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Strengthening the Environmental Health Professional Pipeline From Education Into Practice

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Editor's Note: In an effort to promote the growth of the environmental health profession and the academic programs that fuel that growth, the National Environmental Health Association has teamed up with the Association of Environmental Health Academic Programs (AEHAP) to publish two columns a year in the *Journal*. AEHAP's mission is to support environmental health education to ensure the optimal health of people and the environment. The organization works hand in hand with the National Environmental Health Science and Protection Accreditation Council (EHAC) to accredit, market, and promote EHAC-accredited environmental health degree programs.

This column provides AEHAP with the opportunity to share current trends within undergraduate and graduate environmental health programs, as well as efforts to further the environmental health field and its available resources and information.

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Environmental health professionals (EHPs) stand on the front lines of routine public health efforts and responses to disasters and pandemics (Brooks & Ryan, 2021). These efforts and responses include managing risks related to drinking water, hazardous and general waste, sanitation, food safety, communicable diseases, vector issues, and mass gatherings (Ryan et al., 2020). These expansive areas of expertise were put to work during the COVID-19 pandemic with EHPs supporting and leading the development of strategies to enable society to function in the safest possible manner. This work included mitigation of virus spread in public spaces, contact tracing, modification of shelter activities, food safety assessments and education, workplace training on COVID-19 risk factors, monitoring of safety measures in older adult facilities, guidance for the reopening of facilities, and waste management (Rodrigues et al., 2021). Such activities took priority during COVID-19 and were conducted instead of day-to-day functions—a trend that is increasing due to the frequency of disaster response activities and a limited workforce (Rodrigues, et al. 2021).

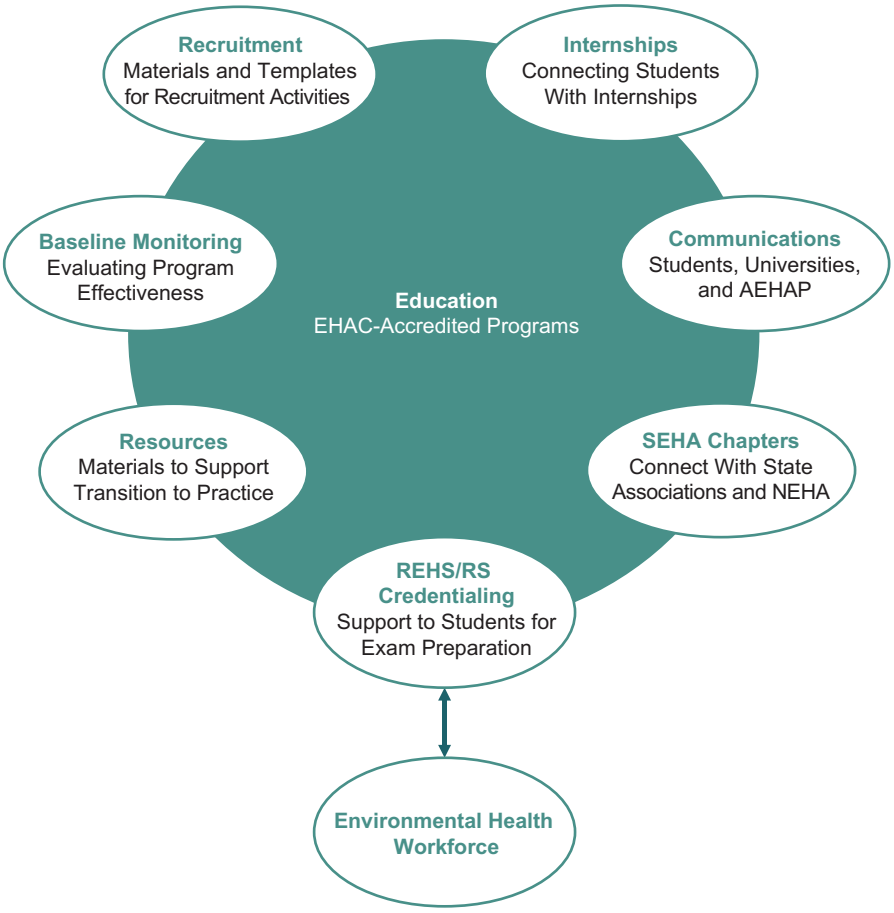
Strengthening the environmental health profession now and into the future will require a robust pipeline from education into practice. Without immediate action, there is an imminent EHP workforce shortage. For example, more than 67% of tribal, 64% of state, and 60% of local environmental health programs report insufficient staffing capacity for COVID-19 response, and industry workers have also reported high levels of burnout (Environmental Health Workforce Act, 2021). This shortage is a significant concern and risk for the public because as a profession and practice, environmental health is one of the most significant contributors to state, tribal, local, and territorial public health (Gerding et al., 2019).

The Centers for Disease Control and Prevention recognized this risk, prior to the pandemic, when it launched the Understanding the Needs, Challenges, Opportunities, Vision, and Emerging Roles in Environmental Health (UNCOVER EH) initiative to better understand EHP needs and demands. This study engaged more than 1,700 professionals and found approximately one quarter (26%) of EHPs are expected to retire in the coming years and there are increasing difficulties in retaining and recruiting staff (Gerding et al., 2019).

To address this challenge, a "whole of environmental health sector" approach is required to strengthen the EHP pipeline from education into practice. This "all-hands-on-deck" approach requires:

FIGURE **1**

Conceptual Framework for Strengthening the Environmental Health Professional Pipeline From Education Into Practice



Note. AEHAP = Association of Environmental Health Academic Programs; EHAC = National Environmental Health Science and Protection Accreditation Council; NEHA = National Environmental Health Association; REHS/RS = Registered Environmental Health Specialist/Registered Sanitarian; SEHA = Student Environmental Health Association.

- an increase in the number of environmental health undergraduate and graduate students,
- support to prepare recent graduates and current students of programs accredited by the National Environmental Health Science and Protection Accreditation Council (EHAC) to join the Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS) ranks, and
- building sustainable partnerships between universities, government agencies, and the private sector.

Developing strategies across these areas would allow current and future EHP workforce needs to be strengthened, supported, and prepared to fulfill the critical role of responding to public health threats.

The mechanisms to translate this strategy into practice exist within current environmental health organizational structures, which are designed to support EHAC-accredited degree programs. For example, the Association of Environmental Health Academic Programs (AEHAP) works to increase the environmental health workforce by promoting and supporting EHAC-accredited degree programs. EHAC was established in 1967 to accredit undergraduate and graduate programs in the field of environmental health and is identified as the benchmark qualification for government and military sectors. AEHAP, EHAC, and the National Environmental Health Association (NEHA) working in synergy can allow the profession to capitalize on this opportunity and revitalize environmental health for current and future generations.

There are seven interconnected actions that AEHAP could use to strengthen the environmental health pipeline (Figure 1). Providing resources and guidance to students at EHAC-accredited degree programs is necessary to support their transition into environmental health practice. These resources would help students in their preparation for the REHS/RS credential exam and be complemented by cultivation of systematic connections between Student Environmental Health Association (SEHA) chapters and NEHA structures at the local, state, and regional levels. Recruitment materials and strategies could be developed to encourage students to join EHAC-accredited degree programs, possibly leveraging the SEHA chapters, with emphasis on diversity within academic programs and the environmental health professions.

These actions can facilitate recruitment of EHAC-accredited degree program students to an array of inclusive and equitable internship opportunities in the government sector that reflect growing student diversity. The effectiveness of this approach to strengthen the professional pipeline from education into practice would require establishment of a baseline to understand the extent to which EHAC-accredited degree programs are currently engaging in these actions and monitoring future progress.

The concept discussed provides a path forward towards a sustainable pipeline from education to practice. Strengthening this pathway is necessary, timely, and urgent. A once-in-a-generation opportunity exists to rebuild the profession starting at the foundation of EHPs—students of EHAC-accredited degree programs. It provides a mechanism to support students into practice to help ensure there are suitability qualified and credentialed EHPs, a vital step towards ensuring efficient and effective delivery of essential environmental health services to local communities. Now is the time to strengthen the EHP pipeline as we recover from the COVID-19 pandemic and move toward anticipating future environmental public health challenges.

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