

Discipline on coronavirus stay-home days for some parents

BY HELEN ADAMS

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Now that we're more than a month into a coronavirus-driven learn-at-home period for kids, some parents are struggling to appropriately discipline their kids in this new normal.

The American Academic of Pediatrics has released some guidelines to help. AAP spokeswoman Elizabeth Mack, M.D., division chief of pediatric critical care at MUSC Children's Health, explains them here.

Come up with a plan for when stress becomes too great to safely handle.

Some people are dealing with massive stress right now. That can affect their ability to make good decisions when it comes to disciplining their kids.

"So many people are about to go through layoffs and pay reductions and that kind of thing, and horrible stress that they just can't handle. Either literally their life will crumble, or mentally, emotionally, they don't have the coping skills to handle it," Mack said.

"Thankfully, locally, we haven't seen that uptick yet, but I do worry so much — particularly as people's jobs are affected and insecurities rise — that we will see people acting in a way that doesn't incorporate coping skills."

When it gets to be too much and a parent is faced with a child who is

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College of Medicine students, from left, Serena Walker, Brandon Sloan and Elisabeth Sidden, help collect medical supplies from community members that were dropped off at MUSC. The donation location has moved to 4295 Arco Lane, MUSC's supply warehouse in North Charleston.

Community support boosts COVID-19 supply collection

Staff Report

The Lowcountry's generous spirit is on full display as donations to help MUSC Health's continuing fight against the coronavirus crisis pour in. While doctors and nurses have what they need for now, if what's happening in other states, such as New York and Louisiana, is any indication, they may need more — a lot more.

Cardiovascular surgeon Sanford Zeigler, M.D., called the public interest in helping out "fantastic." "I think it's a real testament to how powerful our communities are and how we can lift each other up," he said.

In early March, just as the mortality rates connected with the novel

coronavirus were hitting the news, Zeigler learned from friends about colleagues who died from complications with COVID-19.

"I couldn't sit back and accept this," he said.

Zeigler posted some advice to his

neighborhood's social networking page about the anticipated supply needs due to the growing pandemic. Within days, neighbors were dropping off N95 mask donations to his home, and that's when Heroes Need Masks was born, a project

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Suspension of print version of The MUSC Catalyst News during COVID-19 pandemic

The MUSC Office of Public Affairs and Media Relations has temporarily suspended the printing, delivery and distribution of its bimonthly publication, The MUSC Catalyst News, during the COVID-19 pandemic. Your safety and that of our MUSC employees, students and delivery carriers is critically important.

We are committed to keeping our readers informed about the latest novel coronavirus news and other important information that affects the MUSC community. We will continue to rely solely on the online version of our publication. Visit "MUSC Catalyst News in Print" at <https://web.musc.edu/about/news-center>.

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AROUND CAMPUS

Bruce Thiers



Bruce Thiers, M.D., professor and chairman of the Department of Dermatology and Dermatologic Surgery, assumed the presidency of the American Academy of Dermatology as of March 24. He

leads the world's largest dermatologic society, representing more than 20,000 physicians. He will hold this same position with the American Dermatological Association, a sister organization of the AAD.

David Zaas



David Zaas, M.D., has been named chief executive officer for MUSC Health-Charleston Division and chief clinical officer for MUSC Health. Zaas has served as president of Duke Raleigh Hospital

since 2014. He served in previous leadership positions such as chief medical officer and medical director at Duke University Hospital in Durham, and other leadership roles. He will join MUSC in July.

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co-founded with his brother, Townsend Zeigler.

"This viral pandemic is like something we've never seen or expected," said Sanford Zeigler. "Our goal is to protect health care workers, the medical staff who are fighting on the front lines against this COVID-19 pandemic.

There are thousands of these pieces of equipment sitting in people's garages and businesses that are not being used that can be used at hospitals and medical facilities today," adding that some equipment is more useful than others.

"N95 masks are very helpful. Surgical masks are very helpful. Face shields. Clear plastic shields or chemical safety goggles – those are also very helpful. Any sort of scrub hat or hair protection. A hairnet is no good, but anything that covers the hair and protects it from droplets will be good," he said.

"Isopropyl alcohol can be used to decontaminate N95 masks and allow us to reuse them later. We're not at a point where we have to do that, but it's a strategy that we're looking into."

According to Zeigler, Heroes Need Masks was established in mid-March as an initiative to rally people in



Zeigler

communities to donate unused items such as face masks and gloves, personal protective equipment (PPE) and other items used by frontline medical staff in the treatment and care of patients suffering from coronavirus. He said the community is helping to crowdsource the supply chain until the federal government and private industry are able to pick up the slack.

"We're hearing from all over."

In addition to the Zeiglers, the program is helped by MUSC students and volunteers.

Ragan Dubose-Morris, Ph.D., an associate professor in the College of Medicine, said students are playing a key role. "They have some time on their hands and volunteered to help coordinate volunteer hours, drop off locations and messaging. It's kind of one of those happy moments in life where people have time on their hands and expertise they put to good use."

Zeigler said as some businesses slow down hours or close during this health crisis, they're able to send unused equipment MUSC Health's way.

"It's all kinds of places. The easiest ones to think of are dental offices, outpatient clinics that are no longer seeing patients. Nail salons have a lot of surgical procedure masks they use. Contractors, landscapers, construction workers, welders, really any industrial plant will have some of this stuff. We need them to be able to continue working if they can, but if they've really got a slowdown, and aren't going to use things, we can use them today."

So far, the response has been extraordinary. Donations have arrived by car- and truckloads, according to

Zeigler. Recently, they have been able to distribute some medical supplies to Charleston County detention facilities, area ambulance companies and volunteer fire stations to support the COVID-19 fight.

Donors have run the gamut from corporate businesses to local groups, organizations and individuals, all of which have generously contributed much-needed supplies. Included are Coastal Carolina Dentistry-North Charleston, and other dental practices; the Warrior Surf Foundation; local distilleries; Harbor Freight Company; MUSC team members; Tri-county residents, including members of the Chinese and Asian American community; as well as national and international donors. Individuals have also stepped up by creating and donating hand-sewn masks.

Zeigler and his crew are grateful for the continued support. He's proud that this program is a model that can be reproduced in any community during the pandemic. He recommends that groups collect supplies first and then work with their local hospitals to coordinate where those supplies should go.

The public can donate at the collection site located at 4295 Arco Lane in North Charleston. It's open weekdays from 8 a.m. to 5 p.m. You can find the complete list of general and pharmaceutical supplies needed on the COVID-19 donation information page. It's important to note that MUSC Health has to verify certain types of supplies as sterile to be able to use them.

For information, visit <https://www.heroesneedmasks.com/>.

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Health care team 'heroes' to be recognized on April 21

MUSC Health care team members are heroes as they continue to protect the community and patients during the COVID-19 pandemic. To recognize heroes at MUSC, the Charleston Police Department, MUSC Public Safety and the Charleston Fire Department are collaborating to pay respect to the frontline men

and women. From 6:45 to 7:15 p.m. on April 21, April 28 and May 5, these organizations will be staging their vehicles at designated campus locations – flashing their lights and cheering for care team members as they depart for their work shift change. Locations: Jonathan Lucas at CSB entry/exit, Jonathan Lucas near adult ED parking lot and Ehrhardt and Doughty streets.

South Carolina cases may peak by early May; Let's plan now for what comes next

Editor's Note: The following commentary was published in the April 13, 2020 opinion page of The Post and Courier.

BY DAVID J. COLE, M.D., FACS

MUSC President

This past month has been an incredibly difficult time. As an enterprise, MUSC has been forced to take hard but necessary actions, and it's a lot to process, for us and the community. Even in the face of all of this disruption, pain and personal adversity, our team continues to display admirable strength, resilience and focus on the unprecedented journey before us.

The best way to reduce the brunt of these actions for our MUSC friends and colleagues — and to help our community and businesses — is to define an expeditious path back to normalcy that minimizes the economic and personal pain the COVID-19 crisis is having on everyone.

I've been heartened to see many editorials, letters and commentaries in The Post and Courier that focus on balancing our public health response to COVID-19 and the equally important need to return to some sort of economic and lifestyle normalcy.

We have appropriately prepared for the days ahead, but it is also important to look further ahead and lay the groundwork for the future.

So far, our MUSC projections, based on local and national modeling, indicate we should fare much better than New York. This is in large part due to state and local actions to implement social distancing strategies. Thank you for this important community sacrifice that helps our first responders and health care providers do their best to keep everyone safe.

We anticipate a peak volume of COVID-19 patients in late April or early May. As we get more precise at our projections, our communities can make better public health and economic

decisions about how to navigate the coming months. MUSC soon will launch these lead indicators and specific modeling to give us all a common language and understanding as we move forward.

We are not out of the woods, but there is some emerging light down the path. So how do we move forward?

There are three key needs that we all must rally around:

- 1) Deploying a strategic, staged revitalization of the economy.
- 2) Being able to quickly test for infection and to identify those who are recovered and immune to COVID-19.
- 3) Having a system to identify and trace contacts and quarantine individuals at risk.

Our ability to trace and test is crucial to emerging safely from our current reality and regaining a new normal. The balance comes in doing this without allowing a second COVID-19 wave to reverse our efforts to get back on our feet.

We all look forward to the day when we can sit shoulder to shoulder on a crowded beach or share a meal inside a restaurant, but this will not happen on day one.

We are working with partners across the state to gain the tools needed to enable a successful economic revitalization plan: continuing to ramp up our commonly used PCR testing capability; working on point-of-care serology testing in an intensive effort to understand community prevalence and who has developed immunity to the virus; and identifying and supporting the safe recovery of those who are infected.

Importantly, we need a smarter, ground level, collaborative community



Cole

MUSC announces food assistance resources supporting care team members

By CINDY ABOLE

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MUSC is often referred to as a family. And family members are there for each other. Not in recent history has the MUSC family been so affected by a single event — in this case the SARS-CoV-2 pandemic. To help to lessen the impacts felt by many employees, MUSC is taking action to address the safety, health and well-being of its employees through a series of initiatives to support them during this unprecedented time.

The pandemic has hit many Americans hard, and MUSC Health care team members and their families are no exception. Some have experienced difficulties related to reduced work hours or temporary layoffs, in addition to other financial hardships, and find themselves challenged to access basic needs, such as food, because of the national health crisis. For many throughout the country, it's a period of great stress and readjustment, as families anticipate the need for food assistance and other resources as they continue to navigate this national crisis.

The MUSC well-being initiatives are being led by Susan Johnson, Ph.D., director of the Office of Health Promotion, along with a collaborative campus team, to coordinate efforts and respond to employees feeling the stressful effects of the pandemic.

"Nothing is more important than the health and well-being of our employees and the patients they

serve," said Johnson. "As we realized how the coronavirus pandemic was affecting our health care community, we realized more must be done. This has been a huge undertaking to organize and create this plan to manage donations and services and meet the needs of our care team members and their families."

The MUSC COVID-19 Pandemic Food Support Program was established to help employees experiencing hardship in the wake of the COVID-19 outbreak. The program is available and connects available resources, as well as opportunities for employee engagement in support of health care team members. To initiate the process, employees who have needs and desire help can begin by completing an online form and a member of MUSC's Office of Health Promotion will contact you to confirm details. The program features two types of support:

- ☐ Community and Employee Support – Anyone interested in assisting with food access for MUSC care team members and their families (i.e. purchasing and providing pre-boxed, catered or packaged meals for a unit; donating grocery gift cards for an employee; contributing shelf-stable foods or money for food) should visit the food donation page at <https://muschealth.org/patients-visitors/coronavirus-information/donations-to-musc-health/food-donations>. From

See FOOD on page 11

contact tracing ability that would help identify individuals who become infected and ensure they remain isolated until they can be tested and reassured they will not cause further spread of the virus. We are working with DHEC and other partners across the state on moving this forward in a more meaningful way for the days ahead.

What can this look like? This is my vision: We manage the first wave

successfully without overwhelming our health system, get our lives moving back to normal, and be able to handle any secondary COVID-19 impacts in a non-disruptive manner — like a bad flu season. Business is not shut down, and individuals are not forced to stay at home. The cadence of life continues.

We can accomplish this if we continue to move with purpose, together.

Researchers hope to learn about coronavirus epidemic by studying frontline health care workers

By **BRYCE DONOVAN**

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Researchers at MUSC are now looking to their own colleagues in the hopes of learning more about the novel coronavirus epidemic.

Eric Meissner, M.D., Ph.D., assistant professor in the College of Medicine's Division of Infectious Diseases, is the principal investigator for a study starting this week that focuses on MUSC's very own frontline health care workers and their immune responses to potential virus exposure. The hope is to enroll up to 440 employees – 340 of whom either work in emergency medicine or at the West Ashley specimen collection site or those who might have provided care to a patient who was infected – and 100 who are not involved in direct patient care.

Craig Crosson, Ph.D., senior associate dean for research in the College of Medicine, who is working with Meissner

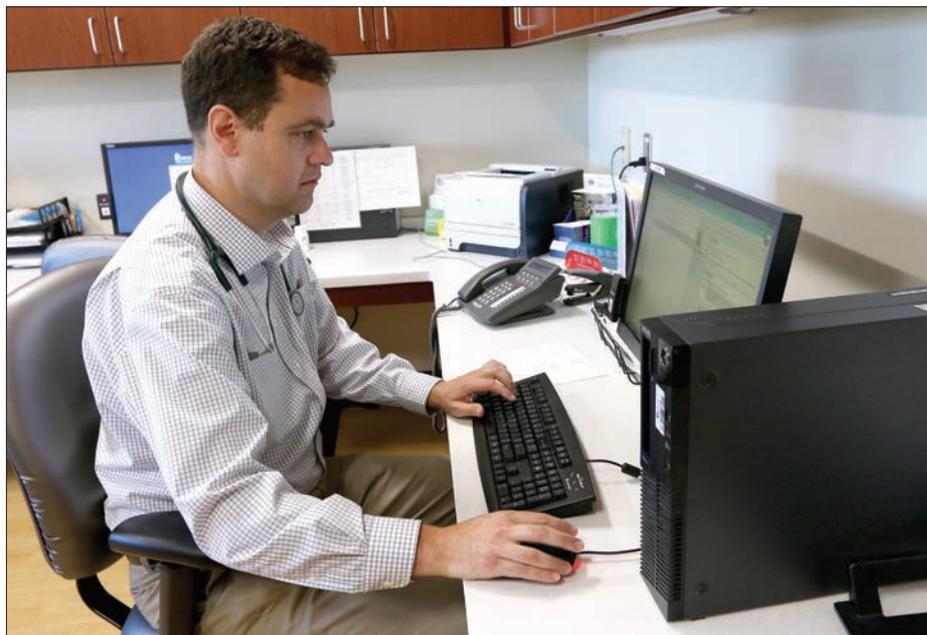
on the study, explained its purpose.

“When people are infected with a virus, they develop an immune response. That’s what allows you to fight the virus off. That’s what we’ll be looking at here.”

The study will use a point-of-care serologic test, a blood-based test that can be used to suggest whether people have been exposed to a particular pathogen by looking at their immune response. The way it will work is enrollees will be mailed a kit that allows them to prick their finger, draw blood and then mix it with a reagent and apply it to a test strip. They will then use their cellphones to take pictures of their results and upload them to a secure site.

“The interpretation of the result is simple, like reading a pregnancy test,” Meissner said.

Once every 30 days, for up to four months, the participants will do this same type of finger prick. Researchers will observe the data in real-time, to see how



Photos by Sarah Pack

Dr. Eric Meissner is the principal investigator on a new research study centered on hundreds of MUSC's own health care workers.



A detailed look at the kits being mailed to participants.

Provided by RayBiotech

5 TO THRIVE

Using nature based grounding to promote relaxation

If you are feeling anxious or worried, identify different items that you can find using your senses. Focus on each item to bring you through the distress and into the present.

- 5 things you can **SEE** 
- 4 things you can **FEEL** 
- 3 things you can **SMELL** 
- 2 things you can **HEAR** 
- 1 thing you can **TASTE**



Alternative:
If you don't have any items on hand imagine items that bring you joy and picture those in your mind

numbers change over time.

Right now, Meissner and team are using a test developed by RayBiotech, which is FDA approved for marketing and research but not for clinical use.

“There are many of these kinds of tests becoming available out there, and none of the currently available ones are perfect. But because of the severity of the epidemic, the criteria for approval for marketing by the FDA has been accelerated to allow researchers to try to understand the epidemic better,” Meissner said.

The catch with this kit, Meissner warned, is that it hasn't been tested to see if it will react to other coronaviruses that are present in the community, so there is a chance it could produce a false positive result. As a result, his team is cautioning those enrolling not to make any health-

related or life decisions based on the outcomes.

“We wanted to get started on this seroprevalence study as quickly as we could, using currently available materials, and we chose this product based on its availability and ability to be used as a point-of-care test,” Meissner said. “We hope that better validated serologic tests that can be used clinically will be available soon.”

The team hopes its findings will help to identify changes in antibodies over time in this group, which will help to contribute to a greater understanding of the virus and how we can better combat it.

“The more we know about how a healthy body responds to the virus, the better our understanding of the virus will become. This is just one step in the fight, but it's an important one,” Crosson said.

MEET RHONDA



Rhonda Mishler, R.N.

Department; How long at MUSC
 MUSC Health Women's Ambulatory
 Clinic-Outpatient; Two months

**How do you feel you're making a
 difference during this time of COVID**
*By working hard to keep patients and
 staff safe and schedules on track with new
 virtual telehealth*

Family
Children, Ashlee and Aimee

What music is in your player now
Country music

Favorite spring sports team
Chicago Cubs

How do you relax and unwind
Going to the beach; walking

A favorite springtime memory
*Sitting on my mom's deck watching mama
 and baby deer*

Favorite quote
"Not all those who wander are lost."
 — J.R.R. Tolkien

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Visit www.musc.edu/iu to start today!

FOR QUESTIONS OR PROGRAM SUPPORT: IMAGINE-U@MUSC.EDU

Resources & support to feed your family during the COVID-19 outbreak

To find area resources to feed children, visit:
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To find food assistance for the whole family, visit:
<https://www.lowcountryfoodbank.org/findhelp>

Did you know that you may now qualify for SNAP, a federal nutrition program that helps you stretch your food budget & buy healthy food? Anyone who is eligible will receive benefits. It's also important to know that you will not be taking away benefits from someone else if you apply.

You may qualify for TANF (Temporary Assistance for Needy Families), a time limited program that assists families with children when the parents or other responsible relatives cannot provide for the family's basic needs.

Learn more about SNAP and TANF or to apply, visit:
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RESIDENTIAL BROKERAGE

Worrying stroke trend in South Carolina during coronavirus pandemic

BY HELEN ADAMS

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Fewer South Carolinians are being treated for strokes during the coronavirus pandemic. Doctors at MUSC Health fear that's not because fewer people are suffering strokes but because people are afraid that getting help will expose them to the virus.

How significant is the decrease? The number of acute stroke calls to MUSC Health's Telestroke Program has dropped by 50%. Telestroke uses technology to connect patients in communities without stroke experts to specialists at MUSC Health.

Christine Holmstedt, D.O., serves as a professor of neurology at MUSC and medical director of the MUSC Health Comprehensive Stroke and Teleneuroscience Programs. "We used to do 17 to 20 telestroke calls a day. Call volume dropped to 12 in March and now it's fewer than nine calls a day. That's a big and concerning reduction."

There are also fewer stroke patients showing up in person at MUSC Health.

The decrease is a global phenomenon, Holmstedt said. "We've seen drops elsewhere. In China, there was a 50% reduction. Similar reductions have been documented in the UK and other regions of the U.S."

She thinks there are a couple of factors. "We'd normally see a lot of small strokes, transient ischemic attacks or stroke like events over telestroke and at MUSC. These patients typically come in the Emergency Department for acute stroke care knowing that was the right thing to do. But now, we're not seeing those patients."

They may be trying to wait out the pandemic, Holmstedt said. Calls are still coming in, but they're mainly for people with severe symptoms.

The imbalance is a problem, said

Acronym to Check for Signs of Stroke

- B — Balance loss.**
- E — Eyesight changes.**
- F — Facial drooping.**
- A — Arm or leg weakness.**
- S — Speech difficulty**
- T — Time to call 911.**

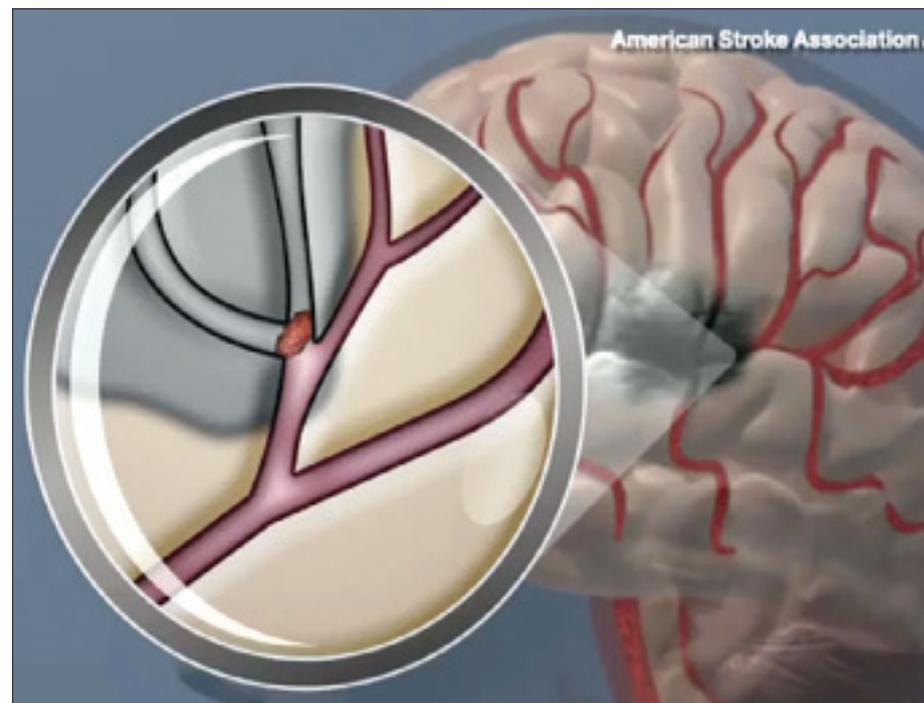
Chirantan Banerjee, M.D., a neurologist and assistant professor at MUSC. All stroke patients need immediate care

"Even patients who are having minor strokes or transient ischemic attacks, not coming in runs the risk that they'll worsen in the next three to five days. About one-third of them will end up with a deficit that will affect their daily lifestyle. Even though, on the face, it may seem like symptoms are minor, they lead to long-term effects in terms of the patients' functional status," Banerjee said.

He encouraged people to watch for signs of a stroke, which are summed up in the acronym BE FAST.

Holmstedt said it's important to keep in mind that a stroke is a medical emergency. "We need to intervene quickly, so those patients need to call 911. They need to get to an emergency department to be evaluated. They also need to know we're doing everything in our power to keep all patients safe from COVID exposure and keep our providers and nurses safe."

MUSC Health has developed protocols for taking care of people with and without COVID-19. Banerjee said its Comprehensive Stroke Center, the first in the state to earn Joint Commission Comprehensive Stroke Center certification, is well-prepared for what lies ahead. "Luckily, we haven't reached a point here in Charleston where we are overwhelmed. We still have plenty of resources to take care of stroke patients."



Graphic by American Stroke Association

This illustration from the American Stroke Association shows blood flow blocked in the brain.

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MUSC Health imaging site reopens with precautions against COVID-19

BY HELEN ADAMS

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MUSC Health has reopened an imaging center armed with multiple protections against COVID-19. It's in the West Ashley Medical Pavilion at the former Citadel Mall, now called the Charleston Epic Center.

Ron McKee, the system administrator for imaging at MUSC Health, said everyone who needs surgery needs imaging, and some procedures just can't wait. "If your mother had cancer or your family member had a bad hip and couldn't walk, would you say, 'We need to wait for months till this blows over?' That can cost lives."

So everyone from infectious disease specialists to information technology experts got together to come up with a way for patients to get MRIs, ultrasounds, CT scans and X-rays safely, despite the coronavirus pandemic.

The result is an extraordinary process for an extraordinary time. "We have more than 4,200 patients who had to be

rescheduled because of COVID," McKee said. "We have to get to a new normal."

That new normal for imaging begins with a phone call to determine if the patient is free of COVID-19 symptoms and risk factors. "Our goal is 100% healthy patients," McKee said. "We need to keep our patients and staff safe."

On the day of the appointment, the patient comes to the mall and stops outside of the West Ashley Medical Pavilion. "We have designated parking spots that are spaced out away from everybody," McKee said.

"The patients will arrive at the front desk – it's outside, not even in the building yet, where somebody will be wearing a mask and then, once again, we'll screen them through a temperature check to make sure they have no fever or other symptoms."

Symptom-free patients then get masks, and a technologist comes out of the building to walk them to a registration desk.

"We're setting up three isolation desks that are probably 12 to 15 feet apart at



Photo by Sarah Pack

Radiologic technologist Erica Burns, left, and multimodality CT tech Donna Davis clean equipment at West Ashley Medical Pavilion.

minimum. They'll have designated places to stand as they get checked in there. They'll get walked back. There's a hand washing station where they'll wash their hands again," McKee said.

While air scrubbers and biofilters

clean the air, patients will be escorted to a procedure room. "Once their procedure is over, we'll walk them out, making sure they're not passing people

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Expert Q&A tackles headline-making drugs in fight against COVID-19

BY CATHERINE MILLS

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Amidst the COVID-19 pandemic crisis, people isolating at home find themselves overwhelmed by the constant stream of information – often conflicting – released by news outlets. The past few weeks have offered countless headlines focused on drugs being used to fight SARS-CoV-2, the virus at the center of this pandemic.

What are these headline-making drugs, and how are they being used to treat this virus? Why is the antimalarial drug hydroxychloroquine being studied as a potential treatment? Why is the UK's National Health Service advising patients diagnosed with COVID-19 to take paracetamol, its counterpart to acetaminophen, instead of ibuprofen?

These questions, and others, are on the forefront of people's minds as they contemplate how to remain safe from the virus.

In an effort to clear up some of the confusing messages that surround pharmaceuticals currently dominating news cycles, MUSC's Patrick M. Woster, Ph.D., the SmartState Endowed Chair in Medicinal Chemistry and chair of the Department of Drug Discovery and Biomedical Sciences at MUSC's College of Pharmacy, agreed to share his thoughts in an informative Q&A. "After

all," he explained, "promoting patient health is the reason I'm in this business."

Researchers at MUSC are involved in numerous efforts, some of which include drug studies, aimed at combating COVID-19, working tirelessly to uncover chinks in the virus' armor. Through his work as a drug discovery researcher at MUSC, Woster is particularly well qualified to provide a medicinal chemistry perspective on pharmaceuticals making news today.

Woster and collaborator David Edwards, Pharm D., of the University of Waterloo, are perhaps best known for their discovery of the compound in grapefruit that alters the absorption of certain drugs, the science behind the prescription warning label that reads "Do not eat grapefruit or drink grapefruit juice while taking this medication."

Although his primary expertise is in the cancer field, it is his work with antimalarials, developing agents with some promise against strains of the malaria parasite that don't respond to drugs like hydroxychloroquine, that provides him specific insight into today's issues.

In this interview, Woster helps the public understand the science behind conflicting information and how those chinks in the virus' armor might well provide a target for either repurposed or newly developed drugs.



Photo by Sarah Pack

Dr. Patrick Woster, SmartState Endowed Chair in Medicinal Chemistry and chair of the Department of Drug Discovery and Biomedical Sciences at MUSC's College of Pharmacy.

It's More than a Home... It's a Lifestyle



COVID-19 Pharmaceutical Q&As

One drug making headlines right now in the fight against COVID-19 is hydroxychloroquine, a drug typically used for treating malaria. How does this drug work, and why is there speculation that it could be used against the virus causing COVID-19?

Woster: Hydroxychloroquine disrupts the metabolism of human hemoglobin by Plasmodium falciparum, the parasite that causes malaria. The drug causes a buildup of toxic metabolites that kill the parasite. Because this enzyme is present in the parasite but not in humans, the drug is not toxic to the patient.

It remains controversial whether hydroxychloroquine has potential in treating COVID-19. Researchers think hydroxychloroquine might be acting as an entry inhibitor. Entry inhibitors act by preventing the virus from recognizing the host cell or by keeping it from pushing its way into the cell.

The COVID-19 virus recognizes the host cell through an enzyme called ACE 2, which is involved in regulating our blood pressure. There's a small segment of ACE 2 that protrudes from the cell, and the virus has a high affinity for

See **DRUGS** on page 10



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Hospital chaplains attend to staff, patients during pandemic

BY LESLIE CANTU

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It seems that increased anxiety and stress will be the “new norm” for people across the nation for the foreseeable future, and that’s certainly true for the people within the hospitals and colleges of MUSC as they brace for the expected peak of novel coronavirus infections within the next few weeks.

The Rev. Herman “Frank” Harris, manager of MUSC Health’s Pastoral Care Services in Charleston, said his team has been called upon more often than usual to provide staff support in the last few weeks, but in particular, over the last few days since MUSC Health announced it had to lay off 900 workers to staunch the hospital system’s financial losses during a time of decreased revenues.

Harris’s team was not immune — five of the 10 chaplains were temporarily laid off.

“The whole nature of chaplaincy is to be embedded where people are,” he said. “As we serve right alongside staff, we definitely feel the emotional impact that just about every other department in the hospital is feeling as well.”

Pastoral care is just one of the many resources offered to MUSC employees on a new “employee well-being collective” page that can be found on the online Horseshoe, MUSC’s intranet. The page marshals resources to assist employees with mental, physical and financial health issues. The offerings range from livestreamed exercise classes via the Wellness Center to stress management teleconsultations and even help with groceries.

Harris said his staff remains available on-site at the MUSC campus from 7 a.m. to 11 p.m. and is available by pager or telephone after hours.

Harris said he observed increased anxiety even before the layoff announcements. “A lot of it is



Chaplain Frank Harris visits with employees in the hospital.

due to the uncertainty of what we’re dealing with medically,” he said, not to mention the increased stress of having to homeschool or find care for children while possibly dealing with reduced hours.

Even as the staff has needed more attention, there have been fewer patients to attend to. With so many elective procedures canceled, there are fewer patients in the hospitals, and the patients who are there are less likely to be able to interact. However, the situations they have been called to have been more urgent, Harris said.

It’s been a difficult season for patients because of the tightened visitor policy, leaving them disconnected from family support, community support and their faith communities, he said. One of the ways that chaplains assess spiritual distress is to uncover what gives patients meaning, purpose and connection in life — and those connections are stressed when visitors are restricted.

Instead, the chaplains remind patients that there are other ways to connect, including by phone and writing. They also help patients to rediscover their spiritual discipline, if that is something that is important to the patient.

As Harris ministers to patients and staff, he said he’s particularly reminded during this season of the things that give hope to many faith communities. “I hope that staff will remember those things that are unchanging in the midst of everything that is changing,” he said.



Dr. Jeff Winterfield, left, and Buist Academy student Harry Ding bring donated boxes of supplies to Arco Lane.

Middle school student, Charleston’s Asian American community donate supplies

BY CINDY ABOLE

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At a time where Lowcountry residents continue to prepare and function in a COVID-19 world, individuals are stepping up and reaching out in their communities to support the needs of medical professionals and hospitals in their preparation for the peak of the coronavirus.

It’s the type of response 14-year-old Buist Academy student Harry Ding chose to commit to when the pandemic was erupting in mid-March.

He was particularly bothered by the growing resentment, negativity and racist attacks targeted to Asians and Asian Americans in connection with the origin of the coronavirus outbreak stemming from Wuhan, China in late 2019.

“We all have bias,” said Harry. “The recent talk and reactions are generated by online talk. It’s both bizarre and unfair stereotypes that don’t help especially at this stressful time. I want to make a statement that it’s not.”

Harry responded to an email circulated by a Buist Academy classmate’s father, Jeff Winterfield, M.D., a cardiologist at MUSC, who was helping to promote the new Heroes Need Masks program started by colleague Sanford Zeigler, M.D. and other medical professionals and students at MUSC.

Harry and his dad, Wei Ding,

an analyst in MUSC’s Biomedical Informatics Center, connected with their family friends and acquaintances who make up some of the Tri-county’s Chinese and Asian American communities to collect needed medical supplies to support frontline hospital staff with the Heroes Need Masks program. With help of this community, a total of 472 N95 masks, 300 surgical masks, a half-gallon of 70 percent isopropyl alcohol, gloves, eye goggles and \$4,000 were collected within a four-day period. On March 23, the Dings brought the items down to MUSC’s Heroes Need Masks donation site in North Charleston.

Asked about how he felt in this effort “It’s an indescribable feeling,” said Harry. “It’s a feeling in your heart that says I’m doing something good no matter how small to help in this fight. To me, it’s worth more than any physical or tangible reward.”

With area schools closed in response to the pandemic, Harry’s time has been occupied by classes via distance learning, the Heroes Need Masks supply drive and other projects.

“If you do what you’re passionate about then it doesn’t become a burden. Helping others is a quality that’s innate in most people. Once you commit to it and share your time and talents — there’s nothing more that you have to do.”

DRUGS *Continued from Page Eight*

this segment. The virus sticks to the enzyme and gets pulled inside the cell.

Lung cells have higher levels of ACE 2, which is one reason why COVID-19 is a respiratory virus. Other areas in the body also have high concentrations of cells with this ACE 2, including the digestive tract, and these are the areas in the body where problems caused by this virus arise. ACE inhibitors would have no effect on virus ability to recognize cells. Recognition is the only role ACE2 plays in the viral life cycle. ACE inhibitors do not inhibit ACE2 and work on the previous enzymatic step – ACE is different from ACE2.

Recently, a man died after taking chloroquine phosphate to prevent COVID-19. Is hydroxychloroquine the same thing, and is it safe?

That was a formulation situation. A couple took tablets intended for use in cleaning aquariums and ponds. While these tablets did contain chloroquine phosphate, a solvent used to treat parasitic infections in fish, they also contained other ingredients that were toxic when taken internally. Sadly, they essentially poisoned themselves with a household cleaning product not meant for ingestion.

Hydroxychloroquine, taken in the correct dose, and when prescribed by a physician, is actually a very safe and effective drug that has been used for decades. It was derived from quinine, which is isolated from the bark of the cinchona tree, and people have been using that for hundreds of years.

A recent publication indicated that an FDA-approved broad-spectrum anti-parasitic drug, Ivermectin, showed anti-viral activity toward COVID-19. How might this drug differ from hydroxychloroquine?

Ivermectin is used as an antihelminthic and works by disrupting chloride channels in parasitic insects and worms. This results in hyperpolarization in the cells in their nervous system and eventually kills the parasitic organism. It is not toxic in mammals, including humans.

In the virus, Ivermectin is another entry inhibitor that prevents the virus from penetrating into the cell nucleus. It appears to block the protein complex that must form to allow the virus to enter the cell nucleus through the nuclear pore complex, so this is a different mechanism of entry inhibition. It may prove to be effective at some point but is unlikely to be prescribed based on one in vitro study.

Why is it important to test whether existing drugs such as hydroxychloroquine, an antimalarial drug, and remdesivir, a drug created for the Ebola virus, work against COVID-19?

It will take time to develop a vaccine against the virus, though everything is being done to speed up the approval process. Development of a small-molecule inhibitor will take much longer. In the meantime, repurposing existing drugs, such as hydroxychloroquine, is a much faster approach. Repurposing drugs for off-label use will likely be the quickest way to find a treatment. I see no reason why physicians can't prescribe a currently available drug if they have some evidence that it actually works, and they feel the risks associated with the disease outweigh those of the cure. For instance, there are reports that both chloroquine and hydroxychloroquine, in addition to the antibiotic azithromycin, prolong QT interval, raising concerns about the risk of arrhythmic death from individual or combined use of these medications in patients with pre-existing risk factors for cardiac arrhythmias. A prolonged QT can potentially cause fast, chaotic heartbeats, which could trigger a sudden fainting spell or seizure, and in some cases, the heart can beat erratically for so long that it causes sudden death. Prescribers would have to factor in these concerns. There are also other variations of this treatment, such as hydroxychloroquine used with the antibiotic azithromycin and the mineral zinc, all of which are currently in clinical trials.

If hydroxychloroquine turns out to be effective and is approved by the FDA for use against COVID-19, it could be widely distributed. For

example, Mylan Pharmaceuticals has already reinitiated the manufacturing of hydroxychloroquine to provide 50 million tablets that could treat 1.5 million patients. To put dose availability in perspective, on April 14, there were more than 582,000 confirmed cases in the U.S., according to Johns Hopkins University.

Remdesivir was developed by Gilead Sciences during the Ebola crisis. Ebola is not a coronavirus, but it is similar in that it is a single-stranded RNA virus. Remdesivir was developed to prevent the Ebola virus from making copies of its viral RNA. Scientists think this compound could work with COVID-19 as well. Gilead has given this drug out for clinical trials and will quickly evaluate whether or not it works to halt the progression of infection.

The UK's National Health Service is advising physicians to treat COVID-19 with paracetamol, the equivalent of acetaminophen, instead of ibuprofen. Is there reason to favor acetaminophen to

ibuprofen in these patients?

Most of the pain and fever you get when you are sick is from inflammation caused by substances released by the body to fight the infection. Ibuprofen inhibits the synthesis of these substances and reduces inflammation and pain. It can also reduce fever. Acetaminophen is not an anti-inflammatory, but it is better at reducing fever, and it alleviates pain by a different mechanism than ibuprofen. If you want to reduce your fever, then you take acetaminophen. If you want to reduce fever and block the synthesis of the nasty elements that are released in response to a virus, then you take ibuprofen. But in either case, you're just treating symptoms.

One potential issue with taking ibuprofen for COVID-19 is that scientists have theorized that ibuprofen could increase the number of ACE 2 receptors on the host cell, but that has not yet been proved.

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** Child does not have to be present*



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COPE *Continued from Page One*

also out of sorts and misbehaving, just stepping away or asking for help is really important, Mack said. “Identifying what your triggers are and knowing who you can reach out to when you can’t take it anymore and you know that might be your next step.

“Identifying what our plan would be if we got into that space where we thought we were going to do something we would regret is always better done in advance. Think about it like a fire or something else that could happen – we need to come up with a plan if or when that situation arises.”

❑ Avoid physical discipline.

“Certainly, forever and ever, the AAP has discouraged corporal punishment with the understanding that it’s not needed for behavior to change,” Mack said.

“I think a lot of people actually don’t know that. Some people think that spanking is OK or spanking with a hand is OK but not with a belt.”

Research has found that spanking actually leads to less compliant kids and may be linked to unwanted behavior such as aggression.

“One thing we pediatricians worry about is that stressful times like this can increase child abuse and neglect. We often will see these stresses come out in that way. Channel your energy. Call a time out if the kid is doing something inappropriate. Step away if you need to.”

❑ Give them your attention.

“Acknowledge the positive acts that they are doing and ignore some of the bad behaviors. That can be as effective

or more effective than punishing bad behavior in some cases,” Mack said.

“Sometimes all they want is really to get a reaction, and sometimes it might be best not to deliver that reaction.”

❑ Don’t use words that could cause bigger problems.

“The AAP discourages verbal shaming,” Mack said. “You’re stupid; you’re bad. All those generalizations about a person’s character can really become a significant adverse childhood experience. For many, that sticks with them a long time.”

❑ Do stick with good routines – and help kids share their fears.

“Routine is really important, and as much as routine that was familiar from the past is important to carry over when we can,” Mack said.

“Making sure that kids have a safe space to share their fears is also really important. Allowing time, opening the conversation to say, ‘Hey what are you nervous about?’ And expect that some of the behaviors that aren’t typical might be coming from a place of fear or insecurity, from all of us – adults and kids,” she said.

“Be understanding about that, but don’t let the pandemic be all-encompassing. Try to find a space at home where there’s safety and routine that’s apart from all that.

“Also, take an opportunity to remember what’s important and what is not. Some insecurities are very real, such as food and shelter, love, safety, all that. Try not to minimize people’s worries.”

For more information on discipline from the AAP, check out their COVID-19 parenting resource page.



Photo Illustration by Sarah Pack

Being cooped up at home for weeks doesn't bring out the best in most of us.

FOOD *Continued from Page Three*

there, complete a short form, <https://is.gd/FoodDonation> and a member of MUSC’s Office of Health Promotion will contact you. For immediate assistance, email Dr. Susan Johnson at johnsusa@musc.edu.

❑ Employees Helping Employees – If an MUSC care team member would like to nominate a unit/department/employee to receive food support, complete the form at <https://is.gd/>

FoodSupportNomination.

For general information about the COVID-19 Food Support project, visit the University Updates on Coronavirus – FAQs at web.musc.edu/coronavirus-updates. Employees needing further information can visit the MUSC Health Intranet (login required) and search under COVID-19 Updates. Go to Coronavirus Clinical Resources, then Well-being Resources on the Horseshoe, then, Financial Health, then Food Assistance.

IMAGING *Continued from Page Seven*

in close quarters. Our focus is to make sure that they get their exam and get taken care of and then they get back into their normal life without having to be at risk of infection.”

Time is built into the imaging center’s schedule for cleaning. “Every time we do a procedure, we’ll take a 15-minute window to sterilize the room,” McKee said. “Each patient will receive a one-

page document explaining what was done for their protection.”

The only risk McKee sees is the fact that people who are self-isolating at home will have to go out in public for the appointment. “But everybody who’s going to be taking care of them will be masked, gowned and gloved,” he said.

“This has really been thought out from the beginning to the end. I want the community to know that MUSC has come together to work for patients.”

April ‘Health Focus’ schedule on SC Public Radio

Visit www.southcarolinapublicradio.org/programs/health-focus

April 20 – Segment #1

Topic: Online Program for Monitoring COVID-19 Positive Patients

Guest: Emily Warr, R.N.

Telehealth at MUSC’s Emily Warr, will discuss an online patient program (and secure website) that allows health care providers to monitor and communicate with COVID-19 positive patients throughout their illness.

April 20 – Segment #2

Topic: Managing Chronic Health Conditions during the Coronavirus Crisis

Guest: Elisha Brownfield, M.D.

Department of Internal Medicine’s Dr. Elisha Brownfield will discuss new approaches to monitoring and managing chronic health conditions remotely during the coronavirus crisis.

MUSC Health begins home monitoring of COVID-19 patients

By LESLIE CANTU

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Much of the emphasis in the news about the coronavirus pandemic has centered around testing, with less about what happens after the test. For South Carolina patients, medical oversight doesn't end with a positive result.

Since March 30, MUSC Health has been offering patients who were tested through its hospital system the opportunity to enroll in a free monitoring service via MyChart, the online patient portal that allows patients to access their medical records and billing statements.

As of April 7, 193 patients have been contacted about the program, and 96 have chosen to enroll, said Emily Warr, R.N., director of operations for the Center for Telehealth.

"It's going well overall. The patients seem to genuinely appreciate the support," Warr said.

On the telehealth side of the screen, nurses can see a list of patients who've tested positive for COVID-19, including if they are considered high risk because of age or underlying health conditions.

On the patient side of the screen, patients get a daily survey with specific questions about how they feel, including their shortness of breath in various scenarios.

MRN	Patient	Age	Room/Bed	HM Enrolled	Last COVID-19 Small COVID-19 Last Out	COVID-19 Last Out	COVID-19 Infective COVID-19 Exposure	Risk
00553001	Zwerblin, Fou	30 y.o.			Positive*	03/19/2020	Active	
00553060	Zwerblin, Tui	3 y.o.			Inconclusive*	03/19/2020	Completed	Yes High Risk
00553049	Test, Pecan	69 y.o.		104		03/29/2020	Completed	Yes High Risk
00553226	Zantel, Dorothea	4 y.o.			Positive	03/26/2020	Completed	
00553220	Laughing, Tami Fillmore	67 y.o. (1020) 1965.8			Not Detected	03/28/2020	Active	Yes
00553251	Zwillow, Bjart	56 y.o. (A120) 2067.4			Detected	03/21/2020	Completed	
00553012	Test, Chester Lab	38 y.o. (12) 1975.1			Positive*	03/22/2020	Completed	Yes
00553073	Test, Lancaster Lab	48 y.o. (12) 1961.1			Positive*	03/22/2020	Completed	Yes High Risk

Image Provided

A screenshot of a test of how the COVID-19 monitoring appears to nurses.

Certain answers trigger an alert for a nurse to take a closer look at the medical record and possibly follow up with a phone call to the patient. Warr said that in this first week of use, the nurses have already made a few follow-up calls, and twice, cases were escalated to a doctor.

Warr said she's pulling staff from other telehealth responsibilities to manage the coronavirus patients. If the workload becomes too much, she'll train nurses from other areas to join the effort. Luckily, she said, leaders in other areas have been forthcoming with offers of workforce assistance.

It took about three and a half weeks and five analysts to create this new feature in MyChart, said Bryan "Buck" Rogers, director of Epic Research Operations and Integrations within the Biomedical Informatics Center at the MUSC.

His group typically builds applications within Epic, MUSC Health's electronic health record, that are intended to help scientists collect and analyze data for research studies. In this case, team members jumped in to help with clinical operations.

Leslie Lenert, M.D., director of the Biomedical Informatics Center, said the group has appreciated the opportunity to offer aid.

"It's been a good way for people to really make a difference when they might have been distracted," he said. "We are trying to do our part, and we hope we can be helpful to the brave clinicians who are out there on the frontlines."

Also in development is a cell phone app for people who don't have or don't wish to use MyChart.



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 I A R L C R D Z L E Z C X R F
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 N G V Q C Q U J T O O G D U H
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