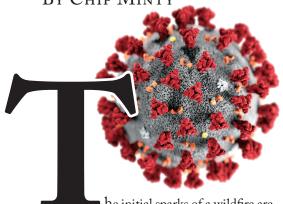
## 'This One is Going to be Different

By Chip Minty



■ he initial sparks of a wildfire are hardly ever noticed, especially when they're hidden on the other side of a distant mountain. The alarms usually sound once the fire has grown so intense and widespread that it begins consuming the entire forest.

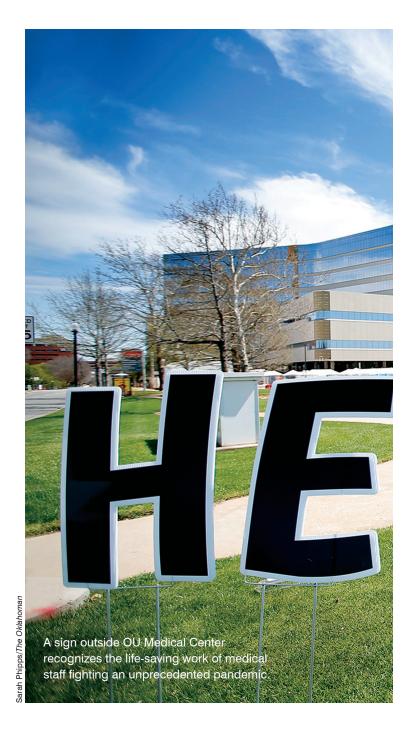
Physicians, researchers and administrators at the University of Oklahoma Health Sciences Center have much to keep them occupied on regular days, but they make it their business to be on the lookout for smoke. They've seen fires before, and the last thing they want is flames at their front door.

They still talk about SARS, MERS and H1N1, lethal pandemics that have swept across borders like wildfire, leaving widespread sickness and death in their paths. As bad as they were in other countries, the U.S. health system limited their spread domestically and contained the disruption. But, when the smoke from COVID-19 appeared on the horizon this winter, OU physicians knew it would be different.

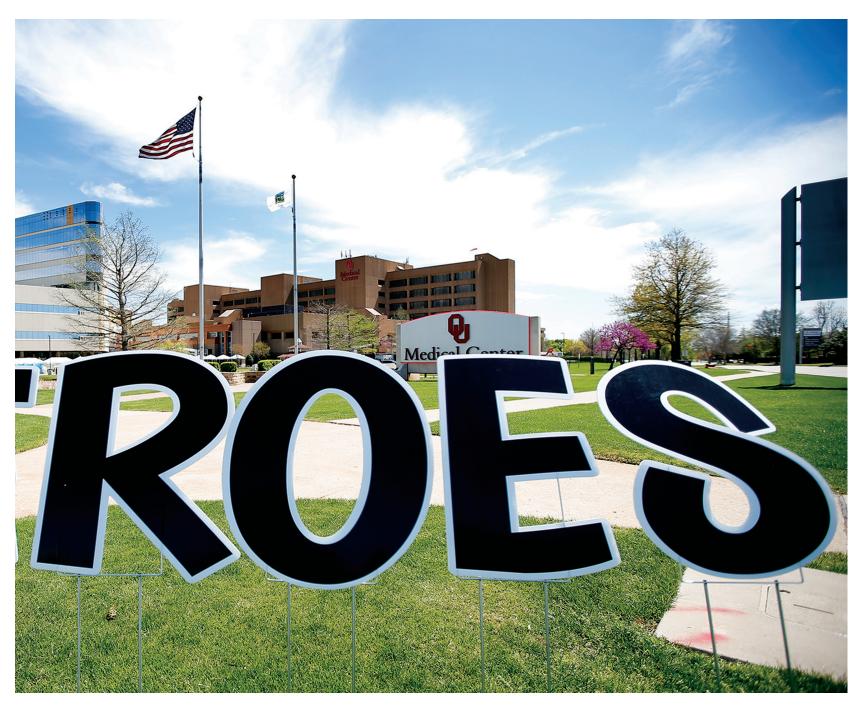
OU's massive medical system spans from Oklahoma City to Tulsa, teaching young doctors and nurses, doing groundbreaking research and providing clinical care to thousands. Often in the background is the university's leadership role in protecting the state's public health. That all changed in the early days and weeks of 2020 as COVID-19 developed, pushing those leaders to the forefront as the budding outbreak took shape on the other side of the world.

"We were quite concerned," says Dr. Dale Bratzler, professor and chair in OU's Hudson College of Public Health.

"China first reported it to the World Health Organization toward the end of December, but there was some pretty good



## OUHSC and OU Medicine mount an aggressive and multifaceted response to the COVID-19 pandemic.



evidence that the disease had probably been going through the Wuhan province in November. But that was not reported to the World Health Organization, so by January, it was a big deal."

Bratzler was among a cadre of experts who gathered for the first time on Jan. 24 to discuss risks associated with the novel coronavirus, which causes the COVID-19 disease. At the time, he says, their mission was to protect the health of students, faculty, staff and patients on OU campuses in Oklahoma City, Norman and Tulsa. The group included representatives from the Colleges of Medicine and Public Health, as well as the Risk Management Office, the Provost's Office, Student Affairs and the Enterprise Risk Management Office.

Initially, the group met in a large conference room in the Health Sciences Center provost's office, and they almost immediately became known as the Special Pathogen Preparedness Operations Team, or SPPOT, says Jill Raines, vice provost for health sciences administration.

The group was already aware of the coronavirus's potential to pose a public health crisis, and they wasted no time in taking action.

"It had all of the makings of a pandemic," Bratzler says. "It had all the characteristics that would see world spread. It was very similar to SARS, and we'd seen world spread. Nobody was immune to it, it spread very rapidly, you saw the numbers going up daily in China, the cases and the number of deaths, so it became clear very quickly that it was going to be difficult to contain this particular virus.

"We knew there were faculty traveling, and we had visiting professors coming in, particularly from China," Bratzler says. "We knew that there were students who were planning to travel internationally. It was clear that we had people who would be coming to the Norman or the OUHSC campuses from areas of the world where transmission was substantial."

On Jan. 27, SPPOT took its first action as an organization and asked Interim President Joe Harroz to suspend travel to China, says Raines, who has served as chief administrator of SPPOT since the group's inception. The group also recommended those coming home from China should self-quarantine for two weeks.

"We were the first university, as far as we could tell from our research, to restrict travel to China, the epicenter at that time of the coronavirus," Raines says.

A few days later, President Donald Trump began implementing a similar travel ban, cutting travel from China, and setting health and safety protocols for U.S. citizens returning from the country.

Bratzler says the university had acted quickly and decisively, but the virus was moving faster than anyone had anticipated.

"We knew that this was going to be linked to China. There



Dr. Dale Bratzler, professor and chair in OU's Hudson College of Public Health, is among a group of OU experts that began working to protect the health of the university's three campuses and the state starting in late January.

had been travel to probably all parts of the world before that travel ban went into place. Then, of course, once you start seeing outbreaks in other countries, particularly Italy and others, it became even more difficult to prevent the spread."

"For me, kind of the 'aha' moment was when it became such a big deal in Italy. Italy is not a third-world country. And northern Italy was being devastated by this virus," Bratzler says. "I remember when SARS went around the world, but it dropped off very rapidly. This one was different. People were dying, and this virus was very efficient in transmission from person to person. Nobody's immune to it, and there is no treatment and no vaccine."

It didn't take long before SPPOT members began seeing bigger outbreaks in California and New York. Then, on March 6, Oklahoma Gov. Kevin Stitt announced the first confirmed case of COVID-19 in Oklahoma. That person had just returned from Italy, but a few days later, a basketball player with the Utah Jazz was diagnosed shortly before tipoff against the Oklahoma City Thunder. The NBA immediately canceled the game as thousands of Thunder fans watched from the stands at Chesapeake Arena.

With COVID-19 at their doorstep, SPPOT broadened its public health effort by ramping up communications with the public and state agencies, increased screening activity and began coordinating with counterparts at OU Medicine, who



"Researchers don't get opportunities very often to help people in such a tangible way," says George Lynn Cross Research Professor William Hildebrand (left), who is leading a team developing a COVID-19 vaccine.



Vice Provost for Health Sciences Administration Jill Raines heads the special pathogen team, which led the way in making recommendations to OU as the pandemic unfolded.

were preparing hospitals for a surge of patients. Meanwhile, OU researchers joined the worldwide effort to attack the disease head on.

In an e-mail distributed March 15, OU Interim President Harroz informed the OU community that the university's response to the pandemic began in January, when SPPOT was first established. By mid-March, SPPOT had ballooned from a cadre of 10 experts to a full-blown organization of 40 members composed of subject-matter experts, public health professionals, epidemiologists and physicians. Members came from OU

campuses in Norman, Oklahoma City and Tulsa, as well as representatives from the state and county health departments.

By March 16, SPPOT had moved from its conference room in the provost's office to the campus' Emergency Operations Center (EOC), where members were meeting daily from 8 a.m. to 7 p.m. or later, says Raines.

While in operation, the Emergency Operations Center was a hive of activity where SPPOT members worked to develop algorithms for screening and updating policies to address the spread. SPPOT assisted in setting up testing sites, recommended university actions and assisted in executing OU's COVID-19 response, Raines says. Meanwhile, academic technology staff prepared for OU classes to move online and OU health clinics refined protocols for screening faculty, staff and students.

"We brought in HEPA filters for the EOC rooms and spread out to observe social distancing," Raines says. "We had hand sanitizer on each table and alcohol wipes around the room and doors were propped open, so we didn't have to touch the doorknobs."

In response to a barrage of questions from the media, public health and infectious diseases experts from SPPOT held an hour-long news conference on March 17 to talk about social distancing, preparedness, collaboration between hospitals, vaccination development efforts at OU and what it means to "flatten the curve."

On March 18, the university distributed a news release announcing a collaborative vaccine development partnership between Austin, Texas-based biotechnology company Pure MHC and an OU Health Sciences Center-based research team led by OU George Lynn Cross Research Professor William Hildebrand.

OU Medicine President and CEO Chuck Spicer and OU

Health Sciences Center Provost Jason Sanders held a virtual town hall meeting the very next day to answer questions from the public.

A week later, OU distributed a news release, recommending ways the public could manage their fear and maintain mental health through the pandemic. At the top of the list was taking time away from 24/7 media coverage.

On March 25, OU announced preparation of mobile emergency rooms near the emergency room entrance of the OU Medical Center to assist COVID-19 screening efforts. The mobile unit was set up as the triage point for all adult

emergency room patients not arriving by ambulance. That same day, SPPOT closed its Emergency Operations Center.

"We were at a point in our COVID-19 response actions that being in one room all day was convenient, but no longer critical," Raines says. "So, we could mitigate some risk of our in-person meetings by moving to virtual meetings."

As the coronavirus established itself across Oklahoma, SPPOT's focus expanded beyond OU's campus communities, says Dr. Linda Salinas, OU Medical Center epidemiologist and infectious disease specialist.

"The word that comes to mind is collaboration," she says. "There has been collaboration between our entities on campus, our executive leaders, other hospitals, between physicians, as just a few examples."

Salinas says the infectious disease community rallied to the effort because of the acute dangers associated with the virus.

"I think many in the public health and epidemiology arena became concerned

about the pandemic when we began to see cases outside of China," Salinas says. "We also realized there was asymptomatic transmission, adding to the concern of widespread infection.

"We are all doing our best to lend our expertise when called upon," she adds. "Some are leaders in investigating treatments, some in infection control and others in employee health."

OU is widely known for its teaching, research and clinical contributions, but the Health Sciences Center's aggressive response to the COVID-19 outbreak may have been a surprise to many.



OU Medicine President and CEO Chuck Spicer speaks at a virtual town hall meeting to answer questions from the public March 19



OU infectious disease specialist and epidemiologist Dr. Linda Salinas (left) and OU Medical Center President Kris Gose thank the staff of Oklahoma City-based furniture retailer Mathis Brothers for retooling its mattress factory to make masks for OU Medicine patients and visitors.

"Public health is not a new role for the university and not a new role for the Health Sciences Center," says Sanders, the center's senior vice president and provost. "But we always appreciate the opportunity to highlight capability we have that may not be generally understood.

"We have expertise in a number of areas that provide a unique resource to the state and community, starting with the Hudson College of Public Health. It's the only college of public health in the state," he says. "Dean Gary Raskob is a national leader among deans of public health, and he's also an expert in statistics and epidemiology.



OU Health Sciences Center Provost Jason Sanders says that the race to stop the spread of COVID-19 is "the largest effort in history to develop a vaccine."

"The department has also had strong partnerships with the State Department of Health, the Oklahoma City-County Health Department and the Tulsa County Department of Health. In particular, Dean Raskob serves as chairman of the board of the Oklahoma City-County Department of Public Health."

Because of its strong foundation in public health and epidemiology, the OU Health Sciences Center is well prepared to take on pandemics, Sanders says.

"We've built up specific expertise over the years in research into infectious diseases, and we have experts in viruses and in clinical services and excellent infectious disease specialists, some of which you've seen on the news."

Also, OU strengthened its collaboration with the Oklahoma State Department of Health last fall when new Department of Health Commissioner Gary Cox took office, Sanders says. The department now has access to all the Health Sciences Center's faculty and clinicians.

Part of OU's public health mission has been vaccination development technology, and the Health Sciences Center is in a strong position of leadership.

Currently, OU researchers are involved in two coronavirus vaccination development projects, Sanders says, and OU's natural capabilities in this area may not be widely recognized.

One of the labs, operated by longtime vaccine researcher Hildebrand, creates targets that help the body's immune system identify and kill virus-infected cells. His research in this area has spanned nearly 30 years, and now he is focused on developing a vaccine to fight COVID-19.

Hildebrand calls the coronavirus vaccine project a unique opportunity to contribute.

"We have dedicated our lives to helping the immune system detect and eliminate unhealthy cells," says Hildebrand. "Now, there's an opportunity to help. Researchers contribute to scientific knowledge during their careers, but unlike physicians who see patients all the time, researchers don't get op-

portunities very often to help people in such a tangible way."

Medicine has seen many great achievements over the centuries, but vaccines have been the greatest, Sanders says. They have an overwhelming benefit-to-risk proposition.

"There is literally a race to develop a vaccine as quickly as possible, and that effort gives us all hope. The question is not if, but when," he says.

"Our scientific capabilities worldwide are poised and in a better position than they've ever been to respond, and we'll only learn from this and accelerate vaccine development in the fu-

ture. Hope is important in this very difficult time, when it's very human to be fearful.

"I am very hopeful that it will be less than a year and a half for development. From all that I can see from my colleagues, this will be the largest effort in history to develop a vaccine."

As SPPOT continues a battle that began months ago, members say their days are not the same as they were when the year began.

Associate Professor Salinas is a member of the infectious diseases section of OU's Department of Medicine. In addition to her teaching duties and her role as OU Medical Center epidemiologist, she also serves as the OU Medicine chief quality officer. She also has published several research papers. Now, she says, her days are much different.

"The entirety of my day is spent trying to help manage COVID-19 related issues and help, as part of a larger team, prepare our hospitals," she says.

"A good part of my time includes providing guidance for personal protective equipment use and supply, guiding patient isolation unit choices, working with our surgeons to assure they and the operating room staff stay protected when performing urgent or essential procedures, coordinating with our employee health medical directors around guidelines, reviewing new equipment that may help stop the spread of infection, providing input on the surge plan, working with our lab around testing and allocation of available tests, reviewing the clinical conditions of any hospitalized positive patients and development of discharge plans, to name just some."

The COVID-19 pandemic has demanded a very large and talented team of doctors, nurses, researchers, administrators and staff to respond with enormous amounts of time and energy. Salinas and her colleagues have left their former lives behind to fight a raging inferno that has reached their front door.

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