Orabloc® Needlestick Safety System

THE PREVENTION OF NEEDLESTICK INJURIES IN DENTAL PRACTICE.







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During dental practice, sharp devices and equipment such as needles, scalpels, root canal reamers, stitch cutters, glass ampoules, sharp instruments and broken crockeries and glasses are used and accidental injury may occur during the time of use or disposal¹. Unsafe injections can result in transmission of a wide variety of pathogens, including viruses, bacteria, fungi and parasites.

They can also cause non-infectious adverse events such as abscesses and toxic reactions. Reuse of syringes or needles is common in many settings. It exposes patients to pathogens either directly (via contaminated equipment) or indirectly (via contaminated medication vials) (3, 4).

The risks of unsafe injection practices have been well documented for the three primary bloodborne pathogens – human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV).²

For these reasons, The Needlestick Safety and Prevention Act was introduced in the US to revise the Occupational Safety and Health Administration's (OSHA) standard regulating occupational exposure to bloodborne pathogens.

This includes the human immunodeficiency virus, the hepatitis B virus, and the hepatitis C virus. The Act was signed into law on November 6, 2000 and OSHA published in the Federal Register it's regulations reflecting the Act and its requirements. The effective date of the regulations was April 18, 2001. The Needlestick Safety and Prevention Act seeks to further reduce health care workers' exposure to bloodborne pathogens by imposing additional requirements upon employers, such as hospitals and ASCs, concerning their sharps procedures.

Consistent with the Act, OSHA's regulations:

- modifies the definition of "engineering controls" and adds definitions for the terms "sharps with engineered sharps injury protection" and "needleless systems,"
- 2. requires employers to consider and implement new technologies when they update their "exposure control plan,"
- 3. requires employers to solicit employee input with respect to appropriate engineering controls, and
- 4. requires employers to maintain a sharps injury log. Practical questions about implementing the new requirements are a source of major concern.³



¹ Shuchi Tripathi1*, Raghuwar Dayal Singh1, Rameshwari Singhal2, Richa Khanna3, Deeksha Arya1 and Swapnil Parlani4 Sharps Safety and Management among Dental Practitioners journal of Dental Problems and Solutions

² Wilburn S, Eijkemans G. Protecting health workers from occupational exposure to HIV, hepatitis, and other bloodborne pathogens: from research to practice. Asian-Pacific Newsletter on Occupational Health and Safety, 2007, 13:8–12.

³ Needlestick Safety and Prevention Act Mark F. Tatelbaum, JDPain Physician, Volume 4, Number 2, pp193-195 2001, American Society of Interventional Pain Physicians® ISSN 1533-3159

Needlestick Injuries are a common subgroup of medical accidents and, they carry personal, and financial consequences. Indeed dentists have to consider that, for example, an inspection can result in the dentist being cited for violations of OSHA's Bloodborne Pathogens Standard, with relevant economic impact for his practice and relevant legal and personal implications.

What does the standard say about the use of safer medical devices?

The standard states, "engineering and work practice controls shall be used to eliminate or minimize employee exposure."

The 2001 revision defines engineering controls as "controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace."

Employers who have employees exposed to contaminated sharps must consider and implement appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

Also, employees with occupational exposure must be trained in the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices and personal protective equipment.

Therefore, training must include instruction on any new techniques and practices associated with new engineering controls.

OSHA (Occupational Safety and Health Administration) and **WHO** (World Health Organization) recommend using needle safety devices or a method such as the one-hand scoop technique to reduce the risk of a needlestick injury.⁴

The European regulatory framework

In Europe about 1 million needle puncture wounds occur every year.

The discipline relating to the prevention of stab wounds is introduced in the Community through Directive 2010/32/EU and arises from the need to protect health workers because workers at risk of needle bites and stab wounds.

The objectives of the standard are, in summary:

- ensure the maximum possible safety of the working environment;
- avoid injuries to health workers caused by any type of sharp medical device (including needle bites);
- protect workers at risk;
- define an integrated approach including risk assessment and prevention, training, information, awareness-raising and monitoring;
- implement response and follow-up procedures.⁵

Council Directive 2010/32/EU implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector. It imposes the obligation to use inside the sanitary structures (public and private) safety devices in order to prevent the needlestick injuries

SECURING THE NEEDLE BEFORE THROWING IT AWAY IS THEREFORE COMPULSORY

How dentists can do this?

Needle recapping using the one handed scoop technique can make securing the needle cap difficult, risking injury.

If a needle cap is dropped or misplaced, there is a potential for needlestick injury.

from https://www.osha.gov/sites/default/files/publications/bbfact02.pdf

⁴OSHA Factsheet. (2011). Protecting Yourself When Handling Contaminated Sharps. Retrieved February 22, 2021,

⁵WHO. Best Practices for Injections and Related Procedures Toolkit. (2010). World Health Organization.

Doi:https://apps.who.int/iris/bitstream/handle/10665/44298/9789241599252_eng pdf;jsessionid=4A9D8F57FDB724AC1237419FD4FD6A0A?sequence=1

The Orabloc Needlestick Safety System is a medical device that allows needle recapping with one hand, so as to minimize the risk of accidental needlesticks.

The device is very practical and simple to use: the needle is inserted into a disc with an opening and closed by a silicone capsule of bright color.

It is then simply extracted and a spring inside the system pushes the opening towards the next capsule.

Once the needle is removed from the syringe, the opposite end can also be plugged.

The rigid silicone caps adhere to the needle and they do not risk falling and effectively avoids the danger of accidental punctures.

The device is equipped with 100 protective capsules of different colors: from green, to yellow and finally to red that signals when you are running out of silicone caps and you need to replace the device.

With the Orabloc Needles Protection Device, the dental practice is equipped with a tool that can be used in case there are multiple operators at work. It is in fact portable.

The silicone base ensures that the device does not move during recapping, without being anchored by clamps to the work table. Compared to other devices on the market:

- Can also be used when multiple injections are being made
- Doesn't reruire electricity
- Does not need to be sterilized
- Produces no emissions or fumes
- Recyclable

It is the most competitive product to ensure safety within your dental practice.

For more information:

https://www.youtube.com/watch?v=K--arNnxAak http://www.orabloc.com/orabloc-needlestick-safety-system/ https://dentaladvisorblog.com/orabloc-needlestick-safety-system/ https://www.dentaladvisor.com/pdf-download/?pdf_url=wp-content/ uploads/2021/03/CPS_Orabloc-Needlestick_Pierrel-Pharma_Issue.pdf

Needlestick Safety System: Very simple and easy to use



01. Place the needle tip in the funnel opening on top of the device.





02. Remove the syringe. A protective capsule will be covering the needle.



03. The system "automatically advances" to the next available capsule.