



# 2016

ANNUAL REPORT



**VCU**

Health Sciences Pipeline

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# OUR

# PURPOSE

The Division for Health Sciences Diversity (DHSD) is strategically positioned within the Office of the Vice President for Health Sciences to create programs that diversify the pool of applicants to VCU's health sciences professional programs.

We exist because there's a critical shortage of diversity among health care professionals. This lack of diversity is a result of the interrelated barriers underrepresented individuals

face regarding education, income, and health care when pursuing a health career. We implement the VCU pipeline to address these barriers by meeting students where they are, and tailoring services to meet their specific needs.

Our goal is to expose students to a wide variety of health careers through experiential learning, assist them in building and utilizing vital resources and networks, and boost their ability to meet and exceed academic and admissions requirements for the health professional program of their choice.

The VCU Pipeline embraces a holistic definition of diversity to ensure highly talented, diverse groups of students are afforded equitable access to academic and social resources through our robust network of health sciences professionals and community partners.

## ACCELERATION DATA:

Average 1st Year Retention Rate

**94.33%**

since 2005

Average 1st Year GPA

**3.18** since 2005

## HSA DATA:

**100%**

Graduation Rate from high school

**893** HSA Program Alumni

**25%** Attend VCU for Undergraduate Studies

**20%** Are Enrolled in Professional Level Training Programs

# HOW WE DO IT

VCU Pipeline Programs aim to educate, excite, and expose diverse students to various health care professions by providing them with hands-on experiences, resources to strengthen their academic skills, and simply helping them make informed decisions while pursuing the health care profession of their choice.

## ALLIED HEALTH CAREER EXPLORATION

Allied Health Career Exploration (AHCE) is a program designed to expose recent high school graduates, college freshmen, sophomores, and juniors to the diverse health sciences careers within the VCU School of Allied Health Professions. During AHCE students learn about career opportunities, experience hands-on activities within nine different disciplines and engage in professional development workshops.

## VCU SCHOOL OF DENTISTRY HIGH SCHOOL PROGRAMS:

- [Dental Career Exploration](#)
- [Dental Hygiene Career Exploration](#)
- [VCU Dental Scholars](#)

VCU's School of Dentistry has three programs that are designed to raise awareness about the field of dentistry to high schools students in the Greater Richmond Area. The Dentistry Pipeline programs offer exposure to the field of dentistry through lectures and hands-on laboratory experiences.

## FROM JUMPROPE TO STETHOSCOPE

From Jump Rope to Stethoscope is a community outreach program that introduces health care careers to K-12 students. Through various programming, such as the Mary E. Mahoney Health Career Camp or Nursing Explorations, students are given the opportunity to gain a deeper understanding of the healthcare field.

## GOVERNOR'S SCHOOL FOR MEDICINE AND THE HEALTH SCIENCES

The mission of the Virginia Governor's School for Medicine and the Health Sciences is to provide an enhanced curriculum for high school students that explores the health sciences and medicine through a systems-based, problem-solving approach that utilizes case studies, laboratory investigations, and real-world shadowing experiences.





## HEALTH SCIENCES ACADEMY

Health Sciences Academy (HSA) helps high school students from Richmond Public Schools and Chesterfield County Public Schools make informed choices about the health professions they wish to pursue. HSA offers a health sciences exploration course to students at Cosby High School's Health Sciences Specialty Center, Richmond Community High School, and John Marshall High School. The course includes interactive lectures from health care workers, a mentoring program with VCU undergraduates and field trips to the Monroe Park and VCU Health campuses. Participants also receive college credit.

## HEALTHCARE QUEST

The purpose of Health Care Quest is to provide middle school students from Richmond Public Schools and Henrico County Public Schools with early exposure to multiple health science careers and encourage students to consider health careers in their future.

## LEAP

The Learning Excellence in Academics Program (LEAP) is a program for high school students who are referred through the Virginia Rehabilitation Center for the Blind and Vision Impaired, and the Capital Area Health Education Center. The program focuses on the transition from high school to college in the context of exploring careers in health science professions, while building college readiness skills.

## PHYSICAL THERAPY CAREER EXPLORATION

The Physical Therapy Career Exploration Program exposes high school students to different specialties and aspects of physical therapy through lectures, reading discussions, research, hands-on workshops, and public speaking exercises.

## PROJECT ACEE

Project ACEe (Academic, Career and Educational experiences) is designed to expose Richmond Public Schools high school students to the medical profession by providing them with workshops and mentoring opportunities.

## SUMMER ACADEMIC ENRICHMENT PROGRAM

The Summer Academic Enrichment Program (SAEP) is an intensive inter-professional academic enrichment program. SAEP is designed to prepare undergraduate, junior and senior and post-baccalaureate students interested in health sciences, for admission into health professional programs. The primary focus of SAEP is to provide students with an academically rigorous experience that simulates the first year of health professional school. This is done through graduate level course work, interprofessional education, community engagement, and skill building.

## VCU ACCELERATION

VCU Acceleration is a comprehensive year-long program offered to incoming VCU freshmen. The program begins with a summer pre-matriculation session that includes an introduction to college level math and science courses and exposure to the health sciences schools at VCU. The program continues throughout their first academic year with a living-learning community. The living-learning community supports high levels of student interaction, increased interaction with faculty outside of the classroom, and collaboration through shared classes, study groups, and programming.

## PROGRAM PARTNERS

Capital Area Health Education Center

Chesterfield County Public Schools

Communities in Schools

Henrico County Public Schools

Richmond Public Schools

VA Department of Education

VA Rehabilitation Center for the  
Blind and Vision Impaired (VRCBVI)

VCU Health System Human Resources' Office  
of Workforce Development and Strategy

VCU Health Sciences Schools

VCU Strategic Enrollment Management



# BREAKING DOWN BARRIERS

## BUILDING CONFIDENCE

The underrepresentation of racial, ethnic, low-income, and first-generation college students in health professional programs is a health equity crisis. This issue translates to fewer health care providers from, and who will care for these populations as reflected in the Centers for Disease Control and Prevention's Health Disparities and Inequalities Report (2016), "During the past decade, documented disparities have persisted... residents in mostly minority communities continue to have lower socioeconomic status, greater barriers to health-care access, and greater risks for, and burden of, disease compared with the general population living in the same county or state." VCU's Health Sciences Pipeline exists for this very reason, but one of the single most pertinent barriers we see our students face is a lack of social and academic support at the high-school level. Underrepresented students, especially those in urban communities, are more likely to come from low-income families and attend under-resourced schools according to a report from the National Center for Education Statistics (2016). The built and social environment of the communities in which students live and learn affect educational attainment, which is why interventions are needed on a local level to help students overcome barriers and achieve success.

VCU Health Sciences Academy (VCU HSA) fulfills this need by partnering with the City of Richmond and Chesterfield County public schools to provide college-level coursework, mentoring, and experiential learning for underserved high school students interested in health care careers. This target population includes 120 students annually from the City of Richmond and Chesterfield County, of which approximately 60% are racial and ethnic minorities, and the other 40% are either low-income or potential first-generation college students. The public schools from which VCU HSA draws its participants face multiple challenges including a lack of teachers, counselors, funding, and other resources necessary to advance student success. These challenges converge in higher dropout rates, and lower rates of postsecondary enrollment as reported by the Virginia Department of Education:

- 10% of students in Richmond Public Schools' 2016 cohort dropped out of school
- More than 80% of these dropouts were under-served students
- Only 55% of high school graduates enrolled in college in 2015

These statistics are interrelated with disparities in college access, degree attainment, matriculation to graduate or medical school, and thus health care professions at large. According to the American Association of Medical Colleges, less than 25% of students entering medical schools across the nation identified as minorities during the 2013-14 and 2015-16 academic years. Increasing the diversity of medical college, then, means increasing the number of underrepresented students graduating high school, and enrolling in college feeling confident about pursuing careers in health care.

Studies indicate underrepresented students struggle in college because they enter with lower levels of career decision-making self efficacy in comparison to other students. Research from the Institute of Education Sciences' What Works Clearinghouse upholds VCU HSA's program design as "having positive effects on [underrepresented] students' degree attainment, college access and enrollment, credit accumulation, completing high school, and general academic achievement." This research is backed by the fact that 100% of VCU HSA's more than 500 participants who are eligible to do so have graduated high school and enrolled in college since the program's inception in 2008. The success of VCU HSA in capturing this metric lies within the combination of mentorship, experiential learning, and rigorous coursework. Program participants are paired with mentors – VCU senior level undergraduate students – at the beginning of the academic year, who help the students establish goals, find colleges, and create academic and career plans. Many students would struggle trying to navigate their way to college and beyond without the mentoring, academic preparation, and experiential learning VCU HSA provides. These resources help students gain the skills and experiences necessary for graduating high school, achieving success in college, and attaining their desired health care career. Formal program assessment indicates the program curriculum increases student levels of career decision-making self efficacy. Outcomes indicate students leave the health career exploration courses with greater levels of confidence in identifying occupational information, self appraisal, and career planning than when they entered the course.

# HEALTH CHECK



Since receiving national recognition in 2015, the Summer Academic Enrichment Program's Foot Clinic at St. Paul's Episcopal Church has served over 100 underserved patients in Richmond's City Center. This population consists of homeless or working poor individuals that often have little or no access to adequate healthcare. SAEP's Foot Clinic gives patients the opportunity to receive treatment for various foot ailments and request physician referrals to local clinics or VCU's Health System. The clinic also provides patients with health education materials on smoking cessation, cardiac health, and diabetes. In addition to patient care and education materials, patients are offered a pair of gently used walking shoes, cleaning and grooming materials for their feet, a clean pair of socks, and a dental care kit.

Graduate students and faculty members from VCU's Schools of Medicine and Pharmacy, and Physical Therapy Department have trained SAEP students in preparation for Foot Clinic sessions in previous years. This year, in an effort to further promote interprofessional healthcare, VCU's School of Dentistry also assisted in training students by incorporating an oral health screening into the clinic. This addition gave students the opportunity

to experience a more holistic approach to healthcare and resulted in the clinic's name change from Foot Clinic to Health Check.

In preparation for Health Check, several hours were spent educating students on the proper methods of cleaning and grooming feet, conducting a diabetic foot exam and measuring a patient's blood pressure and sugar by the use of a stethoscope, sphygmomanometer, glucometer, and lancet. Students learned how to identify abnormalities, defects, traumatic injuries and diseases of soft and hard tissues of the oral cavity, and the association of oral manifestations of systemic diseases. VCU Health Faculty and current Health Sciences students of all disciplines stressed the importance of patient education and trained students on the processes for verifying a patient's history for common chronic problems and obtaining a patient's medication list.

## DATA FROM THE 2016 SAEP POST-PROGRAM SURVEY:

**90.91%**

of respondents felt prepared to **well-prepared** to **serve the clients**.

**100%**

respondents **Appreciate** the relevance of **health checks** from different professions.

**96.96%**

respondents felt the experience was **good to excellent clinical skill building**.

**100%**

respondents felt the experience was **good or excellent** in terms of their **professional goal relevancy**.

**93.94%**

respondents felt the experience was **quality community outreach**.

**100%**

respondents felt the experience was **good or excellent** exposure to a **diverse patient population**.

**100%**

respondents felt it **enhanced** their **communication skills** with patients.

# GOOCHLAND CLINIC

"Volunteering at the clinic has made me realize that the patient's problem doesn't just begin and end with the disease or its symptoms. It is more long term and broad than that. It is important to understand the root cause of the problem. For instance, the patient's distress may be linked to stress, depression, poor living conditions, poor working conditions, financial problems, poor food quality, addiction etc. It is important to have an open mindset and understand the situation of the patient when interacting with them."

- *Bharti Patel*

"I really enjoyed the interaction with Dr. Bradner and the pharmacy students. Hearing them discuss the patient diagnosis and hearing the terminology used was educational. I also enjoyed volunteering and taking patient vital signs. Communicating with them and hearing their different stories were humbling. I will always value this experience!"

- *Aysia Guide-Robinson*

"I learned to take patient's vital signs. It was my first time getting hands-on experience with patients so I really appreciated the opportunity. Besides, I received helpful advice about treating patients from the medical students and the doctors on the team."

- *Han Duong*

For the past six years, Dr. Melissa Bradner, MD and Associate Professor at VCU School of Medicine has been running a health clinic in which medical students, Pharmacy students, and undergraduate Pipeline students help give much needed care to the uninsured and under-insured people of Goochland.

In 2011, Dr. Bradner approached the VCU Pipeline to recruit undergraduate students to participate in the clinic because it has been proven that students from underrepresented and disadvantaged backgrounds are more likely to continue to work with these communities in future health professional careers. To date, approximately 48 VCU Pipeline students have participated in the Goochland Clinic. Her enjoyment working with the Pipeline

students is always so apparent, as she puts it, "Getting to meet young optimistic enthusiastic students from diverse backgrounds — it's the best way to learn about the potential future of our country." Each semester new VCU Pipeline students are selected to work beside Dr. Bradner and the professional students at the Goochland Clinic.

In preparation for the clinic, students complete a two hour orientation and training. During this time, they learn about the population they will serve and how to conduct the social history questionnaire that is given to each patient. Finally each students is taught how to take vital signs such as temperature, respiratory rate, heart rate, and blood pressure.



# STUDENT



## ANDACIA RHYME

**Health Sciences Academy 2014 / VCU Acceleration 2016**

*Freshman, Virginia Commonwealth University*

"I participated in VCU's HSA as a Sophomore, with every lab and lecture, I grew confident that I could actually be the doctor that I have always dreamed of. Throughout the course of that semester, I was also introduced to the VCU Acceleration program. It's a year long program that's meant to get first students acclimated with the demands of college and pre-health studies. During my first semester, I had become a disciplined student, I was accepted into the Honors College, and I was accepted to become a HSA mentor. Back when I was a Sophomore at Cosby, my mentor made it a priority to keep me interested in my goals, which is something that will stick with me forever. I figured that it'll be cool to give that back to somebody else which prompted me to apply to become a mentor myself. Needless to say, VCU's pipeline has been and continues to be an important vessel to my Journey to Medicine."



## CHIOMA VERA OKONS

**VCU Summer Academic Enrichment Program 2015**

*BS, Public Health Studies, East Carolina University 2016*

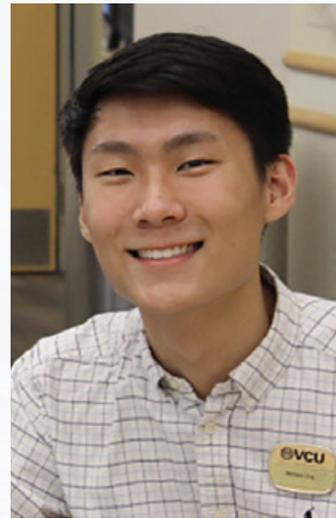
"The most interesting piece of the VCU Pipeline Program for me was volunteering at a local church hosting a free foot clinic for those in need in downtown Richmond. Days leading up to the event, we were trained and instructed by VCU professional students and faculty. I was really amazed and inspired by the students and health professionals who took the time out of their schedules to come in and teach us how to deliver foot care specifically for individuals with or at risk for diabetes, monofilament exams, and assess range of motion. All the individuals at the church were very thankful to have us there and the gratitude was mutual because it was a wonderful experience that I'll never forget."

# SPOTLIGHTS

## MICHAEL ONG

***VCU Physical Therapy Career Exploration 2015 / VCU Dental Scholars 2016  
Health Professions Career Exploration 2016 / Freshman, Duke University***

“When hearing the word ‘health,’ many assume medicine; however, there are many other pathways such as dentistry or allied health. I admittedly was one of those who jumped straight to medicine, but after the programs, I learned a lot about what paths I can pursue. I’ve done a bit of experiential learning in medicine, and now I have decided to explore research. What I find so captivating about [environmental medicine] is that there are so many environmental factors affecting our health yet we are unaware of most of them. The chemicals that are used to manufacture products we use everyday potentially have adverse health effects.”



## SYMONE HOPKINS

***Health Sciences Academy 2012 / BSN, Hampton University 2016  
Registered Nurse, Bon Secours St. Mary's Hospital, Richmond, VA***

“The VCU Pipeline program prepared me... for what was to come in my particular major and gave me so much more appreciation for other healthcare professionals. As registered nurse I have the responsibility to take 4-5 patients and aid them back to health with the help of several different other healthcare occupations. Healthcare is such a rewarding profession. Every day is something new, someone new and so much to learn. Seasoned nurses are still learning after 20 + years and it makes your job much more enjoyable.”



# DIVERSITY

VCU Division for Health Sciences Diversity is able to provide students with invaluable education and career resources with the help of VCU campus and community partners, volunteers, and donors.

Our advocates, partners, and friends enrich underrepresented students' experiences through VCU Health Sciences Academy, VCU Acceleration, and the Summer Academic Enrichment Program. These programs benefit students by providing instruction, mentoring, training, and hands-on exposure to health sciences professions. Many of the students enrolled in these programs come from backgrounds in which their academic and career resources may have been limited.

The Division for Health Sciences Diversity has a track record of not only enrolling, retaining, and graduating underrepresented students at VCU, but also helping those students matriculate to careers in health care.



# DIFFERENT WAYS TO



You can help us advance diversity in health care through any of the following methods:

## STRENGTHEN

VCU campus and community partnerships strengthen our programs by expanding the network of resources available to our students, casting a wider net, and making our cause more visible in the community at large. If your organization, department, school, or business aligns with our mission, and you'd like to help out with one of our programs, please contact [dhds@vcu.edu](mailto:dhds@vcu.edu).

## SUPPORT

VCU Division for Health Sciences Diversity leverages the strengths graduate students, faculty, and staff to support our students by volunteering as instructors, mentors, and/or speakers. Graduate students in the health sciences and health professionals who would like to volunteer for Division for Health Sciences Diversity can do so by reaching out to [dhds@vcu.edu](mailto:dhds@vcu.edu).

## SUSTAIN

You can now make charitable cash donations to VCU Division for Health Sciences Diversity through our online giving form. Just log on to [dhds.vcu.edu](http://dhds.vcu.edu), click on the donate tab at the top of the page, and follow the prompts to make your secure, tax-deductible donations through the Medical College of Virginia Foundation. Your gifts help diversify the pool of students applying to health professional programs and ultimately entering careers in health sciences by funding educational and service-learning activities to which underrepresented students historically have limited access.



# THANK YOU



Now, more than ever, we are reminded of how truly thankful we are for our campus and community partners, as well as anyone who has supported our mission to diversify the VCU community and the healthcare field. This year, your support helped us provide quality education, service learning, outreach, and clinical exposure for over 994 students from highly diverse backgrounds. These are resources that students might not have access to outside of the health sciences Pipeline.

We know VCU will remain a purveyor of difference and genuine interest — the heart of diversity — because you make up the VCU community, and your voices shape what we do. We thank you for taking a step forward with us in 2016, and continuing to support us as we aim even higher next year.

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# #VCUPIPELINE

From volunteer opportunities to pipeline application updates, connect with the Pipeline Team on social media to stay updated.



[dhsd.vcu.edu](https://dhsd.vcu.edu)



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**@vcudhsd**

*Allied Health Career Exploration*

**@healthprofessionscareereexploration**

*Health Sciences Academy*

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# VCU

## Health Sciences Pipeline

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