National Institute for Occupational Safety and Health
NIOSH®

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Personal Protective Technology Program

At-A-Glance

The Personal Protective Technology (PPT) Program is a world leader in keeping workers safe through PPT research, standards development, respirator conformity assessment, public outreach and information dissemination. This snapshot shows recent accomplishments and upcoming work.

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Personal Protective Technology (PPT) Program advances the application and knowledge of PPT to keep workers safe. Technologies include respirators, protective clothing, gloves, eye, fall and hearing protection, hard hats, and sensors to detect hazardous substances. The PPT Program includes the NIOSH respirator approval program, PPT research, evaluations and interventions to support the following NIOSH strategic goals.

What do we do?

- Certify that new respirators meet minimum performance and respiratory protection standards before they enter the market
- Conduct site and product audits to ensure respirators continue to meet standards after approval
- Develop and implement science-based national recommendations for respiratory and other PPT
- Develop new methods to test effectiveness of PPT for workers, including workers engaged in infectious disease activities
- Create guidance and tools to help employers and workers use PPT as effectively and economically as possible
- Develop and evaluate innovative PPT designs and test methods to improve comfort, fit and usability

What have we accomplished?

- Completed 583 respirator approval decisions including 562 new respirator approvals
- Completed 257 site and product audits providing confidence that respirators are effective for their intended purposes
- Updated the chemical, biological, radiological and nuclear (CBRN) hazard assessment for CBRN respirator standards
- Completed two evaluation reports on surgical gowns stockpiled for use during infectious disease outbreaks
- Developed guidance for PPE use by first responders and law enforcement: Fentanyl: Preventing Occupational Exposure to Emergency Responders
- Conducted N95 Day with over 400 participants. This year's theme was 'When to think beyond the N95 Filtering Facepiece Respirator'
- Led effort with ASTM International to publish ASTM F3050 Guide for Conformity Assessment of Personal Protective Clothing and Equipment
- Published the National Framework for Personal Protective Equipment Conformity Assessment Infrastructure
- Developed two improved ASTM test methods based on synthetic blood surface tension research
- Finalized memorandum of understanding with the U. S. Food and Drug Administration (FDA) to establish a unified respirator approval process
- Achieved ISO 17025 accreditation for evaluation of filtering facepiece respirators for the respirator approval program
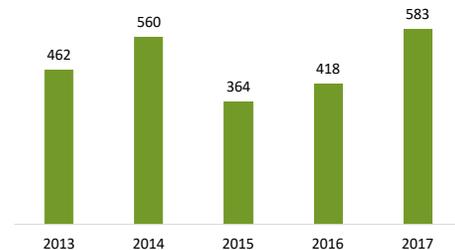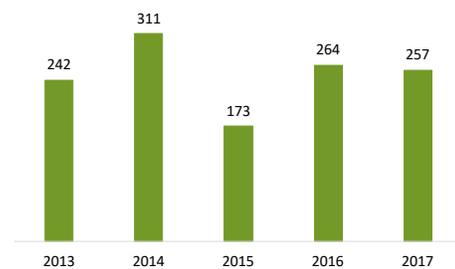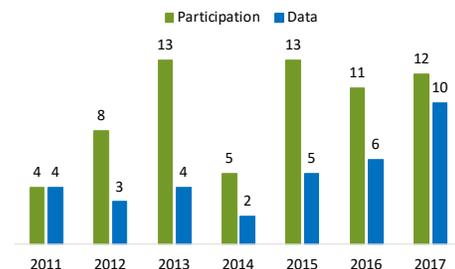
What's next?

- Partner with numerous emergency response entities to document common U.S. stockpile conditions and determine if air-purifying respirators and Level 3 and 4 surgical gowns will remain protective when stockpiled
- Complete 400 respirator approval decisions and 250 audit activities in 2018
- Implement the unified respirator approval process with the U.S. FDA
- Perform testing to determine if CBRN canisters protect against newly identified threats
- Complete the powered air-purifying respirator draft standard to better meet healthcare workers respiratory protection needs
- Prepare document for ASTM test method and fit capability consensus standard for half-facepiece, air-purifying particulate-only respirators
- Revise the mine escape respirator long term field evaluation program strategy to more effectively meet stakeholder needs

Number of respirator approval decisions

Year	Decisions
2013	462
2014	560
2015	364
2016	418
2017	583

Source: NIOSH Program Records

Number of certified respirator audit activities for quality assurance

Year	Activities
2013	242
2014	311
2015	173
2016	264
2017	257

Source: NIOSH Program Records

Number of consensus standards developed using PPT Program participation and PPT Program data in standards development organizations

Year	Participation	Data
2011	4	4
2012	8	3
2013	13	4
2014	5	2
2015	13	5
2016	11	6
2017	12	10

Source: U.S. Bureau of Labor Statistics.

To learn more, visit
https://www.cdc.gov/niosh/programs/ppt/

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