

# Clean Med 2002

## Panel: Safer Needle Devices

Gina Pugliese: *Injury Prevention: The Challenge*

June Fisher: *Device Selection and Evaluation*

Pam Gill: *Preventing Exposures - Frontline*

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## Sharps Injury Prevention: The Challenge

Gina Pugliese RN MS

Vice President, Premier Safety Institute

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1- Rapid Decline in U.S. HBV Cases Among Healthcare Workers Following Vaccination

2- Exposures to Bloodborne Viruses

CDC NaSH

National Surveillance of Health Care Workers

June 1995 - June 2000

- 8,621 exposures to known source patients
  - 903 (10%) to HCV
  - 650 ( 8%) to HIV
  - 169 ( 2%) to HBV

3- HCV

- Most common bloodborne infection in US
- HCV end stage liver disease most frequent indication for liver transplants among adults

4- Occupational Exposure to a Source Co-Infected with HIV and HCV

- Increased risk of HIV and HCV infection after exposure
- Two instances of HCV and delayed-HIV seroconversion in HCWs
- Evidence of interaction between HIV and HCV
  - increased risk of HCV maternal-infant transmission
  - progressive HCV liver disease in co-infected hemophiliacs

## 5- Sharp Injury Surveillance Systems

### EPINet

- Developed by Dr. Janine Jagger at U. VA
- Introduced in 1992
- Used by:
  - 1,500 US hospitals
  - Adapted in other countries
- Aggregate data available from 52 hospitals

### NaSH

- Developed by CDC
- Multi-component system
- Introduced in 1995
- Participation
  - 1995 4 hospitals
  - 1999 23 hospitals
- Aggregate data available from 23 hospitals

## 6 - Sharps Safety Devices - Premier Inc.

- Contract options for sharps injury prevention
    - 16 sharp safety companies
    - Product lists on public Web site
  - Education Resources
    - Manufacturers & Members - open forum
    - CEOs- mailings
    - Frontline workers:
      - Implementation tool kits sent to 1800 hospitals
      - Web site [www.premierinc.com/safety](http://www.premierinc.com/safety)
- Sharps Safety Devices Under Contract

## 7- Sharps Safety Resources

### from Premier

- Message to our hospitals:
  - Encourage evaluation and selection of devices by frontline workers
  - Contracts only one place for information on cost-effective devices to evaluate
- Ongoing review of emerging technology

## 8- Premier Safety Institute Field Evaluations of Safety Devices

- Goals:
  - Identify key factors that contribute to innovative phlebotomy safety device technology
  - Share relevant information on the performance considerations with each participating device manufacturer to assist in future design improvements.

## 9- Premier Phlebotomy Device Assessment Team

- Devices were selected by teams consisting of frontline workers
- Four phlebotomy devices and three syringes were chosen based on initial \*assessment criteria
- All devices evaluated by frontline workers

## 10- Initial Selection/ Assessment Criteria

- product failure rate
- splash-aerosol risk
- product compatibility
- detachable components
- specific improvements to existing designs
- latex free
- single-handed use
- active versus passive
- training requirements
- pediatric use
- compliance with safety mechanism
- agreement to support a field evaluation
- breadth of product line
- anticipated future costs
- current and future manufacturing potential/volume capacity
- conversion/implementation support
- disposal volume

## 11- Study Design phlebotomy devices

- 25 hospitals
- Five devices (total of 17,275)
- 580 clinicians and phlebotomists
- Representing broad demographics
  - Bed size (large, medium, small)
  - Setting: (inpatient, OPD, ER, lab, specialty) Staff (phlebotomists, nurses/clinicians)
  - Previous experiences (safety & conventional)
  - Populations (adult, children)

## 12 - Top Ten Performance Considerations

### *Phlebotomy Devices*

1. Reliable safety feature
2. Easy to use- simple
3. Easily disposed in sharps container
4. Does not interfere with blood draw
5. No risk of spray or drip
6. Satisfactory for standard procedures
7. One handed
8. Visualize procedures
9. Syringe and gauge size
10. Use on heavy, thin, fragile veins

## 13 - Top Ten\* Performance Considerations

### *Safety Syringes Field Evaluations*

*(19,732 syringes evaluated by 298 HCWs in 5 hospitals)*

1. Accuracy of dose
2. Reliable safety feature
3. Hands remain behind needle
4. Visibility of medicine
5. Exposed sharp covered after use
6. One-handed
7. Does not interfere with procedure
8. Simple and self evident
9. Sizes available
10. Does not take more time to activate

14 -Percentage of Workers that Thought Safety Devices Would Protect them from Needlesticks

- Safety Syringes: 77%
- Phlebotomy Devices: 81%

***15 - Premier Safety Institute Website  
for Sharps Safety & OSHA Information  
[www.premierinc.com/safety](http://www.premierinc.com/safety)***

- Summary of bloodborne pathogen risks and prevention strategies
- OSHA compliance tools, checklists, Q & A
- Sample evaluation tools, sharps log
- Resources and educational materials
- Annotated Website links

*Thank you!*