

RECOMMENDATIONS

FEBRUARY 2022 • FRAMEWORKS FOR PROTECTING WORKERS AND THE PUBLIC FROM INHALATION HAZARDS

Recommendations to Meet the Respiratory Protection Needs of Workers without Respiratory Protection Programs

Recommendation 6-1: Congress should revise the Occupational Safety and Health (OSH) Act to clarify the definitions of employer and employee such that the Occupational Safety and Health Administration (OSHA) has the authority necessary to ensure respiratory protection for all types of workers, including all private-sector workers, over whom OSHA currently does not exercise its authority. Revised language in the Act should make clear that persons and entities conducting a business have a primary duty and thus are required to ensure, to the extent reasonably practicable, that the health of their workers—as well as that of other workers influenced or directed by the business, consumers, and the public—is not put at risk by inhalation hazards resulting from the business’s activities. OSHA should have primary oversight responsibility for this requirement and should promulgate and enforce regulations accordingly. Where federal agencies other than the Department of Labor have regulatory responsibilities to protect workers from inhalation hazards, OSHA should have oversight of those agencies’ requirements and programs, which should meet minimum requirements set by OSHA.

Pending revisions to the OSH Act:

- OSHA should adopt the broadest permissible interpretation of “employees” and “employers” under the act such that workers currently excluded based on existing interpretation, including individuals considered to be employees under other U.S. Department of Labor statutes or regulations, are not excluded from respiratory protection requirements. If OSHA does not take action to this end within 1 year, the White House should direct OSHA to reconsider its interpretation of the statute.
- Congress should ensure that OSHA’s respiratory protection requirements can be applied to and enforced for farms with 10 or fewer workers.

Recommendation 6-2: Until and unless Congress acts to modify the Occupational Safety and Health (OSH) Act to ensure that the Occupational Safety and Health Administration’s (OSHA’s) respiratory protection requirements apply to all private-sector employers and workers facing inhalation hazards, or OSHA expands its definitions of employer and employee to cover all private-sector workers, states should require employers to protect workers who are not currently under OSHA jurisdiction from inhalation hazards through the passage of new laws or promulgation of new regulations. In those states with their own occupational safety and health programs, coverage should be expanded to include these additional employers and workers not currently covered by the OSH Act. In those states without their own occupational safety and health programs, state legislatures should create such programs to provide better workplace protections from inhalation hazards for the state’s public-sector workers. Further, for those inhalation hazards for which federal OSHA has no standards, all state legislatures should enact requirements for their states to develop appropriate protections from inhalation hazards for all workers employed in the state and authorize their state occupational safety and health programs, including those newly created, to enforce these requirements.

Recommendation 6-3: The National Institute for Occupational Safety and Health (NIOSH) should expand its National Personal Protective Technology Laboratory to improve the timeliness and surge capacity of its respirator conformity assessment processes. In doing so, NIOSH should (1) use recognized consensus standards where appropriate, and (2) incorporate third-party laboratory testing into its respirator approval program.

Recommendation 6-4: The Occupational Safety and Health Administration (OSHA) should establish and regularly update science-based, comprehensive workplace exposure standards for particulate matter (PM) indicators (e.g., from wildfire smoke), as well as airborne infectious disease agents, that would trigger respiratory protection program requirements, including for those workplaces in which respirators would not otherwise be required. To assist employers in meeting these requirements, OSHA should expand its technical assistance

capabilities and efforts in this area. Given the urgency of the respiratory protection needs of workers facing these and other inhalation hazards, Congress should set deadlines for OSHA's promulgation of these standards. In the interim, OSHA, in conjunction with the National Institute for Occupational Safety and Health (NIOSH), should develop comprehensive guidelines, including the use of NIOSH-approved respirators, for workers who are at high risk of exposure to these hazards.

Recommendation 6-5: When other forms of control (e.g., engineering, administrative) fail to protect workers from inhalation hazards, the Occupational Safety and Health Administration and other agencies with authority over worker safety (e.g., Environmental Protection Agency, Mine Safety and Health Administration, Department of Energy) require that only National Institute for Occupational Safety and Health (NIOSH)-approved respirators be selected. Other agencies that provide guidance for workers facing inhalation hazards but lack this specific regulatory authority should recommend that only NIOSH-approved respirators be used.

Recommendation 6-6: The Occupational Safety and Health Administration and the National Institute for Occupational Safety and Health should undertake an evaluation to understand and predict the potential scope of the increased need for respiratory protection associated with the expansion of worker coverage and the risk of future large-scale incidents or situations involving inhalation hazards (environmental and infectious agents). This information should be shared with the Office of the Assistant Secretary for Preparedness and Response and other relevant federal authorities to inform stockpiling and distribution guidelines regarding respiratory protective devices.

Recommendation 6-7: The National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration, the Environmental Protection Agency, the National Institute of Environmental Health Sciences, and other relevant federal agencies should expand grant programs and other support mechanisms to facilitate the translation of existing technical information on respiratory protection into tailored and culturally appropriate guidance and training materials designed for workers, particularly those who may be using respirators outside of a respiratory protection program. These agencies should recognize the administrative structures and power dynamics, local contexts, and psychosocial and political factors that influence uptake, and increase their support mechanisms to ensure the training of more workers, including those from diverse communities that otherwise might not be reached through training programs. To this end, these support mechanisms should be targeted to those institutions and organizations (e.g., labor organizations, worker centers, nonprofits, academic research centers) that have established relationships and regularly interface with end-user groups.

Recommendation 6-8: In consultation with the Occupational Safety and Health Administration and in collaboration with relevant federal agencies (e.g., Defense Advanced Research Projects Agency, Biomedical Advanced Research and Development Authority), the National Institute for Occupational Safety and Health should launch expanded surveillance and intramural and extramural research programs to better understand and meet the needs of all workers facing inhalation hazards. The surveillance program should generate data on the population sizes and characteristics, exposures to inhalation hazards and associated risks, and respiratory protection needs of these workers, including workers with disabilities, other underserved populations, and volunteers. The research program should include topics such as, but not limited to

- respirator design, including filtration efficiency, breathability, fit, comfort (especially during periods of prolonged use), usability, ability to communicate when worn, and use by workers with a range of impairments;
- characterization of the source control effectiveness of different respiratory protective devices;
- innovative approaches for respirator manufacturing and distribution;
- implementation research; and
- methods and tools for sampling and characterization of workplace inhalation hazards, including airborne infectious agents.

An important objective of this research program should be to generate information that can help address knowledge gaps regarding the choice, acquisition, use, and disposal of respirators by employers and workers in this broader workforce. Additional appropriated funding from Congress will be necessary for this expanded scope.

Recommendation 6-9: The National Institute for Occupational Safety and Health should conduct research to assist the Occupational Safety and Health Administration (OSHA) in evaluating respiratory protection program (RPP) requirements for routine workplace exposures, exposures to inhalation hazards during response to emergencies, and incidental exposures in the workplace. The effectiveness of different RPP models (e.g., those that do not require standard fit testing, such as the mini RPP for health care workers established under OSHA's 2021 Emergency Temporary Standard) should be evaluated and RPP requirements continuously refined.

Recommendations to Meet the Respiratory Protection Needs of the Public

Recommendation 7-1: Congress should expeditiously establish a coordinating entity within the Department of Health and Human Services (HHS) with the necessary responsibility, authority, and resources (financial, personnel, and infrastructure) to provide a unified and authoritative source of information and effective oversight in the development, approval, and use of respiratory protective devices that can meet the needs of the public and protect the public health. Given the urgent need for action, the Secretary of HHS should immediately establish an interim office to take on priority near-term tasks of the coordinating entity until Congress acts to establish the coordinating entity. Pending such congressional action, the White House should establish an interagency task force focused on respiratory protection for the public to ensure that the activities of the interim HHS office are coordinated with other stakeholder federal agencies

Recommendation 7-2: As the two frameworks are implemented, the heads of the two agencies housing them—the Department of Labor (in which the Occupational Safety and Health Administration resides) and the Department of Health and Human Services—should ensure mechanisms are established to support collaboration and cooperation between them.

Recommendation 7-3: The coordinating entity proposed in Recommendation 7-1 should assign and organize roles and responsibilities of federal and other stakeholders through a structured process that matches their capabilities to the committee's framework functions. Where gaps in authorities are identified, Congress should address them to ensure the necessary oversight for each of the framework functions. This process should build on the committee's work to identify the necessary capabilities and oversight authorities of stakeholders for each function and to consider potential stakeholders to fill current gaps.

Recommendation 7-4: Congress should mandate that the Department of Health and Human Services establish and adequately resource a laboratory responsible for overseeing standards development, conformity assessment, and approval for respiratory protective devices intended for use by the public, as described for Function F0.

Recommendation 7-5: The coordinating entity should work with the Centers for Disease Control and Prevention, the Environmental Protection Agency, and other relevant federal stakeholders to establish a timely, responsive, and standardized process for expert scientific review of inhalation hazards and evaluation of risk to the public (including susceptible subgroups of the population) so as to identify those hazards that warrant the public's use of respiratory protection. The coordinating entity should oversee each of the steps in this process and engage stakeholders with the relevant expertise to perform the scientific review and risk evaluation, and use this information to inform evidence-based decisions on the need for public use of respiratory protective devices.

Recommendation 7-6: The laboratory called for in Recommendation 7-4 should use the hazard and risk evaluations generated through the standardized process described in Recommendation 7-5 to identify and make recommendations to the coordinating entity on approved respiratory protective devices that best meet the respiratory protection requirements of the public. When no approved device exists that meets the identified requirements, the laboratory should oversee efforts to address this gap, consistent with its role in Function F0.

Recommendation 7-7: The coordinating entity should organize efforts to make respiratory protective devices available and accessible to the public. It should interface with relevant stakeholders, including the Office of the Assistant Secretary for Preparedness and Response and the Occupational Safety and Health Administration, to guide stockpiling decisions regarding respiratory protective devices, including necessary quantities and characteristics (e.g., fit, reusability). To prepare for the occurrence of a large-scale incident involving inhalation

hazards and ensure an adequate supply of respiratory protective devices in the event of such an incident, the entity should also work with the White House and the Federal Emergency Management Agency, as well as manufacturers, regarding the need to trigger the Defense Production Act and to provide incentives for manufacturing the necessary devices, especially during public health emergencies.

Recommendation 7-8: The Centers for Disease Control and Prevention should lead the development of culturally appropriate guidance and training related to the use of respiratory protective devices by the public. This guidance and training should address which respiratory protective devices should be used, when they should be used, and how they should be worn to reduce harm from inhalation hazards. The coordinating entity should facilitate the engagement of and gathering of input from key stakeholders to advance these efforts, and ensure that the approaches developed consider the needs, cultural and socioeconomic factors, and local contexts of vulnerable groups and those facing persistent health burdens.

Recommendation 7-9: Based on ongoing monitoring and evaluation, the coordinating entity should

- develop and update plans with objective and transparent milestones, and ensure that changes needed to continuously enhance the framework are made;
- regularly assess and publicly report on progress;
- ensure that available funding and its allocation enable goals to be achieved;
- coordinate linkages across partners in government, academia, nonprofits, and industry;
- conduct periodic exercises to evaluate national preparedness for respiratory protection for the public; and
- lead the development of a coordinated, strategic research agenda to develop the knowledge base and address knowledge gaps in respiratory protection for the public.

To read the full report, please visit:
<http://www.nationalacademies.org/respiratory-protection>

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