the process set in motion by the agreement between U.S. EPA



Bill Ravanesi, MA, MPH
Boston Campaign Director

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TUBERCULOSIS IS BACK— ARE YOU READY? Steven D. Weatherhead

I. Introduction

What do the following Massachusetts communities have in common -- Boston, Brockton, Braintree, Quincy, Lowell and Stoughton? Each has experienced an outbreak of tuberculosis (TB) in the recent past. Although TB had been long dismissed as an ancient scourge, the

last years have seen a dramatic increase in this airborne, highly contagious disease. Over 26,000 Americans currently are infected with TB, and there has been an alarming increase in cases of drug-resistant strains. The resurgence of TB has been fueled by HIV/AIDS, home-

lessness, higher nursing home populations, drug abuse and immigration into the U.S. from areas where TB is rampant.

Because they are on the front lines of TB treatment, health care workers are particularly susceptible to the disease. A 1992 survey revealed

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that 13% of hospitals reported nosocomial TB transmission to health care workers, and twelve health care workers died of TB in 1993 alone. Because of the unique dangers, 18 states (including Massachusetts) require medical facilities to screen employees.

But what happens when this screening reveals a positive TB test? There are a myriad of state and federal laws of which an employer must be aware in order to avoid liability to both infected and non-infected employees as well as patients. This article provides NECOEM members with a roadmap for navigating the maze of laws and regulations governing workplace TB issues.

II. Reporting To State and Local Health Authorities

All states require health-care professionals to report cases of TB to local or state health departments. For example, Massachusetts requires health care providers who have knowledge of either a **confirmed** or **suspected** case of TB (regardless of whether it is an employee or patient) to notify the Division of Tuberculosis Control within 24 hours and provide the infected person's name, date of birth, age, gender and address. In addition, employers must record work-related TB cases on their annual injury logs as required by the Occupational Safety and Health Administration ("OSHA").

III. Protecting Patients From Infected Employees

After reporting the case of TB to the appropriate health agency, an employer should determine whether there exists a danger of transmission to patients. In the case of **Traaje v. St. Olaf Hospital**, a hospital employee who recently had been diagnosed with TB but who had been suffering from a severe cold and cough for over six weeks attended to

a newborn child. The child later died of TB, causing its parents to sue the hospital for negligence. The Supreme Court of Minnesota held that the hospital knew or should have known that the nurse had a cough for six weeks, particularly when other nurses had known of her condition. Therefore, the hospital should not have had the nurse on duty, especially with newborns. The Court further stated that it was the hospital's duty to exercise due care to see that its nurses were free from communicable diseases.

In short, a health care provider could be found liable for negligence if: 1) it knew (or reasonably should have known) that an employee was infected with TB and yet allowed the employee to treat or come in contact with patients; and 2) a plaintiff can demonstrate that it is more likely than not that s/he contracted TB from exposure to the ill employee.

IV. Protecting Co-Workers From Infected Employees

OSHA requires employers to provide all employees with a place of employment that is free from recognized hazards that can cause death or serious physical harm. In order to avoid being cited for a safety violation by OSHA, health care providers having employees who potentially have been exposed to TB must comply with OSHA's Directive on Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis. Among other things, this Directive requires employers to provide skin tests and other medical surveillance to all potentially exposed employees at a time and location which is convenient to the workers (and at no-cost to them). Because employers are required to report the hospitalization of five or more employees to OSHA within 48 hours of such hospitalization, employers should provide such tests on-site rather than sending the potentially exposed employees to a

medical facility.

V. Treating and Handling the Infected Employee

If, in order to protect both patients and other employees the employer places the infected employee on administrative leave, does the employer have any liability to the infected employee? The answer is yes.

A. Workers' Compensation

If health care employees contract TB while at work (from either a co-worker or a patient), then they may be entitled to receive workers' compensation benefits. Because of the exclusivity provision found in most state workers' compensation statutes, such benefits generally are the employees' only recourse, as they are not permitted to sue their employers independently for any injuries sustained at work.

B. The Family and Medical Leave Act (FMLA)

The federal FMLA requires employers with 50 or more employees to provide eligible employees with up to 12 weeks of unpaid leave in order to (among other things) care for a "serious health condition." A "serious health condition" generally is defined as an illness, injury, impairment or physical or mental condition that requires at least three days of inpatient care or requires continuing treatment by a health care provider. Although no court has yet held that TB is a "serious health condition" for purposes of the FMLA, if the disease's impact on an employee meets the above definition, then the employer could be required to provide FMLA leave, which requires following extensive regulations regarding, among other things, no-

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and the American Hospital Association to voluntarily eliminate the use of mercury in AHA member hospitals by year 2005. For New England, former EPA Region 1 Administrator, John DeVillars set a more ambitious goal of year 2003. The HCWH coalition has developed a mercury pledge program (Making Medicine Mercury Free) in which more than 600 hospitals and medical clinics nationwide have agreed to eliminate their use of mercury medical devices including mercury thermometers.

At the regional level, HCWH has worked to support the New England Governors and Eastern Canadian Premiers Mercury Action Plan, which is an ambitious program to virtually eliminate the emissions of mercury in the

region. As well, we have worked with hospital systems both large and small on resource conservation initiatives.

At the local level, we have worked on several model mercury reduction programs, including mercury thermometer trade-in programs, mercury battery collection recycling programs, and other pollution prevention work.

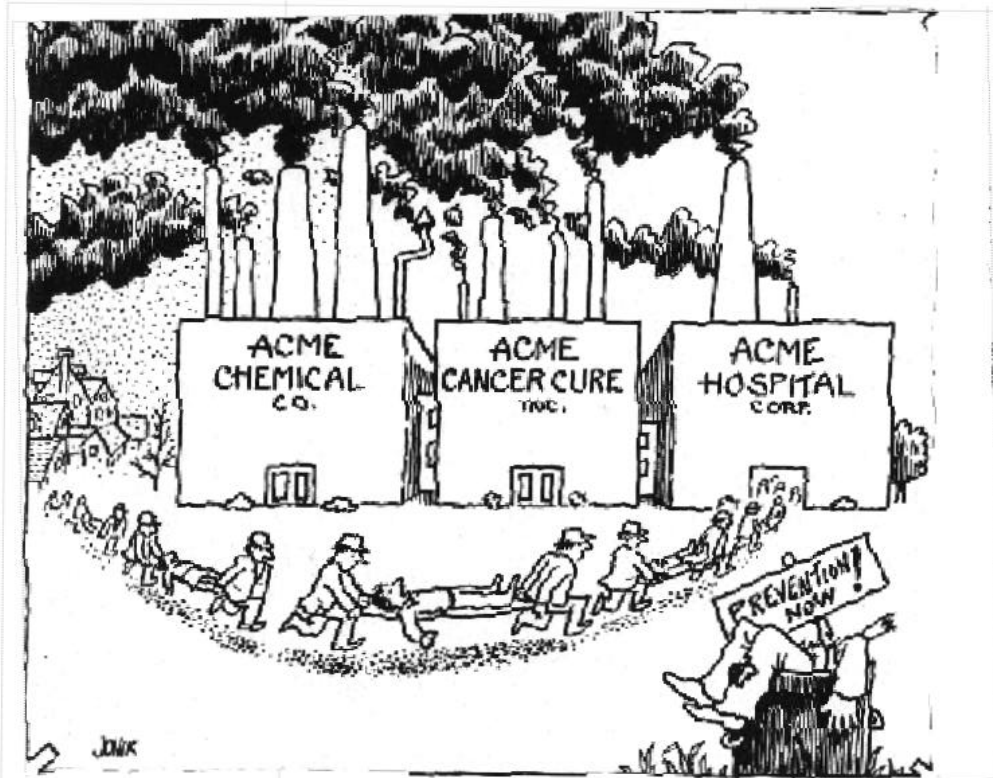
"Why It Is Important to Become A Green Hospital."

We live in an era in which environmental factors are known to be growing

contributors to a wide variety of health problems, including cancer. For example, we are pumping enormous amounts of 80,000 industrial chemicals into the environment, hundreds of which we carry trace levels of in our bodies, and for most of which we have no safety data on at all. Some of these chemicals are carcinogens and, even more troubling, some are endocrine disrupt-

range of deleterious health outcomes, so a single-minded fixation on cancer can actually distract us from other serious threats of these chemicals.

Since the mid 1950s, the amount of waste generated per hospital patient has doubled. It is estimated that the health care industry generates 2 million tons of regulated medical waste per year. Changes in technology and increased use of plastics and disposable products have substantially increased both the waste generated and toxicity. US EPA currently cites medical waste incinerators as the second largest source of dioxin and the fourth largest



ers, implicated in a wide range of diseases. Fertility, fetal growth and development, and immune system response, are implicated.

Environmental health will inevitably be one of the great human rights issues of this new millennium. We don't really know at this point to what extent these chemical exposures are involved in the incidence of various cancers. Traditional estimates are considered low by many authorities. We do know that endocrine disrupting chemicals are being implicated in a very wide

source of mercury pollution of our environment and food supply. It's rather ironic, not long ago, we thought the more we put into red bags for incineration, the safer the patients and community would be. We thought that incineration made the problem disappear. We were wrong. We didn't know that every red bag we sent to be burned came back to your patients and to us in the food we eat. We didn't know about the dioxins and mercury coming out of the incinerator smoke

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HCWH *(Continued from page 3)*

stacks and into our dairy products, chicken, meat and fish. We didn't know that our red bags would end up contaminating the breast milk of the women you serve.

The toxicity of medical waste includes: heavy metals e.g., cadmium, and mercury from medical devices like thermometers and blood pressure gauges, from esophageal devices, mercuric oxide batteries, stains and reagents, cleaning products and fluorescent tubes. There are solvents, lab chemicals, isotopes, waste anesthetic gases, and PVC medical products which when incinerated produces dioxin. Dioxin is the common name for a class of 75 chemicals. Dioxin has no commercial use. It is a toxic waste product formed when waste containing chlorine is burned or when products containing chlorine are manufactured. Dioxin (from medical waste incinerators) interferes by behaving like a hormone and altering the genetic activity in cells. Dioxin is also a known human carcinogen and has been linked to birth defects, decreased fertility, immune system suppression, and endometriosis.

PVC (polyvinyl chloride) plastic is a major source of the chlorine in medical and municipal solid waste incinerators. PVC is the most used plastic in medical products. It accounts for 27% of all plastic used in durable and disposable medical products in the US in 1996.

Approximately, 445 million pounds of PVC were consumed in the manufacture of intravenous (IV) bags, tubing, blood bags, examination gloves, medical trays, catheters, and testing and diagnostic equipment in 1996.

The relationship between

chlorine inputs into an incinerator and dioxin formation, however, depends upon combustion conditions. As well, chlorine, carbon, and catalysts must be present in an incinerator in order for dioxins to form. HCWH's position is that it is inadvisable to engage in new incinerator construction with present knowledge and conditions. For existing units, we advocate for stricter, more protective emissions limits than were in the final US EPA rule. HCWH wants to eliminate the non-essential incineration of medical waste and promote safe materials use and treatment practices. According to the Centers for Disease Control, no more than 2% of a typical hospital's waste stream must be incinerated to protect public health and safety. That 2% is primarily pathological & chemo waste. Yet many hospitals routinely burn over 75 % of their waste, not just blood and contaminated materials, but PVC plastic packaging and broken blood pressure devices and used magazines. This unnecessary burning by the health care industry is one of the ways our health is being harmed.

A landmark agreement was reached on Monday, March 5, 2001 between the Maine Hospital Association, Maine DEP, and the Natural Resources Council of Maine (on behalf of Health Care Without Harm). The Maine Hospital Association signed a first in the nation pledge to reduce the use of polyvinyl chloride (PVC) medical devices and supplies that cause air and water pollution when they are burned as waste. Under the terms of the agreement the state's 39 non-profit hospitals pledge to virtually eliminate mercury from the hospitals waste stream and to

continuously reduce the use of plastics that contain PVC. The hospitals will also pressure manufacturers to produce more of the environmentally preferable products.

MERCURY: There are hundreds and hundreds of products that are used in health care that contain either trace amounts of mercury or have mercury added. Mercury is a potent, persistent toxin that especially affects the brain and developing nervous system of children. It is also toxic to kidneys and liver.

Recent scientific research is revealing that these effects occur at much lower levels of exposure than was previously believed. Breakage of mercury blood pressure gauges and thermometers are a big source of mercury spills. The Environmental Protection Agency estimated that for the year 2000, 17 tons of elemental mercury from thermometers will be disposed of as municipal solid waste - this does not include additional mercury from thermometers that finds its way into the medical waste stream. Solid waste incineration --both municipal and medical waste--are the dominant air emission sources of mercury released in Massachusetts according to the Massachusetts Department of Environmental Protection. Nationally 95 tons of mercuric oxide batteries per year will also be discarded as municipal solid waste and 11.6 tons of mercury from fluorescent lamps.

Much of this mercury finds its way into fresh and salt water bodies. For example, since 1980, the Merrimack Valley in

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northern Massachusetts has been home to several incinerators. As incineration capacity increased in the valley, mercury contamination in the fish dramatically increased. The fish in this region are now among the most mercury-contaminated fish in the nation. The latest data of mercury release in Massachusetts from medical waste incinerators was 780 pounds of air emissions per year (1996). And, from municipal solid waste incinerators it topped 6,000 lbs per year.

Mercury contamination of fresh water bodies throughout the United States has led to fish consumption warnings in 41 states, including all the New England states. The levels of mercury in some species of fish, including tuna fish, make it advisable for pregnant women and women of child bearing age to avoid consuming these top predators. It is no wonder that the Massachusetts Water Resources Authority (MWRA) has set the local limit of mercury in effluent water for hospitals and others industries at zero discharge, one part per billion enforcement.

It is no longer true that mercury thermometers are the best thing. New technology has led to the introduction of several other types of thermometers that have been found to be safe, reliable, accurate and provide rapid temperature readings.

Based on the existence of these safer technologies and the dangers of mercury, HCWH has won pledges from major retail and pharmacy chains nationwide to discontinue the sale of mercury fever thermometers. Joining HCWH on this campaign are CVS, Rite-Aid, Brooks, Wal-Mart, Drugstore.com, Albertson, Kinney, Target, K-Mart,

Toys 'R' Us, Safety First, and The First Years, amongst others. As well, Becton-Dickinson (B-D) -- the largest supplier of mercury thermometers--has plans to stop producing glass mercury thermometers next year at its plant in Brazil and will halt purchasing them from a Chinese factory. Their focus for new sales will be with non-mercury digital models.

In the state of New Hampshire, a person shall not sell or supply mercury fever thermometers to consumers and patients, except by prescription. The county of San Francisco; the City of San Francisco; the city of Duluth, Minnesota; the city of Ann Arbor, Michigan; Dane County Wisconsin; Boston and Cambridge, are among many government bodies that have already passed legislation to ban the sale of mercury fever thermometers.

Many healthcare leaders have found that adopting environmentally sound materials management processes actually save them a great deal of money - one example is Beth Israel Hospital in New York, saving hundreds of thousands of dollars with their waste minimization program.

This past November, the Massachusetts Medical Society adopted a resolution on mercury and waste disposal. The American Medical Association (AMA) has adopted a policy urging hospital administrators to eliminate mercury-containing devices from their facilities. Major healthcare groups like Catholic Health East, Catholic Healthcare West & Kaiser Permanente, are making serious commitments to ending mercury pollution and reducing their contributions to dioxin in the environ-

ment, and again, finding it makes financial sense to do so.

Health care facilities can take immediate steps to reduce the environmental harm that results from its purchasing and waste disposal practices. And by doing so it can benefit financially, increase worker safety, avoid liability cost, improve regulatory compliance, and strengthen its relationship with the community. In fact, it is our belief, that health care delivery institutions will be a driving force in the greening of companies that manufacture products for the health care industry.

This article is a call to action for health-care providers with a hospital affiliation. NECOEM members can show leadership in their respective hospitals on this issue. ED.



Bob McLellan checks trigger finger on Billy "the Kid" Degan at the June 7 Dinner Meeting "Medical Evaluation for Respirator Use"

MAINE STATE REPORT

Leslie Walleigh, MD, MPH

In August of 2000, in Bethel, Maine, the Maine Department of Labor conducted a research symposium titled "Occupational Safety and Health, Integrating Research and Practice." The program was partly funded by NIOSH and featured a variety of presenters from both Maine and NIOSH. The objectives of the symposium were:

#1 To help MDOL develop an occupational safety and health research agenda similar to that of the National Occupational Research Agenda (NORA).

#2 To provide an avenue for researchers and practitioners in

Maine to share and disseminate effective research based strategies for promoting occupational safety and health.

#3 To facilitate networking among state, regional and national researchers and practitioners in promoting occupational safety and health.

The symposium was well attended and generated great enthusiasm for developing a Maine Occupational Research Agenda (MORA). In the fall, following a large meeting of interested parties, a MORA steering committee was formed. The committee includes representatives

from insurance, the Workers' Compensation Board, the Bureau of Health, the Department of Environmental Protection, private consultants, and two NECOEM members-Jonathan Torres MD and myself (Leslie Walleigh MD). A representative from the labor community has just been recruited. The Bureau of Labor Standards provides staffing and organizational support.

An initial focus of the committee, as well as for the "data" subcommittee, has been to survey available sources of data on

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TB *(Continued from page 2)*

and benefits continuation. (Many states also have "mini-FMLA" laws containing similar -- and often more stringent -- requirements.)

C. The Americans with Disabilities Act (ADA)

Under the federal ADA, employers with at least 20 employees are prohibited from discriminating against disabled individuals and are required to provide reasonable accommodations to disabled employees so long as the employee will not pose a direct threat to the health and safety of others. A person is an "individual with a disability" if s/he: 1) has a physical or mental impairment that substantially limits a major life activity; 2) has a record of such impairment; or 3) is regarded as having such an impairment. (Note that one can have a serious health condition under the FMLA and not be disabled under the ADA. Conversely, one can be disabled under the ADA yet not qualify for FMLA leave.) Federal regulations expressly pro-

vide that the term "physical or mental impairment" includes TB. Therefore, if an employee's TB substantially impacts a major life activity (such as working or breathing), then s/he is considered "disabled" and the employer may have to comply with the ADA, but only if the employee's condition will not threaten the health and safety of others. In other words, even though employers are not permitted to discriminate against disabled employees, if there is a substantial likelihood that the worker will transmit TB to a patient, then the employer may not be required to keep the employee on the job.

In *Lester v. Trans World Airlines, Inc.* a federal court in Illinois held that because TB is a temporary, curable condition, it does not qualify as a "disability" under the ADA. Nevertheless, until there is more definitive case law on this issue, employers would be prudent to assume that TB-infected employees are protected by the ADA and act accordingly. This may include

providing, as a reasonable accommodation, a leave of absence to allow the employee to obtain treatment. (Many states have their own disability discrimination laws which may be dramatically different from the ADA.)

VI. Conclusion

Because of the overlap and interplay of various local, state and federal laws and regulations, having one employee infected with TB can result in serious legal liability. Employers are advised to seek counsel to assist them in sorting through these seemingly competing laws, not only to avoid legal liability but also to protect the health and safety of its workforce and the public at large.

Mr. Weatherhead is an associate in the Boston office of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. He is authorized by OSHA to conduct general industry outreach training on a variety of workplace safety and health topics. Mr. Weatherhead would like to acknowledge the assistance of Jessica C. Lowney.

Ethics Column :

Kim Pearson, MD, MPH

Thanks to all who responded to our last column concerning the request of a safety officer to circumvent an OSHA 200-recordable injury by avoiding the use of sutures or prescription medications. Based upon the number of responses, it is not unusual for designated employer representatives to make such requests of treating providers. All respondents would consider the medical needs of the patient as their primary duty. If the clinical outcome was unlikely to be affected, most respondents would do what the safety officer requested. By limiting the consequences of recordable injuries, such as increased workers compensation insurance premiums, we satisfy the needs of our employer client. However, we also must consider our public health duty to ensure that adequate resources are dedicated to the prevention of work-related injuries. This can only be accomplished if we have good data to support the need for such resources. The OSHA 200 log is one source of data and as such should reflect a complete and accurate reporting of work-related injuries.

This issue, we will consider a dilemma that continues to occur all too often despite the efforts of the profession of occupational medicine to work with employers in managing an injured worker's return to transitional duty. You are treating an employee of a manufacturing plant for a shoulder injury. The mechanism of injury is completely consistent with the physical examination and the employee is extremely compliant with the treatment plan. Despite this, she is slow to recover. At each visit, she expresses concern that the employer is not adhering to the restrictions that you have written, and is mandating that she perform tasks beyond her

current capability. You have spoken with the company contact, who is in HR and who has been very sympathetic. She has stated that she will reiterate the restrictions with the line supervisor. However, the patient states that no changes are made. You speak with the line supervisor yourself and he tells you on several occasions that he will take care of it. He does not deny that the employee is working beyond her restrictions.

Despite all of your efforts, the employee continues to report that her work has not been modified. You feel that this is impeding her recovery. Although you truly believe that

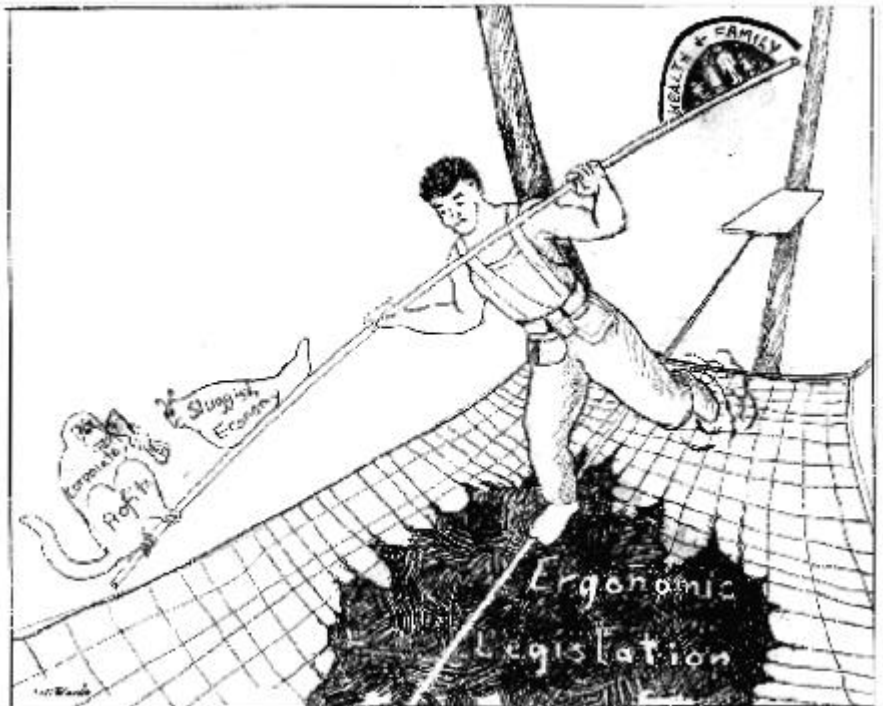
she has a work capacity, you consider writing a "no work" restriction. You question whether your duty to the patient extends to work removal in a situation where the employer cannot or will not accommodate modified work. Although the employee's injury is not serious, and there does not seem to be a risk of further harm by remaining at work, the patient's pain is being prolonged by the employer's actions.

Responses can be sent via email to the NECOEM address or to pearsn@yahoo.com

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employment, exposures, injuries and illnesses. The committee has identified deficiencies in the collection of data regarding occupational injuries and illnesses. Recommendations for improvements have been developed. Once these are approved by the entire MORA group, it is our intent to meet with the appropriate state agencies, as well as with the legislature, to discuss our recommendations and to advocate for appropriate changes.

For more information on the MORA process, as well as minutes of meetings, visit the MORA website <http://janus.state.me.us/labor/bls/mora.htm>.



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NECOEM

"NECOEM is a not-for-profit, regional component society of the American College of Occupational and Environmental Medicine, the pre-eminent organization of occupational and environmental physicians in the United States.

NECOEM has over 200 physician members and is dedicated to preventing and treating occupational injuries and illnesses. NECOEM provides continuing medical education for its physician members in order to enhance the care that they provide to men and women in the workplace. NECOEM is an advocate for workplace safety, occupational health research, raising public awareness of occupational and environmental health issues, guiding public policy, and recognizing outstanding achievement by individuals in occupational and environmental health."

The editorial Board welcomes letters to the editor. Write to NECOEM at the above address. The editor reserves the right to edit letters for publication purposes

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The Massachusetts Needlestick Injury Prevention Law

Philip Adamo, M.D., MPH

Highlights of the Needlestick Injury Prevention Law

(website: <http://www.state.ma.us/legis/laws/seslaw00/sl000252.htm>)

- It currently requires all acute and non- acute care hospitals to record all contaminated sharps injuries, not splashes or other types of exposures. It does not apply to nursing homes and state agencies and municipalities
- The law applies to all "employees" of the hospital, not just employed health care workers. It includes housekeepers and contracted workers.
- Engineering and Workpractice Controls must be reviewed continuously and communicated to hospital staff
- Written exposure control plans shall be developed that include an effective procedure for identifying and selecting existing sharps prevention technology, so-called, of the types specified by the department.
- Information concerning exposure incidents shall be recorded in a sharps injury log to be kept within such acute and non-acute hospitals and reported annually to the Department of Public Health, including but not limited to, the type and brand of device involved in the incident.

An educational process on the recording and reporting of sharps injuries will be organized by the DPH in mid September and it will be expected that hospitals will begin recording October 1, 2001.