Healthy People 2020 and Education For Health  
Successful Practices in Undergraduate Public Health Programs

Morehouse College  
Atlanta, GA  
Public Health Sciences Institute  
Public Health Minor, and Summer and Academic Year Public Health Research Internships  
http://morehouse.edu/centers/phsi/index.html  
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INSTITUTIONAL CONTEXT

Morehouse College is a private, historically Black, 4-year institution located in the urban metropolis Atlanta, Georgia. Morehouse is the largest independent, fully accredited, historically Black liberal arts college exclusively for men. Enrollment for the 2010-2011 academic year was 2,689. The mission of Morehouse College is to develop men with disciplined minds who will lead lives of leadership and service. Morehouse realizes this mission by emphasizing the intellectual and character development of its students. Morehouse provides an academic community dedicated to teaching, scholarship, and service, and the continuing search for truth as a liberating force. As such, the College offers instructional programs in three divisions - business and economics, humanities and social sciences, and science and mathematics - as well as myriad extracurricular activities designed to develop students artistically, culturally, and spiritually. In addition, the College assumes special responsibility for teaching the history and culture of Black people.

In 2010, Morehouse College had the distinction of being ranked as the number one liberal arts college by the Washington Monthly. It has awarded more baccalaureate degrees to African-American men than any other institution in the nation. The Wall Street Journal listed Morehouse College as one of the top colleges in the nation for sending students to the most elite professional and graduate schools. Moreover, Morehouse is ranked number five in the Nation for graduating undergraduate African American students who obtained a Ph.D. in the STEM disciplines. Lastly, Morehouse College is the first HBCU to produce a Rhodes Scholar.

PROGRAM DEVELOPMENT

Future projections suggest that minorities will comprise over 50 percent of the U.S. population by the year 2050. Research illustrates that the health of poor, minority, and underserved communities are more likely to be attended to by underrepresented health care providers. To improve underserved individuals’ access to care and increase research to reduce disparities, a health care work force that mirrors society must be developed. In response to this dilemma, one solution put forth by Morehouse College has been to support the training of students to diversify the public health sciences work force. The Public Health Sciences Institute was created in 1988, under the auspices of a cooperative agreement with the Centers for Disease Control and Prevention (CDC), to support undergraduate public health training programs and activities and to house Project Imhotep, an existing summer internship program established in 1981 and designed to introduce underrepresented students to biostatistics and epidemiology. The Public Health Sciences Institute is the only undergraduate public health program in the Atlanta University Center (AUC), a consortium of Historically Black Colleges and Universities (HBCUs) consisting of four undergraduate institutions, Clark Atlanta University, Morehouse College (men’s institution), Morris Brown College, and Spelman College (women’s institution) and two graduate institutions, the Interdenominational Theological Center and Morehouse School of Medicine. PHSI has made a commitment to training undergraduate students in biostatistics, epidemiology, and occupational safety and health and functions as an academic program that formulates and implements strategies that will lead to positive health outcomes for underrepresented minority Americans.
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The Public Health Sciences Institute also coordinates programs and activities to train and develop underrepresented students for entry into graduate programs and subsequent careers in public health. To accomplish this mission, PHSI offers a comprehensive training program that aims to increase underrepresented students’ awareness of the various aspects of public health, enhance their research skills, and adequately prepare them to complete the pathway to a career in public health (i.e., graduate school, fellowship/internship, and employment). These aims are achieved through an academic minor in public health, two internship programs, an annual public health awareness conference, an Atlanta University Center-wide public health student organization, and faculty-student research teams.

PROGRAM ADMINISTRATION
The Public Health Sciences Institute is housed at Morehouse College within the Division of Science and Mathematics. The Division consists of the departments of Biology, Chemistry, Computer Science, Mathematics, Physics, and Psychology. This Division of the College was selected to house the Public Health Sciences Institute because a major goal of the Division of Science and Mathematics is to foster interdisciplinary learning and scholarly research. Towards this end, several interdisciplinary curricula have been implemented including minors in neuroscience, environmental science, earth and atmospheric science, bioinformatics, and public health.

J.K. Haynes, PhD., the David Packard Professor in Science and Dean of the Division of Science and Mathematics, serves as the Principal Investigator for the Public Health Sciences Institute. Through his work at Morehouse College and within the Atlanta University Center, he plays a key role in the integration of PHSI Programs within the AUC Institutions. Dr. Cynthia Trawick, Director of PHSI, with oversight of the PHSI Advisory Committees, directs the aforementioned activities. Fiscal responsibilities for PHSI are executed under the direction of the Director through the College’s Office of Business and Finance. The Office of Business and Finance executes fiscal management as outlined under the policies of Morehouse College.

The overall objective of the PHSI Staff is to facilitate the execution of PHSI’s mission: increase the interest of underrepresented minority students in public health and increase the number of underrepresented minority students who enter into schools of public health and who pursue careers in public health. Dr. Haynes has over 30 years experience educating and preparing underrepresented minority students for graduate and health professional careers. Dr. Trawick is a former Project Imhotep intern who has been involved with public health training for nearly 20 years. Together they have developed a holistic and comprehensive public health training program that has a proven track record in increasing the interest of and number of underrepresented minority students in public health. The Principal Investigator and Director establish the priorities of PHSI. The Director supervises the day-to-day operations of PHSI and manages PHSI’s budgetary operations along with the College’s Business and Finance Specialist. The Director also manages the programs, grants submissions, time sensitive data, and resolution of disputes and conflict over the use of PHSI’s resources and goals. The Program Coordinator provides leadership, academic advisement and support to students, and reviews all programmatic components of PHSI. The Administrative Support Team works to ensure that PHSI functions smoothly. Some of their responsibilities include student support, tracking departmental equipment and resources, processing time sheets, securing purchases, academic advising and scheduling of events and activities.

External and Internal Advisory Committees oversee the functions of and provide guidance to PHSI. The External Advisory Committee fosters cooperation and collaboration among the consortium (AUC) schools to ensure that students receive appropriate advisement and guidance for entry into graduate schools. The External Advisory Committees meets quarterly and Committee members act as liaisons between their institutions and PHSI; review applications and interview students for the Internship programs; provide input on the implementation of the overall program; and provide assistance as necessary for workshops, seminars, and other PHSI activities. Representatives from the CDC provide
ongoing advice and consultation regarding administrative planning and program development. The Internal Advisory Committee oversees and coordinates the course offerings and promotes interdisciplinary coordination of educational and research efforts. The Internal Advisory Committee meets once each semester and consists of representatives from several departments within Morehouse College.

The Public Health Sciences Institute works collaboratively with numerous organizations to accomplish its mission. Such organizations include other departments with the Division of Math and Science at Morehouse College, all institutions in the AUC, the CDC, Fulton and Dekalb county health departments, AID Atlanta, the State of Georgia Division of Health, The Asian and Pacific Islander Health Forum, The Association of Schools of Public Health, The National Institute of Medical Research in Tanzania and many more. PHSI also works with colleges and universities around the country for various purposes, including graduate school tours, placement for internships and research, and recruitment for its own internship program.

**CURRICULUM**

The mission of the Public Health Sciences Institute is to promote an increased interest among underrepresented undergraduates toward careers in public health, which will increase the number of underrepresented professionals in the public health sciences. This mission is achieved through several avenues, including an academic minor in public health, two internship programs, an Atlanta University Center-wide public health student organization, and an annual public health awareness conference. These program components are described below.

**Public Health Minor:** The Public Health Sciences Institute has offered public health courses since 1988, and formally instituted a public health minor in the 1999 – 2000 academic year. The requisites for the minor in public health are 15 credit hours of course work consisting of 12 core curriculum hours and three (3) public health-related elective hours. The core curriculum consists of four courses: Introduction to Public Health, Introduction to Epidemiology, Biostatistics, and Public Health Sciences Seminar and Practicum. The public health-related elective is approved by the Morehouse College’s Dean of the Division of Science and Mathematics, or his/her designee, and can be taken at any AUC institution. PHSI plans to develop two additional public health courses, Health Policy Administration and Management and Occupational Safety and Health, to expand the pool of public health electives. These additional courses will strengthen student preparedness as these courses are part of the core curriculum in graduate public health programs.

**Internship Programs:** PHSI offers two internship programs, Project Imhotep (summer program) and the PHSI Academic Year Internship (academic year program). The overarching objective of these programs is to train underrepresented students in the public health sciences and ultimately increase the quantity and quality of underrepresented individuals who elect health professions.

Project Imhotep is an eleven-week summer internship designed to provide underrepresented students with an educational program and research-based training in Biostatistics, Epidemiology, and Occupational Safety and Health. The program was developed in 1981 by an AUC steering committee and named after Imhotep, the world’s first doctor and architect who built Egypt’s first pyramid.

At the onset of the program, interns participate in an intensive two-week classroom training experience consisting of introductory and intermediate level courses involving, but not limited to, biostatistics, epidemiology, occupational epidemiology, and industrial hygiene. During this period, interns also participate in short courses to strengthen their scientific writing and presentation skills, and ability to analyze public health data using statistical software (i.e. Statistical Analysis Software (SAS), Statistical Package for the Social Sciences (SPSS). During the final portion of the two-week classroom training, interns conduct investigational studies similar to those offered as a component of the Epidemiological Intelligence Service (EIS) officer course at the CDC, participate in weekly lunch and dinner seminars, and engage in voluntary community service projects.
For the remaining nine weeks, interns conduct public health research at their assigned location (e.g. CDC-Atlanta, or other collaborating organizations), gaining experience in the collection, entry, and analysis of data, as well as performing literature searches leading to the production of a scientific manuscript. As a supplement to the internship, interns must (1) participate in a bi-weekly brown bag lunch seminar series, that exposes them to current research topics such as HIV/AIDS, health policy and administration, health law and politics, and environmental justice; (2) perform 20 hours of community service, (3) and attend staff division, branch, and team meetings, if applicable. At the conclusion of the program, interns give a formal oral presentation and submit a written manuscript of their research.

Interns have come from various racial/ethnic groups including African American, Hispanic/Latin American, and Native American and represent 110 different domestic and international institutions of higher learning. Interns represent majors in a variety of academic fields including basic sciences, liberal arts, social and behavioral sciences, and allied health professions.

Developed in 1995, the PHSI Academic Year Internship is a two-year program that offers a complementary academic and research-based public health experience. Unlike Project Imhotep, only AUC students are eligible to apply/participate. Two students from each AUC institution are selected biannually and serve as interns during the last two years of their undergraduate experience. Interns are required to complete the requirements for the minor in public health and conduct at least a year-long research project.

Each intern develops a research project guided by a mentor from the AUC, CDC or a collaborating public health agency within the Atlanta area. The research project is progressive, which means that the research performed in year one is built upon during year two, and is designed to culminate at the end of year two. Interns devote a minimum of 10 hours per week conducting research. Interns are required to attend, and present their research at conferences and symposia such as the Public Health Awareness Conference, be a member of the AUC Public Health Association and participate in voluntary community service projects.

**AUC Public Health Association:** The Atlanta University Center Public Health Association (PHA) is a student-based organization that sponsors a variety of extracurricular activities to support PHSI’s educational training mission and specific aims. It is chartered at each AUC institution and club members represent a variety of academic disciplines. The AUC PHA organizes activities such as visits to schools of public health, HIV testing, annual AIDS and breast cancer walks, a public health seminar series (in conjunction with the Public Health Sciences Seminar and Practicum course and other student organizations), and assists PHSI in advising students about careers in public health and increasing awareness throughout the AUC. In conjunction with PHSI, the AUC PHA also provides public health career workshops including academic and career counseling and GRE preparation. Each year the AUC PHA takes on a new public health emphasis with the election of a new executive board, but continues to expose students to a wide array of public health issues/topics affecting under-served Americans.

**Public Health Awareness Conference:** Annually, PHSI hosts a Public Health Awareness Conference (PHAC) to celebrate National Public Health Week. Additionally, the PHAC serves as an avenue to increase awareness and train underrepresented students in public health by providing students (and faculty advisers) with the opportunity to demonstrate scientific knowledge and expertise, inquire about graduate programs, fellowships/scholarships and job opportunities in the public health sciences, learn about current and innovative public health research and, network with other students and public health professionals. The conference is held in the spring of each year and consists of workshops, conflict resolution and intervention seminars, student poster presentations, and public health/graduate school recruitment fair.

**STUDENTS**

- **Project Imhotep**
  - Approximately 20 – 25 interns per summer
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- Since 1982, a total of 485 interns have participated in the program (2010)
- 79% of the former interns are pursuing or have earned a post-baccalaureate degree, 68% of the former are public health practitioners, 15% have received or are pursuing an M.D, and 7% are currently working at the CDC.

**PHSI Academic Year Internship Program**
- Two (2) students are selected each academic year to begin internship
- Program began in 1993, and to date, 48 students have participated
- 78% of PHSi internship program participants are pursuing or have earned post-baccalaureate degrees, of those: 44% have earned Master’s degrees (MPH, MS, etc), 32% have earned Medical degrees (MD, DDS), 20% have earned Doctoral Degrees (PhD, ScD, etc.), and 4% have earned Law degrees.

### Table 1: Distribution of Students Enrolled in Public Health Courses, 2002 - 2011

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<th>Courses Offered</th>
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<th>'03-'04</th>
<th>'04-'05</th>
<th>'05-'06</th>
<th>'06-'07</th>
<th>'07-'08</th>
<th>'09-'10</th>
<th>'10-'11</th>
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<td>43</td>
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**LESSONS LEARNED**

Although the Public Health Sciences Institute serves all schools located in the AUC, there is a noticeable lack of male students from Clark Atlanta University, in the academic year program. All of the participating males in the academic year program have come from Morehouse College, the host institution. Going forth, it is imperative that PHSI reach out and recruit male students from Clark Atlanta University. There is a paucity of males, particularly black males, in US public health graduate programs. Since PHSI is located at Morehouse, the only all-male Historically Black College in the United States, PHSI presents a unique opportunity to recruit and train black males.

PHSI’s close proximity and partnership with the CDC and other public health agencies have been key factors to the success in training underrepresented students for careers in the public health. PHSI is well suited to build upon an already solid foundation to become a national leader in training young, underrepresented minority students in the public health sciences. PHSI gives high priority to mentoring in the overall educational process.

Many of the most critical health challenges in the US today have a racial/ethnic component that requires scientists and public health professionals to approach research in new ways. Pre-professional entities such as PHSI are essential in the training of underrepresented Americans in the public health sciences ensuring that they are prepared for long-term professional success.