

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE

CUMEDICINE

Today

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Cover photo: Carlos Franco-Paredes provides care beyond the clinical encounter.

Photos by Trevr Merchant

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DOING OUR PART IN THE FIGHT AGAINST COVID-19

When the pandemic took hold earlier this year, the members of our School of Medicine community stepped forward to do their part.

Jake Fox was completing his fourth-year of medical school training last spring when in-person learning was suspended.

“I was supposed to start a palliative care rotation on Monday, and I can’t, and I won’t get those skills,” he told a New York Times reporter in March. “That said, what we are doing is very purposeful. Doing something meaningful now supersedes that disappointment.”

Instead of the usual training, Jake was one of more than 300 student volunteers from our campus to provide aid at hospitals, elder-outreach programs, and the local Salvation Army. Some were on hand to accept donated cleaning supplies and other items at a drop-off site set up in the parking lot of the Broncos football stadium.

Meanwhile, our faculty prepared to provide extra help in UCHealth University of Colorado Hospital for the expected extra patients.

Tyler Anstett, DO, assistant professor of medicine in the Division of Hospital Medicine, and Kasey Bowden, MSN, FNP, assistant professor of medicine and associate clinical director of hospital medicine, helped coordinate efforts that prepared providers who mostly work in outpatient clinics for shifts in the hospital. More than 100 physicians and advanced practice providers responded to the call for help.

Our laboratory teams looked for ways to address shortages of personal protective gear.

One example: With printers from the lab of Caley Orr, PhD, assistant professor in the Department of Cell and Developmental Biology, Tyler Johnson, who was second-year student in our Modern Human Anatomy program, produced headbands for protective face shields. Caley said, “We’re just one of the cogs in the wheel doing our little part.”

Our campus also is participating in the major national clinical trials to test potential vaccines.

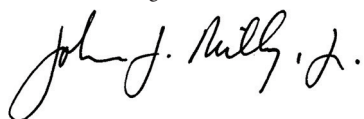
In July, the School of Medicine announced that with our partner UCHealth we are recruiting 1,000 qualified patients into a clinical trial for the Moderna mRNA-1273 vaccine. The emphasis of this vaccine trial is on demonstrating its efficacy in people who are most at-risk for contracting and becoming ill from COVID-19. Thomas Campbell, MD, professor of medicine, is a leader of that effort.

Our campus also was an early leader in using convalescent plasma as an experimental treatment to treat some who were sick with COVID-19. Kyle Annen, DO, assistant professor of pathology and medical director at Children’s Hospital Colorado’s Blood Donor Center, led those efforts.

While we are still far from a resolution to this pandemic, we can draw inspiration from our colleagues who are putting in the extra effort that is required to improve the health and quality of life for others. The pandemic has tested the systems we have built to serve society, but through hard work, intelligence, and resilience, we are contributing to make our conditions better.

We remain grateful for your support and we look forward to calmer times when we can gather again to celebrate the School of Medicine. I hope you and your family, friends, and colleagues remain safe and healthy.

With warm regards,



John J. Reilly, Jr., MD
Richard D. Krugman Endowed Chair
Dean, School of Medicine
Vice Chancellor for Health Affairs
University of Colorado



Reporters locally and nationally turn to the School of Medicine for expertise and research news. Here are examples from near and far.

Danielle Davis, medical student in the class of 2022, discussed her experience working on a research project to follow up on COVID-19 patients following their release from the hospital. “I found that most people want to talk about their experiences that they’ve had with COVID-19 and most people found their experiences with COVID-19 to be a life-altering event,” she said in a report that aired on KOAA in Colorado Springs in August.

Thomas Campbell, MD, professor of medicine, was quoted by USA Today in August regarding efforts to enroll participants in a clinical trial for a vaccine for the novel coronavirus. “I’ve already had over 100 people email me personally and say ‘sign me up,’” he said.

Matthew Wynia, MD, MPH, professor of medicine and director of the CU Center for Bioethics and Humanities, was quoted in The New York Times in August in an article about clinical trials in nursing homes. “There just isn’t a culture in nursing homes that is attuned to doing research and clinical trials,” he said.

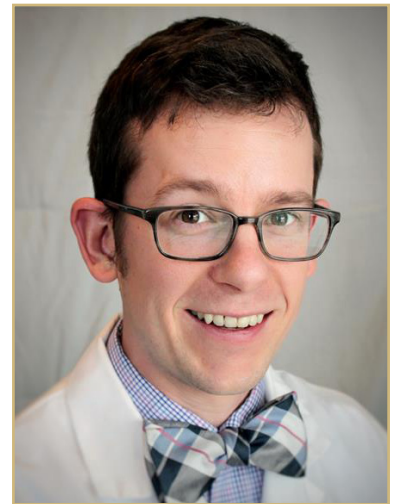
Kim Jordan, PhD, assistant director of the School of Medicine’s Human Immunology & Immunotherapy Initiative, explained the laboratory’s efforts to study the immune system’s defense against COVID-19 in an August report on KUNC, a public radio station in Greeley. “I always think about it from a clinical treatment standpoint,” she said. “So, is there something that we can give patients to help them resolve the inflammation? There are many drugs that target inflammation in general and maybe some of those would be effective in helping their outcomes. But really, I want to know what’s going to help kill this virus.”

Jessica Cataldi, MD, assistant professor of pediatrics, offered advice on how to talk to children about the importance of wearing masks during the school day. “We wear masks to keep people safe and younger kids usually have a strong sense of empathy about that so I think it’s useful to explain the reasoning,” she said in a report on the Denver Fox affiliate in August.

Sean O’Leary, MD, professor of pediatrics, offered context to a report in August in the Washington Post that 97,000 U.S. children tested positive for the coronavirus in the last two weeks of July. “It will be a little hard to sort out the degree to which a lot more kids are getting infected and the degree to which our testing capacity has gone up,” he said. “What we can say is that it’s not particularly surprising given the large increase in cases we’ve seen nationally overall.”

Christopher Hoyte, MD, associate professor of emergency medicine, was one of seven medical professionals featured in a July report on Colorado Public Radio that described life on the front lines. “Having to turn away family at times, that to me is the part that’s the most devastating because people want to be with their family in a time when they’re most vulnerable,” he said. “Not being able to do that really sticks to me because you shouldn’t be sick and alone.”

Craig Jordan, PhD, professor of medicine, was one of several researchers quoted in a Washington Post article in June about how the pandemic had disrupted medical research on deadly rare diseases. “I don’t see how we can maintain the levels of activity we had in the past,” he said.



William Niehaus, MD

William Niehaus, MD, assistant professor of physical medicine and rehabilitation, described a 39-year-old patient’s recovery from COVID-19 for an August report on the ABC News program “Nightline.” “He woke up just a few days before he came to rehab and really started to put together all the things that had happened to him,” Niehaus said, “and from the get-go, he had this fire to get home.”

Daniel Pastula, MD, MHS, associate professor of neurology, was quoted in a Seattle Times article about beach safety during the COVID-19 pandemic. “Gathering at crowded beaches is not a good scenario,” he said. “When you’re close to someone who is mildly symptomatic or asymptomatic, you could inhale droplets and become infected.”

Emmy Betz, MD, MPH, associate professor of emergency medicine, was quoted in July in a report on CNN.com about her research showing that about one-third of people with Alzheimer’s disease have access to a firearm in their home. “Alzheimer’s and other kinds of dementia can cause changes in thinking and memory that could make someone unsafe to handle a gun, even if that person has a lifetime of experience,” she said. “As healthcare providers, family members and friends, we can help older adults think about what they would want to happen with their firearms, if they become unsafe to use them. This approach promotes respect for independence and preferences while also ensuring safety.”



Brandi Freeman, MD

Brandi Freeman, MD, assistant professor of pediatrics, was interviewed in June by KUNC, a public radio station in Greeley, for advice about talking to children about racism. “What’s important for all people, all parents, or people who are mentoring or working with children of any age is to first take a look at their own biases, recognizing that role modeling plays a critical role for children, so being very aware of not only our own actions, but our own emotions or how we respond to things,” she said.

Lauren Heery, medical student in the class of 2021, was profiled by the Denver ABC affiliate in a report on how the pandemic was inspiring a new generation of health care professionals. “Growing up, I was always pretty interested in science. I have a few family members who are in medicine and nursing,” she said in July. “Helping people through my direct knowledge as a scientist, and now as a medical student, was I think what interested me the most.”

Abigail Lara, MD, associate professor of medicine, was one of seven medical professionals featured in a July report on Colorado Public Radio that described life on the front lines. “My patients in the ICU are brown and they are Black,” she said. “The names are familiar to me because they’re also my family’s names: Martinez, Hernandez, Garcia, the list goes on and on. It’s been striking to me in a very primal, very emotional way.”



Rebecca Boxer, MD

Rebecca Boxer, MD, associate professor of medicine, praised a clinical trial designed to protect nursing home residents from coronavirus infection. “These patients are so underserved,” she said in an article in The New York Times in August. “They do not get access to innovative new drugs and trials.”

Angelo D’Alessandro, PhD, assistant professor of biochemistry and molecular genetics, explained to Reuters news service in July that damage done by the coronavirus to the membranes of red blood cells may explain why many COVID-19 patients have low oxygen levels. “Since red cells circulate for up to 120 days, this could also help explain why it can take months to recover from the virus ... until enough new red cells without this damage are made and circulate,” he said.

Jay Lemery, MD, professor of emergency medicine, was quoted by the NBC affiliate in Richmond, Va., in June regarding how COVID-19 was causing additional problems for senior citizens. “One specific issue that becomes even more of concern this summer with the COVID-19 pandemic is the amount of elderly that live in isolation,” he said. “This population is more at risk when it comes to heat-related illnesses and death.”



Fernando Holguin, MD

Fernando Holguin, MD, professor of medicine, recommended limited exercise outdoors in August when smoke from wildfires caused unhealthy air quality, noting that it affects lungs and the cardiovascular system. “Unfortunately, the most reliable thing is to be inside a building that is well-sealed and air-conditioned,” he said in an article in the Colorado Sun. “It’s tough advice to take. People want to be outside, especially in a state like ours.”

Jenna Glover, PhD, assistant professor of psychiatry, offered advice for talking to children about racism in a June report on the NBC affiliate in Colorado Springs. “One of the most difficult parts of this for parents is just being willing to be uncomfortable and knowing that there’s not a right or wrong way to have the conversation,” she said. “The most important thing is to have the conversation.”

Jeremy Ansah-Twum, medical student in the Class of 2023, was quoted in a report on the CBS affiliate in Denver about a White Coats for Black Lives protest on the Anschutz Medical Campus where hundreds knelt for 10 minutes in remembrance of George Floyd. “What we cannot continue to live without is justice,” he said. “We need justice. When crimes are committed, there needs to be repercussions and that is the only way to get this racism to stop.”

GETTING BACK TO SCHOOL SAFELY DURING A PANDEMIC

Infectious disease specialist Sean O'Leary discusses challenges posed by COVID-19

Interviewed by Mark Couch



Sean O'Leary, MD, MPH, professor of pediatrics, has been on the School of Medicine faculty since 2010. He trained in the CU residency program at Children's Hospital Colorado, practiced as a general pediatrician in Fort Collins for eight years, before returning to the Anschutz Medical Campus in 2007 to do his fellowship in Pediatric Infectious Diseases.

He has been a leading voice in efforts to promote childhood vaccinations

and serves as vice-chair of the American Academy of Pediatrics (AAP) Committee on Infectious Diseases. He helped write the AAP's guidance on returning to school. He was interviewed for CU Medicine Today magazine in mid-August about the state of efforts to fight COVID-19 and to reopen schools.

How concerned are you about the possibility of an increase in COVID-19 cases this fall?

That's hard to answer in August for a magazine that will be going to print in the fall. I guess what I'd say is that everyone is kind of nervous about it. We've seen what has happened across the country with an explosion of cases in places that opened up too early.

In Colorado, as of mid-August, we are actually doing OK. Our positivity rate is hovering around 3 percent. I like to think that, as more people are adopting – I won't say embracing, but at least adopting these physical-distancing and mask-wearing measures – that we're going to be able to continue to have these low levels and ideally get them lower.

Of course, the big variable is school. It's hard to say now where we're going to be in two months with school. Denver Public Schools isn't going to open until at least October 16 for in-person learning for most students. Cherry Creek School District is opening, so we may get some lessons there. But it's pretty hard to predict right now. Am I worried? Yeah, I'm worried.

In your role at the American Academy of Pediatrics, you helped develop recommendations earlier this summer to provide for a safe return to schools. Then several states had rising cases of COVID-19. Are the recommendations still applicable?

I think that there are places where it absolutely could be safe to go to school. For example, in other countries where they have really low levels

of circulating virus, they have been able to successfully reopen schools. In some places, they have been able to open without major mitigation measures in place because the level of the virus is low enough. There are pockets in the U.S. where that's true. I think that we all want to get there in Colorado.

We wrote the Academy's guidance with that in mind, that if conditions are right, that if you put mitigation measures in place, then yes, it is potentially safe to do. It's important to recognize that we're learning all the time and we're going to be learning some things may work better than others, some of them may not work at all, and some may make things worse. We have to be ready to change those things as we go along.

The real tragedy of all of this is that the AAP's guidance and other well-meaning guidance have become politicized, almost weaponized. That's made the conversation a lot more difficult. We have an administration who has pointed us in the wrong direction many times and has not engendered trust. That certainly includes teachers. So when the teachers see these politicians demanding in-person schools under any circumstances, of course they're going to balk at that. I absolutely understand where they're coming from.

The AAP guidance depends on widespread adoption of mitigation measures – mask wearing when you go to the grocery store, it means not going to parties at the pool and at the bars, right?

Yes, absolutely. Any public health expert or physician that you see interviewed about this topic about schools reopening, pretty much everyone will say that the most important thing we can do in order to open schools safely is to deal with it in the broader community.

These school mitigation measures are a backup plan. They're not meant to be able to completely stop the virus when there's widespread circulation. That's impossible. If there's widespread circulation, it's going to get into the schools. So, these schools that opened in Georgia that are getting a lot of headlines because of infections, that was absolutely predictable. Absolutely predictable.

If Denver Public Schools is waiting to have in-person classes and Cherry Creek is opening, we have a test case here. We're in the same community.

There are even pockets within our community. If you look at Denver Public Health's website, they have a lot of granular data on the rate of infection in various neighborhoods and it varies within Denver, based on neighborhoods.

It's striking in terms of the disparities that we've seen nationally about the impact this pandemic has had on those living in poverty and in communities of color. That's certainly true in Denver as well. For example, the rates are much higher in Montbello than they are in Central Park (formerly Stapleton). Similarly, the rates of testing are much higher in Central Park than they are in Montbello. These two adjacent neighborhoods have different levels of income and a different combination of race and ethnicity, and we see the disparities in rates of COVID-19.

“These school mitigation measures are a backup plan. They're not meant to be able to completely stop the virus when there's widespread circulation. That's impossible.”

What are you expecting for this year's flu season?

There's an element of terror. Influenza fills up hospital beds and ICUs in both adult and pediatric hospitals every year. With COVID-19, we saw a bit of a surge at Children's Hospital, but nothing like the surge that adult hospitals saw. If those two things hit at the same time, it's going to be terrible. We would almost certainly overcome ICU capacity if we have a typical flu year that is coinciding with a lot of COVID-19 circulation.

We've been working for months now with folks at the state health department, the local public health departments, and Immunize Colorado, discussing what are we going to do about flu vaccination this year. Every year, it's a big push, it's important. It's even more important this year.

We're really trying to make sure as many people as possible get their flu vaccines. I think that's going to be important for all the at-risk adults and children, but in addition this year, it probably takes on greater importance for teachers. There is evidence that immunizing a school age-population against influenza does more to protect the elderly than vaccinating the elderly themselves, so we're really trying to make sure as many kids get vaccinated as possible.

There has been an increasingly vocal anti-vaccination movement. How has that affected vaccination rates?

Right now, certainly, the anti-vaccination movement is a problem because they have aligned themselves with COVID deniers and conspiracy theorists and some of the people that are protesting masks. They've jumped on board with those folks and are spreading misinformation and disinformation about COVID-19, as well as about potential future COVID-19 vaccines. That's certainly a problem.

The anti-vaccination movement is very vocal, but it is very small minority of people when you consider the general population. Even though many parents have questions about childhood vaccinations, we still have in general very high rates of uptake, upwards of 95 percent for some vaccines. Overall, most parents are still getting their children vaccinated.

The bigger issue right now is the dramatic drop we've seen because of the pandemic. There were people who had concerns that due to the stay-at-home orders the doctor's office wasn't open, so some didn't bring their children in for a checkup. Most doctor's offices stayed open through the pandemic. Pediatric and family medicine offices have really bent over backwards to make them safe places to be. There's very little transmission within that setting because they're wearing PPE along with other mitigation measures.

We initially in Colorado saw about a 40 percent drop in doses delivered. That's improved, but we're still about 20 percent below where we should be year on year. There's a group of us working to address the issue, to make sure parents understand that it's safe to go into the office, and to figure out alternative venues for getting those kids caught up.

You contracted COVID-19 in March. How are you feeling now?

I'm one of those long haulers, although I guess I would say a little milder than a lot of people. My wife and I both were pretty sick for two to three weeks. I got completely better and then about two weeks later, I got back to running. I was pretty much back to normal and I went on a long run and that night I felt the symptoms come back, although to a lesser degree than when I was sick, but it's a very distinctive feeling.

That's happened more or less every day since then. Some days are worse than others. It perhaps seems to be getting better over the last month or so, but just when I say that, that's when the symptoms seem to come back. It's tough.

MOVING BEYOND THE CLINICAL ENCOUNTER

Carlos Franco-Paredes works to protect detainees from COVID-19

By Mark Couch

Infectious disease specialist Carlos Franco-Paredes, MD, MPH, has helped save lives during the COVID-19 pandemic by inspecting county jails, advising state prison leaders, and advocating for safer conditions for people held in immigration detention centers.

Franco-Paredes, an associate professor of medicine at the CU School of Medicine, has been a leading voice for protecting the health and safety of those held in custody and those who work in jails, prisons, and detention centers.

"I feel like clinical medicine is incomplete," Franco-Paredes said. "We need to be doing something more, beyond the clinical encounter in the hospital or in the clinic. We need to go to the community and try to address some of the larger issues."

During the pandemic, that commitment to getting beyond the clinical encounter has included Franco-Paredes traveling coast-to-coast to inspect jails and prisons. He has been the court-appointed inspector of the Prince George's County Jail in Maryland and he has inspected facilities in Oakland and for the Los Angeles County jail system.

He also has issued advocacy letters used in court hearings seeking to create safer conditions for those held in custody. Collaborating with the Southern Poverty Law Center, the University of Texas School of Law's Civil Rights Clinic, and other groups, Franco-Paredes has produced declarations on behalf of detainees in Immigration and Customs Enforcement detention centers. He has been actively publishing in peer-reviewed journals, including *The New England Journal of Medicine* and *The Lancet*.

"I have found it a very rewarding experience, providing this feedback to the judges and seeing some of the changes," Franco-Paredes said.

In an open letter that was widely publicized in March, Franco-Paredes wrote: "The prompt release on parole of detainees with medical conditions at risk of severe disease and death due to coronavirus infection may reduce the impact of this outbreak among detention facilities. This intervention may also effectively reduce the potential spillover of the outbreak from a detention center into the community."

SAVING LIVES

Franco-Paredes' expertise and advocacy made a difference for many people, said Tom O'Meara, volunteer attorney for American Gateways, a group that provides a range of immigration legal services in Central Texas.

"The work of Dr. Franco-Paredes not only helped these individual detainees and workers, but also affected the policy decisions which resulted in large-scale efforts to protect those associated with U.S. Government Detention

Facilities," said Meara, who volunteers for American Gateways in Austin and San Antonio. "He donated his own time at a moment in time when there were many competing interests. Saving lives."

O'Meara said he is personally aware of four people, two with respiratory issues, one with chronic high blood pressure and one with active cardiovascular disease, who were paroled into more favorable circumstances because of the work of Franco-Paredes.

"Those government decisions protected not only the medically vulnerable detainees, but also the U.S. government employees, civilian contractors, and vendors who work at the detention facilities," O'Meara said. "Some of the employees, contractors, and vendors could have become disease vectors to their larger communities."

"Those employees, contractors, and vendors could have been asymptomatic carriers of the novel coronavirus because they were doing jobs as essential workers in facilities that house prisoners, defendants in criminal complaints, and suspected illegal immigrants. Protecting those human lives is a primary goal, but the effect was to offer policy guidance that could set a standard for other communities to follow."

Franco-Paredes said it is practically impossible for crowded jails and detention centers to provide the physical distancing necessary to control the spread of the novel coronavirus that causes COVID-19.

"To achieve some degree of meaningful social distancing in these places, you have to reduce the population," Franco-Paredes said. "There's no question, you know. The most important thing I learned is you can have soap, you can have disinfectants, you can wear masks, but if you do not reduce the population, you're not achieving anything."

In a jail that he inspected, there were hundreds of people crammed into the cells, sometimes with triple bunk beds and inmates sleeping head to toe. When those held in custody were moved from one location to another in the jail, they were standing less than one foot away from one another in line.

"The only important step is reducing the population of these places," he said. "Once you do that, you can start separating people, including the medically vulnerable, and protecting them."

DEDICATED TO PUBLIC HEALTH

Throughout his career, Franco-Paredes has been dedicated to public health issues. He earned his MD from La Salle University School of Medicine in Mexico City, and in 1996 began his residency and internship at Emory University School of Medicine in Atlanta, serving as chief medical resident



at Grady Memorial Hospital. He did a subsequent fellowship in infectious diseases and completed a Master of Public Health degree at Emory University.

In 2002, he moved back to Mexico, where he worked for the country's Ministry of Health, providing critical review of national health plans on vaccination, infectious diseases, influenza pandemic preparedness, and other issues. He also helped develop the country's preparedness plan for Severe Acute Respiratory Syndrome, coordinating Mexico's plan with public health officials in the United States, Canada, and other countries.

Franco-Paredes returned to Emory in 2005, with a faculty appointment and consulting for the World Health Organization. He later worked as an infectious diseases clinician for a private hospital system in Albany, Ga. He joined the University of Colorado School of Medicine in 2017. In addition to clinical work and research, he is director of the Infectious Diseases Fellowship Program.

The range of experience gives perspective and informs how Franco-Paredes pursues his work. He said physicians must do more than make a clinical diagnosis.

"When we see patients in the hospital, we do these biological, biomedical interventions," Franco-Paredes said. "They get better and then we send them back into the same conditions that made them sick without paying much attention."

Asking about a patient's social history and doing something about a patient's social experience are different tasks, he said. Treating the infection of a person with a drug addiction or the injury of an abuse victim, but sending them back into the settings where the harm occurred does not cure the problem.

Offering rehabilitation services to a person with a drug addiction is a start, but that effort only goes so far. Case managers can help guide the person to resources to find a job, he said, but that still doesn't address bigger issues.

"I just think it's unfair that we don't dig deeper into their lives and realize that we can do more," Franco-Paredes said. "I think that's where

we fail because we don't recognize those structural vulnerabilities, like discrimination, food insecurity, housing insecurity, job insecurity, all those different things."

He recalled a patient who came to see him. "This lady said, 'I don't have any income, I haven't eaten in three days,' when she came to an appointment. That's unfair, man. That's not right. You can't not address that issue, right? So we had to figure out a way to help her."

COMPASSIONATE CARE AND JUSTICE

Colleagues emphasize the commitment to compassionate care and justice when they describe working with Franco-Paredes.

"He has a genuine, good heart," said Megan Robins, who coordinates care for patients in clinic for Franco-Paredes. "He's thoughtful, compassionate, and empathetic. He never makes you feel bad about asking to help someone."

Janine Young, MD, associate professor of pediatrics, medical director of the Denver Health Refugee Clinic and co-director of the Human Rights Clinic, said Franco-Paredes has been an important colleague in providing care for underserved and marginalized people.

"Not everyone chooses to do that," Young said. "It is commendable and inspiring. He is not afraid to make waves when he needs to. He has been an incredible partner with this work."

Franco-Paredes said his COVID-19 work with incarcerated and detained populations usually stems from litigation pursued by civil rights groups. He explained that protecting public health is a vital service and legal responsibility. Administrators who run jails, prisons, and detention centers are legally required to ensure well-being of the people held in them.

"These people cannot shield themselves from the pandemic and then they don't have access to the right medical care in case they become ill," he said, "and some of them are at risk of becoming highly severely ill."

A recent study published in JAMA reported that the COVID-19 case rate for prisoners was 5.5 times higher than the U.S. population case rate. In his own inspections and studies, Franco-Paredes found that temperature checks do not always catch asymptomatic carriers, testing procedures are inconsistent and not comprehensive, and quarantining procedures are not possible due to overcrowding.

Adding more tests is not a sufficient answer. More tools may help, he said, but they don't replace truly taking care of people.

"But most important, I think, is our humanity is our instrument," Franco-Paredes said. "I think that's where we need to keep going, man. I really believe that we can do better. I really do."

“THIS IS WHAT WE DO. WE TAKE CARE OF SICK PATIENTS”

Michelle Barron is a top infectious disease expert and fearless protector

By Katie Kerwin McCrimmon

A veteran nurse was so afraid when the new coronavirus arrived in Colorado that she considered quitting her hospital job.

Then she watched virtual town halls that featured Michelle Barron, MD, the lead infectious disease expert in Colorado, and the nurse's perspective changed. Barron has worked around the clock with fellow leaders since early January to safeguard patients and more than 24,000 employees at 13 hospitals.

Even as Barron has faced the most overwhelming challenge of her career, she has displayed her typical sunny attitude. She calmly reassures staff members – again and again demonstrating how to properly wear masks and other personal protective equipment, or PPE. She's become a bit of a hospital and media celebrity, known for wearing fun shoes and joking about her curly hair that can have a mind of its own as Barron straps on N-95 masks or face shields.

Her message always has been comforting and clear: “This is what we do. We take care of sick patients. We know how to do this.”



Even in the face of a frightening pandemic, Michelle Barron, MD, has brought her trademark optimism to the job of keeping her community safe. Barron's dad was a deputy sheriff in Texas and Barron has been like the sheriff of UHealth, squaring off against a fierce virus and reassuring patients and providers that she would protect them. Photo by Cyrus McCrimmon for UHealth.

Since early January, Barron has served as one of UHealth's chief architects for handling the pandemic, a “thinker-in-chief” of sorts.

But she also wanted to see how policies she helped create were working and her infectious disease colleagues were exhausted from tending to so many critically ill patients. So Barron recently rounded on two separate weekend shifts at her home base: UHealth University of Colorado Hospital.

There, in one of the COVID-19 units, Barron met the veteran nurse, who like so many other staff members, had been afraid to treat patients with the new virus.

The nurse greeted Dr. Barron like she was a rock star: “I know you. You're the town hall lady!”

Barron grinned.

The nurse confided that she almost left her job, then thanks to Barron, found the courage to carry on.

“I'm still here,” she proudly proclaimed.

“That so made my day,” Barron said.

Throughout the crisis, Barron has been both fearless and self-effacing: the infectious disease expert with the infectious personality.

None of that is a surprise to the people who know Barron. All of her life, she has plunged straight into challenges, armed with a powerful intellect, confidence, and a big heart.

A SHERIFF OF SORTS, LIKE HER DAD

Barron stands just 5-feet 2½-inches tall (yes, she counts the half inch), but don't underestimate how tough she is when it comes to fighting a pandemic.

Barron's dad was a deputy sheriff in Texas and his daughter is now a sheriff of sorts for UHealth. Her bad guy these days is a virus that jumped from an animal to humans in China late in 2019. Since then, Barron has been closely tracking her enemy, while also making life and death calls and keeping her community safe.

Barron grew up in the Mexican border town of Laredo, Texas, and always has been fearless. Along with her little brother and their male cousin next door, Barron loved climbing trees, staring down snakes, finding bugs, and shooting tin cans with BB guns.

While she tore around town with the boys, Barron also loved ballet. And these days, Barron's known for her eclectic shoe collection. Depending on her mood, she might blaze through the hospital halls in bright cherry red Doc Martens, strappy sandals, or leopard-print boots.

Barron has always straddled two worlds. Her mom's family came from Monterrey, Mexico. Her maternal grandfather taught her to ride horses and shoot a rifle at age 6. Her mom's mom taught her how to make spicy roasted chile salsa and homemade tortillas. Her dad was from a big family in the Texas town of Corsicana. That side of the family spoke with a Texas twang and told rich stories. Barron grew up speaking both English and Spanish, and while no one on either side of the family was a doctor, Barron announced to the world at age 4 that she planned to become a ballerina-doctor or maybe an astronaut doctor.

Fortunately for patients and medical providers in Colorado, the doctor part stuck.

While doing her medical training, Barron cared for AIDS patients before experts had good treatments or knew fully how HIV spread. She saw the stigma that her patients faced from getting a sexually transmitted virus and decided to become a specialist in infectious diseases. She came to Colorado to do her fellowship in 1999 and has been here ever since.

For much of her career at University of Colorado Hospital, Barron has served as medical director of infection control and prevention. She's also a professor at the University of Colorado School of Medicine on the Anschutz Medical Campus.

She has tangled with some tough diseases in the past, including the H1N1 flu pandemic in 2009 and Ebola in 2015.

But in early January of this year, Barron learned about a new virus that would become the biggest foe of her career. And she had the foresight to see it coming long before the illness it caused even had a name.

A PRESCIENT EARLY WARNING

On Jan. 8, Barron sent a prophetic email to her emergency preparedness colleagues. In her typical friendly, but firm manner, she alerted them to a virus that was sickening people thousands of miles away.

"Hello. Happy New Year! Never a dull day in infection prevention," Barron wrote. "There is a severe respiratory disease due to a novel coronavirus that is causing an outbreak in the Wuhan province of China."

Barron and her team had been preparing for possible pandemics for years. Maybe this new illness in China would turn out to be nothing. But Barron didn't want to take any chances. She knew that another deadly coronavirus, later dubbed Severe Acute Respiratory Syndrome or SARS, had started in exactly the same way.

In the weeks that followed, as the virus spread from China, to other parts of Asia, Europe and ultimately to Barron's doorstep, her early January warning and immediate action proved prescient and critical.

While coping with the pandemic, Barron has kept twin missions top of mind: providing extraordinary care to patients while protecting caregivers. The pandemic is far from over, but early results show that Coloradans have benefited from Barron's leadership.

Across the U.S., COVID-19 has claimed the lives of more than 195,000 people. Each loss has been tragic, but thanks to Barron and other leaders, UCHHealth medical providers have been able to send many COVID-19 patients home. Nearly nine out of 10 patients hospitalized with COVID-19 at UCHHealth facilities have survived.

Barron's colleagues credit her with a pivotal role in these positive outcomes.

"She clearly is the pre-eminent infectious disease practitioner in Colorado," said Nancy Madinger, MD, who selected Barron for her fellowship back in 1999, helped train her, and is now a close friend.

Since coming to Colorado, Barron has continued to treat AIDS patients and new illnesses keep her detective skills sharp.

"Infectious disease is not a static field. There's always a new challenge. We're very lucky to have someone who has gone through so many iterations of new diseases and who has the knowledge and temperament to manage a crisis," said Madinger, director of the University of Colorado Clinical Microbiology Laboratory and a professor at the University of Colorado School of Medicine.

Of course, Barron is the first to credit her team and the stellar people who have helped fight the pandemic in Colorado: from medical supply managers to nurses to lab managers, ICU doctors, pulmonary specialists, respiratory therapists, cleaning crews, chaplains, and so many others.

Still, Madinger said Barron deserves a great deal of credit since she's such an excellent leader.

"If she were in the military, she'd be a general," Madinger said.

Of course, Barron would score more style points than most generals. She'd be friendlier and she'd make fun of herself more. One of her favorite stories is about the time she was leading a brigade of fellow doctors and students around the old Veterans Administration hospital in Denver when she opened a door and led the team straight into a janitor's closet.

"Never follow me!"

In reality, people love following her. While she may not have the best sense of direction, she has a way of sniffing out danger and keeping people safe. Barron likes the sheriff comparison.

"I'm a law-and-order type of girl," Barron said. "I'm also crazy empathetic, but infection prevention is black and white. We follow rules. My job is to keep you from getting into trouble."

FEARLESS FROM THE START

These days it's funny that Barron's job is to be a rule follower. When she was little, Michelle Angelique Barron, or Shell or Shelley for short, was a bit of a handful. Her mother used to say that she was climbing before she could walk.

FACULTY PROFILE

Barron loved growing up in Laredo. It felt like everyone was related to everyone. Back then, it was easy to head across the border to shop or see relatives. These days, it breaks Barron's heart that the drug cartels have brought violence to her once peaceful city and region.

As a child, Barron had the run of town. She has a sister who is two years older, but Barron and her brother, who is just 11 months younger, considered their sister boring and found their own fun.

"I was basically a boy growing up," Barron said. "We would look for space aliens and play with snakes and lizards. None of that bothers me. I loved digging in the dirt, fishing, and finding worms."

Her mom's dad had been in a weapons instructor in the U.S. Army and took his granddaughter under his wing.

"He taught us how to shoot in case we'd ever want to go hunting," Barron said.

The concept of killing a creature didn't sit well with Barron, but she was a pretty good shot.

"I was probably 6 or 7 the first time I held a rifle. We had BB guns and pellet guns. Grandpa would let us use his rifle. It had a good kick. He'd stand behind us to help steady the gun. We'd shoot tin cans."

Later, her grandfather had high hopes that Barron would join the military. He wanted her to attend West Point, and thanks to his service, he had the connections to help her get an appointment to the elite service academy.

But Barron had plans of her own.

"I never would have survived in the military. I was like, 'Hell no.'"

An older boy from her high school had attended Yale University. He shared his experiences with Barron and encouraged her to apply to the revered Ivy League institution.

"I wanted to go to the best school I could. I dreamed big," she said.

Barron was an excellent student and chose Yale, a decision which her grandfather jokingly bemoaned in his heavy Spanish accent.

"I am so proud of my granddaughter, I wanted her to go to West Point. Instead she went to 'Jale,'" he told his friends, pronouncing the "y" in Yale with a Spanish "j" sound.

Barron eventually bought him a cap with Yale written on it so that people would know she wasn't actually in jail.

He also tried to give Barron a pistol with a pink holster to take to college.

"I was mortified. I gave it back to him," Barron said.

AIDS PATIENTS INSPIRED A CALLING

Despite a bit of culture shock and bitterly cold winters, Barron thrived at Yale.

She met friends for life soon after arriving and loved her professors.

"Yale is really diverse. Laredo was probably 98 percent Hispanic. So meeting people from different backgrounds was a really cool thing," Barron said.

Barron never strayed from her mission to become a doctor. She majored in biology and volunteered in a hospital where she loved bonding with patients.

"I was working in a rehab unit. There was an 80-something-year-old reverend who had had a stroke, was blind in one eye, and had trouble walking," Barron recalled.

Time and again, she visited with the man and the two had great discussions about religion and philosophy.

"I love the amazing stories I get to hear from patients. I draw energy from people," Barron said.

She graduated from Yale in 1992 and returned to Texas for medical school at University of Texas Southwestern Medical Center in Dallas.

As a third-year medical student, Barron worked on a ward full of AIDS patients. Doctors only recently had discovered that an old cancer drug called azidothymidine or AZT could help AIDS patients, but much like COVID-19, there was a lot of fear.

"I had all these patients who were dying from infectious diseases that normally would not kill you," Barron said.

She became fascinated with how the immune system works. She also was eager to help people who were suffering from both physical ailments and discrimination.

Many of her patients were gay men who had never come out to their families. Some had no visitors. Others told loved ones they had cancer.

"There was such a stigma," Barron said.

She decided to dedicate herself to combating infectious diseases.

"I found my calling," Barron said.

"How can we fix the immune system so people don't die of things that live in the environment?"

A DANGEROUS NEW VIRUS

When the first known cases of the coronavirus arrived in Colorado, UCHealth leaders immediately set up command centers to streamline the health system's response.

Barron and her right-hand woman, Larissa Pisney, MD, a fellow infectious disease specialist, assistant professor of medicine at CU School of Medicine, and associate director of Infection Prevention and Control at University of Colorado Hospital, served as key architects for new policies that UCHealth leaders had to create on the fly.

**"How can we
fix the immune
system so people
don't die of things
that live in the
environment?"**

Where should patients go if they thought they had COVID-19? Who should treat them? What medications could doctors and nurses use to treat patients? How would doctors and nurses stay safe? Could UCHHealth continue to offer other services and non-emergency surgeries? Could UCHHealth shift some patient visits to virtual visits instead? Question after question arose and Barron, Pisney, and others had to develop answers fast.

“We were the problem solvers,” Barron said.

She clicked right into gear. Barron is one of those people who gets calmer when the pressure builds. Back in high school, she was on the debate team and thrived during clutch rounds. She and her debate partner arrived at meets having researched a key public policy issue. But, they wouldn’t know which side of the issue they’d have to argue until a judge flipped a coin. Then, calmly and concisely, they would lay out their case.

During the toughest months of the pandemic, there have been moments when Barron has lost her cool.

“In the midst of this, when I felt the gravity of how bad it was going to be, and we started to see the devastation, that’s when I had my first panic attack,” Barron said.

She thought to herself, “This is not theoretical anymore.”

“People’s lives were impacted by our decisions. We were continually looking at the data and the science,” she said.

But Barron also picked up on the fear that staff members were feeling. And that’s when she urged fellow leaders to start doing virtual town halls to give staff members as much information as possible and to allow them to ask questions and deal with their biggest worries.

“Part of my ability to be calm at work is the medical training I’ve had. You lean into that training,” she said.

On particularly rough days, after meetings that started at 6 a.m. and stretched long into the evening, Barron would get into her car and blast heavy metal music like AC/DC and Guns N’ Roses. The chaos emanating from her speakers helped her release all the tensions she felt.

Among the most wrenching decisions were the ones related to visitors who were desperate to be close to their sick relatives. Even though Barron knew that family members of sick patients would suffer, she and others felt it was necessary to bar nearly all visitors, except for women having babies and people in hospice care.

Once, Barron felt sad for a particular family and considered granting an exception.

Her colleagues reminded her that she had created the rule.

“I know. I know,” she responded.

For the most part, Barron has been optimistic amid the turmoil and one of most satisfying moments came when she met the nurse who had decided to stay in her job after hearing Barron’s words of reassurance. That nurse and many others told Barron they were honored to take care of COVID-19 patients.

“That was my proudest moment,” Barron said. “There was no fear, no anxiety. There was a spirit of cooperation and commitment to patients: ‘Yep. We can do this.’”

“You feel so happy and proud of the health care system. Everyone has bonded and gotten through it,” she said.

A BIG DOG’S COURAGE AND A ‘CHILL’ ATTITUDE

At home, Barron decompresses by cooking and spending time with her husband, Greg Woskow, who is an engineer, and their dog, Chase.

He’s a mutt: part Labrador and part border collie. On walks, Barron often thinks about how little dogs must be fierce and yappy to protect themselves.

Barron may be just a smidge over 5 feet, but she feels a lot taller.

“I’m not a Chihuahua. I don’t bark at everyone. I must think I’m a big dog. The bigger dogs tend to ignore all the other dogs. They know they’re big, so when they see another dog, they’re like, ‘whatever.’”

“Even though I look like a Chihuahua, I think I’m a Newfoundland. Whatever. Bring it on.”

Well, the world did bring it on. Barron had to face a massive challenge. One colleague asked her how she knew so far in advance that this coronavirus was going to be a tough one.

“I just knew to pay attention,” Barron said. “This smelled and looked so much like the original SARS. It bothered me. With SARS, so much was kept quiet. The medical reports came out much later.”

Ultimately, Barron had to trust her gut.

While the number of COVID-19 patients now has declined throughout Colorado and at UCHHealth hospitals, Barron is not letting her guard down. She loves to travel and was supposed to go to Europe later this year. She knows she’ll probably have to postpone big trips until 2021.

“I’m very much an optimist, but we’re not remotely done with this,” Barron said.

She recently told her team they need to start planning for the next wave.

“Everything we did in January, we need to be prepared to do it all over again,” Barron said. “We can’t assume this is going away. We need to be ready.”

This article was originally published in UCHHealth Today in June 2020. The number of COVID-19 deaths reported in this article has been updated with mid-September data.



Around the clock, Michelle Barron, MD, has helped lead the fight against the COVID-19 pandemic. Photo by Cyrus McCrimmon for UCHHealth.

CARING FOR OLDER ADULTS DURING A PANDEMIC

Multidisciplinary effort helps some students graduate on time

By Debra Melani

For Kristina Slunecka, it was the woman locked down in her assisted-living facility room, unable to leave the confines of her four walls even to go outside because of COVID-19.

For Desirae Martinez, it was the elderly man beginning their first call with, “I don’t have much to say,” and still chatting with his newfound friend an hour later.

The women were two of about 40 University of Colorado Anschutz Medical Campus students who reached out to the pandemic’s most vulnerable population as part of an innovative program launched by the School of Medicine’s Division of Geriatric Medicine and its UHealth Seniors Clinic.

“We were worried about the patients not having access to care and having a lot of unmet needs,” said Sarah Tietz, a geriatric medicine fellow who created the program with her clinic colleagues. “Older adults have a lot of social isolation, and COVID-19 intensified that.”



Janna Hardland, MD, assistant professor of medicine, Sarah Tietz, MD, assistant professor of medicine, and Skotti Church, MD, associate professor of medicine, are key organizers of the Division of Geriatric Medicine outreach program.

When stay-at-home orders curbed non-emergent inpatient visits and isolated the nation’s older adults from loved ones, the Seniors Clinic staff responded with the creative initiative that served a dual purpose.

ANSWERING A DOUBLE CALL

Since late March, students have conducted welfare checks via phone calls to the clinic’s 75-plus-year-old patients, who include aging veterans through a partnership with the Veterans Affairs Medical Center next to campus. Additionally, the program was approved to offer clinical hours for some students suddenly unable to meet their graduation requirements.

“It was a life-saver for me,” said Slunecka, a BS/DNP candidate in the CU College of Nursing who still needed 50 clinical hours when most rotation programs were suspended due to COVID-19. “It ended up being a win-win for everyone involved.”

Staff and students from CU College of Nursing, the CU School of Medicine and the Skaggs School of Pharmacy and Pharmaceutical Sciences joined the effort that has benefited students and the community’s older citizens during this time of crisis. “We’ve made more than 400 calls so far, and we will continue throughout the summer,” Tietz said.

Martinez, a fourth-year medical student who connected with the man who went from little to say to an hour of storytelling, joined the effort in part to “remain grounded” in patient care during the COVID pandemic. “It was so enjoyable to be able to provide a listening ear, and it reminded me of the reason why I love geriatrics – connecting with the elderly population and making them feel valued.”

“Pretty overwhelmingly, the patients – even those who didn’t really have any needs – were grateful that somebody just cared enough to call,” Tietz said. Many patients opted for weekly calls, just wanting someone to talk to, she said.

CONNECTING THE ELDERLY

In addition to offering emotional and social support, students ensured patients had what they needed, from food and shelter to medications and caregivers. They helped older adults set up appointments for telehealth visits and answered questions about medical and prescription concerns.

“I spoke with a daughter about a side effect of a medication her mother was having and then realized she wasn’t taking appropriate doses,” said Susan Hines, a student in CU Nursing’s Adult Gerontology Nurse Practitioner program. “I was able to get that information to the provider.”



Anschutz Medical Campus students Holly Truong, Desirae Martinez, Susan Hines, Karima Hamamsy, and Hailee Griffin provided welfare checks to patients of the seniors clinic.

When they learned from their peers doing the calls that many patients didn't realize they could have prescriptions mailed or delivered, pharmacy students compiled a list of local pharmacies and their COVID-related policies.

“Older adults have a lot of social isolation, and COVID-19 intensified that.”

“Most pharmacies have been offering free delivery and mail service,” said Scott Pearson, PharmD, assistant professor of pharmacy who organized and oversaw the pharmacy students. “So, the pharmacy students provided that list as a resource for the other students,” Pearson said. “I think that was certainly helpful for a lot of patients.”

TEAMWORK ACROSS DISCIPLINES

Divided into teams with at least one pharmacy, nursing, and medical student on each, the groups met weekly, discussing that week's patients as well as case studies provided by the Division of Geriatrics. Case studies focused on geriatric issues, including osteoporosis, dementia, diabetes, and falls, and were added to enrich the learning experience for students.

“We pre-rounded on patients,” Holly Truong, a fourth-year pharmacy student said of discussing patient cases each week. “I would look at their

medications and see if there was anything I needed to let the other students know before their calls,” Truong said.

Many participants, Slunecka included, found the multidisciplinary aspect highly valuable. “I feel like that's a really useful tool in my current job (as a patient navigator) and even moving forward in my nurse practitioner career,” she said.

“Coordinating with different disciplines and being aware of their different roles within the team is crucial. Everybody brings something to the table,” Slunecka said. “It was really nice having the pharmacy students reviewing these cases to help guide the care.”

CARING FOR THE ELDERLY

For some students, including Truong, the program attracted them toward geriatric care. “It definitely strengthened my desire to want to help the older patients and maybe specialize in geriatrics after I graduate,” she said.

With a dramatic shortage of geriatric specialists and an older adult population expected to more than double in the next 20 years, that's good news for the field, Tietz said.

“Really, students going into most fields are going to deal with older adults,” she said. “So, giving them experience with older patients and the medical challenges that come with them is important for all.”

This article was originally published by CU Anschutz Today in June 2020.

WOMEN OF COLOR ON THE FRONT LINES

Art project collects portraits of unsung heroes fighting COVID-19

By Mark Couch

Sarah Rowan, MD, an infectious disease specialist at Denver Health and associate professor of medicine at CU School of Medicine, paints portraits to relax and take a break from the grind of work, but in the midst of the pandemic, her hobby took on newfound importance.

Rowan's hobby inspired her to find a way to celebrate an overlooked community of frontline workers emerging during the crisis.

"I kept seeing this pattern of health care workers being celebrated," Rowan said. "They were white women and some black men. But there were not black women being portrayed as the health heroes that we were hearing so much about."

She decided to do something about it.

To raise the profile of women of color working on the frontlines of healthcare, she asked physician friends to send selfies so that she could make portraits. Those friends contacted other friends and within days, Rowan had 150 photos from physicians across the country.

That's a lot of portraits. Too many for one person to create. Rowan said she usually spends about two to three hours per portrait. So she reached out to other artists and between 75 to 100 artists signed up.

The resulting artworks have been turned into an online gallery, "Women of Color on the Front Lines: Portraits of Unsung Heroes," that show the strength and determination of health care providers and the creativity and talent of the artists.

She tapped the creative energy and skill of her sibling-in-law, Dave Thatcher, whose video-editing and digital storytelling business had

slowed down due to the economic impact of the pandemic. Putting those skills to work, the website, www.wocfrontlines.com, became more than a gallery. It was a call to action. The website tells the story of the women, showcases the art, and provides resources to support women of color in medicine.

"It was a great way to feel socially engaged," Thatcher said, "and to create a platform for all this great interest that Sarah got for this project."



Sarah Rowan, MD, by Holly McClelland.

FINDING MEANING IN THE ART

The women who provided photos expressed gratitude for Rowan's project.

"It really made me feel very seen in the face of this pandemic. I was a little bit reluctant at first to submit my picture because I feel like part of what we're doing in health care is just doing our jobs," said Shanta Zimmer, MD, senior associate dean for education and associate dean for diversity and inclusion at the CU School of Medicine.

"So being called a frontline worker as a physician sometimes feels a little bit like we're taking too much credit, but I love Sarah's project. And I love the idea of making black women and other women of color seen during this epidemic."

The artists also said the work was meaningful to them.

"Every time I create a portrait, I keep the health care worker in mind," said Denver graphic artist Holly McClelland. "I also keep her patients' health in mind, who are probably going through some of the most challenging times with having COVID-19. I draw from their collective energy. It's empowering. And with that, I am empowered too."

Rowan said the project was a much-needed relief from the long hours of work at the beginning stages of the pandemic.

"I was on the general infectious disease consult service the week that we got our first positive cases at Denver Health," she said. "I saw some of the very first patients. It was a time like no other time in history. It was scary and intense. There was just so much unknown."

"Friends were asking, 'What's going on?' Colleagues were emailing protocols and suggestions across the country. It was just so intense that first week. We were wondering how much risk are we putting ourselves in versus trying to provide good care."

Rowan worked long hours – recalling one night being at the hospital until 11 p.m. because it was so busy. Her husband and six-year-old twins were away from home, staying in the mountains that week, so she didn't worry about unwittingly exposing them when she returned home at night.

When they did return, Rowan was careful to change clothes, wash her face, and leave her shoes outside. But, she added, it would have been impossible to quarantine from her children and the pandemic has lasted so long that such an approach wouldn't have been sustainable.

Making portraits has been a way to ease her mind.



Abbey Lara, MD, by Sarah Rowan.



Shanta Zimmer, MD, by Aimee Moore.

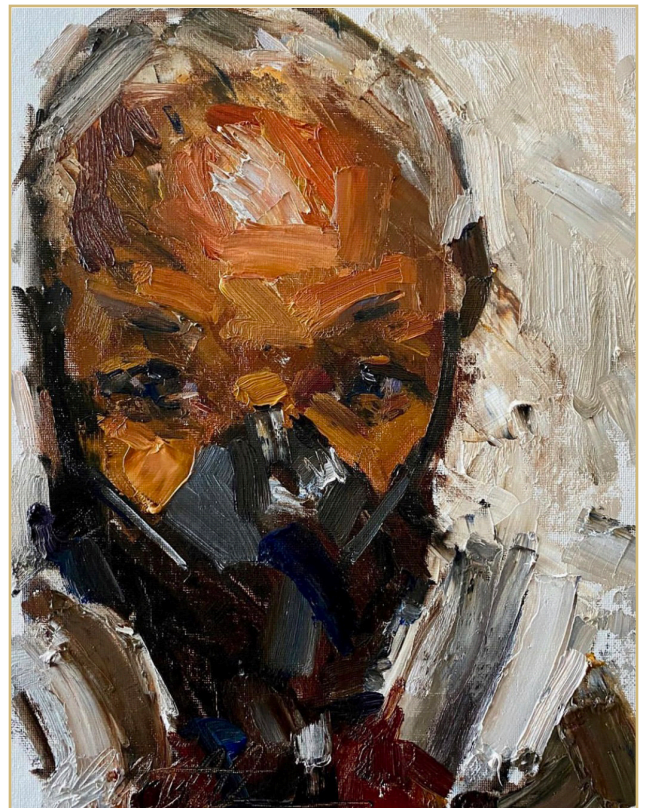
"It's definitely a stress reliever," Rowan said. "You might be thinking about work some, but not in a way where it is 'What is my to-do list? What are all my deadlines?' It's a commitment to put the stresses of work aside and let my mind wander."

The project has attracted widespread attention and people from across the country have contacted Rowan.

"One of them was a woman who runs an art school for high school sophomores and juniors, a little art academy in the summer in Kentucky. She emailed me about doing some portraits. I just heard from her last week and she sent me 35 portraits that the students had done," Rowan said in late July. "They're so fresh, so different. There's a whole bunch more portraits on the website."

Rowan said she is considering how the project could expand. The initial focus has been on physicians.

"There's really no reason not to honor all health care workers who are on the front lines of the health care response," Rowan said. "Lab techs, pharmacy techs, pharmacists. We have one nurse who already has a portrait up. I think highlighting diversity and the different ways this epidemic affects people from different backgrounds would be really cool."



Deborah Saint-Phard, MD, by Clyde Steadman.

COMMUNICATION IS THE PROCEDURE

Carey Candrian studies ways to improve care for older LGBT adults

By Mark Couch



In palliative care, there's a saying, "Communication is the procedure." When talking about communication in palliative care at the University of Colorado School of Medicine, Carey Candrian, PhD, is the go-to expert.

A rare social scientist on the School of Medicine faculty, Candrian, an assistant professor of medicine in the Division of Internal Medicine, focuses on improving the quality of elder care for the LGBT community and their loved ones.

"With a PhD in communication, I knew I would never be able to affect the disease prognosis or treatment trajectory, but I really began to see that I could make a difference with communication, and really begin to change the way people were talking and listening to each other," said Candrian.

The settings where Candrian works – hospices and long-term care facilities – have not historically been especially attentive to the specific needs of LGBT patients and residents and their partners. The result is a disconnection between loved ones with devastating consequences.

"If a person's center – who they truly are, who they truly love – remains invisible, ignored, devalued or otherwise negated, quality of care delivery can be compromised by excluding caregivers and families of choice, which is tragic particularly at the end of life," Candrian wrote in a grant proposal for funding a project to develop communication training for hospice nurses.

Esther Lucero, a participant in a focus group for Candrian's work, described a pervasive don't-ask, don't-tell culture that has defined her experiences with the health care system and her living accommodations when her partner died of a rare form of leukemia. "No one was ever rude," she said, "As long as you were a friend, it was fine. We generally didn't talk about our relationship, but you couldn't be who you were, just holding her hand."

MAKING CHANGES TO IMPROVE CARE

Candrian said such experiences should be addressed by changing the way people interact at the beginning of their involvement with assisted living centers, hospices, and other care settings.

"It does become a clinical issue," Candrian said. "She can't get proper bereavement. She can't get proper grief support. The root of it is a communication issue. If that conversation had started differently: 'Who's the most important person to you? Who do you want to have next to you in this room?'"

"I think the outcome could have been different and, for so many of them, they're usually not asking for the latest and greatest treatment, it's really to be included and to be part of it. Changing the communication, that behavior change, can be the difference, particularly for this population."

Changing behavior, though, requires an understanding of the current conditions and then designing interventions that could improve the interactions.

"The disparities are well-documented among older LGBT adults," Candrian said. "We don't have good data because we don't collect sexual orientation and gender identity information like we do race and ethnicity. That makes it hard to measure and even recognize this population, so part of this is to start having hospices routinely collect this information."

Even collecting the data is a challenge because many older LGBT adults have endured a lifetime of bias that shapes their behavior.

"Given the stigma and discrimination around their life experiences, you have to be able to ask these questions in a way that doesn't perpetuate the stigma and the discrimination," Candrian said.

To pursue her work, Candrian has gathered letters of support from the National Hospice and Palliative Care Organization and SAGE (Services and Advocacy for GLBT Elders). She has also received grants from the Cambia Health Foundation, the National Institute on Aging, the Colorado Health Foundation, and the NextFifty Initiative that aim to create assisted living communities that are more inclusive, to improve advance care planning, and to guide hospice admissions interactions.

BETTER CARE THROUGH BETTER LISTENING

Part of Candrian's approach is to get people together and listen to their experiences. Her current project aims to gather six focus groups of hospice professionals, older sexual- and gender-minority adults and their caregivers to discuss how sexual orientation and gender identity issues are currently handled. With that information, Candrian wants to develop a training that creates respectful end-of-life care settings. She would then pilot test training for hospice nurses.

“Just slapping on a nondiscrimination policy, slapping on a safe place sign is not the kind of change that is going to actually lead to deep cultural change,” Candrian said. “I really do believe that changing the communication and changing the behavior first will be far more effective than going immediately toward the policy. At least for the LGBT community.”

Stanley Deetz, PhD, professor emeritus at CU Boulder, was Candrian’s dissertation mentor. He describes the approach as essential for the kind of change that Candrian is aiming to make.

“Buy-in comes from the hard choices, not from packaging messages,” Deetz said. “She’s been able to keep the question at a personal level. When you do that, people will agree you should help people.”

Candrian transferred to CU Boulder after playing soccer “day and night” at Arizona State University. She decided that she was missing too many big events in life while she was so dedicated to athletics. She ultimately earned three degrees from CU Boulder, including her PhD in communication.

During her studies, she began volunteering at a local hospice.

“I would go every Friday night and push this hospitality cart filled with Doritos and bad snacks and cheap, terrible wine and offer it to patients and whoever was in the room with them,” she said. “There was so much happening clinically, and there was so much happening non-clinically, on an interactional level.”

Her volunteer experience and interactions at the local hospice led to several questions. Were people able to participate in the conversations about their care? Were they able to express who and what mattered to them? What happened when they were too ill or fatigued, when staff was overwhelmed? How did literacy, age, religion, sexual orientation affect the discussions?

PUTTING ADVICE INTO PRACTICE

Conversations with another mentor, Jean Kutner, MD, MPH, professor of medicine, prompted Candrian to explore the issues more deeply. She met Kutner on a bench outside an emergency department, where Candrian had been shadowing staff to observe the way decisions were made around the end of life.

The discussions with Kutner prompted Candrian to think about how to pursue her interest in the role of communication in patient care.

“It was Jean, too, who said, ‘You’re not going to be able to do meaningful and authentic work unless you bring yourself into it,’” Candrian said. “And from that moment, I felt like I could do what I wanted to do, which was to address the enormous disparities faced by the LGBT older adult community. I felt like everything came together because I felt responsible for my community, and I felt like I could actually do something about it with my background. I know there were other people doing this work. But I thought, ‘If not me now, who else is going to do it?’ I came to really see research as a form of advocacy too.”

Candrian joined the School of Medicine faculty in 2014. She has worked with Kutner at the Palliative Care Research Cooperative Group, a national interdisciplinary research community committed to advancing rigorous palliative care science and improving care for people with serious illness. Candrian also has expanded her scope of work to include other settings, such as assisted living, Alzheimer’s care groups, and grief counseling support.

“Just slapping on a nondiscrimination policy, slapping on a safe place sign is not the kind of change that is going to actually lead to deep cultural change.”

“There’s not an LGBT-specific widows of wives or any LGBT support group, which is kind of mind-blowing in 2020,” Candrian said, noting that there’s no organized group for patients with Alzheimer’s who are LGBT. The result can be a double coming-out without an organized support structure to help. “I think there is a real need for resources that are designed for and by the community. I want to leverage this work to address those needs too.”

There are always new opportunities to use communication for healing and comfort, to provide better care.

“She brings perspective and rigor that really pushes the discipline forward,” Kutner said. “She is highlighting really important practical issues. She started with communication at hospice enrollment and I’ve been watching her find her voice. She has become a voice for advancing how LGBTQ issues are addressed and she is shining a bright light on our blind spots with regard to them. She is a true national leader on these issues. As a mentor, I’m learning from her.”

TRANSFORMING HER OUTLOOK

Cleft lip repair surgery inspires teenager to help others

By Chanthy Na and Siyab Khan

As a young child, Jennifer Falomir-Lopez just wanted to look “normal” like all the other kids. She knew she was different but couldn’t explain to her friends why she looked different. Jennifer was born with a cleft lip and cleft alveolus.

“It was really hard for me growing up because kids didn’t really understand my condition and I didn’t know what I had,” said Jennifer. “I would always tell them I fell, or I hurt my face, those were just some of the things I would say, when I was asked.”

A cleft lip occurs when the tissue that makes up the lip does not join completely before birth. This results in an opening in the upper lip. The opening in the lip can be a small slit or it can be a large opening that goes through the lip into the nose. An alveolar cleft is a cleft of the upper gum line. It most often accompanies a cleft lip and/or cleft palate.

According to the Centers for Disease Control and Prevention, each year in the United States about 2,300 babies are born with a cleft palate and 4,000 babies are born with a cleft lip with or without a cleft palate.



Brooke French, MD

THE BEGINNING OF JENNIFER’S JOURNEY

Jennifer was referred to the Cleft Lip and Palate Clinic at Children’s Hospital Colorado by her pediatrician shortly after her birth. She had her first surgery when she was just five months old to repair her lip and nose, and a few months later she had an additional lip and nose revision.

As Jennifer started attending school, kids continually bullied her and always asked about her face, despite surgeries to correct her condition as an infant. She would tell her mom about these incidents and that she felt that she could not do much because of the way she looked.

Jennifer’s mom, Maria Lopez, reconnected with the Cleft Lip and Palate Clinic to discuss additional surgical options.

“It was really hard for me as a mother to see someone bullying my child for having a cleft lip,” said Maria. “I wanted to help my daughter.”

In 2012, Jennifer and her family connected with Brooke French, MD, associate professor at the University of Colorado School of Medicine Division of Plastic and Reconstructive Surgery and co-director of the Cleft and Craniofacial Surgery Programs at Children’s Hospital Colorado. This connection would lead to a bond between Jennifer and French that has spanned the past eight years, multiple surgeries, and numerous follow-up visits.

“I met Jennifer when she was six years old and have watched her grow into the brilliant human being that she is now at 14,” said French. “She has always had a quiet confidence and focus.”

French and the Cleft Lip and Palate Clinic team at Children’s Hospital Colorado provided Jennifer and her family with additional surgical options. This time, since Jennifer was older, she was included in those discussions. With a new plan in place and her family’s support, Jennifer continued her journey to repair her cleft lip and cleft alveolus.

THE TRANSFORMATION

Jennifer described feeling worried and scared before her first surgery with French. She remembered hiding from her mom before she went to the hospital and shaking in the hospital bed before her procedure. However, French and team were able to calm Jennifer’s nerves and her revision surgery to repair her lip was a success.

Jennifer's courage and perseverance were tested throughout her post-surgery recovery period. She found it difficult to not be able to do everyday activities, but after a six-month recovery, she was finally able to see her transformation.

"I looked at my face after six months and thought to myself that I looked really different," said Jennifer. "I told my mom immediately that I wanted another one (another surgery)!"

Jennifer would go on to have several more surgeries and bone grafts to repair her cleft lip and cleft alveolus, with her most recent surgery occurring in June 2019. While the physical transformation of the surgeries can be seen, the impact has been even more profound. Jennifer has flourished with each surgery and has become an advocate for those with cleft lip and/or palate.

She speaks openly and passionately about her condition to help others learn so that other children don't have to face the same challenges and bullying she went through.

"My whole life I have lived with something that I can't control," said Jennifer. "It's no one's fault that I have this condition, but I have had people judge and not accept me for who I am."

Jennifer continues to stay in touch with French. This spring in the midst of the pandemic, she partnered with French on a research paper covering the treatment of cleft lip and palate. Through her paper for an education fair, Jennifer shared the experiences she and her family went through. Along the way, she taught her classmates about the experiences she and others have faced.

"Jennifer has strength and positivity that are inspiring," said French. "I am grateful to know her."

A TEAM OF SUPPORTERS

Jennifer will be the first to say she couldn't have gone through this without the support of her family, friends, and the team at Children's Hospital Colorado. Her family has always stood steadfastly behind her, advocating for her best interests and future.

"My family plays an important role," said Jennifer. "It's important that the whole family is involved with the care of a kid with a cleft lip."

One of Jennifer's biggest supporters was her friend Alex, whom she's known since pre-school. During her last surgery, Alex made a surprise visit to see



Jennifer Falomir-Lopez

Jennifer in the hospital. She encouraged Jennifer with laughter and helped to take away the nerves of her surgery.

"Alex has always supported me," said Jennifer. "There were times we couldn't always hang out because I had to go to a surgery, or I had a doctor's appointment, but she has always been there for me."

Jennifer was also fortunate enough to have Maureen Andrews, RN, MSN, CPN, an advanced practice nurse and clinical nurse specialist for the Cleft and Craniofacial Program at Children's Hospital Colorado by her side since she was born.

"As Jennifer has gotten older, she has had increased interest and motivation to be actively involved in her care," said Andrews. "She has developed into a wonderful, insightful, caring person who has much to offer to those who come in contact with her."

THE NEXT CHAPTER

The future is complicated by the pandemic, but Jennifer is looking forward to her freshman year this fall at Arrupe Jesuit High School located in northwest Denver. She said she plans to continue to live life to the fullest, dancing and playing competitive volleyball for the first time for a school team.

One thing Jennifer is clear about is her future career and her passion to carry the torch that was lit by French. After high school, her goal is to go to college and medical school and become a surgeon.

"At first I wanted to be a teacher," said Jennifer. "Then I met Dr. French. I saw the work that she did, and I really wanted to do that for other people. I want to help make kids feel better about themselves."

The care Jennifer has for others is reflected in her courage to share her story and in her compassion for others.

"I had it really easy," she said. "I didn't have a disease or syndrome, just a cleft lip and that was it. I felt like I never appreciated that."

JOANNE POSNER-MAYER ENDOWED CHAIR IN PHYSICAL THERAPY

Michael Harris-Love leads CU's Physical Therapy Program

By Courtney Keener



Michael Harris-Love, PT,
MPT, DSc

Michael Harris-Love, PT, MPT, DSc, who became the head of the University of Colorado School of Medicine Physical Therapy Program last year, describes himself as an “unlikely candidate” for physical therapy school.

For six years, he worked to save money for his education while attending community college along the way, and changing majors several times. “Generally speaking,” he said, “having few financial resources and a host of eclectic interests is not a recipe for academic success.”

Harris-Love worked as a computer-aided design and manufacturing technician at a Motorola plant in Arizona. During that time, he would visit the company library during his lunch to read about other careers. He found the profession of physical therapy appealing, so he began logging volunteer clinical service hours needed to apply to most PT schools.

When Motorola announced layoffs, he leapt at the chance. The severance package gave him the necessary resources to pursue his undergraduate degree as a full-time student.

During his senior year at Northern Arizona University, Harris-Love attended a career fair where he met a senior member of Mayo Clinic's admissions team. At the time, Harris-Love was considering six schools with PT programs. Mayo was not on that list.

Yet, after interviews in three states over several months, Harris-Love accepted the offer from Mayo Clinic's PT Program. It was 1995 and Harris-Love was the first Black man in enrolled in the program. After graduation in 1997, he launched his clinical career at Mayo Clinic and joined the National Institutes of Health's Clinical Center in 1999.

Most recently, Harris-Love held multiple appointments at separate locations in the Washington, D.C., area. That required shuttling between sites at the VA Medical Center, the Milken School of Public Health at George Washington University, and the College of Health and Human Services at George Mason University.

“Having held various positions in medical centers, universities, and federal government, the possibility of being affiliated with these entities at one campus at CU Anschutz was very appealing,” he said.

In that one campus, he found a welcoming home. The School of Medicine's support for the program and its dedication to inclusive, collaborative culture was an important feature. The Posner-Mayer Endowed Chair provided critical resources for recruiting Harris-Love and will allow him to implement a plan for a more diverse and equitable PT program.

Harris-Love brings extensive clinical research experience to campus. He has contributed to the development of standardized outcome measures for clinical trials involving participants with muscle disease, and his current research is focused on developing innovative exercise interventions for those with sarcopenia, or muscle loss.

A PHILANTHROPIC PARTNERSHIP

The CU PT Program celebrated its 70th anniversary in 2017. The program's previous director, Margaret Schenkman, PT, PhD, a renowned Parkinson's

JOANNE POSNER-MAYER, PT '73

Joanne Posner-Mayer earned her physical therapy degree at CU in 1973 and then worked for more than six years in Switzerland. There, she was introduced to the use of “Swiss Ball” exercise balls in physical therapy.

She returned to the United States in 1980 and continued a clinical practice. Ten years later, she began to lecture and train others on the orthopedic and sports uses of the ball.

Posner-Mayer founded Ball Dynamics International, Inc., in 1991, meeting the

growing market demand she created through her teaching. She subsequently pioneered the use of the Swiss Balls in the fitness market through her second company, Fitball, Inc. Posner-Mayer has delivered lectures nationally and internationally. She also has created instructional videos and written books. She is a recipient of the Physical Therapy Alumni Achievement Award and received an honorary doctorate in humane letters from the University of Colorado.

As a first-generation college graduate and the daughter of a Holocaust survivor, Posner-Mayer has shown profound appreciation for CU and the Physical Therapy Program through generous support. The Posner-Mayer Endowed Chair is made possible with generous commitments totaling more than \$2 million.



Joanne Posner-Mayer, PT '73, with physical therapy equipment and materials created by her company.

disease researcher, helped build the program into one of the nation's best. Graduates and benefactors like Joanne Posner-Mayer, PT '73, also made the program stronger.

In addition to establishing the Posner-Mayer Endowed Chair held by Harris-Love, she has funded scholarships to attract a diverse and talented student population and hosted annual receptions. She

is also an active member of the CU Foundation Board of Trustees, CU PT Scholarship & Endowment Board, and an emeritus member of the Physical Therapy Alumni Association.

"I am proud to be associated with such an outstanding program, and honored to express my gratitude to CU for accepting me as a student five decades ago," Posner-Mayer said. "Through this endowed chair, I hope to help create an even better learning environment for students as they pursue their education."

IMPACT FOR CU PT

"The endowed chair is in many ways a reflection of the growth and maturity of the physical therapy profession itself," Harris-Love said. "During my initial years of clinical practice at the Mayo Clinic in the late 90s, 33 states had direct access to physical therapy, whereas today, every state has some form of direct access."

Yet even as the discipline has become more widespread, the field must improve its diversity and inclusion efforts. "There were six black physical therapy directors across the country when I graduated," he said, "and there are still six today, despite the number of programs increasing during this span of time. There is still much work to be done."

Posner-Mayer said she is confident that Harris-Love will make significant contribution to those efforts.

"Dr. Harris-Love is committed to promoting a diverse and inclusive culture, and brings a perspective that will be important to the future of the program and the profession," she said.

One way to do that is to look for talented students in unexpected places in the same way that the Mayo recruitment officer found Harris-Love.

"Considering my own nontraditional academic journey," Harris-Love said, "this endowed chair will also fuel our continued efforts to recruit and support nontraditional students, and to help broaden our view of who can become a physical therapist or the next great rehabilitation scientist."

Among his goals, Harris-Love plans to strengthen existing PT residency programs, increase efforts to support rural practice, and improve PT access for underserved populations in Colorado, including urban areas including the neighborhoods near the Anschutz Medical Campus. "It means doing our part to usher physical therapy into a near future where the value of our care is linked to the public health goals of Colorado and beyond."

MICHAEL HARRIS-LOVE PROFESSIONAL APPOINTMENTS SELECTED HIGHLIGHTS

2019-present

Program Director and Professor, Physical Therapy Program, University of Colorado School of Medicine

Associate Dean, Physical Therapy Education, University of Colorado School of Medicine

Health Scientist, Geriatric Research Education and Clinical Center, VA Eastern Colorado Healthcare System

2015-2019

Associate Director, Human Performance Research Unit, Clinical Research Center, VA Medical Center, Washington, D.C.

2014-2019

Site Director, Exercise Science/Health Science Internship Program, VA Medical Center, Washington, D.C.

2014-2019

Associate Clinical Professor, Department of Exercise and Nutrition Sciences, Milken School of Public Health at George Washington University, Washington, D.C.

2013-2019

Director, Muscle Morphology, Mechanics, and Performance Laboratory, VA Medical Center, Washington, D.C.

2012-2019

Deputy Director, Polytrauma/TBI Rehabilitation Research Fellowship, VA Medical Center, Washington, D.C.

2005-2010

Adjunct Assistant Professor, Department of Physical Therapy and Rehabilitation Science, University of Maryland

2005-2008

Assistant Professor, Program in Physical Therapy, George Washington University, Washington, D.C.

2004-2009

Adjunct Faculty, Krannert School of Physical Therapy, University of Indianapolis

1999-2005

Rheumatology Clinical Specialist, Physical Therapy Section, Rehabilitation Medicine Department, Mark O. Hatfield Clinical Center, National Institutes of Health, Bethesda, Maryland

Education

2010 Georgetown University/Children's National Hospital, Post-Doctoral Fellowship

2004 University of Indianapolis, Doctor of Health Science

1997 Mayo School of Health Sciences Program in Physical Therapy, Rochester, Minnesota, Masters of Physical Therapy

1995 Northern Arizona University College of Health Professions, Bachelor of Science, Cum Laude

REDUCING CANCER DISPARITIES IN COLORADO

CU Cancer Center sponsors research to help vulnerable populations

By Jessica Cordova

The CU Cancer Center has launched five studies that are focused on addressing disparities in care and outcomes for Black and Hispanic communities in Colorado.

According to the American Cancer Society, Black Americans have shorter survival rates and higher death rates among all racial groups in the United States. Also, Hispanics in Colorado are more likely to be diagnosed with late-stage cancer and have limited access to proper treatments.

To address these disparities, the CU Cancer Center's Office of Community Outreach and Engagement is leading efforts to promote a better understanding of the causes and to improve access to timely care.

Richard Schulick, MD, MBA, director of the CU Cancer Center and chair of the Department of Surgery, said: "The vision of the CU Cancer Center is to prevent and conquer cancer. Together. Our physicians and researchers are working together to enhance the ability of all Coloradans to have access to the best cancer care."

The CU Cancer Center's Office of Community Outreach and Engagement, which was started in 2019, is leading these efforts. This program adds to the Cancer Center's long-standing history of commitment to advocacy, education, outreach and engagement throughout the state of Colorado.

The office's goal is to engage people closer to their homes and help them prevent and detect cancer early enough that there is still a chance for treatment to extend their life. These five studies, which each received a \$100,000 grant, demonstrate the CU Cancer Center's commitment to Colorado communities.

"I hope to see the CU Cancer Center be the catalyst of change through breakthrough research and state-of-the-art treatments that decrease the unequal burden of cancer in Colorado," said Evelinn Borrayo, PhD, associate director of the Community Outreach and Engagement office in the CU Cancer Center and professor at the Colorado School of Public Health.

HEAD AND NECK CANCER CLINICAL TRIALS

Jessica McDermott, MD, assistant professor in the Department of Medicine, aims to increase the representation of underserved populations in head and neck cancer clinical trials.

Because expert care for head and neck cancer is not widely available in community clinics, McDermott plans to identify historic patterns and locations of care for Spanish-speaking head and



Jessica McDermott, MD

neck cancer patients. This study will compile data about when and where patients are receiving health care. With census and CU Cancer Center data, McDermott wants to establish longitudinal partnerships with community providers and patients.

The initiative will also reach and engage key community partners to join in efforts to educate and advocate for sustained preclinical and clinical research involvement of Hispanic patients. A pilot clinic with Spanish-speaking doctors, nurses, and staff, will open within a year.

"This pilot clinic will focus on patients with head and neck cancer, but our ultimate goal is to broaden the scope to include all cancer types," said McDermott.

The head and neck cancer project aims to improve the quality of patient care at the same time that it promotes research that uncovers racial and ethnic disease differences and treatment responses.

LUNG CANCER AND PERSONALIZED CARE

The benefits of advanced lung cancer treatments, especially precision medicine care that targets specific genetic mutations, have been limited in Colorado depending on the racial and socioeconomic status of some patients.

Tejas Patil, MD, assistant professor of medicine, and his team are creating a database that gathers specific information about patients, including their sex, race, ethnicity, medical comorbidities, insurance status, and use of palliative care.

Analyzing information from the database should help physicians understand how therapies and side effects vary in their patients based on their racial or socioeconomic status. Due to limited representation of patients from diverse backgrounds in clinical trials of lung cancer treatments, information about predictive biomarkers, negative side effects, and effectiveness of the drugs is scarce.

"These disparities can have an incredibly negative impact on those patients. For example, potentially losing years of life that they could have had with precision medicine," said Patil.

BRAIN AND CENTRAL NERVOUS SYSTEM CANCER

Black and Hispanic children diagnosed with brain and central nervous system cancers have worse outcomes than white children do. With a



Tejas Patil, MD



Adam Green, MD

grant from the Office of Community Outreach and Engagement, researchers at CU Cancer Center and Children's Hospital Colorado are collaborating to better understand

these disparities, as well as develop ways to reduce the burden of disease in these populations.

Adam Green, MD, assistant professor of pediatrics, and his team will use clinical records of patient populations to add factors such as primary language and distance away from the hospital. They also will use molecular data collected from patients' tumor samples to help determine whether there are biologic differences based on race and ethnicity.

"We will look at the effect of all these variables on how widespread patients' tumors are when they're diagnosed, their treatment, and their survival," Green said. "We will analyze all these data to try to determine the source of demographic and socioeconomic disparities."

With the data, they plan to develop two pilot interventions.

First, they will focus on educating primary care providers who are more likely to diagnose children from underserved, low-income, and rural populations. To do this, Green and his team will use an existing early diagnosis tool called HeadSmart that helps to identify pediatric brain tumor symptoms.

Second, they will conduct qualitative interviews with patients and their families to determine the challenges involved with treatment and enrollment in clinical trials. With the help of multilevel community engagement, Green and his team hope to improve the outcomes of underserved patients diagnosed with central nervous system tumors in Colorado and to develop and refine interventions.

LEUKEMIA TREATMENTS

Newly diagnosed cases of leukemia depend on genetic and molecular testing. With this information, physicians can determine treatment options best suited for patients based on genetic mutations, fusions, and other biologic features. While these tests are crucial for care, not all patients with leukemia have access to them because they are uninsured or underinsured. As a result, some patients do not have access to cutting-edge treatments.

This study focuses on creating a mechanism that allows for molecular testing in metro Denver, where many uninsured or underinsured patients are treated. The goal is to provide access to this highly sophisticated molecular evaluation by pilot testing the program with 25 patients this year.



Lia Gore, MD

"If a patient's leukemia has an identified abnormality that could be sensitive to a targeted therapy, recommendations for access to these therapies will be made," said Lia Gore, MD, professor of pediatrics and co-director of the CU Cancer Center's Developmental Therapeutics Program. "Some patients may also be eligible for newer treatments like our on-campus chimeric antigen T-cell treatments, and this potential option would also be discussed."

Gore and her team hope to create an approach that can be exported to sites around the state and Rocky Mountain region with minimal modification. The testing also could be modified to provide care to patients with other cancers.

BREAST CANCER CARE

This year, approximately 4,500 women will be diagnosed with breast cancer in Colorado, according to the American Cancer Society. Among those diagnosed, Black and Hispanic women, younger women, postpartum mothers, and women living in rural parts of the state will have higher mortality rates and worse outcomes.

The breast cancer program at the CU Cancer Center aims to develop tools for better community outreach and engagement for women of color, Spanish-speaking women, and rural women.



Virginia Borges, MD

The effort, led by Virginia Borges, MD, professor of medicine, starts by using virtual focus groups to identify the unmet needs to breast cancer awareness and survivorship, including understanding the risks and options of lifestyle modifications to reduce the risk of breast cancer and breast cancer recurrence in underserved populations.

Based on the information gathered from these groups, Borges and her team plan to overhaul the existing community outreach materials, which will be available online via social media, local programming, and community centers. They will provide a "breast cancer tool-box" to primary care and underserved care clinics across Colorado.

Finally, Borges and her team will expand the recruitment of breast cancer patients to the Oncology Research Information Exchange Network, which is a research partnership among top North American cancer centers. This effort will ensure diverse representation in translational breast cancer research.

ALUMNI CORNER

WHERE ARE THEY NOW?

2010 CU School of Medicine Presidential Scholars

By Zachary Noriega

In 2010, four incoming medical students at the CU School of Medicine were awarded the Presidential Scholarship, which allowed them to pursue their education and their dreams without worrying about financial burdens and growing debt. The Medical Alumni Association followed up with these Class of 2014 graduates to see where they are today.



CARMEN VANDAL SEPULVEDA, MD '14, a Colorado native, is the daughter of working-class Chilean immigrants. The new mother of son Declan is now a family medicine physician at Swedish Medical Center in Englewood, Colorado.



BENJAMIN MEDRANO, MD '14, who is biracial with Mexican and Irish descent, grew up in a low-income family. He is now a psychiatrist in the New York City hospital system in East Harlem, working with a diverse patient population.



RYAN ROTH, MD '14, is now a hospitalist living in Hawaii with his new wife, bouncing between the different islands to work at the rural hospitals in the state. Many of his patients are apprehensive about leaving their island for care.



MARIA VELAZQUEZ-CAMPBELL, MD '14, is now a pediatric hospitalist living in New Mexico with her husband. She works for the University of New Mexico Children's Hospital, where she is associate program director for the pediatric residency program.

All four presidential scholars attended the University of Colorado for their undergraduate education. Drs. Vandal, Roth and Velazquez-Campbell attended CU Boulder, and Dr. Medrano transferred from Naropa University to CU Boulder, and eventually, CU Denver. Drs. Vandal and Velazquez-Campbell each knew they wanted to be doctors from the age 5, while Drs. Roth and Medrano realized in their mid-20s that they were interested in medicine. Dr. Roth, as a result of recovery from a hip injury, and Dr. Medrano, seeking deeper academic pursuits in psychology.

The physicians all recalled the long nights spent studying and the challenging work they faced during medical school. They reminisced about the lifelong friendships that were forged and expressed how proud they were to be CU graduates. None of them will forget the moment they received the phone call to tell them they had been selected for the Presidential Scholarship. Each scholar expressed profound gratitude they feel for the award. They stated that it allowed them to pursue the specialty of medicine they were passionate about, rather than choosing higher-paying specialties or locations to work just to be able to pay off medical school debt.

Each scholar is contributing to the training of the next generation of medical health professionals.

Dr. Vandal remains involved with CU, precepting medical and nurse practitioner students, mentoring a first-generation medical student, helping with curriculum reform, and is involved with Community Students Together

Against Healthcare Racism (C-STAH). She is also involved with residency admissions at Swedish Medical Center.

Dr. Medrano is on the faculty at New York Medical College for their residency training, and teaches community psychiatry, mentoring both medical students and residents.

Dr. Roth recently signed a contract to work at Queens Medical Center, a tertiary care center that educates medical students, residents, and fellows from the John Burns School of Medicine, and will be part of the teaching staff starting in October.

Dr. Velazquez-Campbell is active in medical education at the University of New Mexico. When she first moved to Albuquerque, she mentored several third-year students through their clerkship, and in her new role, now helps with training all pediatric residents.

When asked what advice they give to current medical students, they all agreed that taking time to care for yourself is critical to avoid burnout. Dr. Vandal urges students to practice the form of medicine that will make them happiest. Dr. Medrano suggests meditation and learning how to be your own advocate. Dr. Roth reminds students that when another physician, resident, or even patient, treats you poorly, it is not a reflection of you, but of that person's life. Dr. Velazquez-Campbell urges students to maintain the pillars that hold up people – family and friend relationships.

ALUMNI REUNION

In place of an in-person gathering, the CU Medical Alumni Association hosted a virtual reunion on September 24-25, 2020, for School of Medicine class years ending in 0 and 5, and all graduates from 2010-2020. We are monitoring the situation around the COVID-19 pandemic and look forward to gathering in person when it is safe to do so. Contact Vanessa Duran at vanessa.duran@cuanschutz.edu if you are interested in helping to reach out to your classmates to recruit for the next reunion.



Meha Semwal, MD '20



Jessica Smith, MD '20

CONGRATULATIONS TO THE CLASS OF 2020 For the first time in the history of the University of Colorado School of Medicine, Match Day and Commencement ceremonies were held virtually. We are proud of the Class of 2020 for their resilience during the COVID-19 pandemic, and we are impressed by all the ways they stepped up around the state to help fight the coronavirus. We express our gratitude to our graduating student representatives on the CU Medical Alumni Association Board of Directors: Jessica Smith, MD '20, and Meha Semwal, MD '20, MPH. Dr. Smith is headed to North Colorado Medical Center for residency in family medicine, and plans to remain on the board of directors as an alumna. Dr. Semwal is headed to the VA Greater Los Angeles Healthcare System for residency in psychiatry. We thank Drs. Smith and Semwal for their service to the board and wish them the best as they embark on the next chapter of their medical journey.

We are always looking for new board members! If you are interested in getting involved, please contact Vanessa Duran at Vanessa.Duran@cuanschutz.edu.

MEDICAL ALUMNI ASSOCIATION SCHOLARSHIP

For the first time, the Medical Alumni Association Scholarship endowment will provide a **four-year scholarship** to a medical student. We are able to do this because of generous gifts from alumni like you! We congratulate Kevin Kamel on being the first recipient of this four-year award! If you are interested in supporting student scholarships, you can contact Vanessa Duran at Vanessa.Duran@cuanschutz.edu.

VIRTUAL HAPPY & HEALTHY HOUR

The Happy & Healthy Hour series was created to bring the CU Anschutz alumni community together for practical advice on personal wellness as health professionals. Our featured speakers will share their expertise on resiliency and wellness in virtual webinars. We hope you will join us the second Wednesdays of each month! Register at <http://cvent.me/ebPDOV>. You can also find previous recordings on the CU Anschutz Alumni YouTube channel. Contact alumnierevents@cuanschutz.edu for more information.

CYNTHIA K. HAMPSON FUND

The CU Medical Alumni Association thanks all the alumni benefactors including Carol Stamm, MD '91, Jyl Voss, MD '91, and Jan Woods, MD '91, co-founders of the Cynthia K. Hampson Fund. This award is presented to a fourth-year medical student for excellence in and commitment to anesthesiology, in memory of Cynthia K. Hampson, MD '91. The CU Medical Alumni Association congratulates our two Class of 2020 recipients of this award, Mario Hernandez, MD, and Kelsey Repine, MD, and warmly welcomes both to the CU alumni family!

CONNECT ON SOCIAL MEDIA

The CU Anschutz alumni community has expanded to social media! CU Anschutz Alumni has officially launched an alumni LinkedIn group focused on professional development tips and resources. Join us to connect with former classmates, contribute to discussions, share your knowledge, and learn from fellow alumni! CU Anschutz alumni has also launched an Instagram page: [@cuanschutzalumni](https://www.instagram.com/cuanschutzalumni). This page will serve as a visual "class notes" so you can keep up with former classmates and colleagues. Did you get married or have a baby recently? Start a new job, embark on new research, retire, or publish an article or book? Did you recently receive an award, or do humanitarian work in your community or abroad? Do you want to share a photo of a memory from your time in school? We want to hear from you! If you have a photo and story you would like featured, please submit them to Zachary.Noriega@cuanschutz.edu.

CHARLES DINARELLO AWARDED THE 2020 TANG PRIZE IN BIOPHARMACEUTICAL SCIENCE

University of Colorado Distinguished Professor Charles Dinarello, MD, was named one of the winners of the 2020 Tang Prize in Biopharmaceutical Science “for the development of cytokine-targeting biological therapies for treatment of inflammatory diseases.”

Dinarello shared the prize with Sir Marc Feldmann, PhD, senior research fellow at Somerville College at University of Oxford, and Tadimitsu Kishimoto, MD, PhD, professor at Osaka University’s Immunology Frontier Research Center.

“Development of biologic drugs, or biologics, has revolutionized the treatment of diseases,” the Tang Prize Foundation said in its announcement of the award in June. “This year, the Tang Prize Foundation recognizes the development of biologics targeting three proteins in our immune system called cytokines.”



Interleukin (IL-1) was the first cytokine to be identified and shown to be a central mediator of inflammation. Dinarello, professor of medicine and immunology, is considered one of the founding fathers of cytokines and his pioneering work set the foundation for establishing IL-1 as a potent mediator of fever and inflammatory diseases, which led to the development of therapeutics for this important cytokine. IL-1 has profound multi-organ, multi-tissue, and multi-cellular impact on cell signaling.

NON-HORMONAL TREATMENT FOR MENOPAUSAL SYMPTOMS OFFERS HOPE OF RELIEF

A non-hormonal therapy to treat hot flashes and other symptoms associated with menopause was found to be effective in a recent clinical trial, according to a published study by a team of researchers including faculty from the University of Colorado School of Medicine.

Fezolinetant, an oral, non-hormone therapy in clinical development, offers relief for hot flashes and night sweats, which are the most common menopause-associated symptoms for which women seek treatment. About 80 percent of American women experience these symptoms.

“An effective alternative to estrogen for the treatment of hot flashes is needed to provide better care,” said Nanette Santoro, chair of the

Department of Obstetrics and Gynecology at the University of Colorado School of Medicine, and an author of the study published online in August by the journal *Menopause*. “There are some medications that can be used, but all have significant side effects and are of lesser efficacy than estrogen.”

The study reviewed the experience of 352 women with moderate to severe menopausal vasomotor symptoms, such as hot flashes, who were enrolled in a 12-week study that compared treatment with fezolinetant versus a placebo. The treatment was tested in a range of dosages.

“The occurrence of VMS [vasomotor symptoms] interfere with sleep, concentration, memory, work productivity, and personal relationships and has been linked to feelings of depression, irritability, anxiety, fatigue, and social embarrassment/isolation,” Santoro and her co-authors write. “All of these factors contribute to the observed negative influence of VMS on psychological well-being and health-related quality of life.”



COVID-19 VACCINE TRIAL IN COLORADO LED BY SCHOOL OF MEDICINE AND UCHealth

Researchers at the University of Colorado School of Medicine and UCHealth on the CU Anschutz Medical Campus announced in July that they are recruiting qualified patients throughout Colorado for a study testing a promising COVID-19 vaccine candidate.

The recruitment period will run about two months at UCHealth University of Colorado Hospital, which is the only hospital in Colorado for this study.

“Our site here at University of Colorado Hospital is part of a nationwide network called the COVID Prevention Network, which is set up so that it has a cohort of sites that are available to sequentially enroll into multiple vaccine studies,” said Thomas Campbell, MD, an infectious disease physician at the CU School of Medicine and University of Colorado Hospital. “If it works, the Moderna vaccine could be a real game-changer for the pandemic.”

UCHealth and the CU School of Medicine are recruiting 1,000 patients for the trial, and participants will be monitored for at least a year to determine the vaccine’s safety and whether they contract COVID-19. Patients from throughout Colorado will be invited to participate,



though they will have to travel to University of Colorado Hospital for their appointments.

The emphasis of this vaccine trial is on demonstrating its efficacy in people who are most at-risk for contracting and becoming ill from COVID-19. This includes those who could be vulnerable because of their occupation, such as employees of crowded facilities, health care workers who treat patients with COVID-19, first responders, and those who work in food processing facilities.

Individuals in higher-risk groups, including Black, Indigenous and Hispanic patients, as well as those with certain health conditions, including those over 65 years old and people suffering from diabetes, obesity, heart disease, lung disease, or chronic kidney disease, will be recruited for the study. Participants in the randomized, observer-blind trial will receive either the vaccine or a placebo.

CHILDREN'S HOSPITAL COLORADO RANKED NO. 6 IN THE COUNTRY

Children's Hospital Colorado ranked No. 6 on U.S. News & World Report's Honor Roll of best children's hospitals, which was released in June. Children's Hospital Colorado is the only nationally ranked children's hospital in Colorado and the surrounding 12 states

The annual ranking evaluates hospitals in 10 specialties, and Children's Hospital Colorado is highly ranked in all of them, with seven specialties ranking in the top 10. The hospital ranked No. 1 in gastroenterology and gastrointestinal surgery, No. 4 in diabetes and endocrinology, No. 5 in pulmonology and lung surgery, No. 6 in cardiology and heart surgery, No. 8 in urology, and No. 9 in cancer, and No. 10 in neurology and neurosurgery.

In addition to the ranking, two School of Medicine faculty members were featured by U.S. News in a special report about innovative practices to care for patients during the COVID-19 pandemic.

- Kyle Annen, DO, assistant professor of pathology, and medical director of Transfusion Services and Patient Blood Management at the hospital, played important roles in collecting convalescent plasma.
- Jessica Hawks, PhD, assistant professor of psychiatry, and clinical director of outpatient services at the Pediatric Mental Health Institute, for helping children cope with uncertainty and struggles around COVID-19.

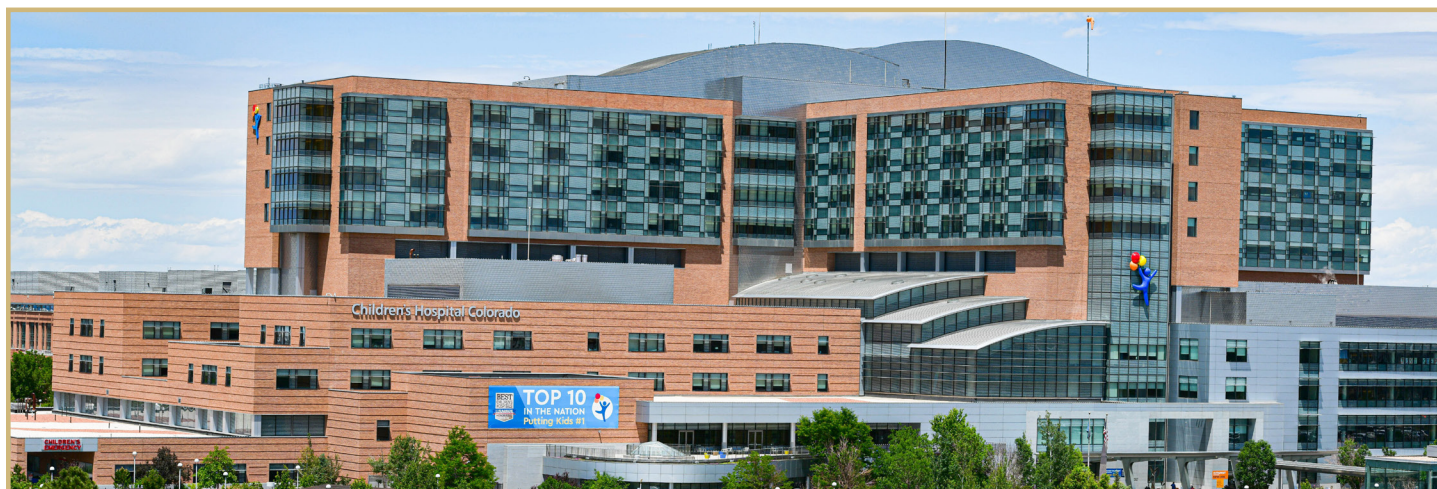
DORIS DUKE CHARITABLE FOUNDATION RENEWS SUPPORT

The Doris Duke Charitable Foundation this year renewed its commitment to provide funding to the University of Colorado Anschutz Medical Campus through the foundation's Fund to Retain Clinical Scientists.

The program provides supplemental, flexible funds to support the research of early-career physician-scientists working on clinical research projects while facing extraprofessional demands of caregiving. The campus has organized a coalition of mentors and sponsors, and received additional support from the School of Medicine to maximize the success and sustainability of the program.

The Anschutz Medical Campus has had funding from the Doris Duke Charitable Foundation for the past five years and with it, the School of Medicine has supported many clinical researchers. CU is one of 10 medical schools to receive this support from the foundation.

Judy Regensteiner, PhD, professor of medicine and director of the Center for Women's Health Research, and Anne Libby, PhD, professor and vice chair for academic affairs in emergency medicine, led the School of Medicine's effort to renew the important grant.



THE FOREST

Reilly Quist

standing here
with your lungs
held in my hands
dissected out
primary, secondary, tertiary bronchi
I finally feel you here

I took and took
each layer of
skin, muscle, vessels, nerves
to build a map
in my head

but each step
made you smaller and smaller
until almost nothing
was left

to take and take
with no way
to give anything back
this is not me
I don't want to feel you here

until
holding your lungs
I began to see
tree roots
and a trunk

and then I realized
you are my giving tree
selflessly showing me
the inside of
every patient I'll see

I breathe in
and out easily
for the first time
in many weeks

when I hear
my first heart murmur
it's your heart
I imagine
grounding me

when I receive
my first patient hug
it's also your arms
around me

these days
I seem to feel you
everywhere
the one who helped me
see the forest
through the trees



Reilly Quist is a student in the CU SOM Class of 2022. After being diagnosed with hip dysplasia and undergoing surgery midway through medical school, she began writing poetry to help navigate both experiences in medicine. She grew up in Delta, Colo., and is passionate about rural primary care. Her poem was published in *The Human Touch*, an annual anthology of poetry, prose, photography, and graphic art by the Anschutz Medical Campus community.

FACES

James Carter, Jr.

I gazed around the room
at all the Faces
primed to discover truths that lay hidden
beneath privileged shells
Unconscious bias training
for those unaware of microaggressions and silent terror
Three hours
Three hours to capture the essence of my experience
as if I were a multicolored butterfly
drifting past a distant sightline
into their embrace

I looked around the room
at all those tranquil Faces
and wanted to tell them
I am terrified of Police
of firearms and helicopters
I am terrified to walk down the street

They will shoot you, Son
My Daddy used to say
as he laid down his service weapon
beside his badge

They will shoot you

I looked around the room
at all those curious Faces
and so wanted to tell them
I am terrified of Landlords
how securing shelter is a courageous act
that flashing my bootstraps pulled high is humiliating
a futile shield from their refusals to let me in

They will shoot you, Son

I looked around the room
at all those introspective Faces
and wanted to tell them
I am terrified of Bosses
of weaponized appraisals that my uniqueness
brands me unfit for appreciation

They will shoot you, Son



James Carter, Jr., MD, assistant professor of medicine in the Division of Cardiology, is board certified in internal medicine, cardiology, and vascular medicine. He focuses on social determinants of health, nutrition, and wound healing. His poem was published in *The Human Touch*, an annual anthology of poetry, prose, photography and graphic art by the Anschutz Medical Campus community.

I looked around the room
at all the doleful Faces
and wanted to tell them
I am more than what they allow me to be
how time and again
they thrash my sapience and expertise
I wanted to tell them every day I absentmindedly caress my scars

Every day

I want to breathe fairness and light
deep
reparative
no more short gulps of fear
I want to dance under stars with dreams deferred
I want to cherish my belonging
bury my shame
and cleanse with the tears of my ancestors
I want to exist
involute and serene

They will shoot you, Son

I looked around the room
at all the uncomfortable Faces
I wanted to tell them
everything

Instead I chose to remain steadfast and free
regal with heritage and legacy
steeled to endure each trespass that may come

They will shoot you, Son

They will shoot you

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"Connecting alumni with each other and the university."

Advancing Science and Improving Care UNIVERSITY OF COLORADO SCHOOL OF MEDICINE

Support a Diverse and Equitable Healthcare Workforce

Philanthropy is critical to creating a diverse and equitable healthcare workforce. Alyssa Blood Valenti, MD '17, and her family, are making a difference. Named in honor of Dr. Blood's grandmother, the Charlean Brooks Blood Endowment for Medical Education provides important financial resources to help students achieve their dreams of becoming tomorrow's medical leaders. By partnering with the CU School of Medicine, benefactors like you can make a lasting impact on students, as well as the future of medicine.

To support diverse students with a named scholarship fund, or a gift to the **CU School of Medicine Diversity Scholarship Fund**, contact Travis Leiker at travis.leiker@cuanschutz.edu or 303.724.2754.



“Scholarship support allows me to focus on earning my medical degree, as well as pursue other leadership opportunities, like addressing the needs of underrepresented students in medicine. As I think about where my career will take me, I feel grateful for the Blood family's investment in my future.”

Stephanie Nwagwu
CU School of Medicine Class of 2021
Blood Family Presidential Scholar



School of Medicine
UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS