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Public Health Needs the National Environmental Health Science and Protection Accreditation Council and the Council on Education for Public Health

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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, NEHA 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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The focus of accreditation discourse since 2016 has been the changes made to the Council on Education for Public Health's (CEPH) accreditation criteria. A collection of competencies has bolstered a rift between public health accreditors and many environmental health academicians and scientists throughout the U.S. The main point of contention is whether the changes to the 2016 CEPH accreditation criteria would beget the ending of environmental health education in the U.S. In lieu of arguing if CEPH's accreditation changes will have an impact on the number of environmental health programs across the U.S.,

the Association of Environmental Health Academic Programs (AEHAP) argues instead for the continued coexistence and possible collaboration of CEPH and the National Environmental Health Science and Protection Accreditation Council (EHAC).

We base our argument on the fact that the two accrediting bodies have different training foci. CEPH aims to accredit schools and programs focused on preparing public health practitioners who master broad public health competencies. EHAC accredits programs that provide students with the foundational knowledge and technical skills required for individuals wanting to obtain an environ-

mental health job. Public health practitioners are to environmental health scientists as primary care doctors are to surgeons. Primary care doctors, like public health practitioners, are broadly trained and have vast general knowledge of their field. Surgeons, like environmental health scientists, have more in-depth preparation and require honed technical skills and expertise.

According to the World Health Organization (WHO) in 2019, there are 10 health challenges that beg for immediate attention. These challenges are:

1. air pollution and climate change,
2. noncommunicable diseases such as cancer and diabetes,
3. global influenza pandemic,
4. fragile and vulnerable settings,
5. antimicrobial resistance,
6. high threat pathogens such as Ebola,
7. weak primary healthcare,
8. vaccine hesitancy,
9. dengue, and
10. HIV.

Addressing the aforementioned public health challenges will require public health generalist and technically trained environmental health scientists. Public health generalists are trained to address 5 of the 10 major issues identified by WHO (i.e., non-communicable diseases, fragile and vulnerable settings, weak primary healthcare, vaccine hesitancy, and HIV). The remaining five issues require technically trained environmental health practitioners. These practitioners must be capable of assessing the risks to human health and well-being regardless of

TABLE 1

National Environmental Health Science and Protection Accreditation Council (EHAC) Environmental Health Technical Areas

Technical Area
Air quality control*
All-hazard preparedness
Built environment
Disease prevention
Environmental health planning
Food protection*
GIS
Global climate change and human health
Global environmental health
Hydrogeology
Injury and violence prevention
Institutional health
Occupational health and safety*
Radiation health
Recreational environmental health
Risk analysis
Soils
Solid and hazardous material and waste management*
Water and wastewater*
Zoonotic and vectorborne disease and their control*
*Topics EHAC requires programs to cover in their curriculums. Source: EHAC, 2016.

media (i.e., air, water, food, or soil), location (i.e., home, work, or recreational facilities), or transport mechanism (i.e., air, drinking water, food, hazardous materials and wastes, radiation, solid waste, wastewater, or zoonotic and vectorborne disease). Although 2,600 environmental health science students graduated from universities with undergraduate or graduate EHAC accreditation from 2012–2017, an academically trained environmental health science workforce shortage still exists (Marion, Murphy, & Zimeri, 2017). AEHAP highlights this shortage to indicate the need for more EHAC-accredited programs in the U.S. and abroad.

Why are EHAC-accredited programs needed? EHAC works with accredited undergraduate and graduate programs to train graduates capable of preparing for and responding to environmental health issues (EHAC, 2016), such as those noted by WHO as requiring immediate attention. Students enrolled in EHAC undergraduate programs complete course and laboratory work in the natural sciences (i.e., physics, chemistry, geology, and biology) (EHAC, 2016). Additionally, students complete coursework in mathematics, communication, and general education. The aforementioned foundational preparation enables students to complete methodology coursework (i.e., toxicology, statistics, and epidemiology) and develop skills necessary to design and manage environmental health programs (EHAC, 2016). Such skills include assessing risk, communicating risk to varying audiences, managing risk, analyzing public health policy, administering environmental health programs, and interpreting environmental health laws (EHAC, 2016).

To ensure students have a broad knowledge of environments, media, and transport mechanisms, EHAC requires accredited undergraduate programs to offer coursework in a minimum of four technical topic areas and expose students to most of the remaining topic areas. According to EHAC (2016), “exposure to ‘most’ topic areas shall mean that at least half of the topic areas,” shown in Table 1 are, “covered in one or more courses during the course of the program” (p. 12). In addition to course and laboratory work, students complete at least 180-clock hours in a field experience (EHAC, 2016). Field experiences (e.g., internships or practicums) further enable students to develop problem solving skills, learn teamwork skills, and understand organizational dynamics (EHAC, 2016).

AEHAP believes that EHAC continues to lead the way for environmental health academic programs, providing much needed educational leadership for its academic intuitions that primarily consist of regional, comprehensive, and historically black colleges and universities. Currently, very few schools of public health have EHAC-accredited environmental health programs. To meet the growing need for environmental health scientists, schools of public health must offer environmental health concentrations.

Is it possible for schools of public health to meet both CEPH and EHAC accreditation?

Simply put, yes. CEPH competencies can be met through the coursework, laboratory experiences, and fieldwork completed by students in EHAC programs. For example, EHAC students can meet CEPH curriculum and competency requirements (CEPH, 2016) through existing coursework, laboratory experiences, and fieldwork.

For example:

- CEPH competency D9 (i.e., science, social and behavioral sciences, math/quantitative reasoning, and humanities/fine arts) can be met through completion of required EHAC foundation coursework (i.e., natural sciences, mathematics and general education).
- CEPH competencies D10 and D11 (i.e., public health bachelor’s degree foundational domains and foundational competencies) can be met through EHAC-required methodology coursework (i.e., epidemiology and biostatistics), technical area courses (Table 1), and coursework that develops skills necessary to design and manage environmental health programs (i.e., EHAC crosscutting knowledge areas).
- CEPH competency D12 (i.e., public health bachelor’s degree cumulative and experiential activities) can be met through EHAC-required foundation and technical coursework, as well as through completing 180-clock hours of fieldwork.

AEHAP calls on CEPH-accredited schools of public health to collaborate with EHAC. The collaboration should lead to the schools of public health dually accrediting existing environmental health programs or establishing new environmental health programs. Having dual accreditation will ensure future environmental health professionals are prepared to identify and respond to dynamic public health challenges.

Regardless of enrollment numbers, environmental health academic programs are and will continue to be needed to address evolving public health issues. We believe East Tennessee State University, the first EHAC-accredited environmental health program, captured our take on the necessity of environmental health in their accreditation application to EHAC in 1969:

Environmental health practice is as old as Moses, as young as tomorrow’s smog, as simple as water, as complicated as a nuclear reactor; if its past might seem inglorious and its future unclear, it is clear that in the future there must be

environmental health if there is to be a future for humankind. 🐼

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ACCREDITED ENVIRONMENTAL HEALTH SCIENCE AND PROTECTION PROGRAMS

The following colleges and universities offer accredited environmental health programs for undergraduate and graduate degrees (where indicated). For more information, please contact the schools directly or visit the National Environmental Health Science and Protection Accreditation Council website at www.nehspac.org.

Baylor University

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