

Training Underrepresented Minority Americans for Careers in the Public Health Sciences

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*No conflicts of interest to disclose.

Statement of Purpose Public Health Sciences Institute

The Public Health Sciences Institute (PHSI) was established at Morehouse College in May of 1988 as an academic program designed to formulate and implement strategies that would lead to positive health outcomes for minorities and underserved populations.

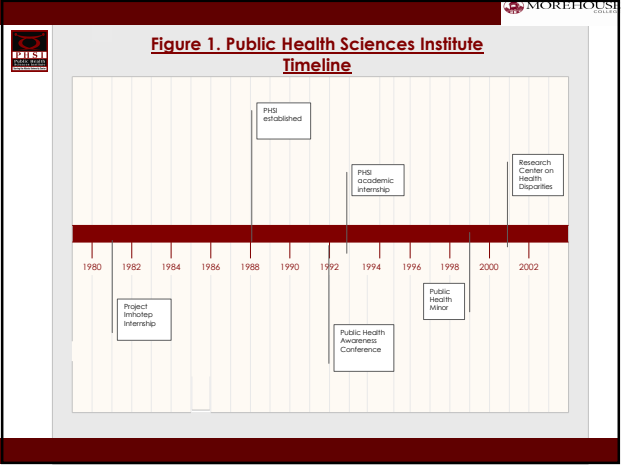


Cooperative Agreement Public Health Sciences Institute


Five-year award from the Centers for Disease Control and Prevention (CDC), U.S. Public Health Service

The cooperative agreement addresses the need to increase the knowledge capacity and skills of minority students in biostatistics, epidemiology, and occupational safety and health


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- ## Program Components Public Health Sciences Institute
- **Student Research**
 - Undergraduate Internships
 - Graduate Fellows and Post Doctoral Fellows
 - **Academic**
 - Public Health Minor
 - Public Health Awareness Conference
 - Atlanta University Center (AUC) Public Health Association
 - **Faculty Research**
 - Center for Research on Health Disparities




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- ## UNDERGRADUATE INTERNSHIPS
- **Project: IMHOTEP**
 - Eleven-week training Program
 - Conduct research (Federal, State, Local)
 - **PHSI Academic Internship**
 - Two-year academic internship
 - Public Health courses
 - Research Presentation




Project: IMHOTEP History




- Originally developed in 1981 in collaboration with an AUC faculty steering committee to train minority undergraduate students in Biostatistics and Epidemiology
- In 1994, the program broadened its focus to include Occupational Safety and Health
- Since 1982, a total of 454 interns have participated.



PROGRAM COMPONENTS



- **Classroom Training**
 - Biostatistics, Epidemiology, Occupational Health and Safety, Industrial Hygiene, International Health
 - SAS, SPSS
 - Scientific writing and Presentation
 - Epidemiologic case studies
 - Community Service Projects
 - Weekly lunch seminar
- **Research at the Local, State, Federal or NGO agency**
 - Gain experience in data collection and entry, performing literature searches, and writing a scientific manuscript
 - Written & Oral Presentations



Demographic Information




Table 1. IMHOTEP Interns (1982-2009)

| Gender* | |
|---------------------------------|-------------|
| Male | 141 (31%) |
| Female | 314 (69%) |
| Institution | |
| HBCU | 336 (76%) |
| Majority | 99 (22.4%) |
| Hispanic/Tribal serving | 7 (1.6%) |
| Ethnicity | |
| African American | 424 (93.2%) |
| Hispanic/Latino | 19 (4.2%) |
| American Indian/Alaskan Native | 3 (0.7%) |
| Hawaiian/Other Pacific Islander | 5 (1.1%) |
| Other | 4 (0.9%) |
| TOTAL | 455 |

*Summary is based 455 participant responses available tracking information (October 2009)





Table 2. Number and Percentage of Degrees Earned by PROJECT IMHOTEP Interns 1982-2009

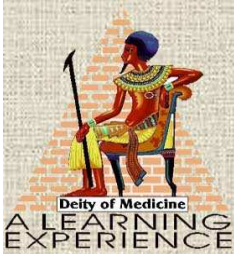
| Degree | Number | Percent (%) |
|-----------------------------------|--------|-------------|
| Bachelors Degree (BA or BS) | 436 | 96.2% |
| Masters Degree (MPH, MSPH, etc.) | 219 | 50.2% |
| Medical degree (MD, DDS, etc.) | 58 | 13.3% |
| Doctorate Degree (PhD, ScD, etc.) | 62 | 14.2% |
| TOTAL | 453 | |

*Summary is based 453 participant responses available from tracking information. Seventeen (17) undergraduate degrees are in progress, and 20 graduate degrees are in progress. Graduate and Professional degree percentages are based on the number students who obtained bachelors degrees (October 2009).




Summary

Project: IMHOTEP




- 79% of the former interns have earned or are pursuing a post-baccalaureate degree.
- 68% are public health practitioners. 90% of these practitioners have advanced degrees.
- Fifteen percent (15%) have received or are pursuing an M.D.
- Seven (7%) of former interns are working at the CDC.

*Summary is based on 436 participant responses for post baccalaureate status, and 241 responses for current position, and 318 responses for CDC employment status available from Imhotep tracking information (October 2009)



PHSI ACADEMIC YEAR INTERNSHIP PROGRAM



- Two year academic and research-based public health experience
- Interns must conduct a year-long research project under the guidance of a mentor from a collaborating Public Health agency (e.g. CDC, Fulton Co. Health Dept.)
- Interns are required to complete the public health minor curriculum, be a member of the AUC Public Health Assoc., and participate in community service projects.
- Only AUC students are eligible to participate in the academic year internship.

Demographic Information
Table 4. PHSI Interns (1989-2009)

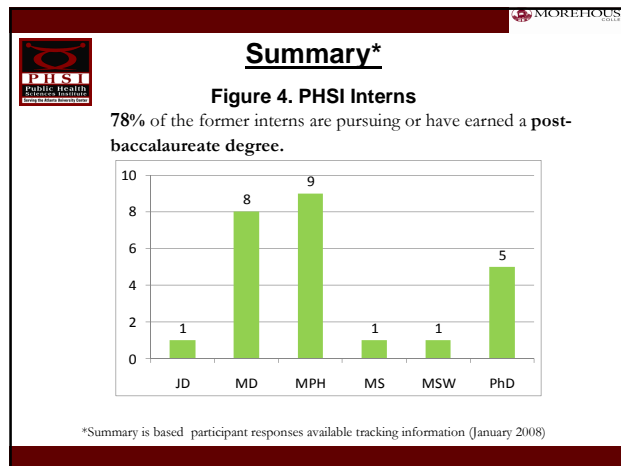
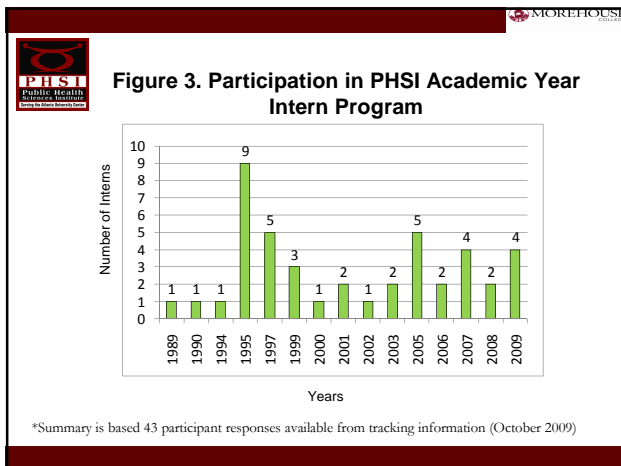
| Gender* | |
|--------------------------|----------|
| Male | 22 (51%) |
| Female | 21 (49%) |
| Region** | |
| Southeast | 21 (55%) |
| Northeast | 6 (16%) |
| West | 6 (16%) |
| Midwest | 5 (13%) |
| AUC Institution* | |
| Clark Atlanta University | 6 (14%) |
| Morehouse College | 21 (49%) |
| Spelman College | 13 (30%) |
| Morris Brown College | 3 (7%) |

*Based 43 participant responses available tracking information (October 2009)
** Based on 38 participant responses available tracking information (October 2009)

Table 5. Number and Percentage of Degrees Earned by PHSI Interns


| Degree | Number | Percent (%) |
|-----------------------------------|--------|-------------|
| Bachelors Degree (BA or BS)* | 39 | 95% |
| Masters Degree (MPH, MSPH, etc.) | 11 | 44% |
| Medical degree (MD, DDS, etc.) | 8 | 32% |
| JD degree | 1 | 4% |
| Doctorate Degree (PhD, ScD, etc.) | 5 | 20% |
| *Total Graduate Degrees | 25 | 78% |

* Total is based upon participant responses (41) available from tracking information. Bachelors degree total includes those degrees currently in progress (7). Graduate degree percentages are based upon participant responses (25) available from tracking information (October 2009).



- Public Health Minor**
- Curriculum includes the following classes:**
- Introduction to Public Health
 - Introduction to Epidemiology
 - Biostatistics
 - Public Health Practicum
 - Public Health Elective(s)
- **Instructors**
- PHSI
 - EIS Officers
 - Professionals from public health agencies (CDC, Morehouse School of Medicine, Fulton County Health Department, etc.)

- Graduate Fellowships**
- Master-level graduate students**
- Assist with undergraduate internships
 - Assist in PHSI Tracking efforts
 - Assist with AUC Public Health Association activity planning
 - Design surveys, complete data entry and conduct small analyses for PHSI projects
 - Conduct Public Health Research



Post-Doctoral Fellowships


Post-Doctoral Fellows

- Instruct PHSI Courses
- Design surveys and conduct analyses for PHSI projects
- Conduct Public Health Research




Public health Awareness conference

- **Activities**
 - Week-long series of seminars and workshops
 - Guest speakers
 - Student Research Presentations
 - Scholarship Luncheon
 - Panel Discussions
 - Graduate School Recruitment Fair




AUC Public Health Association

- **Undergraduates**
 - Morehouse College
 - Spelman College
 - Clark Atlanta University
 - Morris Brown College
- **Activities**
 - Newsletter
 - Seminar speakers throughout the year
 - Attending local, regional and national public health conferences
 - Monthly community service projects




AUC Public Health Association (cont.)

- **Community service projects**
 - HIV testing
 - Breast and prostate cancer awareness
 - Bone marrow and blood drive
 - Raising tobacco tax in Georgia



Research Center on Health Disparities

- Created in 2001 to conduct research to explain higher rates of morbidity and mortality among minorities
- Provides financial support to Atlanta University Center faculty to perform health disparity research projects
- Provides research training opportunities for students through faculty-student research teams



Demographic Information

Table 6. AUC Alumni (1982 – 2009)

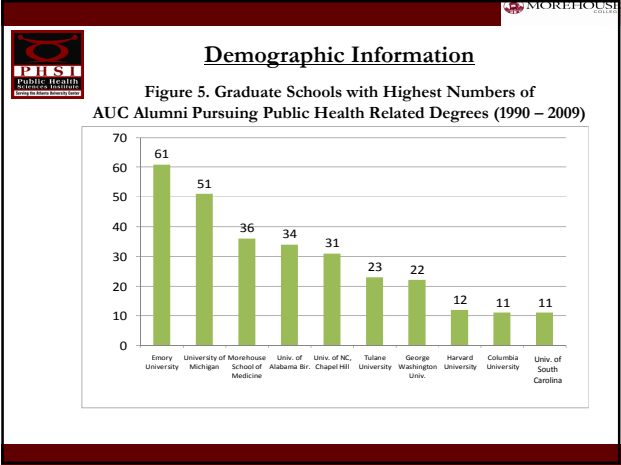
| Gender* | |
|------------------------------------------|-----------|
| Male | 118(33%) |
| Female | 242 (67%) |
| AUC Institution** | |
| Clark Atlanta University | 50 (14%) |
| Morehouse College | 113(31%) |
| Spelman College | 192 (53%) |
| Morris Brown College | 9(2%) |
| Type of Undergraduate Degree Obtained*** | |
| Bachelor of Science | 131(58%) |
| Bachelor of Arts | 95(42%) |

*Summary is based on 360 participant responses available tracking information (October 2009)
 **Summary is based on 364 participant responses available tracking information (October 2009)
 ***Summary is based on 226 participant responses available tracking information (October 2009).

Table 7. Number and Percentage of AUC Alumni Currently Enrolled or have Earned Graduate Degrees (1990 – 2009)

| Degree | Number | Percent (%) |
|---------------------------------------|--------|-------------|
| *Masters Degree (MPH, MSPH, etc.) | 248 | 63% |
| *Medical degree (MD, DDS, etc.) | 23 | 6% |
| *Doctoral Degree (PhD, JD, ScD, etc.) | 63 | 16% |
| Total Graduate Degrees | 334 | 85% |

*Summary is based on 334 out of total 391 participant responses (October 2009).



Summary

Atlanta University Center Alumni

- Of the AUC Alumni that have pursued Public Health related graduate degrees*
 - 17% were Project IMHOTEP participants
 - 15% have gone on to complete a second graduate degree
- Of AUC Alumni that have completed Public Health related graduate degrees**
 - 94% percent are working in public health fields

*Summary is based on 364 participant responses available 1990 - 2009 (October 2009)
**Summary is based on 104 participant responses available for years 1990 - 2009 (October 2009)

Impact of PHSI on Public Health

Verna Lamar Welch, MPH, PhD

Director, Cardiovascular Disease Prevention/Intervention Program & Associate Professor at Morehouse School of Medicine

Adjunct Associate Professor of Health Policy and Management Epidemiology at Emory University,

Project: IMHOTEP Mentor

Clark Atlanta University
BS, Mathematics

Project: IMHOTEP Intern

Emory University
MPH Biostatistics

PHSI Research Associate

Centers for Disease Control and Prevention
Epidemic Intelligence Service Officer

University of North Carolina
PhD Epidemiology

Impact of PHSI on Public Health

Hamish Mohammed, MPH, PhD

Morehouse College
BS,

Ross University School of Veterinary Medicine
Assistant Professor of Epidemiology and Public Health

World Health Organization
Led Outbreak and Field Investigations for the

Centers for Disease Control and Prevention
Epidemic Intelligence Service Officer, Puerto Rico

Project: IMHOTEP Intern

Tulane University
MPH Epidemiology

Tulane University
PhD Epidemiology

Data Consultant
Tulane University School of Public Health and Tropical Medicine

Impact of PHSI on Public Health

- PHSI has demonstrated a unique capacity to provide substantive courses, training, and mentoring which prepares students to gain admission to graduate school and advance in the public health arena
- Data suggest PHSI has had a significant impact on the number of underrepresented minorities entering the public health workforce