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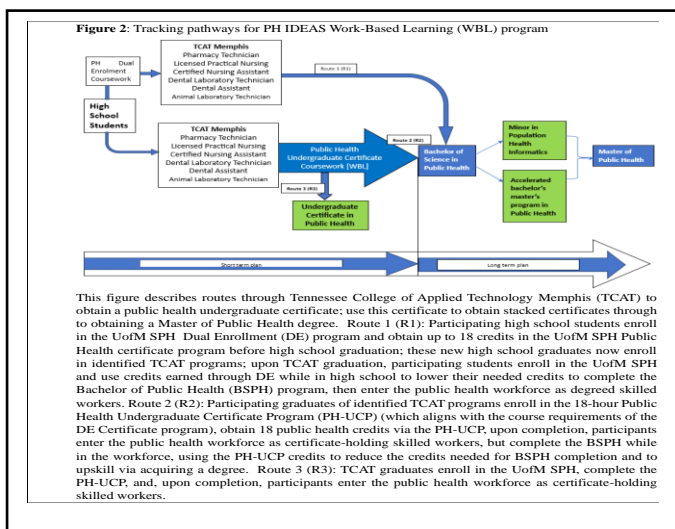
Title: Strengthening the Public Health Workforce in Tennessee (PH IDEAS) Program

Abstract

Background: The COVID-19 pandemic exacerbated public health worker shortages nationwide, severely impacting the Memphis region including Brownsville. The Shelby County Health Department (SCHD), the City of Brownsville, and the Tennessee Department of Health (TDH), which employs public health workers in the Memphis region, face challenges with five Health Resources and Services Administration (HRSA)-designated public health worker shortage areas as demonstrated by the SCHD's significant 42% vacancy rate for its 880 positions.

Objectives: To 1) *develop and collaboratively implement a structured Public Health IDEAS Work-Based Learning (WBL) program to provide structured WBL experiences that strengthen the public health workforce pipeline, and 2) orchestrate the completion of an industry-recognized public health certification for 100 students to be a direct source to meet the public health workforce needs in Shelby County and the surrounding Memphis region.* **Approach:** Tennessee

College of Applied Technology Memphis (TCAT) and the University of Memphis School of Public Health (UofM SPH) will work collaboratively with Memphis Shelby County Schools College, Career, and Technical Education program (MSCS- CCTE), the Memphis Workforce Investment Board (MWIB), and two area employers, the SCHD and the TDH, both with a demonstrated shortage of public health workers and both seeking to employ credentialed public health workers, to establish a WBL program whose graduates acquire skills and stacked certifications **that prepare them for jobs in the public health sector.** Three routes will be created (Figure 1). Route 1 (R1): Participating high school students enroll in the UofM SPH Dual Enrollment



(DE) program and obtain up to 18 credits in the UofM SPH Public Health certificate program before high school graduation; these new high school graduates now enroll in identified TCAT programs; upon TCAT graduation, participating students enroll in the UofM SPH and use credits earned through DE while in high school to lower their **needed** credits to complete the Bachelor of Public Health (BSPH) program, then enter the public health workforce as degree skilled workers. Route 2 (R2): Participating graduates of identified TCAT programs enroll in the 18-hour Public Health Undergraduate Certificate Program (PH-UCP) (which aligns with the course requirements of the DE Certificate program), obtain 18 public health credits via the PH-UCP, upon completion, participants enter the public health workforce as certificate-holding skilled workers, but complete the BSPH while in the workforce, using the PH-UCP credits to reduce the credits needed for BSPH completion and to upskill via acquiring a degree. Route 3 (R3): TCAT graduates enroll in the UofM SPH, complete the PH-UCP, and, upon completion, participants enter the public health workforce as certificate-holding skilled workers.

Table of Contents

Abstract	ii
Section 1: Demonstration of Need - 20 points.....	1
1.1 Localized data demonstrating the need for action.....	1
1.1.1 Local Public Health Workforce Needs	2
1.2 Linkages between grant activities and local/regional needs	3
1.2.1 Framework.....	4
Section 2: Program Plan - 25 points	5
2.1 Summary of the Proposed program.....	5
2.2 Project timeline and overview (Quarterly).....	7
2.3 Key objectives of each phase of the Project.....	7
2.4 Project governance and accountability plan.....	8
2.5 Overview and structure of the optional Work-Based Learning (WBL) program.....	9
Section 3: Strength of Partnership - 20 points	10
Mandatory partner’s role and their capabilities in implementing the identified program.	10
Memorandum of Understanding (MOU)	10
Section 4: Budget Plan - 15 points.....	11
Section 5: Sustainability Plan - 20 points	11
5.1 Plan for sustaining the program beyond the 48-month funding period.....	11
5.2 Availability of long-term resources to house, maintain, and/or repair equipment	11
5.3 WBL programs and education-industry partnerships continuing beyond the 48-month grant period.....	12
Section 6: Optional Criteria	13

6.1 High Demand Programs	13
6.2 County Economic Status Acknowledgement	14
6.3 Census Tracts in Persistent Poverty	14
References	16
Appendices	21
Appendix A: Cover Sheet.....	21
Appendix B: Budget and budget justification.....	23
Appendix C: Memorandum of Understanding (MOU).....	28
Appendix D: Letters of Support	39
Appendix E: Tables	48
Appendix F: Figures.....	57

Section 1: Demonstration of Need - 20 points

1.1 Localized data demonstrating the need for action

This proposal is developed in response to the burgeoning need to identify and address public health workforce skills gaps in the Memphis region including the City of Brownsville's local workforce pools. Through this program, a structured Public Health in Action work-based learning (WBL) program will be collaboratively developed and implemented to provide a significant strategy to reduce poverty rates, address social determinants of health (SDOH), improve health outcomes, promote equity, and reduce health disparities health equity in the Memphis region. While nationally, employment in healthcare occupations is projected to grow 13% from 2021 to 2031, and in Tennessee, it is projected to be 16% from 2020 to 2030 ^{1,2}, PH WINS (2022) report showed that around 32% of state and local public health workers contemplated leaving their current roles within the next year, with 5% planning to retire and 27% citing reasons such as work burnout and others for their potential departure ³. This will create a significant deficit in the health workforce particularly due to factors including an aging population, increasing incidence and prevalence of chronic diseases, new required skills for job efficiency, low retention, increasing attrition rates, and retirements of the public health workforce that constrain the sector's performance ^{4,5}. Tennessee's population is forecasted to grow by nearly 10% between 2021 and 2035, with a particularly notable increase of over 50% in the population aged 75 and above, while the working-age population is decreasing ⁴. These demographic changes will intensify the strain on the public health sector and necessitate a more robust supply of workers to address the demand.

The COVID-19 pandemic amplified the public health workforce shortage and high demand, and further exposed the skills inadequacies in handling a public health crisis of such magnitude. For example, the pandemic exposed inadequate oral and communication skills and a lack of skills

in translating and integrating the One Health concept in public health ^{5, 6}. In Tennessee, unemployment hit its highest rate at 14.7% in April 2020, an 11.4% increase from January 2020 ⁷ while the public health workforce was and continues to be severely under-supplied leading to increasingly widening public health workforce gaps ⁸. The effects of a depleting public health workforce are potentially directly observed in the ever-decreasing life expectancy, increasing health inequities, and poor health outcomes in the U.S. compared to other OECD countries ^{9, 10}. Hence a key objective of the *Healthy People 2030*, via Objective PHI-R02, is to “expand pipeline programs that include service learning or experiential learning components in public health settings” ^{11, 12}.

1.1.1 Local Public Health Workforce Needs

Memphis-Shelby County (Figure 1) experiences some of the poorest health outcomes in Tennessee including high infant mortality, crime, hypertension, diabetes, and high mortality rates of breast, colon, and prostate cancers ^{13 14, 15}. Significant disparities in childhood poverty are observed among minority racial groups, with rates ranging from 15.4- 39.6% ^{16, 17}. Shelby County also has high uninsured rates, higher than the national rate, and the worst population-to-primary care provider ratios ^{18 19}. However, increasingly widening public health workforce gaps, as well as workforce recruitment and retention persist in Shelby County and adjacent areas. The County has five HRSA-designated health professional shortage areas (HPSAs). Moreover, of the 880 full-time, part-time, and temporary positions in the Shelby County Health Department, 366 positions are currently unfilled, representing a 42% vacancy. Likewise, the Tennessee Department of Health has a workforce of nearly 4000 in 89 counties across the State, with a 10-12% vacancy rate ^{1, 4}. Yet, the recommended benchmarks are approximately 814 total and 760 key occupational staff placed in local health departments ²⁰.

To address these needs, we set two key objectives *1) develop and collaboratively implement a structured Public Health IDEAS Work-Based Learning (WBL) program to provide structured WBL experiences that strengthen the public health workforce pipeline, and 2) orchestrate the completion of an industry-recognized public health certification for 100 students to be a direct source to meet the public health workforce needs in Shelby County and the surrounding Memphis region.* The objectives have been integrated into a cohesive structure that facilitates collaborative development and implementation of WBL experiences, and multi-sector industrial community partnerships to meet the demands for a stronger public health workforce which ultimately address SDOH, create economic opportunity that reduces poverty while improving health outcomes and health equity with a positive externality of addressing other public health concerns such as gun violence and the opioid epidemic. Under these objectives, we will implement four key activities including 1) development of structured Public Health in Action WBL experiences, 2) collaborative implementation of structured WBL experiences as a strategy for expanding the healthcare workforce supply, 3) ensuring matched industry skill requirements, accreditation and stacked certification 4) ensuring equitable workforce distribution which emphasizes on approaches that promote equity, address social determinants of health and reduce health disparities.

1.2 Linkages between grant activities and local/regional needs

Increasing workforce shortage that leaves the public health system vulnerable calls for an urgent need to create new public health workforce pipelines, upskilling to meet the rapid changes in capability and technological advancements, and a translation and integration of the One Health strategy into public health demonstrable throughout the COVID-19 pandemic ^{3,5,6}. Bridging these gaps requires a multiprong approach including creating a robust public health workforce pipeline

the DHHS has set as its major priority ^{11, 12}, and new up-to-date training programs that progressively and conveniently provide learners with stacked credentials while potentially increasing their wages. Besides meeting these requirements, our proposal approach will also create strategic collaborations with essential agencies and a shift toward continuing professional development while still increasing the workforce retention and average starting salaries of our graduates. Tennessee College of Applied Technology (TCAT) Memphis and the University of Memphis School of Public Health will partner with Memphis Shelby County Schools, Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, City of Brownsville, Tennessee Department of Health, and Shelby County Health Department to create the Public Health Informatics, Data, Equity, Analytics, and Systems (PH-IDEAS) WBL program that addresses the dynamic public health workforce demands in Memphis Shelby County. The University of Memphis School of Public Health is one of the recipients of the public health *workforce grant through the CDC* and recently was also the recipient of *the 2024 ASPPH Harrison C. Spencer Award* for its outstanding community service.

1.2.1 Framework

The proposed Public Health in Action WBL Program will employ the PH-IDEAS framework ²¹, which is centralized on the Human Centered Design (HCD). Despite notable, coordinated governmental investments over several decades, troubling and substantial health disparities persist ²². Differences in a range of health outcomes are linked to socially stratifying factors such as race and ethnicity, and socioeconomic status (SES). Changes in the United States have intensified the need for work at the intersection of health equity and new areas including health informatics ²². The HCD shifts the focus simply from solving a user problem with participants to, instead, better understanding the people who experience the problem. The principles of the

HCD approach involve (a) active involvement and understanding of users (potential employers), (b) understanding task requirements, (c) appropriate allocation of function between user and system, (d) iteration of design solutions and (e) multidisciplinary design teams ²³. Thus, our proposed PH-IDEAS conceptual framework will address the issues of health inequities through the lens of HCD approach combined with principles of learning, behavioral, humanistic theories, and information processing theory for workforce development.

Tennessee College of Applied Technology (TCAT) Memphis (Dr. Gwen Sutton Lead), and the University of Memphis School of Public Health (Dr. Ashish Joshi Co-Lead) will partner with Memphis Shelby County Schools, Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, Tennessee Department of Health, City of Brownsville, and Shelby County Health Department to create the Public Health in Action WBL Program. These partners will form a strong multidisciplinary team with varying expertise in local workforce and economic development, public health research and practice, health policy, and programmatic evaluations.

Section 2: Program Plan - 25 points

2.1 Summary of the Proposed program

The proposed program PH IDEAS will be an innovative pipeline program to expand the public health workforce here in Memphis Shelby County and the state of Tennessee by awarding an Undergraduate Certificate in Public Health (UCPH, Figure 2). Our approach of building a new public health pipeline across various disciplines will prepare the workforce to respond to both present and future public health needs. As this primarily targets students from underserved populations, the program will award stipends to the students. The program costs will be covered by the Pell Grant, Hope scholarship Perkins loan, and TANF. This pipeline program lends an

opportunity to both high school students and graduates from TCAT Memphis programs to attain their diploma or certificate in areas of pharmacy technician, licensed practical nursing, certified nursing assistant, dental assistant, dental laboratory, and animal laboratory technician. Table 1 describes the TCAT programs' role and enhancements through public health studies. Students enrolled in the UCPH program can earn up to 18 credits hours in public health by completing the following courses: Population Health and Society, Environmental and Climate Health, Social Determinants and Health Disparities, Health Data Analytics and Informatics, Global Health Crises and Milestones, and Public Health in Action (Table 2). The structured PH IDEAS WBL experiences will be developed and embedded into the Public Health in Action with extensions into the Health Data Analytics and Informatics course. Through these WBL experiences, students will learn skills including how to use data, grant writing, and curriculum vitae preparation, interviewing for public health jobs, building rapport with employers and coworkers, and establishing letters of reference. Courses will be offered in hybrid (online/face-to-face) formats.

Figure 2 shows three routes: 1) Route 1 (R1): high school students in 11th and 12th grade enroll in the University of Memphis School of Public Health Dual Enrolment (DE) program ²⁴, and obtain up to 18 credits in the UofM SPH Public Health certificate program before high school graduation; these new high school graduates now enroll in identified TCAT programs; upon TCAT graduation, participating students enroll in the UofM SPH and use credits earned through DE while in high school to lower their needed credits to complete the Bachelor of Public Health (BSPH) program, then enter the public health workforce as degreed skilled workers. Route 2 (R2): Participating graduates of identified TCAT programs enroll in the 18-hour Public Health Undergraduate Certificate Program (PH-UCP) (which aligns with the course requirements of the DE Certificate program), obtain 18 public health credits via the PH-UCP, upon completion,

participants enter the public health workforce as certificate-holding skilled workers, but complete the BSPH while in the workforce, using the PH-UCP credits to reduce the credits needed for BSPH completion and to upskill via acquiring a degree. At the SPH, students have an opportunity to develop a new minor in population health informatics and the opportunity to enroll in our newly approved accelerated bachelor's to master's program. Route 3 (R3): TCAT graduates enroll in the UofM SPH, complete the PH-UCP, and, upon completion, participants enter the public health workforce as certificate-holding skilled workers. The program allows graduates from TCAT Memphis to take courses throughout fall, spring, and summer to allow them to complete the undergraduate certificate in public health. Public health graduates can pursue career opportunities in academia, government, non-profit organizations, and public health thereby increasing their job price points and hence increasing the average salary.

2.2 Project timeline and overview (Quarterly)

In Appendix D, we present Figure 2 showing the program activities, metrics, and timelines presented in phases, Table 2 presents some defined evaluation measures of the PH IDEAS Program and Table 3 presents the descriptions of stakeholders' roles and responsibilities, committees, and key activities to be established to carry out specific functions.

2.3 Key objectives of each phase of the Project

To address public health workforce needs in Shelby County, we set two key objectives:

To 1) develop and collaboratively implement a structured Public Health IDEAS Work-Based Learning (WBL) program to provide structured WBL experiences that strengthen the public health workforce pipeline, and 2) orchestrate the completion of an industry-recognized public health certification for 100 students to be a direct source to meet the public health workforce needs in Shelby County and the surrounding Memphis region. Under these objectives, we will

implement four key activities that emphasize approaches that promote equity, address social determinants of health, and reduce health disparities. These activities associated with the objectives set corresponding metrics and timelines are shown in Figure 3. The proposed collaborative program is an effort to promote, protect, and improve the health of the residents of Shelby County and across the state of TN via this public health workforce pipeline initiative “Public Health IDEAS” by training the 21st-century workforce through its partnerships and input from local business players.

2.4 Project governance and accountability plan

TCAT Memphis and the University of Memphis School of Public Health are implementing the PH IDEAS program through a shared governance model. For the PH IDEAS program to be successful, decisions will be made timely, and at the right level of authority for the project. Table 3 describes the stakeholders’ roles and responsibilities. The program will establish the PH-IDEAS Executive Steering Committee and appoint two program Directors who will equally be accountable for the success of the program. Sutton and Joshi while leading will be part of the PH-IDEAS Executive Steering Committee to have management oversight and supervise the entire program while working with the Workforce project director to coordinate all program input and output completion and dissemination. The Workforce project director will coordinate the development and finalizing of the curriculum, including liaising with the stakeholders, gaining relevant approvals, helping with program setup, setting up the recruitment adverts, monitoring recruitment, undertaking all needed follow-up where necessary, supporting the process evaluation analysis and the delivery of key outputs.

The established public health workforce task force will provide program management support to assist the program directors in operational and quality-related aspects of the program,

as well as providing the program website, quality assurance, data management, and all other required support. The public health workforce task force will meet quarterly to ensure the successful commencement of the program and work with the evaluation team to conduct formative evaluations to improve the program. This team together with the evaluation team will provide feedback and actions taken based on the evaluations to the PH-IDEAS Executive Steering Committee. To facilitate a continuous quality improvement process, evaluators together with the public health workforce task force will prepare reports at least quarterly using all available data and hold a corresponding accountability meeting with stakeholders to discuss the data and capture the story behind the curve. Paired with annual evaluations of all program elements, this will allow program staff, stakeholders, and evaluators to monitor progress toward the goals and objectives of the project and allow for changes so that the maximum impact of the initiative is achieved. This joint team will also prepare a summative evaluation in year 4 (final report) to document and disseminate the “lessons learned”. Evaluation reports will be published on a dedicated page on CCRE’s website where Professor Wesley James is the Director as well as the PH IDEAS website that will be created. The PH-IDEAS Executive Steering Committee will meet every six months to assess the performance of the program and provide feedback for implementation. Individuals representing various academic, administrative and leadership units across TCAT Memphis and UofM SPH along with external stakeholders will be part of the shared governance and accountability plan.

2.5 Overview and structure of the optional Work-Based Learning (WBL) program

The proposed program (2.1) offers the “Public Health in Action” (3 credits) is an experiential learning course that will be part of the newly proposed UCPH program. The goal of the Public Health in Action WBL is to ease the transition between work and school while

reinforcing life and job skills. This course will be offered as a work-based learning course that will equip individuals to excel in their jobs and with daily living skills, functional academics, and internships. Skills will include data usage, grant writing, curriculum vitae preparation, interviewing for public health jobs, building rapport with employers and coworkers, establishing letters of reference, etc. The routes for taking the UCPH course are described (2.1) and the steps are in Table 4.

Section 3: Strength of Partnership - 20 points

Mandatory partner's role and their capabilities in implementing the identified program.

Table 5 describes various partners' roles and their capabilities in implementing the identified program while Table 6 provides details on all mandatory partners. In the Memphis region, there is a consistent demand for public health professionals across various specialties. The TCAT serves as the premier supplier of workforce development throughout Tennessee. The Colleges provide competency-based training through superior quality, traditional and distance learning instruction methods that qualify completers for employment and job advancement. They contribute to the economic and community development of the communities served by training and retraining employed workers ensuring that programs and services are economical and accessible to all residents of Tennessee. They also believe in building relationships of trust with community, business, and industry leaders to supply highly skilled workers in areas of need.

Memorandum of Understanding (MOU)

In March and April, 2024, an MOU was signed between all partners with clearly set objectives and items including agreed partnership and responsibility, Budget and Resource Allocation, Governance and Oversight, Term and Termination, etc, that allow for the successful execution of this program and its sustainability. Please see Appendix C for the signed MOU.

Section 4: Budget Plan - 15 points

The budget and budget justification are attached as Appendix B.

Section 5: Sustainability Plan - 20 points

5.1 Plan for sustaining the program beyond the 48-month funding period

From year one of the program, a grant writer will be hired whose focus will be to write and submit grants with the support of the directors and other academics in the program. This method will be used to obtain more grants to support the program beyond the four years. This hired personnel will work with the University of Memphis Office of Sponsored Programs (OSP) to identify both state and federal grants and other funding sources with plans to secure funding to sustain the program. By the second quarter of year 2, evidence and data obtained from the program implementation will be used to produce the first grant. Subsequent grant sources will be targeted and applied to periodically.

5.2 Availability of long-term resources to house, maintain, and/or repair equipment

The University of Memphis School of Public Health has a dedicated office of recruitment, admissions, and advisement and will continue beyond the funding period to support recruitment, admissions, and advisement of students towards building the proposed pipeline into an undergraduate certificate in public health and beyond. The school has a dedicated office of communication that will continue to develop and update the required marketing and communication material so that the information about the pipeline programs is widely disseminated. The school also has a dedicated office of experiential learning and career services that will continue to develop work-based learning activities. The University of Memphis School of Public Health and Shelby County Health Department have several ongoing collaborative

initiatives and will continue to build upon this relationship to support the workforce needs of the Shelby County Health Department, the City of Brownsville, and the TN Department of Health.

5.3 WBL programs and education-industry partnerships continuing beyond the 48-month grant period

Establishing Public Health Clubs: The University of Memphis School of Public Health has established public health clubs in Memphis Shelby County Schools providing students with opportunities for public health career awareness and career pathways throughout the span of their K-12 learning experience. A public health club will be established at the TCAT, Memphis to highlight the need of the public health workforce and the career and job opportunities associated with it. In collaboration with Shelby County Health Department, the City of Brownsville, and the Tennessee Department of Health, the program will organize public health events, and invite professionals and guest speakers to discuss the needs of the public health workforce across various disciplines that can support public health workforce needs in Memphis, the state of Tennessee and beyond.

Public Health Student Ambassador Initiative: The University of Memphis School of Public Health through its existing public health student ambassador initiative will continue to provide support to the public health clubs where both undergraduate, and graduate students visit the Memphis Shelby County Schools on a weekly basis to talk about Public Health 101 highlighting what is public health, career pathways, employment opportunities, organizations where individuals can work, salary and job outlook and through case studies demonstrate how to address public health challenges of the 21st century. We will continue to expand the public health student ambassador initiative beyond the scope of the grant to ensure continuity of the wide range of activities that will enhance how training in public health can address urgent workforce gaps.

[Annual Public Health Internship and Career Fair](#): The University of Memphis School of Public Health organizes annually a public health internship and career fair that brings community-based organizations and other industry partners together to share about the various internship and job opportunities that exist for students.

Section 6: Optional Criteria

6.1 High Demand Programs

Over the next five years, the Memphis area anticipates the creation of around 33,000 new jobs within the category of medical support assistants (MSAs) due to current and projected identified needs such as the aging U.S. population. Skills provided through our program can position our graduates to secure higher jobs in the health sectors and increase their job price points. In Memphis, another role that has experienced a remarkable 65% growth between 2017 and 2022 is software developers ²⁵. This has placed Memphis among the top ten fastest-growing major metropolitan areas for software development. With increasing automation in various industries and a growing number of manufacturers seeking to be close to the Memphis market, the region anticipates an 18% growth in software-based roles over the next five years. Graduates who use the stacked certificates to obtain minors such as Health Informatics through our program will be able to compete not only in the public health field but also in fields that require such skills. The software developer positions offer an average salary of \$100,000 per year ²⁵.

The Memphis Region is witnessing significant growth in the AgTech and Food Technologies sector. Projections suggest a 7% expansion in Agribusiness and AgTech over the next five years, while local educational institutions have seen a 15% increase in certificate and degree programs related to this field over the past five years. Similar to manufacturing, this industry cluster offers higher wages across all levels of education attainment, whether it's a high school diploma,

certificate, or degree. Moreover, there's a notable presence of entrepreneurs and opportunities for microbusinesses, contributing to the rise in small business ownership rates. In the Greater Memphis area, there are 12 accredited institutions offering degrees and credentials in tech-related fields, alongside training institutions certified by the Tennessee Higher Education Commission, which provide training credentials eligible for articulation agreements. With stacked certificates, skills, and training obtained through Health Data Analytics and Informatics, Environmental and Climate Health, and Global Health Crises courses through the program, our graduates can potentially seek education continuity or early careers in these areas with higher job points.

6.2 County Economic Status Acknowledgement

Every year, counties across the U.S. are provided an economic status designated by the Appalachian Regional Commission (ARC). The economic status of an individual county is determined by three main indicators over three years: 1) per capita market income 2) poverty rate and 3) three-year average unemployment rate ²⁶. Based on these indicators, Shelby County, TN is categorized as transitional. Transitional counties are defined as having a median family income equal to or less than 67% of the US average and a poverty rate of 150 percent or greater of the US average. Presently, Shelby County, TN (FY 2024) has an index value rank of 1,966, accounting for a per capital market income of \$45,834, a poverty rate of 18.6%, and a three-year average unemployment rate of 6.8% ²⁵. Thus, combined training from TCAT and SPH is anticipated to increase the average salary of our graduates, potentially reducing both poverty and unemployment rates in Shelby County.

6.3 Census Tracts in Persistent Poverty

Like many urban communities, Memphis health outcomes and life expectancy are heavily dependent upon one's zip code ²⁷. The city's population is largely concentrated in areas that have

struggled with poverty for decades, with over half of its residents living in these persistently impoverished neighborhoods ¹⁷. A significant portion of these areas have seen poverty rates of 20% or more for 30 years or longer. This situation is particularly challenging for historically disadvantaged communities, with much of the unemployed population being people of color, despite them making up a significant portion of the city's overall population.

In Shelby County's labor market, there are 96 census tracts where the prime-age employment gap (PAEG) is 5% or higher, and household incomes are below \$75,000 ²⁵. However, even within these eligible tracts, the employment gaps are significant. Out of 106,570 individuals of prime age in these tracts, only 63.2% are employed. The average household income in these areas is \$31,788, which is substantially lower than the county's median. There are 97,734 households in these tracts, with an average of 2.6 members per household. Further information can be found [here \(https://www.eda.gov/sites/default/files/2023-12/The_Memphis_Chamber_Foundation_Recompete.pdf\)](https://www.eda.gov/sites/default/files/2023-12/The_Memphis_Chamber_Foundation_Recompete.pdf).

Our project while meeting the public health workforce needs, skills acquired could be used in adjacent industries and on its own can be used to increase the average starting salaries of our graduates, reduce poverty rates, and improve health equity and overall health outcomes in Shelby County and in the State of Tennessee.

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Appendices

Appendix A: Cover Sheet

APPENDIX A: Cover Sheet

NAME OF LEAD ENTITY: UNIVERSITY OF MEMPHIS SCHOOL OF PUBLIC HEALTH

2024 Governor's Investment in Technical Education (GIVE 3.0) PH IDEAS Work-Based Learning (WBL) program.

Lead Entity Name: UNIVERSITY OF MEMPHIS SCHOOL OF PUBLIC HEALTH

Fiscal Agent: TENNESSEE COLLEGE OF APPLIED TECHNOLOGY MEMPHIS (TCAT) IN PARTNERSHIP WITH:

1. Workforce/Economic Development Agency: GREATER MEMPHIS CHAMBER
2. Higher Education Institution(s): UNIVERSITY OF MEMPHIS SCHOOL OF PUBLIC HEALTH
3. LEA/School District Name: SHELBY COUNTY SCHOOLS DISTRICT & MEMPHIS MEDICAL DISTRICT COLLABORATIVE
4. Employer Partners: GREATER MEMPHIS WORKFORCE DEVELOPMENT BOARD, TN DEPARTMENT OF HEALTH AND SHELBY COUNTY HEALTH DEPARTMENT

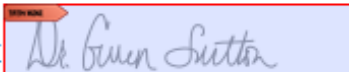
Project Director Name, Mailing Address: DR. GWENDOLYN SUTTON, 1 BRIDGESTONE PARK FL 3, NASHVILLE, TENNESSEE, 37214, UNITED STATES

Director's Telephone: 901-543-6130


Director's E-mail Address: gwen.sutton@tcatmemphis.edu

Funding requested:

\$1,999,999

X 

President of Higher Education Institution: DR. GWENDOLYN SUTTON
Fiscal Agent: TENNESSEE COLLEGE OF APPLIED TECHNOLOGY MEMPHIS

X 

Project Director: DR. ASHISH JOSHI
Lead Entity: UNIVERSITY OF MEMPHIS SCHOOL OF PUBLIC HEALTH

Appendix B: Budget and budget justification

GRANT BUDGET					
GIVE Program Competitive Grant					
The grant budget line-item amounts below shall be applicable only to expenses incurred during the following					
Applicable Period:		BEGIN:	8/1/2024	END:	7/31/2028
POLICY 03					
Object Line-item Reference	EXPENSE OBJECT LINE-ITEM CATEGORY ¹	GRANT CONTRACT	GRANTEE PARTICIPATION	TOTAL PROJECT	
1, 2	Salaries, Benefits & Taxes	\$1,261,213	0	\$126,123	
4, 15	Professional Fee, Grant & Award ²	\$405,000.00	0	\$405,000.00	
5, 6, 7, 8, 9, 10	Supplies, Telephone, Postage & Shipping, Occupancy, Equipment Rental & Maintenance, Printing & Publications	\$66,981.00	0	66,981	
11, 12	Travel, Conferences & Meetings	\$52,220	0	\$52,220	
13	Interest ²	0	0	0	
14	Insurance	0	0	0	
16	Specific Assistance to Individuals	0	0	0	
17	Depreciation ²	0	0	0	
18	Other Non-Personnel ²		0		
20	Capital Purchase ²	0	0	0	
22	Indirect Cost	\$142,833	0	\$142,833	
24	In-Kind Expense	\$71,752	0	\$71,752	
25	GRAND TOTAL	\$1,999,999	0	\$1,999,999	

Budget justification

University of Memphis School of Public Health Budget

A. SALARIES AND WAGES

Dr. Ashish Joshi: Dr. Joshi is the Dean of the School of Public Health and will be the Co-Director of the proposed collaborative Public Health IDEAS Program (PH-IDEAS). He will be the PI from the University of Memphis School of Public Health. He will be overseeing the successful implementation of the program. He will contribute 7% to the project including 5% in-kind.

Dr. Wesley James: He will be the Evaluation Core Lead for the Public Health IDEAS program and will devote 5% of his effort to the project. Dr. James will lead the evaluation team to track the outcomes of the program and will provide quarterly reports on the various activities proposed through the implementation of the program. He will additionally supervise evaluation staff, coordinate with the TCAT and other partners and liaise with the UofM SPH in tracking program progress.

Dr. Stella Lartey: Dr. Lartey will be the co-investigator and will contribute towards the evaluation of the work-based learning program, and conduct stakeholder needs assessment to understand the workforce needs of the community-based organizations and industry partners. She will devote 10% including 5% in-kind of her time to the proposed project.

Dr. Rajesh Tirpaul Melaram: Dr. Melaram will be the co-investigator on the project and is an instructor in the public health enrollment program. He will be responsible for assessing students' skills, and competencies and provide guidance on the work-based learning opportunities for employment placement. He will devote 10% including 5% in-kind on this project.

The Public Health Workforce Coordinator devoting 20% including 10% in-kind effort and the **Work-Based Learning Coordinator** devoting 20% including 10% in-kind effort, together with team leads, will coordinate efforts across all strategies, liaise between the research team at UofM, TCAT, CDC, and business community partners, ensuring completion of milestones and deliverables, meeting necessary deadlines, and maintaining proper project documentation.

Associate Research Administrator (Grant Writer) to assist in preparing and submitting associated sponsored grant and contract paperwork. Working under the supervision of the grant team and Office of Sponsored Programs (OSP), UofM, they will assist in reviewing grant submission documents and budget components, preparing financial reports, and associated award documentation. They will devote 5% effort to this project.

Evaluation, Research and Data Analyst: The evaluation, research and data analyst will be responsible for evaluating the program implementation, program metrics, data mapping, progress reporting, assessments, and liaise with the team to ensure the completion, dissemination and follow-up actions are fully executed. The individual will be devoting 7% of their effort to the project.

The UofM School of Public Health will hire a **Programmer** devoting 10% effort who will work together with the team using their knowledge of computer languages to write code for software applications which will be used to develop and consistently update the program website.

Consultant: Two industry experts will provide insight into needs and skills needed by analyzing existing job postings.

B. FRINGE BENEFITS

The University of Memphis charges fringe benefits according to its federally negotiated rate agreement, with a rate of 35.86% for all salaried employees. Fringe benefits are charged in proportion to the amount of effort allocated to the project. Fringe benefits include FICA, retirement, life insurance, unemployment insurance, health insurance, scholarship benefits, compensated absences, terminal pay, death benefits, and workers' compensation as detailed in the budget.

C. OTHERS

Equipment and supplies:

UoM: Budget is added to purchase 4 computers and a printer for the new positions that are going to be recruited towards implementation of PH IDEAS program. Budget is allocated for printing of posters for students to present their work-based learning activities.

Conference and Meetings: All students of the PH IDEAS program will be provided with American Public Health Association (APHA) student membership. This membership will be covered by the University of Memphis School of Public Health for all those students who continue to pursue Undergraduate Certificate in public health program and other public health majors. These funds will be covered from SPH even after the 4 years of this program funding. Conference fee costs related to registration will be covered in the budget and UofM SPH will cover any additional costs related to the conference such as travel and lodging for students presenting their public health work.

Focus group discussions: We will also host 4 focus group discussions (2 in the fall and 2 in the spring) with prospective employers including representatives of Shelby County Health Department, the TN Department of Health, and other stakeholders to gather their insights into the kind of skills and knowledge and expertise that these professionals need to fulfill urgent healthcare workforce needs.

Work-based learning mitigation stipend: All students each year enrolled in the various years of the program will be provided paid summer stipend opportunities. Each student will receive a

\$15/hour stipend at 40 hours a week for six weeks during the summer as part of the work-based learning program.

Undergraduate certificate in public health program fees: We intend to focus on need-based students who can be prepared as public health workforce and can serve the communities. The undergraduate certificate in public health program includes 18 credits that are also part of the public health dual enrollment. Beyond the program funding period, the students can qualify for several scholarship or loan opportunities such as Pell grants, Perkins Grant and Hope scholarship.

Indirect costs: As mentioned in the grant, the University of Memphis School of public health has budgeted 8% Indirect costs to support additional administrative responsibilities of recruitment, admissions, administrative support, work-based learning, and other opportunities.

Consultant: One industry expert will provide insight into needs and skills needed by analyzing existing job postings.

TCAT Memphis Budget

Project director, TBD: Budget is devoted towards 100% hiring of a project director who will oversee the project implementation and liaison between University of Memphis School of Public Health, TCAT, Memphis and other key stakeholders.

TCAT Instructors: The budget is devoted 100% to hiring two TCAT instructors.

Consultant: One industry expert will provide insight into the needs and skills needed by analyzing existing job postings.

Equipment and supplies: Budget is added to purchase 2 computers, telephone and a printer for the new positions that are going to be recruited towards implementation of PH IDEAS program. Budget is allocated for supplies to support some of the work-based learning activities.

Travel: The budget is allocated for the staff to travel and disseminate findings of the PH IDEAS program at the various forums.

TCAT yearly tuition support for new 15 Students: Each year, the grant funding will provide a need-based tuition support of \$750 each to 15 TCAT students who are expected to continue and enroll in the Public Health Undergraduate Certificate Course to obtain Work-Based Learning (WBL) experiences and obtain stacked credentials.

Conference and Meetings: Conference fees cover costs related to conference registration and UofM SPH will cover any additional costs related to the conference including travel and lodging for those students who will be presenting their public health work.

Indirect costs: The TCAT, Memphis has budgeted 8% Indirect costs to support additional administrative responsibilities of recruitment, admissions, administrative support, work-based learning, and other opportunities.

Appendix C: Memorandum of Understanding (MOU)



**TENNESSEE COLLEGE
OF APPLIED TECHNOLOGY**
MEMPHIS

Main Campus • 550 Alabama Avenue • Memphis, TN 38105-3604
P 901-543-6100 • F 901-543-2461

Aviation Complex Extension Campus • 3435 Ichulahoma Road • Memphis, TN 38118-2718
P 901-543-6180 • F 901-543-6183

Bartlett Extension Campus • 3375 Appling Road • Bartlett, TN 38133
P 901-545-3244 • F 901-543-2461

ACADEMIC MEMORANDUM OF UNDERSTANDING (MOU)
**Between Tennessee College of Applied Technology Memphis (TCAT
Memphis) and Partner Institutions for the Public Health IDEAS:
Strengthening the Public Health workforce in Tennessee (PH IDEAS)
Program**

- This Memorandum of Understanding (MOU), effective as of [March 11, 2024], is entered into by and between the Tennessee College of Applied Technology Memphis (hereinafter referred to as "TCAT Memphis"), serving as the lead institution and The University of Memphis – School of Public Health (UofM SPH) (Secondary Lead)

and the following partner organizations:

- The University of Memphis – School of Public Health (UofM SPH) (Secondary Lead)
- The Shelby County Health Department (SCHD)
- The Memphis Shelby County Schools (MSCS) Division of College, Career and Technical Education (CCTE)
- The Tennessee Department of Health (TDH) Office of Workforce Development
- Other Industry or Educational Partners to be added (hereinafter collectively referred to as "Partners").

Recitals

WHEREAS, TCAT Memphis and UofM SPH and its Partners recognize the critical need for skilled professionals in the Public Health sector within the Greater Memphis area;

WHEREAS, TCAT Memphis and UofM SPH and its Partners aim to bridge the gap between educational attainment and workforce demands through the PH IDEAS program;

WHEREAS, the Partners are committed to enhancing accessibility to education and training, facilitating seamless credit transfer and certification, expanding work-based learning (WBL) opportunities, and strengthening stakeholder partnerships.

A Board of Regents Institution
<http://www.tcatmemphis.edu>
Memphis Premier Provider for Workforce Development
TCAT is an Affirmative Action/Equal Opportunity Institution

NOW, THEREFORE, in consideration of the mutual covenants contained herein, TCAT Memphis and UofM SPH and its Partners agree as follows:

1. Objectives:

The objectives of the PH IDEAS program include:

- Enhance accessibility to public health education and training.
- Expand credit-transfer agreements between TCAT Memphis and the University of Memphis.
- Align educational programs with industry needs.
- Facilitate seamless credit transfer and certification for students.
- Expand work-based learning opportunities.
- Strengthen partnerships among educational institutions, industry partners, and local organizations.

2. Partnerships and Responsibilities

TCAT Memphis (Lead Institution)

- Serve as the primary coordinator for the PH IDEAS program.
- Facilitate the development and expansion of academic programs and certifications in public health.
- Oversee the implementation of work-based learning programs.
- Coordinate with Partners to ensure alignment with industry needs.
- Agree to terms of any future collaborations may be reduced to writing in a separate agreement.

University of Memphis – School of Public Health (Secondary Lead)

- Assist in expanding credit-transfer agreements to certificates and degrees within the School of Public Health
- Provide academic and faculty support for curriculum development and certification accreditation.
- Offer advanced training and educational opportunities for program participants.

Industry and Community Partners (SCHD, TDH, etc.)

- Provide input on curriculum development to align with industry needs.
- Offer work-based learning opportunities, internships, and apprenticeships for students, when available.
- Participate in program evaluation and continuous improvement processes.

Memphis Shelby County Schools

- Promote the PH IDEAS program among high school students.
- Facilitate dual enrollment opportunities and career pathways for students interested in public health careers.

3. Budget and Resource Allocation

The budget plan outlined in Section 4 of the proposal document shall govern financial contributions and resource allocation among TCAT Memphis and its Partners. Partners agree to collaborate in seeking additional funding and resources to support the sustainability of the PH IDEAS program, when aligned with their agency mission.

4. Governance and Oversight

A steering committee, comprising representatives from TCAT Memphis, the University of Memphis, and each Partner organization, shall be established to provide governance and oversight for the PH IDEAS program. The committee will meet quarterly to review program progress, address challenges, and make strategic decisions.

5. Term and Termination

This MOU shall be effective for a term of five (5) years from the date of last signature. Any Partner may terminate its participation in the MOU with ninety (90) days written notice to the other Partners. This MOU may be terminated if grant funding is not appropriated or available.

6. Governing Law

This Agreement will be interpreted under Tennessee law, without reference to its conflicts of law principles.

7. Liability

Each party shall be solely liable for payment of its portion of all claims, liability, costs, expenses, demands, settlements, or judgments resulting from the negligence, actions or omissions of itself or those for whom it is legally responsible relating to or arising under this agreement.

8. Amendments

This MOU may be amended only by mutual written agreement between TCAT Memphis and its partners.

9. Signatures

IN WITNESS WHEREOF, the parties hereto have executed this MOU as of the last date written below.

[Signature Page Follows]

This Memorandum of Agreement (MOA) has been signed by persons authorized to sign for their respective organizations and will be effective upon execution.



Dr. Gwendolyn Sutton (April 29, 2024, 9:44 PM GMT)

Apr-29-2024

Dr. Gwendolyn Sutton, President

Tennessee College of Applied Technology (TCAT)


A Board of Regents Institution
<http://www.tcatmemphis.edu>
Memphis Premier Provider for Workforce Development
TCAT is an Affirmative Action/Equal Opportunity Institution

David J. Russomanno

David Russomanno (April 29, 2024, 7:40 PM GMT)

Apr-29-2024

Dr. David Russomanno, Executive Vice President
Academic Affairs & Provost
University of Memphis


Dr. Michelle Taylor, Director

Shelby County Health Department

A Board of Regents Institution
<http://www.tcatmemphis.edu>
Memphis Premier Provider for Workforce Development
TCAT is an Affirmative Action/Equal Opportunity Institution

CONTRACT NAME Partner Institutions for the Public Health IDEAS: Strengthening the Public Health workforce in Tennessee
CONTRACT ID 721b58f9-3ec1-439b-81d5-6eca8daa2b93
STATUS Executed

CONTRACT HISTORY



SENT

Sent for Signature to **David Russomanno** (drussmnn@memphis.edu) by **Darren Wibberding** (darren.wibberding@memphis.edu).

29 April, 2024 17:56:21 UTC
 IP: 141.225.204.204



SIGNED

Signed by **David Russomanno** (drussmnn@memphis.edu).

29 April, 2024 19:40:41 UTC
 IP: 141.225.205.175
 Shelby County, TN, USA



SENT

Sent for Signature to **Dr. Gwendolyn Sutton** (gwen.sutton@tcatmemphis.edu) by **Darren Wibberding** (darren.wibberding@memphis.edu).

29 April, 2024 19:40:44 UTC
 IP: 141.225.204.204



SIGNED

Signed by **Dr. Gwendolyn Sutton** (gwen.sutton@tcatmemphis.edu).

29 April, 2024 21:44:29 UTC
 IP: 162.245.47.118
 Shelby County, TN, USA



EXECUTED

This document has been signed and executed by all parties.



ACADEMIC MEMORANDUM OF UNDERSTANDING (MOU)
**Between Tennessee College of Applied Technology Memphis (TCAT
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Strengthening the Public Health workforce in Tennessee (PH IDEAS)**
Program

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- Offer advanced training and educational opportunities for program participants.

Industry and Community Partners (SCHD, TDH, etc.)

A Board of Regents Institution
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Memphis Premier Provider for Workforce Development
TCAT is an Affirmative Action/Equal Opportunity Institution

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9. Signatures

IN WITNESS WHEREOF, the parties hereto have executed this MOU as of the last date written below.

[Signature Page Follows]

This Memorandum of Agreement (MOA) has been signed by persons authorized to sign for their respective organizations and will be effective upon execution.

William D Rawls

William Rawls, MA, CED

Mayor

City of Brownsville, Tennessee

A Board of Regents Institution
<http://www.tcatmemphis.edu>
Memphis Premier Provider for Workforce Development
TCAT is an Affirmative Action/Equal Opportunity Institution

Appendix D: Letters of Support

1. University of Memphis School of Public Health
2. The Greater Memphis Workforce Development Board
3. Greater Memphis Chamber
4. Shelby County Health Department
5. Tennessee Department of Health
6. Memphis Medical District Collaborative
7. Memphis-Shelby County Schools

Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

Dear Selection Committee,

We proudly submit this letter in support of our collaboration with TCAT-Memphis application for the for the Governor’s Investment in Vocational Education (GIVE) grant.

The aspiration of the University of Memphis School of Public Health is to be a solution centric, impactful school of public health that prepares learners and leaders to address public health challenges and promote the health and well-being of individuals, families, and the communities they live in through a local, national, and global lens of inclusivity, diversity, equity, accessibility, and sustainability.

The University of Memphis School of Public Health is the Association of Schools and Programs of Public Health (ASPPH) 2024 Harrison C. Spencer Award recipient for outstanding community service. This annual award is given to an ASPPH-member, CEPH-accredited school or program of public health demonstrating a major institutional commitment to addressing community needs through education, practice, and/or research.

The University of Memphis School of Public Health is a collaborator of Shelby County Health Department on the Centers for Disease Control (CDC) *Strengthening U.S. Public Health Infrastructure, Workforce, and Data Systems* grant. The purpose of this grant is to accelerate prevention, preparedness, and response to emerging health threats, and improve outcomes for other public health areas. This work cannot be accomplished without a well-trained Public Health workforce.

The Governor’s Investment in Vocational Education (GIVE) grant seeks to address the “skills gaps” in the local and regional workforce pools.

If funded, the University of Memphis School of Public Health will partner with the TCAT-Memphis, Shelby County Health Department, Tennessee Department of Health, Memphis Shelby County Schools, Greater Chamber of Memphis and other community and industry partners to oversee the full implementation of the PH IDEAS program for all four grant years.

Sincerely



Dr. Ashish Joshi Dean
School of Public Health
University of Memphis

Greater Memphis
Workforce Development Board
SHELBY · LAUDERDALE · TIPTON · FAYETTE

Tennessee Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

March 13, 2024

Dear Selection Committee,

The Greater Memphis Workforce Development Board oversees federal and state workforce development funding for Shelby, Fayette, Lauderdale, and Tipton counties in West Tennessee. The mission of the Greater Memphis Workforce Development Board is to provide leadership and guidance to the workforce development efforts of the greater Memphis area.

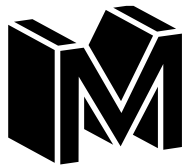
The Governor’s Investment in Vocational Education (GIVE) grant seeks to address the “skills gaps” in the local and regional workforce pools. A study published by the Harvard T.H. Chan School of Public Health in Health Affairs on March 6, 2023 predicted that more than 100,000 Public Health staff could leave their jobs by 2025. Without intentional efforts to strengthen the Public Health workforce pipeline, this predicted “skills gap” will impede the ability of our local Shelby County Health Department to fulfill its mission to protect, promote and improve the health of the people of Shelby County.

The Greater Memphis Workforce Development Board supports the application of TCAT-Memphis and the University of Memphis, as it is essential that we train and employ credentialed Public Health workers to effectively address the public health needs of the greater Memphis area.

Sincerely,



Meka Egwuekwe, Chairman
Greater Memphis Workforce Development Board



**GREATER
MEMPHIS
CHAMBER**

100 Peabody Place, Suite 1000
Memphis, TN 38103
Phone: 901.543.3500
MemphisChamber.com

April 26, 2024

Tennessee Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

Dear Selection Committee,

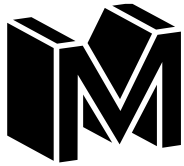
On behalf of the Greater Memphis Chamber, I am writing to express our enthusiastic support for the Governor's Investment in Vocational Education (GIVE) grant, particularly in its aim to address the pressing "skills gaps" within our local and regional workforce pools. As an organization dedicated to fostering economic growth and prosperity in the Greater Memphis area, we are keenly aware of the critical role that workforce development plays in shaping the future of our community.

The Greater Memphis Chamber is committed to empowering businesses, both large and small, to thrive in an ever-evolving economy. Our mission is to drive regional economic growth and prosperity through advocacy, leadership, and support for our diverse business community. Central to our vision is the belief that investing in workforce development is not only essential for individual prosperity but also for the overall health and vitality of our region.

The Governor's Investment in Vocational Education (GIVE) grant, facilitated through a partnership between the Tennessee College of Applied Technology Memphis (TCAT Memphis) and the University of Memphis, is a timely and strategic initiative that directly aligns with the workforce development priorities of the Tennessee Department of Health (TDH). As highlighted in a study published by the Harvard T.H. Chan School of Public Health in Health Affairs on March 6, 2023, the impending "skills gap" in the public health workforce poses a significant challenge to the mission of the TDH and its affiliated local and municipal health departments. The study predicts that more than 100,000 public health staff could leave their jobs by 2025, underscoring the urgent need for proactive measures to strengthen the public health workforce pipeline.

Without intentional efforts to address this workforce shortage, the ability of the Tennessee Department of Health to fulfill its mission to protect, promote, and improve the health of the people of Tennessee will be severely compromised. The GIVE grant presents a valuable opportunity to bridge this gap by providing much-needed support for vocational education programs that directly contribute to the development of a skilled and qualified public health workforce.

Furthermore, the GIVE grant complements and enhances the existing workforce development initiatives at the TDH, which have been identified as high organizational priorities in the department's



**GREATER
MEMPHIS
CHAMBER**

100 Peabody Place, Suite 1000
Memphis, TN 38103
Phone: 901.543.3500
MemphisChamber.com

strategic plan. By investing in vocational education and training programs that specifically target the needs of the public health sector, the GIVE grant will not only strengthen our workforce but also ensure the continued delivery of essential public health services to the residents of Tennessee.

In addition, the Greater Memphis Chamber recognizes the profound impact that the GIVE 3.0 initiative would have on our community, particularly through the partnership between TCAT Memphis and the University of Memphis. This collaborative effort represents a powerful synergy between vocational education and academic institutions, leveraging their respective strengths to address the evolving needs of our workforce. By equipping students with the skills and knowledge necessary to excel in the public health sector, the GIVE 3.0 initiative will empower individuals to pursue meaningful careers while simultaneously addressing critical workforce shortages in our community.

In conclusion, the Greater Memphis Chamber wholeheartedly supports the Governor's Investment in Vocational Education (GIVE) grant and its alignment with the workforce development priorities of the Tennessee Department of Health. We believe that by investing in vocational education and training, we can build a stronger, more resilient workforce that will drive economic growth and improve the health and well-being of our community.

Thank you for your attention to this important matter. Should you require any further information or assistance, please do not hesitate to contact us.

Sincerely,

Amity Schuyler
Chief Innovation Officer
SVP Workforce Development



LEE HARRIS
MAYOR

SHELBY COUNTY HEALTH DEPARTMENT



Public Health
Prevent. Promote. Protect.
Shelby County Health Department

MICHELLE A. TAYLOR, MD, DrPH, MPA
DIRECTOR-HEALTH OFFICER

Tennessee Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

March 13, 2024

Dear Selection Committee,

The mission of the Shelby County Health Department (SCHD) is to promote, protect and improve the health of all in Shelby County. To fulfill this mission, SCHD must work proactively to ensure that we are securing the people necessary to promote and protect health in Shelby County.

In December 2022, the SCHD and the University of Memphis School of Public Health began a partnership via funding from the Centers for Disease Control (CDC) *Strengthening U.S. Public Health Infrastructure, Workforce, and Data Systems* grant to accelerate prevention, preparedness, and response to emerging health threats, and improve outcomes for other public health areas in Shelby County. Much of the focus of this grant involves strengthening our workforce pipeline to ensure that SCHD has the people needed to promote and protect health.

Via funding through the Governor's Investment in Vocational Education (GIVE) grant, the SCHD will partner with Tennessee College of Applied Technology (TCAT)- Memphis, and the University of Memphis School of Public Health to continue our work to strengthen the workforce pipeline necessary for SCHD to ensure that we have the people needed to fulfill our mission to promote and protect health in Shelby County.

Via this partnership, it is the intent of SCHD to address our shortage of skilled Public Health workers, as SCHD will be seeking to employ credentialed graduates from the programs proposed in this grant application to assist with our Community Health, Environmental Health, Population Health, and our Epidemiology, Preparedness, and Informatics work.

Please consider the TCAT-Memphis and University of Memphis School of Public Health GIVE Community Grant application.

Sincerely,

Michelle Taylor, MD, DrPH, MPA
Director and Health Officer
Shelby County Health Department

Mission

To promote, protect and improve the health of ALL in Shelby County.

814 Jefferson Avenue ♦ Memphis, TN 38105 ♦ 901 222-9000 ♦ www.shelbytnhealth.com



March 21, 2024

Tennessee Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

Dear Selection Committee,

We proudly submit this letter in support of the University of Memphis and TCAT-Memphis application for the Governor’s Investment in Vocational Education (GIVE) grant. The mission of the Tennessee Department of Health (TDH) is to protect, promote and improve the health and prosperity of people in Tennessee. To fulfill this mission, TDH must have a robust workforce pipeline. TDH is an awardee of the Centers for Disease Control (CDC) *Strengthening U.S. Public Health Infrastructure, Workforce, and Data Systems* grant. The purpose of this grant is to accelerate prevention, preparedness, and response to emerging health threats, and improve outcomes for other public health areas throughout Tennessee. This work cannot be accomplished without a well-trained Public Health workforce.

The Governor’s Investment in Vocational Education (GIVE) grant seeks to address the “skills gaps” in the local and regional workforce pools. A study published by the Harvard T.H. Chan School of Public Health in Health Affairs on March 6, 2023, predicted that more than 100,000 public health staff could leave their jobs by 2025. Without intentional efforts to strengthen the public health workforce pipeline, this predicted “skills gap” will impede the ability of the Tennessee Department of Health, and its affiliated local and municipal health departments, to fulfill the mission to protect, promote and improve the health of the people of Tennessee. The GIVE grant would directly align with and support current workforce development initiatives at the TDH, which are identified as a high organizational priority in the department’s strategic plan.

The TDH Office of Primary Prevention strongly supports the application of TCAT-Memphis and the University of Memphis, as TDH and its affiliate local and municipal health departments in Tennessee must employ credentialed Public Health workers to effectively address Tennessee’s public health needs.

Sincerely,

A handwritten signature in black ink that reads "Jamie Means". The signature is written in a cursive, flowing style.

Jamie Means, MPH, SHRM-CP
Workforce Development Director
Office of Primary Prevention
Tennessee Department of Health



April 29, 2024

Tennessee Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

Dear Selection Committee,

On behalf of the Memphis Medical District Collaborative (MMDC), we are pleased to offer our full support for the Give 3.0 proposal between Tennessee College of Applied Technology Memphis (TCAT Memphis) and the University of Memphis' Public Health Department.

The MMDC is a dynamic coalition of partners committed to fostering a vibrant, sustainable, and healthy community in the Memphis Medical District (MMD). Our mission is to advance the economic, physical, and social well-being of the district and its surrounding neighborhoods through strategic partnerships, collaborative initiatives, and community-driven solutions.

At the heart of our vision is the transformation of the Memphis Medical District into a thriving urban center that is inclusive, innovative, and equitable. We envision a district where residents, workers, and visitors have access to quality education, healthcare, housing, transportation, and amenities that support a high quality of life. Through our collective efforts, we seek to create a district that serves as a national model for urban revitalization and community development. The Give 3.0 proposal aligns seamlessly with the goals and objectives of the MMDC. By fostering collaboration between TCAT Memphis and the University of Memphis' Public Health Department, this initiative has the potential to enhance educational opportunities, workforce development, and public health outcomes in our community.

We believe that the partnership between TCAT Memphis and the University of Memphis' Public Health Department will not only benefit students and faculty but also contribute to the overall health and vitality of the Memphis Medical District and beyond. The MMDC stands ready to support this important endeavor, and we look forward to collaborating with all stakeholders to ensure its success.

Thank you for considering our support for the Give 3.0 proposal. Please do not hesitate to reach out if you require any further information or assistance.

Sincerely,

A handwritten signature in black ink that reads 'Rory Thomas'.

Rory Thomas
President
Memphis Medical District Collaborative



2930 Airways Blvd Memphis, TN 38116

Tennessee Higher Education Commission
312 Rosa Parks Avenue, 9th Floor
Nashville, TN 37243

March 13, 2024

Dear Selection Committee,

Memphis-Shelby County Schools (MSCS) is Tennessee's largest public school district and is among the 25 largest public school districts in the United States. As we reimagine education, the district is committed to ensuring academic equity while providing high-quality instruction and social-emotional support to prepare every student for success in college and careers. We have more than 200 schools and a wide array of academic offerings to meet the needs and interests of our diverse students. This includes schools with competitive entry requirements and specialized studies, such as College Prep, International Baccalaureate (IB), STEM, Creative & Performing Arts, Health Science, as well as traditional K-12 neighborhood schools with a broad set of courses and extracurricular programs.

The Governor's Investment in Vocational Education (GIVE) grant seeks to address the "skills gaps" in the local and regional workforce pools. A study published by the Harvard T.H. Chan School of Public Health in Health Affairs on March 6, 2023 predicted that more than 100,000 Public Health staff could leave their jobs by 2025. Without intentional efforts to strengthen the Public Health workforce pipeline, this predicted "skills gap" will impede the ability of our local Shelby County Health Department (SCHD) to fulfill its mission to protect, promote and improve the health of the people of Shelby County.

MSCS's CTE programs seek to prepare students for high-demand fields and, with its predicted labor shortage, Public Health is most certainly a high demand field. For this reason, the MSCS CTE department will support students preparedness with the Tennessee College of Applied Technology (TCAT)- Memphis and the University of Memphis School of Public Health (UM SPH) to introduce MSCS students to the Public Health field via the programming proposed in the TCAT-Memphis and UM SPH GIVE application.

Please consider their GIVE application.

Sincerely,

DMcGhee

Dedric McGhee, Ed.D.
Director of STEM
College, Career, and Technical Education
Memphis Shelby County Schools

Appendix E: Tables

Table 1: TCAT programs’ roles and enhancements through public health studies

TCAT Program	Roles and Enhancement
Certified Pharmacy Technician (CPhTs)	<p>TCAT program, the certified pharmacy technician’s (CPhTs) role is to prepare medications, perform calculations for medication preparation, collect medical history, and work with third-party billing. CPhTs are integral in disseminating critical, early health information to patients or their caregivers, often serving as the initial point of contact after a prescription is received. In addition to their solid understanding of medication management, CPhTs are frequently responsible for additional care roles, such as connecting patients to providers and navigating the complexities of health insurance on behalf of patients. Recent studies have indicated that CPhT duties are being further expanded, and their value is widely recognized in a variety of health settings²⁸ However, cross-training with public health training could be immensely beneficial to the pharmacy technician, who can build a line of revenue for health equity, continue to give out prescriptions, and get a “backdoor into other providers for new services. Implementing public health training among the pharmacy technicians in the community pharmacy setting is an effective strategy to increase patient contact and provide additional services. Recruiting and training pharmacy technicians who are already active members of the local community with an additional public health credentials enable patients to feel at ease when discussing their health concerns, and foster a stronger rapport, develop a sense of kinship and shared mission in their efforts to enhance their own community, leading to increased employee satisfaction, retention, and sustainability of the program.</p>
Diploma in Practical Nurse program	<p>TCAT also the Diploma in Practical Nurse program for whom with additional public health training form key public health workforce (i.e., Public Health Nurses) for primary care, community, and preventative health. Public health nursing promotes and protects community health using knowledge from nursing, and public health sciences. Public health nurses play key roles in preventing disease while promoting public safety and well-being. They promote better health and safety in communities and help prepare them for and recover from public health incidents such as natural disasters and disease outbreaks. Getting additional training in public health provides individuals an opportunity with additional skills and knowledge, leading to better pay, increasing opportunities for promotion, and making them an ideal candidate for employers.</p>
Animal laboratory technician (AALT) program	<p>the Animal Laboratory Technician (AALT) program prepares candidates for entry-level employment as technicians to perform routine animal health examinations, routine diagnostic testing and sample collection in animals, maintain vaccination regimens, implement parasite control programs, advise on the risks of animal contact for immunocompromised individuals, general sanitation and maintenance in animal care areas, zoonotic disease management and control^{29,30}. After the COVID-19 pandemic, translating, integrating, and implementing One Health has become urgent⁶ as zoonoses continuously pose a major threat to public health in North America²⁹. The One Health concept emphasizes the interconnectedness and the interdependence of human, animal, and environmental health^{31,32}. The AALTs' duties are intricately linked with population health. Thus, with robust public health understanding by AALTs through dual enrolment, we create a new public health workforce pipeline with an emphasis on One Health, control and/or eliminate the zoonoses threat in communities in North America, integrate and translate the One Health concept into action and improve health outcomes. Economically, AALT</p>

	with public health certification builds a new revenue line for health equity, reduces poverty, potentially increases the wage value, improves employee satisfaction, and increases retention while reducing employee attrition.
Diploma in Dental Laboratory Technology and the Dental Assistant Program.	For example, the Dental Laboratory Technology program trains one with the primary role of Dental Laboratory Technician who utilizes precise dental tools, refines accuracy methods, employs artistic skills, and meticulously attends to small details. Dental technology has a crucial role among the array of health professions within dentistry, contributing significantly to the healthcare delivery system Their efforts enhance patients' aesthetics, as well as their speech and chewing abilities ³³ . The comprehensive services provided by dental technologists are indispensable for dentists to offer a complete range of treatments to their patients. Dental practitioners in public health investigate efficient methods for informing local communities about appropriate dental hygiene practices, care procedures, and preventive measures against dental diseases ³⁴ . Dental technologists, with supplementary training in public health, could pursue roles such as dental public health administrators, dental health educators, or researchers. They will be able to frequently engage in diverse public health initiatives, such as organizing oral health awareness initiatives, conducting dental education workshops, and examining dental health patterns within populations.

Table 2: Expected courses in the public health undergraduate certificate

Course Code	Course Names	Credits
PUBH 2181	Population Health and Society	3
PUBH 3120	Environmental and Climate Health	3
PUBH 3130	Social Determinants and Health Disparities	3
PUBH 3150	Health Data Analytics and Informatics	3
PUBH 3160	Global Health Crises and Milestones	3
PUBH 3170	Public Health in Action	3

Table 3: Primary Stakeholders' Roles and Responsibilities

Roles	Responsibilities	Primary Stakeholders	Affiliates and partners
Collaborative leadership	Oversee the successful implementation of the PH IDEAS program	TCAT Memphis (Dr. Sutton) and UofM SPH (Dr. Ashish Joshi)	
Executive Steering Committee (ESC)	Ensure resources are made available to implement decisions made by this body. The Co-leads on this project from TCAT Memphis (Sutton G) and University of Memphis School of Public Health (Joshi A) will establish a steering committee for broad stakeholder engagement by having representation from our partners including Memphis Shelby County Schools, Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, TN department of health and Shelby County Health Department as part of the Executive Steering Committee.	TCAT, Memphis & UofM SPH	Memphis Shelby County Schools, Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, TN department of health and Shelby County Health Department
CREATE Unit	Focus on expanding access to the pipeline programs through collaborative marketing and recruitment efforts and will provide advisement supported by experiential learning opportunities to get them employment ready.	Recruitment, advisement, and experiential learning team from TCAT, Memphis & UofM SPH	Memphis Shelby County Schools, TN department of health and Shelby County Health Department
Public health workforce task force	Focus on identifying public health workforce gaps skills and opportunities.	Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, TN department of health and Shelby County Health Department	TCAT, Memphis & UofM SPH
Form Collaborative Curriculum working group	Responsible for guiding course offerings and easy transfer to pipeline programs.	Academic faculty advisors from TCAT Memphis and UofM SPH	Includes representation from Memphis Shelby County Schools

Project director	Oversee implementation of the PH IDEAS program and support to the project. Validate priorities, review direction, and ensure appropriate communication is occurring.	Dedicated project director hired by TCAT, Memphis.	Works in coordination with UofM SPH and other affiliate partners
Subject Matter experts' team	Assess the academic pathways. Make recommendations for improving the policies, procedures, and practices that impact the program and/or project.	Staff and faculty of TCAT, Memphis & UofM SPH	Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, TN department of health and Shelby County Health Department
Work-based Learning Coordinator	Coordinate Public Health in Action experiential learning course and facilitate creating internships, apprenticeships, and paid work experience, juniors and seniors (16 years or older) who then may earn high school and college credit for WBL experiences.	Hired by UofM Memphis	Work in consultation with TCAT, Memphis, Memphis Shelby County Schools, and other industry partners.
Public Health Workforce coordinator	Responsible to coordinate public health and other health work force and employment opportunities	TCAT, Memphis & UofM SPH	Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, TN department of health and Shelby County Health Department
Data and evaluation lead	Develops and implements plans to ensure appropriate data is ready when needed by the project.	TCAT, Memphis & UofM SPH	Memphis Medical District Collaborative, Greater Memphis Chamber, Greater Memphis Workforce Development Board, TN department of health, and Shelby County Health Department

Table 4: Brief steps for Public Health in Action WBL program

Step	Description
<u>WBL Pre-Assessment</u>	Many individuals have completed various kinds of training for which they have earned credentials. Students enrolled at TCAT Memphis will provide original documentation as proof of satisfactory completion for prior learning experiences.
<u>Public Health in Action Portfolio</u>	Students without pre-assessed learning experiences are able to seek academic credits by developing a portfolio. The portfolio serves as a reflective narrative of the student's previous learning experiences and includes supporting documentation. Thus, the portfolio helps students articulate what they know and can do, as well as integrate this learning with the principles that would have been learned in university coursework.

Table 5: Partner’s role and their capabilities in implementing the identified program

Description Partners	Roles	Capabilities
TCAT Memphis	Offer certificate and diploma programs in pharmacy technician, dental laboratory technology, licensed nursing, and animal laboratory technology programs.	The main objectives of the programs offered by the TCAT are to give students the opportunity to acquire marketable skills for entry into the labor market or upgrade the present skills and knowledge of persons already employed.
University of Memphis School of Public Health	Offer public health pipeline program, experiential learning opportunities and work-based learning program	The University of Memphis School of Public Health is nationally accredited by the CEPH and CAMHE and offers cutting-edge academic programs to prepare employment ready workforce.
Memphis Shelby County Schools	Identify schools and students with interest in programs offered by TCAT Memphis and public health pipeline programs.	The mission of Memphis Shelby County Schools is to prepare all students for success in learning, leadership, and life with a vision to make district the premier school district attracting a diverse student population and effective teachers, leaders, and staff all committed to excellence. More than half of the MSCS students come from economically disadvantaged backgrounds.
Memphis Medical District collaborative	Create partnerships and collaborations across health and hospitals to identify workforce needs and provide help and reference network for work-based learning opportunities	MMDC is dedicated to enhancing public spaces to build stronger, safer, and more sustainable streets, parks, plazas, and green spaces. They also focus on transportation and mobility and hospitality services throughout the district. Their main focuses are on seeding equitable development activity, nurturing small businesses, and matching people with the right space throughout the district. It is a home to residents, students, businesses, and prominent medical and educational institutions.
Greater Memphis Chamber	Coordinate creating public health workforce taskforce and linkages with the prospective organizations and industry employers	The Greater Memphis Chamber builds a GREATER Memphis for all by aggressively developing the region’s powerhouse economy, diverse workforce, and growth-friendly business environment.
Greater Memphis Workforce Development Board	Assist in coordinating and convening of partners and organization representatives to create 21 st century public health workforce taskforce	The Greater Memphis Workforce Development Board (GMWDB), designated by local elected officials, is charged with administering workforce development services in four counties in Greater Memphis: Shelby, Fayette, Tipton, and Lauderdale.
TN Department of Health	Public health employer	It is the primary agency of state government in Tennessee responsible for public health. Its workforce provides a variety of direct and indirect services to residents and visitors in all 95 counties of the state.
Shelby County Health Department	Public health employer	
The City of Brownsville	Public health employer	

Table 6: Details on All Partners

Partner	Partner Details
Tennessee College of Applied Technology Memphis	At the Tennessee College of Applied Technology Memphis, students can pursue a variety of technical programs geared towards healthcare and laboratory technology. The Pharmacy Technician program equips students with the skills necessary to assist pharmacists and graduates can expect entry-level salaries averaging around \$30,000 to \$35,000 per year. The Dental Laboratory Technology program focuses on training students in the fabrication of dental prosthetics and upon completion, graduates typically start with salaries ranging from \$35,000 to \$40,000 annually. TCAT Memphis offers both Licensed Practical Nursing (LPN) and Certified Nursing Assistant (CNA) programs. LPNs can expect entry-level salaries averaging between \$40,000 to \$45,000 while CNAs typically start with salaries of around \$25,000 to \$30,000 annually. Additionally, TCAT Memphis offers an Assistant Animal Laboratory Technology program for individuals passionate about working with and a starting salary ranging from \$25,000 to \$30,000 per year. These programs at TCAT Memphis provide practical training and valuable skills for students seeking rewarding careers in healthcare and laboratory technology. The impact of these programs on the community is significant. By producing well-trained and competent graduates, TCAT Memphis helps address the shortage of healthcare workers in the region, ensuring that residents have access to quality healthcare services.
University of Memphis School of Public Health	The School of Public Health at University of Memphis is a nationally accredited by the CEPH and CAMHE and offers undergraduate, Master of Public Health, Master of Science, Master of Health Administration, and a Doctor of Public Health programs. SPH at UofM offer a wide range of undergraduate, graduate and certificate programs providing training in public health, analytics, informatics, health administration, leadership, and population health to prepare students with the necessary skills towards addressing pressing public health issues both locally, nationally, and globally. UofM SPH is one of the recipients of the public health workforce grant through CDC and recently was also recipient of the 2024 ASPPH Harrison C. Spencer award for its outstanding community service. Following the vision of SPH CARES, the school is committed to being community engaged anchor institute that offers research-based solutions, brings in entrepreneurship and innovation and is student centric to prepare community of learners and leaders addressing current and emerging public health challenges and promote health and well-being of individuals, families, and the communities in which they live. In addition, University of Memphis School of Public Health is one of the only schools in the nation that has established partnership with the Memphis Shelby County schools to establish public health clubs in the schools and sensitize the youth to the field of public health.
Memphis Shelby County Schools	Memphis Shelby County Schools (MSCS) is Tennessee’s largest school district. They are also one of the top 25 largest public education systems in America. MSCS has more than 200 schools, including K-12 schools, theme-based optional schools, alternative, career and technical, virtual and charter schools. They serve more than 106,000 students.
Memphis Medical District Collaborative	The Memphis Medical District Collaborative (MMDC) is involved in over 20 initiatives across the district. With 40,000+ employees and students and 10,000+ residents, the Memphis Medical District is poised for growth, expansion, and opportunity. Their programs and incentives work to strengthen the connections, communities, and campuses in the Memphis Medical District, so they are more vibrant, prosperous, and equitable. The projects are shaped by collaboration with anchors, community stakeholders, and funding partners.
Greater Memphis Chamber	As the region’s primary economic development organization, it brings jobs, investment, and new opportunities to Greater Memphis. They are a support for regional businesses of all sizes, provide a pro-growth environment favorable to businesses, recruitment of jobs and investments, workforce development and community investments that help build stronger neighborhoods.

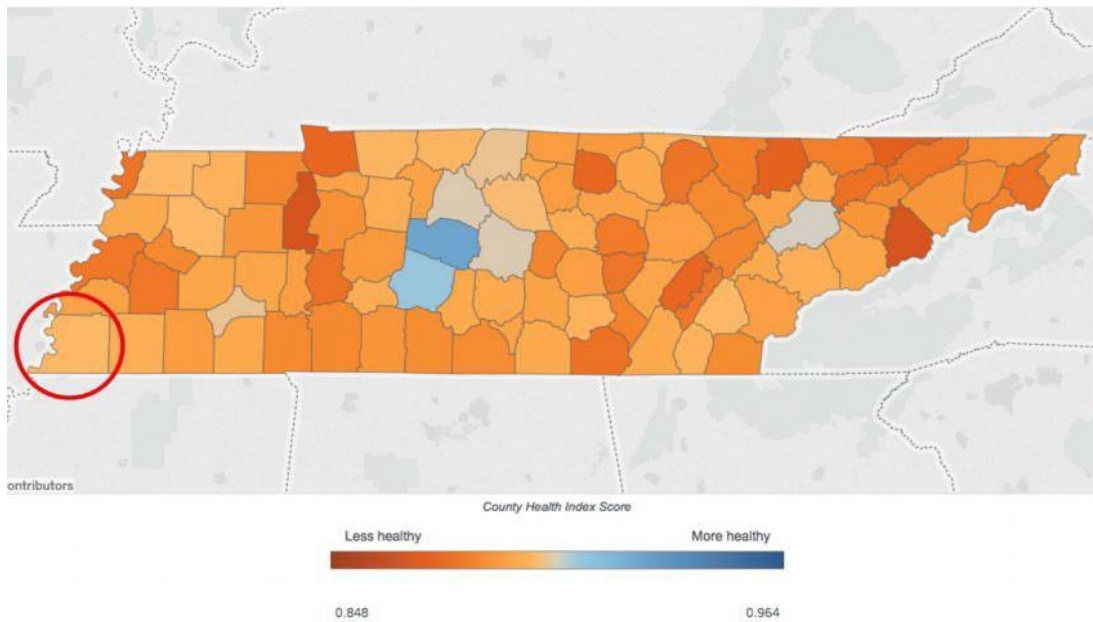
<p>Greater Memphis Workforce Development Board</p>	<p>The Workforce Development Board is a dynamic group of private and public sector partners, in partnership with local elected officials providing leadership, direction and policy oversight for the workforce delivery system in Greater Memphis to promote economic mobility and growth. The GMWDB oversees activities under the Workforce Innovation and Opportunity Act (WIOA) of 2014. The Board uses their knowledge of the local labor market and the economic forces impacting Greater Memphis to define the scope of work performed by the One-Stop Delivery System. The Board designates a “One-Stop” operator and identifies providers of training services, monitors system performance against established performance measures, negotiates local performance measures with the state board and the Governor, and helps develop the labor market information system. The Board is composed of a diverse group of people actively engaged in the community with knowledge of the local labor market and aligns resources towards effective workforce development in order to meet local area needs.</p>
<p>TN Department of Health</p>	<p>The TN Department of Health is the primary agency of the state government in Tennessee. Its workforce provides a variety of direct and indirect services to residents and visitors in all 95 counties of the state. The mission of the TN Department of Health is to protect, promote, and improve the health and well-being of all people in Tennessee. Health departments across the state provide various services, including primary care, family planning, preventative programs and screenings, nutrition education and others. They offer a wide variety of career opportunities across the state. The TDH Academic Health Department (AHD) provides opportunities for students, faculty, and academic institutions to partner with the TN Department of Health. The AHD centrally manages student experiences including internships, fellowships, medical residencies, and collaborative projects. The goal of the AHD is to engage students, educators, and new graduates in meaningful practice to protect and improve the health and well-being of people in Tennessee.</p>
<p>Shelby County Health Department</p>	<p>The Shelby County Health Departments' mission is to promote, protect, and improve the health of all in Shelby County. The vision of Shelby County Health Departments is building a community where everyone is safe, healthy, and valued with the mission to promote, protect, and improve the health of all in Shelby County. Shelby County Health Department, responsible for delivering all public health services and enforcing applicable health codes and ordinances of Shelby County and applicable statutes and regulations of the Tennessee Department of Health. With a budget of \$106 Million and comprised of seven (7) bureaus and 701 employees, the Shelby County Division of Health Services is committed to the improvement of community health, providing expertise in population health, epidemiology, environmental health, maternal and child health, TB elimination, healthy food access, sexual health treatment and counseling, infant mortality reduction, and public health emergency response.</p>
<p>The City of Brownsville</p>	<p>Brownsville is a city in and the county seat of Haywood County, Tennessee, United States. With an expected growth in population and businesses in the City of Brownsville and surrounding areas, the city is expected to be concerned about public health and will seek to employ trained and certified public health workers to improve health outcomes and health equity in the city and adjacent towns.</p>

Table 7: Evaluation measures of PH IDEAS Program

Evaluation Measures of PH IDEAS Program	
1	Establish PH IDEAS Executive Steering Committee
2	Develop CREATE unit.
3	Establish Public Health workforce task force.
4	Form a Collaborative Curriculum working group.
5	Hiring of a Project Director
6	Creation of a subject matter expert team.
7	Hiring of a workforce-based learning coordinator
8	Hiring of a public health workforce coordinator
9	Create a Data and evaluation lead team.
10	The number of recruitment and information sessions conducted to inform the students about this public health pipeline programs.
11	Track the number of students signing up and actually attending the information sessions.
12	Track the number of queries related to the proposed public health pipeline program.
13	Track the number of applications for the proposed pipeline program.
14	Track the number of students enrolled across various public health pipelines.
15	Report the number of students enrolled in the public health pipeline program.
16	Report the number of students completing the public health pipeline program.
17	Report the number of students acquiring work-based learning opportunities.
18	Report the number of students acquiring paid and unpaid work-based learning opportunities.
19	Report the number of community-based organizations/industry partners attending the PH IDEAS each year job fair.
20	Track the various industries where students get placement after completion of the pipeline programs.
21	Track the number of students graduation rate.
22	Track the number of students placed in the industry.
23	Track the number of students pursuing higher education.
24	Track the average salaries, roles and responsibilities and job titles and the organization types where students are placed.
25	Track 12-month employment outcomes data.

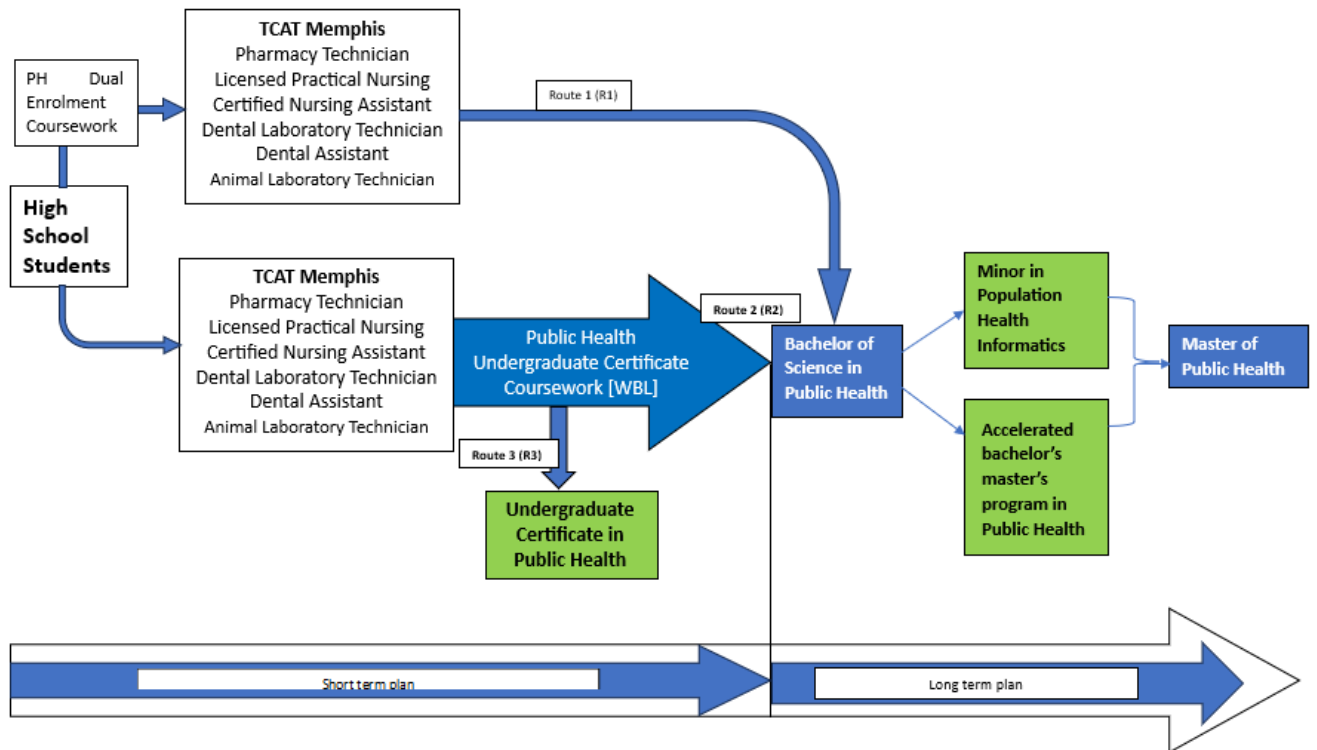
Appendix F: Figures

Figure 1. Map of Counties in Tennessee's health



The map of Counties in TN health using the BlueCross Health Index, a metric between 0 and 1, designating the proportion of optimal health reached by the county's population ³⁵.

Figure 2: Tracking pathways for PH IDEAS Work-Based Learning (WBL) program



This figure describes routes through Tennessee College of Applied Technology Memphis (TCAT) to obtain a public health undergraduate certificate; use this certificate to obtain stacked certificates through to obtaining a Master of Public Health degree. Route 1 (R1): Participating high school students enroll in the UofM SPH Dual Enrollment (DE) program and obtain up to 18 credits in the UofM SPH Public Health certificate program before high school graduation; these new high school graduates now enroll in identified TCAT programs; upon TCAT graduation, participating students enroll in the UofM SPH and use credits earned through DE while in high school to lower their needed credits to complete the Bachelor of Public Health (BSPH) program, then enter the public health workforce as degreed skilled workers. Route 2 (R2): Participating graduates of identified TCAT programs enroll in the 18-hour Public Health Undergraduate Certificate Program (PH-UCP) (which aligns with the course requirements of the DE Certificate program), obtain 18 public health credits via the PH-UCP, upon completion, participants enter the public health workforce as certificate-holding skilled workers, but complete the BSPH while in the workforce, using the PH-UCP credits to reduce the credits needed for BSPH completion and to upskill via acquiring a degree. Route 3 (R3): TCAT graduates enroll in the UofM SPH, complete the PH-UCP, and, upon completion, participants enter the public health workforce as certificate-holding skilled workers.

Figure 2: Timelines and Phases of the project

Project timeline: PH IDEAS Work-Based Learning (WBL) program																	
Activities	Metrics/Outputs	YR1Q1	YR1Q2	YR1Q3	YR1Q4	YR2Q1	YR2Q2	YR2Q3	YR2Q4	YR3Q1	YR3Q2	YR3Q3	YR3Q4	YR4Q1	YR4Q2	YR4Q3	YR4Q4
Phase 1: Preparatory and continuous feedback																	
1	Establish PH-IDEAS Executive Steering Committee																
2	Establish public health workforce task force																
3	Hiring a PH IDEAS project director																
4	Form a Collaborative Curriculum working group																
5	Creation of a subject matter expert team																
6	Hiring of a workforce-based learning coordinator																
7	Hiring of a public health workforce coordinator																
8	Create a Data and evaluation lead team																
9	Collaborative development and iteration of Public																
10	Develop, test and make live the PH IDEAS collaborative																
11	Develop Collaborative Recruitment Enrollment Advisement and Tailored Experiential (CREATE) unit																
12	Developing collaborative recruitment and marketing material																
13	Acquiring logistics for PH IDEAS Work-Based Learning program																
14	Revisit and complete certification process																
Phase 2: Finalize preparations, test and begin implementation																	
15	Complete collaborative development and iteration of Public Health in Action WBL Program																
16	Develop a robust and comprehensive evaluation plan to track the progress of the PH IDEAS program																
17	Active student recruitment																
18	Identify scholarship recipients																
19	Enrol Students																
20	Quarterly meetings: Public health workforce task force [including equitable workforce training, distribution discussions and actions]																

