

SB

261

FISCAL NOTE

STATE OF ALASKA
2000 LEGISLATIVE SESSION

BILL NO. SB 261

Revision Date/Time (Note if correction): _____ Dept. Affected: Health and Social Services
 Title: Relating to needle stick and sharp injury BRU: State Health Services
protections Component: Nursing
 Sponsor: Elton COMPONENT SERIAL NO. 288
 Requestor: Senate HES See also (SN#): _____

Expenditures/Revenues: (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES	43.5	89.2	91.4	93.7	96.0	98.4
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	43.5	89.2	91.4	93.7	96.0	98.4

CAPITAL EXPENDITURES						
CHANGES IN REVENUES ()						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	30.5	62.4	64.0	65.6	67.2	68.9
1005 GF/Program Receipts						
1037 GF/Mental Health	13.0	26.8	27.4	28.1	28.8	29.5
Other (please specify)						
TOTAL	43.5	89.2	91.4	93.7	96.0	98.4

Estimate of any current year (FY2000) cost: \$0.0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

The projected costs were calculated by comparing the costs of standard syringes and collections tubes with protective devices for the costs which would have been incurred in FY1999 based on that year's actual usage. A factor of 2.5% was built-in for subsequent years to cover increased costs in supplies and growth of the number of people using the Public Health Centers. FY2001 is for 1/2 year as the effective date of the bill is January 1, 2001. There is no cost saving to be corrected for in terms of fewer needlestick incidents to investigate. In SFY99 only one incident occurred and the cost per incident for follow-up is \$400.

Prepared by: Peter M. Nakamura, MD, MPH *KP* Phone: (907) 465-3090
 Division: Public Health Date/Time: 3/3/00 4:50 PM

Approved by Commissioner: Karen Perdue, Commissioner Date: 3/6/00
 Agency: Department of Health & Social Services

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COMMITTEE:
Senate HESS

DATE: 3/8/00

Subject of meeting:
SB 261 - Needle stick
and sharp Injury
protections

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REPRESENTING

DO YOU
WANT TO
TESTIFY?

NAME	ADDRESS (MAILING) & (ZIP)	PHONE	REPRESENTING	DO YOU WANT TO TESTIFY?
DON NOVOTNEY	1120 Timbaline CT 99801	7804300	Self	Yes
TAKE MATER	P.O. Box 490 Folsom CA 95763	216 353-1054	AUGENTIS PHARMA	Yes
Elmor Lindstrom	DHSS	465-1613		Yes
Laraine L. New	ASHNHA 426 Main St.	586-1790	ASHNHA	
Barbara Huff Tucker	520 E 34	5659286	Teamsters	YES

AMENDMENT

OFFERED IN THE SENATE HEALTH,
EDUCATION, AND SOCIAL SERVICES COMMITTEE

SPONSOR: Sen. Elton

TO: SB 261

Amend Section 1

After line 7, page 4, insert new subsection to read:

(g) Standards adopted under this section that exceed the requirements of bloodborne pathogens standard existing on the effective date of this section and standards adopted under subsection (b) of this section do not apply to the use of a drug or biologic, approved for commercial distribution or investigational use by the federal food and drug administration, that is prepackaged within administration system or that is used in a prefilled syringe. This subsection expires January 1, 2004.

Effect:

Manufacturers of pre-filled syringe devices are given three years after the effective date of the bill to comply with the requirements for engineered sharps injury protection in their devices.

February 28, 2000

Standards adopted under this section that exceed the requirements of bloodborne pathogens standard existing on the effective date of this section and standards adopted under subsection () () of this section do not apply to the use of a drug or biologic, approved for commercial distribution or investigational use by the federal food administration, that is prepackaged within administration system or that is used in a prefilled syringe.

Effect. The new standards adopted for bloodborne pathogens would not apply to certain drugs and biologics in prepackaged systems until approved by the federal drug administration



Jacob I. Mater, II
State Regional Manager

Aventis Pharmaceuticals

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The Honorable Mike Miller
Alaska State Senate
State Capitol
Juneau, AK 99801

March 6, 2000

Dear Senator Miller

As you are aware, a bill has been introduced in the Alaska State Legislature (S 261) which would require employers to adopt needlestick injury prevention programs for their healthcare workers.

Aventis Pharmaceuticals is in support of measures to improve the safety of healthcare workers against accidental needlesticks, but respectfully request that you consider a friendly amendment to ensure the safety of patients.

Aventis Pharmaceuticals manufactures Lovenox® (enoxaparin sodium injection), the world's leading low-molecular weight heparin, used primarily in the prevention and treatment of deep vein thrombosis, which can lead to pulmonary embolism, a potentially life-threatening condition.

Lovenox is available primarily in pre-filled syringes. These syringes do not include engineered sharps injury protection features. We are now working to modify this design and submit a newly-designed product to the federal Food and Drug Administration (FDA) for approval. This process is expected to be completed, at the earliest, within three years.

Based on our experience in California, which passed similar legislation in 1998, employers are likely to be confused as to their ability to use medications in pre-filled syringes which do not contain engineered sharps safety protections.

Because of the federal requirement that we gain FDA approval for a redesigned pre-filled syringe, we are not able to introduced a re-engineered system as soon as we would like.

Given this, we propose that the Alaska Senate Bill 261 be amended with the following language:

TRANSITIONAL PERIOD FOR CERTAIN DRUGS AND BIOLOGICS.-- THE USE OF A DRUG OR BIOLOGIC THAT IS PREPACKAGED WITH AN ADMINISTRATION SYSTEM OR USED IN A PREFILLED SYRINGE AND IS APPROVED FOR COMMERCIAL DISTRIBUTION OR INVESTIGATIONAL USE BY THE FEDERAL FOOD AND DRUG ADMINISTRATION SHALL BE EXEMPT FOR ANY STANDARD ADOPTED UNTIL SUCH TIME AS SUCH PRODUCT IS APPROVED FOR COMMERCIAL DISTRIBUTION BY THE FEDERAL FOOD AND DRUG ADMINISTRATION WITH INTEGRATED SHARPS INJURY PROTECTION FEATURES.

Several state legislatures are considering legislation to change their bloodborne pathogens standards. The states which have passed legislation which either exempts or delays implementation for standards affecting pre-filled syringes include Texas and New Jersey. Legislation including these provisions which have passed one house include Pennsylvania, Illinois, Ohio and Oklahoma. Other states are now considering bills which contain these provisions.

Finally, please understand that Aventis is moving ahead to introduce a new pre-filled syringe which contains these protections. We are supportive of efforts to ensure the safety of healthcare workers and are equally committed to assuring the continued availability of appropriate medications to patients.

Thank you for your interest. Please call if I can be of any assistance.

Sincerely,

Paul Baldwin
Director, State Government Affairs

SENATOR KIM ELTON

SB 261—Safer Needles Bill

Sponsor Statement

SB 261 brings needed protection to health care workers from accidental needlestick injuries.

Health care workers are at particular risk on the job because of the danger of disease transmission. Accidental needlesticks can transmit bloodborne diseases such as hepatitis B, hepatitis C, and human immunodeficiency virus (HIV). Nationwide, health care workers suffer between 600,000 and one million accidental needlesticks per year. Between 50,000 and 60,000 health workers have contracted serious diseases from needle sticks in the last decade, and on average one health care worker per week is exposed to HIV.¹ While HIV is the highest profile disease, experts now estimate that more health care workers will eventually die from exposure to hepatitis C than from HIV.² Medical workers are four times more likely than police officers to die from a job-related injury.³

A number of manufacturers currently produce safer needle devices with self-retracting needles, self-blunting tips, or other technology, and their effectiveness in reducing injuries has been demonstrated in evaluations by the Centers for Disease Control and Prevention. 250 such devices are FDA-approved, yet only 15% of hospitals use safer needles.⁴

Health care facilities have been slow to use safer needles because they are more expensive. But these devices save money in the long-term by reducing testing and care for workers accidentally exposed through needlesticks. The cost for testing following a high-risk needlestick injury is nearly \$3,000, even when no infection occurs. A serious infection can cost upwards of \$1 million when you include lost time and disability payments. In California, the first state to pass a safer needle law, hospitals and health care employers are expected to save \$100 million per year thanks to reduced accidents. As ever more health care facilities use safer needles, prices can be expected to go down.⁵

SB 261 requires health care facilities to evaluate safer needle devices, and triggers new regulations requiring the use of safer needles when appropriate. The bill requires the Department of Labor to adopt regulations requiring health care facilities to:

- include safer needles as engineering and work practice controls (except in cases where a committee including frontline health care workers determines these devices will jeopardize safety);
- include a procedure for identifying safer needles in the facility's exposure control plan;
- update the exposure control plan as new technology is developed; and
- record exposure incidents in a sharps injury log.

¹ Source: *San Francisco Chronicle*, 4/13/98, p. A1

² Washington State Legislature, Senate Bill Report for ESSB 6416

³ Source: *San Francisco Chronicle*, 4/13/98, p. A1

⁴ Source: American Nurses Association

⁵ Source: *San Francisco Chronicle*, 12/18/98

In addition the Department of Labor may adopt regulations that include training and education requirements, measures to increase vaccinations, requirements for placement of sharps waste containers, and requirements for the use of personal protective equipment. The Department of Labor is required to compile a list of safer needle devices and to make the list available to employers. Finally, a needlestick injury fund is established which, subject to appropriation, may make grants for research, development, and product evaluation of safer needles.

Six states have already passed safer needle legislation and bills are pending in 20 states besides Alaska. In Washington, a similar bill recently passed the state senate by an overwhelming bipartisan margin. In Massachusetts, a safer needle bill was spurred on by testimony from the president of the Massachusetts Nurses Association, who acquired both HIV and hepatitis C from an accidental needlestick.

SB 261 is based on model legislation being used around the country. The American Nurses Association has led efforts to pass safer needle legislation at the state and federal level, and this bill is strongly supported by the Alaska Chapter of the ANA.

SB 261: Safer Needles Bill

Sectional Analysis

Section 1.

Creates new section: Article 13. Health Care Protections. Sec.18.60.880

Product Evaluations

Requires health care facilities to conduct product evaluations of needleless systems and sharps with engineered sharps injury protections that are used in the facility. The evaluation period must last at least six months and must be conducted by front-line health care workers representing all areas where the devices are used. The bill includes no deadline by which evaluations must be commenced or completed. The following categories of devices must be evaluated:

1. IV catheters
2. IV access devices (med ports, etc.)
3. Vacuum-tube blood collection devices
4. Blood-drawing devices including phlebotomy needle and tube holder, butterfly type devices, and syringes and other similar devices
5. Syringes used for purposes other than blood drawing
6. Suture needles
7. Scalpel devices
8. Any other category of device used at the employer's facility where there is a sharps injury risk

New Regulations Concerning Safer Needles

Requires the Department of Labor, by regulation, to adopt a standard concerning the use of needleless systems and sharps with engineered sharps injury protections for devices listed above. The regulations must say that:

- Needleless systems and sharps with engineered sharps injury protections must be included as engineering and work practice controls. This requirement is not applicable if an evaluation committee established by the employer determines by objective evaluation that use of the devices will jeopardize patient or employee safety. This can mean that the devices are not more effective at preventing accidental needlesticks or that the devices compromise patient care or safety. At least half of the members of the evaluation committee must be front-line health care workers.
- Each facility's written exposure control plan must include an effective procedure for identifying and selecting existing needleless systems and sharps with engineered sharps injury protections. The evaluation committee is responsible for identifying and selecting the devices. The evaluation committee is the same as that described for the six-month product evaluations: front-line health care workers representing all wards and medical specialties.
- The written exposure control plan must be updated to reflect progress in implementing use of safer needle devices, as determined by the evaluation committee. The updating must occur at least once every year.
- Information concerning exposure incidents shall be recorded in a sharps injury log.

Sharps Injury Log Requirements

Sharps injury logs must include at least the following information:

- Date and time of the exposure incident
- Type and brand of the sharp involved in the exposure incident
- Description of the exposure incident that must include:
 - Job classification of the exposed employee
 - The department or work area where the exposure took place
 - The procedure that the exposed employee was performing at the time of the incident
 - If the sharp had engineered sharps injury protections, whether the protective mechanism was activated, and whether the injury occurred before, during, or after activation of the mechanism
 - If the sharp had no engineered sharps injury protections, the injured employee's opinion as to whether and how such a mechanism could have prevented the injury, as well as the basis for the opinion
 - Whether an engineering, administrative, or work practice control could have prevented the injury, as well as the recorder's basis for the opinion

Regulations to Implement Section and Optional Additional Regulations

The Department of Labor shall adopt regs to implement the above, and to revise the bloodborne pathogen standard to prevent sharps injuries or exposure incidents.

Regulations *may* also include:

- Training and education requirements
- Measures to increase vaccinations
- Requirements for the strategic placement of sharps containers as close to the work area as practical
- Requirements for the increased use of personal protective equipment

List of Available Safer Needles

The Department of Labor shall compile and maintain a list of existing needleless systems and sharps with engineered sharps injury protections, and shall make this list available to assist employers in complying with the above. The list may be developed from existing sources of information, including FDA, CDC, NIOSH, and US Dept. of Veterans Affairs.

Needlestick Injury Fund

Subject to appropriation, Department of Labor shall establish a needlestick injury fund. DoL can make grants from the fund for research into, development of, and product evaluation of, needleless systems and sharps with engineered sharps injury protections.

Definitions

Creates new section: Sec. 18.60.890 Definitions (pertaining to above)

Section 2

The above takes effect January 1, 2001

Questions and Answers SB 261, the Safer Needles Bill

How many needlestick incidents occur in Alaska?

No state or national data on needlesticks is collected, so most studies reference the national estimate developed by the University of Virginia Health Care Worker Safety Center. That estimate is 600,000 to 1 million accidental needlesticks per year. An estimate of Alaska needlesticks based on Alaska's percentage of the U.S. population in the 1990 census is: 1,327 to 2,211 per year.

Why are needlesticks so dangerous?

Needlesticks can transmit serious bloodborne diseases such as HIV, Hepatitis B, and Hepatitis C. The dangers of HIV are well known. Less well known are the dangers of Hepatitis C, a chronic disease affecting 4 million Americans which can have serious effects on the liver. Hepatitis C infection is the leading indication for liver transplantation; 5-7% of those infected with HCV will die as a result of their infection. There is currently no vaccine for HCV. Experts estimate that more healthcare workers will eventually die due to complications from occupational exposure to Hepatitis C than exposure to HIV. Hepatitis B is a chronic disease affecting 1.25 million Americans which can also result in complications to the liver. Vaccinations for HBV are available to health care workers and are believed to be 90% effective.

How frequently are serious diseases contracted through a needlestick?

Chance of Infection if Exposed to Blood Containing Virus

Hepatitis B: 6-30% (national estimate)

Hepatitis C: 5% (national estimate)

HIV: 0.03% (Alaska estimate)

In Alaska, using rough estimates of needlestick occurrence, disease prevalence, and Alaska's share of US population, this translates into yearly infection numbers of:

Hepatitis B: 1-3 workers infected

Hepatitis C: 1-2 workers infected

HIV: very low--less than 1 worker infected

What are the costs of infection?

According to the State of Maryland's recent Health Care Worker Safety Act Study Group Report and SEIU data from Washington State:

- \$500 to \$750 for standard testing following a needlestick
- \$2,000 to \$3,800 for testing and treatment following a high-risk needlestick injury
- \$20,000 to \$30,000 avg. annual drug costs for HIV treatment
- \$20,000 to \$30,000 avg. annual drug costs for HCV treatment (liver transplantation can raise cost of HCV infection to \$500,000)
- Up to \$1 million--The American Hospital Association estimate of costs to treat a health care worker with a serious bloodborne pathogen disease, including treatment, follow-up, lost-time wages, and disability payments

Using rough estimates for Alaska needlesticks and the costs of testing and treatment, the cost to Alaska health care facilities just for standard testing each year is roughly \$663,500 to \$1,658,250. This cost, of course, rises with high-risk needlesticks and treatment in cases of infection.

How much more do safer devices cost?

This depends on the device. Good examples are offered in the Maryland report:

Purpose of Device	Device	Unit Price (conventional)	Unit Price (safer)	Annual Cost for 250-300 Bed Hospital		
				Conventional	Safer	Incremental
Venous Blood Draw	Vacuum tube Phlebotomy Needle	\$0.10	\$0.33	\$6,500	\$22,000	\$15,500
	Butterfly Needle	\$0.65	\$0.90	\$11,000	\$15,000	\$4,000
IV Access	IV Catheter	\$0.75	\$1.75	\$25,000	\$58,500	\$33,500
IM/SQ Injection/ Fluid Transfer	Hypodermic Needle/Syringe	\$0.05	\$0.25	\$16,500	\$83,500	\$67,000

Is insurance affected by use of safer devices?

At least one major insurance provider, PHTS of South Carolina, has rewritten their underwriting requirements to require facilities covered by their workers compensation policy to have a "sharp object injury prevention program". The new policy is a preventive measure developed because PHT recognized the emerging threat of HCV and HIV infection from accidental needlesticks.

How effective are safer needle devices?

Again, this depends on the device. The CDC and others have conducted studies showing that safer needles can reduce needlestick injuries by up to 76%. Other studies show a zero rate of needlestick injuries when using the newest self-retracting syringes.

Surveys conducted by the Maryland study group show that nearly every facility responding indicated that there was a reduction in injuries after introduction of safer medical devices. No facility has discontinued use after implementation.

Devices with integrated safety features are significantly safer than standard devices. However, SB 261 allows health care facilities to determine this for themselves: if an evaluation committee, at least half of whose members are frontline health care workers, determines that a device jeopardizes patient care or worker safety, it need not be used.

How does this legislation differ from OSHA's November 1999 Compliance Directive on the bloodborne pathogen standard?

The November 1999 compliance directive was updated to clarify the intent of the bloodborne pathogen standard and to incorporate medical advances. The key revisions include:

- Annual Review of Exposure Control Plan: employers must ensure that their plans reflect consideration and use of commercially available safer medical devices
- Engineering Controls and Work Practices: emphasizes use of effective engineering controls
- Emphasizes that employers should rely on relevant evidence in addition to FDA approval to ensure effectiveness of devices
- CDC guidelines for post-exposure evaluation and follow-up for HIV and HCV
- Requires effective training whenever safer devices are implemented

State legislation complements and augments the message prescribed by OSHA. The SEIU, the American Nurses Association, and the State of Maryland Health Care Worker Safety Act Study Group Report detail reasons why the 1999 Directive is not adequate on its own to protect health care workers:

- Decisions about what constitutes safer devices can rest solely with the employer under the directive. Under this legislation, front-line health care workers are given a significant role in evaluating and selecting safer needles.
- The OSHA regulatory process is predominantly complaint-driven. Only a small fraction of facilities will be visited due to complaints by workers or for other reasons.
- The compliance directive is subject to court challenge because it provides detailed procedures for enforcement of the 1991 standard.
- The compliance directive is this Administration's interpretation of the bloodborne pathogen standard; it could change with successive Administrations
- The legislation provides for a much more detailed and product-specific sharps injury log than required by the directive.
- The Maryland study group concluded that the directive "may not be adequate in guaranteeing sufficient use of engineered sharps injury protection." They also agreed that "a clear, unambiguous revision of the bloodborne pathogen standard [through legislation] is warranted and necessary to ensure the widespread adoption and use of engineered sharps injury protection."

What information is currently collected on needlesticks?

Employers are required to complete an OSHA-200 log when an employee requires workers' comp due to an on-the-job injury. The Department of Labor's inspectors have access to these logs, as do employee organizations upon request. These logs do not require information on the type or brand of device involved in needlestick incidents, or other information about engineered sharps injury protection.

A note: It is estimated that 39% of all exposures go unreported.

Are safer devices available?

A wide variety are available, including syringes, IV catheters, safer blood-drawing devices, lancets, and scalpels. The US Patent Office has approved over 1,000 patents for safer needle designs and the US FDA has now approved for marketing 250 products with integrated safety features

What are other states doing about needle safety?

Legislation similar to the model legislation has passed in four states: California, Texas, New Jersey, Tennessee. Maryland passed a bill calling for a study group on health care worker safety. Hawaii passed a resolution calling for use of safer needles. Legislation is pending in 20 states besides Alaska.

Legislation which has passed varies from state to state. Legislation in "state plan OSHA states" covers all health care facilities and employees; Alaska, California, and Tennessee fall into this category. Legislation for other states covers only public employees since private employees are covered by federal OSHA; New Jersey and Texas fall into this category.

What if a facility is already using safer devices?

SB 261 reinforces the policies of facilities already using safer devices, requires the involvement of frontline health care workers in selecting and evaluating safer devices, and requires annual updating of exposure control plans to reflect advances in safer devices. The legislation complements and augments the Nov. 1999 OSHA Bloodborne Pathogens Compliance Directive, which already emphasizes the use and consideration of safer needle devices, and which facilities should already be addressing in their safety practices.

Where do needlesticks occur?

Patient rooms	34%
Operating rooms	23%
Emergency departments	7%
Intensive care units	7%
Out-patient offices	5%
Clinical laboratories	5%
Others	18%

**from EPInet data network, 1996*

Which workers suffer needlesticks and in what proportions?

Nurses	46%
Medical technicians	23%
Doctors	15%
Housekeeper/ laundry workers	5%
Other	12%

**from EPInet data network, 1996*

How many facilities already use safer needle devices?

Nationally only 15% of hospitals use safer devices. The data on Alaskan health care facilities is not available and would require a survey.

Does this legislation mean that Dept. of Labor will mandate which devices to use?

No. These choices are made by health care facilities and their employees through an initial six month evaluation period of safer devices, and subsequent evaluation as appropriate. Each facility can develop its own procedure for selecting devices, subject to the requirements of the bill. DoL will be required to maintain a list of safer needle devices to assist employers in complying with the bill.

Sources:

EPInet data network, see <http://www.med.Virginia.EDU/medcntr/centers/epinet/>

Service Employees International Union, see <http://www.seiu.org/>

American Nurses Association, see <http://www.nursingworld.org/needlestick/nshome.htm#Legislation>

State of Maryland Department of Health and Mental Hygiene Health Care Worker Safety Act Study Group, available at <http://dhmh.state.md.us/html/reprtk10.htm>

San Francisco Chronicle "Deadly Needles" series, 4/13/98, 4/14/98, 4/15/98

Prepared by Senator Kim Elton's office

Alaska Hepatitis C Coalition



5350 Little Tree Street
Anchorage, AK 99507
(907) 563-7675

Senator Kim Elton
State Capitol Room 504
Juneau, AK 99801-1182

March 1, 2000

Dear Senator Elton:

The Alaska Hepatitis C Coalition supports the passage of Senate Bill 261 "An Act relating to needle stick and sharps injury protections and the use of safe needles by health care facilities and health care professionals." We believe that this legislation will significantly reduce the risk of occupational exposure to blood borne pathogens via accidental needle sticks or percutaneous exposure through other sharp instruments in the health care setting.

The Centers for Disease Control and Prevention (CDC) states in the October 16, 1998 Morbidity and Mortality Weekly Report (MMWR) issue entitled *Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease* :

Health care, emergency medical, and public safety workers should be educated regarding risk for and prevention of blood borne infections, including the need to be vaccinated against hepatitis B. Standard barrier precautions and engineering controls should be implemented to prevent exposure to blood. Protocols should be in place for reporting and follow-up of percutaneous or permucosal exposures to blood or body fluids that contain blood.

Senate Bill 261 will ensure that health care facilities provide a safer environment through careful product evaluation, enacting a formal exposure control plan and by implementing a sharps injury log.

It is conservatively estimated that 11,000 Alaskans are infected with HCV. It is not know how many of those individuals became exposed to the virus through accidental needle sticks while working in a health care facility, however several of our members believe that this was the source of their infection. Senate Bill 261 will provide additional protection to health care workers from becoming infected with the hepatitis C virus as well as other blood borne infections and we strongly encourage that it be passed into Alaska State Statue.

Sincerely,

A handwritten signature in black ink, appearing to read "Kendall Thomas".

Kendall Thomas, MS
President

TESTIMONY ON SB 261

I sustained a needle stick injury (my first), after 25 years of nursing, while working in the Emergency Department at Providence Alaska Medical Center. The "butterfly" device that I was using to draw blood did not have a safety sheathe. I recognize how important individual safety practices are in preventing any kind of injury, and most use these devices without problems, but the risk of life altering infections and diseases requires extra effort to protect those, who in a moment of rush or carelessness, might be exposed. My patient had Hepatitis C. I have been tested once and my test was negative, but the concern and stress until the final test at 6 months is negative has an impact on my husband and kids also.

The real cost to hospitals for using safety devices would be such a small fraction of the cost of giving safe, competent patient care. I do not know what expenses the hospital incurs when employees need follow-up testing and treatment, but I suspect the cost of just one incident of employee seroconversion would be greater by far than the added cost of safety devices.

Please support Senate Bill 261. Thank you.

Janice (Jay) Laxson, Registered Nurse
11901 Woodbourne Circle
Anchorage AK 99516-2554
907.345.3639

Subject: testimony re: needle sticks in nursing

Date: Tue, 07 Mar 2000 15:57:02 -0900

From: Wendy Alward <"markus@gci.net"@gci.net>

Reply-To: "markus@gci.net"@gci.net

To: Angie_Schmitz@iegis.state.ak.us

CC: polarmagic@webtv.net

Hello Angie,

I am an RN at Providence Alaska Medical Center and I would like to have my testimony included in the hearing tomorrow. I have been a nurse in an intensive care area for 9 years and have been stuck with contaminated needles, ie blood exposure at least 5 times, with numerous, 'near misses'. Most of these occurred when I was in a hurry due to staff shortages that resulted in high acuity assignments; Other times by coworkers.

I have been very fortunate in that I have not contracted HIV or any of the hepatitises thus far.

The fact that many other hospitals already have safe needless systems already in place confirms that this bill is very important.

What a relief it would be to be able to go to work and know that the risk of a serious exposure has been diminished substantially by having a needless system in place.

Thank you for all of your time and effort in persuing this bill,

Sincerely, Wendy Alward RN BSN

Nursing Facts

From the American Nurses Association

Needlestick Injury

- Health care workers (HCWs) suffer between 600,000 and one million injuries from conventional needles and sharps annually. These exposures can lead to hepatitis B, hepatitis C and Human Immunodeficiency Virus (HIV), the virus that causes AIDS.
- At least 1,000 HCWs are estimated to contract serious infections annually from needlestick and sharps injuries.
- Registered nurses working at the bedside sustain an overwhelming majority of these exposures.
- Needlestick injuries are preventable. Over 80% of needlestick injuries could be prevented with the use of safer needle devices.
- Less than 15% of U.S. hospitals use safer needle devices and systems.
- In 1992, the Food and Drug Administration issued an alert to all health care facilities to utilize needleless IV systems wherever possible. This alert is merely a recommendation, not a mandate. Therefore, health care facilities are under no legal obligation to comply.
- The first safe needle designs were patented in the 1970s, and the FDA has approved over 250 devices for marketing as safety devices.
- More than 20 other infections can be transmitted through needlesticks, including: tuberculosis, syphilis, malaria and herpes.

Cost Savings from Needlestick Prevention

- Hospitals and health care employers in California are expected to save over \$100 million per year after implementing the California Occupational Safety and Health Administration's requirement for safe needle devices.
- According to the American Hospital Association, one case of serious infection by bloodborne pathogens can soon add up to \$1 million or more in expenditures for testing follow-up, lost time and disability payments.
- The cost of follow-up for a high-risk exposure is almost \$3,000 per needlestick injury even when no infection occurs.
- Safe needle devices cost only 28 cents more than standard devices.

Hepatitis B

- Hepatitis B is now preventable due to the vaccine that must be offered to HCWs and is given to children at birth.
- Regulatory and legislative efforts were largely responsible for the reduction of deaths from hepatitis B as a result of vaccine programs.

- Following these regulatory and legislative efforts, including the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard, cases of hepatitis B in health care workers dropped from 17,000 annually to 400 annually—and continue to drop.
- Transmission rate: 2–40%

Hepatitis C

- Testing for hepatitis C after needlestick injuries was only recommended in 1998. It is a silent epidemic. There could be thousands and thousands of nurses with occupationally acquired hepatitis C who do not know it.
- Hepatitis C is the most frequent infection resulting from needlestick and sharps injuries. Of health care workers who become infected, 85% become chronic carriers.
- Chronic carriers have the potential to spread the disease to others, including their partners.
- Drugs that slow the progression of hepatitis C are available, but average \$1,700 each month.
- Hepatitis C leads to liver failure, liver transplants and liver cancer. A liver transplant costs \$500,000.
- At least 4 million Americans are infected with hepatitis C.
- Transmission rate: 2.7–10%

HIV

- Human Immunodeficiency Virus (HIV) is the virus that causes AIDS, a fatal disease.
- Advances in treatment prolong the time before HIV becomes AIDS. The drug treatment can cost up to \$6,000 per month.
- 16,000 of the 600,000 to one million needlestick injuries each year result in HIV exposure.
- There are over 54 documented cases of HCWs with occupationally acquired HIV and at least 133 cases of possible transmissions of HIV.
- There are 35 new cases each year.
- Transmission rate: .2–.4%

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The American Nurses Association is the only full-service professional organization representing the nation's 2.2 million Registered Nurses through its 53 constituent associations. ANA advances the nursing profession by fostering high standards of nursing practice, promoting the economic and general welfare of nurses in the workplace, projecting a positive and realistic view of nursing, and by lobbying the Congress and regulatory agencies on health care issues affecting nurses and the public.

➤ [Return to the Reading Room.](#)

➤ [Return to the Safe Needles Save Lives page.](#)

COSTS AND SAVINGS ASSOCIATED WITH NEEDLESTICK INJURIES AND THE USE OF SAFER NEEDLE DEVICES

Costs for Treating Injured Health Care Workers

- \$500 – cost for initial testing following a needlestick injury
- \$2,200-\$3,800 – initial cost for testing and treatment with prophylactic drugs for a health care worker injured by a potentially HIV-contaminated needle, but the illness not yet confirmed
- \$20,000-\$30,000 – average annual drug costs for a health care worker who develops HIV as a result of a needlestick injury
- Up to \$1 million – The American Hospital Association estimate of costs to treat a health care worker with a serious bloodborne pathogen disease, including treatment, follow-up, lost-time wages, and disability payments
- \$20,000-\$30,000 - average annual drug costs to treat Hepatitis C
- \$500,000 – potential lifetime treatment costs for someone with Hepatitis C

Workers Compensation and Liability Costs

- A study of insurance costs for needlestick injuries, reported that a single needlestick injury can cost up to \$500,000 in workers' compensation costs
- A physician at Yale-New Haven Hospital in Connecticut was awarded \$12.2 million by a jury for a needlestick injury that resulted in him acquiring HIV

Costs to a Health Facility for Safe Needles

- 7 cents – the cost for a conventional syringe
- 24 cents – the median increase in the cost for a safer needle device
- \$70,000 – the additional cost to equip a 300-bed hospital for a year with safe blood collection, hypodermic, and IV catheter devices

Savings Associated with the Use of Safe Needles

- The California Occupational Safety and Health Standards Board estimated that the state will have a net saving of \$106 million each year as a result of implementing the use of safe needles in all health care facilities. Although employers will spend \$185 million for the new, safer technology and for expenses associated with increased record keeping, there will be savings of \$291 million on the costs for diagnosing and treating needlestick injuries.

**Department of Health
and
Mental Hygiene
Health Care Worker
Safety Act Study Group Report**

*Excerpts: members, exec. summary, +
conclusion*

Report to Georges C. Benjamin, MD

Secretary of DHMH

on

House Bill 287 (1999)

December 1999

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Conclusion ***Reference List *****Members**

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Upon the passage of any proposed legislation, it is clear that the regulatory process must be followed. The Annotated Code of Maryland, Labor and Employment Article authorizes the Commissioner of the Department of Labor, Licensing and Regulation (DLLR) upon recommendation from the Occupational Safety and Health Advisory Board to adopt regulations. The Advisory Board may propose or recommend reasonable regulations to prevent conditions that are detrimental to safety and health in each employment or place of employment in the State and that the Board finds are necessary to protect and to improve the safety and health of employees on the basis of circumstantial evidence and information. Proposed legislation would require the Board to advise, consult with, propose, and recommend to the Commissioner of Labor reasonable regulations specific to establishment of a Bloodborne Pathogen Standard governing occupational exposure to blood and other potentially infectious materials.

The Study Group recognizes that the process can be lengthy. For that reason, the Study Group encourages the designated agencies to pursue adoption of regulations with due diligence. Additionally, the Study Groups recommends that any proposed legislation and subsequently drafted regulations specifically provide reference to a time for implementation by employers of no more than twelve months after the final approval and the adoption of the proposed regulations.

7) Scope of the Regulation

There are particular procedures that employees perform that were identified as the primary functions that subject health care workers to injury:

1. Withdrawal of body fluids.
2. Accessing vein or artery.
3. Administration of medications or fluids.
4. Any other procedure with potential for a sharps injury exposure incident.

The Study Group agreed that the revised Bloodborne Pathogen Standard should specifically apply to protection of personshealthcare workers who are licensed, certified, or otherwise authorized in Maryland to provide health care services in the course of their activitiesemployment in the health care setting. These individuals are most at risk for sharps injuries in the normal course of their activities whether as an employeemployment or as a volunteer healthcare provider. This designation thereby excludes medications administered within the home by care providers such as family members and those self-administering medications.

8) Other revisions as needed

Any additional revisions to the Bloodborne Pathogen Standards to prevent sharps injuries or exposure incidents should be based on continuing development of technology, prevention and treatment techniques.

Conclusion

It is evident that occupational exposure to Hepatitis B, Hepatitis C, and HIV are associated with workplace needlestick injuries and are a cause of significant morbidity for workers and expense for healthcare facilities. There continues to be a high incidence of sharps injuries in health care settings although engineered sharps injury protection devices are now available on the market for use in many procedures. The devices have been shown to help prevent needle-stick injuries, if used properly, these devices have been found to reducethe occupational exposure risks. Although there is a growth in the number of Maryland health care facilities that are using engineered sharps injury protection , for some procedures,

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Executive Summary

The Study Group on Health Care Worker Safety was convened by appointment of the Department of Health and Mental Hygiene (DHMH) Secretary, Georges C. Benjamin, in accordance with House Bill 287(1999). In consultation with stakeholders, Secretary Benjamin is required to submit a report to the Governor and to the General Assembly by January 1, 2000, on the establishment of a Bloodborne Pathogen Standard governing occupational exposure to blood and other potentially infectious materials.

Workplace needlestick injuries are associated with occupational exposure to Hepatitis B, Hepatitis C, and HIV and are a cause of morbidity and distress for workers and significant expense to the healthcare industry. The Study Group noted that the recent national response to address needlestick injuries has occurred in part because of the continuing high incidence of sharps injuries in health care settings. Engineered sharps injury protection (or safety devices) have been developed to help prevent needlestick injuries. When, i used properly, these devices have been found to reduce the occupational exposure risk.

Key findings of the study group include:

- Although there is growth in the number of Maryland health care facilities that are using engineered sharps injury protection, 24% of facilities responding to the survey reported they did not use engineered sharps injury protection devices at all. Of the facilities utilizing engineered sharp protection, most are only using devices for intravenous therapy procedures.
- OSHA requirements for documentation of bloodborne pathogen exposure do not accurately reflect injuries caused by such exposures.
- Although the OSHA bloodborne pathogen standard includes language on the use of engineered sharps injury protection, it has not been an effective tool in promoting widespread use of engineered sharps injury protection .

The Study Group recommends the introduction of legislation amending the Bloodborne Pathogen Standard. The Study Group has provided draft legislation that includes key elements necessary to strengthen the standard. Such elements include a requirement for exposure control plans within facilities, procedures for identifying and selecting sharps prevention technology, a sharps injury log for recording all injuries, and training and vaccination protocols. Additionally, the group recognized that employers and the industry will need time to develop adopt procedures and adopt technology, so reasonable time allowances should be made for implementation of new practices. Finally, due to recognized limitations in current sharps protection technology, four exceptions to the recommendations are proposed to ensure high standards of care for patient safety and comfort.

Introduction

The Study Group on Health Care Worker Safety was convened by Georges C. Benjamin M.D., Secretary of Health of the Department of Health and Mental Hygiene (DHMH) in accordance with House Bill 287(1999). House Bill 287 directed the Department of Health and Mental Hygiene to hold hearings and prepare a report on the establishment of a Bloodborne Pathogen Standard governing occupational exposure to blood and other potentially infectious materials. Secretary Benjamin is directed to submit a report on the results of the investigation and study, together with policy recommendations, to the Governor and to the

24% of facilities responding to the survey reported they did not use any engineered sharps injury protection devices. Although the Bloodborne Pathogen Standard includes language on the use of engineered sharps injury protection and has been revised to enhance enforcement efforts, it has not been an effective tool in promoting widespread use of engineered sharps injury protection. Therefore, the Study Group recommends the introduction of legislation amending the Bloodborne Pathogen Standard to better address healthcare worker safety in Maryland.

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OSHA National News Release

**U.S. Department of Labor
Office of Public Affairs**

**National News Release
November 5, 1999
CONTACT: Bill Wright
PHONE: (202) 693-1999**

Stresses employer use of new medical advances

OSHA REVISES BLOODBORNE PATHOGENS COMPLIANCE DIRECTIVE

A new directive issued today by the Occupational Safety and Health Administration will help minimize serious health risks faced by workers exposed to blood and other potentially infectious materials. Among the risks are human immunodeficiency virus (HIV), hepatitis B and hepatitis C.

The directive guides OSHA's compliance officers in enforcing the standard that covers occupational exposure to bloodborne pathogens and ensures consistent inspection procedures are followed. It updates an earlier directive issued in 1992 and reflects the availability of improved devices, better treatment following exposure and OSHA policy interpretations.

"We must do everything we can to protect workers who may be at risk of exposure to bloodborne diseases," said Secretary of Labor Alexis M. Herman. "This directive doesn't place new requirements on employers, but it does recognize and emphasize the advances made in medical technology. And it reminds employers that they must use readily-available technology in their safety and health programs."

The revised directive emphasizes the importance of an annual review of the employer's bloodborne pathogens program and the use of safer medical devices to help reduce needlesticks and other sharps injuries. OSHA does not advocate the use of one particular medical device over another. The directive also highlights basic work practices, personal protective equipment and administrative controls.

The emphasis on engineering controls results from OSHA's request last year for ideas and recommendations on ways to better protect workers from contaminated needles or other sharp objects.

"We received nearly 400 comments from health care facilities, workers and others," said OSHA Administrator Charles N. Jeffress. "They told us that safe medical devices already available are effective in controlling hazards and that wider use of such devices would reduce thousands of injuries each year."

The revised directive also includes detailed instructions to compliance officers on inspections of multi-employer worksites, such as home health services, employment agencies, personnel services, physicians and health care professionals in independent practices, and independent contractors.

Also included in the directive are decontamination requirements, guidelines on hepatitis vaccinations and post exposure treatments, and employee training.

OSHA issued a final regulation on occupational exposure to bloodborne pathogens in 1991 to protect nearly six million workers in health care and related occupations at risk of exposure to bloodborne diseases. Jeffress said the agency will review the standard to determine whether its revision is warranted.

The directive can be accessed from the OSHA home page at (<http://www.osha.gov>) under the "Directives" link. Copies can also be obtained from the agency's Publications Office by calling (202) 693-1888. (NOTE: A fact sheet providing highlights of the revised directive follows this release).

#

The text of this news release is on the Internet World Wide Web at <http://www.osha.gov>. Information on this news release will be made available to sensory impaired individuals upon request. Voice phone: (202) 693-1999.

Highlights of OSHA's Compliance Directive CPL 2-2.44D Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens

OSHA first published the bloodborne pathogens standard in 1991 because of a significant health risk associated with occupational exposure to blood and other potentially infectious materials that may contain bloodborne pathogens-- or microorganisms -- that cause bloodborne diseases. The compliance directive detailing enforcement procedures for the standard was published on March 6, 1992 (the effective date of the standard).

During the past seven years, significant medical advances have occurred that help control bloodborne pathogens. In addition, OSHA has clarified the standard through written interpretations. The emerging technology, coupled with new information on the control of bloodborne pathogens, necessitated a revision in the compliance directive. Following is a summary of some of the key revisions.

- Annual Review of Exposure Control Plan -- employers must ensure that their plans reflect consideration and use of commercially available safer medical devices.
- Engineering Controls and Work Practices -- emphasizes the use of effective engineering controls, to include safer medical devices, work practices, administrative controls and personal protective equipment.
- Emphasizes that employers should rely on relevant evidence in addition to FDA approval to ensure effectiveness of devices designed to prevent exposure to bloodborne pathogens.
- Multi-Employer Worksites -- focuses on employment agencies, personnel services, home health services, independent contractors, and physicians in independent practice.
- Adds most recent guidelines from the Centers for Disease Control on vaccinations against the Hepatitis B virus. Incorporates CDC's guidelines on post exposure evaluation and follow-up for HIV and the Hepatitis C virus.
- Requires effective training and education for employees whenever safer devices are implemented. Stresses "interactive" training sessions rather than just the use of films or videos that do not provide the opportunity for discussion with a qualified trainer.

- Replaces and updates appendices. Includes the following: examples of committees in health care facilities; sample engineering control evaluation forms; an Internet resource list; a "fill-in-the-blanks" sample exposure control plan; and CDC guidelines pertaining to HIV exposure, control and prevention of hepatitis C, and hepatitis B vaccinations.

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49872

SAMPLE SHARPS INJURY LOG

Injury ID (Please leave blank.)

Facility ID (Please leave blank)

Please complete a Log for each employee exposure incident involving a sharp.

Fill in the one circle corresponding to the most appropriate answer. Use block print and avoid touching lines.

Institution: _____ Department: _____

Address: _____ Page # _____ of _____

City: _____ State: _____ Zip code: _____

Date filled out: _____ by: _____ Phone number: () _____

Facility injury ID#	Date of injury	Time of injury	optional
<input type="text"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> : <input type="text"/>	Sex <input type="radio"/> Male <input type="radio"/> Female
	month / day / year	<input type="radio"/> am <input type="radio"/> pm	Age <input type="text"/>

Description of the exposure incident:

Job classification:

MD Nurse

Medical assistant

Phlebotomist /lab tech

Housekeeper/Laundry

CNA/HHA

Student, type _____

Other _____

Department/Location:

Patient room Emergency dept

Operating room Procedure room

CCU/ICU Home

Clinical laboratory

Medical/outpatient clinic

Service/utility area (disp rm./laundry)

Other _____

Procedure:

Draw venous blood Heparin/saline flush

Draw arterial blood Cutting

Injection, through skin Suturing

Start IV/set up heparin lock

Unknown/not applicable

Other _____

Did the exposure incident occur:

During use of sharp Disassembling

Between steps of a multistep procedure

After use and before disposal of sharp

While putting sharp into disposal container

Sharp left, inappropriate place (table,bed,etc)

Other _____

Body part:

(check all that apply)

Finger Face/head

Hand Torso

Arm Leg

Other _____

Identify sharp involved:

(if known)

Type: _____

Brand: _____

Model: _____

e.g. 18g needle/ABC Medical/"no stick" syringe

Did the device being used have engineered sharps injury protection?

yes no don't know

Was the protective mechanism activated?

yes-fully yes-partially no

Did the exposure incident occur:

Before During After activation

Exposed employee: If sharp had no engineered sharps injury protection, do you have an opinion that such a mechanism could have prevented the injury? yes no

Explain: _____

Exposed employee: Do you have an opinion that any other engineering, administrative or work practice control could have prevented the injury? yes no

Explain: _____

Based on proposed revisions to 8CCR 5193 effective 1/15/99 & 8/1/99



Front Page

10 States Act to Improve Health-Care Needle Safety

Move to protect workers is spreading nationally

By William Carlsen
and Reynolds Holding
CHRONICLE STAFF WRITERS

Lawmakers in 10 states have introduced legislation to protect health care workers from potentially deadly needle sticks, joining a national movement that started in California last year with a model law requiring safe needle technology in medical facilities.

Similar bills designed to stop the spread of hepatitis, HIV and other lethal diseases from accidental needle injuries are also being drafted in nine other states and the District of Columbia.

And in the first public comment on the needle stick epidemic by a cabinet-level official of the Clinton administration, Labor Secretary Alexis Herman announced yesterday that the federal government is also considering action to protect health care workers.

"I want to reduce the perils that our nation's health care workers face from exposure to bloodborne pathogens that result from needle sticks and other sharp cuts," Herman said.

Last fall, California Governor Pete Wilson signed legislation that will require hospitals, clinics and other health care facilities by August to shift from conventional needles to needles and syringes incorporating safety features designed to prevent needle injuries.

The bill, sponsored by Assemblywoman Carol Migden, D-San Francisco, was prompted by a series of articles in The Chronicle that found that as many as 1 million medical and public safety workers are injured by needles each year.

The series reported that syringes and blood-drawing devices with safety mechanisms like sliding plastic sheaths and self-blunting needles have been on the market for nearly a decade, but state and federal regulators have not required employers to provide the devices to their workers.

From Washington state to New Jersey, legislators are seeking ways to stop an epidemic that over the past decade has struck down tens of thousands of nurses, doctors and medical technicians — and are looking to California for direction.



10 States Act to Boost Workers' Needle Safety

► NEEDLES

From Page 1

"It's certainly heating up," said Martha Davis, director of California's Sharps Injury Control Program. "I've been getting calls about California's legislation from all over the country. They want to know how our law is going to work, the nuts and bolts."

New Jersey Assemblyman Alan Augustine, a Republican, recently introduced safe-needle legislation in his home state. "This is just such common sense, and it is something that cries out to be passed," he said.

"This should have been done a decade ago."

Augustine said that after a hearing Thursday in Trenton, in which medical workers testified about contracting HIV and hepatitis from needle sticks, the Assembly's health committee unanimously approved his bill.

"There has been tremendous interest in this, and I expect it to pass the legislature without debate," he said.

A similar bill was introduced last month in Maryland's General Assembly by Dr. Dan K. Morbaum, a Democratic delegate from Baltimore County who is also an emergency room doctor.

In Washington, 30 legislators in both houses of the legislature are sponsoring bipartisan emergency safety-needle legislation.

Last week in Illinois, the health and safety director of the nation's

largest health care workers organization, the Service Employees International Union, testified that 3,000 workers a day are being stuck by needles in the United States.

"The psychological cost for the health care worker and their family for each needle stick can be devastating," Bill Borwegen told the state's legislators. Workers often must wait for six months to find out whether they have contracted a disease, he said, and some must take anti-HIV drugs with severe side effects.

At the conclusion of the hearing, the Human Services Committee of the Illinois House of Representatives unanimously approved legislation that would require needleless systems in facilities employing public workers and would fund research into safe-needle technology.

Borwegen, whose union has been actively pushing for safe-needle legislation across the country, said he has been heartened by the response from state lawmakers.

"There is clearly a national

NATIONAL MOVEMENT FOR SAFE NEEDLES

Nineteen states and the District of Columbia are in the process of creating laws requiring medical facilities to provide safe needles to health care workers.



Chicago Graphic

trend," he said. "And acceptance has been remarkably bipartisan."

But Borwegen had less charitable words for federal regulators. Without a federal mandate, each state law will end up with somewhat different laws, leading to confusion, especially for the manufacturers of safe-needle devices, he said.

"This is why we need federal action," he explained. "But while the federal government procrastinates, health care workers are dying."

Labor Secretary Herman was vague yesterday about what, if any,

action the federal government plans to take.

She noted that the department's Occupational Safety and Health Administration asked last year for the public's suggestions on ways to prevent the injuries, and OSHA is currently analyzing nearly 400 responses.

"I am confident that our efforts will soon mean that health care workers will no longer place their own well-being in jeopardy when administering to others," Herman said.

Front page

Hospitals, Clinics Tell Of Needle Sticks

In reports, many ask that OSHA require the use of safety devices

William Carlson, Chronicle Staff Writer
Wednesday, March 17, 1999

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URL: http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/1999/03/17/MN28033_DTL

Hundreds of the nation's medical facilities have documented high rates of needle sticks among their workers and report that safe needle devices dramatically reduce the number of potentially deadly injuries.

More than 600 reports from hospitals, clinics and other medical facilities are under review by the U.S. Occupational Safety and Health Administration. The reports, filed last fall, overwhelmingly support calls for medical facilities to provide safety needles to their workers -- and increase pressure on the workplace safety agency to direct those facilities to do so.

"It's criminal that OSHA has not acted (on these responses), while health care workers continue to die," said Andy Stern, president of the Service Employees International Union. "Safe technology is on the market and it is now being used successfully, as these OSHA responses show. There's no excuse now for the government to delay."

Last summer, OSHA put out a request to medical centers across the country for feedback on the extent of needle stick injuries and specifically asked whether safety devices were working.

Over the next several months, reports from medical facilities of every size and from nearly every state poured into the agency's Washington headquarters.

The responses reveal that needle-stick injuries are a serious and pervasive problem, and that the use of safety needles has led to significant declines in needles injuries.

"Implementing safety devices has been most effec-

tive at the medical center," was a typical response from Karen Miller, an infection control specialist at the 400-bed Borgess Medical Center in Kalamazoo, Mich. "There was an 86 percent drop in sharps injuries (in blood collection) in one year."

The response was similar at Logan Hospital and Medical Center, a 50-bed facility in Guthrie, Okla. "Needle sticks decreased from 59.5 to 15.4 per 100 occupied beds after retractable IV catheter (needles) were introduced," said associate chief nursing officer Jan Ruhl.

Beth Israel Deaconess, a large teaching hospital in Boston, reported similar success with safety needles, reporting "a 60 percent reduction of reported needle stick injuries institution-wide."

The Health Care Association of New York State, representing more than 450 hospitals, nursing homes, home health care agencies and other medical centers, told OSHA that "safer medical devices should be part of an overall health and safety program."

The agency's request for reports followed a series of Chronicle articles last April reporting that U.S. medical workers suffer up to 1 million accidental needle sticks each year and thousands of nurses, doctors, lab technicians and public safety workers have been infected with HIV, hepatitis and other lethal diseases.

Last September, California enacted legislation that will make it mandatory for health care facilities in the state to switch to safe needle devices by August 1. Ten other states this year have introduced safe needle legislation modeled on California's law, with nine other states and the District of Columbia drafting similar laws.

Safe needles advocates are concerned that different state laws could cause confusion, especially among needle manufacturers, and they want OSHA to enforce uniform regulations nationwide.

In a meeting last week with five unions, however, OSHA officials said the agency was not prepared to act now, noting that it was still analyzing the more than 600 responses it received.

One proposal under consideration, according to the union officials present at the meeting, is a directive by OSHA to its field inspectors to require hospitals to evaluate safe needle devices.

OSHA officials have declined several requests for comments and interviews. The agency is preparing a report on the responses it received, which will be made public within a few weeks along with recommendations, according to one staff person.

The American Hospital Association recently issued a 12-step guide for its members to help them evaluate and replace conventional needles with safety needles, but the powerful lobbying group is opposed to mandatory federal regulation.

"The problem is that anyone can come up with a device and say it is a safety needle," said Rick Wade, the association's senior vice president for communication.

He said the health care industry is being "squeezed" for financial resources, and before OSHA mandates the use of safety needles, the government and manufacturers should develop a nationwide standard.

"There are a wide range of different devices," he said. "We need to get everyone to agree on what constitutes an effective safer needle."

But Wade said his organization has not proposed to OSHA or any other government agency what process would be needed to set such a standard and who would make the determination.

In a 21-page response to OSHA's request for information, the nation's largest needle manufacturer, Becton Dickinson, urged OSHA to issue new enforcement rules making it clear to employers that they have to provide their workers with safe needle devices.

But the company argued against any single safety needle standard, saying that it would kill off innovation and competition.

Noting that it manufactures a wide range of safety needles, Becton Dickinson said it "found that many employers do not make these new products available to their employees. Without (enforcement action), the adoption of 'safety devices' will take much longer to achieve."

Included among the OSHA responses was a study by the Department of Veterans Affairs that tested safety needles and recommended that a number of them be adopted. And ECRI, a health care research institute, submitted a report on safety needles it completed last year that recommended a number of the devices after thorough testing.

Meanwhile, health care worker unions are furious that OSHA has not acted more than three months after the deadline for the responses.

"OSHA is the first agency that should act," said SEIU's Stern. "Instead the states have acted, the congress is acting, but OSHA is delaying doing anything."

Susan Wilburn, occupational health specialist for the American Nurses Association, underscored the urgency for action.

She said she was notified last week that two nurse members learned recently that they had tested positive for HIV and hepatitis C, as a result of accidental needle sticks. In both cases, the injuries would have been prevented by safety needles, she said.

"I believe OSHA will come out with (an enforcement policy) later this year," she said. "Is it soon enough? Absolutely not."

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Safer Needles Save Money, Report Says

Lost work time, counseling, liability costs would drop

William Carlsen, Chronicle Staff Writer

Friday, December 18, 1998

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URL: <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/1998/12/18/MN44912.DTL>

California health care facilities could save more than \$100 million a year by using safety needles to protect their workers from accidental needle sticks, according to a state study released yesterday.

The study by top state worker safety officials found that the new devices will cost more but that the cost will be offset by the savings from the reduced need for testing and treatment of needle injuries, which can transmit HIV, hepatitis and other serious diseases.

In September, California became the first state in the nation to pass legislation mandating the use of safe needle technology to prevent an epidemic of needle injuries that have struck down tens of thousands of health care workers over the past decade.

Yesterday, the seven-member Occupational Safety and Health Standards Board, the rule-making body for worker safety, formally adopted emergency regulations based on the legislation by Assemblywoman Carole Migden, D-San Francisco.

Migden introduced her bill after a series of stories by The Chronicle in April that found that 1 million health care and public safety workers each year are injured by needle sticks -- more than 100,000 of them in California.

Migden's bill requires state medical facilities to switch by August from conventional needles to syringes with safety features like sliding sheaths or self-blunting needles. Syringes with safety features have been on the market for years but have rarely reached the hands of workers.

The projected savings from the use of safety needles are considered "conservative," the study said, because they do not account for the full cost of needle stick injuries -- ranging from the additional costs of emergency room visits, lost work time, counseling, lost productivity, managerial and personnel expenses and liability costs.

The state's landmark regulations could also result in a small increase in the num-

ber of health care personnel in the state, the board's staff said, "as it becomes known that the California health care industry provides better worker protection than the rest of the nation."

Under the emergency regulations adopted by the board yesterday, health care facilities will have to start next month to collect needle injury information, including the type and brand of needle involved.

The standards board, which unanimously approved the emergency regulations without discussion, will hold additional meetings next year, including a public hearing in February, before making the regulations permanent.

"This is a love-fest," said Shannon Sutherland of the California Nurses Association after representatives from the state health department and the hospital association praised the new regulations in comments before the board.

Roger Richter, who represented more than 600 hospital members of the California Healthcare Association, told the board that his group strongly supported the new regulations even though they "would add considerable costs."

Allan LoFaso, Migden's representative at the meeting, said afterward that the new regulation "will save a lot of lives in the workplace." Speaking for Migden, he said, "she hopes that other states and the federal government will now follow suit and protect workers throughout the country."

The report released yesterday estimates that each needle stick costs employers between \$2,234 and \$3,832, while the median increase in the cost of a safer needle device is 24 cents.

The agency estimated that over time, as the price of the safety devices falls because of their increased production, the savings benefits will increase.

The staff of the standards board estimated that the increased cost of the safer needle technology will cost employers about \$104 million a year. Employers will also have increased record-keeping costs of \$81 million a year for their required needle stick injury logs.

The savings on screening and treatment of needle stick injuries, however, were estimated at \$291 million, for a net savings of \$106 million each year.

The staff estimated that private businesses, such as hospitals, laboratories, nursing care facilities, dentist's offices and funeral services, will save about \$95 million annually, while state and local hospitals and emergency services will save about \$10 million.

Epidemic Ravages Caregivers

Thousands die from diseases contracted through needle sticks

By Reynolds Holding and William Carlson
Chronicle Staff Writers

University of Wisconsin Hospital
Madison, Wis., 1978

Dr. Dennis Maki, chief of infectious diseases, was unnerved.

On a winter morning a few weeks earlier, a urology technician was inserting an intravenous needle into a patient's arm when the device slipped, piercing the 55-year-old medical worker's finger.

Not long after, the technician fell seriously ill with hepatitis B, and Maki suddenly realized his hospital — and perhaps the rest of the country — had a serious problem on its hands.

"This totally innocent victim had become sick," he said, "and we had to try to understand why."

So he and nurse Rita McCormick began to do some detective work. Their groundbreaking research would sound the first alarm over a deadly epidemic of needle sticks that was striking down health care workers at a startling rate.

Over the next 20 years, thousands of the nation's medical workers would die of AIDS, hepatitis and other blood-borne infections. Tens of thousands more would contract other devastating diseases. Hundreds of millions of dollars would be spent every year on replacing and treating dying and infected workers.

And now, researchers fear, a new needle stick threat has been discovered: Untold numbers of female health workers may have suffered serious birth complications from transmissions of incompatible blood.

But it didn't have to happen.

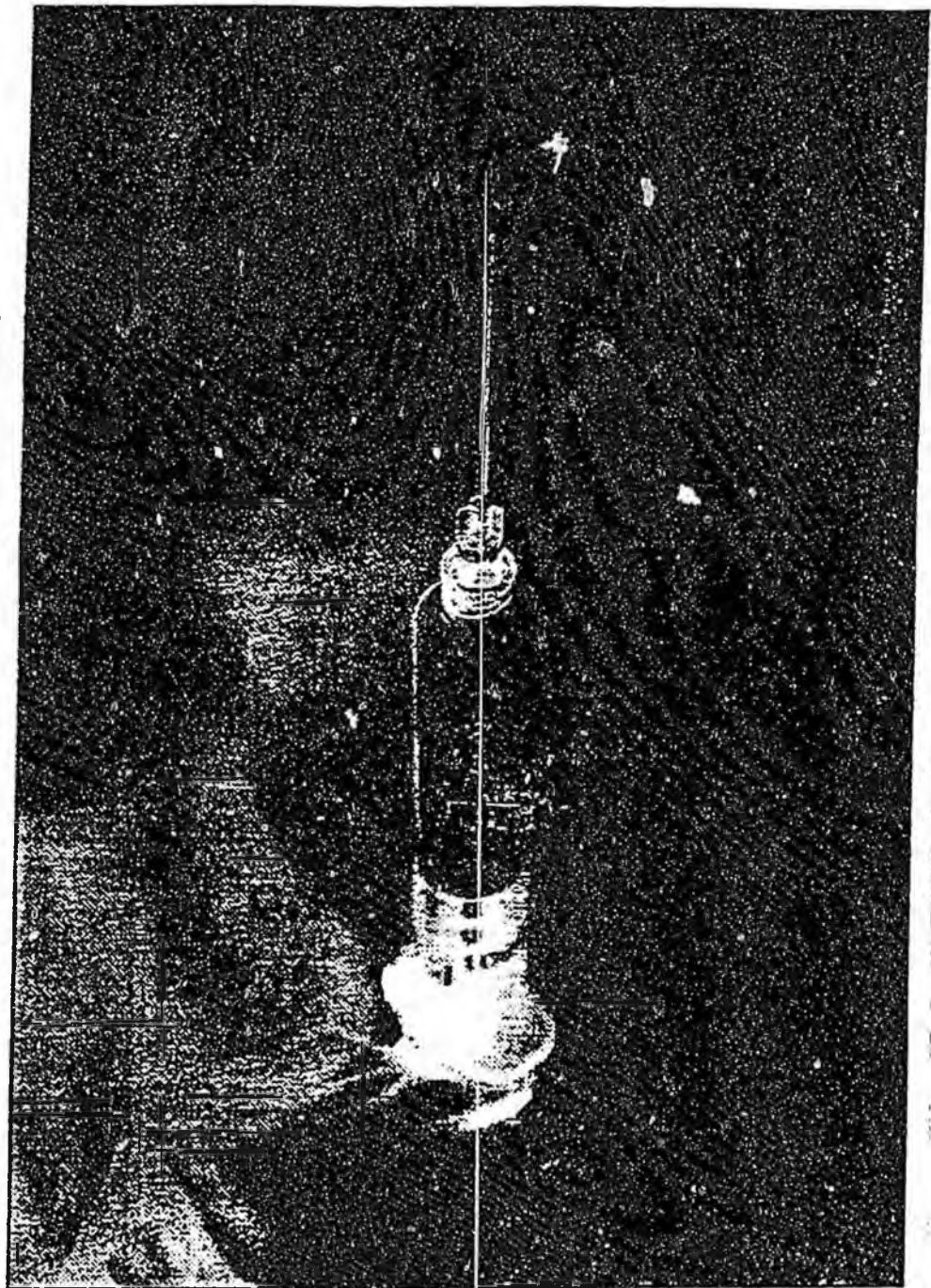
Needles with simple safety features — often costing just pennies more to make — were available at

Needle sticks each year: 1 million

Health workers infected: At least 50,000-60,000 have contracted serious infectious diseases from needle sticks in the last decade.

AIDS cases: One health care worker a week, on average

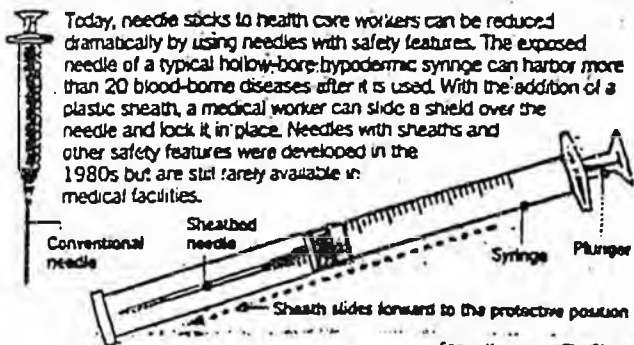
Occupational risk: Medical workers are four times more likely to die from a job-related injury than police officers.



PHOTOILLUSTRATION BY CHRIS STEWART/THE CHRONICLE

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SIMPLE SAFETY FEATURES



STEVE KLASZLEY / The Chronicle

INSIDE

► **STICK VICTIM:** The story of Ellen Dayton, who contracted hepatitis C and the AIDS virus. **A6**

► **A NEW RISK?** Needle sticks may cause serious pregnancy complications. **A7**

ABOUT THE SERIES

"Deadly Needles" is a three-part series about how the medical industry and government let deadly needle stick injuries run rampant among health care workers. Today's installment covers 1978 to 1987, when the needle stick epidemic becomes apparent to the medical establishment.

► **DAY 1 (1978-1987):** A needle stick epidemic ravages health care workers — but no one takes action.

► **DAY 2 (1987-1992):** Health care workers demand action, but the medical establishment delays.

► **DAY 3 (1992-1998):** The medical industry and government break their promises to protect workers.



► Coordinated coverage on television and the internet **A8**

Needle Stick Epidemic

From Page 1

least 10 years ago. Today, however, few have reached the hands of health care workers, even at the nation's most technologically advanced institutions.

In a six-month investigation, *The Chronicle* has uncovered a chilling pattern of indifference and neglect within the nation's medical industry.

Hundreds of interviews and thousands of pages of documents show that the nation's leading needle manufacturer suppressed the market for safer needles, at times using tactics that have raised serious legal and ethical questions.

Health care providers, under intense pressure to contain costs, balked at purchasing safer needles, calculating that it was cheaper to buy conventional needles than to save their workers' lives.

And, perhaps most troubling of all, government watchdog agencies failed to enact and enforce regulations that would have protected health care workers from danger.

"It's disgusting that we can allow people to die when we can easily prevent it," said Andrew Stern, president of the Service Employees International Union, the nation's largest health care workers' union.

"When a crane falls or a mine caves in, the government rushes to do something about it. But when health care workers are dying, it's invisible."

Two decades after Maki's unsettling discovery, the needle stick epidemic rages on. This year, the nation's 8.8 million nurses, doctors, laboratory technicians and hospital housekeepers will suffer 1 million needle injuries. Thousands of them will get hepatitis and other lethal diseases.

This is the story of an epidemic that could have been prevented — how it emerged, why calls for action went unanswered and how health care workers were betrayed by the people who were supposed to protect them.

Becton Dickinson Headquarters
Franklin Lakes, N.J.

Becton Dickinson and Company started as a small medical device import business in 1897, about 50 years after the first hypodermic syringe entered the market.

Even then, medical experts realized they had a problem: Blood-contaminated hollow-bore needles could transmit infectious diseases with deadly efficiency.

Researchers would soon report cases of diphtheria, malaria and syphilis contracted from needles. The variety of diseases would grow into the dozens, with herpes, tuberculosis, and others joining the list.

By the 1960s, executives of Becton Dickinson knew that hepatitis B could be transmitted by needles — through the reuse of contaminated needles and through accidental needle sticks.

"It was probably the reason Becton Dickinson is a \$2 billion company today," said company executive Joseph Welch at a deposition eight years ago.

Welch explained that the soaring number of hepatitis B cases created a huge market for disposable syringes, which would make

1981: Page A7 Col 5

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reusable needles obsolete.

With cash raised from its first public stock offering in 1962, Becton Dickinson began producing tens of millions of the disposable products.

The new disposable syringes reduced infectious transmissions between patients but did nothing to decrease the accidental needle sticks that were spreading diseases to health care workers.

And the company's attention soon turned to making needles sharper, not safer.

The reason: In the late 1970s the Japanese firm Terumo had begun to flood the U.S. market with cheaper, sharper needles.

Within two years, Becton Dickinson overhauled its manufacturing facilities and was mass-producing razor-sharp needles that, in the words of a company advertisement, go through the skin "like butter. Every time."

University of Wisconsin
Madison, Wis.

In 1981, Dr. Maki and nurse McCormick were ready to publish the first systematic study of needle sticks in the United States.

They had studied 316 reported needle stick injuries over a 47-month period between 1975 and 1979. They investigated how the injuries occurred, who the victims were and how the number of accidents could be reduced.

The researchers were stunned by the high rate of needle sticks at their hospital — an average of one out of every 12 workers reported being injured every year.

"But we believe," they wrote, "these figures underestimate the magnitude of the problem."

It was the first indication that needle sticks were a far more serious problem than anyone had suspected.

And, for the first time, health care workers were warned not to recap needles — a practice Maki and McCormick found frequently led to needle sticks.

Becton Dickinson Headquarters
Franklin Lakes, N.J.

Meanwhile, times were good for Becton Dickinson.

The company had overcome the threat from Terumo. Its strategy of signing needle distributors to exclusive, long-term contracts kept Terumo and other competitors at bay and helped establish Becton Dickinson as the world's largest needle manufacturer. It is a position the company maintains today with an estimated 70 percent share of the U.S. market.

But by the early 1980s the dangers of needle sticks had begun to spawn new ideas for making needles safer.

Becton Dickinson insists that it has led the push for safer needles.

"Becton Dickinson's long



tion in the safety arena," said company spokesman Ronald Jasper, "provides indisputable proof of our commitment to protecting health-care workers and other users of our products."

In 1981, Becton Dickinson engineer Michael Bennett filed a patent for a new needle shield. At the same time, his colleagues developed designs for oversized needle covers that make syringes easier to recap as well as devices for clipping off needle points.

But Becton Dickinson did not produce any of the devices, even though "the needle stick problem was obvious at that point," said former Becton Dickinson engineer Robert Stathopoulos, an independent consultant who now works for rival manufacturers.

"The company thought that customers would not pay extra money for any of these safety measures, and they would just cut down on profitability."

In a 1990 suit filed by a needle stick victim, Becton Dickinson Medical Director Edward Duffie offered a candid assessment of the company's response to the needle stick epidemic:

"I don't think we did anything, specifically."

San Francisco General Hospital San Francisco

Dr. June Fisher believes she would have been wasting her time if in the 1970s she had tried to convince hospital administrators that needle injuries were a problem.

"If we had had a meeting on sticks at that point, no one would have come," said Fisher, a medical device expert who set up a health and safety project at San Francisco

General Hospital in 1978.

"The approach would have been to modify behavior," she said, "to tell health care workers to be careful, to take their time."

That attitude persisted across the nation throughout the decade, undermining efforts to measure the epidemic's scope and leading

telling employees to be more cautious — or worse, disciplining them if they stuck themselves.

Some critics insist that the epidemic was ignored because of who the victims were: mostly nonunionized female or minority nurses, housekeepers and orderlies with little power.

"We are not considered important," laundry worker and multiple-stick victim Gwyen Spruill told a congressional committee in 1992. "Our work is not considered anything at all."

Even medical workers with clout rarely complained of their injuries, let alone demanded protection.

"A stick has always been viewed as a rite of passage, a bat-

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tle scar, a point of pride — as in, 'I've been stuck six times and never been infected,'" said Patricia Wetzel, a Texas doctor who contracted the AIDS virus from a needle stick in 1991.

"The attitude is that if you think about yourself and get protective equipment, you're a sissy."

Food and Drug Administration Rockville, Md.

In 1976 lawmakers gave the FDA the authority to regulate medical devices. The agency's mandate was to ensure the "efficacy and safety" of such products.

But any items marketed before 1976 were exempt from review, which, in effect, allowed manufacturers to continue producing conventional needles.

By 1983 the agency knew conventional needles could be made to be safer, because entrepreneurs had begun asking the agency to review new syringes with safety features.

But the agency took no action to compel the manufacturers of conventional needles to make safer devices.

Occupational Safety and Health Administration Washington, D.C.

OSHA issued voluntary guidelines on hepatitis B to the nation's health care employers in 1983.

The agency's notice described the viral disease in detail and recommended work practices including hand washing and the use of a new hepatitis B vaccine.

But OSHA failed to mention the hazards of recapping needles or to convey the urgency of the needle stick problem.

Centers for Disease Control Atlanta

By the early 1980s, CDC officials knew they had a serious problem with accidental needle sticks.

Thousands of health care workers were contracting hepatitis B from needle sticks every year — and hundreds were dying.

In 1985, CDC officials came out with their recommendations to health care workers: Use gowns, gloves, masks and the hepatitis vaccine as protections against infection.

But by then, needle sticks were already spreading a new disease through hospitals and the ranks of health care workers — a mysterious infection with no known cure that was killing its victims with brutal, tragic efficiency.

The appearance of the AIDS virus did what the hepatitis crisis could not: It put the government and the medical industry on alert.

"Had AIDS not happened onto the scene," Duffie testified in a needle stick victim's 1990 lawsuit against Becton Dickinson, "little or nothing would have been made of the ... ongoing risks ... to the health care workers."

Sinai Hospital Baltimore

In February 1982, a 33-year-old housekeeper at Sinai Hospital in Baltimore was taking out the garbage when a discarded needle pricked the palm of his hand.

Fourteen months later, he checked into the hospital's outpatient center complaining of fever, chills, shortness of breath and a cough that wouldn't go away.

Tests were run; his history was checked. The final diagnosis: He had AIDS, and the only way he could have gotten it was from the needle stick the year before.

On June 12, 1983, the house-



*"It's disgusting that we
can allow people to die
when we can easily
prevent it."*

ANDREW STERN,
Service Employees
International Union president

Medical Agencies Fail to Order Safer Needles for Health Workers

keeper died, leaving behind a 9-year-old child and a girlfriend six months' pregnant. A letter in the March 1984 issue of the medical journal *Lancet* noted dryly that he was the first health care worker known to have contracted the AIDS virus from a needle stick.

The news jolted the medical community. Hospitals and manufacturers began to rethink their passive responses to the dangers of conventional needles.

Still, Becton Dickinson was cautious. Standard needles had lifted the company to the top of the industry, and a sudden move toward alternative products could open the market to rival firms and erode Becton Dickinson's market share — or worse, expose the company to lawsuits over its unshielded needles.

Offices of Dr. David Atefi Rossville, Ga.

On April 15, 1985, medical assistant Jenia Hamley was stuck in the left index finger while recapping a Becton Dickinson needle.

Five months later, she tested positive for hepatitis B. Worse, Hamley had been five months' pregnant at the time of the stick, and she claimed the infection caused brain damage to her newborn son.

Hamley contended that she had merely followed the product's instructions, which recommended recapping before throwing the needle away. So she

sued Becton Dickinson, arguing that its product was unreasonably dangerous.

The company responded that its instructions to recap the needle met industry guidelines in 1985 — even though four years earlier the study by Maki and McCormick had specifically warned that recapping was a leading cause of needle sticks.

The company also argued that Hamley was a trained medical ex-

pert who needed no warning because she knew the dangers of needles better than the company did. It is a defense the company uses to this day.

Becton Dickinson settled the case confidentially and denied liability.

"All of Becton Dickinson's products are safe when used as instructed," said company spokesman Jasper.

Administrative offices San Francisco General

Managers at San Francisco General Hospital were in the forefront of treatment of AIDS patients, opening the nation's first full AIDS ward in 1985.

But they responded to employee concerns about contaminated needles by merely urging workers to use more caution around needles and to slow down.

"Here was the premier AIDS center in the world, and there was such resistance — they just kept downplaying the risk to health care workers," said John Mehring, a health and safety officer for the Service Employee International Union.

Mehring and his union, which represented more than half a million medical workers across the country, finally realized that the battle for greater needle safety would never be won piecemeal, hospital by hospital.

So in September 1986, with several other unions that represented health care workers, SEIU petitioned OSHA to issue emergency regulations that would force hospitals to provide greater protections for their employees.

Thirteen months would pass before the agency finally responded to the petition. On Oct. 22, 1987, Assistant Labor Secretary John Pendergrass rejected it, stating that there was insufficient data to grant the emergency request.

Instead, OSHA said it would develop tough new workplace regulations to protect health care workers — a process that would involve sending notices to 600,000 employers, gathering comments and holding public hearings.

The process would be lengthy, but health care workers were optimistic that the agency was at last

ABOUT THE NUMBERS

The statistics for this series came from a number of sources:

The figure of 1 million needle sticks per year is an estimate from the International Health Care Worker Safety Center, based on data from 70 hospitals around the nation. Higher rates have been reported by the Centers for Disease Control and medical journals.

Estimates of the number of medical workers annually infected by the hepatitis B virus from needle sticks, which range from a high of 12,000 in the 1980s to the current figure of 1,000, have been reported by the Centers for Disease Control, the Occupational Safety and Health Administration and medical researchers. Death estimates of 200 to 300 a year in the 1980s are from the CDC and OSHA.

The number of workers contracting HIV from needle sticks — 50 to 60 a year — is an estimate by the International Health Care Worker Safety Center.

The hepatitis C needle stick cases have been poorly tracked, but most experts estimate the numbers to be in the thousands each year.

paying attention to the needle stick epidemic.

Ward 86 San Francisco General

In July 1987, a young nurse who asks to be identified only as Jane Doe was finishing the 11th hour of her 12-hour shift in the AIDS unit at San Francisco General.

She was exhausted as she withdrew an unsheathed needle from an intravenous line connected to a patient.

Safe line connectors with recessed needles were already in use at hospitals across the country. But they were unavailable at San Francisco General, where intravenous lines were still joined with a hypodermic needle held by adhesive tape.

As Jane Doe held up the intravenous fluid bag, the needle went through the bag and into her finger.

"I think I said, 'Oh, shit,'" she

said, recalling the horror moment. "I was struck by irony that in my three years as a nurse, I never had a needle stick."

Six weeks later, Jane Doe tested positive for the AIDS virus and became the first documented medical worker at the hospital to be infected with HIV through a needle injury.

She was the 13th confirmed case in the nation.

St. Joseph's Hospital Orange, Calif.

Nurse Norma Sampson is concerned about the constant posture of health care workers getting hepatitis B through needle sticks.

"Then, when I read about AIDS," she recalled, "I thought, 'Oh, boy, this is worse than hepatitis. People will surely die.'"

So Sampson came up with her own solution: A syringe with a simple plastic shield, that could slide over a needle. With the help of her relatives and a South Carolina engineer, Sampson refined her product.

In 1987, Becton Dickinson bought the rights to the device.

The manufacturer now had the technology in hand to produce a safer product — one that could slash the number of needle sticks and save thousands of health care workers' lives.

Tomorrow: Years of Delay

RELATED COVERAGE ON TV AND INTERNET

For more about "Deadly Needles" and Ellen Dayton's story, watch NewsCenter 4 at 6 p.m. Chronicle staff writers Reynolds Holding and William Carlsen will also appear on "Take Issue" with Pete Wilson on BayTV (Channel 35 in most systems) at 8 p.m.

For more details and dialogue about the "Deadly Needles," log onto www.sfgate.com.



Nurse's Life Changed in a Moment



By Reynolds Holding
Chronicle Staff Writer

If you had to have your blood drawn at the University of California drug clinic here at 18th and Folsom streets, you wanted Ellen Dayton to do it. She was that good.

Not good enough, though, to avoid an accident that strikes health care workers more than a million times each year.

It happened March 20, 1996. Dayton, a nurse practitioner, had just finished drawing blood from a young cocaine and speed addict infected with HIV. Holding the needle in her right hand, she reached across with her left, moving reflexively to catch three blood-collection tubes as they rolled toward a counter's edge.

The needle, filled with infected blood, pierced the side of her left index finger.

"I felt scared and stressed and panicked," she says, recalling the fateful moment. "And at the same time, there was this other voice minimizing things, like, 'No, it's not going to happen to me. I'm not going to get HIV.'"

Two months later, she tested positive for hepatitis C. Within 13 months she learned that she had HIV, the virus that causes AIDS. Today, she can no longer take care of the weak and the sick and the drug addicted because she must take care of herself.

Most days she feels so ill she cannot leave her couch. Her better days are usually consumed by medical appointments and arduous hours of treatment. And though it is not a life that has turned out as she had hoped, it is still one that she does not regret.

"I knew that I was working with people with HIV, but that was the commitment," she says. "And even knowing how dangerous it is, I felt I had to do it. I

wouldn't choose to do it differently. ... That's what I came to California to do."

Dayton, 55, came from a farm in upstate New York, growing up so poor that she will not speak of her childhood. She fled after high school, bouncing from New York City to Berkeley to Buffalo, becoming a single mother, going on welfare, eventually coming out as a lesbian.

In the early 1970s, she got a job at a battered women's shelter in Buffalo and "found out that what I really wanted to do was work with people," she says. "It really seemed I was a natural."

Dayton took night courses in human services, found a job working with the mentally ill and confirmed her talent for counseling.

"I loved it because I was good at it," she says.

But as she raised a teenage daughter, she struggled to make ends meet. Then, in 1980, she came to San Francisco.

Hired first as a drug and alcohol counselor, she soon got a job with the AIDS health project at San Francisco General Hospital, where she was drawn to the nurses and doctors dedicated to fighting the deadly disease.

"I began asking them about becoming a nurse practitioner because I saw it as something that I wanted to do," she says, "and I never really had that — a real goal."

It would be a difficult process: She studied for three years in a select program at the University of California at San Francisco while working in her spare time at San Francisco General. "It was probably the hardest thing I've done with my life," she recalls.

"But I made it. And I felt great."

By December 1995, Dayton was working two jobs, one at San



Francisco General and the other at the University of California drug clinic.

She did well, making more than \$60,000 a year and settling down with her partner. The possibility of contracting a disease from a needle stick was far from her mind.

"I knew that everyone got needle sticks," she says, "but it's one of those things where you think it (an infection) is not going to happen to you."

When it did happen, 10 weeks after she started her job at the clinic, Dayton was using a blood-drawing needle without a safety shield, the only device available. She calmly finished her work with the patient, reported the accident and within hours began taking AZT and other drugs to fend off the possibility of an HIV infection.

The powerful drugs made her nauseous almost immediately. Soon she was too ill to work. And then the guilt set in.

"I blamed myself in the beginning," she recalls. "And yet I

knew I was good at drawing blood. I was really good. Lots of times when someone couldn't get into a (patient's) vein, they would call me in."

"And if there had been a needle with a safety shield on it, I would have used it, and the needle stick wouldn't have happened. So I don't blame myself now."

Instead, she blames the needle manufacturer — Becton Dickinson and Company — for selling a product that she contends in a lawsuit is unreasonably dangerous. Becton Dickinson denies liability.

But her life has changed forever.

"It's so horrid what my family and I have had to go through this last year and a half," she says, "and it's not like there's an end to this. It keeps going on and I don't know where it's going."

"I don't know if I'm ever going to get better, to feel the same again. I sort of feel like I'm probably not. And some days it's just, I just cry."

Ellen Dayton, who contracted hepatitis C and HIV from a needle stick two years ago, spends her days at medical appointments and resting at home. Most days she cannot leave her couch.

"I knew that everyone got needle sticks, but it's one of those things where you think it (an infection) is not going to happen to you."

ELLEN DAYTON

Female Victims Face Special Risks

Incompatible blood transfers could seriously threaten fetuses

By William Carlson
Chronicle Staff Writer

Earlier this year, a medical researcher made an ominous discovery: Female health care workers exposed to incompatible blood through needle sticks could suffer serious pregnancy complications, including miscarriages, or the mental retardation or death of their infants.

The exposure risks appear to be very low, but with more than 1 million needle sticks every year, thousands of female medical workers unknowingly may have been affected over the last several decades. And the discovery underscores the potential dangers from needle stick exposure that still have not been fully explored.

The new discovery involves the Rh factor, or antigen, that coats the surface of red blood cells. When a woman's blood is Rh negative — not coated with the antigen — and it comes into contact with coated Rh-positive blood, her blood forms antibodies in reaction. The antibodies stay with her for life.

If she then conceives a fetus that has inherited the Rh-positive factor from its father, the antibodies in her blood during her pregnancy pass through the placenta into the fetus and attack the fetus' blood. If not treated, the fetus suffers severe anemia, which leads to brain retardation or death.

"It's definitely an important concern that has to be addressed," said Janine Jagger, a University of Virginia professor and health care safety specialist who first made the connection between the Rh problem and needle sticks.

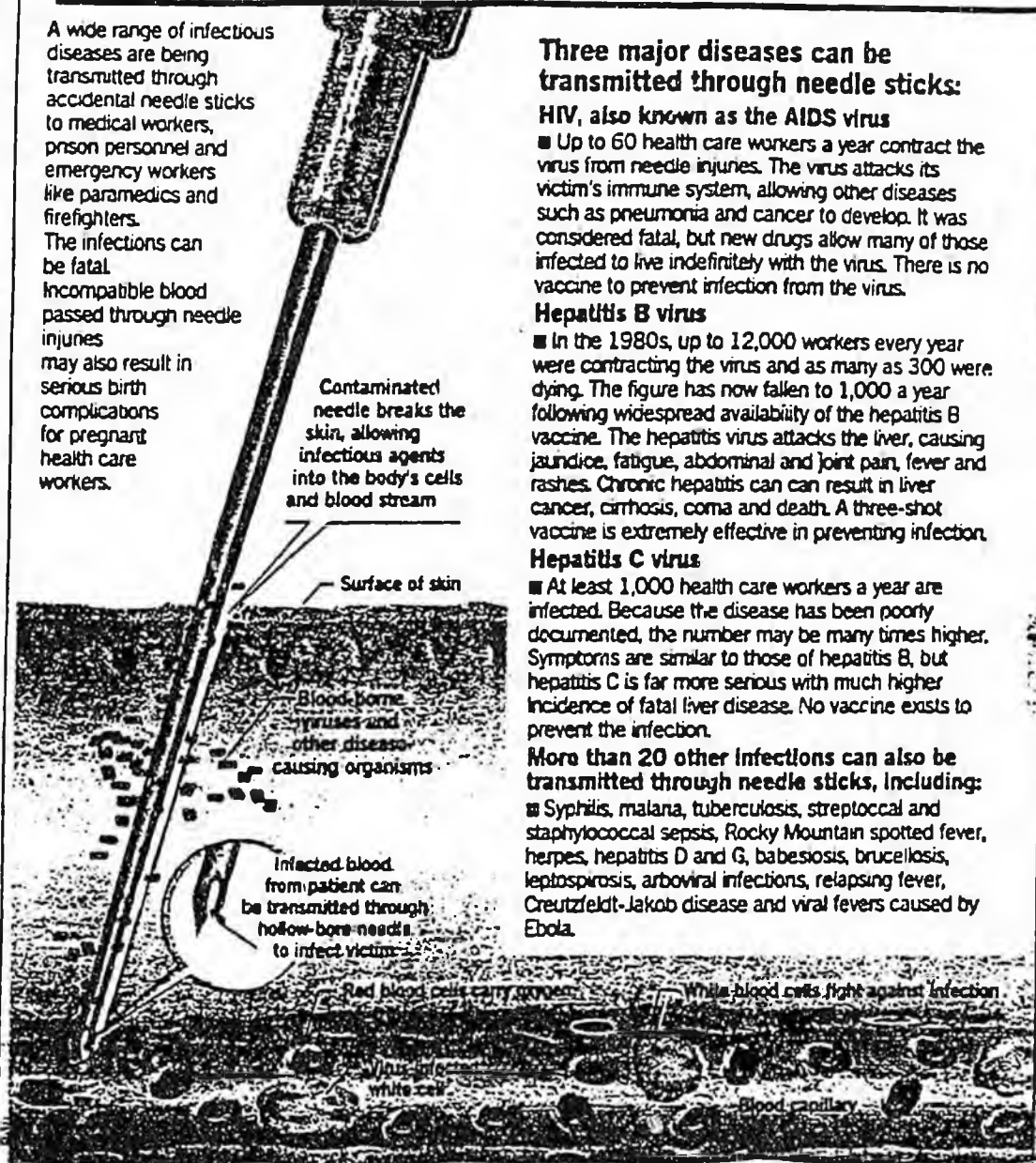
Her discovery is so recent that no hard data has been collected yet or scientific papers written. Jagger and her staff at the International Health Care Worker Society Center in Charlottesville, Va., are preparing a research study for publication.

Jagger stumbled on the problem because she is Rh negative and had been tested for the antibodies during several pregnancies.

"I knew that exposure to Rh-positive blood caused childbearing problems," she said. "So I started calling some experts I knew, thinking that of course this had been already considered in light of the needle stick prob-

DISEASES TRANSMITTED THROUGH NEEDLE STICKS

A wide range of infectious diseases are being transmitted through accidental needle sticks to medical workers, prison personnel and emergency workers like paramedics and firefighters. The infections can be fatal. Incompatible blood passed through needle injuries may also result in serious birth complications for pregnant health care workers.



Three major diseases can be transmitted through needle sticks:

HIV, also known as the AIDS virus

■ Up to 60 health care workers a year contract the virus from needle injuries. The virus attacks its victim's immune system, allowing other diseases such as pneumonia and cancer to develop. It was considered fatal, but new drugs allow many of those infected to live indefinitely with the virus. There is no vaccine to prevent infection from the virus.

Hepatitis B virus

■ In the 1980s, up to 12,000 workers every year were contracting the virus and as many as 300 were dying. The figure has now fallen to 1,000 a year following widespread availability of the hepatitis B vaccine. The hepatitis virus attacks the liver, causing jaundice, fatigue, abdominal and joint pain, fever and rashes. Chronic hepatitis can result in liver cancer, cirrhosis, coma and death. A three-shot vaccine is extremely effective in preventing infection.

Hepatitis C virus

■ At least 1,000 health care workers a year are infected. Because the disease has been poorly documented, the number may be many times higher. Symptoms are similar to those of hepatitis B, but hepatitis C is far more serious with much higher incidence of fatal liver disease. No vaccine exists to prevent the infection.

More than 20 other infections can also be transmitted through needle sticks, including:

■ Syphilis, malaria, tuberculosis, streptococcal and staphylococcal sepsis, Rocky Mountain spotted fever, herpes, hepatitis D and G, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease and viral fevers caused by Ebola.

Why female workers with Rh-negative blood may face an added risk

At this time, no test is given to detect or monitor a change in Rh factor in new needle stick victims.

1 Needle stick

Nurse with Rh-negative blood comes in contact with Rh-positive blood through accidental needle stick.



2 Blood transfer

Nurse develops antibodies to the Rh-positive blood. These antibodies stay with her for life.

3 Potential dangers during pregnancy

If a health care worker conceives an Rh-positive fetus, her Rh antibodies pass through her placenta into the bloodstream of the growing fetus. The antibodies attack the fetus' blood. If not treated, the fetus may suffer brain damage or may die. Treatment usually involves transfusions of unsensitized Rh-negative blood to the fetus while in the womb or total transfusions after the baby is born.



Sources: Centers for Disease Control, Occupational Safety and Health Administration, International Health Care Workers Center, "The Human Body," "The New Good Housekeeping Family Health and Medical Guide" and Chronicle research

lem.

"I got these long silences. No one had even thought about it."

Jagger and other experts say the critical question is how much blood it would take to trigger the antibody reaction and whether the amount transmitted by a needle stick would be sufficient.

"There's no question that some needle sticks are serious enough to cause it," Jagger explained. "For the majority of needle sticks, it is very unlikely."

Dr. John Bowman, a senior scholar at the University of Manitoba in Canada and a world-renowned expert on the Rh factor, is also cautious. "Obviously, it can happen through a needle stick," he said. "But compared to the transmission of the HIV or hepatitis viruses, the risk is very low."

He also pointed out that only 15 percent of the female popula-

tion has Rh-negative blood, and the other 85 percent who are Rh positive would be completely unaffected.

Jagger said the most likely cases in which the transfer of the Rh factor would occur would be when blood is drawn into a syringe, then accidentally injected into an Rh-negative female medical worker. "We certainly know of such cases," she said.

"For ordinary needle sticks involving syringes used for injections, it's very unlikely there would be a sufficient exposure. But there is a gray zone for other kinds of needle sticks,

where the needles are filled with blood, and we just don't know yet where to draw the line."

Jagger said women can be given a safe, inexpensive shot that will stop the Rh antibody reaction. But it must be given within 72 hours to be effective.

Jagger said that currently no testing is done to determine the Rh factor or presence of the antibody in medical workers after a needle stick

because the problem has never been raised before.

Her study, she said, may prompt health care employers to add the inexpensive tests and the

"But there is a gray zone . . . where the needles are filled with blood, and we just don't know yet where to draw the line."

JANINE JAGGER,
Health care safety specialist

shot, if necessary, to their routine post-exposure care for needle stick victims.

The complications from what is called Rh disease in fetuses are well known because many Rh-negative women have been exposed to Rh-positive blood through transfusions or prior pregnancies when the blood of an Rh-positive fetus has passed into the mother's blood.

Because of the dangers, pregnant women are routinely screened to determine their Rh factor. If the antibody is found, the fetus is closely monitored.

The fetus develops severe anemia as the antibody attacks its blood and requires frequent blood sampling and other invasive procedures that may include blood transfusions while in the womb and after birth. A small percentage of fetuses and infants do not survive despite treatment.

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State Senate Panel OKs Bill for Safety Needs

William Carsen, Chronicle Staff Writer

Thursday, July 2, 1998

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URL: <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/1998/07/02/MN56172.DTL>

A bill requiring the use of safety needles to protect health care workers from accidental needle sticks cleared its first legislative hurdle yesterday, winning approval in the state Senate Health and Human Services Committee.

The legislation, if implemented, would be the first in the nation to require tough regulatory enforcement to deal with an epidemic of needle sticks that is spreading HIV and serious infectious diseases such as hepatitis among medical workers.

The committee voted 5 to 2 to approve the measure, which was introduced by Assemblywoman Carole Migden, D-San Francisco.

The legislation was drafted in response to a series of articles in The Chronicle in April that described how more than 1 million accidental needle sticks every year have struck down tens of thousands of nurses, doctors, laboratory technicians and other health care workers over the past decade.

The articles reported that many of the needle injuries could have been prevented with simple safety features on needles and syringes that have been available for nearly 10 years, but high markups by needles manufacturers, reluctance by employers to pay the extra costs and lax regulation have effectively kept the devices out of medical workers' hands.

Migden's legislation closely resembles language recently drafted by California's Occupational Safety and Health Administration. Cal OSHA proposed new regulations last month that would clearly define safe needle devices and require employers to use them to protect their workers from accidental pricks.

That proposal, however, must go through a comment period, possible redrafting, then be approved by the state's worker safety standards board. The process could take more than a year.

Migden's bill, which has been introduced as an emergency measure, would take effect this year if it passes and is signed by the governor.

The California Healthcare Association, which represents the state's hospitals and other health employers, is opposing the bill on the ground that it would be too costly for employers to evaluate the more than 100 safety needle products now on the market before hospitals could use them.

"There is currently no testing being done which identifies devices that reduce needle-stick injuries," Donna Kaylor, the group's legislative advocate, wrote the committee last week.

"The only claims of safety are made by the manufacturers of these devices," the lobbyist wrote. She said infection control researchers at the national level should evaluate and test the devices before California health care employers are required to use them.

The group's expert was not available yesterday to address the committee.

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Health Care Chiefs Back Needles Bill

FRONT PAGE

Employers support plan to prevent sticks

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By William Carlson
Chronicle Staff Writer

In a dramatic reversal, the state's health care industry yesterday endorsed legislation requiring the use of safety needles to protect medical workers — a switch that greatly increases prospects that the measure will become law.

The California Health Care Association, which represents more than 630 hospitals, doctors groups and health care providers, sent a letter to Governor Pete Wilson asking him to sign the bill, the first of its kind in the nation. Until yesterday, the group's opposition to the measure was expected to lead to the governor's veto.

There was no word yesterday on whether Wilson will sign the bill, which was introduced by Assemblywoman Carole Migden, D-San Francisco, following a Chronicle series in April that found that 1 million health care workers nationwide are injured every year by needle sticks. Thousands of those medical workers contract HIV, hepatitis and other blood-borne infections.

The articles reported that syringes and blood-drawing devices with safety features have been on the market for nearly a decade but state safety officers were not requiring employers to provide their workers with the devices to prevent the injuries.

The only other opposition to the bill has come from staff members within the Wilson administra-

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NEEDLES: Health Care Industry Supports Bill

From Page 1

tion who are concerned that the legislation would not give health care employers enough time to shift to the new safety needles.

But John Duncan, the state's director of industrial relations and a key adviser to the governor on the measure, called the shift by the health care industry "a very positive development."

"You can certainly see now why the governor could sign this bill," he said. "We are very pleased with the consensus that has been achieved."

Yesterday's unexpected announcement prompted a virtual lovefest between unions representing health care employees and the employers, especially Kaiser Permanente, which separately announced its support for the bill.

"Everybody came together in a way we can be proud of," said Kaiser attorney Dan Fritz. "It was a positive, cooperative effort with the union."

Andrew Stern, president of the Service Employees International

Union, the nation's largest health care workers union, was equally effusive. "We applaud Kaiser Permanente," he said. "This lifesaving breakthrough is another success for our labor-management partnership."

The legislation now before the governor requires health care employers to provide the safety devices or methods that do not employ needles unless they can "demonstrate circumstances in which the technology does not promote employee or patient safety or interferes with a medical procedure."

The bill requires employers to adopt written plans for selecting new safe-needle technology. Employers must also keep a log of "sharps injuries" that includes the type and brand of the device causing the injury. California health care and public safety workers suffer more than 100,000 needle sticks each year.

The bill was passed by the Legislature as an emergency measure that the state's Occupational Safety and Health Standards Board must adopt by January 15. It re-

quires the board to complete permanent safety regulations with the minimum requirements set forth in the bill by August 1999.

One of the biggest reservations for employers was the January 15 date, which they claimed would not give them time to make the shift to the new technology.

But Migden wrote the governor yesterday stating that the January date was "early notice that would facilitate a phase-in of regulatory requirements."

That resolved the final deadlock. With that understanding, the Health Care Association said in its letter to Wilson, "the industry reasonably can implement the proposed sharps injury regulations by (Aug. 1, 1999), and will work with members to assure compliance."

Cal OSHA, the state's safety enforcement division, has worked all summer on new regulations to deal with the needle stick problem. Director John Howard said yesterday the package conforms with Migden's bill and would be complete in several weeks. "We're all ready to go," he said.



Why We Need A Federal Needlestick Law

"It's too late for these devices to save my life now. Please don't wait for the list of others to grow and grow before effective action is taken."

—Peggy Ferro, San Francisco health care worker infected with HIV from a needlestick, in testimony to Congress February 2, 1992. Six years later, when Peggy died of AIDS at age 49, she was still working to pass a safer needles law in Congress.

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Representatives Pete Stark (D-CA) and Marge Roukema (R-NJ) and Senators Barbara Boxer (D-CA) and Harry Reid (D-NV) have introduced the Health Care Worker Needlestick Prevention Act (HR 1899/S 1140), which would require health care facilities to use safer needles. Health care workers are dedicated to providing quality patient care, but with safety devices available they should not have to put their lives on the line every time they use a needle.

Needlesticks are a growing threat to health care workers.

- 600,000 to a million health care workers are accidentally stuck by needles each year.
- More than 1,000 of these workers will contract serious diseases, such as HIV, or Hepatitis B or C.
- If stuck by contaminated needles, workers and their families must live through a terrifying six months or longer to find out if they are infected.

Safer needles exist today that can prevent the spread of disease.

- There are a wide variety of safer needles on the market that have such features as a protective shield or a mechanism that automatically retracts the needles into the barrel after use.
- The FDA has cleared more than 250 such devices for marketing, yet only 15% of hospitals today use safer needles.
- Most hospitals are not buying or even evaluating safer needles, and regulatory agencies are not requiring them to use safer products.

Safer needles save lives and money for health care facilities.

- Hospital studies report that more than 80% of needlestick injuries are prevented when safer needles are used.

- Even where no infection occurs, it costs up to \$3,000 to treat an injured health care worker with prophylactic drugs when they have had a high-risk exposure.
- One case of HIV can cost \$100,000 and one case of Hepatitis C, involving a liver transplant, can cost as much as \$750,000 (Hepatitis C is the leading cause of liver transplants).
- California, the first state to pass safer needle legislation, estimates it will save up more than \$100 million a year by using safer needles.
- As more health care facilities use safer needles, manufacturers will be able to reduce the price because of increased production volume.

States are leading the efforts to reduce needlestick injuries and deaths.

- In September, 1998, California became the first state to pass legislation requiring the California Occupational Safety and Health Administration to issue regulations mandating all health care facilities to evaluate and purchase safer needles by July 1, 1999.
- Tennessee and Maryland have also passed safer needle legislation and at least 17 other states are considering needlestick prevention legislation.
- The widespread bipartisan interest in state legislatures and the strong public support on this issue demonstrates that strong action should be taken immediately. Federal legislation is the only way to establish uniform national standards to prevent needlestick injuries.

The Health Care Worker Needlestick Prevention Act would...

- Amend the federal Occupational Safety and Health Administration's (OSHA) standards on bloodborne pathogens to require safer needles in health facilities.
- Require the involvement of workers who provide direct patient care in determining which safer needles and sharps to use in their workplaces.
- Provide for more accurate documentation of needlestick injuries.
- Create a national clearinghouse to collect data and develop evaluation and training guidelines.
- Require that public sector employees receive the same protections as private sector employees by requiring Medicare-funded hospitals to use safer needles.

**"For the price of a postage stamp, for 33 cents,
we could save health care workers lives."**

*—Andrew L. Stern, President
SEIU, Service Employees International Union*

Demand That Congress Act Now to Protect Health Care Workers!

MORE THAN A PLAIN FULL

SEIU's Guide to

OF HEALTHCARE WORKERS

Preventing

ARE KILLED EACH YEAR

Needlestick

BY PREVENTION

Injuries

NEEDLESTICK INJURIES



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Third Edition

SEIU is the largest union of healthcare workers in North America, with 600,000 healthcare members working in hospitals, HMOs, nursing homes, home care agencies and other facilities.

With more than 13 million members in the United States, Canada, and Puerto Rico, SEIU is the third largest and fastest growing union in the AFL-CIO.

Introduction

Healthcare workers face a deadly risk from the use of dangerous needles each and every day—risks that are totally unnecessary. While needlestick injuries are a big problem, the solution is simple—and it's here today. Government-funded research has demonstrated that the elimination of unnecessary sharps and the use of safer needles can dramatically reduce needlestick injuries.

Yet, it is estimated that 600,000 to one million workers continue to get stuck by these older conventional needles each year. According to an SEIU-sponsored study conducted in 1994 with the National Phlebotomists Association, 24 percent of healthcare workers who drew blood were stuck by a needle in the previous year. Each year, at least 1,000 healthcare workers contract a serious infection from needlestick injuries. The majority will become infected due to the growing spread of hepatitis C, with 80 percent becoming chronic carriers. It is estimated that on average one healthcare worker per week will eventually die due to their hepatitis C infections caused by a needle injury. A similar number of workers will eventually die from their occupational exposures to HIV occurring today.

Behind these statistics are living, breathing individuals, members of our union, who live in fear of getting stuck—workers and their families who live the nightmare of waiting for months to find out whether they have been given a death sentence or another reprieve. In one hospital alone, SEIU members have reported that five workers have occupationally contracted HIV from needlestick injuries.

We all too vividly remember the ValuJet plane that went down in the Everglades in 1997. That crash was rightly considered a catastrophe. The government sent federal investigators down immediately. It was in the headlines for weeks. Think about it. Every year, a planeload's worth of healthcare workers die from needlestick injuries. Yet healthcare workers are treated as invisible . . . dying from a silent epidemic.

As we strive to improve patient care and worker safety in this era of "managed care," our struggles are becoming greater, and our need for action more urgent. The impact of "patient focused care" can be devastating on both patients and healthcare worker safety. A recent hospital study found that puncture injuries skyrocketed 127 percent after the institution fired the majority of its phlebotomists, relying on nursing staff and their assistants to conduct most blood draws.

And it is not just needlesticks. Today, it is safer to work in a mine, a factory, or a construction site than it is to work in a hospital. With healthcare restructuring in full swing, the situation is only getting worse. Employers report that while occupational injuries and illnesses throughout the United States declined by 5 percent in 1996, in hospitals the rate *jumped* by nearly 10 percent. The rate of injuries among healthcare workers has doubled over the past ten years. In fact, healthcare employers now report a higher number of injuries and illnesses than any other sector, bar none. Yet, due to lack of employer reporting, it is estimated that less than 10 percent of sharps-related

injuries are ever included in these already alarming injury and illness figures.

We have revised our needlestick booklet to again reemphasize that safer needle technology is not a dream of the future. Lifesaving, safer needles exist today. And many more safer designs are on the market since our last edition.

2 The foot-dragging must stop. The neglect and indifference to the safety of healthcare workers must be remedied. OSHA must begin to vigorously enforce the provision of the Bloodborne Pathogen Standard that requires employers to evaluate engineering controls such as safer needle products. NIOSH and the CDC need to collect and disseminate currently available device-specific needlestick injury data to promote the use of safer needles. The FDA needs to reconsider SEIU's original petition to alert healthcare institutions about the lifesaving potential of safer needles, and ban the use of conventional needles unless medically necessary. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) must begin citing hospitals that fail to evaluate and use the safer products. Needle manufacturers need to stop production of the inherently dangerous conventional needles and hospitals need to pledge to buy only the safer ones. Group purchasing organizations must encourage hospitals to purchase the latest state-of-the-art safer needle products from companies both large and small.

Action can save lives. Together, we ended the epidemic of hepatitis B among healthcare workers. Thanks to the Bloodborne Pathogen Standard of 1991 which requires the free availability of the hepatitis B vaccine, CDC officials report that hepatitis B infections among healthcare workers declined from 17,000 to just 400—and healthcare worker deaths from hepatitis B declined from 250 per year

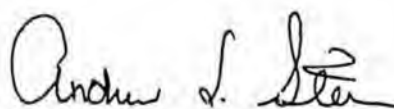
to an undetectable level. SEIU is proud to have originally petitioned OSHA for this standard in 1986, which has now proven to have saved the lives of thousands of healthcare workers. All of our locals and members who worked so hard in the late 1980s to push for a strong OSHA Bloodborne Disease Standard should be equally proud of the important role they played.

Working with our local unions and their healthcare worker members, we recently achieved a historic breakthrough: passage of the nation's first statewide needlestick safety law which will require all healthcare facilities in California to purchase safer needles. We are proud of this important achievement. But we will not rest until safer needles are put into the hands of every healthcare worker throughout the United States and Canada.

This booklet, originally written in 1992, has been thoroughly revised and updated to help educate and mobilize our members. To help our members to collect needlestick injury data. To actively participate in product evaluation committees. To work with hospital administrators who—after too many years of resistance—are starting to bring in the safer needles. And to file health and safety grievances and OSHA complaints when necessary.

I hope that this is the last edition of the needlestick prevention booklet which our union needs to produce.

In Unity,



Andrew L. Stern
International President
October 15, 1998

Bloodborne Diseases

The federal government estimates that healthcare workers incur between 600,000 and 1 million needlestick injuries per year. Many of these needles have been used and are potentially contaminated. Of all the bloodborne diseases transmitted by used needles, the HIV virus has the most notorious reputation. However, as dreaded as the HIV virus can be, there are up to 20 other bloodborne diseases that can be transmitted to healthcare workers as a result of exposure to blood on the job. Of these, the diseases that pose the most serious threat to healthcare workers are hepatitis B and hepatitis C. Experts now estimate that more healthcare workers will eventually die due to complications from occupational exposure to hepatitis C than from occupational exposure to HIV.

Hepatitis B

Historically called "the healthcare workers' disease" hepatitis B has long been recognized as an occupational hazard for healthcare workers. This virus, like other bloodborne diseases, is spread through contact with infected blood and other body fluids such as semen, saliva, and vaginal fluids. Hepatitis B is a disease that causes a number of conditions, ranging from fever, jaundice, and inflammation of the liver to life-threatening cases of cirrhosis of the liver and liver cancer.

The two most common ways that hepatitis B virus (HBV) is transmitted are through contaminated needles and sexual intercourse. Workers also can be

infected through a splash of blood in the eyes, nose, or mouth, or through blood or other infectious body fluids coming in contact with a cut, sore, or other open skin. It is possible that bites that penetrate the skin can also transmit hepatitis B. Six weeks to six months after exposure, a person may develop symptoms including fatigue, nausea, joint pain, loss of appetite, fever, abdominal pain, yellowish eyes or skin, dark urine, and light-colored feces. Most people who are infected with the hepatitis B virus do not show any symptoms.



Preventing Needlestick Injuries

Approximately one in 10 people infected with HBV become "chronic carriers," meaning that they can transmit the virus to others through their blood or other body fluids. Chronic carriers are at greatly increased risk of liver disease. Many chronic carriers do not show symptoms and often are not aware that they can spread the virus to other people.

Prior to the introduction of the hepatitis B vaccine, the Centers for Disease Control and Prevention (CDC) estimated that 6,000 to 8,000 healthcare workers were infected with the HBV each year. Every year 200 to 300 healthcare workers died from HBV or its related illnesses. SEIU waged a successful five-year battle ending with the promulgation of the 1991 OSHA Bloodborne Disease Standard which, in part, requires employers to make the hepatitis B vaccine available free of charge to all workers at risk of exposure. Today, CDC estimates

that the number of new cases of hepatitis B among healthcare workers has fallen to 400 per year. In fact, this rate is now lower than the rate for the general population. This is a clear example of how OSHA standards save workers' lives.

More About Hepatitis B Vaccination

The vaccine for HBV is very safe, and the legal rights workers fought to have included in the OSHA standard require employers to offer the vaccine to all "at-risk" workers free of charge. The vaccine must be offered within 10 working days of a worker's hire date. The vaccine is genetically engineered, meaning that it cannot be contaminated with any other viruses since no human or animal plasma is used in its preparation. The vaccine is given in three separate doses over a six-month period of time. Approximately one in five people have mild side effects such as soreness where the vaccine is administered, fever, headache, fatigue or nausea.

The vaccine causes the body to develop antibodies against HBV. The vaccine works for nine out of 10 people. A simple blood test looking for antibodies can tell if the vaccination is working, or if another vaccination series is needed. Individuals previously infected with HBV don't need to be vaccinated because infection confers immunity. Currently, OSHA does not require employers to offer this antibody testing. However, if a worker has an exposure to blood or potentially infectious body fluids on the job, OSHA does require the employer to offer a confidential medical evaluation. SEIU advises healthcare workers to request the HBV antibody test as part of this evaluation so that it can be determined whether they are protected or if they need to receive immunoglobulin and a new series of the vaccine.



Preventing Needlestick Injuries

	Hepatitis B	Hepatitis C
Percent of infections which result in chronic (long-term) infection	Less than 10 percent	More than 85 percent (70 percent of all infections lead to chronic liver disease)
Number of people in U.S. with chronic infection	1 to 1.25 million	3.9 million
This infection is transmitted to others in the following ways	Contact with infected blood Sexual contact Perinatal (mother to child)	Contact with infected blood (transmission via sexual contact and perinatally occurs but is much less frequent)
Vaccine	There is an effective vaccine that can keep you from getting this disease.	THERE IS NO VACCINE
Cure	None	None
Treatment	Treatment with Interferon alpha produces a positive response in 35 percent of cases. Some people with HBV should not receive this treatment.	Interferon alpha, taken for one year, can help 15 to 25 percent of patients. A new combination drug therapy has reduced viral levels in 46 percent of cases.

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Hepatitis C: The Growing New Threat

Hepatitis C is caused by the hepatitis C virus (HCV). This virus was only identified in 1989, although it has been around much longer and was frequently referred to as "non-A, non-B" hepatitis. It is primarily spread through contact with infected blood. HCV can also be spread through sexual contact, but not as easily as hepatitis B or HIV. Like HBV, HCV can also lead to severe liver damage and death. But there are some very important differences between the two.

OSHA estimates that in 1995, 560 to 1,120 workers occupationally contracted HCV infection due to needlesticks and other exposures to blood and other body fluids. It is estimated that 5 to 7 percent of people infected with HCV will die as a result of their infection. Based on this information, it can be estimated that between 28 and 78 workers will eventually die every year from these exposures.

In summary, HCV is an even more serious threat to healthcare workers than HBV.

This is because it more commonly causes long-term infection, which leads to severe liver damage. It is now the leading medical reason for liver transplants. HCV is also more dangerous to healthcare workers because, unlike HBV, there is no vaccine to protect from infection. Therefore, the best way to protect workers from HCV is through the use of safer needle-bearing medical devices.

HIV

HIV (human immunodeficiency virus) is a virus that attacks the body's defenses—the immune system. It is the virus that causes AIDS (acquired immune deficiency). AIDS occurs when the immune system has been weakened to the point that a person becomes vulnerable to a wide variety of other infections, which can eventually be fatal. In recent years there have been great advances in the treatment of HIV infection, but there is no cure. It is not known how long these new treatments will remain effective and there is the possibility that they may have serious side effects.

There is no vaccine to prevent people from being infected with HIV.

HIV can also be transmitted by exposure to contaminated blood or body fluids. It is harder to catch HIV than either hepatitis B or C. The risk of being infected with one or more of the three major bloodborne diseases, if you are exposed to blood containing the viruses, is summarized in the table below.

We do not know for certain how many healthcare workers have been infected with HIV at work, but the CDC readily admits that it does not actively seek out this information. Dr. Janine Jagger, a leading expert from the University of Virginia, and the founder of the EPINET needlestick data collection system, estimates that as many as 64 healthcare workers are occupationally HIV-infected each year.

For more information about HIV/AIDS, contact SEIU for a copy of SEIU's comprehensive 84-page book: *The AIDS/HIV Book: Information for Workers*, Fifth Edition, March 1997.

Virus	Chance of Infection if Exposed to Blood Containing Virus
HIV	Very Low—there is a 0.3 percent (1 in 333) chance of being infected.
Hepatitis C (HCV)	Higher—there is a 5 percent (1 in 20) chance of being infected.
Hepatitis B (HBV)	Highest—there is a 6 to 30 percent (between 1 in 16 in 1 and 3) chance of being infected.

Safer Needles

You say you haven't seen any—that your employer hasn't purchased them? Since 1984, manufacturers have successfully filed more than 1,000 patents and the FDA has reviewed and approved more than 250 types of safer needle devices. It is estimated that well over 100 safer products are now on the market.

What is a Safer Needle Device?

Safer needle devices have safety features built into the product which prevent needlestick injuries. The term "safer needle device" is broad and includes many different types of devices, from those that have a protective shield over the needle to those that do not use needles at all. The common feature of effective safer needle devices is that they reduce the risk of needlestick injuries for healthcare workers over the conventional, inherently dangerous, older needles.

Picture an unguarded piece of machinery in an industrial workplace. Use of conventional needles without integrated safety features in the healthcare environment is no different. They are dangerous by design and must be eliminated wherever possible. Tragically, the FDA has "grandfathered" these cheaper, older "killer" needles, allowing them to be produced and sold and refusing to ban them, or even to consider evaluating their safety while they remain on the market to injure and kill more healthcare workers.



Asking healthcare workers to "work safely" around such deadly, poorly designed, obsolete products is a recipe for disaster, a situation that would not be allowed to exist in any other industry sector. The fight was won by industrial workers for adequate machine guarding in the 1960s; today, healthcare workers must win the fight for safer needles.

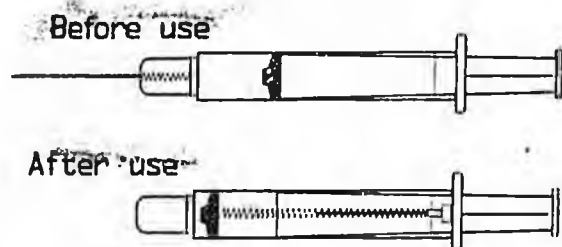
Do Safer Needles Really Work?

Federally funded research has shown that most needlestick injuries can be prevented by switching to needleless I.V. connectors and using devices with incorporated safety features. In recent years, the CDC sponsored a multi-hospital study and proved that safer devices can dramatically reduce needlestick injury rates. The results appeared in the January 17, 1997 issue of CDC's *Morbidity and Mortality Weekly Report*. The study found that when drawing blood, one of the highest-risk procedures, needlestick injuries could be cut 27 to 76 percent with the use of safer needles. The investigation also found that the use of safer needles did not lessen the quality of patient care. Further, the safer needles were generally accepted by healthcare workers.

Are Some Safer Needles Safer than Others?

The types of safety features used in safer needle devices can be categorized according to certain aspects of the safety feature, i.e., whether the feature is "passive" or "active." *Passive* safety features remain in effect before, during and after use; healthcare workers do not have to activate them. Passive features enhance the safety design and are more likely to have

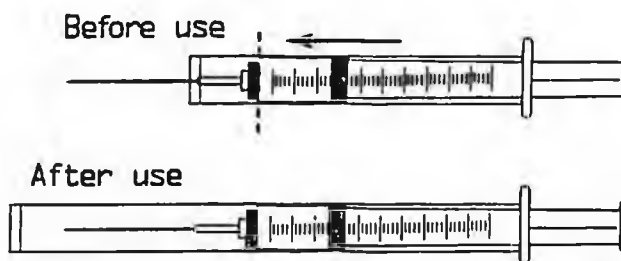
This is an example of a "passive" safety mechanism, where the needle retracts automatically into the barrel when the plunger is depressed after use.



a greater impact on prevention. An example of such a product would be a spring-loaded retractable syringe or self-blunting blood collection device.

Active devices require the healthcare worker to manually activate the safety feature. An example of such a product would be a needle with a sheath that the healthcare worker must manually pull over the used needle. Failure to do so would leave the worker unprotected. Some employers use the excuse of not buying safer needles because they claim that healthcare workers do not activate the protective sheath before disposing of the products in a needle disposal

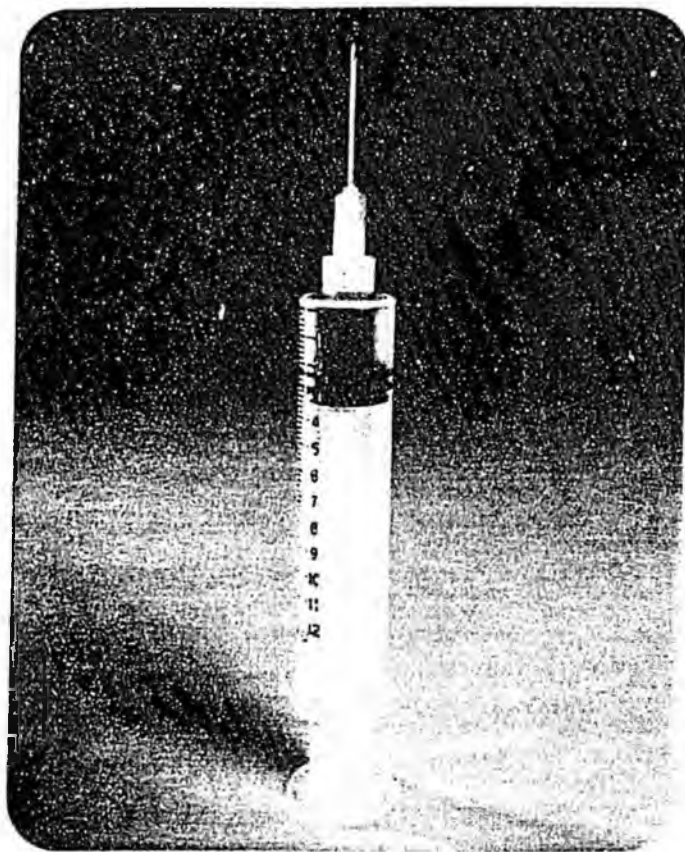
This is an example of an "active" safety mechanism, requiring the healthcare worker to pull the sheath over the needle after use.



box. However, it may be entirely logical to dispose of such unsheathed needles if the disposal box is close by, especially since some cases of activation have resulted in needlestick injuries.

What Is the Role of the FDA?

Under the Safe Medical Devices Act, the FDA has the legal authority to protect both patients and healthcare workers from dangerous medical equipment. In 1991, SEIU petitioned the FDA to ban conventional, inherently dangerous, needle devices unless medically contraindicated.



In 1992, as a direct result of this petition, the FDA published a "Needleless Systems" safety alert warning about the risk of needlestick injuries from the use of hypodermic needles as a connection between two pieces of I.V. equipment. This alert was based on research that demonstrated that secondary I.V. tubing with connector needles was associated with the highest risk of needlestick injury. The use of needleless I.V. systems or systems with recessed needles to connect adjoining equipment was strongly encouraged in this alert. Today it is estimated by FDA that more than 50 percent of all hospitals use needleless I.V. connection systems.

However, to date, the FDA has refused SEIU's 1991 request to ban the older, obsolete conventional needles unless medically necessary. Instead, the FDA's sole focus has been reviewing and approving, or rejecting, new devices when a manufacturer

makes safety claims about a new, "safer" product. Remarkably, while the FDA spends all its energy evaluating the safety of new safety needles, it continues to turn a "blind eye" to the much more significant hazard: evaluating the use of the traditional needles which continue to dominate the healthcare workplace. In fact, in one recent case, the FDA actually recalled a safer product with an active sheath after reports of increased rates of injury. Some employers use this sole case of a "safer" product recall to justify their failure to evaluate or purchase **any** safer needles. However, we need to remember that this is one recall out of 250 FDA-approved safer products, and we should not fall prey to this hollow argument. The irony is that the FDA has **never** evaluated any of the traditional, inherently dangerous needles on the market. If it did, experts agree that most if not all such devices would easily fail these same tests.

What Are the Characteristics of a Safer Needle?

The FDA has suggested that needles with safety features designed to protect healthcare workers should:

- Provide a barrier between the hands and needle after use;
- Allow or require the worker's hands to remain behind the needle at all times;
- Be an integral part of the device and not an accessory;
- Be in effect before disassembly and remain in effect after disposal to protect downstream workers;
- Be simple and self-evident to operate and require little or no training to use effectively.

These are the same criteria the FDA has used to

approve more than 250 safer needle products, and to reject a similar number that did not meet these standards. *Ironically, the FDA has refused to evaluate the safety of any conventional needles with these or any other safety criteria. Such unevaluated needles should be eliminated from use.*

Where Else Can I Find Which Safer Needles Are Best?

Many hospitals and hospital systems have conducted extensive evaluation studies of safer needle devices on their own. Kaiser Permanente, for example, is an industry leader in evaluating and purchasing safer devices. Frequently this information is available in your facility from the product evaluation, health and safety, and/or the infection control committees. The University of Virginia's International Health Care Worker Safety Center and its EPINet needlestick injury data collection system has been distributed to more than 1,500 hospitals in the United States. Currently, needlestick injury data is available online from a 77-hospital database and can be accessed free of charge at www.med.virginia.edu/~epinet. You can also receive further information by calling 804-982-0702.

Can I Conduct My Own Safer Product Evaluations?

While much data already exists on which safer needles are best for which uses, frequently healthcare facilities still want to conduct their own evaluations. *Directly involving the frontline healthcare workers who will be using these safer products is critical in this evaluation process.* To help you conduct such evaluations in your workplace, we have been

granted permission to reprint and have included in the next section a set of excellent "Safety Feature Evaluation Sheets" developed and recently updated by Dr. June Fisher and her staff at the Training for Development of Innovative Control Technology Project (TDICTP). Four separate sheets—for evaluating safety syringes, I.V. connectors, vacuum-tube blood collection systems, and I.V. access devices—are reproduced here, beginning with general guidelines on page 11.

What Are My Rights to Demand Safer Needles?

Finally, it is critical to understand that under the 1991 OSHA Bloodborne Disease Standard, such evaluation of "engineering controls," such as safer needles, is legally required. But to date, unfortunately, OSHA has ignored its obligation to enforce this lifesaving provision. If your employer is **not** evaluating safer needles, you should be filing complaints with OSHA and reminding them of their duties in this area. For assistance in filing an OSHA complaint, contact SEIU.

Additional Resources

"Safer Needle Devices: Protecting Health Care Workers," is a comprehensive manual prepared by the Occupational Safety and Health Administration, Directorate of Technical Support, Office of Occupational Health Nursing, October 1997, Washington, DC 20210. It can be accessed and downloaded from the OSHA website at www.osha.gov (go to the index and type in the word "Needlesticks"). You can also call OSHA at 202-219-7056.

Guidelines for the Use of Safety Feature Evaluation Sheets¹

Coordinators

Determine which products are to be evaluated and provide at least four or more test samples for each individual evaluating the product. (Each evaluator should have enough samples to disassemble and test the design thoroughly.)

Set up a testing station for each type of device which allows testers to evaluate products in a simulated patient procedure. Provide training dummies (injection pads, oranges, etc.) as necessary.

Provide visual instructions and a rating system to each evaluator.

Encourage each evaluator to comment on the sheets and prioritize the questions at the end of the evaluation. This will provide a useful decision-making tool and will help alert you to specific areas of concern which may not have been covered by the questionnaire.

Evaluators

Reenact all steps of intended or possible procedures to be performed with the device being tested.

Attempt to misuse the device and circumvent or disable the safety feature.

Answer each question, including the short answer section at the end. If you do not understand a question, please write comments directly on the sheets.

Note: Certain assumptions have been made in the development of these forms based on information about currently available products. We recognize the likelihood that the ideal product may not exist. TDICTP welcomes your comments on the use of these tools.

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Safety Syringes Safety Feature Evaluation Form

Date _____ Department _____ Occupation _____

Product _____ Number of times used _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

During Use

	Agree	Disagree	
1. The safety feature can be activated using a one-handed technique.	1 2 3 4 5		N/A
2. The safety feature does not obstruct vision of the tip of the sharp.	1 2 3 4 5		N/A
3. Use of this product requires you to use the safety feature.	1 2 3 4 5		N/A
4. This product does not require more time to use than a non-safety device.	1 2 3 4 5		N/A
5. The safety feature works well with a wide variety of hand sizes.	1 2 3 4 5		N/A
6. The device is easy to handle while wearing gloves.	1 2 3 4 5		N/A
7. This device does not interfere with uses that do not require a needle.	1 2 3 4 5		N/A
8. This device offers a good view of any aspirated fluid.	1 2 3 4 5		N/A
9. This device will work with all required syringe and needle sizes.	1 2 3 4 5		N/A
2 10. This device provides a better alternative to traditional recapping.	1 2 3 4 5		N/A

After Use

11. There is a clear and unmistakable change (audible or visible) that occurs when the safety feature is activated.	1 2 3 4 5		N/A
12. The safety feature operates reliably.	1 2 3 4 5		N/A
13. The exposed sharp is permanently blunted or covered after use and prior to disposal.	1 2 3 4 5		N/A
14. This device is no more difficult to process after use than non-safety devices.	1 2 3 4 5		N/A

Training

15. The user does not need extensive training for correct operation.	1 2 3 4 5		N/A
16. The design of the device suggests proper use.	1 2 3 4 5		N/A
17. It is not easy to skip a crucial step in the proper use of the device.	1 2 3 4 5		N/A

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

Vacuum-Tube Blood Collection Systems Safety Feature Evaluation Form³

Date _____ Department _____ Occupation _____

Product _____ Number of times used _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree	Disagree	
	1	2	3
	4	5	
1. The safety feature can be activated using a one-handed technique.	1	2	3
2. The safety feature does not interfere with normal use of this product.	1	2	3
3. Use of this product requires you to use the safety feature.	1	2	3
4. This product does not require more time to use than a non-safety device.	1	2	3
5. The safety feature works well with a wide variety of hand sizes	1	2	3
6. The safety feature works with a butterfly.	1	2	3
7. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.	1	2	3
8. The safety feature operates reliably.	1	2	3
9. The exposed sharp is blunted or covered after use and prior to disposal.	1	2	3
10. The inner vacuum tube (rubber sleeved needle) does not present a danger of exposure.	1	2	3
11. The product does not need extensive training to be operated correctly.	1	2	3

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Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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I.V. Access Devices Safety Feature Evaluation Form

Date _____ Department _____ Occupation _____

Product _____ Number of times used _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree	Disagree	
	1	2	3
	4	5	
1. The safety feature can be activated using a one-handed technique.	1	2	3
2. The safety feature does not interfere with normal use of this product.	1	2	3
3. Use of this product requires you to use the safety feature.	1	2	3
4. This product does not require more time to use than a non-safety device.	1	2	3
5. The safety feature works well with a wide variety of hand sizes.	1	2	3
6. The device allows for rapid visualization of flashback in the catheter or chamber.	1	2	3
7. Use of this product does not increase the number of sticks to the patient.	1	2	3
8. The product stops the flow of blood after the needle is removed from the catheter (or after the butterfly is inserted) and just prior to line connections or hep-lock capping.	1	2	3
9. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.	1	2	3
10. The safety feature operates reliably.	1	2	3
11. The exposed sharp is blunted or covered after use and prior to disposal.	1	2	3
12. The product does not need extensive training to be operated correctly.	1	2	3

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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I.V. Connectors Safety Feature Evaluation Form

Date _____ Department _____ Occupation _____

Product _____ Number of times used _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree	Disagree	
1. Use of this connector eliminates the need for exposed needles in connections.	1	2 3 4 5	N/A
2. The safety feature does not interfere with normal use of this product.	1	2 3 4 5	N/A
3. Use of this product requires you to use the safety feature.	1	2 3 4 5	N/A
4. This product does not require more time to use than a non-safety device.	1	2 3 4 5	N/A
5. The safety feature works well with a wide variety of hand sizes.	1	2 3 4 5	N/A
6. The safety feature allows you to collect blood directly into a vacuum tube, eliminating the need for needles.	1	2 3 4 5	N/A
7. The connector can be secured (locked) to Y-sites, hep-locks, and central lines.	1	2 3 4 5	N/A
8. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.	1	2 3 4 5	N/A
9. The safety feature operates reliably.	1	2 3 4 5	N/A
10. The exposed sharp is blunted or covered after use and prior to disposal.	1	2 3 4 5	N/A
11. The product does not need extensive training to be operated correctly.	1	2 3 4 5	N/A

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Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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Sharps Disposal Containers



It is important to remember that the leading cause of occupational exposure to bloodborne pathogens is needlestick injuries. The elimination of unnecessary sharps and the use of safer needle-bearing products are the primary methods used to prevent needlestick injuries.

The Role of Sharps Disposal Containers in Preventing Needlestick Injuries

In too many healthcare facilities, sharps disposal containers are incorrectly used as a substitute for a

program of eliminating sharps or for using safer devices. Instead, the consistent use of rigid sharps disposal containers in the healthcare environment is simply *complementary*, but a critical and necessary element in reducing the number of needlestick injuries. Studies indicate that placement of disposal boxes in all patient and treatment rooms consistently decreases the frequency of sharps injuries. Investigators have concluded that appropriately placed sharps disposal containers reduce needlestick injuries related to recapping of sharps by as much as 80 percent.

A Good Sharps Disposal Container Program

Basic principles in the safe use of sharps disposal containers include: containers must be located in the immediate vicinity of where sharps are used; containers must be of sufficient size and capacity; they must be replaced when full; and they must be used by all workers who handle or encounter sharps. It is likely that no single container type meets the disposal containment needs for an entire facility, and many different products will need to be evaluated. Designated staff members should be assigned the responsibility for regular monitoring and maintenance of sharps disposal containers. The staff should frequently and routinely monitor fill levels of containers and be responsible for changing containers before they are overfilled.

What Are Legal Standards for Sharps Disposal Containers?

Sharps disposal containers are regulated by the FDA as what are called "Class II Medical Devices," and are subject to special controls, such as performance standards, to ensure their safe and effective use. OSHA's Bloodborne Disease Standard also establishes minimum design performance elements for sharps disposal containers. Specifically, the standard requires that contaminated sharps "be discarded immediately or as soon as feasible in containers that are:

- Closeable;
- Puncture-resistant;
- Leakproof on sides and bottom; and
- Labeled or color-coded in accordance with paragraph (g)(1)(i) of the standard."

Section (g)(1)(i)(C) contains very specific requirements about the labeling of containers for contaminated sharps: "These labels shall be fluorescent orange or orange-red or predominantly so, with lettering or symbols in a contrasting color." The standard also requires that the biohazard symbol and the word "Biohazard" be displayed; note, however, that "Red bags or red containers may be substituted for labels" in section (g)(1)(i)(E).

The standard further states that "during use, containers for contaminated sharps shall be:

- (i) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (laundries);
- (ii) Maintained upright throughout use; and
- (iii) Replaced routinely and not be allowed to overfill."

When containers of contaminated sharps are being moved from the area of use, the standard requires that they be:

- (i) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;
- (ii) Placed in a secondary container if leakage is possible. The second container shall be:
 - (A) Closeable;
 - (B) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping.

Introducing a New Sharps Disposal Container into the Workplace

Before a new sharps disposal container is introduced, worker training should be conducted to address the proper use of sharps disposal containers. All workers who might come into contact with sharps should be included in the training, including maintenance and laundry service staff. Where appropriate, multilingual educational materials should be developed.

Recommended Strategy for Selecting and Using Sharps Disposal Containers

The following strategy for selecting and using sharps disposal containers should be implemented as part of an overall needlestick injury prevention plan. Selection of a container, or combination of containers, should be based on a worksite-specific hazard analysis.

Components of a worksite-specific hazard analysis should include the following:

- Assessment of size and type of sharps to be disposed of;
- Assessment of the volume of sharps to be disposed of at each point-of-use;
- Assessment of the frequency of sharps disposal container removal, and container mounting bracket servicing, by facility maintenance staff;
- Compliance with federal, state and local regulations;
- Security requirements;
- Container transport or mobility needs;
- Clinician, and procedural, variability and movement;
- Laboratory equipment variability and movement;
- Environmental and disposal constraints.

Evaluating and Selecting Sharps Disposal Containers

1. Front-line workers evaluating different sharps disposal containers should inspect, operate and compare containers side-by-side.
2. Representative sharps (including syringes, I.V. sets, blades, biopsy needles, pipettes, etc.), should be used to test candidate containers.
3. Evaluation facilitators should provide product manufacturer literature and visual instructions and should demonstrate proper operation of each of the containers.

For further information about Sharps Disposal Containers, contact NIOSH and request a copy of its publication: *Selecting, Evaluating, and Using Sharps Disposal Containers*, January 1998. You can request this document by phone at 1-800-35-NIOSH or visit the NIOSH website at www.cdc.gov/niosh.

Here is a sample evaluation tool to assess the usefulness of various sharps disposal containers based on common product design features currently available on the market. **Note:** the ideal product may not exist.

Sharps Disposal Containers Safety Feature Evaluation Form

Date: _____ Department: _____

Location: _____

Description of Container Evaluated: _____

Please circle the most appropriate answer for each questions. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree	Disagree	
1. The container's shape, its markings, or its color, imply danger which can be understood by workers, visitors, children and patients.	1 2 3 4 5		N/A
2. The implied warning of danger can be seen from the angle at which people commonly view it (including very short people, people in wheelchairs, children, etc.).	1 2 3 4 5		N/A
3. For an Emergency Room: The container can be placed in a location that is easily accessible during emergency procedures.	1 2 3 4 5		N/A
4. The container's purpose is self-explanatory and easily understood by a worker.	1 2 3 4 5		N/A
5. The container can accept sharps from any direction desired.	1 2 3 4 5		N/A
6. The container can accept all sizes and shapes of sharps.	1 2 3 4 5		N/A
7. The container is temporarily closeable, and will not spill contents.	1 2 3 4 5		N/A
8. The container allows single-handed operation. (Only the hand holding the sharp should be near the container opening.)	1 2 3 4 5		N/A
9. It is difficult to reach in and remove a sharp.	1 2 3 4 5		N/A
10. Sharps can go into the container without getting caught on the opening or any molded shapes in the interior.	1 2 3 4 5		N/A
11. The container can be placed within arm's reach of the point-of-use.	1 2 3 4 5		N/A
12. The container is puncture-resistant.	1 2 3 4 5		N/A
13. When the container is dropped or turned upside down (even before it is permanently closed), sharps stay inside.	1 2 3 4 5		N/A
14. The user can determine easily, from various viewing angles, when the container is full.	1 2 3 4 5		N/A
15. When the container is to be used free-standing (no mounting bracket), it is stable and unlikely to tip over.	1 2 3 4 5		N/A

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	Agree					Disagree					
	1	2	3	4	5	1	2	3	4	5	
16. For an Emergency Room: The container is large enough to accept all sizes and shapes of sharps, including 50 ml preloaded syringes.											N/A
17. It is safe to close the container. (Sharps should not protrude into the path of hands attempting to close the container.)											N/A
18. The container closes securely under all circumstances.											N/A
19. The product has handles which allow you to safely transport a full container											N/A
20. The product does not require extensive training to operate correctly.											N/A

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

Please Note: Although it is not possible to provide precise guidelines for evaluating questionnaire scores, the lower the score, the better the sharps disposal container. A priority, or value, must be assigned a criterion on a case-by-case basis. It may be useful to compare the model of sharps container currently in use with the replacement models under consideration by using the questionnaire scoring system.

Organizing To Prevent Needlestick Injuries

A campaign to get lifesaving, safer needles into the hands of SEIU healthcare members to prevent needless suffering, illness and death requires mobilizing members to organize a worksite-based needlestick injury prevention program. In this way, fighting needlestick injuries can also build strong local unions.

The key to any organizing strategy is the development of a strong program and an active organizing committee. A needlestick injury prevention program sets concrete goals for reducing injuries, and is written and accessible to all workers, their union representatives, and OSHA.

A needlestick prevention strategy begins with the formation of a needlestick prevention committee. It is not necessary to have specific contract language authorizing the needlestick prevention committee—the committee can be formed separately from the contract.

The committee can be an independent union needlestick prevention committee or a joint labor/management committee with equal representation by labor and management . . . or ideally both can be formed. An independent committee allows representatives of the union to meet and consider needlestick injuries free from any interference by management. Whether an independent or a joint labor/management committee, the union can develop priorities and strategies for reducing needlestick injuries. The committee should have

direct access to the chief executive officer of the facility or other high-level decision-maker and be given adequate resources to implement an aggressive prevention program.

A major duty of the committee is to collect and review data on needlestick injuries. In many worksites, this data is presented in the form of needlestick or exposure logs. Union members should demand that their employers provide data that includes the type of exposure, classification of the worker exposed, the worker's shift, the procedure involved, and a complete description including the name, model and manufacturer of the needle-bearing device, and whether the device was a safety or conventional product.

The needlestick prevention committee should demand representation on the facility's product evaluation committee. Most healthcare facilities have such a committee that reviews equipment before deciding which products the facility should purchase. The product evaluation committee should include workers from all departments that handle or use needles, including nursing, infection control, central supply, and housekeeping. In order for workers to have a say about what devices are purchased, they must be involved early in the process.

It is critical that the union learn about and ask for a copy of any group purchasing organization (GPO) contracts between the hospital and medical device suppliers. The selection of safer products for

review may be severely limited to products from a very few manufacturers who have signed multi-year deals with the GPO. GPOs may then financially penalize healthcare facilities that evaluate and purchase superior, safer products from companies that are locked out of these special GPO arrangements.

In addition, the needlestick prevention committee should monitor needlestick reporting to see if all needlestick injuries are being recorded. The committee should ask the employer for its list of needlestick injuries and for its OSHA 200 log. The OSHA 200 log is where employers must record all workplace injuries and illnesses that require medical treatment "beyond first aid." Employers who may resist should be pushed to record **all** needlestick injuries with a potentially contaminated needle on the OSHA 200 log, as these incidents clearly fit the definition of "more than first aid," based on the need to provide the injured worker with blood testing, post-exposure medications, and/or counseling due to the significant psychological impact of such potentially life-threatening injuries.

In reviewing the logs, the committee may find that some needlestick injuries were not reported. Every needlestick injury is a serious event. If needlestick incidents are going unreported, talk with workers and supervisors to learn why injuries are not being reported. It is critical that all needlesticks be reported so the committee can take proper steps to eliminate these injuries.

If further questions remain about the employer's needlestick data, the needlestick prevention committee should conduct its own follow-up surveys for supplemental information to determine where the highest number of needlestick injuries occurs and what devices and procedures seem to cause the greatest number of injuries. A survey can also be

used to further educate the membership about issues surrounding needlestick injuries.

The committee should also:

- Confirm that the most recent CDC post-needlestick protocol is in place for hepatitis B, HIV and the growing threat of hepatitis C, and is posted prominently for all workers to see. The post-exposure protocol should include provisions on testing, counseling, prophylaxis, and worker confidentiality. Workers should be trained on the components of post-needlestick follow-up, and told who to contact for immediate treatment, 24 hours a day on all shifts.
- Educate the membership on the prevention of needlestick injuries—through membership meetings, leaflets, newsletter articles, or health and safety training sessions. Sponsor a safer devices exhibit at a local union meeting or health and safety workshop. Contact medical manufacturers to arrange for them to exhibit their devices. Most manufacturers have toll-free numbers and regional sales representatives who are eager to come to meetings to display their products.
- File class action grievances over the use of unsafe needle-bearing devices. In the early 1990s, members of SEIU Local 250 and Local 790 joined together to win a precedent-setting grievance at San Francisco General Hospital by mobilizing to demand safer devices. As a result of the union's actions, SFGH provides a safer I.V. catheter hospital-wide and formed a joint labor/management needlestick prevention committee.
- Involve members in building a strong case. Be prepared with the union's response to management's arguments.

Management will often argue that safer devices are too costly. Demonstrate that the prevention of needlestick injuries and bloodborne disease infection saves money.

- File complaints with OSHA over the use of unsafe needle-bearing devices. Healthcare workers won the right to engineering controls or safer needle-bearing devices such as self-sheathing needles, with the enactment of OSHA's Bloodborne Disease Standard. The 1991 standard clearly states that employers must evaluate and implement "engineering and work practice controls" including the use of safer needles. Enforce your rights by making OSHA do its job to protect healthcare workers.
- Push for contract language on safer needles. In 1997, Local 1991 in Miami negotiated language that the employer will adopt "engineering controls" to protect workers from infectious diseases. Local 535 members in Los Angeles staged a one-day strike to fight for safer device language in 1998. See the contract language section for the complete set of clauses.
- Remember: all grievances, OSHA complaints, and contract language demands must be well documented. Involve members in collecting information, signing petitions, and demanding safer devices. Organize! Mobilize! Demand your rights to safer devices. It's your right!

Characteristics of a Needlestick Prevention Program

Good	Inadequate	Bad
Sets a concrete goal of reducing needlestick injuries.	Has no concrete goal of reducing needlestick injuries.	Denies seriousness of needlestick injury problem.
Has a written needlestick injury prevention program that emphasizes aggressive prevention of needlestick injuries.	Substitutes management of needlestick injuries for prevention.	Has no written program.
Has one labor/management needlestick prevention committee responsible for the program, with a timeline and accountability.	Has several committees working on different parts of the program.	Designates no authority at all.
Is backed by specific contract language and is accountable to a joint labor/management committee.	Relies on generic health and safety contract language.	Has no health and safety contract language.
Produces and circulates the needlestick injury log to the full committee on a regular basis.	Circulates the needlestick injury log to management only.	Has no needlestick injury log.
Organizes injury data to show injured workers' classifications, shifts, departments, as well as medical devices and tasks involved.	Organizes injury data to show total number of injuries only.	Has no needlestick injury log.
Evaluates and makes changes in work practices and medical devices based on injury data. Buys and implements safer medical devices for all workers.	Promotes changes in workers' behavior to prevent needlestick injuries.	Makes it difficult for workers to report needlestick injuries.
Solicits input from workers in all areas, shifts, and jobs.	Allows only token worker involvement.	Involves no front-line workers.
Trains workers frequently on preventing needlestick injuries. Has in-services on safer medical devices.	Trains workers only on managing needlestick injuries, focusing on what to do after a needlestick injury.	Conducts no training on needlestick injury prevention.

Sample Contract Language

Note: Below is health and safety contract language with a particular emphasis on needlestick prevention developed and negotiated by two SEIU locals. To review a wider selection of more general model and sample health and safety language, as well as language specific for other workplace hazards, please refer to Chapter 6 of SEIU's Health and Safety Manual.

Local 1991, Miami

This language was successfully negotiated with Jackson Memorial Hospital in October 1997.

SAFETY AND HEALTH

Section 1. General Recognition

It is the responsibility of the Employer to provide safe and healthy working conditions in all present and future installations and to enforce safe working practices. Nothing in this Agreement shall imply that the Union has undertaken or assumed any legal liability to provide a safe workplace.

Section 2. Joint Health and Safety Committee

A. Purpose—The purpose of the committee is to identify and investigate health and safety hazards and make recommendations on preventive measures. Additionally, the committee will assist in monitoring all ongoing health and safety programs to assure their effectiveness in preventing hazardous working conditions. Investigation and monitoring may include work site inspections as requested by the Union. The committee shall have the authority

to make recommendations for safer substitutes or modifications to the new equipment, medical treatments and/or processes to the Product Review Analysis Committee. The Employer shall provide the Committee on a quarterly basis with data containing the vital information on all work-related injuries and illnesses, including but not limited to injury-on-duty quarterly, reports which will include needlestick and sharps injuries.

B. Establishment—The Employer will continue to comply with applicable federal, state, and county laws and regulations pertaining to occupational safety and health. To this end, any unsafe conditions reported by nurses will receive priority corrective action by Management. If a Registered Nurse believes a task or area is hazardous or unsafe, she will inform her immediate supervisor. If the nurse and supervisor do not agree on the matter, the nurse will have direct access to the Management personnel on that shift who has been designated by the Employer to resolve possible imminent danger hazards. The decision of this designated Management personnel shall be final. Every reasonable effort will be made to remedy such conditions as soon as possible.

C. Make-up of the Committee—The Committee shall be composed of 18 members. Nine (9) may be designated by the Employer. Nine (9) may be designated by the Union, with no more than one per patient care unit. The Committee will be co-chaired by Union and Management.

D. Meetings and Agenda—The Committee shall meet at least monthly and at other times when either side feels that there is a health and safety issue that requires immediate attention from the Committee. Each party will submit to the Chair for that meeting an agenda of topics to be discussed at least five (5) days prior to the regularly scheduled meetings. Either side may place any safety and health issue on the agenda.

Section 3. New Practices and Procedures

The Employer will inform the Union as soon as possible of the planned implementation of any new equipment, medical treatment and/or processes. Employees who are affected by any new equipment, medical treatment and/or processes shall be provided, prior to implementation, with the strongest feasible protection from hazards including, but not limited to, engineering controls, personal protective equipment, safer substitutes, and proper education and training.

Section 4. Infectious Diseases

The Employer shall provide the strongest feasible protection to nurses from occupational transmission of bloodborne and airborne infectious diseases, including but not limited to tuberculosis and HIV/AIDS, through the use of engineering controls, work practice controls, personal protective equipment, training and education and the development of a comprehensive bloodborne and airborne infectious disease program.

Local 1991 also successfully negotiated safety and health language on asbestos in the hospital and reducing workplace violence, which is not included here.

Local 535, Los Angeles

This language was drafted and proposed in current negotiations during October 1998 with Tenet Medical Center, Encino, Calif.

HEALTH AND SAFETY: INFECTION CONTROL

Section 1. General

The Employer shall provide an annual infection control update for all employees which shall include, but not be limited to (1) transmission of bloodborne, airborne, and other infectious diseases; (2) universal precautions, respiratory precautions, and other infection control measures; and (3) post-needlestick and other blood and body fluid exposure management protocol. The Employer shall provide maximum protection to employees from occupational transmission of airborne and bloodborne infectious diseases, through the use of engineering controls, work practice controls, personal protective equipment, training and education, and the development of a comprehensive airborne infectious disease program.

Section 2. Sharps Injury Log

The Employer shall maintain a Sharps Injury Log and shall record each exposure incident involving a sharp on the log within 14 working days of the incident, including the following information:

- A. Date and time of the exposure incident;
- B. Type and brand of sharp involved in the exposure incident;
- C. Frequency of use of the type and brand of sharp involved in the exposure incident;

D. Description of the exposure incident which shall include:

1. Job classification of the exposed employee;
2. Department or work area where the exposure incident occurred;
3. The procedure that the exposed employee was performing at the time of the incident;
4. How the incident occurred;
5. The body part involved in the exposure incident;
6. If the sharp had engineered sharps injury protection, whether the injury occurred before the protective mechanism was designed to be activated, during activation of the mechanism or after activation of the mechanism, if applicable;
7. If the sharp had no engineered sharps injury protection, the injured employee's opinion as to whether and how such a mechanism would have prevented the injury.

Section 3. Methods to Prevent Transmission

1. General. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.
2. Engineering and Work Practice Controls
 - A. Engineering and work practice controls shall be used to eliminate or minimize employee exposure.

B. Needleless Systems. Needleless systems shall be used for:

1. Withdrawal of body fluids;
2. Administration of medication or fluids; and
3. Any other procedure involving the potential for an exposure incident for which a needleless system is available as an alternative to the use of needle devices.

C. Needle Devices. If needleless systems are not used, needles with engineered sharps injury protection shall be used for:

1. Withdrawal of body fluids;
2. Accessing a vein or artery;
3. Administration of medication or fluids; and
4. Any other procedure involving the potential for an exposure incident for which a needle with engineered sharps injury protection is available.

D. Non-needle Sharps. If sharps other than needle devices are used, or if objects that become sharp are used, these devices and objects shall include engineered sharps injury protection.

OSHA Bloodborne Diseases Standard Checklist

In December 1991, after a five-year battle, SEIU won important protections for healthcare workers at potential risk of occupational exposure to hepatitis B, hepatitis C, HIV/AIDS, and other bloodborne diseases, when OSHA finally issued its Bloodborne Disease Standard.

The following checklist can be used to evaluate whether or not your employer is following OSHA's requirements for protecting workers from bloodborne diseases:

The employer has a written exposure control plan, which contains at least the following:

- A list of all jobs in which workers are exposed to blood and other potential infectious materials.
- A list of all tasks in which workers can be exposed.
- How the employer will implement the standard.
- The exposure control plan is accessible to workers and to OSHA.
- The exposure control plan is reviewed and updated at least annually.

Note: SEIU believes that the employer cannot meet its obligation to review and update its plan unless it keeps detailed records of every needlestick and sharps injury. At a minimum these records should include the date and time of the exposure incident, brand and type of device involved in the incident, whether the device was a "safety" device, frequency with which this

brand and type of device is used in the facility, a detailed description of the exposure incident, and the employee's opinion about whether any other controls could have prevented the injury.

- Universal precautions are followed. This means that all blood and body fluids are treated as though they were infected with HIV, hepatitis B and C.
 - Hand washing sinks are available.
-

- Engineering and work practice controls are used to eliminate or minimize worker exposure. Engineering controls (e.g., sharps disposal containers and safer medical devices) isolate or remove infectious hazards from the workplace. Some examples of safer devices are retractable or self-blunting needles, needleless I.V. connection systems, luer locks and needle-protected systems.
- Engineering controls are examined regularly and replaced with better, safer devices as they are approved by the FDA and become available in the marketplace.
- Because recapping needles is dangerous, OSHA has allowed recapping only when there are no alternatives to self-sheathing needles, such as procedures like blood gas analysis.

Note: In these circumstances, OSHA will allow a mechanical recapping device or a safe one-handed recapping method. SEIU is opposed to one-handed recapping techniques because recapping needles is dangerous. Only mechanical recapping devices should be used if one must recap.

- Personal protective equipment such as gloves, gowns, masks, mouthpieces and resuscitation bags are free to workers, in the right sizes, and readily available.
 - The employer cleans, repairs, and replaces personal protective equipment when needed.
 - The employer provides glove liners, and powderless gloves, or non-latex alternatives such as nitrile or vinyl gloves to prevent latex allergies.
-
- Sharps containers are easily accessible to all workers and are as close as possible to the areas where sharps are used, including patient care, laundry, and housekeeping areas.
 - The containers are kept upright throughout use, replaced routinely, and not allowed to overfill.
 - OSHA did not mandate, but SEIU believes that sharps containers should be wholly disposable.
 - Contaminated laundry is handled as little as possible and bagged where it was used.
 - Contaminated laundry is not rinsed where it was used.
 - Contaminated laundry which is sent off-site is placed in bags or containers which are labeled or color-coded with appropriate biohazard warnings.
-
- The employer maintains a schedule for proper cleaning, disinfection and sterilization of work surfaces (i.e., floors, walls) and contaminated equipment.
 - Sterilizers should be registered with the EPA and have the highest level of affinity for destroying all viruses, including HBV, HCV, HIV and TB.
 - Contaminated broken glass must be picked up with tools, and never with the hands.
-
- The hepatitis B vaccine is available within 10 working days of initial assignment to all employees who have occupational exposure. The vaccine is free to the worker and available at a reasonable time and place.
 - Workers choosing not to take the vaccine must sign a statement declining the vaccine. (The employer must still provide vaccine if the worker asks for it later.)
 - Confidential post-exposure follow-up procedures for HIV, hepatitis B and hepatitis C are provided free to workers who have had an exposure incident.
-
- Follow-up includes a confidential medical evaluation documenting how the exposure incident occurred, identifying and testing the source patient if feasible, testing the exposed worker's blood with consent, post-exposure treatment, counseling, and evaluation of reported illnesses. (See "If You Are Exposed . . ." page 30, for post-exposure treatment.)
 - A worker's consent is given before collecting his or her blood for testing after an exposure incident.
-
- Training on the standard is provided when a worker is first hired, when tasks or procedures are changed, and at least annually thereafter.
 - Training materials are understandable in language and content to all workers.
 - Training includes an interactive question-and-answer session with the trainer.
 - The employer maintains workers' medical records for the duration of employment plus 30 years.
 - Medical records are kept confidential, but are made available to the worker, anyone with written consent of the worker, OSHA, and NIOSH.
 - Training records are maintained for three years.

If You Are Exposed to Blood or Body Fluids

Obviously, most needlestick injuries could be prevented if employers used safer needle devices or needleless systems. When workers do suffer a needlestick injury or are splashed with blood or body fluids, the employer must respond promptly with an evaluation, counseling, and treatment if appropriate. OSHA requires that employers follow the U.S. Public Health Service guidelines for workers who have been exposed to HIV or hepatitis at work.

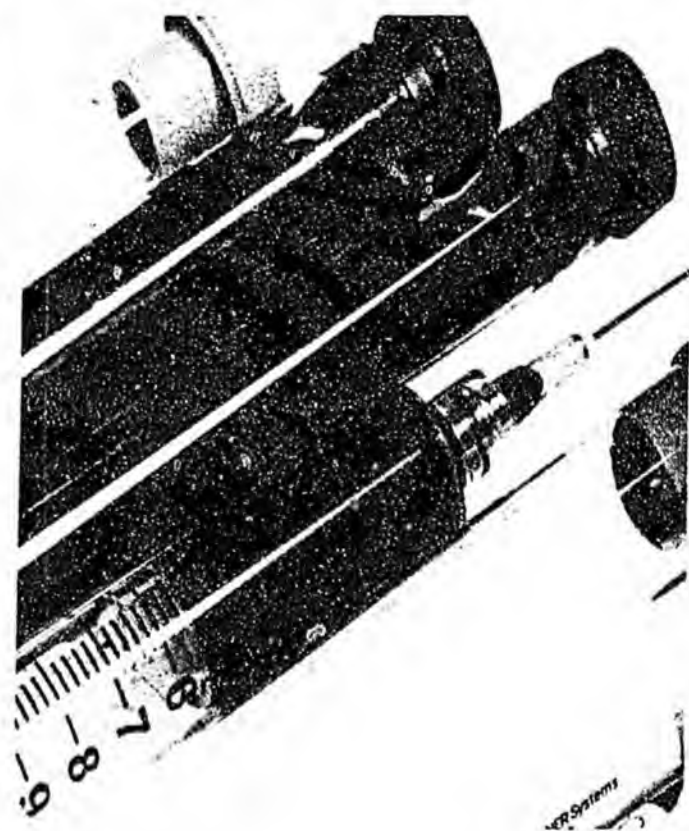
As time is of the utmost importance to maximize the effectiveness of various medical treatments, it is

essential to report a needlestick or blood exposure to your employer immediately. The employer should make every effort to determine whether the patient who is the source of the blood has HIV or hepatitis B or C. In some states it is illegal to test a patient's blood without their consent, but in most cases, their health status is already contained in their medical records.

If You Are Exposed to HIV

If you have been exposed to blood containing HIV or blood from a source whose HIV status is unknown, you should be evaluated as soon as possible (within two hours) by a clinician familiar with post-exposure evaluation and treatment. You should have a baseline blood test. The clinician needs to assess the degree of risk from your exposure to HIV so that decisions can be made as to whether to recommend giving you drugs to fight the virus. There are several factors in determining whether to recommend treatment such as: 1) How severe the needlestick—how much blood and how deep? Severe exposure is more likely if stuck by a hollow needle versus solid needle, it is a deep puncture, there is visible blood or it was a stick by a needle that was used in patient's artery or vein; and 2) How much HIV was in the source patient's blood (high versus low titer)?

Most exposures to HIV positive blood as a result of needlesticks or other sharps injuries warrant at least consideration of anti-HIV drugs. There are several



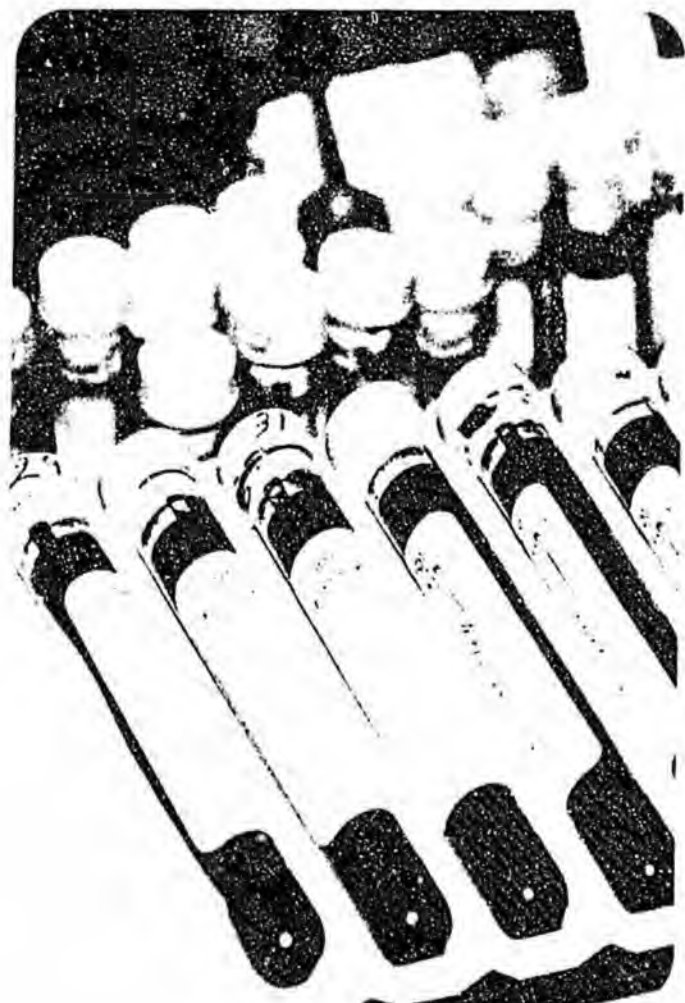
different types of treatment, depending on the level of risk in your exposure. The important thing is that you are evaluated promptly by someone familiar with treatment of occupational exposure and that they explain to you the reasons for their recommendation. The drugs used to fight HIV may have significant side effects. The person evaluating you should explain the risks of taking, or not taking, anti-HIV drugs. If you have your own questions about proper treatment, are concerned that your employer is not taking your exposure seriously, or you do not believe that you are receiving the best treatment and/or advice, you should call the federally funded **CDC's National Clinician's HIV Postexposure Treatment Hotline at (888) 448-4911**.

Again, timing is of utmost importance. According to the U.S. Public Health Service, when drugs to fight HIV are called for, they should be started "within a few hours" of the exposure. Employers need to be able to offer evaluation, counseling and treatment "during all working hours, including nights and weekends."

If you have been exposed to HIV at work, the U.S. Public Health Service recommends that your blood be tested at the time of exposure and periodically over the next six months (e.g., 6 weeks, 12 weeks and 6 months). The first (baseline) blood test doesn't tell you whether you have been infected as a result of your exposure. It shows whether you were infected before the incident. Even if you feel confident that you did not have HIV before, you should have the test. It can serve as proof that any infection that shows up in the following months was acquired at work. This can be very important if you need to file for workers' compensation or take other legal action.

SEIU recommends that you also have your blood tested one year after exposure, since there have been cases of healthcare workers converting (testing positive for antibodies, which demonstrates infection) more than six months after they were exposed.

Once you have been exposed to HIV at work, you should be advised to practice safe sex or abstinence and to avoid donating blood until you are certain that you are not infected. This is so that you do not pass along the disease to others. Unless your job entails performing invasive medical procedures, your work responsibilities do not need to be assessed further to avoid infecting patients.



If You Are Exposed to Hepatitis C at Work

If you are exposed to blood from a person with hepatitis C, you should have a baseline test of your blood at the time of exposure and follow-up blood testing as in the case of exposure to HIV.

Unfortunately, at the current time there are no drugs or vaccines that can help your body fight off the HCV infection, but it is still very important to know if you have been infected. If you do become infected, you should receive counseling on the effects of HCV infection and how you can avoid passing the infection on to others. You should not donate blood, semen or body tissue if you think

you might be infected. You should not share razors or toothbrushes with anyone. You should adopt safe sex practices to avoid infecting others.

If you develop chronic (long-term) hepatitis C infection, there are drugs available which may help reduce the amount of virus in your body. Consult your healthcare provider.

If You Are Exposed to Hepatitis B at Work

If you suffer an exposure to blood or body fluids that may contain hepatitis B (HBV) and you have not been vaccinated, you should begin the vaccine as soon as possible. If the blood is known to con-

Antibody Status of the Exposed Healthcare Worker	Treatment Recommended by the U.S. Public Health Service After Exposure, or Suspected Exposure, to HBV
Unvaccinated	Immune globulin (within 24 hours of exposure) and begin vaccination series
Previously Vaccinated	
Known responder (your body produced sufficient antibodies)	No treatment
Known non-responder (your test does not show enough antibodies in your blood)	Either 2 shots of immune globulin, or 1 shot of immune globulin and initiate revaccination
Antibody response unknown	<p>Test exposed healthcare worker for antibodies:</p> <p>If antibodies are adequate, no treatment is called for</p> <p>If antibodies are not adequate and the source is known HBV carrier, then 1 shot of immune globulin plus a vaccine booster</p> <p>If antibodies are not adequate and it is not known whether the source was HBV positive, then initiate revaccination</p>

tain HBV, you should also receive a shot of immune globulin within 24 hours of the exposure.

If you have been vaccinated and are exposed to blood that contains or is suspected of containing HBV, there are several treatment options. The proper treatment depends on whether your body responded to the vaccine by producing enough antibodies.

Whether you are exposed to HIV, HCV or HBV, all post-exposure testing, evaluation, counseling and treatment must be provided free of charge. It should be delivered promptly and the results should be kept confidential.

Resources

Centers for Disease Control and Prevention, "Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Postexposure Prophylaxis," *Morbidity and Mortality Weekly Report*, Recommendations and Reports Vol. 47, No. RR-7, May 15, 1998.

Centers for Disease Control and Prevention, "Recommendations for Follow-Up of Health-Care Workers After Occupational Exposure to Hepatitis C Virus," *Morbidity and Mortality Weekly Report*, Vol. 46, No. 26, July 4, 1997, pp. 603-606.

Centers for Disease Control and Prevention, "Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC)," *Morbidity and Mortality Weekly Report*, Recommendations and Reports Vol. 46, No. RR-18, December 26, 1997, pp. 22-23.

Note: All of these reports can be found on the CDC's Website at www.cdc.gov



Safer Medical Device Products and Manufacturers

MEDICATION DELIVERY

DISPOSABLE SYRINGE INJECTION

(1) Safety-Lok Syringe, Becton Dickinson and Co., Franklin Lakes, N.J., (888) 237-2762. [Sliding sleeve.] *Also insulin syringe with safety-lok.*

(2) Monoject Safety Syringe, Kendall/Sherwood/Davis & Geck, Manfield, Mass., (800) 962-9888. [Sliding sleeve.] *Also insulin syringe with safety feature.*

(3) SteriMatic Safety Needle, Stepic Medical, Long Island City, N.Y., (800) 456-9987. [Sliding sleeve.]

(4) Safe-Point Needle Cover System, North American Medical Products, Schenectady, N.Y., (800) 488-6267.

(5) The Guardian, Frontline Medical Products, Ventura, Calif., (805) 658-1601. [Retracting device.]

(6) VanishPoint Syringe, Retractable Technologies, Inc., Lewisville, Texas, (888) 703-1010. [Retracting device.]

(7) Zero-Stik Safety Syringe, New Medical Technology, Inc., Zionsville, Ind. (800) 522-1512 [Retracting device]

NEEDLELESS INJECTION

(1) Biojector Jet Injection System, Bioject Inc., Portland, Ore. (800) 683-7221.

PREFILLED CARTRIDGE SYRINGE INJECTION

(1) Safe-Point Needle-cover System, North American Medical Products, Schenectady, N.Y., (800) 488-6267.

I.V. ADMINISTRATION

I.V. NEEDLELESS ADMINISTRATION

(1) SAFSITE I.V. Access System, B. Braun/McGaw, Irvine, Calif., (800) 624-2948.

(2) Interlink I.V. Access System, Baxter Healthcare Corporation, Deerfield, Ill., (800) 933-0303.

(3) Clave Connector, ICU Medical, Inc., San Clemente, Calif., (800) 824-7890. [Luer-lock connector.] (This device is co-marketed with Abbott Laboratories.)

(4) AccuSlide Flow Regulator with Smartsite Needleless System, Alaris Medical Systems, Inc., San Diego, Calif., (800) 482-4822.

I.V. PROTECTED NEEDLE ADMINISTRATION

(1) Centurion Kleen-Needle System, Tri-State Hospital Supply Corporation, Howell, Mich., (800) 248-4058.

Preventing Needlestick Injuries

(2) Autogard I.V. Needle, Becton Dickinson and Co., Franklin Lakes, N.J., (888) 237-2762.

(3) Baxter Protective Needle Lock, Baxter Healthcare Corporation, Deerfield, Ill., (800) 933-0303.

(4) ICU Click-Lock, ICU Medical, Inc., San Clemente, Calif., (800) 824-7890.

(5) McGaw Protected Needle, B. Braun/McGaw, Inc., Irvine, Calif., (800) 624-2948.

(6) LifeShield Connector and LifeShield Blunt Cannula, Abbott Laboratories, Abbott Park, Ill., (800) 222-6883.

(7) Saf-T Klik I.V. Connection System, Winfield Industries, San Diego, Calif., (800) 321-5493.

VASCULAR ACCESS BLOOD-DRAWING

WINGED, STEEL-NEEDLE I.V. (BUTTERFLY)

(1) Shamrock Safety Blood Collection Set, Winfield Industries, San Diego, Calif., (800) 321-5493. [Sliding sleeve.]

(2) Safety-Lok Blood Collection Set, Becton-Dickinson and Co., Franklin Lakes, N.J., (888) 237-2762.

(3) Monoject Angel Wing Safety Needle System, Kendall/Sherwood/Davis & Geck, Manfield, Mass., (800) 962-9888.

(4) PUNCTUR-GUARD Winged Set for Blood Collection, Bio-Plexus, Vernon, Conn., (800) 223-0010. [Needle is blunted after use.]

VACUUM-TUBE PHLEBOTOMY

(1) Vacutainer Brand Safety-Lok Needle Holder, Becton-Dickinson and Co., Franklin Lakes, N.J., (888) 237-2762. [Sliding sleeve.] Hemogard Closure—plastic shield over the rubber stopper.

(2) Saf-T Klik, Winfield Industries, San Diego, Calif., (800) 321-5493. [Sliding sleeve.]

(3) PUNCTUR-GUARD Blood Collection Needle, Bio-Plexus, Vernon, Conn., (800) 223-0010. [Needle is blunted after use.]

(4) Safe-Point M-D (Multi-Draw) Blood Collection Needle and Needle Guard, North American Medical Products, Inc., Schenectady, N.Y., (800) 488-6267. Safe-Point Vacutainer Needle-cover System.

(5) VanishPoint Blood Collection Tube Holder, Retractable Technologies, Inc., Lewisville, Texas, (888) 703-1010.

ARTERIAL BLOOD-GAS

(1) Accu-Vent with Needle-Pro [Needle Protection Device], SIMS Portex, Inc., Keene, N.H., (800) 258-5361.

IN-LINE BLOOD COLLECTION

(1) Safedraw Closed-loop Blood Sampling System, Becton Dickinson and Co., Franklin Lakes, N.J., (888) 237-2762.

(2) Medex Secure System, Medex, Hilliard, Ohio (800) 848-1757.

(3) VAMP: Venous/Arterial Blood Management Protection System, Baxter Cardio-vascular Group, Irvine, Calif., (800) 424-3278.

I.V. CATHETER (STYLET)

- (1) PROTECTIV I.V. Catheter Safety System, Johnson & Johnson, Inc., Arlington, Texas, (800) 423-5850.
- (2) Insyte AutoGuard, Becton-Dickinson, Franklin Lakes, N.J., (888) 237-2762. [Shielded I.V. catheter without wings.] *Safety E-Z Set, [see above]. [Shielded I.V. catheter with wings.] Safety Intima, [see above]. [Shielded I.V. catheter with wings.]*

PUNCTURE/INCISION ADMINISTRATION

- (1) Glucolet 2 Automatic Lancing Device, Bayer Corporation, Elkhart, Ind., (800) 348-8100.
- (2) Microtainer Safety Flow Lancet, Becton Dickinson and Co., Franklin Lakes, N.J., (888) 237-2762.
- (3) Surgicutt, ITC (International Technidyne Corporation), Edison, N.J., (800) 631-5945. [Arm incision for adults, children and infants.]
- (4) Tenderfoot, [see above]. [Heel incision for infants.]
- (5) Tenderlett, [see above]. [Finger incision for adults, children and infants.]
- (6) Monoject Monolettor Safety Lancet, Kendall/Sherwood/Davis & Geck, Manfield, Mass., (800) 962-9888.
- (7) Unistik Lancet, Owen Mumford, Marietta, Ga., (800) 421-6936.

HEMATOCRIT TESTING

- (1) SafeCrit Plastic Hematocrit Tube, StatSpin Inc., Norwood, Mass., (800) 782-8774. [Substitutes plastic in place of a glass tube.]
- (2) HemoCue Hemoglobin system, HemoCue, Inc., Mission Viejo, Calif., (800) 323-1674. [This system eliminates the need for a hematocrit tube.]

SURGICAL NEEDLES

- (1) Ethiguard Needle System, Johnson & Johnson, Inc., Piscataway, N.J., (800) 255-2500. [This system features a blunt-tipped needle for purposes of suturing.]]

IRRIGATION SPLASH SHIELD

- (1) Zerowet Splashshield, Zerowet, Inc., Palos Verdes Peninsula, Calif., (800) 438-0938. [Eliminates use of needles in debridement procedures, and protects against splashing of body fluids.]

**This list was revised in September 1998 and is not complete. This list will be updated periodically. These devices have not been evaluated by SEIU for their safety performance or efficacy. If you know of additional medical devices which would prevent needlestick injuries or other exposures to body fluids, or if you have comments about any of the products listed here, please contact the SEIU Health and Safety Director in Washington, D.C.*



Our mission is to
improve the lives of
working people and
their families, and lead
the way to a more just
and humane society.



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