

# Reusable Health Care Textiles for Personal Protective Equipment

Virtual Workshop

## WORKSHOP AGENDA

**March 4-5, 2024**

**Workshop Objectives:** Workshop discussants and participants will have the opportunity to examine opportunities to increase the use of reusable health care textiles (HCT) for personal protective equipment (PPE) used in health care settings. This workshop will provide the opportunity to exchange knowledge and ideas among key value holders—including technical experts, policy makers, manufacturers, and PPE users in health care—and to explore the potential benefits and feasibility of integrating more reusable HCTs into health care operations.

The public workshop will feature invited presentations and discussions to:

- Examine existing recommendations, approaches, and guidelines relating to reusable HCTs to ensure optimal protection of patients and health care workers;
- Discuss issues related to contamination of textiles and fabrics in health care facilities;
- Explore issues associated with current product and technology standards for reusable HCTs, considering input on standards needs from a past National Institute for Occupational Safety and Health (NIOSH) Personal Protective Technologies (PPT) Centers of Excellence Federal Register Notice;
- Examine the comparative performance, comfort, environmental impact, and use issues for disposable and reusable HCTs;
- Highlight similarities and differences between U.S. and European systems for reusable HCT use/maintenance/disposal systems, sustainability, and standards/regulations;
- Explore potential benefits, including potential cost savings, and feasibility issues related to increasing the use of reusable HCTs in crisis and everyday situations and in different health care settings;
- Discuss opportunities and approaches to integrate more reusable HCTs into health care operations where appropriate.

To watch the livestream, please visit the workshop's event page [here](#).

### DAY 1 – MONDAY, MARCH 4, 2024

Welcome and Overview of the Workshop	
10:00am	<b>Chair Welcome and Opening Remarks</b> <i>Sundaresan Jayaraman</i> , Workshop Chair
10:15am	<b>National Personal Protective Technology Laboratory (NPPTL) Opening Remarks</b> <i>Adam Smith</i> , Senior Scientist, NPPTL
Session 1	Level Setting: The US Ecosystem
10:30am	<b>Introduction</b> <i>Elizabeth Easter</i> , Professor, University of Kentucky  <i>This panel will lay the foundation of the workshop by defining key terms and concepts. It will describe the current US ecosystems for disposable and reusable healthcare textiles (HCTs) for personal protective equipment (PPE).</i>
10:40am	<b>Panel Presentations</b> <i>Elizabeth Easter</i> , Panel Moderator  <u>Overview of Disposable PPE Life Cycle</u> <ul style="list-style-type: none"> <li><i>Charlie Merrow</i>, CEO, Merrow Manufacturing</li> </ul> <u>Overview of Reusable PPE Life Cycle</u> <ul style="list-style-type: none"> <li><i>John Wintz</i>, Group Vice President, Standard Textiles</li> </ul> <u>Sustainability in PPE Manufacturers and Suppliers</u> <ul style="list-style-type: none"> <li><i>Dan Glucksman</i>, Senior Director for Policy, International Safety Equipment Association (ISEA)</li> </ul> <u>Healthcare Worker Perspective on PPE Selection</u> <ul style="list-style-type: none"> <li><i>Pamela Falk</i>, Epidemiologist, Association for Professionals in Infection Control and Epidemiology (APIC)</li> </ul> <b>Audience Q&amp;A</b> <i>(time permitting)</i>
11:30am	<b>BREAK</b>
Session 2	Level Setting: Policies and Standards
11:45am	<b>Introduction</b> <i>Elizabeth Beam</i> , Associate Professor, University of Nebraska Medical Center College of Nursing  <i>This panel will lay the foundation of the workshop by defining key terms and concepts. It will describe the current policy and standards that influence the ecosystems for disposable and reusable PPE.</i>

11:50am

### Panel Presentations

*Elizabeth Beam*, Panel Moderator

#### Policies and Standards for Manufacturers

- **PPE Manufacturers:**  
*Jeff Stull*, President, International Personal Protection; Member, ASTM Committee on Standards for Medical Face Masks and Protective Clothing
- **Textile Manufacturers:**  
*Erika Simmons*, Technical Director, American Association of Textile Chemists and Colorists (AATCC)

#### Policies and Guidance for Use

- **Federal Perspective:**  
*Lynne Sehulster*, CDC Division of Healthcare Quality Promotion (ret.)
- **Healthcare Perspective:**  
*Tiffany Wiksten*, Associate Director, Standards Interpretation Group, The Joint Commission
- **Laundry and Reuse Perspective:**  
*Liz Remillong*, Division Vice President, Crothall Healthcare

#### Comparison of US and International Policies and Standards

- *Henk Vanhoutte*, Secretary General, European Safety Federation

**Audience Q&A** (*time permitting*)

1:00pm

**BREAK**

## Session 3

## Environmental Impact

2:00pm

### Introduction

*Kelly Wright*, Director of Minimally Invasive Gynecological Surgery and Associate Professor of Obstetrics and Gynecology, Cedars-Sinai Medical Center

*This session is the first of a series aimed at characterizing the impact associated with the increased adoption of reusable versus disposable HCTs within healthcare settings. Specifically, this session will examine the environmental impact, both risks and benefits, using a life-cycle analysis (LCA).*

2:05pm

### Presentation

#### **Environmental Impacts at Each Life Cycle Stage**

*Michael Overcash*, CEO, Environmental Genome Initiative

2:15pm

### Case Study

#### **Environmental Sustainability in Clinical Care**

*James Marvel*, Clinical Assistant Professor, Stanford University School of Medicine

2:25pm

### Panel Discussion

*Kelly Wright*, Panel Moderator

3:10pm

### Production and Use

- **Biodegradable, Disposable PPE:**  
Gajanan Bhat, Professor, University of Georgia
- **Reusable PPE:**  
Shelley Petrovskis, Director of Marketing & Regulatory Affairs, Lac-Mac Limited

### Transportation of Disposable and Reusable PPE

- Shawn Gibbs, Dean, Texas A&M School of Public Health

### End-of Life: Disposal and Recycling

- Melissa Dawson, Associate Professor, Rochester Institute of Technology

### Audience Q&A

## Session 4 Economic Impact

3:15pm

### Introduction

Barbara Strain, Principal, Barbara Strain Consulting, LLC

*In this next session of the series, the panel will examine the economic impact of the increasing use of reusable versus disposable HCTs. It will focus on both the short- and long-term infrastructure investments for healthcare facilities and value holders.*

3:20pm

### Presentation

#### **Value Analysis 101**

Barbara Strain, Principal, Barbara Strain Consulting LLC

3:30pm

### Case Study

#### **Costs Associated with Stockpiling of Reusable Respiratory Protective Devices**

Gio Baracco, Professor, University of Miami

3:40pm

### Panel Discussion

Barbara Strain, Panel Moderator

### Production, Use, End of Life: Disposable and Reusable PPE

- Charlie Merrow, CEO, Merrow Manufacturing

### US Trade Policy

- Laurie-Ann Agama, Acting Assistant Trade Representative for Textiles, U.S. Trade Representative

### Healthcare System Perspective

- Laura Thurston, Director Laundry Services, Intermountain Health

4:15pm

### Audience Q&A

## Day 1 Wrap-Up

**4:20pm**

**Chair's Reflection and Preview of Day 2**

*Sundaresan Jayaraman*, Workshop Chair

**4:30pm**

**ADJOURN DAY 1**

### DAY 2 – TUESDAY, MARCH 5, 2024

Welcome and Recap of Day 1	
10:30am	<b>Chair Welcome and Opening Remarks</b> <i>Sundaresan Jayaraman</i> , Workshop Chair
Session 5	Safety & Quality Considerations
10:45am	<b>Introduction</b> <i>Nicole (Nikki) McCullough</i> , Vice President of Application Engineering and Regulatory, Personal Safety Division, 3M Company  <i>The last session in the series aimed at characterizing the impact associated with increasing the adoption of reusable versus disposable HCTs within healthcare settings, the panel will explore the impact of reusable HCT use on patient and health care worker safety using a risk-based assessment framework.</i>
10:50am	<b>Case Study</b> <b><i>Ensuring Reusable Respiratory Protective Devices Were Properly Cleaned/Disinfected During the COVID Pandemic</i></b> <i>Hope Waltenbaugh</i> , Vice President of Perioperative Services & <i>Sara Angelilli</i> , Director - Education & Professional Practice, Allegheny Health Network
11:00am	<b>Panel Discussion</b> <i>Nicole (Nikki) McCullough</i> , Panel Moderator  <u>Functional Clothing and Textiles</u> <ul style="list-style-type: none"> <li><b><i>Wearability and Garment-Based Wearable Technology:</i></b>  <i>Lucy Dunne</i>, Professor, University of Minnesota</li> <li><b><i>Performance Comparison and Physiological Stress:</i></b>  <i>Meredith McQuerry</i>, Associate Professor, Florida State University</li> </ul> <u>Healthcare System Level</u> <ul style="list-style-type: none"> <li><i>Mark Shirley</i>, Director - Integrated Resiliency Management, Sutter Health</li> </ul> <u>Healthcare Worker Level</u> <ul style="list-style-type: none"> <li><i>Jill Morgan</i>, Critical Care Nurse, Emory University Hospital</li> </ul> <u>Regulatory Perspective</u> <ul style="list-style-type: none"> <li><i>Louise King</i>, Assistant Professor, Harvard Medical School</li> </ul>
11:45am	<b>Audience Q&amp;A</b>

### Session 6 Decision Making Support

11:55am

#### Introduction

Jacqueline Daley, Senior Director - Infection Prevention, Providence St. Joseph

*In this session, the panel will consider the elements of a decision-support framework that a healthcare organization might consider when exploring the incorporation of more reusable HCTs into its operations.*

12:00pm

#### Case Study

##### **Decision Process to Incorporate More Reusable Isolation Gowns in Healthcare Operations**

Beth Schenk, Executive Director Environmental Stewardship &

Jack Holmberg, Senior Infection Preventionist, Providence Health

12:10pm

#### Panel Discussion

Jacqueline Daley, Panel Moderator

##### Healthcare Systems & Organizations Perspective

- **Large-Scale:**

Skip Skivington, Vice President of Health Care Continuity and Support Services, Kaiser Permanente

- **Small-Scale:**

Barbara DeBaun, Improvement Advisor, Cynosure Health

##### User Perspective

- Katherine Townsend, Professor, Nottingham Trent University

12:55pm

#### Audience Q&A

1:05pm

#### BREAK

### Session 7 Implementation

1:40pm

#### Introduction

Sundaresan Jayaraman, Workshop Chair

*This final panel will close the workshop by discussing what it would take for a healthcare organization to implement use of more reusable HCTs. In addition to highlighting the implementation strategies and systems and behavior change models each panelist relied on to promote the increased use of reusable HCTs in their healthcare setting, the panel will also address barriers to adoption that were encountered.*

1:45pm

#### Panel Discussion

Sundaresan Jayaraman, Panel Moderator

## Reusable Health Care Textiles for Personal Protective Equipment

### WORKSHOP AGENDA

#### Healthcare System with Both On- and Off-Site Laundry Services

- *Laura Thurston*, Director Laundry Services, Intermountain Health

#### Sustainability in Clinical Care

- *Cassandra L. Thiel*, Assistant Professor, NYU Grossman School of Medicine
- *Edward McCauley*, President & CEO, United Hospital Services

#### Healthcare Worker Level

- *Jill Morgan*, Critical Care Nurse, Emory University Hospital

#### Intersection of Regulations and Healthcare Worker Safety

- *Louise King*, Assistant Professor, Harvard Medical School

2:30pm

**Audience Q&A**

### Day 2 Wrap-Up

2:40pm

#### **Sponsor's Reflections**

*Maryann D'Alessandro*, Director, NPPTL

2:50pm

#### **Closing Remarks**

*Sundaresan Jayaraman*, Workshop Chair

3:00pm

**ADJOURN**