

PH-IDEAS: Creating Workforce and Research Partnerships to Address Public Health Challenges in Memphis and the Delta

Establishing Place-Based Need

It is important to educate the next generation of interdisciplinary public health leaders who can influence population health around the world. Youth should gain exposure to the skills of population thinking through this education. However, it has yet to become an essential component of high school curricula. Investing in youth health and well-being is essential to economic growth and social change. The community faces public health issues daily, and yet may not understand that these are public health concerns. So, there is a need to enhance youth understanding of the field early on.

The Mississippi Delta region we have partnered with for the PH-IDEAS program started in Memphis and is working to scale to a 45-county region that aligns with other projects in our IEP proposal. These 45 counties are referred to as INTEGRIT-E (“Integrity”) strategic engagement region. The region suffers from dramatically declining population (Figure 1); and population trends show a severe aging of the region (Figure 2), bringing with it an increase in healthcare infrastructure needs not supported by the population size. Many communities have to drive more than an hour for specialist care, and this lack of healthcare options exacerbates the emptying out of the region.

Building Trust-Based Workforce Pipelines for Public Health

In partnership with local high schools and the Shelby County Health Department (SCHD), the University of Memphis School of Public Health (SPH) launched a new initiative, Public Health - Informatics Data Equity Analytics System (PH-IDEAS), a national innovative model for public health education in high schools rooted in the regional challenges we face. Dr. Michelle Taylor, Director of SCHD, and Dr. Ashish Joshi, Dean of SPH, worked together to focus on four key programs to address concerns for

2000-2021

Area	Percent Change	Absolute Change
U.S.	17.9	50,471,839
South	26.9	26,988,509
Arkansas	13.2	352,491
Mississippi	3.7	105,307
Tennessee	22.6	1,285,935
INTEGRIT-E Region	1.1	26,940

2000-2010

Area	Percent Change	Absolute Change
U.S.	9.7	32,712,013
South	14.3	14,318,924
Arkansas	9.1	242,518
Mississippi	4.3	122,639
Tennessee	11.5	656,822
INTEGRIT-E Region	3.4	86,273

2010-2020

Area	Percent Change	Absolute Change
U.S.	7.3	22,703,982
South	10.2	11,710,518
Arkansas	3.3	95,606
Mississippi	-0.2	-6,018
Tennessee	8.9	564,375
INTEGRIT-E Region	-1.7	-43,682

2020-2021

Area	Percent Change	Absolute Change
U.S.	0.1	444,464
South	0.8	959,222
Arkansas	0.3	14,367
Mississippi	-0.4	-11,314
Tennessee	0.9	64,378
INTEGRIT-E Region	-0.5	-13,651

Figure 1: Absolute and Percent Population Change, 2010-2021

Males

Absolute Population Change	Percent Population Change	Age	Percent Change in Labor Force	Absolute Change in Labor Force
-2,485	-3.4%	16-19	-6.5%	-1,439
-5,436	-14.0%	20 & 21	-12.8%	-2,201
-6,139	-11.3%	22-24	-10.8%	-4,256
2,208	2.6%	25-29	5.4%	3,652
-3,508	-4.1%	30-34	-4.3%	-2,919
-2,190	-1.4%	35-44	-2.7%	-3,440
-14,758	-8.9%	45-54	-9.6%	-12,587
-4,676	-5.7%	55-59	-1.8%	-1,026
1,337	4.6%	60 & 61	4.8%	847
7,911	20.7%	62-64	28.1%	5,421
9,519	18.7%	65-69	16.0%	2,945
12,204	35.9%	70-74	43.8%	3,315
5,695	11.6%	75 & Over	38.4%	2,047

Females

Absolute Population Change	Percent Population Change	Age	Percent Change in Labor Force	Absolute Change in Labor Force
-1,730	-2.4%	16-19	0.8%	176
-15,040	-31.2%	20 & 21	-44.1%	-16,809
-6,165	-11.4%	22-24	-11.1%	-4,395
342	0.4%	25-29	-0.6%	-446
-3,679	-4.1%	30-34	-2.0%	-1,344
-3,669	-2.2%	35-44	-3.3%	-4,340
-19,195	-10.6%	45-54	-8.0%	-10,567
-4,228	-4.7%	55-59	-6.0%	-3,451
1,623	4.9%	60 & 61	12.7%	2,369
5,885	12.9%	62-64	20.8%	4,160
14,026	24.0%	65-69	28.4%	4,558
11,892	27.7%	70-74	43.5%	2,457
1,614	1.9%	75 & Over	6.2%	248

Figure 2: INTEGRIT-E Region Population & Labor Force Change by Age, 2015-2021

community healthcare providers. The efforts described below were funded through a “CDC Strengthening US Public Health Infrastructure, Workforce, and Data Systems” grant. The project is expanding to a Delta-wide approach, partnering with health departments beyond Memphis, to address these issues.

Experiential Learning Program (Target Audience: High School Students)

A partnership with Memphis Shelby County Schools (MSCS), the purpose of this program is to strengthen the public health workforce pipeline by preparing ten (10) high school students per cohort, via a 240-hour hybrid program, to pursue careers in Public Health after high school graduation. Students who participate in the program over two semesters produce the outcomes listed in Figure 3. A large portion of the work performed by these cohorts aligns with first-year courses at the University of Memphis, helping fast-track individuals into careers. Students receive a stipend of \$4,000 per year as an incentive for participation.

Fall 2023

- A 5–7 page research paper on HIV, substance abuse, chronic disease, or violence/injury prevention
- A Public Health public service campaign aimed at Opportunity Youth on the selected research topic
- An academic research poster on the selected research topic
- 3 college essay papers
- College interviewing preparation
- Multiple ACT practice tests AND the official ACT Test on December 8
- Completion of PUBH 218I- Population Health and Society, via dual enrollment

Spring 2024

- Complete PUBH 3130: Social Determinants of Health
- Complete Excel Certification Course
- Complete ACT tutoring (for juniors with below 30 ACT score)
- Complete CPR w/AED, Stop the Bleed, Narcan, etc. training
- Complete Research paper on Social Determinants of Health-related topic comparing Shelby County with TN and the US
- Complete Research Summary PowerPoint.
- Complete a public health graphic novel based on social determinants of health topic.

Figure 3: Student deliverables for experiential learning program.

Population Health Data Analytics (Target Audience: Undergraduate Students)

This program is a capacity-building initiative created in partnership with CodeCrew, a local nonprofit focused on coding education for K-12 and non-traditional students. The program strengthens the public health workforce pipeline by preparing four (4) undergraduate students, during their junior and senior years, to collect analyze, and disseminate public health data. Participating students receive \$7,000 in tuition and \$1,080 monthly stipend for 12 months.

JUNIOR SUMMER

- 16 hours per week for seven (7) weeks of in-class Code Crew instruction
- Four (4) hours per day, four (4) days per week

SENIOR SUMMER

- Data Modernization Internship to complete a Dashboard project for the Shelby County Health Department, under the direction of CodeCrew
- 16 hours per week for seven (7) weeks

Figure 4: Program elements of Population Health Data Analytics program

SCHD Public Health Scholars Program (Target Audience: Graduate Students)

The partnership with SCHD is designed to strengthen the public health workforce pipeline, retain current public health workers, and enhance the public health competencies of current SCHD workers. This provides full scholarships and stipends to mitigate the costs associated with returning to school for 18 current SCHD staff to obtain graduate certificate and degrees in public health while maintaining employment at SCHD. Participants in the

program are selected from interested SCHD employees (250 expressed interest) and 18 applicants were selected. Employees receive \$12,000 annually to mitigate costs associated with returning to school (childcare, transportation, lost hours for hourly employees, etc.).



Figure 5: Inaugural Public Health Scholar Cohort

Capacity Building Workshops (Target Audience: Community Members and SCHD/Regional Health Dept Employees)

The purpose is to empower community members in Memphis and the wider Delta region by focusing on the nexus of emotional literacy, trauma-informed care, and collective well-being. Workshops are two hours and are preceded by a dinner. In Memphis and the wider Delta region, unique challenges make community wellness not just an individual pursuit but a collective responsibility. Using social collectivism as a framework, the workshops promote interconnectedness and shared emotional vocabulary, which is vital for collective resilience. We also incorporate narrative theory to allow a shared language for understanding personal and collective trauma. Our goal is to build a more empathic community that can contribute meaningfully to local policy changes, enhance public health, and improve overall well-being.

The workshops augment the professional development of Health Department employees. They are two hours long, conducted during the workday, and focus on fusing practical skills with theoretical foundations. Participants were selected by six local community partners (a total of 30 community participants) and approximately 25 health department employees were selected by SCHD or local health departments in the Delta. Each participant received a \$100 per workshop participation fee and were expected to complete all four workshops. Dinner and parking passes were provided.

Public Health Clubs (Target Audience: Elementary and Middle School Students)

This capacity building initiative, in partnership with MSCS, strengthens the public health workforce pipeline by increasing the public health knowledge and interests of MSCSC middle school students through public clubs. To date, over 200 students have participated in clubs across the city with current plans to expand to the wider Delta region.

Links

[PH-Ideas Website](#)

[UofM School of Public Health offers dual enrollment for high school students \(actionnews5.com\)](#)

[Public Health Club at University High School - School of Public Health - The University of Memphis](#)

[SPH Launches High School Public Health Clubs and Dual Enrollment Program - School of Public Health - The University of Memphis](#)