



HEALTHIER WORKPLACES | A HEALTHIER WORLD

Public Policy Agenda Focus Areas



Goals*

- 1. Increase the number of occupational and environmental health and safety (OEHS) professionals in the United States.**
- 2. Increase the knowledge and skills of OEHS professionals in the United States.**
- 3. Increase public awareness of the roles and value of OEHS professionals in the United States.**
- 4. Increase protections for workers in the United States from the risk of OEHS hazards.**

*The number next to each goal is for reference only and does not imply their relative level of importance.

Analysis of Problem 1: Why aren't there more OEHS professionals in the United States? What barriers stand in the way of increasing the number of professionals?

It should be clearly stated up front that we do not know whether a gap exists between the supply and demand for OEHS professionals in the United States. The most recent comprehensive information we have on this subject comes from a National Institute for Occupational Safety and Health (NIOSH)-commissioned report, which found that in 2010, there were approximately 48,600 occupational safety health (OSH)² professionals in the U.S. and that employers expected to fill 25,000 positions over the next five years. These positions were expected to be filled either from OSH training programs, existing professionals, or non-OSH trained professionals.³ These findings build upon a 2000 National Academies report,⁴ which found that

“The current supply of OSH professionals, though diverse in knowledge and experience, generally meets the demands of large and some medium sized workplaces. However, the burden of largely preventable occupational diseases and injuries and the lack of adequate OSH services in most small and many medium-sized workplaces indicate a need for more OSH professionals at all levels.” (pgs. 10-11, emphasis added)

Although we have limited information on the number of OEHS professionals in the U.S., based upon these and other studies as well as reports from the field, **we can say with certainty that unmet OEHS needs do exist, particularly for medium and small businesses, independent workers, transient/migrant workers, and temporary workers.** As a result, the exact supply and demand gap at any one time may be less meaningful than the forces that either bottle up or unleash the supply and demand for OEHS professionals in the United States.

It should be noted that the demand for OEHS professionals can be correlated to the promulgation of new standards and regulations and the increase in enforcement efforts by government agencies. Therefore, supporting legislative initiatives, the promulgation of more protective government standards and regulations, and advocating for increased agency funding is certain to have a net positive effect on the number of OEHS professionals at all levels; including OEHS technicians, OEHS trained

² Occupational safety and health professionals are referenced here instead of the broader OEHS set because the NIOSH report was confined to OSH.

³ National Institute for Occupational Safety and Health. 2011. *National Assessment of the Occupational Safety and Health Workforce*. Washington, DC. <https://www.cdc.gov/niosh/oshworkforce/default.html>.

⁴ Institute of Medicine. 2000. *Safe Work in the 21st Century: Education and Training Needs for the Next Decade's Occupational Safety and Health Personnel*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/9835>.

competent persons, and OEHS regulatory professionals who provide support to medium and small businesses, independent workers, transient/migrant workers, and temporary workers via the Occupational Safety and Health Administration's (OSHA) State consultation programs.

Furthermore, hiring an OEHS professional provides employers with a competitive edge by reducing the direct and indirect costs of workplace hazards, which include equipment damage, lawsuits, medical expenses, and more. Occupational and environmental health and safety issues are an inherent part of business operations and therefore OEHS-related investments often have an impact on many aspects of a process or service, providing businesses with the opportunity to realize long-term benefits well beyond the scope of the immediate application.

Supply-side barriers to increasing the number of OEHS professionals in the United States

The supply-side barriers to increasing the number of OEHS professionals in the U.S. are found within the education pipeline. The specific problems and solutions vary depending upon grade level, however, both elementary and secondary school students and those in institutions of higher education share some of the same common problems:

- Dropout rates
- Access and opportunity
- Competition with other professions

Dropout rates

Because most OEHS professions require at least a bachelor's degree, students who drop out at any point along their journey through elementary and secondary school and into college decrease the total pool of potential OEHS professionals.

Overall, the high school dropout rate is approximately 6%; however, this varies considerably with gender, ethnicity, and geography⁵. For instance, Hispanic male students have a dropout rate of approximately 11.5%.⁶ Additionally, of those who attend college, approximately 40% of undergraduate students drop out.⁷

⁵ U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), October, 1967 through 2017. https://nces.ed.gov/programs/digest/d18/tables/dt18_219.70.asp.

⁶ U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), October, 1967 through 2017. https://nces.ed.gov/programs/digest/d18/tables/dt18_219.70.asp.

⁷ Bustamante, Jaleesa. "College Dropout Rates". Educationdata.org. <https://educationdata.org/college-dropout-rates/>.

Access and opportunity

The costs of attending college have skyrocketed, with the average amount owed by a student who graduated with a bachelor's degree doubling over 20 years.⁸ Federal grants cover only a portion of the costs of college and not everyone qualifies for aid. As a result, in 2019, 62% of graduates from public and private colleges had student loan debt that averaged \$28,950.⁹

Competition with other professions

Most OEHS professions require at least a bachelor's degree. However, most Americans do not have a college degree. Instead, **only about one-third of the U.S. population has completed four years of college or more.**¹⁰ This means that *all* professions requiring a college degree must compete over the same relatively small portion of U.S. workers with a college degree, which is estimated to be approximately 80 million.¹¹ Competition is intense. Colleges must carefully evaluate what programs they offer, estimating what professions are likely to attract the most students, the workforce needs in the community, State, and nation, what those colleges are (or would like to be) known for, and what the potential return on investment could be.

There are three primary pathways for increasing the number of OEHS professionals in the U.S.:

- 1) Encourage OEHS generalists and “technician-level” practitioners who are working with only a high school diploma or equivalent or are pursuing or received a two-year associate degree to obtain at least a bachelor's degree from an OEHS college program.
- 2) Increase student enrollment in existing OEHS college programs.
- 3) Create new OEHS college programs and attract students to them.

Whether seeking to increase enrollment in an existing program or create a new one, both face a common challenge: Justification.

⁸ U.S. Department of Education. “College Affordability and Completion: Ensuring a Pathway to Opportunity”. <https://www.ed.gov/college>.

⁹ The Institute for College Access & Success. “Student Debt and the Class of 2019”. <https://ticas.org/interactive-map/>.

¹⁰ Dufflin, Erin. “Percentage of the U.S. population with a college degree, by gender 1940-2019”. Statista. <https://www.statista.com/statistics/184272/educational-attainment-of-college-diploma-or-higher-by-gender/>.

¹¹ U.S. Bureau of Labor Statistics. “Employment status of the civilian noninstitutional population 25 years and over by educational attainment, sex, race, and Hispanic or Latino ethnicity” (2019) <https://www.bls.gov/cps/cpsaat07.pdf>.

Degree programs are essentially business products. As such, creating or maintaining a program requires a business case to be made. Questions that must be addressed include: Why is a course needed at this time? How is labor market demand being justified? What students will it serve? How many students will it attract? Will it compete with or complement any existing university courses or programs?¹²

Answering these questions is a time-intensive process that can take up to a year – and approval of an academic program proposal is not guaranteed. As a result, **developing successful OEHS program proposals are among the most important activities that will lead to higher numbers of OEHS professionals in the United States. A key element of a successful proposal is demonstrating the demand for these professionals**, which is the topic we next turn to.

Demand-side barriers to increasing the number of OEHS professionals in the United States

Eighty-nine percent of businesses in the U.S. are smaller businesses, with less than 20 workers.¹³ A combination of limited awareness and understanding of OEHS, financial struggles, and challenges communicating the business case for OEHS services have resulted in historic pressures that suppress demand for OEHS professionals and services. The following section addresses how to overcome these barriers, as well as those present on the supply-side.

Guiding policies and actions for solving Problem 1, Increase the number of OEHS professionals in the United States

Access, opportunity, awareness, equity, and support – these are among the basic ingredients of student success, particularly for low-income and minority students. While OEHS professionals work in a wide variety of settings, they share a common set of skills, knowledge, and methods of problem analysis.

By ensuring that elementary and secondary schools and institutions of higher education provide students with the core elements necessary for success in OEHS, and by working with employers to raise awareness of and make the business case for OEHS, AIHA will have a direct, positive impact, increasing the number of OEHS professionals in the United States. AIHA can accomplish these things by working with employers, teachers, guidance counselors, principals, boards of education, professors, deans, and local, State, and Federal policymakers, businesses, and other

¹² For examples of questions university and college leaders ask at when approving new or revised programs or courses see (PDF) <https://bit.ly/3oz7ASB> and <https://bit.ly/3muiVLB>.

¹³ <https://bit.ly/35JoSnD>

organizations to ensure that the following actions occur. Please note that AIHA may or may not take a leadership role in the following and will always seek to partner with other organizations as appropriate.

Supply-side

- Elementary and secondary school students are encouraged to take science, technology, engineering, and mathematics (STEM) courses.
- Students at all grade levels have access to up-to-date resources, tools, and technologies to aid learning.
 - Governments supply schools with sufficient funding to provide these resources.
- Students at all grade levels are made aware of and encouraged to pursue OEHS careers.
- Elementary and secondary schools are encouraged to highlight OEHS within the core educational curriculum.
- Secondary school-sponsored career fairs feature OEHS careers.
- Government-sponsored scholarship and grant programs for students to pursue OEHS careers are available and fully funded. Where necessary, create or expand such programs.
- Secondary school students can earn credits applicable toward OEHS college degrees.
- Secondary school students can earn high school graduation credits by taking an OSHA 10- or 30-hour training.
- Students are made aware that a two-year associate degree can serve as a steppingstone towards an OEHS career.
- College professors have access to a library of successful OEHS college course proposals and the professors who wrote them.

- Maintain and grow NIOSH’s Education and Research Centers (ERCs), which are university-based multidisciplinary centers that educate and train the current and next generation of OEHS professionals.¹⁴
- Work with the U.S. Armed Forces to promote careers in OEHS to active military, military reservists, and veterans.

Demand-side

- Create, maintain, and grow partnerships between businesses, governments, universities, and nonprofits that foster job growth, training, innovation, and research. Examples include:¹⁵
 - Small Business Innovation Research program.¹⁶
 - Under this program, NIOSH funds early-stage small businesses that develop and commercialize innovative occupational health and safety technologies. In FY 2018, NIOSH awarded five grants totaling \$1.8 million for these purposes.¹⁷
- Support and expand NIOSH extramural research and training programs, including its ERCs and multidisciplinary centers.¹⁸
- Ensure that government contracting and procurement requirements and incentives are aligned with the recommendations contained in AIHA’s *Use of OHS Performance Criteria in Contracting and Performance* Position Statement¹⁹ and *OHS Performance Criteria in Contracting and Procurement* White Paper.²⁰ As noted in the White Paper, “Significant leverage may be afforded [occupational health and safety (OHS)] professionals when they include OHS performance measures in some or all of these components of contract specifications.”

¹⁴ <https://www.cdc.gov/niosh/oep/ercportfolio.html>

¹⁵ The Consortium for Building Energy Innovation (CBEI) serves as a model of successful collaboration where government, industry and academia came together to innovatively address regional needs. The lessons from this partnership are applicable throughout the nation and across industry sectors. Learn more at <http://www.cbei.psu.edu/>.

¹⁶ <https://www.sbir.gov/about>

¹⁷ NIOSH [2019]. NIOSH extramural research and training program: annual report of fiscal year 2018. By Robison WA, Williams DF, Grandillo P. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2020-108, <https://doi.org/10.26616/NIOSH PUB2020108>

¹⁸ <https://www.cdc.gov/niosh/oep/default.html>

¹⁹ (PDF) <https://bit.ly/3oGwGPN>

²⁰ (PDF) <https://bit.ly/37WjdLL>

- Review U.S. Small Business Administration (SBA) initiatives and loan and grant programs. As needed, work with SBA, the White House, and Congress to ensure that SBA loans, grants, and initiatives incentivize businesses to hire OEHS professionals.

Analysis of Problem 2: Why don't the knowledge and skills of OEHS professionals in the United States match what's needed?

This problem seeks to answer two essential, timeless questions: “What is needed to protect workers and their communities?” And “What do OEHS professionals need to know and do to protect workers and their communities?”

Seeking to answer these questions, the 2011 *National Assessment of the Occupational Safety and Health Workforce* found that “employers generally are satisfied with their employees’ level of training in their work areas” (pg. xlx). However, it also revealed, “a desire for new hires to have training in additional areas, primarily relating to leadership and various forms of communication, and to have training in one or more of the other disciplines” (pg. xx). Nearly a decade later, AIHA’s environmental scan²¹ confirmed the need for additional training on topics such as communication, serving the changing workforce, and collecting and analyzing data to inform risk assessment and management decisions.²² Additionally, employers may have a misunderstanding that workers are already trained and ready for the job or that previous work experience has provided the skills needed to do the job safely and healthily. Employers may also fail to realize that training provided by one company may not be OSHA compliant and that learned work practices and skills may be inadequate without controls.

Since the association’s founding in 1939, AIHA has been the premier location for networking and source of scientific knowledge, producing essential, cutting-edge OEHS educational programs and content. AIHA will continue to improve the knowledge and skills of OEHS professionals in the U.S. by taking the actions listed in the following section.

²¹ American Industrial Hygiene Association. *2020 Environmental Scan Report*. (PDF) <https://bit.ly/35MrdOB>.

²² American Industrial Hygiene Association. Content Portfolio Advisory Group. <https://www.aiha.org/get-involved/volunteer-groups/content-portfolio-advisory-group>.

Guiding policies and actions for solving Problem 2, Increase the knowledge and skills of OEHS professionals in the United States

- Advocate for professional title protection.
- Support NIOSH's Health Hazard Evaluation (HHE) Program, which helps employees, unions, and employers learn whether health hazards are present at their workplace and recommends ways to reduce hazards and prevent work-related illness. NIOSH HHE's are done at no cost to the employees, unions, or employers.²³
- Support OSHA's On-Site Consultation Program, which offers no-cost and confidential OSH services to small- and medium-sized businesses, with priority given to high-hazard worksites, and does not result in penalties or citations.²⁴
- Support OSHA's Voluntary Protection Programs, which recognize employers and workers in private industry and Federal agencies who have implemented effective health and safety management systems and maintain injury and illness rates below U.S. Bureau of Labor Statistics averages for their respective industries.²⁵
- Maintain and grow NIOSH's ERCs, Centers of Excellence for *Total Worker Health*[®], and National Occupational Research Agenda Sector and Cross-Sector Councils.
- Support the Centers for Disease Control and Prevention's National Occupational Research Agenda program.²⁶
- Promote programs and materials from NIOSH, OSHA, and academic programs to train professionals in the changing nature of the U.S. workforce and their health and safety needs, especially relating to the significant increases in contract, contingent, temporary, and "gig" workers.
- Promote programs and materials from NIOSH, OSHA, and academic programs to train professionals in the control of infectious diseases in the workplace, particularly as it applies to COVID-19 and other pandemics.
- Through AIHA's partnerships with OSHA, NIOSH, and other government entities, encourage OEHS professionals to attend and present at AIHce EXP, take AIHA University courses and webinars, and purchase AIHA publications to advance their professional development.

²³ <https://www.cdc.gov/niosh/hhe/default.html>

²⁴ <https://www.osha.gov/consultation>

²⁵ <https://www.osha.gov/vpp>

²⁶ https://www.cdc.gov/nora/default_brohtml

- Guided by AIHA’s Content Portfolio Advisory Group²⁷ and Strategic Plan,²⁸ AIHA will continue developing new content to serve the ever-changing needs of current and aspiring OEHS professionals.
- In 2021 AIHA plans to conduct an environmental scan of so-called OEHS technicians (those who may lack a four-year college degree) to better understand what their role might be in providing fundamental occupational health education aimed at this rather broad-based audience segment.
- Work with the U.S. Armed Forces to promote OEHS training and certification to active military. This will help decrease occupational injuries, illnesses, and deaths in the military and prepare those in the military for successful careers in OEHS when they become veterans.
- Work with veterans and the organizations that represent them to encourage and prepare veterans to enter and succeed in OEHS careers.

Analysis of Problem 3: Why do we need to increase public awareness of the roles and value of OEHS professionals in the United States?

Increasing awareness of the value of OEHS is a key solution that will unlock success in all other areas, including, but not limited to productivity, performance, profitability, and prosperity. Recognizing the pivotal role that awareness plays, AIHA conducted a thorough analysis to better reflect changes in the OEHS industry and remain relevant to industry stakeholders,²⁹ and in 2020, unveiled its brand evolution, which is an ongoing campaign with a three-pronged purpose: 1) To raise public awareness of OEHS in the workplace and wider community; 2) To educate corporate decision-makers about the core value of OEHS in the workplace; and, 3) To educate students and career counselors about this vibrant and mission-driven STEM career opportunity.

Guiding policies and actions for solving Problem 3, Increase public awareness of the roles and value of OEHS professionals in the United States

To encourage students to pursue careers in OEHS, businesses, and governments to invest in OEHS (including hiring more OEHS professionals), AIHA will promote inspiring stories of the roles and value that such professionals play as they protect the lives of workers, their families, and communities. To accomplish this, AIHA will:

²⁷ <https://www.aiha.org/get-involved/volunteer-groups/content-portfolio-advisory-group>

²⁸ <https://www.aiha.org/about-aiha/aiha-governance/aiha-strategic-planning>

²⁹ <https://www.aiha.org/about-aiha/aiha-brand-evolution>

- Encourage local, State, and Federal policymakers to attend and speak at AIHA Local Section and other events.
- Encourage Local Sections to speak with community and business leaders at Chambers of Commerce and related business organization events.
- Evaluate regional injury and illness statistics to identify occupational health and safety hazards and promote available AIHA resources.
- Collect and distribute stories of how OEHS professionals are having positive impacts on workers, businesses, and communities, with a particular focus on disaster preparedness, response, and recovery, and Total Exposure Health.³⁰
 - Use microlearning techniques to tell short stories and highlight the successes of OEHS public policies, programs, and procedures.
 - Promote AIHA’s microsite, www.workerhealthsafety.org, which is designed for business leaders.
- Educate local, State, and Federal policymakers on the roles and values of OEHS through phone calls, emails, virtual meetings, and (public health permitting) in-person meetings with agency leaders and State and Federal “Days on the Hill” with legislators.
- Train AIHA members on effective communication practices with policymakers and the media.
- Actively seek out and facilitate interviews between AIHA members and the media. This includes being accessible to journalists who are writing about the OEHS profession as well as providing perspectives to journalists on investigative works concerning OEHS issues.
- Promote, encourage, and recognize outstanding journalists who bring attention to OEHS issues and spur action through creative and compelling journalistic and investigative reporting which raises public awareness of OEHS issues.
- Encourage Local Sections to write about social and economic concerns facing the advancement of Total Worker Health in their newsletters and on Catalyst, AIHA’s online collaboration platform.

³⁰ <https://bit.ly/34lankD>

- Encourage AIHA members and Local Sections to participate in and organize STEM and career fairs.
- Encourage AIHA members to visit elementary and secondary schools, community colleges, and four-year universities (in-person or virtually) to deliver presentations that encourage students to pursue careers in OEHS.
 - Promote AIHA’s IH Heroes, which includes an online game, award-winning comic books, and more.³¹
 - Promote AIHA’s IH Professional Pathway, which provides a roadmap for students and aspiring or current OEHS professionals to enter the profession and advance their careers.³²
 - Promote www.OEHSCareers.org, which is designed to encourage students of all ages to pursue careers in OEHS.
- Interview OEHS professionals on AIHA’s *5 on the Frontline* podcast.³³
- Collaborate with U.S. and State OSHA programs to promote OEHS training and education for all business and industry stakeholders to reduce operating costs and utilize best practices.

Analysis of Problem 4, Increasing protection for United States workers from the risk of occupational safety and health hazards

Increasing worker protection and increasing the quantity and quality of OEHS professionals go hand in hand. OEHS professionals are a vital force in promoting worker health and safety. In turn, initiatives and actions by the government and private sector that protect worker health and safety help stimulate training programs for OEHS professionals and increase public awareness and support for the OEHS profession.

Guiding policies and actions for solving Problem 4, How to increase worker health and safety protections

- Increase funding for the lead Federal agencies and programs that address OEHS issues (e.g., OSHA, MSHA, NIOSH, and the EPA).

³¹ <https://www.aiha.org/ih-careers/discover-industrial-hygiene/meet-the-ih-heroes>

³² <https://www.aiha.org/ih-careers/ih-professional-pathway>

³³ <https://www.aiha.org/membership/advocacy/5-on-the-frontline>

- Support the worker health and safety activities of other Federal and State agencies.
- Increase AIHA membership involvement in State health and safety committees supporting both private industry and public employers.
- Promote the review of OSHA enforcement activities to improve worker health and safety.
- Support State and local initiatives for addressing worker health and safety issues not addressed by Federal agencies.
- Streamline the processes for updating existing OEHS standards and developing new standards. This could be accomplished by supporting the incorporation of validated science-based consensus standards, industry best practices, and guidance developed and supported by peer-supported nonprofit scientific associations.
- Promote programs in OSHA and NIOSH that address the needs of contract, temporary, contingent, and “gig” workers.
- Promote OSHA consultation and enforcement activities that target vulnerable workers (i.e., youth, older, disabled, immigrant, women, and minority workers).
- Promote standard-setting and workplace health and safety regulations addressing the spread of infectious diseases, specifically as it applies to COVID-19 and other pandemics.
- Promote awareness of the benefits of AIHA membership and consultants listing to support concerns of business and industry.

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