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Title: Conference - Tenth Anniversary of Needlestick Safety & Prevention
Act: Mapping Progress, Charting a Future Path
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FINAL REPORT ABSTRACT: Grant #: 1R13OH009924-01

A conference entitled *Tenth Anniversary of the U.S. Needlestick Safety and Prevention Act: Mapping Progress, Charting a Future Path* was held November 5-6, 2010, in Charlottesville, Virginia. It was organized by the International Healthcare Worker Safety Center (IHWSC) at the University of Virginia (UVa) School of Medicine. In addition to celebrating the tenth anniversary of a historic piece of occupational safety and health legislation (H.R. 5178, the Needlestick Safety and Prevention Act [NSPA]), the purpose of the conference was to assess progress achieved in the decade since the law was passed and identify areas where further progress was needed. The conference was attended by approximately 100 people representing a variety of sectors and stakeholders, including clinicians, researchers, healthcare administrators, representatives from government agencies, professional associations, and the medical device industry. The conference also had global participation, with speakers from Asia, Europe, Africa, and North and South America. A number of medical device companies exhibited at the conference.

Key outcomes of the conference:

- (1) The efficacy of the NSPA in reducing needlestick injury rates and risk of occupational blood exposures was supported by data presented at the conference. This is a major public health achievement that has had and will continue to have an impact on countries around the world, as they seek to emulate the U.S. success in this area. Such evidence also provides support for government policies and regulations intended to support injury prevention and worker protection, both in the U.S. and worldwide.
- (2) Non-hospital (outpatient care) and surgical settings were identified as two healthcare settings in need of greater attention and focus in the years ahead by all relevant stakeholders.
- (3) Consensus Statement: to provide guidance for future efforts in the field of sharps safety, conference participants called for the development of a consensus statement; the result document, "Moving the Sharps Safety Agenda Forward: Consensus Statement and Call to Action," was endorsed by the American Nurses Association and 18 other healthcare organizations, and was published in a special supplement of the ANA's journal, *American Nurse Today* (Sept. 2012). The Consensus Statement can be viewed on-line at: <http://www.healthsystem.virginia.edu/pub/epinet/ConsensusStatementOnSharpsInjuryPrevention.pdf>.

SECTION 1

1. SIGNIFICANT (KEY) FINDINGS

The conference celebrating the 10th anniversary of the Needle Safety and Prevention Act yielded three key findings:

(a) ***The Needlestick Safety and Prevention Act (November 2000) has had a substantial impact in reducing sharps injury rates nationwide.*** This conclusion, supported by data presented at the

conference, represents a significant public health achievement and underscores the importance and efficacy of government legislation and policy in improving public and occupational health.

This is a key finding for occupational health programs generally and for bloodborne pathogen exposure prevention programs specifically—in the United States, and in countries worldwide.

(b) ***Non-hospital patient care settings and surgical settings are the two areas posing the greatest challenges in the coming years*** for reducing healthcare workers' occupational risk of exposures to bloodborne pathogens. Healthcare is increasingly being provided outside of hospitals, such as practitioners' offices and clinics, patient homes, rehabilitation centers, and long-term care facilities. This shift is expected to continue well into the future; yet these are the very settings in which enforcement of the BPS has been weakest and implementation of safety-engineered devices, according to market data, has been lowest. Conference participants agreed that more focused surveillance and research in the various care settings were needed to support and shape prevention efforts. In the case of surgical settings, sufficient research and surveillance already exists; the need is to design surgical safety programs that *work* and are *enforced*.

(c) ***Need to develop a consensus statement to guide future prevention efforts.*** Preventable sharps injuries and blood exposures continue to occur in U.S. healthcare settings—a conclusion supported by data presented at the conference. In an increasingly complex and evolving healthcare environment, participants agreed on the need for a renewed commitment to achieve further progress in sharps safety; one way to support this goal was the development of a consensus statement outlining key remaining issues in the field of needlestick prevention.

An additional outcome of the conference was the development of a website which makes available all of the speakers' Powerpoint presentations, as well as a video of John Howard's keynote address and notes for some of the sessions.

2. TRANSLATION OF FINDINGS

The conference participants, many of whom were occupational and employee health directors in healthcare facilities and/or managed infection control programs, took from the conference a wealth of practical knowledge that could be used to improve their needlestick injury prevention efforts and bloodborne pathogen exposure programs. They learned how to use surveillance data to improve injury prevention programs and shape safety device selection; how to encourage employee participation in device selection; and how to work with surgeons to create a dialogue on, and set feasible targets for, surgical staff safety. These and the many other topics covered, as well as the opportunities to network with colleagues and meet product manufacturers, provided participants with a wealth of resources and information to guide their practice as occupational health professionals.

3. OUTCOMES/ IMPACT

Potential outcomes: As a result of the conference, a consensus statement was developed to set the course for future action; it is entitled “Moving the Sharps Safety Agenda Forward in the United States: Consensus Statement and Call to Action.” The recommendations contained in this document were based on the presentations, panels, and informal discussions that took place at the conference. Five areas were identified as key for moving forward the sharps safety agenda, with a series of recommendations developed for each area: (1) improving sharps safety in surgical settings; (2) understanding and reducing exposure risks in non-hospital settings; (3) involving frontline healthcare workers in the selection of safety devices; (4) addressing gaps in safety devices, and the need for continued innovation; and (5) enhancing worker education and training with regard to safety devices and occupational exposure prevention. The expectation of the consensus statement authors is that, if the recommendations are widely adopted and implemented, a further decline in sharps injury rates is achievable over the next 5-10 years.

The consensus statement was officially endorsed by the American Nurses Association and 19 other healthcare groups, including the industry trade group, AdvaMed (representing all major medical device manufacturers) [**appendix 5**, list of endorsing organizations]. It also received a statement of support from the Occupational Safety and Health Administration. The full statement and list of endorsers is available on the Center’s website, as well as on the website of the ANA and other supporting organizations.

SECTION 2: Scientific Report

Introduction

A conference entitled *Tenth Anniversary of the U.S. Needlestick Safety and Prevention Act: Mapping Progress, Charting a Future Path* was held November 5-6, 2010, in Charlottesville, Virginia, organized by the International Healthcare Worker Safety Center (IHWSC) at the University of Virginia (UVa). In addition to celebrating the tenth anniversary of a historic piece of occupational safety and health legislation (H.R. 5178, the Needlestick Safety and Prevention Act [NSPA]), the purpose of the conference was to assess progress achieved in the decade since the law was passed and identify areas where further progress is needed.

The conference was attended by approximately 100 people representing a variety of sectors and stakeholders, including clinicians, researchers, healthcare administrators, representatives from government agencies (in particular NIOSH/CDC and OSHA), professional associations, and the medical device industry. The conference also had global participation, with speakers from Asia, Europe, and Africa, as well as North and South America. A number of medical device companies exhibited at the conference and senior leadership from many of those companies participated in the sessions.

The conference was comprised of 12 sessions [appendix 1, conference program], which were offered for CME credit under the auspices of UVa's Office of Continuing Medical Education [appendix 2, CME information]. John Howard, MD, MPH, director of the National Institute for Occupational Safety and Health (NIOSH), opened the conference by issuing a challenge to continue moving forward: "Have we achieved all that we need to in order to protect healthcare workers from exposure to sharps injuries? I don't think so. We need to do more—we need to look at the regulation, including the definitional sections; at enforcement strategies; at further prevention through design strategies. We need to look at compliance incentives, especially in emerging areas like home health care."

Dr. Howard's keynote address was followed by a series of 11 panel discussions covering a variety of topics, including challenges associated with the effective enforcement of OSHA's Bloodborne Pathogens Standard, gaps in safety-engineered medical devices, how to encourage continuous quality improvement in safety-engineered sharp devices, and improving sharps safety in surgical settings. Participants and panelists also discussed ways to advance the sharps safety

agenda in developing and transitional countries, and learned about the current sharps safety regulations in the European Union that were modeled after the U.S. regulations.

1. Significant (Key) Findings

The conference celebrating the 10th anniversary of the Needle Safety and Prevention Act yielded three key findings:

(a) ***The Needlestick Safety and Prevention Act (November 2000) has had a substantial impact in reducing sharps injury rates nationwide.*** This conclusion, supported by data presented at the conference, represents a significant public health achievement and underscores the importance and efficacy of government legislation and policy in improving public and occupational health. This is a key finding for occupational health programs generally and for bloodborne pathogen exposure prevention programs specifically—in the United States, and in countries worldwide.

Elayne Kornblatt Phillips presented, for the first time, data from the EPINet Sharps Injury and Blood Exposure Surveillance Network (coordinated by the IHWSC, UVa) that were statistically tested and validated; these data were subsequently published in the *New England Journal of Medicine*. The data showed:

A trend toward increasing rates of injuries [was observed] before the legislation was enacted, followed by a drop of about 38% (95% confidence interval, 35 to 41) in 2001 when the NSPA took effect. Subsequent injury rates, through 2005, remained well below pre-NSPA rates. This reduction in percutaneous injuries was concomitant with a steep market shift from conventional to safety-engineered devices and an increase in the number of OSHA citations for violation of the revised standard for handling bloodborne pathogens—two factors directly linked to the legislation. Since percutaneous injuries are the most frequent transmission for occupationally acquired infections from bloodborne pathogens, a reduction in such injuries could be expected to result in a proportional decrease in occupational morbidity and mortality from these pathogens. Our findings provide evidence that the NSPA contributed to the decline in percutaneous injuries among U.S. hospital workers. They also support the concept that well-crafted legislation bolstered by effective enforcement can be a motivating factor in the transition to injury-control practices and technologies, resulting in a safer work environment and workforce. (cf. Phillips EK, Conaway MR, Jagger JC. Percutaneous injuries before and after the Needlestick Safety and Prevention Act. *N Engl J Med*. 2012 Feb 16;366(7):670-1.)

(b) ***Non-hospital patient care settings and surgical settings are the two areas posing the greatest challenges in the coming years*** for reducing healthcare workers' occupational risk of exposures to bloodborne pathogens. Healthcare is increasingly being provided outside of hospitals, such as practitioners' offices and clinics, patient homes, rehabilitation centers, and

long-term care facilities. This shift is expected to continue well into the future; yet these are the very settings in which enforcement of the BPS has been weakest and implementation of safety-engineered devices, according to market data, has been lowest. Conference participants agreed that more focused surveillance and research in the various care settings were needed to support and shape prevention efforts.

In the case of surgical settings, sufficient research and surveillance already exists; the need is to design surgical safety programs that *work* and are *enforced*. Patient safety programs must include, as a critical component, staff safety and occupational injury prevention. Explicit standards for safe surgical practice and for use of safety-engineered devices in ORs need to be implemented in each individual facility, with measurable goals and accountability as a part of the framework. Participants agreed that professional associations of surgical personnel would play a key role in propagating and supporting such measures, but that buy-in by upper-level hospital administrators was critical as well.

(c) ***Need to develop a consensus statement to guide future prevention efforts.*** Preventable sharps injuries and blood exposures continue to occur in U.S. healthcare settings—a conclusion supported by data presented at the conference. In 2001-2002, following passage of the NSPA and subsequent revisions to the BPS, a significant decline in sharps injury rates occurred; since then, however, injury rates have leveled off—and in some settings, such as surgery, have shown a slight increase. In an increasingly complex and evolving healthcare environment, participants agreed on the need for a renewed commitment to achieve further progress; one way to support this goal was to develop a consensus statement outlining key remaining issues in the field of needlestick prevention. The resulting consensus statement was intended to serve as a guidepost for efforts over the next decade.

The conference steering committee agreed to develop the document, which was done over the subsequent year (March through August 2011). A draft was developed and circulated, first among conference committee members, and then among a list of stakeholder organizations. The document, entitled “Moving the Sharps Safety Agenda Forward in the United States: Consensus Statement and Call to Action,” was released in April 2012 [**appendix 3, consensus statement; appendix 4**, press releases], and published as a special supplement to the September 2012 issue of *American Nurse Today* (a journal of the American Nurses Association).

An additional outcome of the conference was the development of a website [**appendix 6**, screenshot of webpage], which makes available all of the speakers' Powerpoint presentations, as well as a video of John Howard's keynote address and notes for some of the sessions, written by session "scribes" [**appendix 7**]. Other resources include a slideshow of conference photos and a PDF of the conference program. The website is at:

<http://www.healthsystem.virginia.edu/pub/safetycenter/internetsafetycenterwebpages/nspaceconference/nspaceconference.html/>.

Also, an issue of the IHWSC's newsletter discussing the conference can be found at: <http://www.healthsystem.virginia.edu/pub/safetycenter/internetsafetycenterwebpages/news/ihwscnewslettersummer-fall2010.pdf> [**appendix 8**, newsletter].

2. Translation of Findings

The conference participants, many of whom were occupational and employee health directors in healthcare facilities and/or managed infection control programs, took from the conference a wealth of practical knowledge that could be used to improve their needlestick injury prevention efforts and bloodborne pathogen exposure programs. They learned how to use surveillance data to improve injury prevention programs and shape safety device selection; how to encourage employee participation in device selection; and how to work with surgeons to create a dialogue on, and set feasible targets for, surgical staff safety. These and the many other topics covered, as well as the opportunities to network with colleagues and meet product manufacturers, provided participants with a wealth of resources and information to guide their practice as occupational health professionals.

3. Outcomes/ Impact

The main outcome of the conference (in addition to the on-line archive of conference presentations, video, photos, and program) was the development of the guidance document "Moving the Sharps Safety Agenda Forward in the United States: Consensus Statement and Call to Action." The recommendations contained in the statement were based on the presentations, panels, and informal discussions that took place at the conference. Five areas were identified as key for moving forward the sharps safety agenda, with a series of recommendations developed for each area: (1) improving sharps safety in surgical settings; (2) understanding and reducing exposure risks in non-hospital settings; (3) involving frontline healthcare workers in the selection of safety devices; (4) addressing gaps in safety devices, and the need for continued innovation;

and (5) enhancing worker education and training with regard to safety devices and occupational exposure prevention.

The consensus statement was officially endorsed by the American Nurses Association and 19 other healthcare groups, including the industry trade group, AdvaMed (representing all major medical device manufacturers) [**appendix 5**, list of endorsing organizations]. It also received a statement of support from the Occupational Safety and Health Administration. The full statement and list of endorsers is available on the Center's website, as well as on the website of the ANA and other supporting organizations. As noted above, the Consensus Statement was published in a special supplement of the September 2012 issue of *American Nurse Today*, the journal of the American Nurses Association.

For more on the Consensus Statement, see (1c) above. The full text is available at these URLs:

- http://www.healthsystem.virginia.edu/pub/safetycenter/Consensus_statement_sharps_injury_prevention.pdf
- <http://www.nursingworld.org/MainMenuCategories/WorkplaceSafety/SafeNeedles/SharpsSafety/ConsensusStatement-SharpsSafety.pdf>
- <http://www.americannursetoday.com/Resources.aspx>

Some links to news coverage:

- <http://www.infectioncontrolday.com/articles/2012/06/the-sharps-safety-agenda-acknowledging-past-progress-working-toward-the-future.aspx>
- <http://ohsonline.com/articles/2012/08/13/aohp-to-add-sharps-safety-statement-to-strategic-plan.aspx>
- http://www.osap.org/?Issues_SharpsSafety
- <http://www.slideshare.net/SafeInCommon/safe-in-common-the-unfinished-agenda>
- <http://www.scribd.com/doc/99688975/Sharpssafety-Journal>

List of appendices

1. Conference program
2. Conference continuing medical education credit information
3. Consensus Statement on Sharps Safety
4. Joint press release on Consensus Statement for Sharps Safety from the University of Virginia and the American Nurses Association
5. List of endorsing organizations for Consensus Statement
6. Screenshot – conference website making available conference presentations and other materials
7. Conferences notes
8. Newsletter from the International Healthcare Worker Safety Center with article about conference.