



## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Centers for Disease Control and Prevention

[Docket Number CDC-2021-0115, NIOSH-343]

### The Need to Establish Personal Protective Technology Centers of Excellence to Address Research and Practice Gaps

**AGENCY:** Centers for Disease Control and Prevention, HHS.

**ACTION:** Request for information.

**SUMMARY:** The National Institute for Occupational Safety and Health (NIOSH), within the Centers for Disease Control and Prevention (CDC), is soliciting public comment on the need to establish centers of excellence to address research and practice needs in the area of personal protective technology (PPT), including personal protective equipment.

**DATES:** Comments must be received by [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Comments may be submitted through either of the following two methods:

- *Federal eRulemaking Portal:* <https://www.regulations.gov> (follow the instructions for submitting comments), or
- *Mail:* NIOSH Docket Office, 1090 Tusculum Avenue, MS C-34, Cincinnati, Ohio 45226-1998.

*Instructions:* All written submissions received in response to this notice must include the agency name (Centers for Disease Control and Prevention, HHS) and docket number (CDC-2021-0115; NIOSH-343). All relevant comments received will be posted without change to <https://www.regulations.gov>, including any personal information provided.

**FOR FURTHER INFORMATION CONTACT:** Patrick G. Dempsey, Ph.D.; email: [odadmin@cdc.gov](mailto:odadmin@cdc.gov); telephone 412-386-6480 [not a toll-free number].

**SUPPLEMENTARY INFORMATION:** Within NIOSH, the National Personal Protective Technology Laboratory is charged with preventing disease, injury, and death among the millions of American workers who rely on PPT. To accomplish this mission, NIOSH conducts scientific research, leads PPT conformity assessment efforts, develops guidance and authoritative recommendations, disseminates information, and responds to requests for workplace health hazard evaluations.

Personal protective technology – such as respirators, protective clothing, gloves, eyewear, hearing protection, helmets, fit testing equipment, and fall harnesses – is instrumental in protecting the health and safety of workers in the United States and globally. Due to the comprehensive and inter-/multi-disciplinary nature of PPT, innovative thinking and approaches are necessary to advance and maximize its role in enhancing occupational safety and health.

In 2008, the Institute of Medicine (IOM) and the National Research Council (NRC) of the National Academies convened a committee to appraise the NIOSH intramural PPT Program to “evaluate the relevance and impact of a dozen specific elements of the PPT Program in preventing work-related injury and illness, identify important future considerations for scientific investigation, and provide recommendations for program improvement.”<sup>1</sup> The committee offered five recommendations; Recommendation 2 suggested that NIOSH “should establish and sustain extramural PPT centers of excellence and work to increase other extramural research opportunities.” Specifically, the committee recommended that the intramural PPT Program “[d]evelop

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<sup>1</sup> Institute of Medicine and National Research Council. 2008. The Personal Protective Technology Program at NIOSH. Committee to Review the NIOSH Personal Protective Technology Program. Rpt. No. 5, Reviews of Research Programs of the National Institute for Occupational Safety and Health. Washington, DC: The National Academies Press, at ix.

and support research centers of excellence that work closely with the NIOSH intramural research program to improve PPT, increase field research, and explore and implement research to practice interventions.”<sup>2</sup> Benefits and advantages of this approach include increased interdisciplinary expertise and improved ability to evaluate interventions (*e.g.*, emerging technologies), extending the scope of scientific inquiry to include the behavioral sciences, and increasing field research.

### Request for Information

In response to the IOM/NRC recommendation, NIOSH is exploring the establishment of centers of excellence dedicated to advancing PPT and serving as knowledge hubs where experts from multiple disciplines, industry representatives, and other interested parties/groups collaborate on PPT research and practice. To accomplish that goal, NIOSH is seeking input from any interested party regarding the scope of future centers of excellence that could play critical roles in identifying research needs, conducting research, disseminating information including education and outreach activities, and translating research findings and technologies into products and practices that will enhance safety and health. The NIOSH National Personal Protective Technology Laboratory has identified the following three broad focus areas to be addressed by one or more future centers of excellence:

- research and development of new technologies and approaches to PPT including sensor technology to increase efficacy;
- human factors/ergonomics approaches to evaluating the factors that influence the adoption and usage of PPT such as performance, comfort, fit, and usability; sociotechnical systems analyses of the influences of factors such as health and safety management systems, safety culture, and regulatory requirements; and

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<sup>2</sup> *Id* at 13-14.

- innovative approaches to the design, manufacture, and maintenance of PPT that enhance factors such as the effectiveness and acceptance of PPT in varied user populations, availability, and the ability to rapidly customize and produce PPT during crises.

In addition to input on the three topic areas described above, NIOSH is seeking input on the following questions:

- 1) What are the perceived needs for and benefits of establishing centers of excellence to advance PPT research and practice as it relates to your organization or for you personally?
- 2) Are there specific PPT research and practice needs for certain industry sectors and/or occupations?
- 3) Are there specific PPT research and practice needs for different types of hazards (*e.g.*, biological, chemical, gas and vapor, thermal, physical)?
- 4) Are there specific PPT research and practice needs for certain anatomical categories of protection (*e.g.*, dermal, vision, hearing, respiratory)?
- 5) Which particular academic disciplines, research domains, or technical expertise should contribute to addressing PPT research and practice needs? Describe multi- or inter-disciplinary needs to most effectively advance research and practice.
- 6) Describe emerging or novel technologies that can be investigated with respect to increasing the effectiveness of PPT.
- 7) How well do the three broad focus areas described above identify critical needs? Are there alternate or additional needs that have not been identified in this notice?
- 8) NIOSH anticipates that future PPT centers of excellence will include at least three functional core areas: *planning and evaluation*, which includes center of excellence administration; *research*, which can be comprised of pilot projects, small projects, and

large projects; and *outreach*, which can include communication and dissemination activities, education activities, and implementation activities. An academic training functional core area is optional. How important are the different core areas and activities within core areas to the ability of centers of excellence to advance PPT research and practice?

**Disclaimer and Important Notes:**

This notice is intended for planning purposes; it does not constitute a formal announcement for comprehensive applications. In accordance with Federal Acquisition Regulation 48 CFR 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding award. NIOSH will not provide reimbursement for costs incurred in commenting on this notice.

NIOSH will not respond to individual public comments or publish publicly a compendium of responses. An informational submission in response to this notice does not create any commitment by or on behalf of CDC or HHS to develop or pursue any program or ideas discussed.

**John J. Howard,**

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