State of the Sector: Healthcare

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Pittsburgh, PA

Personal Protective Technology Stakeholder Meeting
March 29, 2011
Presentation Outline

- Sector defining documents.
- PPT Projects NORA-identified research areas.
- Today’s events – Healthcare Track
NORA Sector: Healthcare and Social Assistance

Identification of Research Opportunities for the Next Decade of NORA
Executive Summary [6/2009]
(http://www.cdc.gov/niosh/docs/2009-138/)

NIOSH Publication No. 2009-139: State of the Sector | Healthcare and Social Assistance
Identification of Research Opportunities for the Next Decade of NORA [6/2009]
(http://www.cdc.gov/niosh/docs/2009-139/)
Healthcare Workforce

- Fastest growing industry sector
- About 17 million workers (11% of the U.S. workforce)
- Includes 12 of top 20 fastest growing occupations
  - Highly diverse workforce
  - Highest percentage and number of females
  - Highest percentage of African-Americans
  - Highest in total number of Asians
- 2\textsuperscript{nd} with over 30\% of all lost-time nonfatal occupational illness and injuries
  - Nursing aides, orderlies and attendants, and registered nurses
- 2/3 occupationally-associated personal assaults and violent acts
Workplace Health and Safety Hazards

- Exposures to infectious, chemical, and physical agents
  - Exposures to hazardous drugs
  - Sharps injuries
  - Unknown exposures and risks in caring for those with emerging infectious diseases or the emerging threat of bioterrorism
- Stress (psychological hazards) of dealing with the highly charged HCSA environment
- Work organization (e.g. long/unpredictable hours, rotating shifts, under-staffing)
- Risks associated with ergonomic hazards (e.g. patient lifting and repetitive tasks)
- Workplace violence
Safety Culture and Safety Climate

- Inaccurate stereotype of clean and safe workplace
- Patient care issues supersede the personal safety and health of workers
- Wide range of workplace health and safety hazards

Opportunities for Improvement

- Link worker safety with patient care
- Patients and providers share common environment
- Synergies of patient and provider protections
Research Opportunities

Cross-Cutting

- Safety Culture and Safety Climate
- Business Case for Managing Safety and Health
- Public Health Emergencies: Mass Casualty Events
- Prevention through Design
- Environmental Concerns – Events and Impacts
- Nursing and Other Professional Worker Shortages
- Occupational Health Surveillance

Specific Health and Safety Problems

- Work-related Musculoskeletal Disorders
- Violence
- Slip, Trip, and Fall Incidents
- Hazardous Drugs
- Chemical Hazards
- Sharps Injuries and Bloodborne Pathogens
- Infectious Diseases
National Academies Evaluations provide high level scientific input to PPT Program

- Understanding influenza transmission
- Commit to worker safety and use of PPE
- Innovate and strengthen PPE design

- **Personal Protective Equipment (PPE) for Healthcare Workers Action Plan, NIOSH Docket Number 0129**
  - [http://www.cdc.gov/niosh/docket/archive/docket129.html](http://www.cdc.gov/niosh/docket/archive/docket129.html)

- Support original recommendations
  - Effective interventions
  - Culture of safety
  - Improve fit

  [http://www.cdc.gov/niosh/npptl/nationalacad.html](http://www.cdc.gov/niosh/npptl/nationalacad.html)
Healthcare and Social Assistance
Research Agenda

• Developed by HCSA Sector Council
• December 2009
• 5 Strategic goals

Strategic Goals

- **Strategic Goal 1**: Promote safe and healthy workplaces and optimize safety culture in healthcare organizations.
  (9 Intermediate Goals)

- **Strategic Goal 2**: Reduce the incidence and severity of musculoskeletal disorders among all HCSA workers.
  (5 Intermediate Goals)

- **Strategic Goal 3**: Reduce or eliminate exposures and adverse health effects caused by hazardous drugs and other chemicals.
  (3 Intermediate Goals)

- **Strategic Goal 4**: Reduce sharps injuries and their impacts among all healthcare personnel.
  (7 Intermediate Goals)

- **Strategic Goal 5**: STOP transmission of infectious diseases in HCSA settings among workers, patients and visitors.
  (12 Intermediate Goals)
Selected FY 09 and FY10 PPT Program Healthcare Worker Related Projects

http://www.cdc.gov/niosh/programs/ppt/projects.html

- Total Inward Leakage (TIL) / Half Mask and Filtering Facepiece Respirators
- Fit Test Pilot Studies
- PPE Surveillance Intervention Studies
- Penetration of Nanoparticles through NIOSH Approved Respirator Filters
- Frequency of Fit Testing
- Reusability of Filtering Facepiece Respirators
- Metabolic Evaluation of N95 Respirator Use with Surgical Masks
- Pan Flu - HCW: Surveillance / Demonstration and Sentinel Surveillance System of PPE/PPT Usage in US Healthcare Workers
- Evaluation of Respirator Use for H1N1 Influenza Among Healthcare Workers (REACH)
- Aerosol Generation by Cough (HELD/NPPTL)
- Project BREATHE- Better Respirator Equipment using Advanced Technology for Healthcare Employees (NPPTL/ VHA)
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<td>Laboratory Study to Assess Causative Factors Affecting Temporal Changes in Filtering-Facepiece Respirator Fit: Part II – One Year Assessment of Fit Changes</td>
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Healthcare Breakout Session 1

- **Breakout Session 1: 9:15 – 10:45**  
  **Location:** Allegheny Ballroom
- **Subject 1:** Healthcare Sector PPE Research Needs: A Work Environment Perspective
- **Presenter:** Dr. Barbara Sattler – University of Maryland
- **Topics:**
  - Review of body burden studies of healthcare professionals and “Nurses Survey” results
  - Review of asthmagens and asthma triggers commonly found in healthcare
  - Disinfection and sterilization processes-related exposures / the need for respiratory protection
  - High risk areas of exposure where applying the “hierarchy of controls” could reduce risk
  - Suggested research

- **Subject 2:** Update and Overview of NPPTL Healthcare Worker Personal Protective Equipment
- **Presenter:** Ron Shaffer
- **Topics:**
  - Rationale for selected NIOSH research projects related to PPE Healthcare workers
  - Current NIOSH projects and recognize potential outcomes to the workplace
Healthcare Breakout Session 2

- **Breakout Session 2: 3:00 – 4:30**  
  **Location:** Allegheny Ballroom

- **Subject 1:** Masks & Respiratory Protection for Influenza
  - **Presenter:** Dr. Howard Cohen
  - **Topics:**
    - IOM Studies on Masks & Respirators for Influenza (2006-2009)
    - What we know and what we don’t know
    - Clinical studies: Strengths & Weaknesses

- **Subject 2:** Overview of healthcare worker IOM Report
  - **Presenter:** William H. Kojola
  - **Topics:**
Quality Partnerships Enhance Worker Safety & Health

Visit Us at: http://www.cdc.gov/niosh/npptl

Disclaimer:

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