As a worldwide pandemic washes over the St. Louis region, the Washington University Medical Campus is eerily quiet. Most visitors, students, staff and research faculty are no longer on campus. Limited patients come to its medical buildings, as many appointments are taking place virtually on video screens.

But it's another story in the COVID-19 designated space of Barnes-Jewish Hospital (BJH), where Washington University physicians are fighting an exhausting battle against a new, baffling and sometimes lethal disease with the help of the hospital’s nurses, other medical professionals and support staff.

“When the very first suspected COVID-19 patient was admitted to our hospital in early March, I volunteered to take care of him,” said hospitalist Han Li, MD, an instructor in Washington University’s Division of Hospital Medicine. “And then, we went just from that one patient to the next day having two, three and then more than 100 patients on our floors. We have all been thrown into the fray, and we’re focused on figuring out how to get every patient the care they need. There are no firm guidelines because it’s a completely new disease, but we are learning new information almost daily. I think we’re going to look back on this in a few months, and only then will we have the time to really process things and reflect.”

Long before the first case was diagnosed in the St. Louis region, Washington University physicians and BJH started preparing, with support from BJC HealthCare. “In January, before the United States felt any impact from the coronavirus, we worked with BJH and BJC to start...”
planning how we would care for patients with COVID-19 — specifically, where we would care for them, who would provide that care, how we would outfit our health-care workers with personal protective equipment — so when the number of patients started to surge in March, we could handle it,” said William G. Powderly, MD, the Dr. J. William Campbell Professor of Medicine and co-director of the Division of Infectious Diseases. “We had very little information in the beginning about how to treat this disease, so our physicians had to think on their feet when the answers weren’t available through limited existing research and clinical accounts of others confronting the virus. The creativity, flexibility and dedication our health-care providers have shown in the face of this novel and sometimes deadly virus has been extraordinary. They are true heroes."

Several specific areas of the hospital and five intensive care units were dedicated to COVID-19. BJC and university logisticians obtained massive quantities of personal protective equipment (PPE) such as masks, gowns, face shields, gloves and goggles for front-line medical staff. Hospital managers shuffled work schedules so there would be enough attending physicians from the divisions of general medicine, infectious diseases, and pulmonary and critical care available to care for the dozens of cases expected to arrive.

“Because of all the planning, the workload has been manageable, but the actual work is much more difficult than usual,” said Komo Gursahani, MD, an associate professor of emergency medicine at the and assistant director of the BJH emergency department. “Just the donning and doffing of personal protective equipment repeatedly can add a lot of stress because we have to be very careful with how we put the equipment on and remove it so we don’t contaminate ourselves. And we have to be cognizant that every test we order – whether it’s X-rays or CT scans or some other diagnostic – requires someone to have contact with the patient. So every decision we make now comes with a little added factoring in of how much we’re exposing our colleagues and coworkers to potential disease.”

In the early days of the pandemic, doctors thought that the majority of COVID-19 patients who became critically ill had developed acute respiratory distress syndrome (ARDS) which can be triggered by a variety of infectious and noninfectious causes. The condition is very serious. As the number of cases grew, however, doctors around the world began to realize that not all COVID-19 patients’ respiratory symptoms looked like ARDS. And the doctors started to note other complications. Some patients developed heart problems and died of cardiac arrest. Some were caught in a “cytokine storm,” which occurs when their own immune systems overreact to infection and produce disastrously high levels of immune proteins. Some developed unusual blood-clotting problems leading to respiratory failure, heart attacks, strokes, kidney damage and other serious complications. In short, COVID-19 was unlike any virus they had seen before.

To handle a disease of this complexity, doctors rely on a team of BJH nurses, respiratory therapists and other medical professionals who provide much of the day-to-day care for COVID-19 patients, and a large team of specialists who help guide the care. A multidisciplinary COVID-19 critical care task force that includes physicians from pulmonary medicine, emergency medicine, surgery, cardiology, anesthesiology, neurology, medical ethics and other fields has been set up to make recommendations for patient care. Every day, the intensive care physicians caring for COVID-19 patients meet with specialists in infectious diseases, pulmonary and critical care medicine, nephrology (kidneys), cardiology and other fields for 90 minutes to discuss the care of each of the critically ill COVID-19 patients.

“The information on COVID is always changing and always increasing,” said Colleen McEvoy, MD, an assistant professor of pulmonary and criti-
awards & announcements

RECENT GRANT AWARDS

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<td>R21, National Institutes of Health, National Institute of Allergy and Infectious Diseases (NIH - NIAID)</td>
<td>Bourbon Virus: Therapy development and serology effect of host genetic variation on the magnitude and breadth of the antibody response to influenza vaccination</td>
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<td>A Living Database of Implementation Research Addressing HIV for Systematic Review, Meta-analyses and Meta-research (LIVE) to improve the synthesis and use of implementation research and thereby accelerate a data-driven, evidence-informed, global health response.</td>
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special recognition

Class of 2020 have chosen Gerome Escota, MD, assistant professor of medicine, as their guest at the Senior Diploma Ceremony to receive the Full-Time Clinical Teacher of the Year Award. The event was to be held on May 15, 2020 at the America’s Center in downtown St. Louis, however, future arrangements will be made.

congratulations...

Best wishes to Dharushana Muthulingam, MD, MS, instructor in medicine and Michael Landis, PhD, assistant professor in biology, on the birth of their daughter, Anaka Elisabeth Landis on Feb 3. Anaka joins big brother, Ishan, who is 2 years old.

Best wishes to Mike Durkin, MD, assistant professor of medicine and Julie Ruppel on the birth of their son, Theodore “Teddy”, born Feb 26. Teddy joins older sister, three year old Isla.
Infectious Diseases Division Newsletter Spring 2020

Infectious diseases division newsletter spring 2020, a newsletter from the Infectious Diseases Division, discusses the challenges faced by medical professionals during the COVID-19 pandemic. The newsletter highlights the work of Dr. Cristina Vazquez Guillamet, an assistant professor of infectious diseases and pulmonary and critical care medicine, who co-leads the COVID-19 critical care task force. She emphasizes the importance of learning from the experiences of other countries and the need for better health care for everyone. The newsletter also discusses the isolation imposed on patients with COVID-19, the emotional toll on medical professionals, and the sacrifices required by health care workers. The Vazquez Guillamets, like many other health care workers, have taken steps to protect their families and ensure their own safety while caring for COVID-19 patients.

The more that is learned about COVID-19, the more clear it becomes that the disease does not hit all communities equally. “In my area, the vast majority of patients are African American,” said Cristina Vazquez Guillamet, MD, an assistant professor of infectious diseases and pulmonary and critical care medicine who works in the COVID intensive care unit. “That reveals the fact that the U.S. health-care system has not been doing a good job of taking care of everybody up to this time. If there is a silver lining to this pandemic, I hope it is that we become more aware of health-care disparities and make health care better for everyone.”

A tragedy of contagious diseases is the isolation it imposes on people who contract the illness. Some people seriously ill with COVID-19 drive themselves to the hospital to avoid asking family or friends for a ride. Some arrive in ambulances, accompanied only by paramedics. Family members who bring a patient to the hospital aren’t allowed into the emergency room. They drop off their loved one, leave a name and phone number with the emergency room staff and drive away. Once admitted to the hospital, some COVID-19 patients stay two or three weeks and, for everyone’s safety, family members are rarely allowed to visit.

“One of the most challenging things right now is the distance between patients and families,” said Patrick Lyons, MD, an instructor in pulmonology and critical care medicine who cares for COVID-19 patients in intensive care. “We’re so used to being able to have loved ones at the bedside with us, to hold the patient’s hand, be with us as we talk them through what’s going on and what’s likely to happen. Now patients don’t have that support.”

Added Vazquez Guillamet: “At points, you feel that you’re the physician but you’re also the family member. Sometimes you have people who are obviously scared, and there’s nobody around, so we do what we can to comfort them.”

After their morning rounds to check on all patients and deal with any urgent needs, physicians spend part of each afternoon calling family members to update them. Those patients who are healthy enough to communicate can use the land line by each bed or their own cellphones to call family and friends. Nurses bring in iPads so those without smartphones can video chat with their families. Medical staff have begun distributing cards with their pictures on them to the patients to show that there are, indeed, human beings underneath all the PPE.

COVID-19 has required medical professionals to take risks and make sacrifices like no other group in society. Thousands of health-care workers nationwide have contracted the virus. To avoid exposing her family should she be infected, Vazquez Guillamet has moved into temporary housing in the Knight Center on the Danforth Campus with her husband, Rodrigo Vazquez Guillamet, MD, an associate professor of medicine in the Division of Pulmonary and Critical Care Medicine. He also is caring for COVID-19 patients in intensive care units. The housing is provided free of charge by Washington University to essential staff at the School of Medicine and BJC HealthCare fighting COVID-19. The Vazquez Guillamets’ two young children are being cared for by their grandparents. The parents work for nine days at a stretch, take another three days to make sure they’re not infected, and then go home to spend a few days with the children before returning to the intensive care units.

continued page 5
Julia López, PhD, MPH, LSCW, recently joined the infectious diseases division as an instructor in medicine. Dr. López is a public health researcher who uses her clinical practice skills to further advance the field of sexual health using public health and social work theories and frameworks.

To date, she has worked to integrate her clinical expertise as a licensed social worker in community mental health settings and substance use treatment with the research design and methodology for analyzing, interpreting, and disseminating data across a myriad of settings and populations. By building on this foundation, Dr. López has focused on addressing gaps in research and clinical practices in the areas of sexual and gender minority (SGM) health, racial disparities, HIV care, and women’s health and its relationship to mental and physical health outcomes. She is compelled to understand multilevel barriers of marginalized communities related to both mental health and substance use. Her goal is to engage and provide a platform for these populations through practice, research and community collaboration.

To that end, her focus is to reduce health disparities affecting SGM populations by understanding the mechanisms through which different types of trauma/minority stress impact mental health and substance use. She is also passionate about elucidating the needs of women of color. Specifically, women of color living with HIV who are marginalized and often underserved within the HIV care system. She believes that with this research, she will be able to develop and test interventions, in collaboration with community partners, to reduce disparities and inform clinical practice. She is committed to public health interventions and clinical care by way of behavioral and social science research, with a priority to maximize translation into community.

frontline  continued

“The danger is there; we know it’s there. You don’t see it with a naked eye because you can’t see a virus with a naked eye, but we know it’s there,” Cristina Vazquez Guillamet said. “It’s hard. I miss my kids. My husband normally wears a beard, but he shaved it off so the N95 mask would fit better. So when my 4-year-old saw him, he didn’t recognize him. This has been very hard on our family.”

For the doctors, the work is exhausting, physically and emotionally. But at the same time, it is what they are trained to do as physicians.

“We get inundated on a daily, hourly basis with patients being admitted to the intensive care units, and some of them are dying,” said Gerome Escota, MD, an assistant professor of medicine in the Division of Infectious Diseases. “It has really been hard. But I think the best way to deal with it is to go back to the main reason we became doctors: to help people in crisis. You can’t ever prepare for a pandemic, of course, but all those years of medical school, postgraduate training, have taught us how to adapt to any situation and handle a crisis. It’s like you’re riding a different bike now; while it feels new and difficult, it’s important to remember that it’s still a bike. Even if the bike feels foreign, we have the skills to apply to this situation.”

Added Gursahani: “When this was just beginning, maybe the second week of March, I was working from home, doing a lot of planning and administrative work. That whole time, I was getting more and more anxious. When I finally got back to the hospital, I felt a lot better. As emergency medicine physicians, we are extremely skilled in operating in a world of uncertainty. And it’s scary, of course, to be faced with this disease and all the risk of exposure, but all of that anxiety I was feeling in the planning went away. I’m with my team. I’m with all the people who have my back, doing what I’m trained to do.”
Infectious Diseases Division Newsletter  Spring 2020

ID physicians at WUSM tackle coronavirus early

Soon after a novel coronavirus first appeared in China in late 2019, researchers, doctors and staff at Washington University School of Medicine in St. Louis began preparing for the possibility of an outbreak. Infectious disease physicians started planning how to respond if a person with suspected exposure to the virus arrived on campus, and researchers set to work finding drugs or vaccines to treat or prevent COVID-19.

“New infectious diseases emerge every so often, and we have to be vigilant,” said Steven J. Lawrence, MD, associate professor of medicine. “Over the last few decades we’ve had HIV, Ebola, SARS, Zika and now COVID-19. Such diseases usually arise when an animal virus manages to jump into people because of close contact between people and animals. The chance of preventing that happening anywhere in the world is probably zero. What we can do is be prepared to respond as rapidly as possible when it happens.”

In December, China reported the first cases of a mysterious illness characterized by fever, a dry cough and difficulty breathing. Within weeks, Chinese scientists had identified the cause as a never-before-seen member of the coronavirus family. Coronaviruses typically cause mild infections such as the common cold. But in 2002, a newly emerged strain of coronavirus caused an outbreak of severe acute respiratory syndrome (SARS) that killed nearly 1,000 people before it was contained.

It quickly became evident that the 2019 coronavirus strain, named SARS-CoV-2, was more like SARS than the common cold. By late January, tens of thousands of people in China were infected. At the time, the only cases in the U.S. were believed to be in people who had been infected while traveling in China.

“In January and February, we had a brief moment of opportunity to contain this outbreak in the U.S. by knowing where people had traveled,” Lawrence said. “That’s why the efforts to identify and isolate people with the virus were so robust, even though we had such few cases. Once the virus started spreading from person to person in the U.S., it became much, much more complicated.”

Hilary M. Babcock, MD, professor of medicine and medical director of the Infection Prevention and Epidemiology Consortium for BJC HealthCare, and David K. Warren, MD, professor of medicine and the medical director for infection prevention at Barnes-Jewish Hospital, did not wait for the virus to start spreading in the U.S. In January, they established a virtual incident command center at BJCHealthCare and called twice-weekly meetings to develop a coronavirus outbreak response plan for all BJC hospitals, including hospitals and clinics staffed by Washington University physicians. The team started by dusting off a plan developed in 2002 for SARS and adapting it to COVID-19 as more information emerged.

The data on mortality for COVID-19 remains a moving target and continues to be assessed. So far, people who are older and those with underlying health conditions, such as heart disease, lung disease or with compromised immune systems, have a higher risk of death. Early data suggests that the illness is more deadly than seasonal flu. Like SARS and the flu, COVID-19 spreads easily through droplets released when infected people cough or sneeze. The virus’s contagiousness means that proper use of personal protective equipment is crucial to protect health professionals caring for coronavirus patients.

“Communication is one of the most important tools at a time like this,” Babcock said. “We needed to make sure that our front-line clinicians can very quickly recognize that someone might be infected, and that they know what to do if a potentially infected person presents at their clinic. We also developed guidance regarding which personal protective equipment to wear when working with a patient suspected of having COVID-19 — mask, gloves, eye shield, respiratory equipment, and gown — how to put it on so it is most effective, and, most importantly, how to take it off without contaminating yourself.”

written by Tamara Bhandhari, MPH, PhD, Senior Medical Science Writer
ID division response to COVID-19

Drs. Bill Powderly, Jeff Milbrandt, and Sean Whelan lead COVID-19 research governance structure at Washington University

When Washington University Vice Chancellor for Research, Jennifer K. Lodge, first sounded the alarm about the disruptive impact COVID-19 likely would have on labs across the university, the research community heeded her warning, taking steps to shut down lab work and move as much as possible online.

The School of Medicine’s COVID-19 task force orchestrating research into the novel coronavirus is led by Jeffrey Milbrandt, MD, PhD, the James S. McDonnell Professor and head of the Department of Genetics; William G. Powderly, MD, the J. William Campbell Professor of Medicine and director of the Institute for Clinical and Translational Sciences (ICTS); and Sean Whelan, the Marvin A. Brennecke Distinguished Professor and head of the Department of Molecular Microbiology. Ultimate success in reducing the harms of COVID-19 requires frontline physician providers, hospital staff and researchers to work together in an environment that promotes rapid completion of COVID-19 studies. Dozens of faculty and senior staff are engaged in efforts to provide rapid logistical support and streamlined regulatory review so that important studies can be started quickly.

Those in position to do so began pivoting their research to the novel coronavirus. In a very short span of time, the university’s scientific community has responded to the pandemic with extraordinary research collaborations, all the while finding new ways to keep faculty, staff and students connected as they shift work out of the lab and into cyberspace.

Research in most university labs moved from bench to internet.

Khader, Boon and Diamond labs remain active with focus on COVID-19

Researchers who study other viruses, lung infections or have other related expertise are turning their lab’s resources to the novel coronavirus. Shabaana Khader, professor of molecular microbiology, studies tuberculosis (TB); and Jacco Boon, associate professor of medicine, is focused on influenza viruses. Both are uniquely positioned to trade research into one dangerous lung infection for another.

“Because we study other types of respiratory viruses, our lab is ideally equipped to conduct basic research on the COVID-19 virus,” Boon said. “We can grow the virus in our facility and, once we have animal models, we can start testing new compounds and antibodies for potential treatments. One challenge is that mice don’t have the lung receptor that this virus targets to infect human lungs. One solution could be to genetically modify mice to express the human lung receptor.”

Khader studies the lungs’ immune response to tuberculosis (TB) infection. Her team could, potentially, help shed light on how the immune system in the lungs reacts to coronavirus infection. As part of her TB research, Khader works with a collaborator at the Texas Biomedical Research Institute, Deepak Kaushal. Kaushal studies TB infection in macaques, nonhuman primates that have the lung receptor for COVID-19 infection.

“When we receive lung samples from his group, we will be using single cell technology to study the lung immunology of this disease,” Khader said. “We will be able to look at the immune response over time and how it might change from the first few days of infection to longer time points. So, my lab is shutting down our TB operations and ramping up COVID-19 work.”

continued
COVID-19 research in the lab

Ideally, the first step for launching any vaccine or therapeutic drug intervention is to test it in one or more animal models. Preclinical testing in an animal model is a time-tested approach to improve efficacy and safety. Here at WUSM, Dr. Michael Diamond, infectious diseases division, and his team are ahead of the field in developing the first high-throughput animal model of COVID-19 in mice using genetic engineering approaches, as well an approach in which viral adaptation is promoted through passage in an immunodeficient background. Dr. Diamond and his team took an analogous approach in 2015-16, when they developed the first mouse model of Zika infection, another pathogen to which mice are not naturally susceptible. At that time, they were able to identify an antibody that is now used as part of a diagnostic test for the disease. Dr. Diamond and his lab offer just one example of many WUSM scientists drawing from a wealth of experience investigating infectious diseases. Any day now, other scientific collaborators from departments across the campus will begin testing therapeutic interventions in the new mouse model, including FDA-approved drugs that can be repurposed for COVID-19, novel compounds, and antibodies that could be used for immunotherapy.

Presti and O’Halloran Co-lead Clinical Trial for COVID-19 Treatment

Washington University School of Medicine in St. Louis is launching a clinical trial for patients hospitalized with COVID-19. The trial will investigate the effectiveness of different combinations of the antimalarial drugs chloroquine and hydroxychloroquine and the antibiotic azithromycin in treating ill patients infected with the novel coronavirus. Cigna/Express Scripts provided the drugs, open to COVID-19 patients at Barnes-Jewish Hospital. Rachel Presti, MD, PhD, associate professor of medicine is co-leading this clinical trial with Jane O’Halloran, MD, PhD, assistant professor of medicine. The clinical and translational research related to COVID-19 at the School of Medicine harnesses a breadth of resources of the Institute for Clinical and Translational Sciences (ICTS), which were deployed to bring this study forward in less than two weeks. Washington University’s ICTS is part of the Clinical and Translational Science Award (CTSA) nationwide network funded by the National Center for Advancing Translational Sciences (NCATS).

ID Clinical Research Unit Rises to the Occassion

The faculty and staff at the Infectious Disease Clinical Research Unit (ID-CRU) have a rich tradition of rising to the occasion when a healthcare crisis occurs. For many years they worked tirelessly to make an impact in the areas of HIV, Hepatitis, Fungal and other infectious diseases. They have once again risen to the occasion as our world faces a COVID-19 pandemic. Along with other researchers within WashU and around the country, they are combatting this virus. COVID-19 studies were conceived, written, approved and implemented in record time. Several staff persons remain on the front lines, to ensure implementation of these new studies. Each have once again shown resilience, bravery and adaptability. The members of ID-CRU, all with a passion for the work they do, give their all to help our community and our world; asking for nothing more than healthy outcomes for our participants and families impacted by this novel enemy. Dr. Rachel Presti, Dr. Jane O’Halloran, and the CRU staff have done amazing work placing some ongoing studies on hold at the same time opening at least 6 COVID studies at the same time! It is a remarkable achievement.

Rachel Presti, MD, PhD
Jane O’Halloran, MD, PhD
St. Louis Metropolitan Pandemic Task Force

A collaboration between the area’s largest health care systems, the St. Louis Metropolitan Pandemic Task Force has been working together to prepare for the surge of patients in the St. Louis area and provide the best possible care. The Task Force includes an unprecedented collaboration amongst the heathcare system of BJC HealthCare, Mercy, SSM Health, and St. Luke’s Hospital, that led to sharing of data and protocols, ending elective surgeries, and pooling protective equipment. Dr. Bill Powderly and Elvin Geng, MD MPH, professor of medicine and director of the Center for Dissemination and Implementation Science at the Institute of Public Health, are key participants from Washington University.

Dr. Steve Lawrence, associate professor of medicine, heads up a specific task to provide technical assistance in reviewing business reopening plans. Clay Dunnagan, MD, MS, professor of medicine, participates in the task force as the chief clinical officer for BJC, which is one of the founding organizations. BJC, Mercy, and SSM joined regional civic and business leaders in creating the task force to help guide response efforts. Keith Woeltje, MD, PhD, professor of medicine and his team at BJC works with similar teams from Mercy, SSM, and St. Luke’s on defining regional projections for the course of the pandemic, and models for regional planning.

The Task Force provides daily briefings to news media and the community on COVID-19, including mitigation efforts, patients currently hospitalized, daily ICU census and ventilators in use for COVID-19 patients, among the Task Force Hospitals. Dr. Alex Garza, Chief Medical Officer of SSM Health, serves as Incident Commander of the Task Force who provides the daily briefings. The briefings are streamed on the task force Facebook page for everyone to watch.

Jeff Henderson Leads Trial of Century-old Idea

Washington University physicians are testing a treatment for COVID-19 that brings back a therapy used during the 1918 Spanish influenza pandemic. The treatment involves transfusing antibodies from the plasma of recovered COVID-19 patients into patients battling COVID-19 infection. “Our hope is that this speeds their recovery and gets them off of a breathing tube or improves their ability to breathe and allows their own immune system to catch up,” said Jeffrey Henderson, MD, PhD, associate professor of medicine and one of the leaders of the initiative.

During the 1918 Spanish influenza pandemic, doctors — recognizing that people who had recovered would have developed immunity to the infection — tried treating sick patients with blood plasma from those who had recovered, and in many cases it worked. In the early 2000s, the strategy was tried again, often successfully, in patients infected with SARS, a coronavirus related to the virus that causes COVID-19. Henderson is one of the leaders of a nationwide trial, with colleagues at Johns Hopkins and Mayo Clinic, to test the strategy in patients with COVID-19. He said the next few weeks should help doctors know if the treatment will work for COVID-19 patients.

Principal investigator of the program to collect blood plasma from COVID-19 survivors, Rachel Presti, MD, PhD, an associate professor of medicine, began enrolling potential donors last week. “The response from the community has been extraordinary”, Presti said. “In the first two days we received emails from 50 people who wanted to donate, and that was before we had even begun publicizing our contact information. So many people want to help fight this pandemic any way they can.” To participate - donors must have had a positive COVID-19 test - email the study organizers at IDCRI@wustl.edu.
COVID-19 response continued

Caline Matter, MD, co-investigator of study to evaluate antidepressant as potential COVID-19 treatment

Drug fluvoxamine may help prevent life-threatening ‘cytokine storm’. Researchers at Washington University School of Medicine in St. Louis are launching a clinical trial in patients who have tested positive for COVID-19 but who are not sick enough to be hospitalized. The trial is investigating whether the antidepressant medication fluvoxamine, which is currently used to treat patients with obsessive-compulsive disorder (OCD), can be repurposed for COVID-19. The drug is thought to reduce the onset of a second phase of COVID-19 infection: a life-threatening overreaction of the immune system that leads to what’s called a “cytokine storm.”

Fluvoxamine, which is in the class of drugs called selective serotonin-reuptake inhibitors (SSRIs), also interacts with a protein important to the body’s inflammatory response. This effect may help relieve an overwhelming immune response, which is thought to occur in about one in seven COVID-19 patients, who then often end up hospitalized, and sometimes on ventilators, with a higher risk of death.

“Using a psychiatric drug to treat COVID-19 may sound counterintuitive, but it’s no more counterintuitive than using a malaria drug,” said Eric J. Lenze, MD, the Wallace and Lucille Renard Professor of Psychiatry and the study’s principal investigator. “This drug has been around for decades, so we know how to use it safely. If effective, it could be an ideal drug to repurpose for outpatients with COVID.”

Lenze, the director of the Healthy Mind Lab at the School of Medicine, is an expert in using mobile and internet technology to conduct clinical trials. His team will interact with patients remotely because they will be quarantined due to having active coronavirus infection. The team plans to recruit 152 patients from Missouri and Illinois. Patients in other states will not be eligible because the team’s physicians are not licensed to provide care in other states.

The quarantined patients will receive home deliveries of medication or inactive placebo, thermometers, automatic blood pressure monitors and fingertip oxygen sensors. In daily interactions with members of the research team — either via phone or computer — the patients will report on their symptoms, their oxygen levels and other vital signs.

For more information, please call 314-747-1137, visit the study website at https://stopcovidtrial.wustl.edu/ or e-mail stopcovidtrial@wustl.edu.

ID Fellows join Julia López, PhD, MPH, LCSW, disseminating COVID information to the Spanish-speaking community.

Faculty and fellows in ID took turns presenting a broad range of COVID-19 topics with Spanish-speaking podcasts aired on Soy De Rancho Radio Online, a station established in St. Louis through the grass roots organization – Latinos en Axión STL.

Joining Dr. Lopez were Juan Calix, MD, PhD, Instructor of Medicine completing Physician Scientist Training Program, Carlos Mejia Chew, MD, Instructor in Medicine, Miguel Chavez Concha, MD, MSc, first year fellow, Julia López, PhD, MPH, LCSW, Instructor in Medicine and Adriana Rauseo Acevedo, MD, second year fellow.
COVID-19 response continued

Washington University and Barnes-Jewish Hospital Partner to Raise Community Awareness About COVID-19

The Division of Public Health Sciences works to increase community knowledge amid growing concerns regarding coronavirus. Washington University in St. Louis is closely tracking the spread of coronavirus disease (COVID-19). In partnership with BJC Health Care, Washington University School of Medicine in St. Louis is working to raise community awareness and develop a vaccine.

School of Medicine faculty at BJC have shared their knowledge and expertise in infectious diseases and public health with community partners throughout the St. Louis region to help answer questions and create a more informed conversation about this serious health concern.

Hilary Babcock, MD, professor of medicine, infectious disease specialist at Washington University School of Medicine and BJC’s director of infection prevention, shares important information about coronavirus during interviews on podcasts. With so much information available in the media, it can be difficult to navigate to reliable, up-to-date answers to important COVID-19 questions. Because patient care and public health are of the utmost importance to the School of Medicine, faculty have taken the initiative to share their authoritative knowledge of disease prevention.

Steven J. Lawrence, MD, an associate professor of medicine, infectious diseases, and Sean Whelan, PhD head of department of molecular microbiology spoke to St. Louis on the Air to inform listeners and answer audience questions about the virus and the possibility of a future vaccine. On a daily basis our ID physicians brought corona updates and answered specific questions submitted to the news media.

The School of Medicine posts frequent COVID-19 updates https://coronavirus.med.wustl.edu/ to keep community members aware of the most current information available. To help the St. Louis community stay up-to-date on news surrounding COVID-19, the St. Louis Post-Dispatch has made all of its coverage of the virus free to all readers.

Dharushana Muthulingam, MD, MS, COVID-19 expert for Vogue

When Vogue began covering COVID-19, Dharushana Muthulingam, MD, MS, instructor in medicine, infectious diseases, was their go-to expert. Dr. Muthulingam has responded to questions on social distancing, and what to do with your clothes after returning home from running errands.

More recently she has responded to the mysterious, potentially coronavirus-related illness affecting children. In the early days of the pandemic, it appeared that children weren’t as affected by COVID-19 as adults were, but that has changed. Children’s hospitals in New York and around the country have seen an uptick in cases of children presenting with pediatric multisystem inflammatory syndrome, a rare but serious illness believed to be associated with the coronavirus.

Dharushana Muthulingam, MD, infectious diseases physician and instructor at the School of Medicine, told Vogue that while this syndrome is frightening, the best course of action for parents is to concentrate on facts, not fear. Muthulingam said the syndrome looks like illnesses physicians know about and is responsive to intensive care. “The best way for people to feel like they have control over the situation is to keep preventing COVID-19 the best they can, and if a child is sick, take them to their pediatrician and seek out care.”
2020 Distinguished Faculty Awards announced –
Congratulations to Megan Baldridge, MD, PhD,
Michael S. Diamond, MD, PhD, and Robyn Klein, MD, PhD

Washington University School of Medicine faculty members nominate their peers for Distinguished Faculty Awards. These honors are recognition of their colleagues’ wide-ranging achievements, talents and dedication.

The recipients, recognized for excellence in clinical care, community service, research and teaching, received the awards in a ceremony Feb. 26 at the Eric P. Newman Education Center on the Medical Campus.

Megan T. Baldridge, MD, PhD, assistant professor of medicine, smiles during the 2020 Distinguished Faculty Awards. Baldridge received a Distinguished Investigator Award.

Michael S. Diamond, MD, PhD, the Herbert S. Gasser Professor of Medicine, and professor of molecular microbiology, and of pathology and immunology, also received a Distinguished Investigator Award.

Robyn S. Klein, MD, PhD, professor of medicine, of pathology and immunology, and of neuroscience, and vice provost and associate dean for graduate education for the Division of Biology & Biomedical Sciences was honored with a Distinguished Educator Award for her work teaching and mentoring graduate students.

Hilary Babcock Plenary Speaker in Yokohama Japan

Hilary Babcock, MD, MPH, professor of medicine and past president (2019) of the Society for Healthcare Epidemiology of America (SHEA) provides the history of SHEA, key activities and challenges facing epidemiologists at the 35th Annual Meeting of the Japanese Society for Infection Prevention and Control in Yokohama Japan in February 2020. Dr. Babcock’s presentation stresses the importance of collaboration with partners outside of infection prevention.
The innovative work of Gerome Escota, MD, and Ige George, MD, both assistant professors of medicine, was acknowledged by IDSA and is the first to teach ID through the use of board-style multiple choice questions (MCQs) on a twitter-based polling platform. WuidQ has inspired other fields and specialists to do the same. Dermatology, microbiology and pathology departments of other institutions have reached out to Gerome for advice on how to use twitter for this purpose. Cases used are not “primary” because patient information is changed to protect privacy. Therefore, “cases” are really just “topics” inspired by different sources (e.g. patients, grand rounds, reading) that are used to create MCQs.

Gerome, himself, was inspired by Dr. Tony Breu on Twitter (@tony_breu) after a few years of following his “tweetorials” (tutorials on twitter). Gerome came up with the idea of posting MCQs for ID board review when he learned about the poll function on Twitter which is a way for people to vote their preferences, voice opinions, etc. He experimented on this idea and tweeted his first MCQ on this original account (@MDdreamchaser). Fellow faculty members, Courtney, Andrej and Carlos were his first “voters” and “audience”. He found he could teach using this medium. Two months later on July 17, 2018, Gerome created a new account, and @WuidQ was born. He then recruited Ige George, who shares the same passion for teaching.

The love of teaching most inspires both. That love inspired Gerome throughout his journey; from being a volunteer tutor in college to serving various teaching roles in medical school and residency to being an associate program director for the ID fellowship and now Medicine clerkship director. “Sharing oneself with others through imparting knowledge is a transformative opportunity. So, being able to share this to a bigger audience through social media is gratifying,” said Dr. Escota. “It is also humbling when you realize that you can help people from across the globe wherever you are through the touch of a button on your phone. This continues to dazzle and inspire me.”

Currently, the peer review process consists of Drs. Escota and George. Questions are vetted based on accuracy and clarity. Sometimes they solicit help from other experts in the division, such as Andrej Spec, MD helps with fungus questions, Dr. Carey-Ann Burnham with microbiology questions. Dr. Hilary Reno reviews questions related to STDs, and many others. Gerome and Ige make sure that all answers are supported by literature. “But the ‘peer review process’ really happens as soon as we tweet the MCQ and answer. Our 4,000+ followers are the “peers” that review each tweet. They call us out for imperfect questions/answers, and most especially, add other useful information that enrich our content” said Gerome. “Many highly acclaimed ID experts from here and around the globe have interacted with us with each question and in that sense, has become our “peer review process” that happens in real-time. Healthy discussion is always encouraged.”

The platform has grown exponentially through Twitter sharing, retweeting, likes, etc. It has grown further when Gerome talked about it in the Program Director’s meeting at the IDSA in 2018, and even further when Ige and Gerome presented at last year’s ID Week where @WuidQ, as an innovative idea, was entered as a finalist in the Incubator Award. @WuidQ has now become a regular mainstay in the list of med ed resources in ID (check most recent IDSA publication about it https://academic.oup.com/ofid/article/7/3/ofaa058/5739761.

“I think the success of @WuidQ is attributed to the fact that it found a niche in the ID community and in social media, and it thrived in that space. It can also be attributed to the continued support of everyone in our division, from Dr. Powderly who continues to encourage us, our fellows and everyone in the ID community.”

Collaborators invited to submit questions for WuidQ

A challenge associated with this endeavor is the time it takes to create new questions and vet them; and the time it takes to make concise, crisp and practical learning points for the questions. Developing answers may take more time than the questions. If you are interested in collaborating with Gerome and Ige, please email them at escotag@wustl.edu and igegeorge@wustl.edu for vetting. If used, your submission will be acknowledged.
ID announces Bridge to Health Program

The Infectious Diseases Bridge to Health Program at Washington University is the among the few of its kind managed by the infectious diseases division providing additional services to patients who inject drugs and are admitted to the hospital with invasive infections. Funded by the CDC through a mechanism known as the Safety and Healthcare Epidemiology Prevention Research Development (SHEPheRD) Program, Mike Durkin, MD, MPH and Stephen Y. Liang, MD, MPH, both assistant professors of medicine, are co-principal investigators. Patients in the program have free access to health coaches, mental health services, clinical case management, transportation and medication assistance (if eligible) and connection to care after treatment of the infection is completed. We welcome a team of people who help to make this possible and was especially resourceful during the COVID pandemic with helping our ID patients with social supports including food pantries, housing, insurance, and more.


Jennie H. Kwon, DO, MSCI, assistant professor of medicine, and colleagues assessed the potential transmission of antibiotic resistant organisms (ARO) in the hospital environment through the use of two surrogate markers, a fluorescent powder and the MS2 bacteriophage. The fluorescent powder was detected on more HCWs and environmental surfaces than MS2, and use of contact precautions resulted in reduced detection of fluorescent powder and MS2. Contact precautions were associated with greater compliance with hand hygiene, and reduced detection of fluorescent powder and MS2. This study highlights the importance of hand hygiene in the role of ARO transmission.


Aaloke Mody, MD, instructor in medicine: Patients frequently transition in and out of HIV care over time, but common analytical approaches to assessing HIV care cascade outcomes fail to capture such transitions. We used multi-state analyses to account for these transitions and assess patient outcomes over time among 23,227 treatment-eligible patients living with HIV in Zambia. This approach highlighted care gaps that occurred at distinct time points across patients’ time in care and can help guide more tailored public health approaches in the setting of universal HIV treatment in the future.
The **Drs. Gerald and Judith Medoff Professor of Medicine** will celebrate Jerry's passion and love for the School of Medicine, his outstanding career which began with basic mycology research and extended to clinical research, patient care, and education. Jerry loved to teach, and was a passionate educator when interacting with medical students, residents, and fellows.

To honor Jerry, Vicky Fraser, MD, and her husband, Steve Miller, MD, are making a lead gift of $1M in a matching fund to endow a professorship in the name of Drs. Gerald and Judith Medoff. Please join our effort by financially supporting his endowed professorship with a charitable gift. Your gift will enable us to continue the inspiring tradition of excellence in research, patient care, and education that Jerry was committed to throughout his career.

![Logo](image)

**We thank you for your gifts and your consideration for helping celebrate Dr. Jerry Medoff’s legacy.**

**Gifts received Jan. 1 - Mar. 31, 2020**

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