10th Anniversary of the Needlestick Safety and Prevention Act:
Mapping Progress, Charting a Future Path

Friday-Saturday, November 5-6, 2010
Omni Hotel
Charlottesville, Virginia

This conference is supported in part by a grant from the National Institute for Occupational Safety and Health
CONFERENCE STEERING COMMITTEE

Chair: Janine Jagger, MPH, PhD
Co-chair: Elise Handelman, BSN, MEd, RN-COHN

Ramon Berguer, MD, FACS
Clinical Professor of Surgery, UC Davis
Chief of Surgery, Contra Costa Regional Medical Center

Renuka Gaddes
Director, Global Health, BD

Ahmed E. Gomaa, MD, ScD, MSPH
Division of Surveillance Hazard Evaluation and Health Studies
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June Fisher, MD
Associate Clinical Professor of Medicine, UC San Francisco
Director, TDICT Project

Amber Hogan Mitchell, MPH
Assistant Director, Occupational Health for Nurses Program
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Gina Pugliese, RN, MS
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Andrew Rose
Vice President, Global Marketing
Safety Solutions, Smiths Medical

Tom Sutton
Vice President of Vascular Access and IV Systems
B. Braun Medical

Susan Wilburn, MPH, RN
Technical Officer, Occupational and Environmental Health
World Health Organization

Dionne Williams, MPH
Senior Industrial Hygienist, Directorate of Enforcement Programs

STAFF OF THE INTERNATIONAL HEALTHCARE WORKER SAFETY CENTER
(Division of Infectious Diseases, Department of Medicine, University of Virginia)

Janine Jagger, MPH, PhD (Director): Dr. Jagger has made significant contributions to healthcare worker safety in the U.S. and countries worldwide. She was awarded a MacArthur Foundation Fellowship in 2002 for her pioneering research in sharps safety and needlestick prevention. Dr. Jagger and colleagues are the inventors of six patented safety needle devices.

Jane Perry (Associate Director): Ms. Perry has written and lectured extensively on needle safety and occupational exposure prevention in the U.S. and other countries, and produced both print and web-based publications and educational resources on these topics. She was managing editor of the Center’s publication Advances in Exposure Prevention from its founding in 1994 until it ceased publication in 2005.

Elayne Kornblatt Phillips, RN, MPH, PhD (Research Director): Dr. Phillips has extensive experience as a researcher and clinician in public health policy and practice. She has conducted research and training in healthcare worker safety in Malawi, South Africa, and the Democratic Republic of Congo, and has lectured at many international conferences.

Ginger Parker (EPINet Program Coordinator): Ms. Parker has supervised the Center’s U.S. EPINet research program for the last decade, and overseen the translation of EPINet into 18 languages. She has conducted EPINet training in countries around the world, including Saudi Arabia, South Africa, the Democratic Republic of Congo, Columbia, Venezuela, and Peru.

Dallas Mullins—office manager.
Welcome to Charlottesville!

Whether you traveled across the state, the continent, or the Atlantic Ocean, we thank you for attending this conference and helping us mark a very special occasion: the tenth anniversary of the Needlestick Safety and Prevention Act. All of us at the International Healthcare Worker Safety Center are delighted to be able to celebrate this occasion with so many of our esteemed colleagues in government, industry, academia, and on the frontlines of healthcare, with whom we have been privileged to work over the last two decades.

Charlottesville is the home of the University of Virginia, and its presiding spirit is Thomas Jefferson, our third president and author of the Declaration of Independence. He founded UVa in 1819, calling it the “hobby of my old age.” His home, Monticello, a UNESCO World Heritage Site, is located a few miles from the Omni. Jefferson was a man of many talents: thinker, inventor, architect and, of course, politician. His interests and activities crossed many boundaries. So he is an excellent model for us as we consider ways to think creatively and globally about the challenges of protecting healthcare workers everywhere, in all countries.

We particularly wish to thank the National Institute of Occupational Safety and Health for a grant that made this conference possible, and its distinguished director, John Howard, for agreeing to be our keynote speaker.

Special thanks as well to our platinum partner, BD, who has long supported the work of the International Healthcare Worker Safety Center—in particular the development and global propagation of EPINet, a sharps injury and blood exposure surveillance program which is now used in over 80 countries, and has been translated into 21 languages.

We are proud to announce our designation, this past September, as a WHO/PAHO Collaborating Center for Occupational Health. For the past several years we have been actively involved in the WHO/PAHO/NIOSH joint initiative on preventing occupational transmission of bloodborne pathogens in Latin American healthcare workers, and we are honored to receive this formal recognition of our work. As a Collaborating Center, we join a global network of organizations dedicated to furthering occupational health.

We extend our deepest appreciation to our longtime OSHA colleague, Elise Handelman, who served as conference co-chair and contributed her time and expertise to the planning of this conference. Thanks also to the other members of the conference steering committee, whose names are listed on the previous page, and to all our speakers and panelists, who took time from their busy schedules to be here.

My hope is that we all come away from this conference with a renewed commitment to the protection and safety of one of the world’s most critical resources: our healthcare workers.

Janine Jagger
Director, International Healthcare Worker Safety Center
Division of Infectious Diseases
Department of Medicine
University of Virginia Health System
Speaker Disclosures

The following conference presenters have disclosed that they do not have a personal or professional financial relationship with or interest in any proprietary entity producing healthcare goods or services:

- Jordan Barab
- Lisa Black
- Katherine Cox
- Bruce Cunha
- Mark Davis
- Mary Foley
- Ahmed Gomaa
- Cathie Gosnell
- John Howard
- Angela Laramie
- Maria Sofia Lioce-Mata
- Tara MacCannell
- Linus Ndegwa
- Gina Pugliese
- Singh, Sanjeev
- Wilburn, Susan
- Williams, Dionne

These conference presenters disclosed the following:

- Ramon Berguer has disclosed that he is a member of the Speaker’s Bureau of Ethicon.
- Gabriella De Carli has disclosed that she has industry-funded research from BD.
- Joe Fanucchi has disclosed that he is President, Medical Director, and owns stock in MediTrax/Occupational Health Systems.
- June Fisher has disclosed that she has given a lecture sponsored by BD.
- Renuka Gadde has disclosed that she is an employee of BD.
- Charlotte Guglielmi has disclosed that she is President and on the Board of Directors of the Association of peri-Operative Registered Nurses (AORN).
- Lynn Hadaway has disclosed that she is a consultant for B. Braun, BD, Bard Medical, Baxter, Covidien, Depuy Mitek, Excelsior Medical, Infrared Imaging Systems, Christie Medical, Access Scientific, Amsino, and Hospira. She is also either on the speaker's bureau or the advisory board for B. Braun, Bard Medical, Baxter, Excelsior Medical Infrared Imaging Systems, Christie Medical, Access Scientific, and Hospira.
- Elise Handelman has disclosed that her spouse is a contractor for DPS, Inc.
- Janine Jagger and Elayne Kornblatt Phillips have disclosed that their Center has educational grants from BD, B. Braun Medical, Ethicon, Medikit Co., Ltd., and Smiths Medical.
- Andrew Rose has disclosed that he is an employee of Smiths Medical.
- Brett Sarnoff has disclosed that he is an employee of Ethicon, Inc.
- Thilo Rubart has disclosed that he is an employee of B. Braun Melsungen AG.
- Tom Sutton has disclosed that he is an employee of B. Braun Medical.

How to claim your CME/CEU Credit

Thank you for attending the conference
10th Anniversary of the Needlestick Safety and Prevention Act:
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The following website allows physicians and healthcare professionals who attended the conference to claim credit and receive their CME/CEU certificate online: http://safety.cme360.net.

This site will be available after the conference ends, from Saturday, November 6, through Saturday, November 20, 2010.

IMPORTANT: To receive CME credit you must register on this site and complete the conference evaluation.

Please note that the address for this site is http://......... .net (not “www….. .com”).

How to Claim Credit:
1. To claim credit, click on the Register button in the Activities box.
2. Complete the Site Registration Form, which will give you access to the Conference Evaluation.
3. Complete the Evaluation by clicking on the evaluation link located on the right-hand side of your screen under Step 3 Assessments.
4. Upon completion of the Conference Evaluation, your CME Certificate will be generated in PDF format located under Step 4 Certificates.
5. Click on the certificate link to view and print your certificate.

If you experience technical difficulties, please e-mail Colleen Conner at the UVa CME office: cac9f@virginia.edu.
About our keynote speaker

John Howard, MD, MPH, JD, LLM
Director, National Institute for Occupational Safety and Health

John Howard serves as the Director of the National Institute for Occupational Safety and Health in the U.S. Department of Health and Human Services in Washington, D.C. He served in this capacity from July 2002 to July 2008, and was re-appointed in September 2009.

Prior to his appointment as Director of NIOSH, Dr. Howard served as Chief of the Division of Occupational Safety and Health in the California Department of Industrial Relations from 1991 through 2002.

Dr. Howard received his MD from Loyola University in Chicago in 1974, his MPH from the Harvard School of Public Health in 1982, his Doctor of Law from UCLA in 1986, and his Master of Law in Administrative Law from George Washington University in Washington, DC, in 1987.

Dr. Howard is board-certified in internal medicine and occupational medicine. He is admitted to the practice of medicine and law in the State of California and in the District of Columbia, and he is a member of the U.S. Supreme Court bar. He has written numerous articles on occupational health law and policy.

We are honored to have these OSHA staff as speakers and participants:

**Jordan Barab** joined OSHA as Deputy Assistant Secretary of Labor for Occupational Safety and Health on April 13, 2009. He previously served as Special Assistant to the Assistant Secretary of Labor for OSHA from 1998 to 2001, during which time he helped the Agency promulgate the ergonomics workplace safety and health standard (repealed by Congress in March 2001). He was Senior Labor Policy Advisor for health and safety for the House Education and Labor Committee from 2007 to April 2009. Mr. Barab specialized in workplace safety issues for the U.S. Chemical Safety and Hazard Investigation Board from 2002 to 2007, was a Health and Safety Specialist for the AFL-CIO from 2001 to 2002, and directed the safety and health program for the American Federation of State, County and Municipal Employees (AFSCME) from 1982 to 1998. He also created and wrote the award-winning weblog, Confined Space, from 2003 to 2007.

Mr. Barab holds a master’s degree from The Johns Hopkins University and an undergraduate degree from Claremont McKenna College.

**Dionne Williams** is a Senior Industrial Hygienist in OSHA’s Directorate of Enforcement Programs, and is currently OSHA’s National Bloodborne Pathogens Coordinator. She specializes in enforcement issues related to healthcare, bloodborne pathogens, laboratory safety, access to medical records, and cadmium exposures. Ms. Williams began her career with OSHA as a compliance officer more than 12 years ago, working in the Parsippany, New Jersey, and Fort Lauderdale, Florida, OSHA Area Offices before joining the National Office enforcement staff in Washington, DC. In her federal role, she has been involved with numerous OSHA enforcement cases, as well as educational initiatives and policy issues.

Ms. Williams earned a Master of Public Health degree from the University of Medicine and Dentistry of New Jersey, and is currently a doctoral candidate in public health at the Johns Hopkins Bloomberg School of Public Health. Her graduate work focuses on needlestick prevention, particularly in the operating room setting.
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CONFERENCE AGENDA

Thursday, November 4
6:00-8:00 pm: Opening reception, Colonnade Club on The Lawn, University of Virginia (free transportation provided from Omni)

Friday, November 5: MAPPING PROGRESS
7:00 am Exhibit Hall and registration table open (Exhibit Hall will be open all day)
7:00 - 7:50 am - Continental breakfast available in Exhibit Hall area

8:00 - 8:15 am: Welcoming Remarks—Janine Jagger, MPH, PhD (Director, International Healthcare Worker Safety Center, University of Virginia)

Session 1/8:15 - 8:45 am: Keynote Address—John Howard, MD, MPH (Director, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention)

Session 2/8:45 - 9:15 am: Protecting Healthcare Workers from Occupational Infection—A Personal View
Introduction: Mary E. Foley, MS, RN (Associate Director, Center for Nursing Research & Innovation, School of Nursing, UC San Francisco; Past President, American Nurses Association, 2000-2002)
Speaker: Lisa Black, PhD, RN, CNE (Assistant Professor, Orvis School of Nursing, University of Nevada, Reno)

Session 3/9:15 - 10:00 am: Progress in Reducing Needlesticks and Healthcare Worker Injury Risk and the Impact of the Needlestick Safety and Prevention Act
Janine Jagger, MPH, PhD, and Elayne Kornblatt Phillips, RN, MPH, PhD (International Healthcare Worker Safety Center, UVa)

Session 4/10:00 - 10:45 am: OSHA's Bloodborne Pathogens Standard: Challenges of Effective Enforcement
Session chair: Elise Handelman, RN, MEd, COHN-S (Former Director, Office of Occupational Health Nursing, Occupational Safety and Health Administration). Panelists: Jordan Barab (Deputy Assistant Secretary of Labor for Occupational Safety and Health); Katherine Cox, Med, MPH (Director, Health and Safety Program, American Federation of State, County and Municipal Employees); Dionne Williams, MPH (Senior Industrial Hygienist, Office of Health Enforcement, Directorate of Enforcement Programs, OSHA).

10:45 - 11:00 am – Break

Session 5/11:00 - 11:45 am: Gaps in Safety-Engineered Medical Devices—Improving Uptake, Seeking Innovation
Session chair: June Fisher, MD (Director, Training for Development of Innovative Control Technologies Project, San Francisco). Panelists: Bruce E. Cunha, RN, MS, COHN-S (Manager, Employee Health and Safety, Marshfield Clinic, Marshfield, Wisconsin); Cathie Gosnell, RN, MS, MBA (Clinical Consultant, Premier Safety Institute); Angela K. Laramie, MPH (Project Coordinator/Epidemiologist, Massachusetts Sharps Injury Surveillance Program, Massachusetts Department of Health).

Session 6/11:45 - 12:30 pm: Safety-Engineered Sharp Devices in the Marketplace: Continuous Quality Improvement?
Moderator, Gina Pugliese, MS, RN (Vice President, Premier Safety Institute). Short presentation of U.S. market data for sharps safety devices, followed by moderated audience discussion in which representatives from the medical device industry, healthcare organizations, and professional associations can assess and reflect on the current state of the safety device market in the U.S. What are the factors that determine whether or not devices get into the market? Does the market as it is currently structured encourage or discourage innovation? Does non-activation of safety-engineered devices continue to be an important issue, and if so, what are the best ways to address it?

12:30 - 1:30 pm – Lunch

Session 7/1:30 - 3:30 pm: Improving Sharps Safety in Surgery—Strategies for Success
Session chair: Ramon Berguer, MD, FACS (Chief of Surgery, Contra Costa Regional Medical Center; Clinical Professor of Surgery, UC Davis School of Medicine). Panelists: Mark Davis, MD, FACOG (Surgical Safety Consultant); Brett Sarnoff (Product Director, Ethicon, Inc.); Ahmed Gomaa, MD, ScD, MSPH (Medical Officer, Division of Surveillance Hazard Evaluation and Health Studies, NIOSH/CDC); Charlotte L. Guglielmi, RN, BSN, MA, CNOR (President, Association of periOperative Registered Nurses).

3:30 - 3:45 pm — Break

Session 8/3:45 - 4:45 pm: Sharps Injury Surveillance: Past, Present, Future
Speakers: Ahmed E. Gomaa, MD, ScD, MSPH (NIOSH/CDC); Joseph J. Fanucchi, MD, FACEOM (President, MediTrax/Occupational Health Systems, Inc., Alamo, CA); Tara MacCannell, PhD (Healthcare Epidemiologist, Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention); Ginger Parker, MBA (EPINet Program Coordinator, International Healthcare Worker Safety Center, UVa).
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CONFERENCE AGENDA (cont.)

Saturday, November 6: CHARTING A FUTURE PATH

7:00 am-9:00 am: Exhibit Hall open (continental breakfast available from 7:00-8:30 am)

9:00 - 9:15 am: Introduction to Day 2—Janine Jagger
Video presentation—Gary Cohen (Executive Vice President, BD)

Session 1/9:15 - 10:00 am: Advancing the Sharps Safety Agenda in Developing and Transitional Countries—Critical Issues
Session chair: Renuka Gadde (Senior Director, Global Health, BD). Panelists: María Sofía Lioce-Mata, MD, MPH (Assistant Coordinator and Medical Advisor, Global Collaborations Program, NIOSH/CDC); Linus Ndegwa, MPHE, HCS (Infection Control Manager, Global Disease Detection, Centers for Disease Control and Prevention-Kenya); Sanjeev K. Singh, MD (Senior Medical Administrator, Amrita Institute of Medical Sciences and Research Centre, Kochi, India); Susan Wilburn, RN, MPH (Technical Officer, Occupational and Environmental Health, World Health Organization).

Session 2/10:00 - 10:45 am:Sharps Safety in the European Union
Speaker: Gabriella De Carli, MD (Senior Researcher in Epidemiology and Occupational Infectious Diseases, National Institute for Infectious Diseases “L. Spallanzani”, Rome, Italy)

10:45 - 11:00 am — Break

Session 3/11:00 am -11:50 am: Taking Sharps Safety Global—Industry Perspectives on Opportunities and Challenges
Session chair: Tom Sutton (Vice President, B. Braun Medical). Panelists: Lynn C. Hadaway, MEd, RN (President, Lynn Hadaway Associates, Inc.); Andrew Rose (Vice President, Global Marketing/Safety Solutions, Smiths Medical); Thilo Rubart, MD (Director of Market Management, IV Administration and Access, B. Braun Europe)

Session 4/12:00 - 1:30 pm: Brainstorming lunch and discussion
Discussion leader: Tom Sutton
- Formulate five critical policy issues in advancing sharps safety worldwide
- Formulate five ways to move forward in improving healthcare worker sharps injury protection worldwide
- Form a Global Sharps Safety e-discussion group to continue the flow of ideas and monitor progress

1:30 - 1:45 pm: Janine Jagger—Closing Remarks

3:00 pm: Bus departs for tour of Monticello, home of Thomas Jefferson (cost - $20; limit 25 people)
Abstracts/brief summaries

**Ramon Berguer (session 7, day 1): “Improving Sharps Safety in Surgery—Strategies for Success”**
Ten years after the Bloodborne Pathogens Act of 2000 non-OR sharps-related injuries have decreased by 30% yet the rate of OR sharps-related injuries has not changed. The recent publication of this data from EpiNet is making an impact on surgical societies with the realization that surgeons (and Operating Rooms in general) have not acted to implement sharps safety recommendations. The problem has also been complicated by the weak enforcement of the Act by State and Federal regulatory agencies and, until recently, the lack of available and/or usable blunt needle and sheathed scalpels. At a local level there has been significant under-reporting of sharps injuries in the OR due to the inconvenience of the reporting systems and concerns over the possible practice repercussions of a confirmed seroconversion from a sharps injury.

What the recently published data demonstrate is that sharps injury prevention in the OR is a team effort where the hospital, surgeons, and OR staff all play a key role. This data clearly shows that nurses and techs account for 80% of the injuries but are not the ones who decide whether to use a sharps safety device or technique. Surgeons must be made aware of the impact of their decisions and of the American College of Surgeons recommendations to use double gloving, blunt suture needles, the Hands-Free Technique, and sheathed scalpels as a routine part of their work.

We are currently working in a collaborative manner to implement a national sharps safety program with all the stakeholders in the OR. The AORN is working with the Council on Surgical and Perioperative Safety (CSPS) to develop an OR sharps safety bundle that includes a template OR sharps safety policy for hospitals to implement nationally. I believe we now have the necessary combination of knowledge and products to make significant advances in reducing OR sharps injuries.

**Bruce Cunha (session 5, day 1): “Gaps in Safety-Engineered Devices”**
I will focus on sharps for which we have not yet found safety alternatives. These include: bone marrow kits; hypodermic needles longer than 1.5”; spinal needles; epidural needles; acupuncture needles; unique devices such as needles used for cervical injections; and dental injection needles. I will also discuss the issue of sharps in purchased kits.

**Mark Davis (session 7, day 1): “Lessons Learned From A Decade of Sharps Safety Education in the OR”**
Compliance with the Needlestick Safety and Prevention Act among surgeons has been a painfully slow process. Topics covered will include: drivers of change for U.S. surgeons, facilitating education, and overcoming obstacles to changing surgeons’ behavior. Differences in safety device implementation and safety culture between the U.S. and Japan will be compared. Suggestions will be offered for ways to hold surgeons accountable for unsafe behavior, providing incentives for compliance and linking negative consequences to noncompliance.

**Gabriella De Carli (session 2, day 2): “Sharps Safety in the European Union”**
In Europe, approximately 8 million healthcare workers (HCWs) face infection risk from blood-contaminated needlestick injuries (NSIs) in their daily work. It is estimated that about 600,000 reported and 600,000 unreported NSIs occur in Europe each year. Needlestick prevention devices (NPDs) potentially represent one of the most effective interventions to decrease exposure and infection risk from bloodborne pathogens. Their implementation has been limited in most EU countries, however, due to lack of data on the extent of the problem, and by scarcity of resources for educational and training programs for HCWs and for large-scale purchasing of NPDs. Currently the use of NPDs is widespread in France, Spain, and Austria, which have adopted prescriptive legislation; is increasing in Germany, Italy, and the UK (with advocacy from different stakeholders); and scarce elsewhere.

The Studio Italiano Rischio Occupazionale da HIV (SIROH) is a well-established national surveillance network of Italian hospitals. Data from SIROH on the impact of NPD introduction on needlestick rates in Italy showed a significant decrease from the baseline corresponding conventional device (CD) rates. NPD rates were significantly lower (-80% on average) than the corresponding CD rates; most importantly, these lower rates were maintained over time. These data provided evidence and support during a technical seminar with the European Social Partners (European representatives of health employers and HCWs) in the hospital and healthcare sector at the beginning of 2008—a meeting which resulted in a framework agreement on the prevention of sharp injuries, signed on July 17, 2009. A European Directive based on the July 2009 agreement was approved by the European Parliament on March 8, 2010. All EU member states have a three-year transition period to come into conformity with its requirements.

An example in the EU of best practices for HCW safety utilizing NPDs can be found in the European Network for Highly Infectious Diseases, which gathers data from 48 high-isolation units in 16 EU countries. These units are authorized to care for patients with highly contagious diseases, and thus have enhanced protective measures for HCW safety. Of these units, 98% have implemented specific protocols for NPI prevention and 98% for exposure management; 96% record all exposures. Sharps containers are available in all units, and all report the use of at least 1 and up to 14 different types of NPD (6 on average), with the most widely implemented being vacuum tube phlebotomy sets with winged-steel needle (37), IV catheters (29), and standard (28) and hypodermic (28) syringes. In 46 centers (96%) specific education and training programs are in place. In 33 centers (69%) training is repeated annually. Adherence to safer procedures is monitored in 27 centers (56%). These examples of good practice can be shared between units and should be implemented as well in less specialized units elsewhere in EU healthcare settings.

**June Fisher (session 5, day 1): “Gaps in Safety-Engineered Medical Devices—Improving Uptake, Seeking Innovation”**
This presentation will address user-based strategies for identifying new technology for preventing occupational exposure to blood. Topics to be discussed:
1. What is true user-based technology and how can this be furthered?
2. To what extent are workers involved in the evaluation and selection of safety-engineered sharps technology, as mandated by OSHA? What is meaningful involvement? What impact does this have on the selection and use of the most appropriate safety devices? How can this support the development of better devices?
3. How can systematic user evaluation and selection of devices impact both appropriate device usage and development?
4. Using task analysis to identify clinical needs for existing safety-engineered devices, as well as gaps in such technologies. (5) Promoting the collaboration of frontline healthcare workers with material scientists, product designers and manufacturers to develop new technologies to prevent occupational exposure to blood.
Ahmed Gomaa (session 8, day 1): “Sharps Injury Surveillance: Past, Present, Future”
In this presentation I will discuss: (1) Evaluation of existing sharps injury and blood exposure surveillance systems (where we are and where we need to be). A methodology for evaluating sharps injury surveillance is needed, in order to measure the impact of such activity. Currently there are no formal evaluations taking place of such surveillance programs; such evaluation could be important in identifying areas for improvement and, where appropriate, activities that could be coordinated among different surveillance systems. (2) Expanded use of data for informing research and prevention, including a feedback loop in dissemination efforts. Accessing and interpreting surveillance data remains a problem for researchers and groups in a position to undertake prevention efforts. Efforts are needed to increase accessibility and interpretation of sharps injury and blood exposure surveillance data, and to ensure that data are presented in a compelling and usable fashion. The majority of surveillance data do not have reports or data that are released on a regular and predictable basis.

Lynn Hadaway (session 3, day 2): “User Adoption of Safety Devices”
Many issues create a variety of challenges for use of safety devices. These challenges vary between countries due to cultural influences and allocation of healthcare resources. This presentation will explore these issues along with ways that device manufacturers and healthcare leaders can influence the adoption of safety devices.

This presentation will review evidence of the impact of HR 5178, the Needlestick Safety and Prevention Act, on hospital worker sharps injuries. Using EPINet surveillance data, which tracks sharps injuries among workers in 85 hospitals, we observed changes in injury rates from 1995-2005, during the period prior to and following the legislation. There was a significant drop in slope beginning in the year 2000, and the overall rates continued to decrease in the post-legislation period. This was true regardless of denominator (beds, admissions or FTEs). Injury rates from non-safety sharp devices decreased significantly ($P<0.001$) after 2000, while rates of injury from safety-engineered devices decreased initially but then increased slightly ($NS$); the highest injury rates from safety devices have not reached the lowest rates of non-safety devices. These findings strongly support the conclusion that, even in the presence of OSHA regulations that pre-date the legislation, and even with a market of safety engineered devices available prior to the legislation, the legislation had an independent and powerful impact on the sharps injury experience of hospital workers in the U.S.

Angela K. Laramie (session 5, day 1): “Sharps Injuries among Massachusetts Hospital Workers: Findings from the Massachusetts Sharps Injury Surveillance System, 2002-2008”
The Massachusetts Department of Public Health (MDPH) conducts surveillance of sharps injuries among hospital workers with a goal of identifying procedures, occupations, and devices associated with injuries. Our study identified the rate of sharps injuries with and without sharps with engineered sharps injury protection (SESPs) over the period 2002-2008. MDPH uses the data to promote prevention by identifying injury patterns by hospital and injury characteristics. Methods: Data on injuries among workers with contaminated sharps are collected annually from all hospitals licensed by MDPH in accordance with public health regulations. The number of licensed beds was used to calculate injury rates. Comparisons over time were analyzed to identify adoption of SESP by select devices. Results: In Massachusetts, over 3,000 sharps injuries among hospital workers are reported to MDPH each year. Between 2002 and 2008, the proportion of sharps injuries involving devices lacking sharps injury prevention features decreased from 62% to 55%. Overall sharps injury rates decreased over the same time period from 19.1 to 17.2 injuries/100 licensed beds. The proportion of injuries with winged steel needles lacking sharps injury prevention features declined, rates of injury also declined. This pattern also held for several other devices. Conclusions: There is continued need for increasing the use of SESP and evaluating barriers to adoption and availability. The number of injuries involving SESP raises questions regarding device design and the need for additional training.

Maria Lioce-Mata (session 1, day 2): “Preventing Occupational Infections from Bloodborne Pathogens Among Health Care Workers in Latin America”
In Latin America the attributable fraction of infections among healthcare workers (HCWs) due to sharps injuries is approximately 80% for hepatitis B, 53% for hepatitis C, and 2.5% for human immunodeficiency virus. In 2005, the World Health Organization, the Pan American Health Organization, and the U.S. National Institute for Occupational Safety and Health, along with partners from Latin American countries, developed a model project for the region. Venezuela agreed to conduct the pilot project. The WHO toolkit “Protecting Healthcare Workers: Preventing Needlestick Injuries” was culturally and linguistically adapted for Latin American audiences.

In 2007, international, national, and state partners participated in train-the-trainer workshops. The partners agreed that Aragua State in Venezuela would serve as a model for the country. The approach seeks to achieve sustainable expertise within academic institutions and ministries of health and among employers and frontline healthcare workers. The pilot project started in four hospitals in Aragua State; today, the program has reached 210 healthcare facilities and 8 universities in 17 states in Venezuela, and approximately 30,000 healthcare workers nationwide. Recently, an EPINet-based surveillance system has been added. In 2008, a similar project was implemented in Peru together with a national campaign to provide hepatitis B immunizations to HCWs. To date, about 1,200 Peruvian HCWs have participated in training programs, and about 75% of the 160,000 HCWs in the country have received immunization for hepatitis B. In September 2009 a conference, the “First Regional Encounter for Latin America and the Caribbean: Health Protection of Health Care Workers,” was held in Venezuela with international representatives from Brazil, Canada, Cuba, Colombia, Ecuador, the U.S., Guatemala, Jamaica, Peru, Dominican Republic, and Trinidad & Tobago. In 2010, Colombia joined this effort, and in October Peru approved a new regulation for protect HCWs that includes the use of safety devices and the EPINet surveillance system.

Dionne Williams (session 4, day 1): “OSHA’s Bloodborne Pathogens Standard: Challenges of Effective Enforcement”
This presentation will highlight the impact of the Needlestick Safety and Prevention Act (NSPA) on OSHA’s enforcement activities. Statistics on OSHA inspections involving the Bloodborne Pathogens Standard before and after the NSPA will be shared, along with a discussion of some lessons learned and anticipated enforcement challenges for the future.
Ramon Berguer received his MD degree from Wayne State University, completed a general surgery residency at the University of Colorado Health Sciences Center, and a one-year fellowship in gastrointestinal research at the Web-Waring Institute in Denver, Colorado. Dr. Berguer recently completed six years as chief of surgery at Contra Costa Regional Medical Center. His academic affiliations include Clinical Professor of Surgery at the University of California Davis School of Medicine and Adjunct Associate Professor in the School of Engineering at California State University Sacramento. Dr. Berguer has published over fifty peer-reviewed scientific papers as well as six book chapters in stress immunology, laparoscopic ergonomics, and the prevention of sharp injuries in the operating room. He frequently speaks at national and international surgical conferences on the topics of surgical ergonomics and sharp injury prevention. He is co-founder and president of Lifeguard Surgical Systems which designs surgical visualization systems.

Lisa Black, PhD, RN, CNE, is an assistant professor in the Orvis School of Nursing at the University of Nevada, Reno. Dr. Black completed her BSN and MSN at the University of Nevada, Reno, and her PhD at the University of California, San Francisco. Since experiencing a life-altering needlestick in 1997, Dr. Black has worked to increase awareness about sharps injury prevention, and was involved in the creation and passage of state and federal needlestick prevention legislation. Dr. Black has given numerous invited presentations about needlestick prevention and sharps safety throughout the United States, Europe, and Asia. Her research interests include nurses who maintain their nursing credentials while working in non-nursing jobs, patient advocacy activities of registered nurses in acute care settings, and nosocomial spread of HCV in healthcare settings.

Katherine Cox is director of the occupational health and safety program and coordinator for all healthcare workforce issues at the American Federation of State, County and Municipal Employees (AFSCME). Ms. Cox’s responsibilities include advising AFSCME leadership and affiliates on emerging health policy and health and safety issues, and tracking trends in health care delivery at the federal and state level. As a senior occupational health specialist at AFSCME from 1990-1996, Ms. Cox specialized in occupational hazards in health care settings. In this position she spearheaded the union’s efforts to protect health care workers from workplace hazards, most notably infectious diseases, workplace violence and ergonomic injuries. She played a significant role in the development of the Occupational Safety and Health Administration’s Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers, the proposed tuberculosis standard, and the Bloodborne Pathogens Standard. Ms. Cox holds Masters degrees in public health and in education.

Bruce E. Cunha, RN, MS, COHN-S, has over 30 years of experience in the field of occupational health nursing. He has served as manager of employee health and safety for the Marshfield Clinic, a multi-specialty medical clinic system in Wisconsin with five ambulatory surgery centers, six dental clinics, a research complex and 50 centers, for the last 18 years. Bruce received his BSN from the University of California, Dominguez Hills, and his MS in risk control from the University of Wisconsin, Stout. He recently retired from the U.S. Army National Guard with the rank of lieutenant colonel, after 28 years of service.

Mark Davis, MD, completed his surgical training in obstetrics and gynecology in 1978. Since his retirement from clinical practice in 2001, he has worked full time as a consultant, author, and speaker with the mission of reducing sharp-object injuries in the OR. He has consulted at hospitals across the United States and in Japan, and has been a speaker for AORN, APIC, AST, ACS, and the Japanese Surgical Society. He has published over 20 articles on OR safety, and is author of the safety handbook, Advanced Precautions for Today’s OR: The Operating Room Professional’s Handbook for the Prevention of Sharps Injuries and Bloodborne Exposures. The book has been read by healthcare workers around the world and was translated into the Japanese language in 2002.

Gabriella De Carli, MD, is a Senior Researcher in Occupational Infectious Diseases Epidemiology, and is in charge of the Occupational Risk from Biologic Agents program at the National Institute for Infectious Diseases at L. Spallanzani in Rome, Italy. Her research interests include epidemiology of HIV infection, epidemiology and control of occupational exposures and infections from bloodborne and emerging/reemerging pathogens in healthcare workers; HIV post-exposure management and anti-retrroviral prophylaxis; and epidemiology and control of occupational exposures to highly infectious pathogens. She is a principal investigator for two ongoing research programs: the Italian Study Group on the Occupational Risk of HIV, HCV and Other Blood-borne Pathogens in the Health Care Setting (SIRDHO), and the Italian Registry of Antiretroviral Post Exposure Prophylaxis (IRAPEP). She has served on a number of EU-wide scientific committees, including EuroNHD (European Network for Highly Infectious Diseases), the European Network of Infectious Diseases Physicians, and EURO-NONOPEP (European project on non occupational post-exposure prophylaxis). She is the author of numerous publications, including 45 listed in PubMed.

Joseph Fanucchi, MD, is president and medical director of Occupational Health Systems (OHS). Board-certified in occupational medicine and a certified medical review officer, he has served as a clinical occupational physician and program administrator for over 25 years. He is a fellow of the American College of Occupational and Environmental Medicine, with expertise in disability management, policy development and administration, and occupational health information systems. Dr. Fanucchi and his colleagues at OHS have provided accredited “hands-on” training in the use of evidence-based clinical practice guidelines for over 8,000 occupational health professionals. He was elected the first chair of the ACOEM section on computers (now informatics) in occupational medicine, and now serves on the section’s executive committee. He was appointed to chair the ACOEM Task Force on Electronic Information Strategies, and has served as editor and webmaster of several websites related to the field of occupational and environmental medicine.

June M. Fisher, MD, is an internal medicine physician who has specialized in occupational health since 1978. She founded, and ran for 11 years, the first occupational health clinic at San Francisco General Hospital, which provided services for the over 25,000 municipal employees of the City and County of San Francisco. Dr. Fisher is currently a senior scientist at the Trauma Foundation at San Francisco General Hospital, where she heads the Training for Development for Innovative Control Technology Project (TDICT). The user safety criteria developed by TDICT, first published by the American Hospital Association, have been widely reprinted, and are included in the WHO toolkit for preventing occupational exposure to blood. She has lectured widely and done many workshops worldwide on frontline healthcare worker evaluation and selection of safer devices to prevent occupational exposures, most recently in Columbia and Venezuela.

Mary E. Foley, RN, PhD, is the Associate Director of the Center for Nursing Research and Innovation at the University of California, San Francisco (UCSF). At the Center she has worked with the Collaborative Alliance for Nursing Outcomes (CALNOC) and, in 2009, was appointed Director of Education Services for CALNOC. In those roles, Mary works with hospitals and nursing leaders as they collect and analyze nursing-sensitive quality indicators to improve patient care. Foley was president of the American Nurses Association from 2000-2002. Prior to her term as president, she was employed for 19 years at Saint Francis Memorial Hospital in San Francisco, where she worked as a staff nurse, director of nursing, and safety officer. An RN for over 35 years, Foley writes and lectures about health care policy, workplace improvement, and promotion of safe care for workers and patients. She completed a six-year term as a member of the National Patient Safety Foundation Board of Directors, and is an advisory member of the Partnership for Patient Safety.
Renuka Gadde is Senior Director of Global Health at BD, where she works with international organizations, thought leaders, and governments agencies to improve medical and clinical practices globally. She has led BD’s initiative to promote safe immunizations and injections in emerging markets, including providing input for national policies to accelerate adoption of autodisposable syringes in order to prevent reuse in these markets. She is currently focused on appropriate policies, standards and products for safe blood collection, which remains a highly risky practice in most parts of the developing world. Other key initiatives she has worked on include a partnership between BD, the International Council of Nurses and the President’s Emergency Plan for Aids Relief (PEPFAR) to establish wellness centers for healthcare workers in sub-Saharan Africa, and a collaboration between PEPFAR, the CDC and BD to improve blood collection practices in Africa.

Renuka serves on the external advisory council for the University of Michigan’s Center for Global Health, and on the board of World Neighbors, an NGO focused on strengthening communities in order to find lasting solutions to hunger, poverty and disease. She received her BS and MBA from Andhra University in Hyderabad, India.

Ahmed Gomaa, MD, ScD, is a Medical Officer with the Surveillance Branch of the Division of Surveillance, Hazard Evaluation and Field Studies at the National Institute for Occupational Safety and Health. Dr. Gomaa received his MD from Alexandria University in Egypt, and both an MPH and a doctorate in science from Tulane University. Dr. Gomaa started his career as an orthopaedic surgeon, treating occupational injuries for five years in Alexandria, Egypt. He then went to Tulane to study occupational and environmental epidemiology. He completed his training in internal medicine at the University of South Alabama, and in occupational medicine at Harvard University. Dr. Gomaa is board certified by the American Board of Preventive Medicine and Occupational Medicine. During his career at the Centers for Disease Control and Prevention, he has worked on many initiatives related to environmental and occupational medicine, including bloodborne pathogen exposure prevention during his tenure at NIOSH.

Cathie Gosnell, RN, MS, MBA, is a clinical consultant for the Premier Safety Institute. She has more than 25 years experience as a healthcare clinician, educator, and administrator. In her role as chief nursing officer for La Rabida Children’s Hospital, she developed and oversaw quality, safety, infection control, environmental purchasing, and regulatory compliance programs. She was also responsible for product evaluation, contract development and implementation of safety devices, including Premier’s sharps injury prevention portfolio. Prior to working with the Safety Institute, Gosnell directed Premier’s pediatric product line in Group Purchasing Services. Gosnell lectures and writes widely about clinical and safety topics in healthcare.

Charlotte Guglielmi, RN, BSN, MA, CNOR, is president of the Association of PeriOperative Registered Nurses (AORN), having previously served as AORN’s Vice President (2006 – 2008), Secretary (2004 – 2006), and as a member of the Board of Directors (2002 – 2004). She represents AORN on the Council of Surgical and Perioperative Safety and on the American College of Surgeons’ Committee on Development of High Performance Teamwork in Surgery through Education. She has presented at numerous national conferences and has authored several articles and book chapters. She was the 2001 recipient of AORN’s award for Outstanding Achievement in Perioperative Clinical Practice. Ms. Guglielmi is a perioperative nurse specialist at the Beth Israel Deaconess Medical Center in Boston, where she has been a perioperative nurse for 34 years. She has also been an OR educator and a clinical nurse IV in several surgical specialties.

Lynn Hadaway, MD, RN, BC, CNRN, has more than 35 years experience in infusion nursing and adult education. She holds national certifications in infusion nursing and nursing professional development. Ms. Hadaway has published on many aspects of vascular access, including anatomy and physiology, care of all types of vascular access devices, infusion and vascular access complication management, legal and regulatory issues, and principles of adult learning. She has served as director-at-large and president of the Association for Vascular Access (AVA) as the president of the Southeastern Chapter of INS (twice); and currently serves on the INS Standards committee. She is president of Lynn Hadaway Associates, Inc., an education and consulting company which she founded in 1996.

Elise Handelman, RN, MD, COHN-S, served for nearly 20 years as director of OSHA’s Office of Occupational Health Nursing. Her areas of expertise include bloodborne pathogens, workplace violence, ergonomics and young workers. She was actively involved in the 2009 federal response to pandemic influenza, as well as other national disasters involving workers. She has received numerous awards from the Department of Labor and has been formally recognized by her professional peers for her work. Prior to coming to OSHA, Ms. Handelman worked in acute care, public health, occupational health and infection control. During her career, Ms. Handelman has worked in hospitals of various sizes, from a small community hospital to a tertiary care facility in Northern Virginia where she directed employee health programs, served as the infection control coordinator, and was a nursing supervisor. Ms. Handelman is an associate faculty member at Johns Hopkins University and an adjunct assistant professor at the University of North Carolina, Chapel Hill. She serves as the occupational and environmental health editor for the Maryland Nurses Association, and as a technical reviewer for the International Nursing Review.

Linus K. Ndegwa, PhD, MPH, is a program manager in infection control for the Global Disease Detection Division (GDDD) of the Centers for Disease Control and Prevention in Kenya. His work helps support Kenya’s Ministry of Health in strengthening its infection control initiatives in the nation’s hospitals and healthcare facilities. Previously Dr. Ndegwa worked as a consultant training officer with the John Snow Training and Research Institute in Kenya on the “Making Medical Injections Safer” (MMIS) project, developing educational materials and training health care workers on safe injection practices.

Dr. Ndegwa holds a PhD in Epidemiology and a masters degree in Public Health and Epidemiology from Kenyatta University. He also has postgraduate diplomas in cataract surgery and ophthalmology from the Kenya Medical Training College and the School of Clinical Medicine and Surgery.

Gina Pugliese, RN, MS, is Vice President of the Premier Safety Institute, part of the Premier Healthcare Alliance. She holds adjunct faculty appointments at the University of Illinois School of Public Health and at Rush University College of Nursing. Pugliese is Senior Associate Editor of Infection Control and Hospital Epidemiology, and author of more than 140 publications. She has spoken nationally and internationally on infection prevention and on patient, healthcare worker and environmental safety issues. Her advocacy for sharps safety devices began in the mid-1980s when she was Director of Safety at the American Hospital Association.

In 2005, the Gina Pugliese Scholarship was established by the Society for Healthcare Epidemiology of America (SHEA) in recognition of her contributions to the field of healthcare epidemiology.
Andrew Rose is Vice President of Global Marketing at Smiths Medical. He has 22 years of experience in the medical device industry, having previously worked for Medex, Ethicon Endo-Surgery, and Johnson and Johnson Medical. Beginning in 1995, Andrew was part of industry efforts to support hospitals and clinicians in the San Francisco Bay area who were advocating for the implementation of safety devices. This experience strengthened his belief that industry and clinicians need to work together to advance the cause of healthcare worker and patient safety. Today, Andrew and his staff continue to partner with clinicians to advance globally the implementation of safety-engineered sharp devices and use of medication safety software for infusion devices.

Andrew received his MBA from Southern Methodist University.

Thilo Rubart is Regional Director of Market Management for IV Administration and Access at B. Braun Medical in Europe. Previous positions with B. Braun include Vice President of the Basic Care business unit for Germany, and Manager of Health Care Systems for B. Braun Melsungen AG. Prior to joining B. Braun, Mr. Rubart was Managing Vice President of the Institute of Health Economics at the University of Trier in Germany. He holds a masters degree in economics and a PhD in health economics from the University of Trier.

Brett Sarnoff is a Product Director for Ethicon, Inc., a Johnson and Johnson company. Brett has 15 years of experience in the medical device industry in a variety of roles, including sales, sales training, leadership development, and marketing. In his role for Ethicon he is responsible for the Ethicon Safety Portfolio of products.

Sanjeev Singh, MD, is Medical Superintendent and Associate Professor of Pediatrics at the Amrita Institute of Medical Sciences and Research Centre (AIMS) in Kochi, India. AIMS is a 1200-bed tertiary care referral health center with 50 clinical departments and an attached medical college that includes a 500-bed teaching hospital. Prior to joining the staff of AIMS, Dr. Singh practiced as a pediatrician, and worked for the World Health Organization’s Disease Eradication Program in Delhi. He has a number of leadership roles in national organizations, including joint secretary of the Federation of Hospital Administrators and regional director of the Indian Health Care Quality Forum. He also a lead assessor for the National Accreditation Board for Hospitals and Healthcare Providers (NABH), India’s equivalent of the Joint Commission.

Dr. Singh has broad research expertise and is presently PI or co-PI of three projects, including a multi-center study on infection control and a quality initiative in pediatric cardiology. In 2009, he was a visiting fellow at the International Healthcare Worker Safety Center, University of Virginia.

Tom Sutton is Vice President of Vascular Access and IV Systems at B. Braun Medical Inc. (B. Braun). He has over 20 years experience in sharps safety product design and global marketing of disposable needles and vascular access technologies. He has managed sharps safety product lines at Johnson & Johnson, Bio-Plexus, Medex, and Smiths Medical. Tom served on the California OSHA Advisory Board which helped develop the first state requirement for safer needle designs. He is a member of the AAMI and ISO workgroups charged with setting standards for safety IV Catheters and Medical Needles. Tom is a co-inventor on four US patents for safety medical devices.

Susan Wilburn, MPH, RN, is a Technical Officer in Occupational and Environmental Health in the Department of Public Health and Environment of the World Health Organization. Susan has worked on behalf of nurses and nursing for the past 20 years, at the local, state, national, and international level, as a shop steward, union organizer, lobbyist, political activist, and labor educator. Before joining the WHO, she worked as an occupational and environmental health specialist for the American Nurses Association (ANA) and the International Council of Nurses. Under Susan’s leadership, the ANA prioritized occupational health as one of its top five core issues, and worked for the passage of the 2000 Needlestick Safety and Prevention Act.

Susan has served as co-chair of the nurses work group of Health Care Without Harm, and as project director of the ANA’s “RN No Harm” and the WHO/ICN Needlestick Prevention initiative. Susan is a graduate of Kent State University School of Nursing and the University of Washington School of Public Health.

Not pictured:

Angela K. Laramie is an epidemiologist with the Sharps Injury Surveillance Project in the Occupational Health Surveillance Program at the Massachusetts Department of Public Health. In addition to presenting at national and international meetings, Ms. Laramie has participated in national workgroups addressing sharps injuries. She has collaborated with the CDC, piloting a web based system for bloodborne pathogen exposure surveillance, as well as the Workbook for Designing, Implementing and Evaluating a Sharps Injury Prevention Program. She works closely with hospitals across the state of Massachusetts providing technical assistance regarding sharps injury surveillance and prevention.

Taranisia MacCannell is a healthcare epidemiologist with the Division of Healthcare Quality Promotion at the Centers for Disease Control and Prevention (CDC) in Atlanta, GA. Tara received her PhD in infectious diseases epidemiology from the University of Calgary, Canada. Tara was an infection control professional in acute care for seven years prior to working with the CDC, working in the areas of outbreak management, staff education, and regional and national surveillance. Her current areas of focus include the Healthcare Personnel Component of the National Healthcare Safety Network (NHSN), the promotion of infection control in healthcare, both domestically and abroad, and the new HICPAC Guidelines for the Management of Norovirus in Healthcare Settings.

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