

No summer slump: explosive growth, new group affected by COVID-19

By HELEN ADAMS

adamshel@musc.edu

The trajectory of the coronavirus in the July 2 update from MUSC's COVID-19 Epidemiology Intelligence Project makes April's "wave" of cases in the Tri-county area look more like a ripple.

There's also been a dramatic shift in the age range of many of the people who are testing positive.

Michael Sweat, Ph.D., directs the public health project at MUSC. It analyzes COVID-19 data and trends in the Charleston Tri-county area, provides perspective and offers predictions to help guide health care and policy decisions.

"About 74% of all infections in the Charleston area since the pandemic started have been diagnosed since mid-June," Sweat said. "It's rapid, explosive growth. Of the 6,171 total cases in the Tri-county area as of July 1, 4,547 have been since mid-June."

Sweat pegs the growth rate at about 8%. "That's a really big number. If you keep it at that number, it just keeps growing. We end up with large numbers of cases."

A key factor in that growth is the coronavirus' spread among young adults. "There's definitely this marked change in the demographics of who is showing up infected right now," Sweat said. "Older people are not

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Sweat

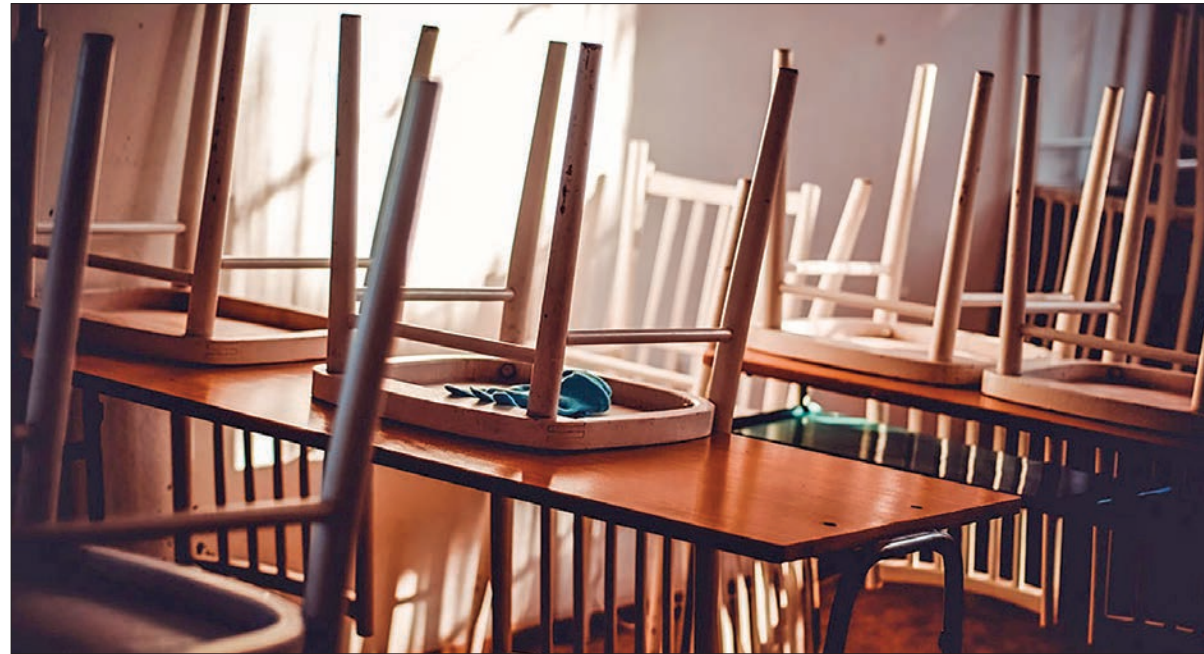


Photo Provided

Schools are considering when and how to reopen for in-person classes during the coronavirus pandemic.

Pediatrician group encourages schools to reopen, if they can do so safely

By HELEN ADAMS

adamshel@musc.edu

Elizabeth Mack, M.D., a pediatric critical care specialist at MUSC Children's Health and a spokeswoman for the American Academy of Pediatrics, said the AAP is encouraging schools to try to reopen with in-person classes if they can do so safely. "The AAP strongly advocates that all policy considerations for the coming year should start with the goal of having students physically present at school."

The South Carolina chapter of the AAP has written a letter to all school districts in the state

making that position clear. While keeping kids home was seen as an essential part of flattening the coronavirus' curve during the final months of the last school year, things have become less concrete, Mack said — at least from a pediatrician's perspective. That's because doctors and scientists have a lot more information about the virus and children than they did in the early days of the pandemic.

First, research suggests the virus' effect on kids isn't as bad as initially feared in most cases. For example, it doesn't seem to be infecting kids in the widespread way the way the flu would. "We still don't know exactly why kids are not as affected by SARS-CoV-2. But we know

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that it's a fact around the world," Mack said.

Studies back that up. One, published June 16 in the journal *Nature Medicine*, estimated people under 20 were half as susceptible to being infected with the virus as people over 20. Another report in *Pediatrics*, the journal of the AAP, noted that children have not been "significant drivers of the COVID-19 pandemic."

Mack's own observations at MUSC Children's Health back it up as well. "At this point, the numbers of children requiring hospitalization are much smaller

than adults here in the Lowcountry. None of them has had the need for a ventilator that you think about with adults. In fact, most of the kids were here for other reasons and then found to have COVID. That part of their course wasn't particularly serious. Obviously, it's a scary diagnosis for people, but thankfully, our kids have done well."

While there are concerns about multisystem inflammatory syndrome in children, or MIS-C, which has affected some children and is apparently linked to COVID-19, Mack said it's rare. "We don't fully understand how MIS-C is stimulated. But thankfully, most kids who get it do well."

Second, while virtual learning filled a



Mack

void caused by the pandemic, it hasn't been ideal. In fact, it has had some serious downsides. "In the last few months, we have seen child abuse and neglect rise. We have seen more child hunger, since many kids normally get their meals during the school day at school. We have seen mental health effects in children. I've seen more victims of gun violence and suicide attempts in the pediatric intensive care unit than I've seen kids with COVID in the last few months," Mack said.

"Without the stimulation of other children, without the natural play, without the learning that kids are meant to do, we've seen increases in problems with ADHD, depression and anxiety. Kids have, in many cases, sort of reverted to electronic interaction. They may see no one outside of their house because we've asked them to isolate. It's been really troubling for many kids."

Third, it's possible to reduce the risk of virus transmission in public places. Physical distancing, mask wearing, disinfecting frequently touched surfaces and doing things like keeping doors open can help.

The AAP gets into a lot of specifics in its reentry guidance for schools, but some of the takeaways include making sure there's plenty of space between desks, reducing the need for students to move to different classrooms, requiring masks for everyone who can wear one safely and frequently disinfecting spaces touched by a lot of people.

The guidance varies by age — preschoolers aren't likely to wear masks or practice social distancing, while older students are — but there are suggestions for every level of school.

"Ultimately, pediatricians believe the effects of in-person learning with proper precautions outweigh the alternative benefits, which are virtual learning and lack of social interaction."

Elizabeth Mack, M.D.

Fourth, while testing is an important part of slowing the pandemic's spread, it's a nuanced area.

Mack said the value of testing every student for the virus that causes COVID-19 before the school year isn't as clear-cut as it might seem. "They might be negative for that one moment in time. But it isn't pleasant, and it doesn't mean they won't develop COVID later in the week or the year."

She said antibody testing has also come up. "But there is concern about a class structure that might develop from the concept of assumed immunity. Also, we don't think antibodies last as long as

we initially did."

The AAP doesn't recommend temperature checks for every student, either, Mack said. "Many organizations have understandably let temperature checks go by the wayside. Checking every child would take a lot of time. Many people do not have fevers when they're infected, and you can have a long course of COVID-19 with no fever, so it can be falsely reassuring."

Mack said the AAP's point of view is based on what it sees as best for families and children. She knows some parents will have a very different take, and so will some school employees. In fact, a USA Today poll back in May found that about a third of parents were "very likely" to focus on at-home learning in the fall, and 1 in 5 teachers were unlikely to return to classrooms then, either.

Mack said schools will have to strike a balance as they learn more about how the coronavirus affects children and the adults who take care of and teach them. "Ultimately, pediatricians believe the effects of in-person learning with proper precautions outweigh the alternative benefits, which are virtual learning and lack of social interaction."

The MUSC COVID-19 Archive:
DOCUMENTING LIFE DURING
THE COVID-19 PANDEMIC

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MUSC CATALYST news

Editorial Office

MUSC Office of Public Affairs & Media Relations, 135 Cannon Street, Suite 403C, Charleston, SC 29425.

843-792-4107

Fax: 843-792-6723

Editor: Cindy Abole
catalyst@musc.edu

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Letter from the
CEO

MUSC HEALTH

Dear MUSC Health team,

While we are battling the latest COVID-19 wave of infections in South Carolina, we are also coming upon the yearly influx of new care team members in July:

- New residents and fellows.
- Many medical staff graduating to a new level of responsibility (interns become residents, residents become attendings, etc).
- New students from all MUSC colleges.
- New care team members across the entire system (the next two months are our biggest influx of new people throughout the year).

We should all welcome these new care team members warmly, especially those who are jumping in during these unprecedented times.

We have all heard of the 'July effect' in academic medicine that refers to the perception that there are increased medical errors and complications because of the presence of new doctors. While most current and best evidence does not support this, we do know that it's critical to increase supervision and continue the commitment by senior attendings and medical leadership to educate and mentor.

While we can't ignore that the influx of new staff this time of year can feel a bit chaotic, especially as we become inundated with infected patients and the unknowns of COVID-19, we need to make sure our new care team members are given the attention and training they deserve. Please keep the following in mind over the next several weeks:

❑ Introduce yourself

Go out of your way to introduce yourself to everyone who is new. New care team members. New physicians. New students.

❑ Explain

Health systems are complex adaptive systems. It takes months to understand a new health system. Take the time to explain the MUSC way of doing things and more importantly, be sure to explain why we use certain methods. Although they receive plenty of orientation and training, it will take weeks, even months, to understand the system fully.

❑ Critical awareness

Remember that there are many new team members this time of year. Pay even more attention to the details of what is occurring around you. Speak up if you recognize a problem. Please keep in mind that these new team members do not yet know the MUSC system. They also do not know each other yet and therefore will not function optimally as teams.

❑ Patience

Things are simply not going to work as smoothly this time of year. Take a deep breath and remember that you were once new as well!

So, in summary, this is the time for everyone to step up and share that "South Carolina charm" to all the new care team members. Let's be sure to be thinking about patient safety and making sure everyone is adapting well to a new environment.

Thank you for the great care you provide every day!

Patrick J. Cawley, M.D.

CEO, MUSC Health

Vice president for Health Affairs, University



Cawley

Community support boosts supplies, spirits for MUSC Health care teams, patients during pandemic

Staff Report

Since the pandemic began in March, more than 300 people, businesses and organizations have donated meals, equipment, supplies and personal protective equipment for MUSC Health care team members and patients. As the number of COVID-19 infections and hospitalizations continues to climb across South Carolina, these donations have helped MUSC respond and prepare for taking care of COVID-19 patients in hospitals across the state.

"The outpouring of support for our care team members and patients during this pandemic has been extraordinary, especially considering how many families and businesses are struggling themselves," said Patrick J. Cawley, M.D., MUSC Health CEO and vice president for Health Affairs, University. "These gifts have boosted our capacity of in-demand health supplies for MUSC Health care teams who put their own health at risk to care for our patients. The community as well as many of our partners have come together to support our teams physically and mentally with supplies, meals and motivating messages. We can't thank them enough and appreciate the continued support as we weather this pandemic."

In-kind donations at a glance:

MARCH 20 TO JUNE 26, 2020 SUPPLIES

- 25,000+ face shields.
- 58,410 masks.
- Air freight and delivery of 150,000 goggles and protective face shields.
- Three loaner cars for team members without transportation.

- 54 iPads for patients who have been isolated from family and friends because of COVID-19 visitor restrictions.

Food

- 72 hospital units served.
- 15,480 free meals to those working the front lines.
- 2,160 pounds of food to care team members.

"The community awareness of frontline care workers has been amazing," said Matina Kordonis, a nurse who works in the medical intensive care unit (MICU) with COVID-19 patients. "The amount of support from the community to make sure we have what we need has been overwhelming and puts smiles on everyone's faces. The support of the community has been a positive light through this pandemic."

MUSC Health appreciates and welcomes donations. For a current list of supply requests, please visit MUSC Health's donations page. Monetary donations can be made online at giving.musc.edu or by phone at 843-792-2678.

INTERVIEWS AVAILABLE

Please contact Melissa Varner, public information director for the Department of Development and Alumni Affairs, at varnerm@muscedu to set up an interview with the following MUSC Health personnel:

- Tom Crawford, Ph.D., MUSC Health chief operations officer
- Jennifer Simon, analyst, Capital Asset Planning and Tracking Support Services/Asset Management. Simon has tracked goods and services donated to MUSC Health throughout the pandemic.

All gifts to MUSC Health during the pandemic are accounted for through the MUSC Foundation.

Innovation Week sparks new idea for instruction

BY LESLIE CANTU
cantul@muscul.edu

Innovation Week at MUSC isn't just about showing off great ideas, though there are plenty of those. It's also about sparking new ideas and new collaborations between groups that otherwise might not have met.

That's just what happened during Innovation Week 2019, and in 2020, the collaborators were back to talk about it.

Tambra Prantner-Marik is an assistant professor in the College of Health Professions who teaches occupational therapy students, and Erick Lemon is director of digital strategies and innovation at the James W. Colbert Education Center and Library.

During the 2019 Innovation Week, Lemon made a presentation about 3D printers at the library. At that point, he

said, the library had only one 3D printer, but he was in the process of acquiring more through grants. Lemon, who has a background in instructional technology and 3D printing from his time at the dental school at the Medical College of Georgia, wanted to create an opportunity for instructors to integrate 3D printing into their curricula.

Prantner-Marik saw his presentation and was intrigued.

"I knew 3D was being done in our field, a little bit here and there, but it certainly isn't mainstream yet," she said.

Occupational therapy often involves the use of specialized tools to help people achieve basic tasks of daily living. Someone who has difficulty pinching or grasping, whether because of congenital issues or injury, could have problems using a key in a door or wielding a fork or spoon during a meal. In her own



Screenshot provided
Some of the items that Tambra Prantner-Marik's students 3D printed included models of the scapula and an adaptive spoon.

practice, Prantner-Marik works with people with orthopedic conditions. She often makes hand or wrist splints for patients, but traditional splints can cost more than \$100 apiece.

"If your insurance doesn't cover that, that's a lot of money for a client," she said.

Lemon and Prantner-Marik began to talk about how she could use 3D

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You Can Do It!



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The MUSC librarians aren't in the library, but they are still available to help you. They are taking online appointments, helping with citation managers, offering instruction, meeting with students online, assisting with research, and making sure you have the information you need. You can reach them through email, LibChat, or Ask a Librarian.

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MUSC Libraries



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Changing What's Possible

MEET ALEC



Alec DeCastro, M.D.

Department; How long at MUSC

Department of Family Medicine; Eight years
(six years as residency program director)

How are you changing what's possible at MUSC

I'm honored to help train the best and brightest future family medicine physicians. I also have the privilege of treating amateur and elite athletes here in Charleston and all over the world with MUSC Health Sports Medicine.

Family

Wife, Justine; daughters, Lexi, 11, and Lainey, 8; sons, Manny, 9, and Matty, 4

A unique talent you have

U.S. Air Force Reserve flight surgeon

Something new about the Family Medicine residency program

We just moved back to MUSC's campus after a 20-year affiliation with Trident Medical Center. Our program is one of the oldest family medicine residencies in the country (50 years).

Favorite quote

"When everything seems to be going against you, remember that the airplane takes off against the wind, not with it." — Henry Ford

Faith over fear, five-time cancer survivor shares her story

By VAGNEY BRADLEY

bradleyv@musc.edu

Donna Rosa likes to recall boating in the Lowcountry with her grandsons and traveling to Italy with her husband and making tasty tiramisu. She treasures the moments, even more than most, because she thought she might not live to see it, especially given the fact that she's been diagnosed with melanoma skin cancer five times.

This year, the American Cancer Society estimates that more than 100,000 melanoma skin cancers will be diagnosed across the country. Dermatologist Joni Mazza-McCrann, M.D., with MUSC Health, encourages others to pay attention to any skin irregularities, as it is vital to diagnose melanoma skin cancer early.

"The rates of melanoma have been on the rise over the past few decades, which is certainly alarming, but the good news is that when detected early, melanoma can be treated," Mazza-McCrann said. "This is why it is so important to monitor your skin for new or changing moles and follow up with a dermatologist."

As a melanoma survivor, that certainly is what Rosa wants everyone to know. She enjoys telling others her story to give them hope, but the years leading to this point weren't without struggle. She credits her faith as being a guiding light through some dark days she endured.

"My faith never wavered. I was just so grateful to be alive," Rosa said. "I never thought about giving up, and it had to be God that gave me the strength to not give up."

Rosa's more than two-decade cancer journey started in the summer of 1996, 24 years ago, with a bothersome mole on her back. Doctors had been "watching" the mole for years. Once the mole started to itch more often, Rosa, a mother of two young boys at the time, insisted it be tested for cancer.

She recently read a story about a young mother with two sons, just like herself, who was diagnosed with melanoma and was dead six months later.

Melanoma is a type of skin cancer that develops when melanocytes — the cells that give the skin its tan or brown color — start to grow out of control. Cells in nearly any part of the body can become cancerous and can then spread to other areas of the body.

Her self-advocacy may have saved her life, as she ended up being diagnosed with melanoma. Rosa was not a patient of the Hollings Cancer Center at the time and was treated by non-MUSC doctors. The specialists removed the mole, but the cancer returned only a year later.

Mazza-McCrann explained melanoma is considered a more dangerous type of skin cancer because it is more likely to spread to other parts of the body if not caught and treated early. "Melanoma is less common than basal cell and squamous cell carcinomas but more dangerous because of its ability to spread to other organs if not diagnosed and treated early."

The second time the cancer returned, it showed up in Rosa's lymph nodes under one of her arms. She was referred to MUSC Hollings Cancer Center and was seen by oncologists who recommended chemotherapy as part of her treatment. She met oncologist Edward McClay, M.D., and immediately became grateful for his positive attitude and medical advice.

Rosa knew dealing with cancer was not going to be an easy feat, but she was thankful for the doctors at the cancer center. "MUSC truly was the place that saved my life," Rosa said.

At the time, Rosa's husband was in the U.S. Air Force and stationed in Hawaii; she stayed back home, so that her son wouldn't have to change schools. It proved difficult undergoing cancer treatment and helping to raise a family at the same time, but Rosa was thankful she always felt love and support. She relied on her positive attitude, even during tough times, and her faith and wanting to see her two sons grow up.

"I originally just prayed to see my kids grow up and graduate from high school. Then, I questioned if I was going to



Photo Provided

Donna Rosa is joined by her husband, Lt. Gen. John W. Rosa Jr., USAF (retired) and their grandsons Matt and Mikey.

"It is important to believe in yourself and just take it one day at a time, but it's hard. It's a long journey."

Donna Rosa

see them go to college or get married," Rosa said. "When I would hit those milestones, I felt like I was so blessed that I couldn't get angry, and I'm an upbeat, optimistic person."

Two years after the cancer was removed from Rosa's lymph nodes, melanoma was found in her lungs. At this time, she was living at Maxwell Air Force Base in Alabama and was

preparing to move to Valdosta, Georgia. With this cancer diagnosis, doctors told Rosa she might only have nine months to live, if she did not receive the proper medical treatment. Though the news was scary for her, she was determined not to live on the side of fear. Instead, she chose faith.

"I'm an optimist, so unless you are going to prove to me that I'm not going to make it, then I am going to go on believing I am going to survive," Rosa said. "It is important to believe in yourself and just take it one day at time, but it's hard. It's a long journey."

Rosa and her family moved to Valdosta two weeks after her diagnosis, and she had surgery five days later. The cancerous nodule was removed at Emory University Hospital in Atlanta. Her oncologist in

Researchers urge public to do their part, 'take care of each other'

By LESLIE CANTU

cantul@musc.edu

As COVID-19 cases in South Carolina spike, two MUSC researchers urged residents to do their part in fighting the virus.

"In this pandemic, it's paramount that we take care of each other. It's very important to set our own comfort aside sometimes — wearing a mask makes it hard to breathe — but it's important that we take care of each other so we can all get through this," said Satish Nadig, M.D., D.Phil., an immunology researcher and transplant surgeon who spends a good amount of his work hours wearing a mask.

"Mask wearing, hand hygiene and physical distancing — those three steps will greatly help contain this pandemic," said Michael Schmidt, Ph.D., a professor in the Department of Microbiology and Immunology.

The two participated in a virtual TEDxCharleston moderated by The Post and Courier investigative reporter Tony Bartelme. They covered a range of questions about the novel coronavirus, from progress toward a vaccine to doubts about whether there is truly a spike in local cases.

To those who would say the increase in cases is due to an increase in testing, the researchers said: No. The increase is due to the greater spread of the virus throughout our state. That can be seen not just by the increase in "percent positive" tests but by the increase in hospitalizations and the increase measured in sewage. Yes — sewage.

"Stool doesn't lie," Schmidt said.

He explained that University of South Carolina environmental health sciences professor Sean Norman has been measuring the amount of COVID-19 that shows up in sewage plants in different areas of South Carolina, and the amount has been going up.

With that increase in mind, they asked people to make wise choices for the greater good when celebrating the Fourth of July. And in speaking about parties and large gatherings, they also explained something called the R_0 , or basic reproduction number.

The R_0 , pronounced R-naught, indicates the average number of cases attributable to one infected person. Highly infectious diseases, like measles, have high R_0 values. The ideal value for R_0 is less than 1, which is akin to stranding the virus on an island — it can't go anywhere, Schmidt said.



Photo by Sarah Pack

Dr. Satish Nadig appeared in a virtual TEDxCharleston discussion about the novel coronavirus along with colleague Dr. Michael Schmidt.

Unfortunately, R_0 is best calculated in hindsight. Because it can fluctuate depending on human behavior, like wearing masks, scientists can't pinpoint a real-time R_0 value.

What they can say, though, is that if the R_0 value is 2, then 15 people attending a backyard barbeque in which one person is infected would spread the disease to 225 people. If the R_0 value is 2.5, then that 15-person barbeque spreads the disease to 871 people.

And while most cases of the disease are mild, there is no guarantee about who will have a mild case.

Some have argued that we should allow people to become sick so that we can build herd immunity to the disease — herd immunity being the concept that when a majority of the population has antibodies to a particular disease, then it can't get a foothold to start an outbreak.

But going for herd immunity is a risky strategy, Nadig said. A high percentage of the population would have to develop antibodies.

"That's a big risk and gamble to take. How many people have to die in the general population to get 80% antibody positive?" he said.

Sweden, for example, decided to take the herd immunity route, yet only 7% of its population shows antibodies, he said.

But the two also noted that there is plenty to be hopeful about. Schmidt said the search for a vaccine is happening at

warp speed. In addition, treatments have improved.

"It's medicine — the practice of medicine and the sharing of that knowledge. The evidence has reduced that fatality rate. We know much more than we did in March," Schmidt said.

While the world waits for a vaccine, some scientists have suggested that giving everyone the polio vaccine — which is plentiful, inexpensive and safe — would jumpstart an immune response to the novel coronavirus. There is some evidence that live attenuated vaccines can improve responses even to diseases they don't specifically target, Nadig explained. Some think this could be why children seem to be less affected by this disease — because they have recently received the measles, mumps and rubella vaccine, he said.

In closing, the scientists asked everyone to remember to wear masks, wash hands and keep physical distance between themselves and others outside their households. Nadig also asked people to consider donating blood, as hospitals continue to need blood for lifesaving procedures.

And finally, Schmidt urged optimism.

"Remember to be hopeful because there are a lot of folks out there, on planet Earth, working day and night, diligently, to find solutions."

The session can be viewed on TEDxCharleston's Facebook page.



Dr. Michael Schmidt appeared during a virtual TEDxCharleston presentation about the novel coronavirus.

SURVIVOR *Continued from Page Six*

Valdosta was working with the oncologist at Emory during this treatment process. After the surgery, Rosa began chemotherapy in Valdosta.

She admits that this time in her life was grueling, but the treatment is what she believes kept her alive. She wanted to do anything she could to survive. Thankfully, Rosa lived past the nine months and survived the cancer that was found in her lungs.

Three years later, the cancer returned in her hip, and it was surgically removed. During this time, doctors in Washington, D.C., decided Rosa could be a candidate for granulocyte-macrophage colony stimulating factor (GM-CSF). This immunotherapy treatment stimulates the production of blood cells and promotes their ability to function.

“GM-CSF was relatively new and was given in shot form,” Rosa said. “I received shots for a little over two years until I began having bad reactions to the drug, so I had to discontinue.”

To keep the faith and hope of seeing healthier days, Rosa forced herself to look in the mirror daily and smile. Even though she didn’t always feel like smiling, she knew that if she could form a smile, she could keep going and defeat the cancer.

“Cancer can feel like it’s taking over your body, but I was determined that it wasn’t going to take over my mind,” Rosa said.



Donna Rosa enjoys spending quality time with all of her family and grandchildren, including her youngest grandchild, Cam.

Photo Provided

After immunotherapy, Rosa no longer had the cancer in her hip. Just as she hit the 10-year mark without cancer, she noticed, in the summer of 2011, what looked like a splinter in her toe.

Erring on the side of safety, Rosa told her doctors at MUSC Health about it, and tests revealed new melanoma on her toe. Thankfully, the cancer, her fifth diagnosis, was found early and removed without Rosa having to go through chemotherapy.

Rosa is now in remission and visits Joel Cook, M.D., an MUSC Health dermatologist and surgeon, every six months for routine checkups.

Having experienced cancer five times, Rosa believes that she has a duty to try to help others who might have melanoma.

Once, while at a tailgate party at a Citadel football game, she saw a young girl with a mole that looked similar to the cancerous one she had had on her back.

Respectfully, Rosa gently told the young girl’s mother she might want to get the mole checked out by doctors. A month later, the mother wrote to Rosa,

thanking her because doctors felt the need to remove her daughter’s mole.

Instances like those help Rosa, who is also an advocate for others to seek second opinions if they feel something is not right with their bodies. It leads her to believe there is a reason she has lived to tell her story of surviving cancer.

“If I can help one person, then it’s worth it,” Rosa said.

Rosa’s advice for anyone going through cancer treatment or who has been recently diagnosed is to always keep hope alive. She believes it is possible to defeat cancer and live a life without fearing the disease. Even when times seem difficult, she urges others to keep fighting.

These days, Rosa enjoys retirement with her husband, who is the former president of The Citadel. Now, a grandmother of three, Rosa does not take life for granted, especially precious moments with her family. Her faith has proved to be greater than her fear of cancer.

“Cancer is just a statistic,” Rosa said. “Statistics are meant to be broken.”

Skin cancer safety and prevention tips:

- ☐ Avoidance of UV light is critical to decreasing your risk of skin cancer.
- ☐ Apply broad spectrum sunscreen, SPF 30 or greater, to sun-exposed areas when outdoors. Don’t forget to reapply.
- ☐ Wear sun protective hats and clothing.
- ☐ Avoid peak sunlight hours between 10 a.m. and 2 p.m.
- ☐ Avoid tanning beds.
- ☐ The risk for developing melanoma doubles if a person has had five or more sunburns.

Skin check: Remember A.B.C.D.E.

- Moles with Asymmetry.
- Irregular Borders.
- Multiple Colors.
- Diameter larger than a pencil eraser.
- Evolving/changing moles should be evaluated.

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Luxury Charleston hotel gets MUSC Health's help to keep guests, employees safe from COVID-19

Editor's Note: As the MUSC Health Back2Business team expands its efforts to help businesses and organizations operate as safely as possible during the coronavirus pandemic, MUSC Catalyst News is profiling some of the changes taking place. Up first, how the Hotel Bennett is adapting to protect guests and employees.

BY HELEN ADAMS

adamshel@musc.edu

Guests at the luxurious Hotel Bennett in Charleston may notice a new certification when they check in. MUSC Health's Back2Business team, which helps businesses operate as safely as possible during the pandemic, has given the hotel a sign to post announcing that it's completed training to protect guests and employees from the coronavirus.

That's no small feat, according to Back2Business quality control expert Tara Torres. "They have taken this very seriously and have put processes into place very quickly. They're very open to suggestions and want to be a positive role model for the city."

The stakes are high. The consulting firm McKinsey & Company reports that the coronavirus pandemic has taken a serious toll on the hotel industry that may last until at least 2023. So making sure people feel safe is a top priority.

Hotel Bennett general manager Marty Wall said that's why he's making sure the site's 179 guest rooms, along with its restaurants, bars, spa and other shared spaces, meet the highest health and safety standards. The hotel has a COVID coordinator who's been working closely with MUSC Health's Back2Business experts.

"Our efforts are part of a long-term strategy to keep our employees and guests safe, and being certified by such a renowned institution like MUSC

significantly helps convey our safety first message. We sincerely appreciate and enjoy the partnership," Wall said.

Torres said her team came in and checked out the guidelines and processes the hotel came up with on its own, then created a customized health and safety plan. "We made sure they had the absolute best practice guidelines and risk-mitigation strategies. We also provided employee risk stratification. So every employee will know how to appropriately use personal protective equipment and their specific level of exposure for their roles. They have been very receptive to all our suggestions and are very excited to work with us."

The hotel is providing hand sanitizer, masks and gloves for guests and employees. It's posting signs describing how to practice social distancing in three languages. And it's checking employees' temperatures and screening them for symptoms of COVID-19.

Torres said the hotel is also focusing on air flow. "What we have recommended for them to do is to increase ventilation. Ventilation is probably the best thing. Leaving doors open if possible. Updating their air filter system."

Areas normally touched by a lot of people are carefully cleaned. "They have very frequent sanitizing times. We've helped them identify high-touch items and areas. So they go in frequently and wipe them down with disinfectant products. That includes door handles, railings, elevator buttons, countertops, light switches. They also have clear cough shields wherever there's an employee facing the client."

Torres said some items have been removed. "There's nothing communal in the dining areas. Everything is single use if possible. Think about things people want to touch and share. We can't share



Photo by Hotel Bennett

A masked, gloved employee delivers a drink.

anymore."

Guest rooms in the Hotel Bennett now sit empty for at least 24 hours after someone checks out. Then, each room is thoroughly cleaned before the next arrival.

Torres said the Back2Business team will stay in touch with hotel management, reevaluating and adjusting its tailor-made plan as needed. Back2Business experts include not only quality control specialists but also doctors and nurses with public health and infectious disease backgrounds.

Right now, the Back2Business team is working with at least one other

Charleston hotel, along with the airport, the Kiawah Island Club, dentists' offices, restaurants, private schools and the locations where the HBO show "The Righteous Gemstones" is shot in Charleston.

"We feel like MUSC is a good fit for this because we are all about providing health care needs for our community. We feel like this is part of helping our community as well as visitors who come in to remain as safe as possible. We have the expertise and knowledge and want to be able to share that with our community," Torres said.

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MUSC
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MUSC named national coordinating center for rehab research

BY LESLIE CANTU

cantul@musc.edu

About one in five Americans has a disability of some sort, whether because of accident, war, congenital issues or aging, according to the National Institutes of Health.

MUSC has been a leader in supporting research to help individuals to rehabilitate their bodies and participate more fully in life for the past five years. This will continue as the National Center of Neuromodulation for Rehabilitation (NC NM4R), housed within the College of Health Professions (CHP) at MUSC, has received a five-year renewal from the National Institutes of Health (NIH). It is one of only two rehabilitation research centers to be renewed in this grant cycle.

In addition, the NC NM4R will take on a new leadership role as it has been named the national coordinating center for a group of six such centers, the Medical Rehabilitation Research Resource Network, each with its own particular focus on rehabilitation research. The coordinating center is what can truly make the whole greater than the sum of its parts, said NC NM4R program director Steve Kautz, Ph.D., an endowed professor whose research focuses on stroke recovery.

"We're now working hand in glove with the NIH to help set the agenda to improve rehabilitation research across the country," he said.

As the national coordinating center, MUSC will be able to develop conferences and initiatives to meet the emerging needs and interests of the rehabilitation research community, Kautz said.

The NC NM4R, which includes faculty from the College of Medicine as well as CHP, focuses on research into neuromodulation, using noninvasive techniques like transcutaneous auricular vagus nerve stimulation (taVNS), transcranial magnetic stimulation (TMS) and operant conditioning to train the brain and spinal cord in new ways of moving or thinking. Multiple clinical trials are using these techniques on a variety of physical and mental conditions, and TMS is already FDA approved for treatment-resistant depression.

But the key to MUSC's successful renewal is its focus not just on MUSC researchers but on training researchers across the country, Kautz said.

"We try to nurture people at different levels of their involvement in rehab research to take them to the cutting edge and make it more likely they can get funded to do things that are going to have impact," said Richard Segal, PT, Ph.D., chairman of the CHP Department of Health Professions.

He made note of one graduate student who came to a workshop at MUSC and learned techniques for operant



Photo by Anne Herford

MUSC biomedical engineer Jayce Doose, right, speaks to a small group during a conference hosted at MUSC in 2019.

"The gold standard for what we hope to achieve is what Dr. Mark George already achieved with respect to depression. He came up with a TMS (transcranial magnetic stimulation) protocol that is now saving the lives of people with depression for whom drug therapy isn't working."

Steven Kautz, Ph.D.

conditioning of spinal reflexes, took that information back to the lab where his advisor gathered preliminary data and then successfully applied for a grant from the NC NM4R. With those results, the advisor was able to secure an NIH grant. That the researcher is at the University of Texas at Austin, rather than MUSC, isn't a drawback in Segal's eyes but a win.

"That's perfect," he said. "That's our job, to reach out."

The NC NM4R has trained people from more than 30 states, Segal and Kautz said. Traditionally, those trainings are in the form of in-person workshops, but the pandemic has forced them to get creative and go online. In doing so, they've discovered how many

more people they can reach. One recent workshop was slated to have 40 in-person attendees. When it was moved online, 200 people registered, Segal said. At times, there were as many as 150 people logged into Zoom sessions. Segal and Kautz are enthusiastic about continuing virtual trainings even when in-person sessions are feasible again because they offer a way for scientists from universities with smaller travel budgets to receive training.

"The training we do is for researchers who want to change the structure and function of the nervous system to help people recover after an injury or disease. We do most of it without being invasive, so we're helping people with things we believe, ultimately, could end up in practice," Segal said.

The currency of the nervous system is electricity, Kautz explained. Thus, stimulating certain nerves or areas of the brain promises to deliver results in a more targeted fashion with fewer side effects than drugs.

"The gold standard for what we hope to achieve is what Dr. Mark George already achieved with respect to depression. He came up with a TMS protocol that is now saving the lives of people with depression for whom drug therapy isn't working," Kautz said.

George is a key member of the neuromodulation center and serves its scientific director.

"I've told him if I could develop one treatment in my career that had that kind of impact, I would be a happy scientist when I retire," Kautz added.

See CENTER on page 11

COVID *Continued from Page One*

showing up as new infections nearly as much as younger people. About 47% of infections being diagnosed right now in Charleston County are among people 30 and below. Berkeley and Dorchester counties are about the same.”

He has a theory about that. “I think older people are being more cautious because they’re more concerned about the impact of the coronavirus. Young people like to get out and interact with people. They’ve been pent-up for a long time. I think when the state reopening was approved, people just got out. And I believe a lot of younger people got

infected. Now we’re seeing this wave of them coming in to be tested.”

Sweat said young people are less likely than older people to have severe symptoms. That’s good news for them. But it also means there may be even more of them in the Lowcountry who aren’t getting tested because they don’t realize they have the virus.

“The frequent lack of recognition of mild symptoms as COVID could be leading to even further spread. We know that people who are mildly symptomatic, maybe they think they just have allergies or aren’t feeling great for a day or two, may be accounting for a lot of transmission. That’s something we really need to watch,” Sweat said.

“I anticipate we’re going to start seeing older people catching it from younger people. That’s what’s likely to happen, particularly within households. About 60% of cases diagnosed are from interhouse transmission.”

Sweat said the idea floated early in the pandemic that the virus might ebb during the summer is not panning out, at least not in the Lowcountry. And its rapid spread makes what he calls tools for fighting the virus harder to use. That could affect everybody, not just people who come down with the virus.

“As these numbers get bigger, it becomes less feasible to contact trace and test rapidly. Then, the only tool you have is lockdown. I know there’s zero political

will for it, but that may change. You’re seeing Texas and other states back off opening up. If it gets bad enough, there’s nothing you can do but institute a strict lockdown. I hope we don’t have that, but once those numbers start getting large, you just lose our tools to roll them back. I’m afraid we’re on that path.”

But Sweat said that’s not inevitable. “I have faith in people that they’re going to change their behavior. They’ll learn the seriousness from this outbreak. The main thing that historically gets people to change behavior is personal knowledge of people affected. That’s going to happen more and more as we see larger numbers.”

CENTER *Continued from Page Ten*

Brain stimulation can be used on conditions as varied as Parkinson’s disease, epilepsy or anxiety. MUSC researchers have been using taVNS to help premature babies learn how to drink from a bottle, a skill that is difficult for a significant portion of premature infants.

Kautz’s work is in stroke recovery. For years, it was assumed that stroke patients would achieve most of their recovery in the first few months post-stroke; after that, there was nothing further that could be done. “Thousands of people did not receive the rehabilitation they needed because of that



Kautz

thought. Neuromodulation is one of those ways in which we can both treat acute injuries and those that are longstanding,” he said.

MUSC’s strength is in its collaboration between the brain stimulation experts in the College of Medicine Department of Psychiatry and Behavioral Sciences and the rehabilitation experts in the College of Health Professions, Kautz said. He also serves as the program director of the Center for Biomedical Research Excellence (COBRE) in Stroke Recovery, which includes a brain stimulation component. He believes the success of MUSC’s initial application for the NC NM4R was due to the COBRE having already trained a half-dozen junior investigators who started with expertise in either brain stimulation or rehabilitation and showed them how to combine the two fields in research.

“We took national what we were doing locally,” he said. “It worked so well that now we get to serve the rehabilitation research community for five more years.”

INNOVATION *Continued from Page Five*

printing in her courses. She had found designs online for some of the basic things she wanted students to do, though Lemon noted that he has a graphic designer, Sherman Paggi, who can help develop designs.

“If somebody has an idea and they don’t know exactly how they can print what they’re thinking about, we can work with them,” he said.

Prantner-Marik came up with a plan to introduce students to the idea of 3D printing.

In the first semester, first-year students were assigned in groups to create a 3D model of a bone as a means to get them familiar with 3D printing. Prantner-Marik admits many of the students weren’t entirely enthusiastic about the assignment, but by the second semester, when they were assigned to create a tool that could be used by clients, they began to appreciate the possibilities — especially when they realized that a custom-made tool would cost only a few dollars to create.

They then got to see those tools put to good use after they donated them to the student-run CARES Physical, Occupational and Speech Therapy Clinic for people without health insurance.

Prantner-Marik’s plans for the third semester were interrupted by the COVID-19 pandemic. She intended to have students use the 3D scanner in the library to scan each other’s arms and then custom make splints. She still hopes, eventually, to implement this part of the plan, but she was very happy with the results from what students were able to do.

“It was just a beautiful thing all around,” she said. “We got to work with Erick, and students learned about 3D, and then we were able to donate what they made for our clients who are underserved.”

Lemon is also happy with the outcome. The

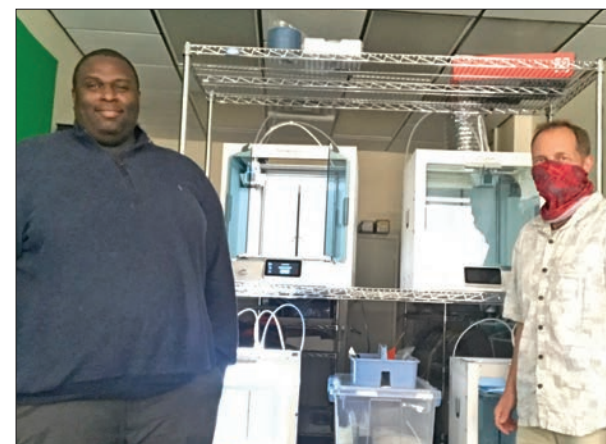


Photo Provided

Erick Lemon, left, and Sherman Paggi in the library makerspace.

“If somebody has an idea and they don’t know exactly how they can print what they’re thinking about, we can work with them.”

Erick Lemon

library makerspace, which opened in October and now has a half dozen 3D printers, is open to anyone in the enterprise, he said. They’ve already created prints for researchers and students with individual projects — not to mention about 400 face shields for care team members — and Prantner-Marik’s course embedded the 3D printing into the curriculum in a new partnership for the library.

He and Paggi also noted they’re sponsoring a new 3D printing club for students. Lemon said that anyone at MUSC, whether in the hospital or university, can contact him or Paggi to get started with 3D printing.

Finding time for reflection, finding purpose through challenge

I'd like to share a passage written by one of our own, Reece Smith, director of strategic risk management, who also serves as parish elder at Sunrise Church on Sullivan's Island. She and her colleagues from Sunrise have been sending out daily prayers during the pandemic, and the one she wrote this week really resonated with me, as I'm sure it will you. She has graciously agreed to let me share it here.

"It struck me today that I'm tired. There has not been a day in the past four months when I felt particularly overwhelmed, but I'm beginning to think each day has progressively chipped away a little bit more of my energy. And for whatever reason, as the day has progressed I've started to feel like I need a vacation... or a really long nap! Maybe it's the fact that the curve we'd flattened is bending back in the wrong direction in the nation, the state, and our community. Maybe it's concern that we'll have to reinstitute some of the measures we had in place in the spring. Maybe it's anger that there are those who are unwilling to do their part to keep this virus under control. Maybe it's sadness that people are suffering and will continue to suffer.

The reality is some days we feel good, we feel positive, we feel optimistic. Other days we feel the opposite. Wouldn't it be nice to feel positive every day? It just

doesn't work that way, does it? As I continue to trudge through this day, I hold out hope for a lot of things. I hope for better treatments; I hope for resilience in the health care and research communities; I hope all the citizens of our nation will come to understand how their actions affect others; and I hope those who are ill will feel the loving hand of God.

This has been a tough time and continues to be one. It's lasted longer than most of us thought it would, and we're finding out we're not out of the woods yet. We've got to give ourselves permission to feel however we're feeling about that, and if it means being grumpy, that's OK too. Just don't forget about hope." — Reece

Sometimes we choose change, sometimes it chooses us. Either way, one thing is clear: having a strong sense of purpose helps us weather storms and thrive in challenging times. Research shows that having a strong sense of purpose helps us bounce back, feel less anxious and regulate our emotions better. It also shows a strong purpose outside of ourselves can boost our immunity to both physical and mental health threats.

To amplify the benefits of purpose further, the Office of Health Promotion is excited to launch the "Purpose Challenge." Developed by a leading expert in the study of purpose, Vic Strecher, Ph.D., a professor at

MUSC Health
& Well-Being

By Susan L. Johnson, Ph.D.,
MUSC Office of Health
Promotion



the University of Michigan's School of Public Health and founder of Kumanu, The Purpose Company, this unique experience harnesses powerful brain science and simple exercises to help people to better define their purposes in less than five minutes.

Please join us in building a community of purpose and hope at MUSC. <https://challenge.purposeful.io/s3/musc>

For more information on MUSC wellbeing resources, check out our weekly newsletter, visit the Office of Health Promotion website or our Wellbeing Collective on the Horseshoe. To subscribe to the Wellness this Week newsletter, email undefined-musc-empwell@musc.edu.



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