

# Effect of PPE on Biomechanical and Physiological Responses in First Receivers during Decontamination Performance: A Multidisciplinary Approach – FY17 (93905AY)

## **Objective**

To provide scientific data to develop better performance criteria and operational strategies for first receivers and emergency healthcare workers as well as to ensure the health and safety of workers wearing PPE in hazardous environments



## **Applicable Standards**

- NFPA-1999: Standard on protective clothing for emergency medical operations
- OSHA Best Practice for hospital based first receivers of victims from mass casualty incidents involving the release of hazardous substances
- ACGIH TLVs for heat stress

## **Key Partners**

- NFPA
- West Virginia Healthcare/United Hospital Center

## **Project Scope**

- Assess the biomechanical and physiological effects of wearing PPE during simulated first receiver tasks under variable ambient conditions
- Examine the current American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) for the allocation of work-rest schedules to aid administrative control strategies and educational products for workers in the heat

## **Milestones FY17**

- Human subject data collection
- Presenting preliminary data at national/international conferences

## **Outputs**

- Manuscripts in peer reviewed journals
- Presentations to conferences and/or stakeholders
- Presentations to technical committees and/or SDOs

## **Outcomes**

- Manuscripts are cited in technical and/or scientific literature
- Provide findings and information to government and/or non-government organizations to support guidance, education, and/or standard documents
- Provide findings and information to SDOs to support revising existing standards and/or developing new standards when requested

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