



inspiring AGENTS OF CHANGE

UA ENLISTS UNDERREPRESENTED STUDENTS AS FUTURE LEADERS IN HEALTHCARE

Underrepresented high school students from two Alabama counties are benefiting from an innovative program preparing them for rewarding professions and opportunities to make a difference in the health and wellbeing of their state. Supported by a Science Education Partnership Award (SEPA) from the National Institute of General Medical Sciences (NIGMS) of the National Institutes of Health (NIH), The University of Alabama Capstone College of Nursing will become just the second state university system in the nation to empower students pursuing careers in healthcare through the Health Sciences and Technology Academy - Alabama (HSTA-AL). HSTA-AL is the first full-scale replication of the parent SEPA-funded HSTA program developed in West Virginia. Beginning with a pilot program in Hale and Pickens Counties, HSTA-AL will encourage students to pursue college degrees by offering after-school clubs to engage students in community-based participatory research; hosting summer camps on nursing, citizen science, and rural health disparities; and providing professional development to in-service and pre-service teachers.

The program supports inclusion in nursing, nursing education and nursing science roles by opening the doors to higher education for underrepresented high school students. Through an innovative mentoring infrastructure, this program will both coach students

toward academic success, and help demystify the transition from high school to college.

“Our state is in dire need for more practicing nurses, nurse scientists and nurse faculty from rural areas with diverse racial and ethnic backgrounds,” said Dr. Robin Bartlett, Associate Dean for Research at The University of Alabama Capstone College of Nursing. “To change this dynamic, we must encourage high school students from underrepresented populations to enter the field of nursing.”

According to the American Association of Colleges of Nursing nearly 40% of the U.S. population are Black, Indigenous, and people of color, but these groups comprise only about 20% of the nursing workforce (2019) and 16% of full-time nursing faculty (2017).

Dr. Bartlett continued, “Nurses from underrepresented and diverse communities have the potential to become change agents in their communities, employing their understanding and expertise to address health inequities that lead to poorer health outcomes among underserved populations.”

HSTA-AL was developed to help transform Alabama’s rural communities through the education and mentoring of rural students; in order to do that, members from those communities needed to be part of the program’s team as well, so local governing



boards were established in both Hale and Pickens Counties. Over the past year, members of these local governing boards have worked together to generate interest in their communities, and in the coming years, they will oversee student selection and after-school club programs.

Summer camps provide enriching and challenging learning opportunities as the students explore a variety of health-related topics, learn about biomedical careers, and gain skills that will prepare them to conduct successful community-based research projects in their HSTA-AL after-school clubs.

Rising freshman students from Hale and Pickens counties were encouraged to apply for the HSTA-AL program, which began with a week-long summer camp in June 2022. The local governing boards convened to review the applications and select students for the first year of HSTA-AL, ultimately sending 31 students to Tuscaloosa for a week at The University of Alabama.

"I chose to come to the HSTA-AL camp because I thought it would be a great experience for me to learn new things and better myself and my abilities," said Wyatt Sterling from Aliceville, Ala.

During their week at UA, camp counselors, teachers from HSTA-AL partner schools, and CCN faculty educated the students on health sciences, the healthcare industry and medical professions.

The camp, provided at no cost to HSTA students, will focus on a different biomedical theme each year.

This year's camp focused on research methods and epidemiology, offering presentations and lab exercises based on those topics.

Zyreuna Cousette, a rising freshman at Aliceville High School, dreams of becoming an OB-GYN physician.

"I applied to HSTA-AL because I wanted to learn more about health science and to get experience seeing what it's like in the medical field," said Zyreuna.

Her favorite part of camp was learning about epidemics and how germs spread. She also enjoyed learning how to properly insert an IV and give injections.

"I think these experiences will help me in the future because it has opened my eyes to some of the things I will have to do when I pursue my career as an OB-GYN."

"I can't wait to come back next year, it's a great program."

Another goal of the summer camp was to equip the students with the tools needed for academic success. Each day, the students attended brief math refresher classes and sessions on life skills and community engagement.

Outside of their daily sessions, campers also experienced campus life, staying in student dorms, touring labs and other UA facilities, completing a campus-wide scavenger hunt, and swimming at the UA Student Recreation Center Outdoor Pool Complex.

"It's really fun, and you feel like you're in college," said

Shyann Kearley, a Hale County High School freshman aspiring to be an ER Trauma Nurse. "You just get an experience I feel like not everyone can get."

Continuing the momentum from their summer camp, the HSTA-AL clubs at each school will meet weekly with their HSTA-trained teacher, participate in community service activities, and complete and present an annual community-based research project.

UA's HSTA-AL summer camp team included 10 counselors, five teachers from Hale and Pickens Counties, CCN faculty and staff members: Dr. Robin Bartlett, Courtney Greene, Mahelene Lanier, Dr. Paige Johnson, Brandi Lester, Dr. Michele Montgomery, Dr. Mercy Mumba, and Samford University's Dr. Betty Key.

ROADMAP FOR SUCCESS

HSTA began as a pilot program at West Virginia University in 1994 and has received four five-year SEPA awards totaling approximately \$5.6M since 1997. SEPA funds came from the National Center for Research Resources from 1997 to 2011, NIH Office of the Director from 2012 to 2017, and NIGMS from 2017 to present.

In West Virginia, the program funding overcomes social and financial challenges by providing substantial tuition support for students to pay for college and earn undergraduate and graduate STEM-based degrees. This funding apparatus has combined with HSTA's mentoring infrastructure to enable community leaders throughout the state to improve STEM education, boost college graduation rates, and expand their community's access to health and wellness services.

For West Virginia's HSTA program, the returns on investment are substantial. Over 3,000 West Virginians have participated in HSTA and program graduates are more likely to attend and graduate from college than their peers. Because they generally stay close to home to live and work, they enhance the local economy, address staffing shortages and provide improved health and wellness access for all citizens. HSTA graduates have the potential to earn over \$30,000 more per year than their highest earning parent, are more likely to be civically engaged, and to build a better life for themselves, their families, and their home communities.

It is the intention of the HSTA-AL team that our state will share in the same successes HSTA has brought to West Virginia.

To learn more about HSTA-AL, visit hstaal.ua.edu.

Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under SEPA Award Number R25GM142027. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

PAGE 6: Ah'Keria Peck practices inserting an IV. OPPOSITE PAGE: Aubrie Ballard performs an assessment on a fellow camper. TOP RIGHT: Gage Mayfield and Omarr Lewis practicing nursing skills in the Clinical Practice Lab. MIDDLE RIGHT: 31 students from Hale and Pickens counties attended the week-long HSTA summer camp at The University of Alabama. BOTTOM RIGHT: Jaden Witherspoon studies samples from a lab experiment.

