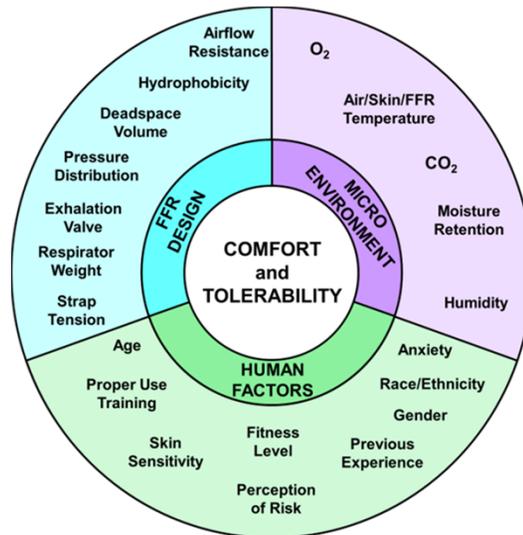


BETTER RESPIRATOR EQUIPMENT USING ADVANCED TECHNOLOGIES FOR HEALTHCARE EMPLOYEES (Project BREATHE) – FY13 (921ZJVY)

Objective

To improve respirator use compliance among healthcare workers (HCW) by developing information products, respirator performance requirements, and advanced technologies for the next generation of HCW respirators that are more comfortable and tolerable.



Applicable Standards

- OSHA standard (29 CFR 1910.134) for respiratory protection.
- 42 CFR Part 84
- ISO/ANSI TC94/SC15/WG1/PG5

Timeline

- Phase 1: 2008 – 2009
- Phase 2a: 2010 – 2011
- Phase 2b: 2010 – 2012
- Phase 2c: 2010 – 2014
- Phase 2d: 2010 – 2013
- Phase 3: 2011 – 2014
- Phase 4: 2015

Key Partners

- Veterans Health Administration (VHA)
- 3M, Scott Safety
- Texas Tech University (TTU)
- Georgia Tech
- Johns Hopkins University (JHU)
- Centers for Disease Control and Prevention (CDC)

Project Scope

- 1: Interagency Project BREATHE Working Group (VHA)
- 2a: Improving HCW compliance with N95 FFR use (NPPTL)
- 2b: Comfort /tolerability research & test method development (NPPTL)
- 2c: Respiratory Protection Effectiveness Clinical Trial (ResPECT) (JHU,VHA)
- 2d: Partnership and prototype development (VHA, 3M, Scott, Georgia Tech)
- 3: Prototype bench (NPPTL) and field trials (VHA)
- 4: Commercialization / standards development (VHA, 3M, Scott)

Milestones FY13

- Q1 ResPECT (year 2) initiate data collection
- Q1 Submit draft TR on "Psychophysiology of Respirator Wear" to ISO TC94 SC15
- Q2 Complete human subject testing of 3M low pressure drop prototype FFR
- Q2 Circulate draft "B95" manuscript internally
- Q3 Discuss "B95" requirements at stakeholder meeting
- Q4 Submit "B95" manuscript to peer-reviewed journal
- Q4 Obtain IRB approval to conduct FY14 testing of 3M and Scott B95 prototypes

Outputs

- Project BREATHE working group final report
- TTU final report
- Manuscripts published in peer-reviewed journal (**14** published, **5** more accepted/submitted, and **2** more in development)
- Presentations at national/international conferences & stakeholder meetings (**17**)

Expected Outcomes

- Manufacturers use the Project BREATHE final report, test methods, and prototype designs to develop HCW-specific respirators that provide increased safety, comfort, tolerability, and wearability
- Government agencies and standards development organizations use project information to develop guidance documents and recommendations to improve the use of respirators by HCW
- Future revisions to 42 CFR Part 84 use test methods and performance requirements developed in this project
- Other researchers utilize project findings to conduct further research on compliance, comfort, or tolerability of respirators (**18** citations to date)

Updated: 01 April 2013