

Making most of a limited resource to help S.C. patients with severe COVID

By KIM MCGHEE

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As COVID-19 cases surge in South Carolina and other hot spots around the country, demand continues to grow for remdesivir, one of the only medications that has shown benefit in patients with severe disease.

An investigational antiviral agent developed by Gilead Science originally to treat Ebola, remdesivir was shown in a clinical trial to speed recovery of patients with severe COVID-19 by 31% and reduce the average hospital stay from 15 to 11 days. Just last week at the Virtual COVID-19 Conference, held during the 23rd International AIDS Conference, Gilead announced that the drug also reduced the risk of death in critically ill patients by 62%, a finding that has not yet been published in a peer-reviewed journal and will need confirmation by future studies.

Unfortunately, Gilead had limited supplies of remdesivir on hand when its benefits for patients with severe COVID-19 were first announced this spring. As a result, federal authorities had to allocate the available treatment courses to states based on their numbers of hospitalized COVID-19 patients. Gilead is now making the drug available commercially, but the federal

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Front-line Faces

Delivering specialized care with passion, devotion



Nurse leader Melanie Brooks, second left, has worked in MUSC Health's COVID ICUs since March. She's part of the 4C front-line care team and other expanded ICU and med/surg units. The 4C COVID ICU day shift includes nurses Victoria McNeill, from left, Brooks, Larkann Byrd, Joy Johnstone, Rebecca Ferneding, Erica Tollerson and Drexly Blair, back, patient care tech.

Photo Provided

Editor's Note: This story is part of a series of profile stories of MUSC Health front-line health care workers who are providing medical care and support to patients with COVID-19.

By CINDY ABOLE

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Throughout this COVID pandemic, health care workers have risked their lives daily to save lives and care for others.

There's a special sense of duty and compassion in the hearts of nurses, physicians, therapists and specialists who work directly with the hospital's most critically ill patients. This is certainly true for 4C nurse leader Melanie Brooks.

Brooks has been a nurse for 11 years, most of that time working in the Surgical Trauma intensive care unit at MUSC. She was among a team of health care workers that volunteered to work in MUSC Health's original eight-bed

COVID-19 ICU (5C), which was deployed in March and operated until May. In mid-June, as coronavirus cases in the Lowcountry were on an upswing, Brooks returned to work in the hospital's secondary COVID ICU (4C), a 14-bed unit, which opened in mid-June.

She volunteered to work with the COVID-19 medical response team, caring for the hospital's most critically ill patients as she felt that somebody had to work there, realizing that some hospital co-workers, especially those with families, weren't comfortable working in the COVID unit.

"As a critical care nurse, volunteering to work in the COVID ICUs was an opportunity for me to work with a different patient population while providing the best patient care," she said. "The teamwork I experienced first in 5C and now 4C is exceptional. It's been wonderful to see everyone coming together and working hard for our patients."

Brooks also said that while the patients aren't as sick

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during COVID.

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amid uptick.

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MUSC helps Charleston County assess school safety

By HELEN ADAMS

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As the Charleston County School District carefully decides when and how to begin the new school year, whether it's in person, online or a combination of the two, it's working with public health experts from the MUSC Health Back2Business program to ensure the reopening is as safe as possible for students and staff.

Edward O'Bryan, M.D., leads the Back2Business team. "CCSD is taking it very seriously," he said. "I think we're going to do our best to get the schools started back safely. But people need to keep in mind it's a moving target. They need to be ready to rapidly transition into alternate types of schooling if needed."

Jeff Borowy has his eye on that target. The chief operating officer for the school district recently met with members of the Back2Business team at Simmons-Pinckney Middle School on the Charleston peninsula. The school, built in the late 1940s, is brightly lit and well-maintained. There are paintings of ironwork artist Philip Simmons and Emanuel AME Church pastor Clementa Pinckney in the hallways. Outside, bricks pave the space that connects the middle school with Burke High School.

But it wasn't aesthetics that concerned the group touring the school. It was something they couldn't see — the coronavirus.

The Back2Business team works with a range of organizations, from resorts to public utilities, scrutinizing surfaces and systems during the coronavirus pandemic and making recommendations that are compiled in a detailed playbook for the business. Businesses that follow through get a Back2Business seal.

O'Bryan said the MUSC Health program gives organizations a single source to rely on that incorporates recommendations from not only MUSC Health but also the Centers for Disease Control and



Photo by Sarah Pack

Jeff Borowy, chief operating officer of the Charleston County School District, talks with MUSC liaison manager Regina Fraiya, left, and Simmons Pinckney Middle School principal Stephanie Spann.

Prevention, the South Carolina Department of Health and Environmental Control and other public health agencies. Otherwise, businesses are left trying to sort out sometimes contradictory advice. "It's not fair to ask schools and businesses to become public health experts."

Back at Simmons-Pinckney, Borowy showed the MUSC Health team what's being done or considered there and in the district's 80-plus other schools. The Back2Business plan for the district will include specific recommendations for every public elementary, middle and high school in Charleston County.

"Every school we do is going to be a little different,"

Borowy said as they walked down a hallway to visit the cafeteria and a classroom. "Classroom sizes were different till we did the standard protocol for new construction."

They paused at what in the past would have been a water fountain. It's now a water bottle filling station. "We're working very hard to get bottle fillers in all our schools. We have 17 schools that don't have them right now. Our goal would be to have every kid and every teacher with a water bottle. Nobody's drinking from the fountain," Borowy said.

"Will all children wear masks?" asked Back2Business

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The MUSC Innovation Station will be open for tax-free holiday shopping, Aug. 7-8. Special sale hours: 8 a.m. to 4 p.m., Friday, Aug. 7 and 10 a.m. to 2 p.m., Saturday, Aug. 8.

Shop for computer desktops, laptops, iPads and related accessories including accompanying keyboards, case covers, stylus pens, etc. Featured products include

Apple, Dell, Lenovo and HP. The sale is limited to available stock. No special orders. Items can be placed on hold in advance with the intent of purchase by Aug. 8. Payroll deduction is also available with processing fee waived for this sale.

The Innovation Station is located in the lobby of the Colbert Education Center and MUSC Library. For information, call 843-792-5312.

Letter from the
Office of the

PRESIDENT

Dear MUSC family,

As a community, state and nation, we are in the midst of a generational challenge. To succeed, we must work together to manage an at-risk COVID-19 life until we can move beyond this pandemic. We have the resources and tools for success at our fingertips, but it will require us to walk down this path together and with unified purpose. I am by nature an optimist – and do see some early progress. In local communities around the state, mask ordinances are having a positive impact, based on some early data trends. We've seen relatively stable rates of COVID-19 hospitalizations during the last week and a half across our health system. And, public awareness campaigns are underscoring the critical importance of making good choices right now to help shape the immediate future.

To continue raising awareness about how the community can slow the spread of COVID-19, the Charleston Area Convention and Visitors Bureau asked local leaders to participate in a series of public service announcements that are now airing on broadcast and cable networks throughout the Lowcountry. To view these videos, please visit

❑ (30-sec PSAs)

<https://drive.google.com/drive/folders/1pDsQQHOSJ6YkrTprIN799g32oTxZhqhA?usp=sharing>

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Given the current situation across South Carolina, we know the absolute number of infections will continue to increase in the days ahead; however, the basis for moving forward is slowing down the growth rate of new infections at the local level – this is something within our control as a community. The decisions we make, and the decisions we encourage others to make, will be our key to success. As challenging and, at times, as frustrating as it may be, we must persevere in making the right choices ourselves and getting individuals on board with consistently wearing masks, social distancing, practicing excellent hygiene and protecting the vulnerable.

We must continue to hope and strive for more communitywide accountability in response to the threat of this virus. And yes, we must continue to prepare for the very real potential for localized or statewide emergencies in the next couple of weeks. I remain confident that no matter what comes our way, the MUSC family will continue to move our mission of education, research and patient care forward with safety at the forefront of everything we do.

A well-known quote guides us to “Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.” Our culture of innovation, teamwork and compassion helps us achieve our goals in the best of times, and it will help us through the times ahead – whatever they may be. I encourage you to visit regularly the MUSC Catalyst News site to find moving stories that speak to the spirit of the MUSC family, especially now. Please continue to lead from where you are and never forget the impact that positive actions and energy can have in determining the path forward. I am forever grateful for all that you have done and will continue to do.

Yours in service,

David J. Cole, M.D., FACS
MUSC president



Cole

Healing from the Wounds of Soul Injury

A conversation with
Rev. Herman “Frank” Harris

July 29, 2020
2:00 PM

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Rev. Harris began his work at MUSC in 2015 and is a hospital chaplain and the manager of the Pastoral Care program. He holds a Master of Divinity from the Interdenominational Theological Center (Seminary) in Atlanta, Georgia. His pastoral care interests include adult and pediatric palliative care, community involvement, and bereavement workshops.

Meet Our Presenter
Reverend Herman “Frank” Harris

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MUSC Libraries

Changing What's Possible

MUSC researchers emphasize masks as tool to reduce COVID infections

BY LESLIE CANTU
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Unless you're a superhero who must hide your identity to protect your loved ones from supervillains bent on revenge, wearing a mask on a day-to-day basis isn't something that Americans usually do.

But in the topsy-turvy pandemic world we live in, the simple act of wearing a mask is now something you can do to help your community.

Wearing a mask is more than show. Increasing epidemiological evidence indicates that masks, even homemade cloth masks, do help to reduce infections from SARS-CoV-2.

"That's clearly held true in all the publications I've read recently, that masks are a big, big key," said Paula Traktman, Ph.D., dean of the MUSC College of Graduate Studies, who is a virologist by trade.



Traktman

The critical point is that masks do a better job of keeping an infected person's germs inside of his or her own mask than preventing germs from getting past a healthy person's mask. And because of the long incubation period of this particular virus and the way it affects different people in such varied ways, an infected person can walk around for several days before starting to feel sick – or never feel worse than having a mild cold.

"You feel like, 'Oh, I'm not getting anybody sick. I'm fine.' But you don't know that," Traktman said. "Feeling OK is not a good indication that you don't have the virus."

That means that everyone should be wearing a mask when out in public, she

said. And while you might be fine after a COVID-19 infection, someone you infect might not be.

"Is it worth it to us as a group, in this time of a pandemic, to all wear a mask in the hopes it will help our neighbor or a friend or someone we've never even met? Can we collectively adopt this practice out of concern for others even if we don't all fully believe in it as individuals or find it inconvenient? Are we able to do this for each other given the severity of this infection for some people?" asked Eric Meissner, M.D., Ph.D., an assistant professor in the MUSC College of Medicine Division of Infectious Diseases who's part of the team responsible for the MUSC COVID-19 Epidemiology Intelligence Project.



Meissner

No one is saying that cloth masks, surgical masks or even N95 masks are 100% effective at blocking the virus, Meissner said. But as the pandemic has gone on and researchers have gathered more information, they're finding that masks make a difference.

For example, when researchers looked at COVID-19 mortality rates around the world, they found that countries with older people or greater numbers of people who are obese had higher mortality rates – but so did countries that resisted masks when compared with countries where mask-wearing is a cultural norm or was mandated early.

A modeling study by researchers in the United Kingdom suggests that mask wearing – even if the homemade masks capture only half of exhaled respiratory droplets – can still help control the pandemic at the population level.

"If we were all do this as a society, the



Image by Christo Anestev via Pixabay

Even cloth masks can be helpful in reducing COVID-19, researchers are finding — but only if everyone wears them.

odds of transmission go down, and we could see a significant impact of that collective group choice on the rates of infection, even though there would still be some infection," Meissner said.

That could then help us to open schools and businesses as safely as possible, he pointed out.

Besides cultural norms, part of the resistance to masks stems from early messages from public health authorities that masks were unnecessary.

Traktman said the early messages given to the public were "very sloppy" and missed a lot of nuance. At that point, authorities worried about having enough N95 masks for health care workers. And because it was a new virus, there were a lot of unknowns. People thought that physical distancing of 6 feet – the generally accepted range of respiratory droplets before they fall to the earth – would be enough to contain the spread, she said. But the experience of Asian countries where masks are more common is showing masks' utility.

Meissner said there's a misperception that if you can, for example, smell someone's perfume while wearing a mask then the mask isn't doing anything. But respiratory droplets – the droplets exhaled when you cough, sneeze, sing, laugh or

yell – are bigger than oxygen and carbon dioxide molecules. That means you can breathe through the mask while it still catches those droplets.

Traktman said she puts her mask on as she gets out of her car each morning and wears it in all common areas of the office, like hallways and the break room. Only when she's alone in her own office will she take it off, she said.

"I hear all these people say, 'Oh, I can't breathe when I have a mask on,' but you see surgeons wearing masks for eight-, 10-hour operations. Of course you can breathe," she said.

For a rough test of the efficacy of a cloth mask, she suggested holding it up to the light. The more light it blocks, the tighter the weave and the more effective it is. But the most important thing is to wear the mask properly – covering the nose and mouth – and to wear it consistently.

"I don't think anybody puts it on and says, 'Oh, fabulous! What a relief! I'm going to keep doing this after COVID!' Of course not. But if you find one that fits comfortably, you don't need four layers of fabric and two coffee filters," she said. "Much better to find one that feels comfortable on you and wear it than to complain it's not comfortable and not wear it."

MEET KIRSTIE



Kirstie Jones

Department; How long at MUSC

Corporate Internal Communications—MUSC Health; four months

How are you changing what's possible at MUSC

By helping plan and distribute internal communications to our MUSC Health care team members, specifically those in our Regional Health Network

Family

Husband, Thomas; and two dogs, Emma (a lab mix) and a lab puppy, Saluda or Lou.

Something that relaxes you during COVID

I've been trying to exercise as much as I can — evening walks around my neighborhood

Best thing about living in Charleston

I love being so close to the water.

Favorite quote

"Truly I tell you, if you have faith as small as a mustard seed, you can say to this mountain, 'Move from here to there,' and it will move. Nothing will be impossible for you."

— Matthew 17:20

Conversation Cafe
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Applications accepted for 2020 MUSC Womens Club scholarships

The Medical University Womens Club is accepting applications for its annual scholarships to deserving MUSC students enrolled in all six of MUSC's colleges. The MUWC plans to award a total of \$17,000 in scholarships.

Full-time MUSC students, who are in their second or subsequent years, as well as previous applicants may apply.

An applicant must provide a copy of his/her transcript (does not have to be official), a personal statement and letter of recommendation from an MUSC faculty member as part of the application process.

Application deadline is 4 p.m., Thursday, Sept. 10. Applications must be submitted to muwcscholarship@gmail.com. No paper or late applications will be accepted.

Scholarship recipients will be notified by Sept. 23. For information, email muwcscholarship@gmail.com.

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MUSC and the RHJ VAMC are conducting a research study in healthy adults and people with Traumatic Brain Injury.

If you are between 30 and 65 years of age and interested in participating, please call or email for more information.

Contact Laura Lohmes at:
(843) 792-7709
or Lohmes@MUSC.edu

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Medical University of South Carolina
Changing What's Possible

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Front-line Faces

‘We’re able to pull a lot of people back from the brink’

By HELEN ADAMS

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As the number of COVID-19 patients hospitalized at MUSC Health in Charleston remains above 100, with more than 30 in intensive care and about 20 on ventilators, Jeffrey McMurray, M.D., is grateful for the teamwork that goes into trying to help them recover. McMurray, an anesthesiologist with fellowship training in intensive care medicine, works in MUSC Health’s COVID ICUs.

“We’re able to pull a lot of people back from the brink, which is good to see,” he said.

The number of hospitalized COVID patients at MUSC Health in Charleston was in the single digits until mid-June. Then, it began to increase steadily, first topping 100 in early July and staying close to that number since then. MUSC Health opened COVID ICUs for the patients who need them.

“They have pretty severe respiratory failure. They’re critically ill,” McMurray said of the COVID ICU patients. “Most of them are 40 and older. There are a few younger folks in there. COVID is just part of our daily lives now.”

That means the COVID ICU team stays busy. “We’ve all had to take on extra challenges, but certainly during my time in the COVID ICU, I’ve never felt overwhelmed. We have good numbers of staff, with a large group of medical residents, nurses and respiratory therapists.

“We’re very fortunate that we have a number of specialized physicians on campus, lots of consultants and a lot of resources. But I definitely feel especially for doctors in smaller community hospitals who don’t normally have patients this sick and in these numbers. I can only imagine they’re feeling a little overwhelmed.”

At MUSC Health, streamlined processes help prevent that. Working in the COVID ICUs means carefully “donning” and “doffing” personal protective equipment. “They have to go in there for hours at a time dressed in PPE. You can’t drink water, you can’t use the restroom. You have a big process to go in and out. It can be a little taxing in some ways, but I’m very impressed by how well everyone works together,” McMurray said.

They prioritize making sure the patients’ wishes are respected and keeping family members up to date. “Normally families can come and go in our ICUs and



Photo by Sarah Pack

Dr. Jeffrey McMurray has been taking care of COVID intensive care unit patients since late June.

“At the end of the day, we use the knowledge that we’ve gained from the last decade of advancements of taking care of folks with acute respiratory distress in terms of lung protective ventilation, appropriate medications and your basic universal ICU-supportive-level care.”

Jeffrey McMurray, M.D.

see their loved ones. But here, they’re not allowed to visit. So the nurses have done a great job doing video chatting so family members can see their loved ones in there.”

The COVID ICU team also keeps up with the latest information on what might help patients recover. “I think there’s new treatment stuff that comes out every day in terms of the promising results with potential with steroids like

Decadron, Remdesivir and other therapies,” McMurray said.

“At the end of the day, we use the knowledge that we’ve gained from the last decade of advancements of taking care of folks with acute respiratory distress in terms of lung protective ventilation, appropriate medications and your basic universal ICU-supportive-level care. So we’re learning some new things, but what we know about patients with similar illnesses still applies to them. We’re using all those efforts to kind of standardize our treatment and provide the best care that we’re able to.”

At the end of the workday, McMurray is careful to protect the health of two other people who are very important to him: his wife and 2-year-old daughter. “I self-monitor every day and take precautions.”

And he makes a point of focusing on success stories – especially the ones that surprise him. “I was in a COVID unit the last week of June, the first few days of July. I had a couple of patients who were very, very ill. I honestly didn’t think they were going to pull through.”

But when McMurray, who’s juggling his work in the operating room and cardiovascular and medical surgical intensive care units with his time in the COVID ICUs, returned, he got a surprise. “When I came back a week and a few days later, they had actually made pretty significant improvement. It was nice to see.”

NURSE *Continued from Page One*

as they were in March, there are more critically ill patients to care for. Fortunately, they have better treatments and more options than they had in March.

Nursing leadership is continuously focused on making improvements that work best for staff and the patients. “We’re learning what work’s best for everybody involved to help things run more smoothly and as safely as possible,” she said. “It’s been an every day learning experience for sure.”

In turn, Brooks and others working in these special COVID units are able not only to teach new skills but to learn critical care practices from others — building and improving upon best practices.

She and her colleagues have enjoyed learning new techniques and information, especially as it relates to respiratory complications associated with the virus. One shared best practice that Brooks has learned while working with COVID patients is the value of prone positioning, or proning, which means placing patients on their stomachs so they are lying face down — a practice typically used by critical care colleagues working in the medical ICU but not in her home unit, the STICU. COVID inpatients may have high oxygenation requirements, with or without the use of a ventilator. Rotating the time patients spend on their backs and stomachs can improve expansion of the lungs, help to remove secretions and improve breathing.

Hospital policies changed during the pandemic to safeguard the health and safety of patients, physicians and staff. The no-visitor restriction was especially tough for COVID inpatients, who not only struggled alone fighting an invisible virus but could not have the support of their families around them. Instead, nurses and health care team members stepped in to fill special roles to support their patients and families.

One situation will forever remain with Brooks. In the early days of the pandemic, a mother and daughter were admitted to the unit. Both patients were extremely ill with COVID. Unfortunately, the mother succumbed to

complications from the virus and died, while the daughter, who was intubated and struggled in her own fight against the disease, never got to say her final goodbye. Brooks helped to facilitate a final phone call between the dying patient and her family. She recalled her own sad feelings, tears rolling down her cheeks while she sobbed behind her N95 mask and face shield. “I can’t describe how hard it was to watch that,” she said.

Brooks never imagined a time like this. Every shift, she goes home physically and mentally exhausted. During this recent uptick in cases, she and nursing and hospital leaders manage daily concerns, like staff shortages, equipment needs and physical demands, while monitoring psychological strain and signs of burnout.

Like her colleagues, she’s particularly careful with her actions and PPE so as not to contaminate herself, as she still is involved with caring for her parents. That type of personal safety is yet another adjustment she’s made working on the front lines of the pandemic. It’s difficult, but she purposely avoids or limits time spent with family and friends because of her work and admits the loneliness during quarantine can be tough. To de-stress, she spends time relaxing with her Australian shepherd mix, Jethro, which she adopted last fall. “Jethro’s helped me through some of my tougher workdays,” she explained.

“It’s hard not to be able to see people when you want to,” Brooks said about the psychological adjustments people learn to adapt and adjust to during times like a pandemic. She knows of other colleagues who are struggling with the self-isolation, as their families live separately or out of state.

But Brooks, like her colleagues, are motivated by the passion she has for her job. She’s proud to be part of a health care team that chose to dive right in to help others. She also feels that her efforts have contributed to the supportive work environment they initially established and have continued to foster in the five months since the coronavirus hit the Lowcountry. Brooks is also grateful for the public recognition of health care workers during this period — the community’s Health care Hero appreciation parades, public donations



Photo Provided

Like many of her colleagues, Brooks turns to family to de-stress. Her Australian shepherd mix, Jethro, has been a constant source of comfort.

of PPE supplies, meals and other donated items.

“It has boosted our morale for sure,” she said. “It was nice to be recognized in these many ways. It made all of us feel appreciated.”



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Nurse finds a way to feed the eyes and soul during pandemic

By CINDY ABOLE

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What happens when a professional photographer, nurse and caring mother of three combines her talents for a good cause? It sounds like just the kind of creative mash-up that could make a real difference, especially during a pandemic. And Sarah Kassouf did exactly that.

Kassouf, a Meduflex nurse, was working as needed at the height of the Lowcountry's COVID-19 outbreak this past spring. Upon seeing her coworkers working tirelessly in the hospital's busiest areas — sometimes skipping meals and working long hours away from their families — Kassouf saw a way to bring together her creative talents to benefit self-isolating families around Charleston and support MUSC's health care heroes working the front lines of the pandemic.

Kassouf is the owner of SLK Photo on Instagram, which specializes in family, wedding and portrait photography. In late March, she approached the local nonprofit Feed Our Heroes-SC, which formed to assist hard-hit restaurants affected by the coronavirus and collect donations to provide free meals to health care teams at Tri-county hospitals and medical facilities.

Kassouf's idea would allow her to raise funds in exchange for photographing families and creating personal portraits during a time of social isolation. The result would become a time capsule for families during the COVID-19 pandemic. She posted details about the project on her photography Instagram page.

Feed Our Heroes-SC co-founder Whitney Klomprens couldn't have been more excited about this partnership.

"Working with Sarah was a wonderful experience. To have someone of Sarah's caliber for photography work with us to provide donations was incredible. The portrait project was a wonderful way for people to get involved and donate to help others in a positive way. I hope this joint effort will allow people to look back at this COVID period in a positive way."

For Kassouf, the project's success was

For information about the Feeding Our Heroes-SC, visit <https://www.facebook.com/FeedingOurHeroesSC>.

equally surprising.

"I had no clue it would be so popular," said Kassouf. "I thought if I can book enough portrait sessions, I'd raise a few hundred dollars to donate to this program and feed a health care team for a meal or two. It became something more meaningful."

Within a month, Kassouf had received more than 450 messages from around the Tri-county area and booked 150 portrait sessions. Eventually, she would organize, travel and shoot portraits of families at locations all around the Charleston area — from Mount Pleasant, the Isle of Palms and Sullivan's Island to downtown Charleston and West Ashley. According to Kassouf, it was hard work. Normally, her schedule would allow her to shoot jobs three days a week and usually around sunset — the best light for her portrait work, she said. For this project, she was shooting portraits almost every day.

On April 23, she presented Klomprens and organizers of the Feeding Our Heroes-SC team with a check for \$4,000 from the portrait project. For Kassouf, presenting the check was a highlight for her. It was also the organization's largest single donation to date. Her donation provided about 400 meals to MUSC Health employees working in the Adult ED, ICU areas and pediatric units from late April through May. This also included providing a few team meals to Kassouf's home unit, the Meduflex team. Participating restaurants that prepared the meals included Graze, Halls Chophouse and Rutledge Cab Company, among others.

According to Klomprens, Feeding Our Heroes-SC raised more than \$40,000 and distributed about 4,500 meals within a four-month period.

"We were so grateful to have someone



Photo by Sarah Kassouf

A portrait of Whitney Klomprens and her family, taken by MUSC Health nurse Sarah Kassouf.



Kassouf is part of the Meduflex team at MUSC Health. In April, she paired her photography skills and compassion for others to create family portraits in exchange for donations to the Feeding Our Heroes-SC program, established to help feed Lowcountry health care workers during the coronavirus pandemic.

Photo Provided

like Sarah coordinate a project like this. The project helped so many people — health care teams, restaurants and the community. It's been an incredible experience working with her. It was also amazing to see how this community was

able to work together while thinking of others," she said.

For information about Feeding Our Heroes-SC, visit their Facebook page at <https://www.facebook.com/FeedingOurHeroesSC>.

What's best for patients and care team members: MUSC Health leaders confident in pandemic plan

By LESLIE CANTU

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Like people across the country, leaders at MUSC Health are learning to live with ambiguity and uncertainty. It's not something they necessarily like – “We're all desperate as physicians to know where things are going so we can prepare, but none of us know. No one knows,” said Eugene Hong, M.D., chief physician executive – nonetheless, they are confident that the health system's preparations ensure it can provide excellent care to COVID and non-COVID patients alike as South Carolina faces its greatest challenge yet from the pandemic.

“I am extremely confident,” said Tom Crawford, Ph.D., chief operating officer. His confidence stems from the hard work and planning that have been happening behind the scenes for months, focused on the three priorities of capacity, staffing and supplies.

“When this started occurring, even though there was a very low prevalence in South Carolina, we started behaving like it would be here on our doorstep within days. That started in March, so we were very, very well-prepared going forward,” Crawford said.

Pandemics have long been part of the system's emergency management planning. Unlike hurricanes and tropical storms, which test the system on a near-annual basis, pandemics have been such a rarity that none of MUSC Health's leaders – nor any of the colleagues across the country that Hong has talked to – have had to deal with a public health crisis quite like this one.

From the beginning of this pandemic, Hong said, MUSC Health leaders have focused on two principles: “What's best for our patients and what's best for our

care team members?”

That focus continues as MUSC Health has transitioned from emergency mode into modified operations for the foreseeable future. In other words, MUSC Health is committed to providing the safest care possible for all patients throughout this pandemic. That means testing every patient admitted to the hospital so that COVID-19-positive patients are cared for separately from other patients; it means reallocating spaces within the hospitals on the Charleston campus and adding COVID units as necessary; and it means making use of the telehealth infrastructure that MUSC has spent years building.

“This isn't emergency management. This is just the world we live in,” said David Zaas, M.D., chief clinical officer and CEO of MUSC Health Charleston Division.

Zaas noted that MUSC Health is continuing to provide what are generally termed elective procedures, although he doesn't like using that term.

“I don't think anything we do in hospitals and academic medical centers is ‘elective.’ We do medically appropriate care for patients. If you're in a lot of pain, spine surgery isn't elective. If you have a breast mass or a colon mass, that surgery isn't elective. That's medically necessary surgery,” he said.

Those types of surgeries can be put off for a couple days or weeks but not for the duration of a pandemic, he said.

“We need to understand ‘How do we strive to provide perfect care in the COVID world?’ That's what we should always be aspiring to – perfect care – and now the world has changed,” Zaas said.

One of the more visible recent changes has been the move to admit young adults to the MUSC Shawn Jenkins Children's Hospital and Pearl Tourville Women's



Photo by Brennan Wesley

MUSC Health leaders say they are focused on two principles: what's best for patients and what's best for care team members.

“We need to understand ‘How do we strive to provide perfect care in the COVID world?’ That's what we should be aspiring to – perfect care – and now the world has changed.”

David Zaas, M.D.

Pavilion. That's part of the reallocation of space across campus.

But it's not unprecedented for the children's hospital to care for young adults. The specialists there treat patients who survived heart disease or cancer in childhood, for example, and help transition patients with chronic conditions, like sickle cell disease or Type I diabetes, to adult care.

Mark Scheurer, M.D., chief of the Children's and Women's Integrated Center of Clinical Excellence, said the move is simply an extension of the children's hospital's mission as a member of the overall MUSC Health

hospital system. He noted that not all young adults will be automatically admitted to the children's hospital. A team of doctors and nurses meets daily to review patient records and determine who, if anyone, would be a good fit. It's a plan that's been under discussion since March, he said.

Leaders took advantage of the four-month head start on planning to craft a tiered bed capacity plan that details the triggers for opening new COVID units and where each COVID unit will go. The plan accounts for children and pregnant women who test positive as well as patients at the Institute of Psychiatry who test positive. MUSC Health also got lucky in that it had just vacated the old children's hospital in February, not even a full month before South Carolina Gov. Henry McMaster ordered schools to close.

“We're very fortunate to be in a situation where we do have physical capacity because we do have the old children's hospital,” Hong said.

Leaders also developed contingency plans to provide care outside the hospital building – for example, in the MUSC Wellness Center – but, as

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government will continue to allocate the drug until September.

The allocation has not gone off without a hitch. Hospitals in some states have more remdesivir than they can use while others in hard-hit areas do not have enough to offer to all patients who could benefit. The federal government is working toward a solution, but the inability to target distribution to the hospitals and the patients with the greatest need has been a frustration.

South Carolina officials recognized early that an equitable and transparent process was needed to ensure its initial allotment of 74 treatment courses would go to those patients who would benefit most. The South Carolina Department of Health and Environmental Control (DHEC) and the South Carolina Hospital Association (SCHA), charged with coming up with such a plan, turned to South Carolina's leading health systems and ethics experts to establish a remdesivir advisory committee. MUSC Health critical care expert Dee Ford, M.D., is a key contributor.

Ford was asked to join the advisory group to provide a clinical perspective on the drug's distribution.

"I think it's very much to the credit of DHEC and SCHA that they really wanted an ethical framework to inform how South Carolinians received the medication," said Ford. "The key ethical principles were that the process should be patient-centered, equitable, transparent and clinically informed."

One of the first decisions was to offer five-day, instead of ten-day, treatment courses, doubling the number of patients who could be helped. A recent study showing similar benefit from five- and ten-day courses of remdesivir confirms the wisdom of that decision.

Another key decision was to base the distribution on designated clinical criteria. Desperately needed, however, was a tool for gathering the necessary clinical data for COVID-19 patients to determine their eligibility.

A clinical researcher who also serves as director of the Dissemination and Implementation Science Collaborative for the South Carolina Clinical & Translational Research (SCTR) Institute,



Photo by Sarah Pack

Dr. Dee Ford is a professor in the Division of Pulmonary and Critical Care Medicine and the director of the MUSC Telehealth Center of Excellence.

Ford thought immediately of REDCap, a Vanderbilt-developed research survey tool that is made available at MUSC through SCTR. A link to a REDCap survey can be shared easily by email, and the collected data can be downloaded into Excel files for analysis.

Most of the other physicians and public health experts serving on the advisory group were unaware of this research tool, but it would turn out to be exactly what they needed to gather the information critical to remdesivir allocation.

"We had the idea to have a query to obtain a set of clinical criteria that, to the best of our limited knowledge, would mean that the patients most likely to derive the most benefit would be allocated the treatment," explained Ford.

Ford reached out to Royce Sampson, R.N., SCTR primary administrator, for help. Sampson championed the project and helped quickly muster SCTR resources to support it.

With the assistance of Stephanie Oppenheimer, a REDCap administrator at SCTR's SUCCESS Center, the advisory committee developed a REDCap survey to collect clinical data about COVID-19 patients that could be sent to health care institutions statewide.

"Less than 48 hours from when SCTR first heard about it, we were deploying this query out to providers — it was

quick," said Ford.

Stephanie Gentilin, program director of the SUCCESS Center, was able to help Ford obtain Net IDs for officials at DHEC so that they could use MUSC's REDCap tool and analyze the collected data to make decisions about where the remdesivir would go.

"Through this process, I was really struck by what an example this challenge provided of how when a group of people, each with his or her own strengths, skills, perspective and experience, blend their resources toward a shared goal, that challenge can be addressed with a creative and effective solution at a level I don't believe any one group would have designed on its own," said Oppenheimer.

As the epidemic evolved, the clinical criteria for remdesivir eligibility were adjusted. Initially, the medication was reserved for those without other serious conditions. However, as COVID-19 hit Black and Hispanic populations the hardest, in part because of the higher prevalence of conditions such as diabetes and hypertension, this restriction was removed to ensure the equitable distribution of the drug.

Care was also taken that health care facilities statewide, including those in rural areas, were aware of the tool and could use it to determine if their patients with severe COVID-19 were eligible for a treatment course. Initially, SCHA sent

the link to the REDCap survey out via an existing Listserve to hospital officials, but it quickly became clear that it was the "boots on the ground" health care providers who had the needed patient data.

The SCHA took the time to identify the appropriate pharmacists and other front-line health care providers at each institution and shared the tool with them. In this way, it helped to ensure that not just the big metropolitan hospitals and their patients had access to this vital resource.

As the tool was being developed, South Carolina received a number of additional allocations of remdesivir from the federal government. Using the clinically informed, patient-centered system it developed, DHEC distributed 2,100 treatment courses of remdesivir between May 15 and July 12: 599 to the Upstate, 388 to the Midlands, 655 to the Pee Dee and 458 to the Lowcountry.

In late June, the U.S. Department of Health and Human Services announced that it has obtained 500,000 treatment courses of remdesivir from Gilead that would be allocated to states for purchase by hospitals. The advisory committee and DHEC are hoping to continue using their strategic approach for allocation once the drug is commercially available, but that remains, for now, a work in progress.

As cases continue to spike in South Carolina, having an equitable, transparent and clinically informed system already in place is helping to speed the administration of this potentially lifesaving drug to patients who need it most.

And the infrastructure that the advisory committee built to ensure the equitable distribution of remdesivir will likely continue to be important as new treatments and vaccines are rolled out.

"This methodology would have the potential to be used for vaccine access or for other therapies, such as convalescent plasma or other antivirals, once they are shown to be valuable," said Ford. "These kinds of treatments initially are always going to be considered a scarce resource because you'll have a ramp-up period for production once something has been shown to work."



Photo by Sarah Pack

Heather Toepfner, left, and Regina Fraiya of the Back2Business team talk with Charleston County School District chief operating officer Jeff Borowy about safe spacing in a classroom.

SCHOOL *Continued from Page Two*

liaison manager and nurse Regina Fraiya of Borowy as they checked out classroom 109, a 700-square-foot room where the district has been testing how to configure desks.

“The indications are right now that we’d have masks for everyone in the school building who can safely wear one. You could only take them off when you get into a position where you’ve got social distancing,” Borowy answered.

The district is also testing portable barriers for teachers. “It’s clear plastic in the middle. It’s L-shaped. You can fold it, and it’s lightweight. They can put it on their desk. They can sit across from a student and you can have that dialogue closer,” Borowy said.

“If the teachers have a conference

down the hallway in a small conference room, and you want to put four of them in there, they each bring their own divider with them. That’s an option. They’re relatively inexpensive. We’re testing to see how well they can be cleaned and how long they’ll last.”

O’Bryan said school district leaders are pondering a lot of options with the help of a risk management team that includes him and other health experts. “Schools are relatively unique. We know most students aren’t likely to end up in the hospital with COVID. It just doesn’t affect them as harshly as adults. But we know this is a serious concern for the families they go home to and the teachers who are around them. We want them to know we are doing everything we can to keep them as safe as possible.”

PLAN *Continued from Page Nine*

long as the community does its part by wearing masks, washing their hands and physically distancing, those plans shouldn’t be needed.

“We need to plan for scenarios that will never happen,” Zaas said.

MUSC Health also has a strong telehealth infrastructure. It’s been the headquarters for the South Carolina Telehealth Alliance since 2014 and a National Telehealth Center of Excellence since 2017. This meant that, in addition to offering virtual urgent care, MUSC Health’s doctors can see patients virtually when it makes sense to do so.

Besides capacity, leaders keep an eye, every day, on supplies and staffing levels. As the system deals with normal nursing shortages on top of temporary vacancies caused by staff members who must quarantine, some people who typically work in administrative or outpatient roles have returned to the bedside. Travel nurses are also being hired. It would be nice if he could snap his fingers to make more nurses and respiratory therapists magically appear, Hong admitted, but, barring that superpower, the system is managing its staffing issues. The pandemic has forced them to think

about health care provider staffing in a holistic way and really tap into the deep well of expertise that exists at MUSC Health, he said.

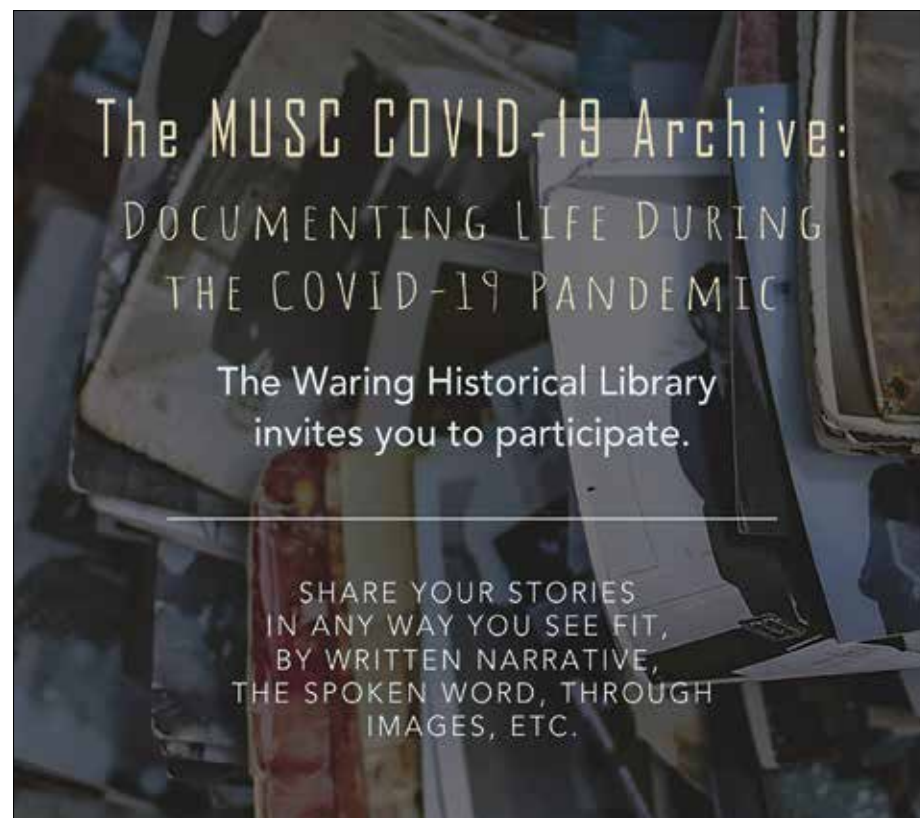
Crawford agreed. “We know where we can pull from. We know what spaces we can utilize. And, we created alternative pathways for our supply chain,” he said.

Supplies have been a sore point nationally, especially early on, but Crawford said he has not felt that anyone at MUSC Health has been placed in an unsafe situation.

“Our supply chain has done a remarkable job — and I really mean a remarkable job — of not just capitalizing on our current supply chain pathways to get what we need but by creating new pathways to get supplies in,” he said.

Thanks to the work that so many people have been putting in, the health care system leaders feel good about MUSC Health’s ability to deal with whatever lies ahead, all while providing safe and quality care for patients no matter what their diagnosis.

“We feel very strong about our ability to keep our patients safe and our care team members safe in the hospital and health care system, whether it’s ambulatory or inpatient,” Hong said.



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Researchers' work focused on social determinants of health lands prestigious grant

By Bryce Donovan
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Two MUSC researchers were awarded a \$330,000 grant from The Duke Endowment. Chanita Hughes-Halbert, Ph.D., and Anita Ramsetty, M.D., received the honor to assist with their work to identify and address social determinants of health among primary care patients.

"One of the things that is really great about this work is it combines so many different aspects of MUSC," said



Hughes-Halbert

Hughes-Halbert. "It addresses issues in our community and across the state. The Endowment will help us build upon the work we've already started but can take even further now."

According to Hughes-Halbert, South Carolina ranks worst in the country for food insecurity in older adults, with rates of 20% among people over age 60. Compelling evidence links food insecurity with adverse health outcomes such as depression and chronic diseases such as diabetes and hypertension. The endowment has previously funded six health systems across the Carolinas in similar areas in the hopes of advancing statewide alignment of efforts and infrastructure to address these social determinants of health.

"We've all been working on this in a parallel universe," she said, "but now,

this finally brings us together."

Ramsetty agreed. "Every day, there is a small improvement in addressing these inequities, but a major finish line would be developing a system where we could link patients' needs in a much more efficient way," she added. "I fully believe we can do this. It's sort of similar to cruise control. Once it's built, it will work. We're trying to make it so easy and seamless that people will use it. We have clinicians who care. We have patients who need it. And we have services that want to help. This feels like we might finally be connecting them all."



Ramsetty

MUSC will join the effort by implementing a primary care practice transformation project to improve health outcomes by increasing access to healthy foods. Primary care practices will systematically screen for food insecurity

and use patient navigators to implement patient-centered interventions with community partners. The program will leverage enhanced data analytics, electronic patient records and clinical workflows to develop a scalable and equitable model for primary care implementation. Data analytics, for instance, can help the team answer questions and identify patterns earlier so they can intervene faster and more precisely for their patients.

"We're really excited about this," said Hughes-Halbert. "The Duke Endowment is a prestigious foundation, and the process is very competitive. To be funded by them is a real honor."

Based in Charlotte and established in 1924 by industrialist and philanthropist James B. Duke, The Duke Endowment is a private foundation that strengthens communities in North Carolina and South Carolina by nurturing children, promoting health, educating minds and enriching spirits. Since its founding, it has distributed more than \$4 billion in grants. And while the endowment shares a name with Duke University and Duke Energy, all are separate organizations.

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