

# UMMC leaders detail preparations for care of COVID-19 patients

**By UMMC**

A crush of patients with COVID-19, the disease caused by the novel coronavirus, will soon impact hospitals in Mississippi as the pandemic spreads from community to community.

In response, the University of Mississippi Medical Center is “bringing to bear the full force of resources we have to address this,” said Dr. LouAnn Woodward, vice chancellor for health affairs and the Medical Center’s top executive.

Woodward and other Medical Center leaders updated statewide media with what’s known about the highly contagious virus, which had killed 110 people and sickened close to 8,000 in the United States as of mid-Wednesday. Some media attended in person, with others listening in via conference call.

Globally, more than 200,000 have been infected, with the death toll numbering 8,732, also as of mid-Wednesday. The Mississippi State Department of Health listed on its website a total 34 people in the state confirmed positive for COVID-19, spanning a total 14 counties, and MSDH testing of 513 residents. Those numbers are escalating daily.

No hospital nationally or globally can be fully prepared for a pandemic infection, said Dr. Alan Jones, chair of the Department of Emergency Medicine. Given that, “we are ramping up to prepare for the tidal wave of patients we know will hit us,” he said. “Our teams are working all day, every day, focusing on when this reality comes face to face with us, so that we can be as ready as we can be.”

Among the Medical Center’s actions:

- Visitation policies have been sharply restricted to decrease the number of people who have contact with health-care workers, patients and a limited number of family members.
- Clinic visits and many elective surgeries have been postponed across the board.
- Aggressive steps have been taken to conserve personal protective equipment, or PPE, that includes face masks, gloves, gowns and face and eye shields. All clinical activities for students have been suspended; groups of caregivers who round from patient to patient have been cut to only a necessary handful entering a patient room; and managers are taking steps to ensure patients, families and employees don’t take home PPE.

The Medical Center is receiving partial shipments of PPE and can’t count on help from any federal or state agencies for reinforcements. “We don’t see that as the cavalry coming to help us,” Woodward said. “The demand out-

strips the supply.”

- The Medical Center has the capability to increase to more than 100 its number of negative pressure patient rooms, which stands at 60. Negative pressure rooms, often used for patients with infectious diseases, are designed to filter contaminated air out of the hospital’s air-handling system.
- A telehealth app is in development that can be downloaded on a smartphone, giving Mississippians the opportunity to be screened for COVID-19 without having to make an in-person visit. “You will go to a virtual waiting room and be picked up by a provider, but only for COVID-19 screening,” Jones said. The app should be available in the next few days.
- UMMC researchers are working around the clock to develop an in-house test for the virus, with the technology expected to be available in several weeks. As the state’s only academic medical center, “not only do we have physicians, but we have the scientists necessary to create this test,” said Dr. Richard Summers, associate vice chancellor for research.

Those who believe they need to be tested for COVID-19 should not come to an emergency room, Jones said. He urges them instead to use telehealth to obtain screening or contact their provider, and let an emergency room be the resource for truly sick and injured people.

“We need people to allow us to do our job and take care of the sick, sick patients at the (UMMC) Emergency Department,” Jones said. “If you are not in need of hospitalization, stay away from the ED. Most patients just need reassurance and the ability to isolate themselves.”

Those with mild cases should stay home until 72 hours after all symptoms have resolved, he said. “Seek care only if you get worse, or if you become short of breath,” Jones said, and if that’s the case, “please, on the front end, notify the provider first” so that steps can be taken to protect health care workers and other patients.

Medical Center caregivers are urging the public to practice social distancing, or staying no closer than six feet to any person; perform frequent hand washing; stay home from work if sick; and taking many other measures intended to help curb the virus’ spread.

“These things are not aimed at preventing people from getting the virus,” Jones said. “It’s to give health care a fighting chance. If not, our ability to care for any patient will be hampered.”

Complicating that is the state’s high rates of chronic

diseases that place many at greater risk for complications if they contract the virus, said Dr. Jonathan Wilson, UMMC’s chief administrative

officer. “That’s the group of patients we are worried about the most,” he said.

Screening for the virus has pivoted from checking for travel to a highly affected country, to considering anyone for testing who has the primary symptoms of cough, fever and respiratory issues,

Jones said. “This is a reality. It is here, and it will affect all of us.”

Jones urges Mississippians to stay abreast of a rapidly changing situation and take steps to protect themselves and others. That includes physicians, nurses and others in the health care community

that give bedside care to all patients, not just those who will become ill from COVID-19.

“This is not to be taken lightly,” he said. “This will affect us profoundly. This is not another bad flu season. School children will be reading about this 50 years from now.”

## THE SCIENCE BEHIND THE CORONAVIRUS

By Charles Apple | THE SPOKESMAN-REVIEW

What do we really know about this little bug that’s turned our lives upside-down? Quite a bit, actually.

### What is a coronavirus?

First off, let’s clarify our terms. We’ve all been calling this thing the coronavirus, but actually, coronavirus is a type of virus. It’s called that because the little spiky things protruding from the virus reminded researchers of a crown. “Corona” is Latin for crown, or halo.

You may remember SARS (Severe acute respiratory syndrome) from 2003 and MERS (Middle East respiratory syndrome) from 2012. Both of those were caused by coronaviruses.

For a while, folks were calling this one “the novel coronavirus,” meaning it was new. The Centers for Disease Control and Prevention prefer the name COVID-19 for the disease caused by SARS-COV-2.

Coronaviruses affect only birds and mammals.

### Where did it come from?

The short answer: Researchers don’t know just yet.

Early research in the U.K. suggested the COVID-19 virus is similar to one found in horseshoe bats. That’s not so far-fetched as its sounds: SARS spread from bats to cats to humans. And MERS originated in bats and spread to camels before the first human was infected.

The first human cases of COVID-19 were detected in early December in the Wuhan Province of China. The CDC says the first cases of COVID-19 were linked to a live animal market there. The Chinese government has said they now think the very first case may have been a 55-year-old man who fell ill on Nov. 17 of last year.

From there, the COVID-19 spread around the world.

### How does the virus work?

Like all viruses, this one has just one purpose in life: to reproduce. This only becomes a problem when the human body detects the virus and then goes into overdrive to try to rid itself of the virus. Most of the respiratory symptoms a patient suffers are actually brought on by the body’s immune system.

Once it’s in the lungs, the virus uses protrusions made of spike proteins to latch onto a receptor on a lung cell. Researchers have noted that the COVID-19 virus seems to be “stickier” than, say, the SARS virus. Which may be one reason this strain has spread more quickly.

The virus then transfers its RNA into the lung cell and hijacks the cell’s reproduction machinery. Copies of the virus emerge from the host cells and go out in search of new host cells where they repeat the process.

This electron microscope image shows COVID-19 viruses as they emerge from the surface of host cells in a lab culture taken in February from a patient in the U.S.

### How does the virus spread?

COVID-19 can damage the lungs. But how does the coronavirus gain access to the lungs?

For the most part, COVID-19 spreads from person-to-person. An infected person can cough or sneeze, spreading the virus through tiny droplets that are too small to see.

COVID-19 can also live for a period of time outside the body. So these drops can come to rest on a table or counter that can be touched by someone else who comes along later.

This is why we’ve been advised to not touch our mouths, noses and faces. Cells in our mouth and nasal tissues also have receptors for the spike protein. We can get droplets on our fingers that then multiply and spread to our own respiratory systems.

### COVID-19 compared to other pandemics and epidemics

		CASES WORLDWIDE	DEATHS WORLDWIDE	CASES IN THE U.S.	DEATHS IN THE U.S.	
H1N1 1918-19	“Spanish Flu”	One-fifth of the world’s population and one-quarter of the U.S. population came down with the virus. In one year, the average life-expectancy in the U.S. dropped 12 years.	500 million	50 million	25 million	675,000
H2N2 1957-58	“Asian Flu”	Originated in Singapore, spread to Hong Kong and then to coastal cities of the U.S. Numbers settled down for a while but then resurged in 1958, particularly in the U.S.	Unknown	1.1 million	Unknown	116,000
H3N2 1968-70	“Hong Kong Flu”	Was thought to be caused by a mutated strain of the Asian Flu virus from a decade before. Spread quickly across Southeast Asia to U.S. soldiers returning home.	Unknown	1 million	Unknown	100,000
SARS 2002-03		Originated in China and spread quickly among health care workers before it was identified. Major cities like Beijing and Singapore restricted travel and closed schools.	8,096	774	27	0
H1N1 2009-10	“Swine Flu”	Originated in Mexico, where it was thought to have mutated from a virus found in pigs. It had a resurgence in India in 2015, killing 1,841 people.	6.7 million	19,654	113,690	3,433
MERS 2012-PRESENT		Is thought to have originated in camels in Saudi Arabia. Another outbreak took place in South Korea in 2015 and then again in Saudi Arabia in 2018.	2,506	862	2	0
EBOLA 2014-16		Was first identified in Africa in 1976 but a major outbreak in West Africa in 2014 caused the World Health Organization to declare a public health emergency.	27,000	11,300	4	2
COVID-19 2019-20		First cases were identified in China in December 2019 but last Friday, the World Health Organization declared Europe the new epicenter of the pandemic.	284,566	11,868	19,624	260

Sources: Centers for Disease Control, National Institutes of Health, World Health Organization, U.S. National Library of Medicine, European Centre for Disease Prevention and Control, GlobalSecurity.org, NBC News, Healthline.com, LiveScience.com, HowStuffWorks.com, Encyclopedia Britannica

COVID-19 numbers as of 11 a.m. Saturday, March 21