

## Meeting The Safety Challenges In Ophthalmic Surgery: The Role of the Ophthalmic Surgical Team

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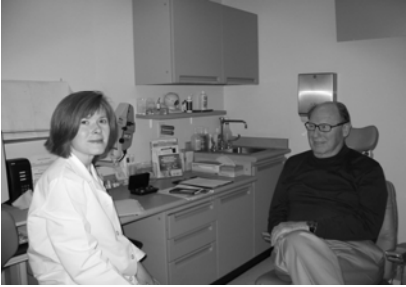
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## This is OUR Message – Attention to the Smallest of Details Affects Patient Outcomes




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
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## Learning Objectives

- Identify recommendations from the TASS Task Force to address patient safety regarding proper ophthalmic instrument sterilization.
- Describe the Needlestick Safety and Prevention Law, which requires employers to evaluate and implement the use of "safer medical devices".
- Identify better practices to prevent TASS and Endophthalmitis.

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## Learning Objectives

- Explain how single-use instruments can play a role in patient safety.
- Identify the impact of sharps injury on hospitals and practices.
- Discuss the costs and resources associated with instrument cleaning and sterilization.
- Describe the potential cost benefit of single-use instruments.

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## Historical Perspective of Surgical Instrumentation

- Look how far we have come ~
- The history of surgical instrumentation dates back to 2,000 BC.



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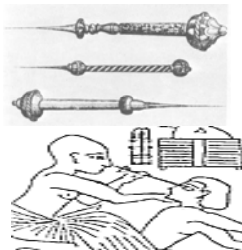
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## Early Cataract Extraction

- Early removal of cataracts was performed by Couching the lens.



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## Advanced Technology & Instrumentation



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## Introduction of Disposable Medical Products

- It has only been ~ 50 years ago that the availability of quality, sterile, disposable medical products have been made available.



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## Correlation Between Surgical Instrumentation and Surgical Outcomes

- "While there was no conclusive epidemiological data to suggest that only one product was responsible for the increase in TASS cases, this report identified multiple potential etiological factors linked to cleaning and sterilization of instruments".

□ ASCRS/ASORN Special Report - February 2007



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## Instrument Cleaning Begins On The Sterile Field



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## Proper Instrument Care is a Process

- Cleaning the Instruments
- Decontamination of Instruments
- Sterilization of Instruments



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## Pearls for Finding the Balance

- Adequate time for thorough cleaning, decontamination and sterilization of all ophthalmic surgical instrumentation must be established.
- The number of surgical trays is determined by how long this process takes.
- Only reprocess what is used every time.

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## Safety MUST BE a Priority

- Today's challenge ~ perform more procedures in less time with less cost.
- ~ 3 million cataract procedures are performed each year in US.
- Process are in place to insure health care workers safety and patient safety.
- It is our duty to be knowledgeable of risks and procedures to follow.

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## The Needlestick Safety and Prevention Act

- March 6, 1992 ~Bloodborne Pathogen Standard became effective.
- October, 2000 ~ United States Congress passed the federal Needlestick Safety and Prevention Act. Include requirements to use safety engineered sharps devices.
- July 17, 2001 ~ Enforcement of new standard by OSHA.

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## Why do we need Guidelines?

- WHY ? Needlesticks continue to be a problem in health care settings.
- CDC estimates ~ 600,000 – 800,000 incidents per year even with standard in place.
- Estimates ~ 220,000- 420,000 occur in non-hospital health care settings.

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## The Importance of Compliance

- With safety, it is always better to anticipate a potential danger and prevent it rather than make changes after the event occurs.
- Employee Safety
  - 3 million Americans infected with HBV
  - 4 million Americans carry the HCV
  - 800,000 infected with HIV
- Who is at risk for needlestick injury ?
  - Nurses at highest risk ~38%

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## Employee Safety the Priority

- OSHA estimates –
  - 5.6 million HC workers
  - At risk for exposure to bloodborne pathogens
  - 20 different bloodborne pathogens result in 1,000 infections each year.



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## Comparative Risks of Bloodborne Pathogen from Percutaneous Injury

- HBV = 6% - 30%
- HCV = 0.4% - 1.8%
- HIV = 0.3%
- No reports of HIV transmission in eye care setting.



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## HBV

What is the risk of infection after an exposure?

- People who received vaccine and developed immunity- virtually no risk.
- Depends on the status of the source pt. 6-30%.



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## HCV

What is the risk of infection after an exposure?

- After needlestick or cut 1.8%
- After blood exposure to eye, nose, mouth = believed to be very small.



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## HIV

What is the risk of infection after an exposure?

- After needlestick or cut 0.3%
- After blood exposure to eye, nose, mouth = 0.1%
- After blood exposure to nonintact skin < 0.1%



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Despite our best effort at prevention ~

Exposures Happens





Then we need to assure the injured HCW gets the appropriate care

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One Nurse's Story  
The Unthinkable Happens

- One needlestick changes a life.
- An injury that was 100% preventable.
- Now she takes over 20 pills per day to fight her disease.




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How do we PREVENT INJURY?

- CDC estimates 62%-88% of sharps injuries could be prevented by the use of safer medical devices.
- Examples are: guarded surgical blades, needless devices, shielded needles, blunt needles, retractable needles.

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## Common Causes of Injury

- Improper work practices.
- Sharps being passed between individuals.
- Sharps being transferred to a different location.
- Recapping a needle.

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## Common Causes of Injury

- Collisions between workers.
- Decontamination or processing used equipment.
- Improper disposal of used sharps.



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## What are Safety Devices?

- Safety products are designed to prevent percutaneous injuries.
- The term “engineered controls” has expanded to engineered sharps injury protection.
- Specific devices with increased risks are: hollow bore needles, devices that must be taken apart by HC worker, exposed needles after use, needles attached to tubing.

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## Engineering controls

Isolate or remove the bloodborne pathogen hazard from the workplace



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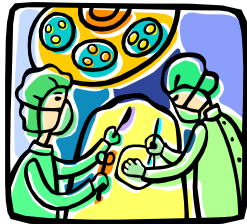
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## Patient Safety and Patient Perceptions

- When HC workers demonstrate safe actions in care ~
- We instill patient confidence that we place a premium on safety and quality.



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## Injury Prevention

- Fact – approximately ½ of all NSI go unreported by employees.
- Create a culture where staff are supported when reporting injuries.



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## Safe Work Practices

- Before procedure, be sure all equipment is within arms reach.
- Have adequate lighting for task.
- Locate sharps disposal container prior to procedure.
- Assess patients ability to cooperate – do you need assistance to perform safely?

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## Safe Work Practices

- Maintain visual contact with sharps.
- Be aware of surrounding staff.
- Create a predetermined "Neutral Zone".



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## Safe Work Practices

- Activate safety features asap – look and listen for clues.
- Count sharps.
- Transport reusable sharps in a closed container.



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## Injury Reporting

- Health care facilities **MUST** track and document sharp injuries as required by OSHA.
- Must include: device, department, explanation.
- Also report near misses.




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## What do Nurses Want?

### 2008 ANA Survey of 700 Nurses

- Hands and fingers to stay behind needle when activating safety mechanism.
- Safety feature activated using one hand.
- Syringe is permanently disabled after the safety mechanism is activated.




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## What do Nurses Want?

- Needle withdraws into the barrel.
- Safety feature is integral to the design of the syringe.
- No add-on pieces such as sheaths, shields or caps.




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## What do Nurses Want?

- Nurses want to be part of the process to evaluate and select safety products.
- 74% of nurses say they would not work for employer which does not provide safety products.
- In 2008, 94% of nurses report there is still room for improvement in the design of safety products.

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## An ounce of knowledge

- 75% of nurses state they received information about NSI in school.
- 62% nurses state is it useful to have repeated and frequently updated knowledge on NSI.
- 29% nurses stated they were not familiar with the Needlestick Safety and Prevention Act of 2001.

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## Summary

- Sharps safety is everyone's responsibility
- Work practice controls are mandatory
- Engineering controls are available
- Prevention is the key strategy




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# Safety Is NOT Expensive ~ It is PRICELESS

■ TOMORROW ~

□ YOUR REWARD FOR  
WORKING SAFELY  
TODAY.



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