

Safe Needle Devices

Ed Krisiunas

A Webber Training Teleclass

Safe Needle Devices

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Objectives

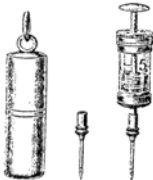
- Brief history – hypodermic syringes
 - Needlestick injuries
 - Safe Needle Devices
- What is a safe needle device?
- Examples
- Considerations
- Obstacles

Disclaimer

- The specific mention or photograph(s) of a safe needle device or product is not an endorsement of that product or company.

ARTICLE 2757.

A NOVEL SUBCUTANEOUS SYRINGE.
MESSRS. JOSEPH WOOD & CO., of York, are making an extremely neat and useful novelty in the shape of a watch-chain charm containing a subcutaneous syringe. The annexed diagram is of the actual size of the instrument. The syringe is graduated to



5 minims, and fits with its two needles into a neat gilt case, with double swivel ring to permit its being attached to the watch-chain. When in this position, it is ready for any emergency, and is not likely to be forgotten. Its moderate price should prove a recommendation.

By permission of Oxford University Press⁶

The word "syringe" is derived from "syrinx" and "syringos," Greek words for "pipe" and "tube"

Figure 1.4: The final hours of a morphinist



By permission of Oxford University Press⁶

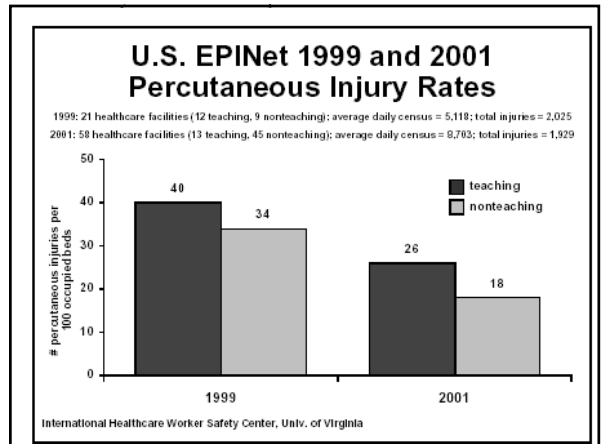
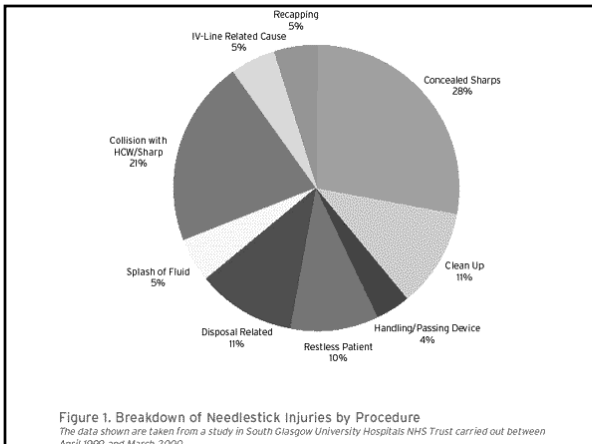
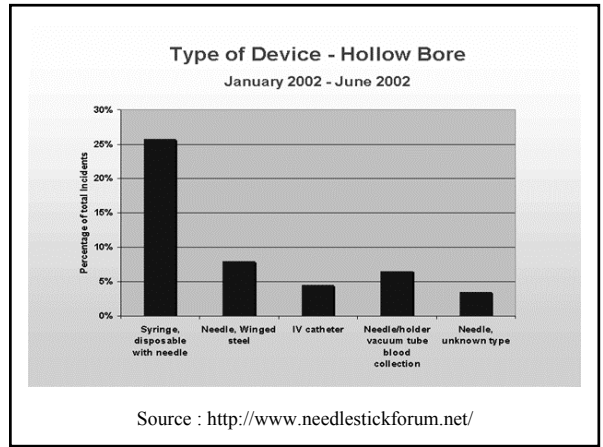
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More Recent History
1954
Glenn Murdoch – New Zealand
Disposable Hypodermic Syringe

D'Iorio Restaurant
Waterbury, Connecticut, USA
1957
Louie's Steakhouse
Columbus, Nebraska, USA



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SHARPS Injury Control Program
California Department of Health Services



Sharps Injury Control Program Report

<http://www.dhs.cahwnet.gov/ohb/sharps/>

OSHA
United States Department of Labor

**Occupational Safety
and
Health Administration**
www.osha.gov

Bloodborne Pathogen Standard
29 CFR 1910.1030

Resources

**International Sharps Injury
Prevention Society**
<http://www.isips.org/>

**International Health Care Worker
Safety Center**

<http://www.med.virginia.edu/medcntr/centers/epinet/>

Resources

The Needlestick Forum
<http://www.needlestickforum.net/>

European Agency for Safety and Health at Work
http://europe.osha.eu.int/good_practice/sector/healthcare/

UNISON
www.unison.co.uk

What is a “Safe Needle Device”?

A “safe needle” device incorporates engineering controls to prevent needlestick injuries before , during or after use through built-in safety features.

Efficacy of Safer Needle Devices

Q. Can safer needle devices prevent needlestick injuries?

A. All needlestick injuries are not preventable, but research has shown that almost 83% of injuries from hollow-bore needles can be prevented (Ippolito et al, 1997). Many of these needlesticks can be prevented by using devices that have needles with safety features or eliminate the use of needles altogether (e.g., needleless IV connectors, self re-sheathing needles, and blunted surgical needles).

Occupational Safety and Health Administration
Directorate of Technical Support
Office of Occupational Health Nursing
October 1997

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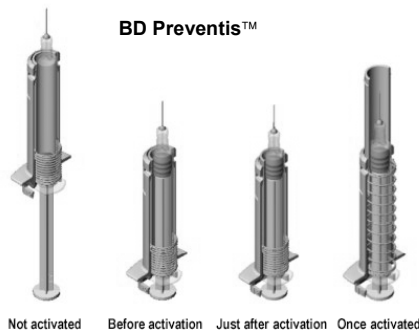
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What are some of the types of safety features used in safer needle devices?

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 active or passive and whether the engineering control is part of the device (Chiarello, 1995).

- **Passive safety features** remain in effect before, during and after use; health care workers do not have to activate them. Passive features enhance the safety design and are more likely to have a greater impact on prevention.



- **Active devices** require the health care worker to activate the safety mechanism. Failure to do so leaves the worker unprotected. Proper use by health care workers is the primary factor in the effectiveness of these devices.




Medi-Hut Co. Inc.


- An **accessory safety device** is a safety feature that is external to the device and must be carried to or temporarily or permanently fixed to the point of use. This design also is dependent on employee compliance and according to some researchers, is not desirable.
- An **integrated safety design** means that the safety feature is built in as an integral part of the device and cannot be removed. This design feature is preferred.

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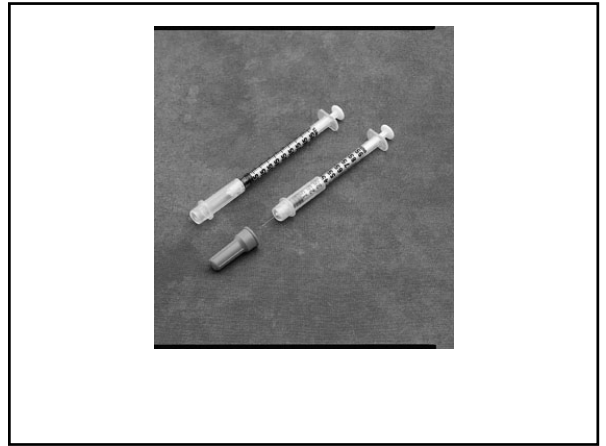
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HYPODEST - *Disarming the Weapon in Used Needles*
 Portable Needle Destroyer 



Marketing and Commercial Development Worldwide
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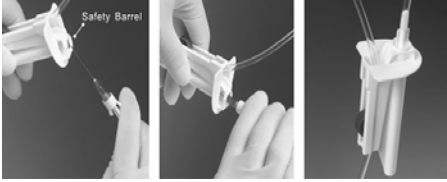


NOMO Stick



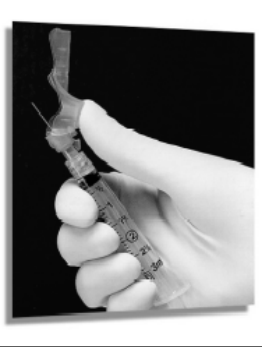
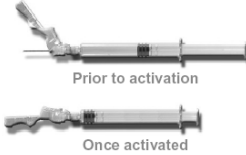
Taiject Medical Device Co Ltd

Safety I.V. Set syringe disposal kit. Insert - Lock - Dispose




Taiject Medical Device Co Ltd

BD Eclipse™ Shielding Hypodermic Needle

Prior to activation
 Once activated

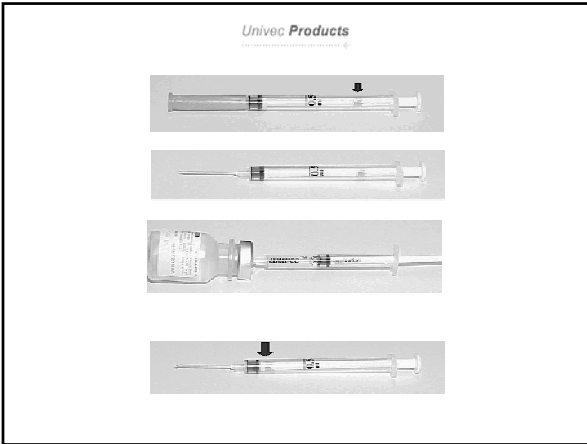


Clave Needle-Free Connector

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EVALUATING SAFER NEEDLES A UNISON GUIDE "NEEDLE SAFETY AT WORK"

<http://www.unison.org.uk/acrobat/B337.pdf>

www.tdict.org

Training for Development of Innovative Control Technology
USA

During Use

1. Safety feature can be activated using a one handed technique
2. Safety feature does not obstruct vision of the tip of the sharp
3. Use of this product requires you to use the safety feature
4. Product does not require more time to use than a non-safety device
5. Safety feature works well with a wide variety of hand sizes
6. Device is easy to handle while wearing gloves
7. Device does not interfere with uses that do not require a needle
8. Device offers a good view of any aspirated fluid.
9. Device will work with all required syringe & needle sizes

After Use

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

Training

14. User does not need extensive training for correct operation
15. The design of the device suggests proper use
16. It is not easy to skip a crucial step in the proper use of device

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

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

**L Tan et al. Report of the council on scientific affairs.
Preventing needlestick injuries in health care settings.
Archives of Internal Medicine 2001 161: 929-936**

- ✓ Staff involvement in the evaluation and selection of safer devices, and the proper education and training of staff in their use was an extremely effective means of preventing percutaneous injury.
- ✓ The use of safer devices was not reported to affect delivery of patient care.
- ✓ A comprehensive safety and health programme may be the most effective way to reduce the risk of bloodborne pathogen transmission.

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- ✓ Increased costs and staff resistance to change were the two most frequent obstacles to adopting safer needles.
- ✓ Safer devices are generally more expensive than conventional devices, but the total additional cost for a facility is a small fraction of the total costs.
- ✓ Reductions in needlestick incidence will result in substantial financial benefits from reduced post-exposure testing and treatment, as well as health benefits from reduced transmission of disease.

Final Comments

- Many products exist in the market place
- Do your research
- Determine what works best for you and your institution
- Safer devices are generally more expensive than conventional devices, but the total additional cost for a facility is a small fraction of the total costs.

Thank -You!



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or refer to

www.webbertraining.com/help.cfm