

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Current Issues in the Assessment of Respiratory Protective Devices: Non-Traditional Workers and Public Use

Virtual Workshop Agenda

August 4 – 5, 2020
National Academies Webinar

Workshop Objectives:

- Review lessons learned over the last 100 years of respiratory protection and how these can be applied to the assessment of respiratory protective devices moving forward.
- Explore current respiratory protection needs and risks for non-traditional worker groups and the public.
- Review current practices of the NIOSH respirator approval program and conformity assessment processes for respirators and identify opportunities and gaps.
- Explore conformity assessment approaches used in other countries, by third-party organizations, and in private industry and discuss the risks and benefits of these approaches in the context of use by non-traditional workers and the public.
- Examine whether the respiratory protection needs of underserved groups, such as non-traditional workers and the public, are served by current standards and assessment programs and identify opportunities and research gaps.
- Explore research gaps in understanding respiratory protection needs for non-traditional workers as well as opportunities to enhance communication of respiratory protection guidance to users and other stakeholders.

DAY 1

August 4, 2020, 10:30 a.m. – 2:30 p.m.

10:30 a.m. **Opening Remarks and Charge to Workshop Speakers and Participants**
Melissa McDiarmid, MD, MPH, DABT, University of Maryland School of Medicine
Planning Committee Chair

Maryann D'Alessandro, PhD, MS
Director
National Personal Protective Technology Laboratory, NIOSH

SESSION 1: LESSONS LEARNED FROM THE LAST 100 YEARS OF RESPIRATORY PROTECTION

10:45 a.m. **Session 1**

Moderator: Melissa McDiarmid, MD, MPH, DABT, *Planning Committee Chair*

Session Objectives:

- Describe the evolution in the assessment and approval of respiratory protective devices over the last century to respond to the needs of occupational users.
- Discuss how these lessons can inform planning for future needs, such as the approval and use of respiratory protective devices by the public and by occupations that do not currently use respirators as part of a formal respiratory protection program.

Richard Metzler, MSIE

Senior Scientist, *retired*

National Personal Protective Technology Laboratory, NIOSH

11:00 a.m. **Discussion with Planning Committee and Speaker (15 minutes)**

SESSION 2: RESPIRATORY RISKS AND USER REQUIREMENTS FOR NON-TRADITIONAL WORKERS AND THE PUBLIC

Session Objectives:

- Identify non-traditional respirator user populations¹ (i.e. workers who perform duties outside of a formal respiratory protection program or the public) and examine the respiratory risks for these groups.
- Describe the situation-specific needs of these populations, as well as current guidance regarding their use of respiratory protective devices and other respiratory protection strategies.
- Explore how these risks compare to those encountered in professions that currently use respirators in the context of formal respiratory protection programs.
- Examine how these situation-specific needs and respiratory risks align with existing recommendations, guidance, and standards.

11:15 a.m. **Session 2A: Respiratory Risks and User Requirements for Non-Traditional Workers**

Moderator: Robert Harrison, MD, MPH, University of California, San Francisco
Planning Committee Member

Bill Kojola, MS

Industrial Hygienist, *retired*

AFL-CIO

¹ Target populations include outdoor workers in highly polluted environments (wildland fire fighters and agricultural workers); non-health care workers exposed to respiratory risks (workers in meatpacking plants and grocery stores); government employees and families deployed to high air pollution locales, and the general public.

Joseph Domitrovich, PhD
Exercise Physiologist
U.S. Forest Service

Kevin Riley, PhD, MPH
Director of Research and Evaluation
Labor Occupational Safety and Health Program
University of California, Los Angeles

11:45 a.m. **Panel Discussion (30 Minutes)**

12:15 p.m. **Lunch Break (30 Minutes)**

12:45 p.m. **Session 2B: Respiratory Risks and User Requirements for the Public**
Moderator: John Balmes, MD, University of California, San Francisco
Planning Committee Member

Claire Huson, CIH
Industrial Hygienist
Department of State

Stephanie Holm, MD, MPH
Co-Director
Western States Pediatric Environmental Health Specialty Unit

Mark Nicas, PhD, MPH, CIH
Emeritus, Adjunct Professor
University of California, Berkeley

1:15 p.m. **Panel Discussion (30 Minutes)**

1:45 p.m. **Break (15 Minutes)**

SESSION 3: REFLECTIONS FROM DAY ONE

2:00 p.m. Rapporteurs:
John Balmes, MD, *Planning Committee Member*
Robert Harrison, MD, MPH, *Planning Committee Member*

Session Objectives

- Revisit the major themes and ideas of the day.

2:15 p.m. **Closing Remarks from Workshop Chair**

2:30 p.m. **Adjourn**

DAY 2
August 5, 2020, 10:30am–3:30pm

10:30 a.m. **Highlights from Day 1**
Melissa McDiarmid, MD, MPH, DABT, University of Maryland School of Medicine
Planning Committee Chair

SESSION 4: DELIVERING TIMELY AND HIGH QUALITY RESPIRATORY PROTECTIVE DEVICES – CONFORMITY OF DEVICE PERFORMANCE TO STANDARDS

Session Objectives:

- Review the current NIOSH Respiratory Approval Program and conformity assessment process for the occupational use of respirators.
- Explore how existing conformity assessment processes and standards align with the health and safety requirements of non-traditional user groups and how these processes function to deliver technologies to the end user while balancing speed of delivery with safety.
- Discuss what opportunities exist to develop or support conformity assessment processes for respiratory protective devices and control strategies, such as cloth face coverings, that are responsive to the specific requirements of these user groups.
- Discuss conformity assessment models used in other countries, by third-party organizations, and in private industry for the occupational and non-occupational use of respirators and barrier masks.

10:45 a.m. **Session 4A: Assessment Pathways for Respiratory Protective Devices for Non-Traditional Workers**
Moderator: Howard Cohen, PhD, MPH, Yale School of Medicine
Planning Committee Member

Maryann D'Alessandro, PhD, MS
Director
National Personal Protective Technology Laboratory, NIOSH

Jeffrey Peterson
Branch Chief
National Personal Protective Technology Laboratory, NIOSH

Jeff Stull, MS
President
International Personnel Protection, Inc.

11:15 a.m. **Discussion with Panelists and Discussant (30 minutes)**

Discussant
Andrew Levinson, MPH
Deputy Director
Directorate of Standards and Guidance
Occupational Safety and Health Administration

11:45 a.m. **Lunch Break (30 Minutes)**

12:15 p.m. **Session 4B Assessment Pathways for Respiratory Protective Devices and Other Options for the Public**

Moderator: Daniel Shipp, International Safety Equipment Association, *retired*
Planning Committee Member

Jim Johnson, PhD, CIH, QEP
Consultant
JSJ and Associates

Emiel DenHartog, PhD, MSc
Associate Professor
Associate Director Textile Protection and Comfort Center (T-PACC)
North Carolina State University

Jonathan Szalajda, MSIE, MEng
Deputy Director
National Personal Protective Technology Laboratory, NIOSH

12:45 p.m. **Panel Discussion (30 Minutes)**

1:15 p.m. **Break (15 Minutes)**

SESSION 5: ADDRESSING RESEARCH AND COMMUNICATION GAPS

1:30 p.m. **Session 5: Research and Communication Gaps and Opportunities**

Moderator: Tener Veenema, PhD, MPH, MS, RN, Johns Hopkins School of Nursing
Planning Committee Member

Session Objectives:

- Identify research gaps related to the assessment of respiratory risks and needs of different user groups.
- Explore research priorities related to human factors engineering and psychology around the use of respiratory protective devices outside of a formal respiratory protection program.
- Discuss challenges related to user acceptance and approaches for developing and communicating guidance on the effective use of respiratory protective devices and barrier masks to non-traditional workers and the public.

Rachael Jones, PhD, MPH
Associate Professor
University of Utah

Ayse Gurses, PhD, MS, MPH
Professor
Johns Hopkins University School of Medicine

Barbara Materna, PhD, CIH
Chief, Occupational Health Branch
California Department of Public Health

2:00 p.m. **Panel Discussion (30 Minutes)**

2:30 p.m. **Break (15 Minutes)**

SESSION 6: REFLECTIONS FROM THE WORKSHOP

2:45 p.m. **Session 6**
Moderator: Melissa McDiarmid, MD, MPH, DABT, *Planning Committee Chair*

Session Objectives

- Revisit the major themes and highlights of the workshop.
- Discuss what additional research is required to deliver the appropriate respiratory protection to these groups.
- Discuss future directions for conformity assessment and approval of respiratory protective devices for non-traditional workers and public use.

Howard Cohen, PhD, MPH, *Planning Committee Member*

Daniel Shipp, *Planning Committee Member*

Tener Veenema, PhD, MPH, MS, RN, *Planning Committee Member*

John Balmes, MD, *Planning Committee Member*

Robert Harrison, MD, MPH, *Planning Committee Member*

3:15 p.m. **Closing Remarks from Workshop Chair**

3:30 p.m. **Adjourn**