



Photo By Anne Thompson

Dozens of people showed up at the green space next to MUSC's Urban Farm to watch the world premiere of "The Groundbreaking."

And the award for the 2022 building of the year goes to...

BY BRYCE DONOVAN

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Though it just missed the cutoff for the 2021 Academy Awards, the buzz surrounding "The Groundbreaking" is starting to gain steam. Well, at least with faculty, students and alumni of MUSC's College of Pharmacy.

The "film," which was the brainchild of the COP's very own Roby Hill, director of communications, and Megan Draper, director of development, centers on something that has been in the works for the past 50-plus years: a much-needed new building for the College of Pharmacy. In pre-pandemic times, you might have

seen this milestone celebrated by a bunch of top dogs from MUSC smiling and holding gold shovels. But this new virus-filled world has forced – and in many ways led to – some outside-of-the-box thinking from those within the university. As a result, a 30-minute video was born, featuring equal parts ceremony and Oscar-worthy performances by the likes of College of Pharmacy Dean Philip Hall, Pharm.D.; provost Lisa Saladin, PT, Ph.D.; and even Phil the Pill, COP's unofficial mascot.

Since 1952, the college has been headquartered in a building on Calhoun Street that was originally

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Tri-county COVID case rate drops more than 60% in one week

BY HELEN ADAMS

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As the temperature outside rises, the COVID case rate is falling in the Tri-county area. Between May 17 and May 22, it dropped more than 60% compared with the previous week.

"I think what we're likely to see across the country is a lot of optimism right now," said Michael Sweat, Ph.D., leader of the COVID-19 tracking team at the Medical University of South Carolina.

It's easy to see why. "The number of cases per day for every 100,000 people in the Tri-county area went down to six," Sweat said.

"We've seen similar effects in Florence and Lancaster. Florence is at six per 100,000 a day and Lancaster's down to seven." Sweat's team focuses on those areas because MUSC Health has hospitals in them.

"Statewide, it's eight per 100,000. So it's going down, down, down across the whole state.

More and more people are getting vaccinated, including kids as young as 12. Clinical trials will test whether children younger than that should get vaccinated, too.

At this point, more than 40% of South Carolinians age 12 and up have had at least one vaccine. About 35% are fully vaccinated.

And Sweat noted a geographic trend in vaccinations.

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'Hardworking,
compassionate, dedicated.'

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MUSC and Medical University Hospital Authority (MUHA) Board of Trustees recently held their regularly scheduled combined committee sessions and board meeting. Due to the COVID-19 pandemic, many attended the meeting from remote locations via video. Those physically in the MUSC boardroom observed appropriate safety protocols, as needed. The board meeting was held the day before the MUSC spring commencement events.

On Saturday, May 15, in two ceremonies, the MUSC board bestowed health care degrees on 741 graduates from its six colleges: Dental Medicine, Graduate Studies, Health Professions, Medicine, Nursing and Pharmacy. The ceremonies were held at the North Charleston Coliseum with safety for all participants as the top priority. All events were conducted in accordance with the South Carolina Department of Health and Environmental Control and Centers for Disease Control and Prevention guidelines for social distancing and mask usage.

MUSC President David J. Cole, M.D., FACS, will preside over the commencement events, welcoming the graduates, families and guests with a huge congratulations. His remarks will note that “The presence of each graduate is a testament to incredible tenacity and durability during all things COVID-19.” □ During its meeting, the board was also provided with an update on the MUSC Health ongoing vaccination efforts.

“Our health care teams continue to engage in a variety of outreach efforts to combat vaccine hesitancy and to take vaccinations into community settings across the state,” Cole explained. “For the vast majority of those who get their shots, vaccines have been proved safe and effective. The vaccines work to prevent infection from this dangerous virus and minimize the symptoms exhibited if you are vaccinated before contracting the virus.”

Cole posited, “If you could do something to prevent needless suffering, hospitalization and possibly death, why wouldn’t you? That’s what the vaccines represent. Getting vaccinated is a tangible step everyone should take to protect themselves, their families and our community.”

“With access to highly effective and safe vaccines for COVID-19, the state has seen significant reductions in the number of infections” said Michael D. Sweat, Ph.D., leader of the MUSC COVID-19 Epidemiology Intelligence Project, who is closely tracking the leading indicators of the COVID-19 pandemic. “However, there are a substantial number of people who lack immunity, and for us to fully return to normal, it is important to continue to get as many people vaccinated as possible.”

Sweat observed, “All our cases are now being concentrated in the shrinking population of those without immunity.” MUSC’s Molecular Pathology Laboratory has also been analyzing all

of the eligible positive COVID-19 tests that MUSC conducts, and their new results show that about 90% of new cases are now from variants of concern, mostly the British variant that is 50-70% more transmissible. “We are likely to see a reduction in mask use and social distancing with increased vaccination and lower case rates, and this coupled with the emergence of the British variant puts those people who are not vaccinated at very high risk,” Sweat concluded.

□ Patrick J. Cawley, M.D., CEO, MUSC Health, provided an update on the policy expecting all MUSC Health care team members to receive the COVID-19 vaccine. The policy was implemented to ensure the highest level of safety for care team members, patients and visitors. Phase 1 rollout of the plan included new care team members and leaders across MUSC Health. These groups were 100% compliant with the policy. Phase 2, which includes all other care team members, is set to be completed by June 15. Cawley reported that 74% of those in Phase 2 had received their first dose of the vaccine by May 15.

□ Three members of the Charleston County School District (CCSD), the Rev. Eric Mack, chairman of the CCSD Board of Trustees, Geritta Postlewait, Ed.D., superintendent of schools, and Ellen Nitz, R.N., director of Nursing Services, joined the meeting as guests. They presented MUSC Board of Trustees Chairman James Lemon, D.M.D., with a certificate of recognition and thanks for MUSC’s “meritorious and tireless efforts in the immunization of Charleston County School District teachers and staff.”

“Beginning back in March 2020 and throughout the entire COVID-19 pandemic, the Medical University has worked tirelessly to support Charleston County School District’s efforts to provide a safe learning environment for its entirety of 50,000 students and 6,500 staff,” Mack said. “Throughout MUSC’s Back2Business Program and the district’s Safe Start planning, MUSC partnership better enabled the district to serve the needs of each student in

this unprecedented time, most recently, serving as a major provider of COVID-19 vaccinations to eligible students and staff. We thank you for your tremendous efforts and relentless commitment to supporting the health and safety of students and staff in the Charleston County School District now and always.”

The CCSD leaders also provided Cole with an Excellence Award lapel pin in honor of his exemplary efforts to support the CCSD.

“MUSC gave us the tools and the resources and the backing for our parents to have faith in us and bring the kids back safely,” Nitz said. “You helped us design our protocols so that parents would feel safer. You gave us the tools to help test. When vaccines became available, you were able to partner with us on that. We worked ...with community members making sure that we’re getting all the best information out there. So, from the bottom of my heart, from our students, our staff, all the school nurses out there, thank you because you guys really make it possible. Without your backing, we would not have been able to succeed.”

□ With the fiscal year drawing to a close at the end of June, Kate Azizi, vice president for Institutional Advancement, reported that funds raised year-to-date through philanthropy totaled more than \$42.2 million. Azizi advised the trustees that major projects underway for which additional philanthropic funding is critical include the new MUSC Health hospital planned for the Williamsburg-Lake City community, the new facilities being constructed in the heart of the Charleston campus to house the Araneo and Craft College of Pharmacy, support of the MUSC Health Living Donor Program for major organ transplants and transplant research.

□ Lisa K. Saladin, PT, Ph.D., executive vice president for Academic Affairs and provost, began her report by thanking Kathleen Brady, M.D., Ph.D., for her seven years of service as vice president of Research at MUSC. Brady is an

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MUSC CATALYST
news

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The MUSC Catalyst News is published bi-monthly. Paid advertisements, which do not represent an endorsement by MUSC or the state of South Carolina, are handled by Island Publications Inc., Moultrie News, 134 Columbus St., Charleston, S.C., 843-958-7480, 958-7384, 958-7488 or 937-7489. E-mail: advertising@moultrienews.com.

Pipeline program connects underrepresented minorities to PA profession

By LESLIE CANTU

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When high school or college students think about health care careers, they're likely thinking of the most well-known of health professions: doctors and nurses. But health care today encompasses many more professions.

Physician assistant is one such profession, and a pilot program between MUSC and Claflin University, South Carolina's oldest historically Black college, is seeking to introduce more underrepresented minority undergraduates to this career path.

The year-long program, which began in March, will unlock some of the mysteries of PA school applications, explore the career opportunities available to PAs and connect the undergraduates with PAs of color.

"We also want them to know, you can go anywhere. We hope you choose MUSC, but if you don't, the profession awaits you. And wants you," said DaNine Fleming, Ed.D., associate chief officer for inclusive excellence in the Department of Diversity, Equity and Inclusion at MUSC.

Studies have shown that diversity among health care providers and researchers improves care and changes the research questions that are asked. Right now, though, less than 4% of certified PAs are Black.

Fleming, a Claflin alum, was chatting with Claflin administrators about how students are often unaware of the many options in health care. Fleming herself admits she didn't know much about PAs until she began to work at MUSC, which offers a Master of Science in Physician Assistant Studies through its College of Health Professions.

There is much that is unsaid about the PA school application process, Fleming said, leaving unconnected students in the dark.

"Many students of color don't have the same kind of patient contact hours, and that precludes them sometimes from being as competitive as other students," she said. "We keep hearing, 'Oh, you don't have to have patient contact,' but the average student who applies to programs has anywhere from 1,500 to 4,000 contact hours."

That's one aspect of the application process that the pipeline program will address, Fleming said. She's working to add a certified nursing assistant training component to the program so that students will be able to gain patient contact hours by working as CNAs.

The pipeline program itself came to be after Willette Burnham-Williams, Ph.D., MUSC chief equity officer, asked her staff to pitch ideas for new programs or services to be funded through MUSC strategic funds. Fleming thought about her conversations about PAs and proposed a pipeline program to familiarize students with the profession.

After being notified that the pipeline program was approved, Fleming quickly got the word out to the dean of Claflin's School of Natural Sciences and Mathematics. A dozen students are participating in this inaugural year after applying through a blinded process for a seat in the program.

Nya Weems is one of them. The sophomore from Philadelphia has always been interested in health care.

"As a kid, I really looked forward to going to my doctor's appointments," she said.

She likes pediatrics, but as she learned about the PA profession, she was attracted to the idea of being able to change specialties. Physician assistants are trained as generalists and so can work in any type of medical practice, from addiction medicine to urology.

"That's the great thing about it. I don't have to just do pediatrics. Because of that versatility, I can do pediatrics,



Claflin undergraduates in a pilot pipeline program are dedicating one Saturday a month to an all-day Zoom session to get in-depth information about the physician assistant career path.

"We also want them to know, you can go anywhere. We hope you choose MUSC, but if you don't, the profession awaits you. And wants you."

DaNine Fleming, Ed.D.

dermatology, whatever," Weems said.

She's enjoyed hearing guest speakers discuss their varying experiences as PAs, and their stories have made her even more interested in the profession.

"I didn't even know PAs worked at urgent cares," she noted after listening to certified physician assistant Wilfrida Lugg, an MUSC alum who now works at an urgent care clinic in Rock Hill.

While the versatility is a major part of the appeal, money is another factor. The average PA program is 27 months, and less time in school means less student loan debt.

Those factors also attracted Danelle Branch, a sophomore from Orlando, Florida. She likes the positive job outlook — the U.S. Bureau of Labor

Statistics projects job growth of 31% between 2019 and 2029 — and that she would get to work hands on with patients while maintaining the flexibility to change specialties.

The most beneficial aspect of the pipeline program for her so far has been the mentorship from current MUSC PA students. It's helpful to hear the paths that successful students are following, she said.

"I love it so far. I'm just really thankful to be a part of it," she said.

Sophomore Mindal Reese agreed with her classmates. She comes from a medical family — she's got an aunt who's a nurse, one uncle who's a dentist and another who's a doctor — and she came into college thinking she was headed to medical school. But she came to realize that wasn't a good fit for her. She didn't want to endure the years of training or deal with the ensuing debt. She started exploring nurse practitioner and physician assistant career paths and decided that PA suited her.

Reese already has a CNA certification, which she was about to let lapse until she learned in the pipeline program how important those patient contact hours would be on her application. She now has a job at a nursing home, where she

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New federal mask guidelines are supported by science, MUSC expert says

By HELEN ADAMS
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New federal guidelines that say fully vaccinated Americans don't need to wear masks or physically distance in most situations are backed up by sound scientific evidence. That's according to the leader of MUSC's COVID-19 Epidemiology Intelligence Project.

"Several very large, extremely high-quality studies clearly show that the risk of vaccinated people getting infected is extremely small," said Michael Sweat, Ph.D.

"When vaccinated people do get infected, they have very mild cases, typically with no symptoms. Meanwhile, other studies show that vaccinated people aren't likely to transmit the coronavirus to others."

Sweat said the change in federal guidelines is timely. "It's becoming clear that masks for those who are vaccinated make no difference. I believe that we

would have soon seen that vaccinated people would realize this and come to realize that it was just performative. They would ask themselves, 'Why am I inconveniencing myself with a behavior that doesn't have any utility?' And in addition, they might say, 'Why should I do this to protect people who will not wear a mask or get vaccinated?'"

But Sweat, director of the MUSC Center for Global Health and a professor in the College of Medicine, said some people may have a trouble with the change — despite being fully vaccinated. "Those who have really toed the public health line and showed solidarity with community concerns by wearing masks may have a difficult transition to not wearing masks."

There are a few reasons for that, he said. "Mask use is a signal that you care about others. And second, the fear of infection has now become deep rooted. Not wearing a mask will make people who are vaccinated feel like others will think they're selfish, and there will be a lingering sense of fear of infection. Same



Photo Illustration by Sarah Pack

with institutions that have mandated masks. It partially signals that they're responsible institutions, and it'll be hard to change based on that."

But another change the new guidelines may bring about may be all too easy for some people – and potentially harmful. "What may happen as vaccinated people stop using masks is that the unvaccinated will do the same thing in droves. And when unvaccinated people stop wearing masks, that will likely drive up the rates of infection among that group. This is also now against the backdrop of the British variant being the dominant strain. So we should expect a possible surge coming – hopefully not huge."

Sweat said everyone who can get vaccinated should go ahead and get the shots, citing several reasons:


- Vaccines reduce the severity of, hospitalization rates related to, and mortality from COVID-19.
- Vaccines are highly effective against the current variants in circulation.
- Vaccines work well for all age groups, while natural immunity from a coronavirus infection has been shown to be much less effective among people 65 and older.
- Many people mistakenly think they

had COVID-19 in the past. If they avoid vaccination because of this, it's very risky.

Sweat's team will keep an eye on the coronavirus' trajectory as restrictions ease. It posts daily updates on COVID-19 cases in the Charleston area and weekly updates on everything from the weekly change in reported infections to hospitals' capacity to treat critically ill patients.

Waring Historical Library still collecting reflections for its COVID-19 archive

The Waring Historical Library is collecting personal reflections to document the daily life of the MUSC community during the COVID-19 pandemic for its MUSC COVID-19 Archive. Everyone is invited to share their stories, creative expressions — poetry, artwork, photography, short stories, journal entries, musical compositions and oral history interviews — for this project. If you would like to participate or have questions, contact the Waring Library at covid19archive@musc.edu.



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MEET TONY



Tony Ciuffo

Department; Years at MUSC *MUSC Public Affairs and Media Relations; 11 years*

Family, pets and their names

Wife, Bonnie; daughter, Suzanne; son, Nick; and dogs, Rascal and Layla

A favorite MUSC memory

Watching firsthand a heart transplant

Favorite food to cook in an airfryer or grill

Chicken wings

Hobby you'll enjoy in retirement

Hoping to get back into working in athletics as a play-by-play announcer or in media relations

Orange or Garnet *Tough question – I pull for my alma mater, the South Carolina Gamecocks.*

What will you miss the most about MUSC

The people that I've gotten to know, love and work with over the past 11 years. It's a special group and a very special place.

Greatest moment in your life

There's been many and too many to count. My marriage to Bonnie, watching daughter Suzanne graduate and attending son Nick's MLB draft night in New York.

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2021 Nurse of the Year is who ‘we should all aspire to be’

By LESLIE CANTU
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After 40 years of nursing, Luc Gagne, R.N., is still the nurse on the floor who is everywhere, ever ready to lend a hand to fellow nurses, always attentive to his patients and upbeat and enthusiastic about his job.

Monday, he was honored as the MUSC Health-Charleston Nurse of the Year for 2021.

“Luc is the nurse that we should all aspire to be. Hardworking, compassionate and dedicated to his patients and their families,” said fellow nurse Karoline Hill, R.N., who nominated him for the honor.

Hill wrote that she knew from the first time she worked with him that Gagne would teach her and mold her into the type of nurse about whom patients and families fondly reminisce years later.

“The one thing that separates him from all other nurses is his true determination to make sure patients and families are cared for until the very end, whether that’s the end of life, being transferred to the floor or discharged to home. He puts every ounce of energy that he has into his nursing practice,” she wrote.

Gagne said nursing work is not hard to him.

“It’s where I need to be, where I feel I need to be. My wife tells me all the time, ‘Are you not tired?’ But it’s not hard,” he said.

As a high schooler in Canada, Gagne wanted to go into physical therapy. But that program was very competitive, so when he wasn’t accepted, the university steered him into forestry.

“Forestry? In the forest? No, not going there,” Gagne said. He did end up doing one semester of the program, but, he said, “That was not me at all.”

Instead, he pursued nursing, and the career has been a perfect fit. Gagne worked with the Inuits, traveled to Saudi Arabia and worked in Florida and Vermont before settling in Charleston, where he has worked for more than 20 years. Now, he celebrates 40 years as a nurse – 45 years of patient care once you include his time as a patient care tech.

The best feeling is at the end of the day when he knows he’s done a good job, he said. And at this point in his career, he is eager to pass on all that he’s learned over the years.

In addition to Gagne, the event honored a nurse



Photos by Sarah Pack

2021 Nurse of the Year Luc Gagne hugs chief nursing officer Patti Hart, DNP, after the ceremony at St. Luke’s Chapel at MUSC in Charleston.



Nurse of the year unit nominees for MUSC Health-Charleston.

from each unit in the hospital. The celebration at St. Luke’s Chapel was part of Nurses Week, a national celebration that ends on May 12, Florence Nightingale’s birthday. The hybrid in-person/streaming event represented an end to this phase of the COVID response, said MUSC Health-Charleston CEO David Zaas, M.D., as one of the first in-person events held on campus since March 2020.

Patti Hart, DNP, chief nursing officer, thanked the nurses for their perseverance, especially in these times of uncertainty.

“Over this past year, we have had many challenges thrust upon us, and I am so proud of what we have accomplished,” she said.

Guest speaker Tena Brown, an empathy educator and patient advocate, recounted her own health journey

as well as that of a woman with a rare skin condition who felt herself alone in the world because her doctor, although medically exceptional, didn’t consider her mental and emotional needs.

She loves nurses for all they do, she said, and encouraged the nurses to continue to become more compassionate and loving.

“You have so much power. Each and every one of you. And maybe you don’t have the power to heal someone, but you do have power to love someone and care about someone. And I want you to know, from a patient’s perspective, that is more important sometimes than anything. That you hear us, that you care about us, and that you listen to us,” she said.

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Agony in India hits home in Charleston

BY HELEN ADAMS

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When most people in the United States see stories about the coronavirus' crushing impact on India, they're horrified. The South Asian country recently set a world record for the number of deaths in a day. Hundreds of bodies of suspected COVID-19 victims have been found floating in the Ganges, India's holiest river. And images on TV and online show makeshift clinics, severe oxygen shortages and funeral pyres.

But for Sarandeep Huja, D.D.S., Ph.D., dean of the College of Dental Medicine at MUSC in Charleston, it goes much deeper than that. India is where he grew up. And it's intensely personal.



Huja

"I'm trying to take care of my mom from here," he said.

Huja's mother, Kanwaljit Huja, is known as "Miti" to her friends. The retired teacher and homemaker lives in the city of Pune, near the western coast of India. The city of more than 7 million people is known as the "IT hub of India" and the "Oxford of the East." It's frequently ranked as the most livable city in India.

But the beauty and culture of the city, nestled by the Sahyadri Mountain Range, can't protect it from the coronavirus. "The second wave has hit with a vengeance. I FaceTime my mom twice a day. We know so many people who have so unfortunately passed away due to COVID, and many people have been affected by COVID," Huja said. "There's no one who's not touched by this, whether it's in the United States or in India."

He and his older brother, who runs an industrial automation company in Virginia, moved to the United States to pursue graduate degrees years ago with

their parents' support. "I came to the U.S. for an education, and I stayed here. One of my mentors said, 'Oh, no, no, you can't go back now. We've spent so much time in educating you. We want you to stay here.' I've been very fortunate. I mean, I've been living a dream."

Huja and his brother routinely make the 8,000-plus mile journey to Pune to visit. But the 2019 death of their father, a retired naval officer, raised the intensity of their concern about their mother. "After my dad's passing, she really needed company. I was supposed to go to India last year, and then obviously during the pandemic, I couldn't."

Huja's mother, who he described as ailing from a condition unrelated to the coronavirus, needs full-time care. "It's an awful sense of helplessness that you can't help your loved ones being so far away."

He's far away from a country he loves, too — a country in crisis. "A lot of people have been asking me what's been going on in India, and you know, there's not a clear answer. India is a country of 1.4 billion people. And only a small percent have been vaccinated."

That's despite the fact that the world's largest manufacturer of vaccines is in India. "India initially practiced some vaccine diplomacy, which seemed like the right thing at the time," Huja said, referring to its decision to provide vaccines to other countries when India's cases were relatively low. "But it seems now it is not able to provide for its own population."

Huja was able to visit his mother in January of this year once he was vaccinated. She wasn't, yet. But they made the most of their time together.

"It was such a thrill to see her. In India, when we meet elders, we touch their feet to seek their blessing. It was just so wonderful to be able to do that. I just wanted to spend every minute with her, even though at that time she was not vaccinated," Huja said.

"I was wearing a mask all the time in her presence, but I just wanted to be of any service to her, just to hug her, to be with her."

He still worried about her — but he



Photo by iStock

There have been more than 27 million confirmed cases of COVID-19 in India.



Photo Provided

Dean Huja's mother, left, with a caretaker.

was encouraged by how well India was doing. "Surprisingly, for some reasons that are not clear, India did not initially experience the COVID numbers that people anticipated it would. I was surprised, coming from the United States, by how low the numbers were and how well India was doing."

But the pandemic wasn't finished with India. People let their guards down, more contagious variants spread, and this spring, COVID-19 cases soared.

"I'm sure you've seen the pictures on

television, people lying in cars or on the roadside, people are dying due to lack of oxygen. The infrastructure and the hospitals, both private and government-supported, are in crisis. It's just been tragic. India has amazing doctors, but it seems that the system has just collapsed under the surge of COVID," Huja said.

He was happy to learn that his mother was vaccinated in April and thanked friends and colleagues at MUSC for their support. Now, he hopes the world

See INDIA on page 10

MUSC Libraries serve as regional lead for national library network

By LESLIE CANTU

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2021 is proving to be a big year for the libraries at MUSC. Even as library staff members are working out of University Hospital Extension while the Colbert Education Center and Library building undergoes renovation, director of libraries Shannon Jones and her team are preparing for a major new responsibility.

After a competitive application process, MUSC Libraries was awarded a five-year, \$6 million cooperative agreement from the National Library of Medicine to serve as one of seven regional medical libraries in the United States. The MUSC Libraries took on this responsibility on May 1, serving as the regional medical library for Region 2 of the Network of the National Library of Medicine. Region 2 comprises Alabama, Florida, Georgia, Mississippi, South Carolina, Tennessee, the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

“It puts MUSC on the map in a different way,” Jones said.

The network’s mission is to improve health by providing access to biomedical and health information to everyone from researchers and public health workers to members of the public. Its members include not just academic libraries but also public libraries, public health departments and community groups with an interest in health and health care.

As part of this mission, the regional medical library based at MUSC will offer training, funding and engagement opportunities for members and other organizations. Jones expects to see grant applications from libraries and community groups that are trying to address health disparities, health literacy and the digital divide that has become more apparent in the South, thanks to the pandemic.

“We’ll get to fund some projects that will be trying to address some of those issues. That’s the exciting thing – that we’ll be in a position to enable some exciting and meaningful work throughout the region,” she said.

But she also expects the membership to keep her busy.

“The challenge we have – and it’s a good challenge to have – we’re taking over a very active network and a very active member base,” she said.

Not only is this MUSC’s first year as a regional medical library, but this is the first year for this new region. Previously, the Southern states were part of the region that extended north through West Virginia and Maryland. For the new cooperative agreement period, the National Library of Medicine realigned the regions to better balance the membership in each district.

The University of Maryland at Baltimore, which



Photo by Sarah Pack

Shannon Jones is leading MUSC Libraries as it takes on the role of regional medical library for the Network of the National Library of Medicine.

“We’ll get to fund some projects that will be trying to address some of those issues. That’s the exciting thing – that we’ll be in a position to enable some exciting and meaningful work throughout the region.”

Shannon Jones

previously served as the regional medical library for the old Southeastern/Atlantic region, is now serving a new region that extends from Virginia and Kentucky up through Pennsylvania as well as a mentor for the region headquartered at MUSC.

Jones said she’s received a lot of support from colleagues across the nation as well as here on campus, including the Office of the Provost and Office of Research and Sponsored Programs.

The first thing she’ll have to do is hire seven staffers to implement the programs and mission of the regional medical library.

She expects one position in particular, the research

and data science coordinator, to help laypeople to understand data curation and the importance of research data and how to store, preserve and replicate data. This will be geared toward community groups that are running health programs but aren’t necessarily thinking that they might want to use their data 10 years from now for research.

She’s also going to be reaching out to the membership. Last year, while preparing the application along with Monique Hill, program manager of Hands on Health South Carolina, and Heather Holmes, associate director of Libraries, they talked to network members to find out what their experiences have been and what they’d like out of a new Southern office. Now, she’s happy to return to those who gave their feedback and ask them to sit on advisory boards.

And while Jones is busy getting this new region off the ground and keeping the library running in its temporary space, she’ll also be taking on yet another major task: She recently learned that she was elected as president-elect of the Medical Library Association, only the second Black librarian that will have served in this position in the association’s 123 years.

Despite all that’s going on, Jones is eager to begin work as the regional library and is already hopeful for a successful reapplication in four years.

“We’re going to represent the university well,” she said.

Innovative ideas get leadership backing at 2021 MUSC Shark Tank

BY LESLIE CANTU

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What if? What if there were a better way? What if trying something new led to better patient care or student education?

The health care field is ever evolving – and leaders at MUSC want faculty, staff and students to be at the forefront of change. The annual Innovation Week event showcases innovation occurring across the enterprise and encourages everyone to see themselves as innovators, too.

The highlight of the week is the live Shark Tank funding pitch. Nine teams out of 100 got the chance to describe their ideas to a team of "sharks," and three teams won funding to pursue their projects.

This year, the sharks – President David Cole, M.D., FACS; Kathleen Brady, M.D., Ph.D., vice president for Research; Lisa Saladin, PT, Ph.D., executive vice president for Academic Affairs and provost; and Patrick Cawley, M.D., CEO of MUSC Health and vice president for Health Affairs, University – threw their support behind teams proposing a new surgery, a new method of training students and a new way for doctors to

order fluids for patients.

Each of the winning ideas will receive funding and other support. Stephanie Brown, program manager with the Office of Innovation, noted that the staff will be in touch with other teams as well to offer support for their ideas.

The 2021 MUSC Shark Tank winners:

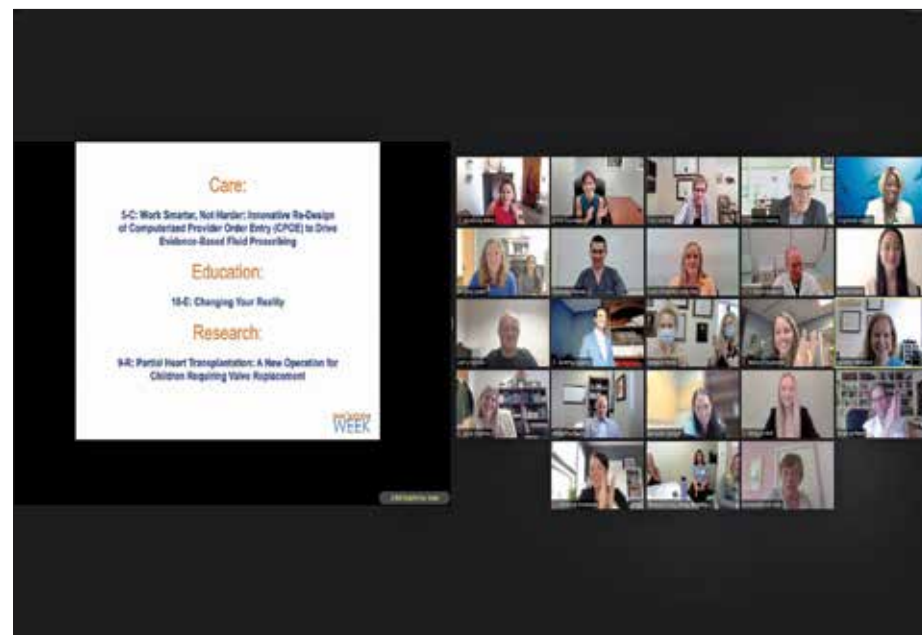
"Partial Heart Transplantation: a New Operation for Children Requiring Valve Replacement"

Jennie H. Kwon, M.D.; Morgan Hill; Steven W. Kubalak, Ph.D.; Satish Nadig, M.D., D.Phil.; John Costello, M.D.; T. Konrad Rajab, M.D.

Seven in 1,000 newborns have congenital heart defects, which often involve the heart valve. Unfortunately, unlike for adult patients, there are no good options for doctors and patients to replace the heart valves of a newborn.

Doctors can implant mechanical valves in older babies and children, but these valves do not grow with the child. Instead, as the child grows, new valves must be implanted, meaning a child could undergo five or more open heart surgeries, said medical student Morgan Hill.

There are no mechanical valves on the market that are small enough for a



Competitors in the MUSC Shark Tank pitching event applaud the winners.

newborn. There are a few procedures that doctors can perform on small babies, but none have emerged as a gold standard.

Neonatal heart transplant, on the other hand, has the best outcomes of any solid organ transplant.

With this in mind, the MUSC team proposed a transplant variation aimed at children with valve defects. By transplanting only a valve, not the entire heart, not only would the valve grow with the child, but the medical team could implant a mechanical valve once the patient was full-grown, allowing the patient to stop taking immunosuppressant drugs.

Hill explained that up to a third of potential infant donor hearts aren't used because of poor functioning, but those deficits rarely affect the valve.

"We expect partial heart transplantation to have an immediate impact in the clinic," Hill said.

Cardiothoracic resident Jennie Kwon, M.D., said the team has done preliminary work on developing the proper technique but will refine the surgery further. Although similar to existing surgeries, there are technical challenges that must be addressed, she said. For instance, mechanical valves are manufactured with features to simplify implantation. Donor valves, on the

other hand, don't have these features. She is also working in the Transplant Immunobiology Laboratory under the mentorship of Satish Nadig, M.D., D.Phil., to clarify the immunobiology of this new type of transplant.

Pediatric heart surgeon Konrad Rajab, M.D., M.Chir., expects the process to take several months before the team is ready to publish an article describing its surgical techniques. The team is also designing a pilot clinical trial, which will be led by Rajab and John Costello, M.D., the vice chair of clinical research in the Department of Pediatrics and director of research for the Children's Heart Center.

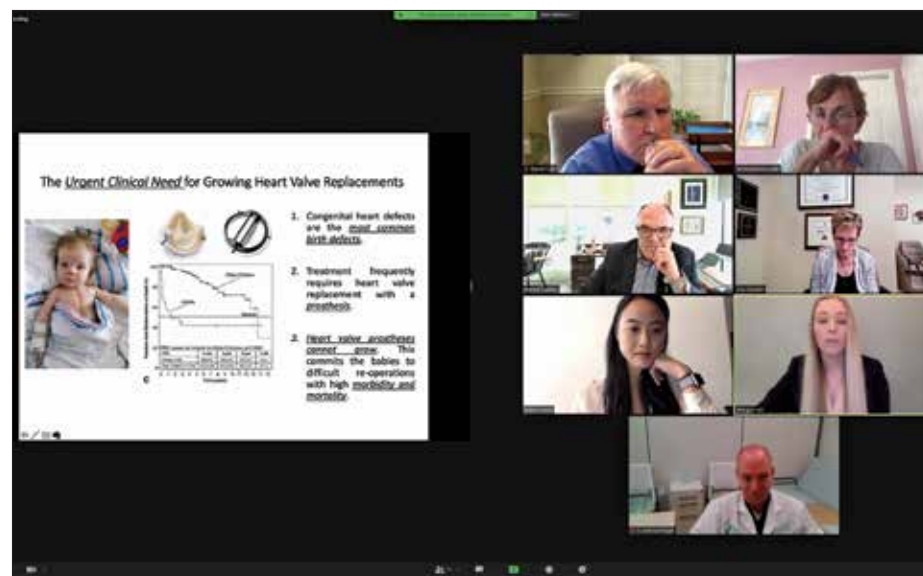
"Changing Your Reality"

Andrew Novak; Sarah Screws, R.N.; Kasey Jordan, Ph.D., R.N.; Christina McDaniel, DNP, R.N.

The past year has elevated the role of virtual learning in education, but a team from the College of Nursing proposed that virtual learning could not just substitute for in-person learning but actually provide experiences that students wouldn't otherwise have.

Andrew Novak, senior simulation specialist at the Health Care Simulation Center, developed a virtual reality mass casualty simulation for nursing students.

See **SHARK** on page 12



The partial heart transplant idea team presents its proposal to the sharks.

Volume of variants hits about 90% in latest testing cycle

By HELEN ADAMS
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The volume of variants in coronavirus samples tested at MUSC jumped from 40% for March to about 90% for April.

“We are now in the world of variants of concern and variants of interest,” said Julie Hirschhorn, Ph.D., associate director of the molecular pathology laboratory and leader of MUSC’s COVID-19 variant analysis. Variants of concern and interest are categories created by the Centers for Disease Control and Prevention to track the coronavirus mutations cropping up around the world.

The variants have not caused a spike in cases locally. The most recent update from the MUSC Epidemiology Intelligence Project showed a 53% decrease in COVID-19 infections compared with the previous week for the Charleston Tri-county area.

But there is some concern that the variants pose a threat to people who haven’t been vaccinated yet. The dominant strain for April, the U.K. variant, is also called B.1.1.7. It’s represented in red in the chart at the top

INDIA *Continued from Page Seven*

will step up its aid to India with more vaccines, for people like his mother, and medical supplies for people who desperately need them.

“This is a global issue. We should not let our eye off that fact. It would be premature to say that we are done with this. We may be to a large extent in the United States, hopefully. But we are intertwined as a world. There’s no doubt in my mind.”

of this story. You can see it starts to show up in February and takes over in just two months.

“The B.1.1.7 variant strain is 50% more transmissible. You need to either be hypervigilant or get vaccinated. It’s best to get vaccinated. That will help protect you from being hospitalized from COVID,” Hirschhorn said.

Experts say our vaccines appear to work against the current variants, greatly reducing the chance of infection, serious illness, hospitalization and death. Kids as young as 12 are now eligible to get the Pfizer vaccine.

But more than 200,000 South Carolinians were overdue for their second doses of COVID vaccines in a recent assessment. And the CDC estimated vaccine hesitancy at 16% for Charleston County, 18% for Berkeley and 19% for Dorchester.

Hirschhorn hopes that showing the rise of the variants will help convince some of those people to get vaccinated. “If more people have an idea of what variants are and what their potential is, and knowing what we’re facing right now, maybe would move the needle on people getting vaccinated. The best we can do is provide the data. COVID is still here. It hasn’t gone away.”

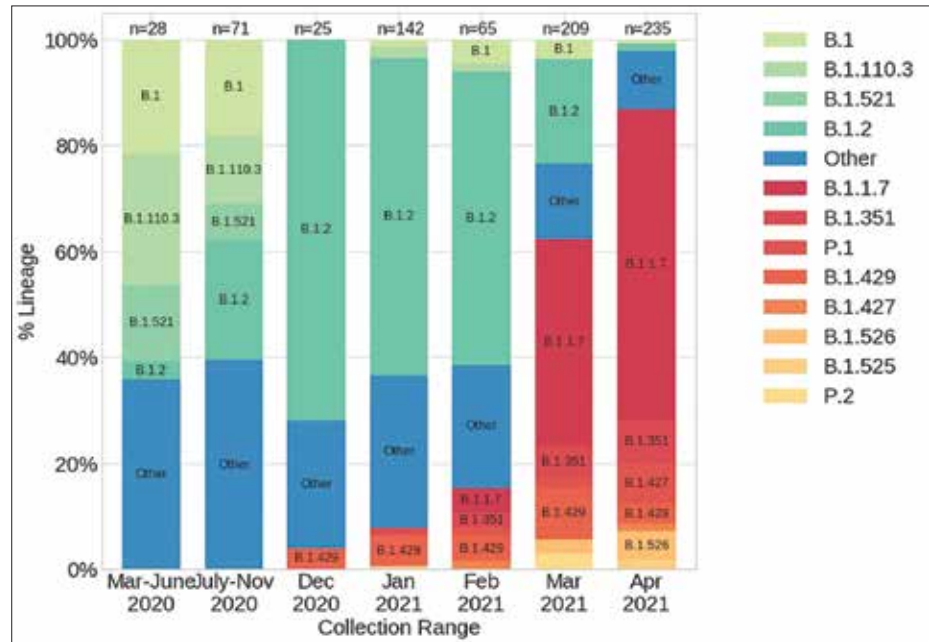
Her team plans to speed up its testing in the near future to give as close to real-time information as possible regarding variant numbers in the COVID-positive population being tested at MUSC. It’s also working to expand its testing to coronavirus samples taken from people around the state and look at the variants’ impact.

“One thing that’s missing with the CDC surveillance is they often don’t have information like whether patients were hospitalized, what their symptoms were, what drugs they’ve taken and whether or not they worked. So our next step is to start looking at the data set as a



Photo By Sarah Pack

Dr. Julie Hirschhorn, left, talks with medical technologist Kristen Maurer as they get ready to sequence coronavirus samples to check for variants.



This bar graph, created by Dr. Julie Hirschhorn, shows the dramatic rise of the U.K. variant B.1.1.7.

whole, with patient information, to start being able to ask and answer questions about the different variants and impact that they may have.”

Part of her team’s goal is to prepare for the future. “We’re hoping that we can

start creating a preparedness plan, so if a pandemic happens again, we’ll be ready to start testing and variant surveillance quickly to provide a rapid response to our community, state and the world.”

BUILDING *Continued from Page One*

constructed as a cancer clinic. Over the decades, some lab and research space has crept into the Drug Discovery Building as well as the Basic Science and Biomedical Engineering buildings. Now, the college will get its very own 22,000-square-foot space in the BSB, constructed out of concrete and glass.

The groundbreaking video is filled with laughs, confusion, drama, tension, thrills – OK, so maybe not all of that, but it is certainly entertaining – and centers on the hunt for the ceremonial shovel. It brings together past COP deans, such as William Golod, Ph.D. – the very man who began the quest for a new building back in the 1970s – with current dean, Hall.

“This groundbreaking has been decades in the making,” Hall said from the pulpit of St. Luke’s Chapel on the MUSC campus. “Literally thousands of people have donated their time, talent and resources to making this day possible.”

The film was screened at the green space next to the Urban Farm. Nearly 50 people sat on blankets and munched on popcorn as the film was streamed on YouTube. Joining those on campus were alumni from all over the country – Wisconsin, New Jersey, Virginia –

weighing in with how excited they were.

“Today is a great day for us to celebrate the history of the College of Pharmacy and to take a giant step toward its future,” Saladin said.

Not to spoil the ending, but Golod jumps in to save the day with his very own shovel. “I have been waiting to use this shovel for over 50 years,” he said. “If they would let me, I’d drive the bulldozer myself.”

In a scene reminiscent of the opening ceremony of the Olympic Games, Golod’s shovel is passed from one key player to another – a group composed of former deans, alumni, current and past faculty – until eventually ending in the hands of Hall. Along the way, each person tosses the shovel out of frame to a new person who catches it from off-camera. You’ll have to excuse the lack of continuity as the shovel in the video switches from plastic to metal at the very end because, well, let’s be honest, someone getting hit by a flying metal shovel only works on “America’s Funniest Videos.”

In the end, nine key players make ceremonial first shovel digs into a planter in front of the Basic Science Building. The building is expected to be finished by the summer of 2022 and begin housing faculty and students by the fall of the same year.



Empathy educator and patient advocate Tena Brown reminded nurses of the power their love and compassion have for patients and families.

Photo by Sarah Pack

NURSE *Continued from Page Six*

Zaas, who recently has had his own health care journey, reiterated Brown’s point.

“The impact that the nurses had on me and my family is something I will always appreciate and recognize,” he said.

Now, as CEO, he receives countless letters from patients and families.

“The most common theme they highlight is the excellence and compassion of our nurses,” he said.

That, he added, has been particularly true during this past year, when many families could not be with their loved ones in the hospital.

UPDATE *Continued from Page Two*

internationally recognized psychiatrist with a research focus in the area of addictions and has been a faculty member at MUSC since 1988. She began her interim role leading research in 2014, accepting the role permanently in 2016 after a national search.

“While Dr. Brady contributes to all three missions of the university, she is most well known for her contributions to science through research,” Saladin said. “Dr. Brady has been the top NIH research funded investigator on the MUSC campus for 12 consecutive years. She also was in the top 10 NIH-funded investigators in Departments of Psychiatry across the country for the past 12 years – and for four of those years, she was the top-funded faculty in any Department of Psychiatry in the U.S.”

In other business, the 16-member MUSC/MUHA board also voted to approve the following items:

- Renovation of 1,860 square feet on the second floor of the MUSC Health West Ashley Medical Pavilion to create a new dental clinic. The stand-alone dental clinic will be licensed and fully equipped to perform sedated oral surgery procedures.

- Renovations to approximately 1,400 square feet of existing office and lab space in the Clinical Sciences Building. The updated space will include a negative pressure lab to meet biosafety requirements and permit the South Carolina Clinical & Translational Research Institute to conduct COVID-19-related study visits and collect samples from infectious patients, as well as handle and process infectious diseases samples more safely.

- Lease renewals for two parking lots at 165 Cannon Street and at Hagood and Line streets. The lots are used by MUSC employees and students.

For more information about the MUSC Board of Trustees, visit <http://academicdepartments.musc.edu/leadership/board/index.html>.

RATES *Continued from Page One*

“Every county along the coast has the highest rate of vaccination in the state, literally any area that touches water.”

But he said about 34% of the people in South Carolina don’t have any immunity to the virus that causes COVID-19. They haven’t been vaccinated at all and haven’t had COVID – or got sick so long ago that it’s unclear if they’re still immune.

Sweat encouraged anyone who is eligible to get vaccinated. All the vaccines work against the current variants in our area, and they’re more effective than natural immunity in people 65 and up. None of the vaccines contain live virus, so they can’t infect you with the coronavirus. The shots can cause side effects, but those should go away in a few days.

After all, it was just a year ago that we saw a summer surge in COVID cases. “It probably had to do with a lot of people moving around during the summer and getting together inside in

air conditioning,” Sweat said.

“I would expect the same phenomenon might happen again, except there’s just not that many people left who don’t have any kind of immunity. You might see a mini-surge among those people. I doubt it would be anything like before. But I could definitely envision these numbers might go up again.”

MUSC annual mandatory deadline approaching on June 30

All MUSC team members must complete their annual mandatory by June 30. This applies to University, MUSC Health and MUSCP employees. Your assigned mandatory can be found in MyQuest.

Employees are now required to complete four hours of diversity, equity and inclusion training. Courses meeting this criteria are listed in MyQuest.

SHARK *Continued from Page Nine*

The program is fully customizable, he said, so different scenarios can be programmed, and the simulations can be set up for an individual or a team.

“Thankfully, we do not have mass casualties every day, but our students certainly need to be prepared,” said nursing instructor Christina McDaniel, DNP. She noted that although the program was developed with nursing students in mind, it could easily be adapted for use in the other colleges.

The program allows the instructor to track each student’s actions. This is key because during team exercises, there’s a tendency for one student to emerge as the leader of each group, making it difficult to properly evaluate each individual’s knowledge and skills, she said.

Novak said the simulation center has VR headsets that students can use to participate, but the program will also work on a regular desktop or laptop, so students could also participate remotely.

To fully roll out the simulation, however, the team asked for funding for hardware. Novak said he developed the prototype on his laptop, which was struggling to keep up with the software demands.

He expects to have a proof of concept ready for testing with students by this summer.

“Work Smarter, Not Harder: Innovative Re-Design of Computerized Provider Order Entry (CPOE) to Drive Evidence-Based Fluid Prescribing”

Michelle Spiegel, M.D.; Carolyn Bell, Pharm.D.; Amanda Davis, M.D.; Annie Simpson, Ph.D.; Lindsay Smith, R.N.; Janet Byrne, R.N.; Achsah Philip, Pharm.D.; Greg Hall, M.D.; Andrew Goodwin, M.D.

Nearly every person admitted to a hospital gets intravenous fluids at some point, with many of them receiving a saline solution.

But some newer research indicates that balanced fluids might be better for many patients, said third-year pulmonary fellow Michelle Spiegel, M.D. Balanced fluids, like lactated Ringer’s, contain a mix of calcium chloride, potassium chloride,



A screenshot of the mass casualty simulation that can be used to train students.

sodium chloride, sodium lactate and water, whereas normal saline contains sodium chloride and water. The research shows a greater risk of kidney injury with normal saline, potentially due to its high chloride content, she said.

At MUSC Health, 60% of the time, providers were ordering saline, although the percentages varied greatly by specialty, she said.

The multidisciplinary team decided to try to increase the ordering of balanced fluids, where appropriate, so that more patients would receive balanced fluids and also so there would be a standard practice across disciplines throughout the hospital system.

Before they instituted an educational campaign, team members noted a small 1.5% increase per month in orders for balanced fluids, which they attributed to a growing but uneven knowledge of the latest research. The team instituted an educational campaign in October 2019, at which point team members began to see a 4.4% increase in balanced fluid orders each month.

The real change, though, happened when the team was able to change the appearance of the electronic order panel. The new panel includes clinical decision support that explains the preference for balanced fluids and outlines the specific

instances when another fluid should be used; it also moves lactated Ringer’s up the list of fluid choices so that it is listed first.

After that change in March 2020, the team saw an immediate 21% increase in orders for balanced fluids, Spiegel said. The new ordering levels were maintained at least through December, when the team stopped tracking, she said.

The team was careful to promote the most cost-effective balanced fluid, Goodwin said. At 10 cents more per bag, lactated Ringer’s is similar in price to normal saline, although those costs can add up, he said. He estimated a cost of \$8,300 per year to move to balanced fluids. However, he thinks that cost would be offset by savings from not having to treat kidney injury.

Part of the team’s request to the sharks was for funding to perform a proper cost analysis to see if its intuition about the cost offset is correct. Team members also need additional technical support to adapt additional electronic ordering systems that weren’t included in the pilot.

2020 WINNERS

Attendees also got an update on last year’s winners.

The Care and Safety Resource Avatar

PIPELINE *Continued from Page Three*

enjoys interacting with and helping the residents.

She said the pipeline program has been great in providing more information about the career and connecting participants with role models already in the field.

“I feel like it’s opening a lot of doors for a lot of young students,” she said.

That’s precisely what Fleming hoped for with the program. Although the program has just gotten started, she’s looking ahead to consider what a second year might look like. Would it be open to current pipeline students or only to new applicants? How many of the current students will go on to apply and be accepted at PA schools? And might she add another historically Black college to the mix?

She’s excited about the possibilities of the program, as well as the chance that MUSC could consider adding additional pipeline programs.

“That is how we elevate the culture of ONEMUSC. That is how we talk about health care disparities and how we change what’s possible,” she said.

is currently in development. This avatar was designed to orientate floating nurses quickly to the procedures on the unit they’ve been assigned. A nurse can click on different body areas to pull up relevant information.

A mobile, text-based screening and remote care coordination system that connects pregnant women with mental health care has already enrolled more than 900 women in the program and is creating a collaboration with Pee Dee Healthy Start.

Finally, an automated preprocedural planning method for transcatheter aortic valve replacement has completed the institutional review board process and is in the late stages of artificial intelligence software development.