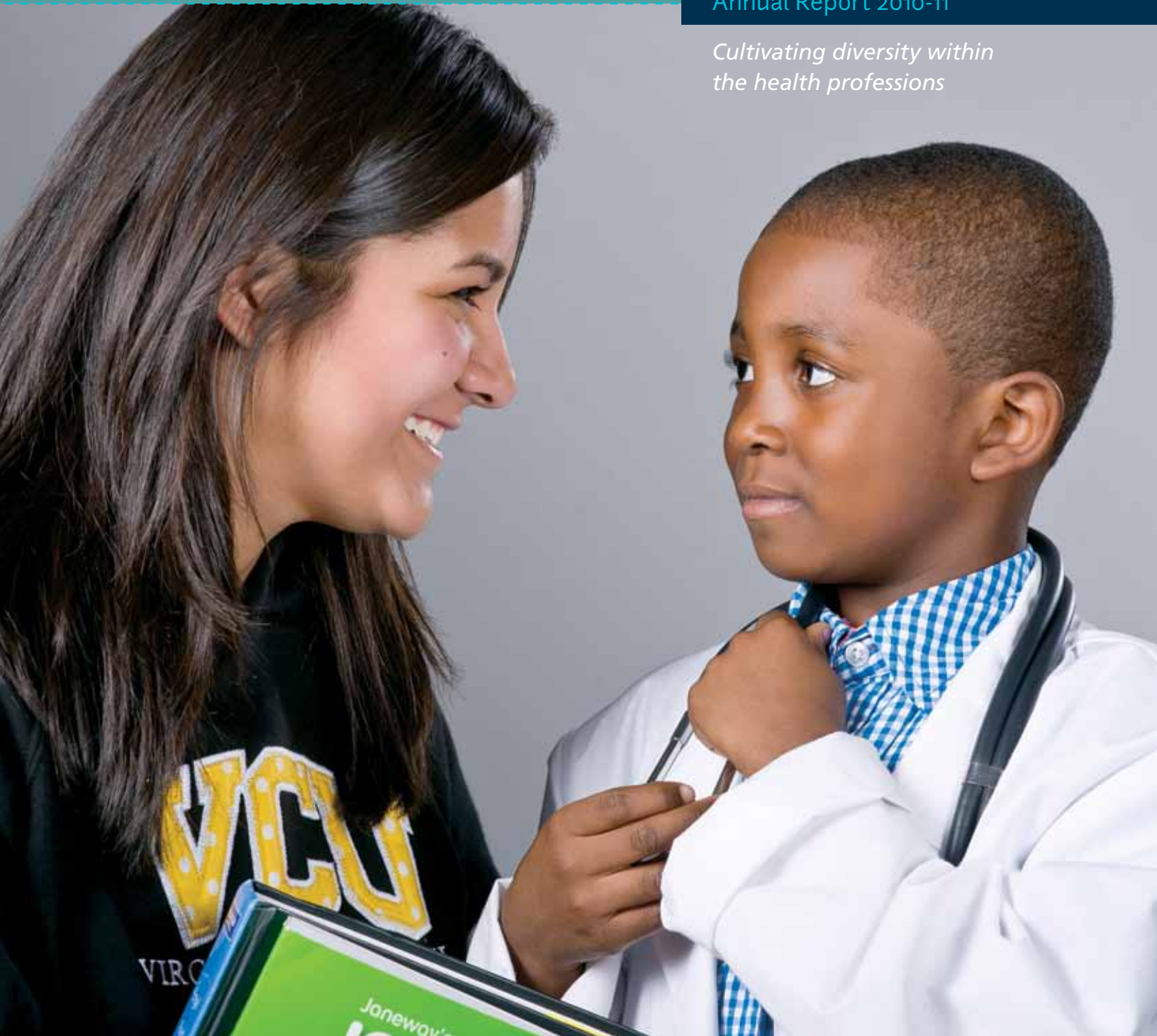


VCU

Health Sciences and Health Careers Pipeline Programs

Annual Report 2010-11

*Cultivating diversity within
the health professions*





VCU Cultivating diversity within the health professions

The following report reflects the culmination of many great ideas and the generous effort made by members of Virginia Commonwealth University and its community partners to sustain the VCU Health Sciences and Health Careers Pipeline, also called VCU Pipeline. This report covers the 2010-11 academic year, but the ideas and effort extend further back.

VCU's efforts to develop a coordinated health sciences pipeline model began in 2005 as a project of the **Grace E. Harris Leadership Institute**. Strategies were developed to centralize recruitment, data management and evaluation for VCU health careers and research training programs — essentially developing a sustainable infrastructure. With oversight from a campuswide Workforce Diversity Committee, VCU Pipeline has resulted in a number of relationships at both the strategic and operational levels that combine staff and fiscal resources universitywide. For example, the Division for Health Sciences Diversity has substantial and effective partnerships with the Office of Pre-health Advising, Division of Community Engagement, Life Sciences and the VCU health sciences schools. Through these partnerships and a stable and increasingly expanding infrastructure, VCU is positioned to enhance diversity within the health professions locally and at the state and regional levels.

The pages that follow recount the numerous partnerships that have been strengthened or developed in the past year. Stakeholders have worked together to lay a strong foundation for future expansion of the VCU Pipeline to include broader interaction with the new Virginia Health Workforce Development Authority. **This statewide effort provides a platform for multiple organizations to share ideas and best practices intended to increase diversity and access for individuals interested in a health professions career.** The report also highlights the vision of VCU leadership and the generosity of VCU faculty and staff members to ensure students, regardless of background, have an opportunity to succeed at VCU. Finally, many thanks go to the Workforce Diversity Committee and others who contribute to advancing diversity efforts at VCU.

I want to cure cancer.

I'm going to create robotic medicines.

I will get rid of cavities for good.

I want to help athletes get better fast.

I'm going to make the hospital a fun place to be.



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VCU Pipeline: A centralized program model that now features 21 on-campus programs focused on increasing awareness of health careers in individuals who are from diverse backgrounds.

“If someone has an innate ability and aptitude and just needs help because of early life experiences, why would you not want to help them?”

– David Sarrett, M.S., D.M.D., dean of the School of Dentistry and associate vice president for faculty affairs for VCU Health Sciences

What is the VCU Pipeline?

For more than 30 years, VCU has been dedicated to serving students from disadvantaged backgrounds who are interested in pursuing a career in the health professions. For several years, VCU received federal funding through the Health Resources and Services Administration in the form of a grant known as the Health Careers Opportunities Program. Following the loss of HCOP funding in 2006, VCU provided institutional resources to support two programs: Summer Enrichment Day Camp, now known as S.E.E.D., and VCU Acceleration. In addition, several other programs were developed using funding available from grants and partnerships, resulting in programs such as Reaching Academic Milestones through participation and Service (RAMpS) and the Cosby High School Health Sciences Exploration Course. Each program is profiled in this report.

Programs range from one-day workshops to 10-week research internship programs. The programs may run during the summer or at different times throughout the academic year. In addition, the age ranges of students participating in the programs vary. Programs are available for students in elementary and middle school, such as the S.E.E.D. program, as well as to students who are preparing their applications to enter professional school, such as RAMpS. ***Since the centralization of the core pipeline efforts, the true effectiveness of the pipeline has begun to emerge, effectively “handing-off” students to the next academic phase in the pipeline.***

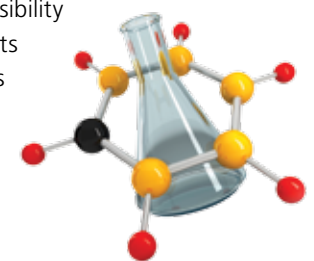
In 2009, the VCU Office of the Vice President for Health Sciences established the Division for Health Sciences Diversity to serve as the central office responsible for implementation of the VCU Pipeline model.

David Sarrett, M.S., D.M.D., dean of the School of Dentistry and associate vice president for faculty affairs for VCU Health Sciences, says the pipeline program offers students opportunities and early life experiences that have a “major influence on your chance of being successful at this level of education.”

“If someone has an innate ability and aptitude and just needs help because of early life experiences, why would you not want to help them?” Sarrett says. “What we should all be about is trying to help people to be successful.”

To assist the division, the multidisciplinary Workforce Diversity Committee has assumed responsibility for establishing goals for the VCU Pipeline and ensuring coordination of common elements among independent programs. The division staffing structure and subcommittees mirror VCU’s Pipeline operational areas in:

- Marketing
- Evaluation
- Data management
- Common curriculum



The VCU Health Sciences and Health Careers Pipeline

PHASE I Preschool 5th grade

Build partnerships with community-based organizations
Lobs & Lessons

PHASE II 6th grade 8th grade

Discovery@VCU X-Treme Healthcare
S.E.E.D. Mary E. Mahoney Nursing Camp
Science, Explore, Exercise, Develop

PHASE III 9th grade 12th grade

Boy Scouts of America Health Career Explorers
Cosby High School VCUHS Junior Volunteers
Dental Career Exploration VCU Scholars
Physical Therapy Career Exploration Project ACEe

PHASE IV Pre college, college, post baccalaureate

Academic and Clinical Skills Symposium Research programs
VCU Acceleration program RAMpS Dental

Since the centralization of the core pipeline efforts, the true effectiveness of the pipeline has begun to emerge, effectively 'handing-off' students to the next academic phase in the pipeline.

School of Nursing

School of Allied Health Professions

School of Medicine

School of Pharmacy

School of Dentistry

VCU Pipeline goals and objectives

The goal of the VCU Pipeline is to increase awareness and utilization of VCU Health Sciences and Health Careers Pipeline programs, with a special focus on increasing the number of under-represented minority and disadvantaged students admitted to health profession schools.

The following seven objectives provide the operational and implementation framework for the VCU Pipeline:

1. Develop a common VCU Pipeline goal that is adopted and institutionalized by participating programs
2. Sustain commitments by schools and stakeholders to establish linkages among the programs
3. Establish effective partnerships with community-based organizations
4. Develop educational components to support a connected experience for participants among each vertical pipeline phase
5. Implement effective processes to "hand-off" and "recruit" students to subsequent phases
6. Establish an evaluation framework with appropriate metrics and success measures
7. Develop a well-functioning central coordinating entity

The VCU Pipeline is relatively young, but there has been no shortage of significant achievements during its first years of operation. There have been a number of institution- and student-based achievements since the transition to the comprehensive pipeline model. Following are a few examples:

- Increase from 14 to 21 programs from 2007 to 2011 with a total of 1,285 participants
- Centralized website, www.dhsd.vcu.edu, with social networking tools
- Centralized marketing and recruitment materials with growing centralization in recruitment processes
- Centralized database with online application featuring remote access for partnering programs and customized reporting capabilities

Many participants are persistently staying on course to become health professionals. We aim to match their persistence and to continually equip our students for their journey with state-of-the-art information and support.



I'm going to make sure all foods are safe for kids.



Pipeline program participants (above) enjoy the annual summer BBQ. VCU hosts the 2010 NAMME College Student Development Program (right).

The VCU Health Sciences and Health Careers Pipeline programs hired a director of recruitment for the spring of 2011. Marketing and recruitment activities were aimed at high school and middle school students, as well as teachers and counselors, and more than 30 events were attended.

Pipeline BBQ

The annual summer BBQ provides an opportunity for summer pipeline program participants to interact and network in a relaxed social atmosphere. The tradition, established by a single program, now boasts six pipeline programs and an attendance of approximately 80 students.

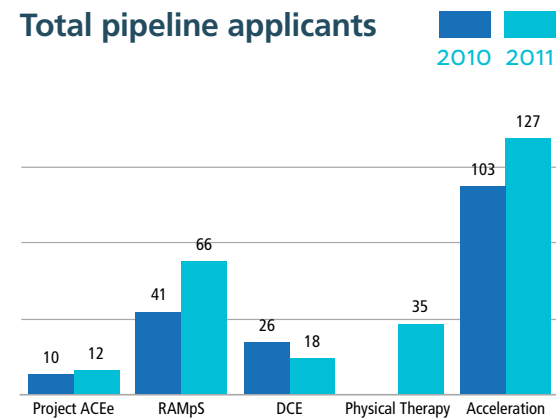
Activities include an introduction to the James River and the city of Richmond's park systems; games of dodgeball, kickball and chess; and food, fun and relaxation from the rigorous summer course load.

Pre-Health Advisors Conference

The 2011 Regional Pre-Health Advisors Conference drew 26 pre-health advisors from 14 four-year institutions and one community college, ranging from Pennsylvania to North Carolina. The conference gave advisors the opportunity to connect and discuss "hot" items. Representatives from nine VCU schools, departments and programs presented workshops and informational sessions to the advisors on various methods for enhancing student success.

Making an impact on Virginia

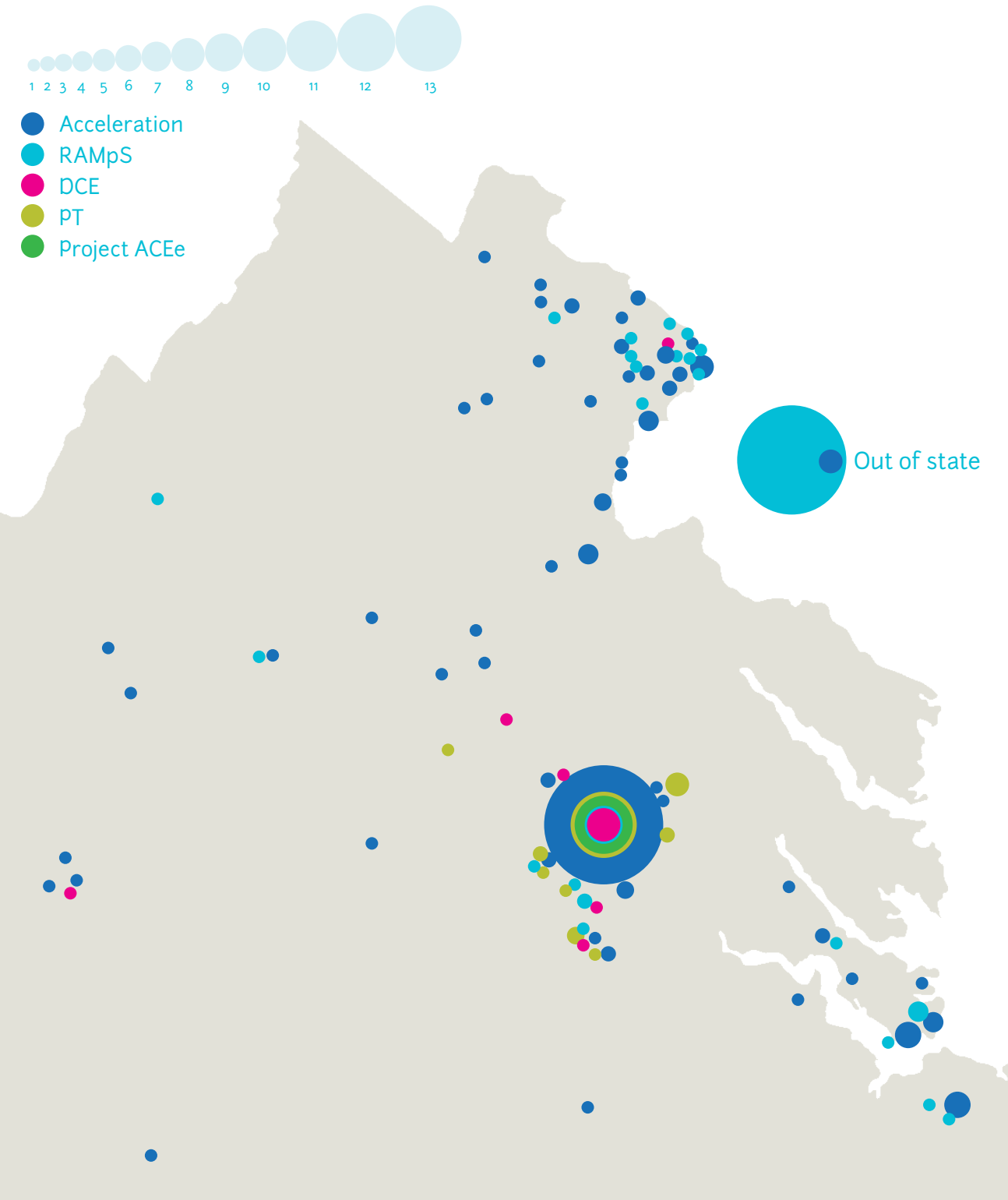
The goal of outreach for the VCU Pipeline programs is to create relationships and build awareness, in essence, creating a market for our programs. Our market includes students, teachers, administrators, school counselors and community partners. With an increased focus on Richmond Public Schools and Virginia rural communities, we are developing a personalized approach for those schools visited. We also continue to grow our relationships with high schools and colleges across Virginia and within the VCU community, working closely with the VCU Office of Pre-health Advising, the VCU Office of Undergraduate Admissions and the VCU Office of Alumni Relations.



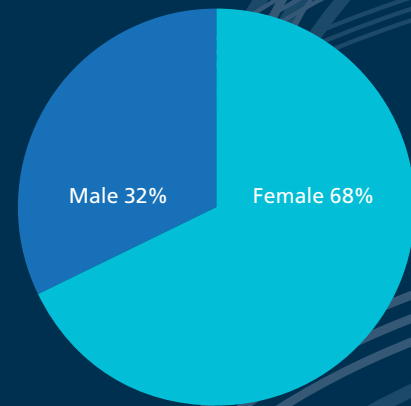
40 total recruitment activities

Type	
Fairs	21
Presentations	12
Conferences	7
Audience	
High school	26
Middle school	5
Elementary school	1
College	5
Teachers/counselors	3
Location	
Richmond Public Schools	16
Rural	5
VCU	9
Other	10

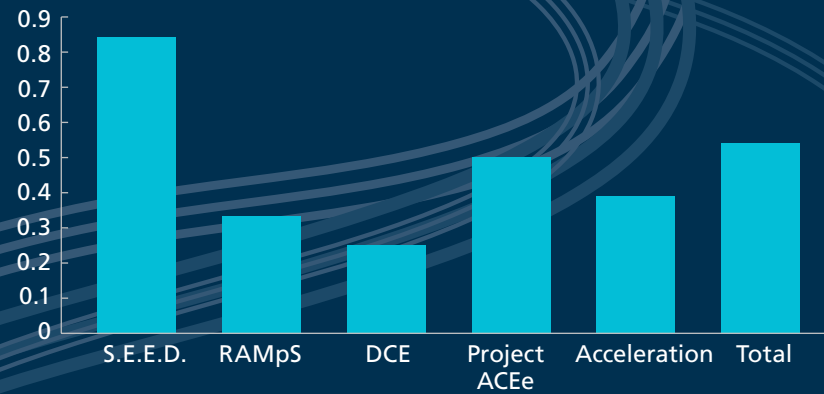
Pipeline applicant hometowns



2010 Participant gender



2010 Percentage of first-generation college student participants



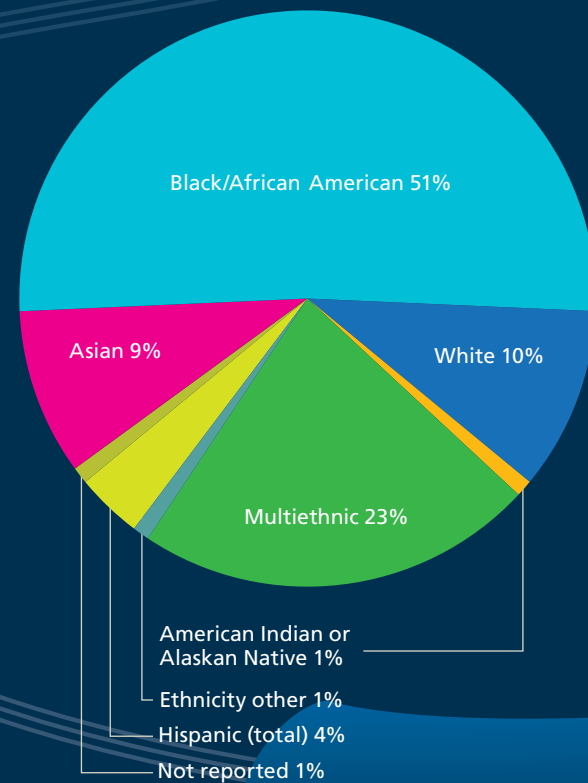
Where are they now?

Degree Program	VCU	Other	Total
Bachelor of Science, Nursing	9	0	9
Bachelor of Science, Clinical Laboratory Sciences	8	0	8
Bachelor of Science, Clinical Radiation Sciences	2	0	2
Post-baccalaureate Certificate Programs	3	2	5
Master of Science, Nursing	1	1	2
Master of Science in Occupational Therapy	0	1	1
Master of Public Health	1	2	3
Master of Pharmaceutical Sciences	1	0	1
Doctor of Pharmacy	4	0	4
Doctor of Medicine	0	1	1
Doctor of Osteopathic Medicine	0	1	1
Doctor of Dental Surgery	14	9	23
Total	43	17	60

Richmond program participants – 2010

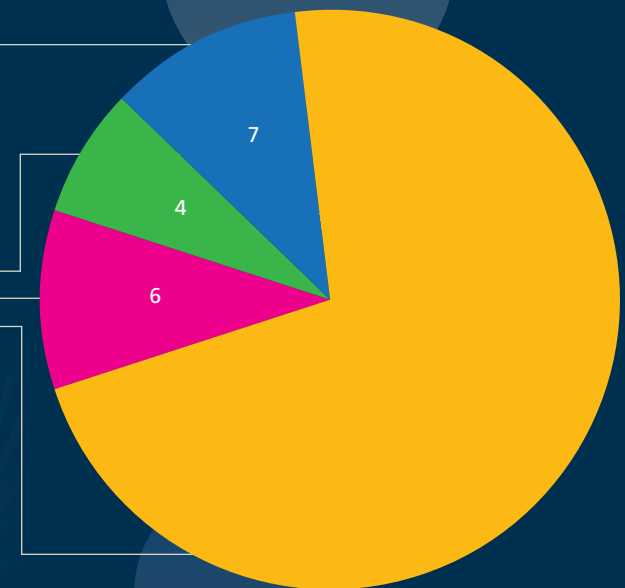
School	Total participants
Woodville Elementary School	3
Bellevue Elementary School	1
George Washington Carver Elementary School	5
Chimborazo Elementary School	1
Richmond Community High School	6
Huguenot High School	2
Maggie L. Walker Governor's School	2
George Wythe High School	1
Franklin Military Academy	2
Precious Blessings Academy	1
Total	24
Percentage	22.43%

2010 Participant race/ethnicity



Location of VCU Pipeline participants

- Mid Atlantic (VA, NC, MD, DC) 11%
- Northeast (MA, NY) 7%
- Other (TX, MI, AZ, GA) 10%
- Virginia Commonwealth University 72%



Core programs included in participant data: Dental Careers Exploration, Project ACEe, S.E.E.D, VCU Acceleration and VCU RAMpS

Pipeline participants from 2005-10, enrollment or graduation as of fall 2011

S.E.E.D. Science. Exercise. Explore. Develop.

The S.E.E.D. program, formerly known as Summer Enrichment Day Camp, is run through a partnership with the Mary and Frances Youth Center, part of the Division of Community Engagement, and the Division for Health Sciences Diversity through a grant from the Howard Hughes Medical Institute. The program allows for 40 rising sixth-grade students to participate in a fun and educational science program that introduces them to the many health career options available. Students are selected by their home schools from Richmond Public Schools, Hopewell Public Schools, Henrico County Public Schools and Charles City County Public Schools.

The program relocated to the Mary and Frances Youth Center at VCU during the summer of 2010. The center, with its flagship program, Lobs & Lessons, opened its doors in 2007 and offers two private tennis courts and classrooms designed for youth programming.

Lobs & Lessons aims to teach young elementary and middle school-aged children about life skills and healthy lifestyles through the sport of tennis.

The mission of the Mary and Frances Youth Center "also includes teaching about a healthy lifestyle, which was a perfect fit for the S.E.E.D. program," said Tina Carter, the center's director.

The addition of S.E.E.D. to the programming already offered at the center enabled an additional 40 students to participate in summer programs, while also incorporating health professions into a full-day curriculum.



S.E.E.D. students receive one-on-one tutoring.

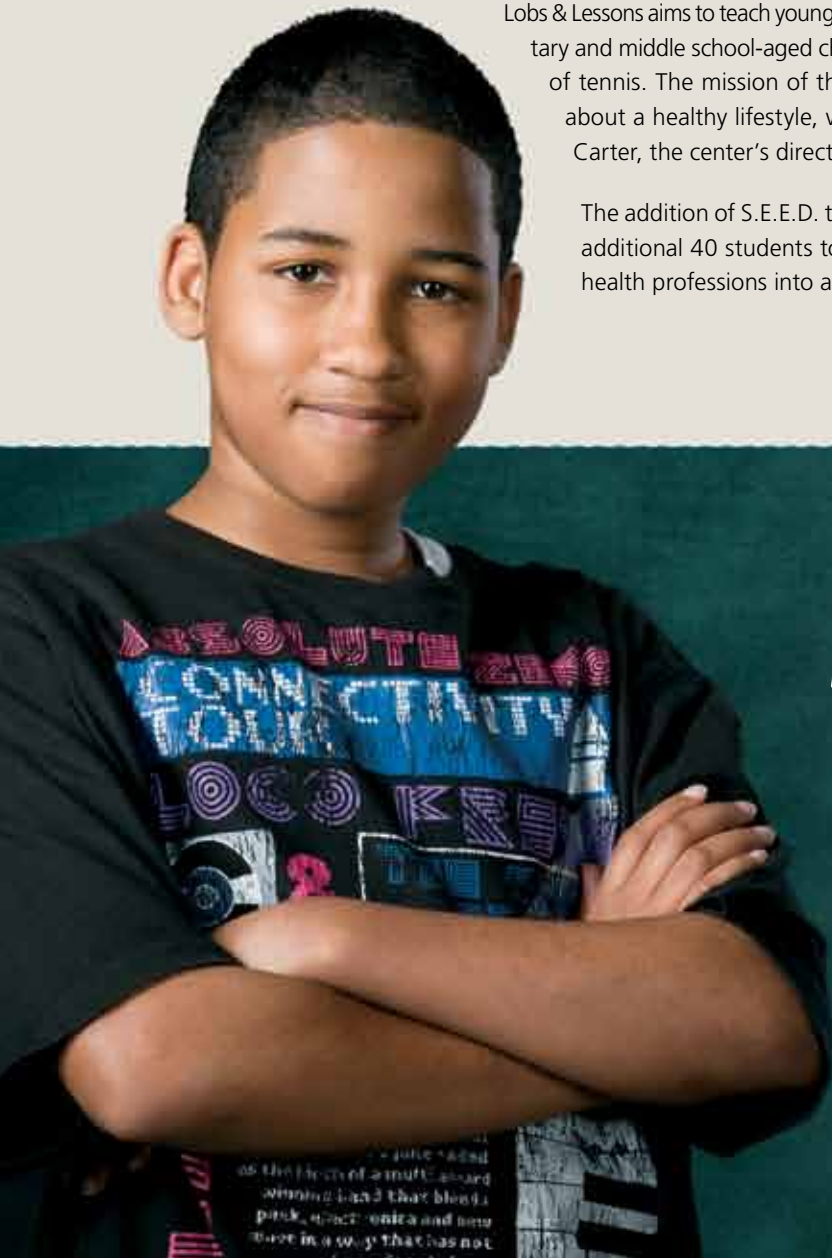
The S.E.E.D. program also gives young students an opportunity to continue working on their educational studies during the summer months. Students participate in exciting science workshops provided by the Science Museum of Virginia and receive individual tutoring in math and reading from undergraduate students in the VCU Acceleration program. This programming allows for younger students to be able to explore the world of science in a nurturing environment.

"As youth develop, their ideas of what they want to be when they grow up changes," Carter said. ***"Youth are influenced by their surroundings and peers. By working with underserved youth who have identified an interest in health science at an early age, we can show them a variety of career options that they never imagined or help them streamline their interest, while at the same time showing them the opportunities that are obtainable."***

Although the S.E.E.D. program has been operating for five years, there are many exciting possibilities ahead. "I believe our schedule offers a winning combination of presenters, field trips and academic support," Carter said. "Each year, we will continue to bring in new ideas based on the feedback of the participants, school districts and staff. With the popularity of the program, it would be great to add one additional school district or to serve up to 10 additional students from our current districts."



The Mary and Frances Youth Center, home to Lobs & Lessons, also hosts the S.E.E.D. program.



KAE'VON BROWN

S.E.E.D. PARTICIPANT, SUMMER 2010

SEVENTH-GRADER, JOHN ROLFE
 MIDDLE SCHOOL, HENRICO, VA.

I'm going to be a doctor.

What was your favorite part of the program?

My favorite part was swimming and tennis.

What was the most interesting thing you learned during the program?

While on field trips, I learned that doctors save peoples' lives and give CPR. I also learned how to do a DNA test.

Did the tutoring over the summer help you get ready for classes?

What was something your tutor helped you with?

Yes, she helped me with reading, math and science.

What about the program most surprised you?

I was surprised when doctors came and showed us what they do, and science people came and showed us what they do. We learned to cook and a chef came.

Cosby High School Health Sciences Exploration Course

The Health Sciences Career Exploration Course taught at the Health Sciences Specialty Center at Cosby High School in Chesterfield County is a unique learning experience offered to high school students. The students participating in the course are 10th-graders who were selected through competitive admission to the specialty center at Cosby High School. VCU's involvement in the specialty center began in 2006 when Sheryl Garland, vice president of health policy and community relations for the VCU Health System, was contacted by the planning committee with an invitation to collaborate with the center. Seth Leibowitz, Ed.D., director of the VCU Office of Pre-health Sciences Advising, presented the idea of using the health careers exploration course that was already being taught to first-year VCU students.

"Since the mission of the center deals with helping students make career decisions, the idea of the health careers exploration class being integrated into the specialty center was well received," Leibowitz said.

The Health Sciences Exploration Course offers a unique experience to high school students to explore various health careers through lectures taught at their high school, accompanied by trips to VCU to gain more in-depth information about the material covered in their courses. The high school students are assigned an undergraduate VCU student as a mentor during the class, which provides students with additional information about the pre-health program and also assistance and guidance on assignments.

The course runs through 15 weeks during the spring semester. Leibowitz credits the skilled instructors and coordinators for giving the students such a comprehensive and in-depth look at the health professions. In the past three years, the syllabus has continued to grow.

"The curriculum has improved going forward, and this year we were able to add many more bells and whistles," Leibowitz said. "A highlight of this year's class was a visit to the Critical Care Hospital where each student had the opportunity to shadow one-on-one with health care workers during a normal work day."



ALEXANDRA
LEONARD

COSBY HIGH SCHOOL HEALTH
SCIENCES EXPLORATION COURSE
PARTICIPANT, SPRING 2008

VCU SCHOOL OF NURSING,
CLASS OF 2014

I'm going to be a nurse.

Early results of the class have already begun to emerge, as the first class that participated in the Cosby High School Health Sciences Exploration Course in 2008 graduated high school in 2010. Of the 42 students participating in that course, seven students chose to attend VCU for their undergraduate studies. Leibowitz now sees many of those students in the Office of Pre-health Sciences Advising.

"I am very proud of the seven students from the first class that came here," he said. "I have gotten to know four of them very well, and it's good to see they have been fully integrated into the VCU culture and are very happy here. I've recently learned another three are transferring here from the schools where they started out to our undergraduate programs, and I just found out 23 from the graduating class in 2011 are coming to us this fall. That is fantastic!"

The future of the Cosby High School Health Sciences Exploration Course contains many possibilities. Interest in duplicating the program in other area high schools has risen with the initial success that has been garnered from the first graduating class from Cosby High School. "The possibilities are limitless in terms of the impact we can have on individual students and the community," Leibowitz said.



Cosby High School students receive hands-on instruction during a field trip to VCU.

Why did you apply to the Cosby program?

I was originally districted to go to another high school, but I wanted to explore the health professions. The course was a good way to find out if you were interested in a health field.

What did you learn from the Health Sciences Exploration Course?

I was originally interested in nursing and physical therapy, and through the class we learned about all of the schools down here [in Richmond]. Through the course, I found that I liked nursing more, because there are just so many things that you can do with your degree! I have already been admitted to the VCU School of Nursing.

What did the class teach you about VCU?

I live close, only about 20 minutes away, and when you live that close, it doesn't occur to you just how good of a school VCU is, but it's really one of the best schools available if you're interested in a medical field. The mentors that were already in college gave us an idea of how it really is in college, especially with lecture classes. Also, Dr. Leibowitz helped to advise me even before I got to VCU, which helped to boost my resume and select classes.

VCU Acceleration

The VCU Acceleration program began in the summer of 2005 with a partnership between the then-Division of Health Careers/Education and Special Services for Students on the MCV Campus and the Office of Pre-health Sciences Advising on VCU's Monroe Park Campus. The program was designed for incoming VCU freshmen as a way to prepare them for the rigors of the undergraduate pre-health sciences curriculum, while simultaneously giving students an inside look at the health professions. Today, the program serves as one of the core programs in the VCU Health Sciences and Health Careers Pipeline in a strong partnership between the Office of Pre-health Sciences Advising and the Division for Health Sciences Diversity.

While the name Acceleration can indicate that the program packs a boost, Leibowitz sees more. "I think of the journey to the health professions as a rocket ship, and that rocket ship needs fuel. The services and programs that are offered by the Acceleration program are that fuel."

Those services and programs offered through the Acceleration program are many and varied. Students begin with a four-week summer pre-matriculation program where they are prepared for the rigors of the pre-health sciences curriculum by VCU faculty members in math, chemistry and biology. Students also participate in workshops and seminars from schools and professions to give them a wider perspective of the health care field. Students have a unique opportunity to learn about career and educational options that are available to them, options that they may not have considered before attending the Acceleration program.

According to Nathalie Spita, dean of the Acceleration cohort of 2010, the summer session is "a preview of what's to come, getting used to living by yourself and getting through the kinks early on. In a few short weeks, you know not just what you need to be a successful pre-health sciences student, but how you can get it."

VCU Acceleration continues into the freshman academic year for students, as they are placed in a living-learning community in Brandt Hall on the Monroe Park Campus. Students are placed in the same biology and University College courses to foster an environment in the residence halls that allows for study groups to form and promotes collaborative learning. The Acceleration students all meet with the same first-year academic advisor, who also instructs the "Introduction to the University" course, giving students an opportunity to interact with

their advisor on a weekly basis. The relationships cultivated in the living-learning community are long lasting, as Sophie Yuth, Acceleration Class of 2007, said, "We still study together, take classes together, check in on each other and even will be planning a wedding where five of us are bridesmaids for one of our classmates."

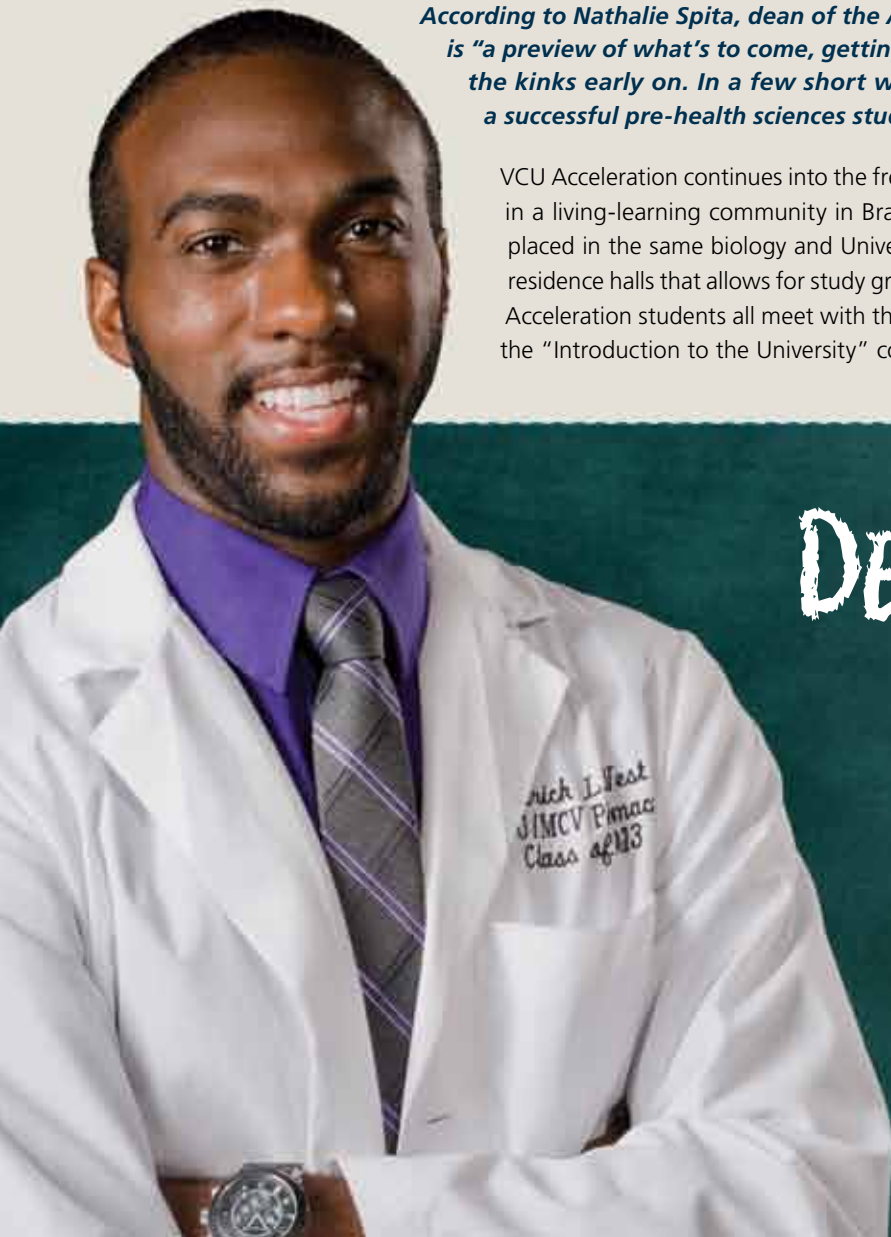
The benefits of the program extend beyond the services offered through the Division for Health Sciences Diversity and the Office of Pre-health Sciences Advising. In this collaborative learning environment, students have the opportunity to learn from each other, as well as from university faculty and staff.



The VCU Acceleration program prepares students for health sciences studies at VCU.

Early results of the program have been very positive, with the first cohort of students graduating in 2009, and many more in the past two years. The average first-year retention rate of VCU Acceleration students is 90.6 percent as compared to the average retention rate of 85.5 percent for both the university and pre-health sciences students. The four- to six-year graduation rate for Acceleration students is 78.3 percent (2005 cohort) as compared to 50.7 percent (2004 cohort) for VCU students. Nine Acceleration students have been accepted into the VCU School of Nursing, four into the VCU School of Pharmacy, eight into the VCU clinical laboratory sciences program, two into the VCU clinical radiation sciences program, as well as several other programs at VCU. In addition, many students are currently in the process of applying to VCU health sciences schools for entry during the 2012-13 academic year.

Twenty-three students comprised the first cohort of VCU Acceleration. Today, the incoming 2011 cohort consists of 38 students from all areas of Virginia, and even beyond. Adding to the excitement, during the 2011-12 academic year, more than 110 Acceleration students will be on the VCU campus, from freshmen to first-professional students. Acceleration students are active in the VCU community, serving as leaders for student organizations and clubs, working on campus and serving as positive role models as resident assistants, just to name a few. The only question to ask when talking about the accomplishments and dedication of these students is, "What will come next?"



DERRICK WEST

VCU ACCELERATION COHORT 2005
HOMETOWN: CHESAPEAKE, VA.

VCU SCHOOL OF PHARMACY,
CLASS OF 2013

I'm going to be a pharmacist.

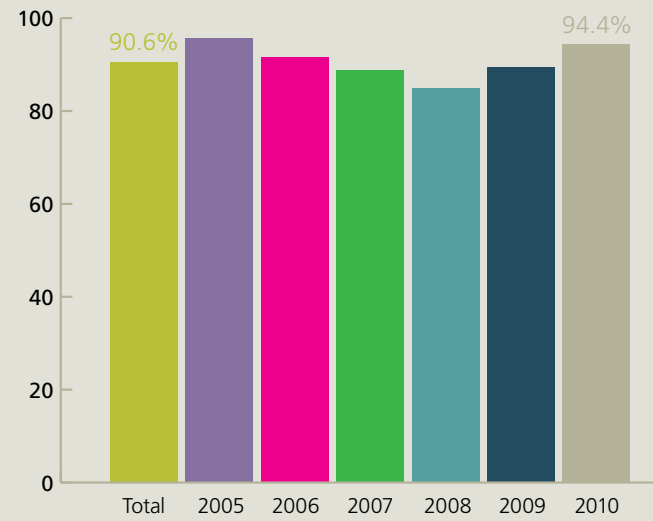
When asked why he chose coming to VCU over any other college or university in the country, Derrick West simply replied, "Because of the VCU Acceleration Program."

It simply seemed like the one place where I could be close to my family and still have my independence, to grow as a student and young man," he said. "The first few years here were tough, balancing school and family issues, but the VCU Acceleration program helped to keep me focused on what I wanted to do — to become a pharmacist and to be able to take care of my mother and sister.

I would highly recommend any student participate in a program like the VCU Acceleration program and wish that programs like this existed for all students interested in the health sciences and health careers. The program has helped me to explore all the possibilities and potential of what I can be.

West earned his Bachelor of Science degree in Clinical Laboratory Sciences in 2009. He is a member of the first cohort of VCU Acceleration and one of the first program participants to make a seamless transition through the VCU Health Sciences and Health Careers Pipeline to a professional school. He is working on his Doctor of Pharmacy at the VCU School of Pharmacy and is a member of Kappa Psi Pharmaceutical Fraternity and the Student National Pharmaceutical Association. He received the Gates Millennium Scholarship and now serves as a mentor; and he founded the VCU Pre Pharmacy Student Organization. In addition to his participation in the VCU Acceleration program, West has participated in the HERO and Research Experiences for Undergraduates summer research programs and can be found working as a pharmacy intern at VCU Medical Center.

Acceleration retention to sophomore year (percentage)



Acceleration program statistics

	Program totals	2005 cohort	2006 cohort	2007 cohort	2008 cohort	2009 cohort	2010 cohort
Number of participants	202	23	36	36	33	38	36
Male	56	6	10	12	8	10	10
Female	146	17	26	24	25	28	26
Retention to sophomore year	183	22	33	32	28	34	34
First-year average GPA	3.08	2.69	2.95	2.94	3.17	3.46	3.1
4- to 6-year graduation rate		78%	64%**	n/a	n/a	n/a	n/a

**4- to 5-year graduation rate

Where are they now?

Degree program	VCU	Other	Total
Bachelor of Science, Nursing	8	0	8
Bachelor of Science, Clinical Laboratory Sciences	8	0	8
Bachelor of Science, Clinical Radiation Sciences	2	0	2
Post-baccalaureate certificate programs	3	2	5
Master of Science, Nursing	1	1	2
Master of Science in Occupational Therapy	0	1	1
Master of Public Health	1	1	2
Master of Pharmaceutical Sciences	1	0	1
Doctor of Pharmacy	4	0	4
Doctor of Medicine	0	1	1
Doctor of Osteopathic Medicine	0	1	1
Doctor of Dental Surgery	0	1	1
Total	28	8	36



VCU RAMpS

The VCU RAMpS program began in the summer of 2008 with grant funding from the Robert Wood Johnson Foundation. It originated with the VCU School of Dentistry, which wanted to establish a program that would provide pre-dental students with the skills to succeed in dental school. The VCU School of Dentistry received one of only eight grants awarded by the foundation.

VCU RAMpS runs for a five-week period during the summer and offers a heavy focus on academic enrichment activities, such as biochemistry, microbiology, dental instruction, health disparities, ethics and professionalism. VCU School of Dentistry faculty members and current students motivate, encourage and support students participating in the program. In addition to the strong focus on academics, the students in the VCU RAMpS program are prepared for the upcoming dental admissions process by working with representatives from the VCU School of Dentistry admissions office.

Carolyn Booker, Ph.D., associate dean for students and faculty administrative affairs at the VCU School of Dentistry, also serves as the VCU RAMpS program director. She emphasizes the importance of academic enrichment programs such as VCU RAMpS.

“Programs of this nature serve many purposes, such as exposing the participants to the dental school or health professions school environment; exposing them to the faculty at a particular institution; helping them to have a better understanding of what they need to do once enrolled in a health professions program; gaining a better understanding of the admissions process; and overall increasing their confidence about their abilities to handle the curriculum,” she said. **“These programs are essential to continue to work with students who do not have good pre-health advising at their undergraduate institutions, for students who come ill-prepared for admission into a program and for those who are unrealistic about what it takes to make it through a program.”**

The program has produced some impressive early results. Students participating in the 2008 and 2009 summer programs matriculated to dental school in large numbers. Between the summers of 2008 and 2009, 35 students participated in VCU RAMpS. Of those students, 25 (71 percent) applied to a dental program within two years of completing RAMpS. Preliminary data from the 2010 program participants (15 students) show that three students (20 percent) will be attending dental school within one year of completing the program, with two students (13 percent) attending the VCU School of Dentistry.



Hands-on activities prepare RAMpS participants for dental school.

Booker said she is very optimistic for the future of this young program, with many plans to continue offering resources to help students who are interested in attending dental school. All expansion and improvement efforts would be aimed at areas that would assist students in being successful in dental school. The program provides an opportunity for students interested in dentistry to truly understand the elements of success associated with dental school.

“From reading a book to giving a public speech, it challenges students to do more than just study for a test, or sit in class and listen,” Booker said. “They must now pull from within themselves skills that demonstrate their ability to communicate thoughts and ideas, work as a team and learn that dentistry encompasses more than they ever envisioned.”



CHRISTINA FRANKLIN

RAMpS PARTICIPANT, SUMMER 2009
VCU SCHOOL OF DENTISTRY, CLASS OF 2014

Christina Franklin's interest in dentistry sparked with a career exploration course she took in high school. Then, as an undergraduate biology major at VCU, she participated in a volunteer program where she met a 19-year-old who had to have his 16 remaining teeth extracted.

It bothered me that someone my age was not given preventative measures or adequate hygiene instruction and felt like extractions were his only option,” she says. That day confirmed my choice in dentistry, especially the preventative aspect, and my journey has not stopped since.

Her participation in RAMpS further solidified the vision for her future. Now 23 and a second-year student at the VCU School of Dentistry, Franklin plans to graduate and complete a two-year residency in pediatric dentistry by the time she's 28.

I'm going to be a pediatric dentist.

Why did you apply for the VCU RAMpS program?

I wanted a taste of what dental school was like and no other program I knew of gave this perspective. Most programs are for Dental Admission Test preparation, but the RAMpS program allowed students to take courses on the professional/graduate level while exposing them to dental courses. You get one on one time with faculty and professors, but most of all, you find out if you can handle the course load and pace of dental school.

Did RAMpS teach you anything surprising about the school or profession?

I learned that the VCU School of Dentistry runs like a family. Faculty are very helpful, always willing to lend a helping hand, and the competition between students is pretty much nonexistent. For the profession, I realized that dentistry is very much a craft or an art. It takes practice and patience, but when you complete a procedure, it is something to be very proud of.

What was the most interesting piece of the RAMpS program?

The most interesting thing about the RAMpS program was being given the opportunity to use a hand piece and drill on teeth in mannequins. This is something most students do not experience until their first or second week in dental school. This gives you the chance to see if dentistry is really for you.

How did the program assist you in preparing for dental school?

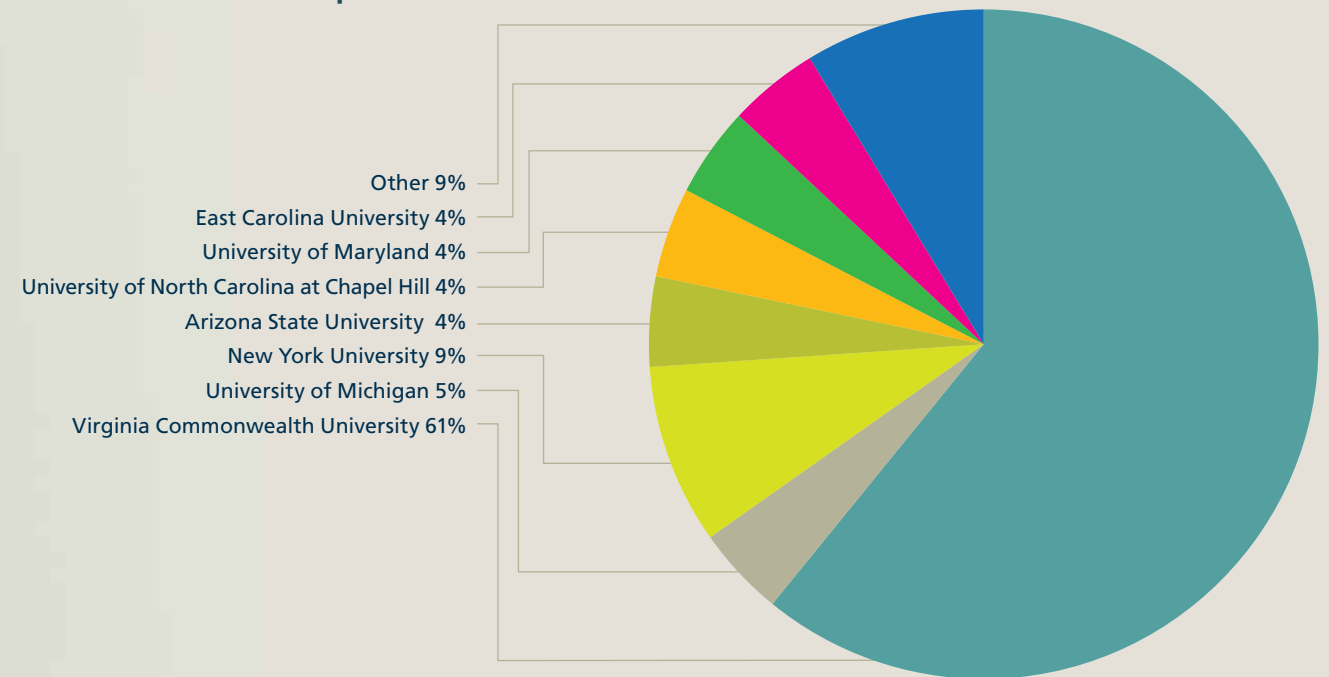
RAMpS taught me my strengths and weaknesses in my study habits. I learned I am a visual learner, so rewriting my notes, with diagrams and charts, helps me study effectively. It also prepared me to handle any constructive criticism that I will receive throughout dental school.

What would you tell other students considering the VCU RAMpS program?

I would tell them to only apply to the program if they will take this time to learn about themselves. This program should be taken very seriously, since you do leave with an evaluation of your progress and a recommendation of whether or not you are ready for professional school. Leave a good impression on anyone you meet, and get the most out of the program as possible. This program was an excellent transition for me into dental school.



RAMpS current enrollment status



RAMpS program statistics

	Program totals	2008 cohort	2009 cohort	2010 cohort
Number of participants	50	12	23	15
Total applied to a dental program	31	10	13	8
Percentage of participants applying to dental school	62.0%	83.3%	56.5%	53.3%
Total number of participants accepted to dental school	24	9	11	4
Total number of participants currently enrolled in dental school*	23	8	11	4
Percentage of participants enrolled in dental school*	46.0%	66.7%	47.8%	26.7%
Number of participants enrolled at VCU School of Dentistry*	14	4	8	2

*Enrollment data as of fall 2011



The VCU Health Sciences and Health Careers Pipeline includes additional programs offered to students from elementary school all the way through the post-baccalaureate level. Each and every program in the VCU Pipeline offers unique and interesting experiences.

Discovery@VCU

Offered through the VCU Division of University Relations, this program exposes sixth- to eighth-grade students to the arts, humanities and sciences for five weeks during the months of June and July. Students attend courses in university classrooms and laboratories taught by university faculty, graduate students and professionals in the field. Often, students participate in hands-on field trips to enhance the learning experience.



Jump Rope to Stethoscope

In response to the ongoing and predicted shortage in health care professionals, Jump Rope to Stethoscope serves as a community outreach program whose primary goal is to introduce health care as a career option to children K-12. This is accomplished through various umbrella programs. The short-term goal is to maintain ongoing contact with participants by introducing them to a network of outreach, academic and mentoring programs located on the MCV Campus as well as the VCU Monroe Park Campus. The long-term goal is to "grow our own workforce" by highlighting the educational opportunities at VCU as well as the numerous employment prospects at VCU Medical Center. Current programs include the Mary Elizabeth Mahoney Nursing Camp (middle school students), X-Treme Healthcare (middle school boys) and the Boy Scouts of America Health Career Explorers (high school students).



Lobs & Lessons

Lobs & Lessons is offered as an after-school and summer enrichment program housed at the Mary and Frances Youth Center on the Monroe Park Campus. The program targets second- to fifth-grade students and promotes education and life skills through mentoring, tutoring and teaching tennis.



Physical Therapy Career Exploration

This new two-week summer program is for 10th-, 11th- and 12th-graders who have an interest in the field of physical therapy. Students have the opportunity to learn concepts through classes and hands-on lab experiences, gain exposure to current research in the field and learn how to become a competitive applicant when applying to physical therapy professional programs in the future.



Dental Careers Exploration

The Dental Career Exploration Program is offered to 10th- to 12th-grade students from the Richmond area who are interested in exploring a career in dentistry. Through hands-on workshops, students develop effective study skills, as well as skills such as reading comprehension through book discussions and public speaking through practice debates.



VCU Scholars

Part of VCU RAMpS, this program assists high school students and their parents in preparing for a college career by providing a series of student/parental workshops, mentorship and academic enrichment activities. The opportunity is offered to students and parents in Richmond city and Chesterfield, Hanover, and Henrico county schools who express an interest in the field of dentistry.



Project ACEe

Academic, Career and Educational experiences (Project ACEe) is designed for high school students in the Richmond Public Schools, as well as those from Chesterfield, Henrico and Hanover counties. Sponsored by the School of Medicine, Project ACEe exposes students to the medical profession by providing workshops and mentoring opportunities. The goal of the program is to increase the number of health care practitioners from disadvantaged backgrounds who will practice in the state of Virginia.



Academic and Clinical Skills Symposium

This one-day symposium provides beneficial information and additional insight into the clinical side of health careers and conducts hands-on demonstrations for pre-med and post-baccalaureate college students interested in health careers. From the material provided in the workshops, students will learn how to complete their applications and make themselves more competitive professional school applicants.



Research programs

Scientific research programs are offered through the VCU Center on Health Disparities for high school through post-baccalaureate students with a variety of educational interests and backgrounds. The programs, ranging from 10-week summer programs to yearlong experiences, provide students with the chance to gain intensive hands-on laboratory experience and networking opportunities with professionals in the field, present their research in national conferences and publish their findings in scientific journals.



Community engagement



Acceleration students tour and learn about volunteering and research at the VCU Massey Cancer Center.

Many participants in the VCU Health Sciences and Health Careers Pipeline programs participate in various community outreach and volunteering projects in the Richmond area. Activities vary each year, but have ranged from teams volunteering at the Richmond Heart Walk, individuals volunteering with the VCU Medical Center and other local health facilities, and working in groups to teach nutrition lessons to students participating in the Lobs & Lessons program at the Mary and Frances Youth Center. Most projects are student-led, giving students the opportunity to gain leadership experience and abilities.



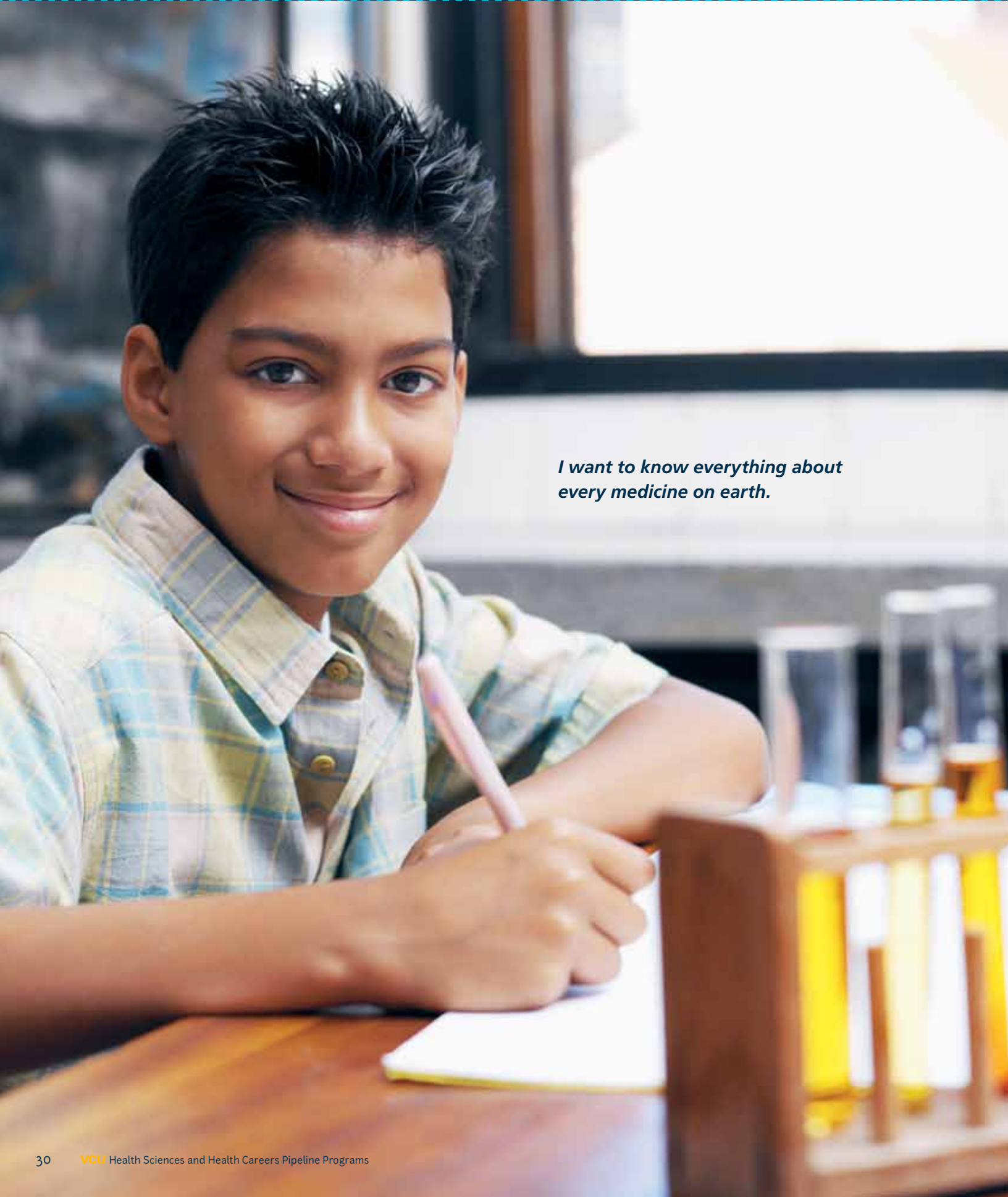
Students in the Acceleration program have been awarded scholarships.



VCU Acceleration students and staff volunteer at the Healthy Lifestyle Expo.



A VCU Acceleration student tutors reading comprehension to a participant in the S.E.E.D. program.



I want to know everything about every medicine on earth.

Integration with VCU strategic and diversity plans

The university's commitment to providing a world-class education to students who come from diverse backgrounds is reflected throughout the university's new six-year strategic plan, Quest for Distinction. VCU's six-year diversity plan further displays the commitment to diversity by providing "a fertile environment in which ideas and skills can be cultivated for a future and world that respects natural diversity." Academic units recently developed unit-specific diversity plans in which ongoing oversight will be conducted by the provost and vice president for academic affairs. Establishing synergy with both strategic efforts, particularly with regard to implementation and evaluation planning, will further mainstream programs.

Integration with new Virginia Health Workforce Development Authority

In its 2011 session, the Virginia General Assembly established a Health Workforce Development Authority to evaluate, address and monitor the health workforce needs in the state. The authority has asked the Virginia Medical School Consortium, a collaboration of the five state medical schools, to provide direct oversight of the Virginia Area Health Education Centers. These new entities collectively provide an overarching framework for better coordination and concentration of resources. Additionally, the Virginia Department of Health has developed an online, statewide student registry that captures the interest of high school and college students who endeavor to a health career. The VCU Pipeline programs will have significant involvement in and utilization of that resource in both our outreach and longitudinal tracking efforts.

Increased outreach and partnership development

The focus of expanded outreach will entail developing formal partnerships with the Virginia state medical schools and regional pre-medical advisors to better leverage resources and to expand the scope of outreach. Other efforts include expanding VCU's presence within the Richmond Public Schools system and within rural communities through new partnerships with Bridging Richmond and Communities in Schools organizations. These new efforts are intended to better attract and enrich individuals seeking a career in the health professions at earlier stages and across multiple layers of the education continuum.

Enhanced infrastructure

Future efforts will include further enhancement of core program infrastructure, particularly with regard to integrating existing VCU Pipeline databases with campus data. Better synergy with VCU and partnering organization data systems will allow for more meaningful follow-up with program participants.

Efforts this past year have strengthened and expanded the VCU Pipeline to include a new high school enrichment program in physical therapy and a partnership with the Division for Health Sciences Diversity and the Division of Community Engagement on a Howard Hughes Medical Institute-funded initiative. Focus moving forward will include integration with broader state and regional efforts to increase the pipeline, increased recruitment and outreach efforts to Richmond and rural Virginia, and solidifying core infrastructure with emphasis on evaluation.

Special thanks

The many contributors to this effort are too numerous to name. However, special thanks are in order. On behalf of the many students who have been and will be impacted by this effort, thanks to the Grace E. Harris Leadership Institute for serving as the incubator of such grand ideas. Thanks to the GEHLI Class of 2004, particularly Sheryl Garland, for ensuring that the group's vision transformed into reality. Thanks also to the many who have served on the Workforce Diversity Committee with great passion and expertise. Last but not least, thanks to the Office of the Vice President for Health Sciences for the ongoing commitment to promote diversity efforts at VCU.



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