Dean Reilly’s Vision
An interview with John J. Reilly, Jr., MD
1 Letter from the dean
2 In the news
4 Q&A
Dean John Reilly, Jr., discusses his experience and vision
8 Research
John Carroll and patient work to improve clinical trials
10 Community
Roberta Capp creates a program to help frequent ER users
12 Community
DAWN Clinic offers care and experience
14 Research
A muscle test that works In the gym and the ICU
16 Research
Kristen Boyle studies whether obesity is inherited in the womb
18 Research
Can disgusting photos change your taste in high-calorie food?
19 Faculty
Photos of CU surgeons are a work of art
20 Patient Care
CAMP offers total care for pregnant teens
22 Patient Care
CU receives grants to improve treating the body and the mind
24 Alumni corner
26 Peaks

John J. Reilly, Jr., MD
The new Dean discusses his background and the School of Medicine’s future.

Cover photo and left by Glenn Asakawa.

Robert Capp, MD, MPH, page 10

DAWN Clinic, page 12

Kristen Boyle, PhD, page 16
Increasing the RPMs

The University of Colorado School of Medicine is poised for significant achievements in the years ahead and we are taking steps to ensure our faculty, students and staff can fulfill our mission to improve function, relieve suffering, and increase longevity of those we serve.

This fall, I announced the Transformational Research Funding initiative to support development of multidisciplinary research programs that will make a significant impact in their area of focus and will attract additional talent to the School to work together developing new knowledge.

More than 60 letters of intent were submitted by our faculty and final applications are due in December. We are convening a panel of external experts to review the applications and we will select and support no more than four proposals, each with a budget of between $10 million and $20 million over a five-year period. I expect to announce our selections in January at the State of the School address.

The ideal proposals are ambitious and emphasize collaboration. They build on our strong foundation here on the Anschutz Medical Campus and are large enough in scope to raise our national stature. We believe that funding these proposals will position CU as a leader in cutting-edge and emerging fields, attract extramural funding, help recruit and train outstanding faculty, enhance education and training and positively impact human lives and society in Colorado, the nation and the world.

These activities will strengthen the education we provide. We already are training excellent new physicians, scientists, physical therapists, physician assistants and other health care professionals and the funded projects will attract additional talented students to our School.

When the University of Colorado Board of Regents met on the Anschutz Medical Campus last summer, I discussed what made becoming Dean of the School of Medicine such an attractive opportunity. The problems we have here are related to managing growth, in contrast with many other academic medical campuses, where leaders are fighting to hang on to what they have.

Our faculty clinical practice has been a source of strength that has allowed for much of our growth, our research programs have remained competitive in a tough funding environment and our philanthropic support has been increasing. We aim to make all of these sources of support even stronger. We believe that the Transformational Research Funding initiative will help with all those efforts.

The hard work of our faculty and the smart investments of those who built the Anschutz Medical Campus have started the wheel turning and it’s my job to increase the RPMs. Working together, we will make it happen.

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.

**Helen Lawler, MD**, instructor of medicine, in June discussed an advocacy group’s advertisement warning of health problems related to soda consumption. She told 9News of Denver that obesity in the U.S. a “major problem” and “I do think limiting soda and drinking more water is definitely recommended.”

**Amber Khanna, MD**, assistant professor of medicine, explained her research finding that living at high altitude is associated with increased risk of sudden infant death syndrome (SIDS). “This is a call for people living in high altitudes to be very vigilant” about other factors that may lower SIDS risk, “like putting the baby on his back every time, no smoking, encourage breast-feeding,” she told The New York Times in May.

**Linda Barlow, PhD**, professor of cell and developmental biology, in May told CBS4 of Denver that she and fellow researcher Dany Gaillard, PhD, have discovered a key genetic pathway that controls the renewal of taste buds, a finding that could help cancer patients who lose their sense of taste. “We might be able to have like a topical cream or some kind of a lollipop that patients could suck on from time to time that would give them a local burst of this signal that they could perhaps retain or maintain their sense of taste a little bit better.”

**Michelle Barron, MD**, associate professor of medicine, in September discussed news reports of pollution in Rio de Janeiro’s water less than a year before the 2016 Olympics. She told a sports columnist for the Colorado Springs Gazette that her advice to a patient would be simple: “I would tell you to not go in the water.”

**Emily Townsend, DPT**, who graduated from the School of Medicine’s Physical Therapy Program in May, told the Daytona Beach News-Journal that her impaired vision helps her relate to patients. “Many of my patients and their families have experienced significant loss or hardship when it comes to their physical challenges,” she said. “I am not only able to empathize, I have also experienced a loss regarding my physical abilities. I believe this connection allows for a mutual understanding which allows for extremely open and effective communication.”

**Kristen Boyle, PhD**, assistant professor of pediatrics, explained in Time magazine her research suggesting that children of obese mothers may be predisposed to being obese due to their womb environment. “The next step is to follow these offspring to see if there is a lasting change into adulthood,” she said in June.

**Fred Hirsch, MD, PhD**, professor of medicine and pathology, reported to the Denver Post in September that progress in efforts to treat lung cancer have been significant. “We are on the way to make lung cancer a chronic disease,” he said. “And not that far in the future.”

**David Tinkelman, MD**, professor of pediatrics, discussed with Denver's 9News the use of vaporizers to consume marijuana and the increasing use by teenagers. “[Kids’] fear of getting caught has gone down, and that’s a big deal," he said. “Once you remove that fear of getting punished, they’re going to experiment more, and I’m not surprised one bit about it.”

**Robert Eckel, MD**, professor of medicine and of physiology and biophysics, was quoted in an article by Kaiser Health News and published by PBS in September saying physicians should talk with older patients about prescribing statins when there’s scant evidence that the benefits outweigh the risks. “It’s a gray zone,” he said, referring to the need for more clinical trials.
Holly Wyatt, MD, associate professor of medicine, described her experience as medical director on the television program, “Extreme Weight Loss,” in an interview with the Aurora Sentinel in May: “The first season I was a little nervous — I mean, here I’d agreed to do reality TV, and there were colleagues here who thought I was crazy, because when you think reality TV, you don’t think that mixes with an academic institution. But it’s been inspiring for me, my staff, and it just fits so nicely with what we do.”

Huntington Potter, PhD, professor of neurology, explained to the CBS affiliate in Denver a promising clinical trial for Alzheimer’s disease occurring on the Anschutz Medical Campus. “We’ve started a clinical trial on a drug called Leukine,” he said. “We discovered it because people with rheumatoid arthritis almost never get Alzheimer’s disease.”

James Tod Olin, MD, assistant professor of pediatrics, told the HealthDay news service in September that there can be benefits for a child who gets a tonsillectomy. “When you can eliminate a child’s sleep apnea symptoms, there are important developmental and cognitive [mental] benefits,” he said.

Marian “Emmy” Betz, MD, MPH, associate professor of emergency medicine, said on Colorado Public Radio in September that older drivers should consider planning for a “driving retirement.” “Retirement is something that happens to all of us, right?” she said. “And maybe we even look forward to it. You prepare for it, you make financial plans, you think about what you’re going to do.”

Inigo San Millán, PhD, assistant professor of physical medicine and rehabilitation, commented on fitness wearables in Outside magazine in September: “The vast field of data that these sensors will allow will revolutionize what we know about fitness.”

Paula Riggs, MD, professor of psychiatry, told The Globe and Mail of Toronto, in May: “Adolescents who start regularly using marijuana before the age of 17 have neurocognitive deficits that may not be fully reversible with abstinence.”

Cyril Mauffrey, MD, associate professor of orthopedics, described in August on 9News, the NBC affiliate in Denver, a less-invasive hip surgery he developed to treat a patient who declined blood transfusions for religious reasons. “My belief is that this is the tip of the iceberg,” he said. “I think with the elderly population, more fractures of the socket of the hip joint, patients who are not able physiologically to withstand long surgeries with blood loss and long incisions, I think this will benefit them greatly.”

Robert Dellavalle, MD, PhD, MSPH, associate professor of dermatology, said UV photos are a useful tool to show young people the damage caused by tanning. “I personally feel there’s nothing we can do that’s more effective than to show a person their picture,” he told the Houston Chronicle in May. “You have a picture of your face and you’re seeing damage on your face. It’s so striking that a lot of teenagers didn’t want to see it.”
John J. Reilly, Jr., MD, became Dean of the School of Medicine and the University’s Vice Chancellor for Health Affairs in April. Prior to joining the University of Colorado, he was at the University of Pittsburgh School of Medicine beginning in 2008. In 2011, he was appointed the Jack D. Myers Professor and Chair for Pittsburgh’s Department of Medicine. Reilly’s education and training include an undergraduate degree in chemistry from Dartmouth College and a medical degree from Harvard Medical School, with postgraduate work at Brigham and Women’s Hospital in Boston and at Intermountain Healthcare in Salt Lake City.

While at the University of Pittsburgh, Reilly oversaw the grants administration enterprise for the Department of Medicine, providing a broad view of academic research there and shaping his ideas for the elements of success in research. His personal research activities are focused on pulmonary diseases, including emphysema, chronic obstructive pulmonary disease and lung cancer.

In addition to his participation in multidisciplinary research, Reilly has extensive experience in creating and working in multidisciplinary clinical programs. He participated in the founding of the Lung Transplant program at Brigham and Women’s Hospital in 1992, and since then he has worked in a comprehensive lung cancer program, a multidisciplinary critical care service running a surgical intensive care unit and two lung volume reduction surgery programs. In his role as department chair at the University of Pittsburgh, he reorganized the liver and renal transplant areas to a more integrated model functioning as a unified team.

In this Q&A, Reilly talks about his background and offers his perspective on the future of academic medicine and the University of Colorado School of Medicine.

Did you always want to be a doctor?
According to my mother, yes. There’s actually no good reason for that. There are no doctors in my family before me and we didn’t have particularly close social relationships with any physicians. I guess I was attracted to what my concept was of being a doctor, which was not grounded in any reality of what being a doctor is actually like.

Do you have siblings who went on to become doctors?
I’m the oldest of eight kids. I have two younger brothers, No. 3 and No. 8 in the lineup, who are physicians. They both went to Dartmouth like I did. My brother Jeffrey, he’s the third of the eight, is a vascular surgeon.
in Atlanta, Georgia, which is where we went to high school and is where his wife is from. My youngest brother, Philip, who just turned 50, so he's eight years younger than me, is a family practice doctor in Seattle. He manages one of the county health clinics there that primarily cares for immigrants from Mexico and Central America.

What did your parents do?
My father worked for IBM, primarily in marketing and sales, and was quite successful, so we moved a lot. My mother left the workforce when she had me and then pretty much had her hands full with eight kids in eight years.

You went to Dartmouth. Why did you choose Dartmouth?
It was a different time back then. I think I applied to three colleges. I didn't know anything about Dartmouth. I didn't know anybody from Dartmouth. And I didn't visit Dartmouth until my first day there. I was interested in math at the time and Dartmouth sent a recruiter through our high school in Atlanta who talked about the math department. And Dartmouth was a really long distance from Atlanta and I was interested in attending school a really long distance from Atlanta.

Because it was Atlanta or because you were ready to get out of the house?
The answer to your question is yes.

When did you graduate from Dartmouth?
I graduated from Dartmouth in '77 and I did not major in math after all. I majored in chemistry. I finished early at Dartmouth, in December. The next fall, I started at Harvard Medical School.

And you stayed there.
I did my internal medicine residency at Brigham and Women's Hospital in Boston. And then my pulmonary and critical care fellowship in the Harvard Fellowship Program, which was at Brigham, Beth Israel Deaconess and the VA.

Did you always want to stay in Boston?
No, we were always going to move. We were going to move after medical school, but my wife, Lise, had just been promoted and it wasn't like there was a shortage of good residencies in Boston, right? Then we were going to move after residency, but my wife had just been promoted again. And then we were going to move after fellowship, but it wasn't a great time to move. We decided we weren't going to ask our kids to move in the middle of high school. And then all of the sudden, it was 30 years. Wasn't it John Lennon who said 'Life is what happens you're busy making plans?'

After residency and working in Boston, you went to Pittsburgh. What made that an attractive move for you?
I think a couple of things. One is our youngest son was off to college. Literally the day I drove him to Georgetown, the moving van pulled up to the front door of our house in Wellesley.

The attractions to Pittsburgh were several. One is the guy who recruited me there, Steve Shapiro. I had worked for him in Boston and we got along really well and I liked working with him. The second was actually a few years before, Lise and I sat down and decided that we wanted to try someplace new. I was interested in someplace new professionally. I loved the Brigham. I loved my time there. But I was ready to try someplace new. I was just turning 50 and I could see what the next 10 years looked like and it wasn't bad, but it was kind of predictable. I was interested in seeing what I could do in a new environment.

What kinds of things did you think you wanted to do in Pittsburgh?
There were some good research collaboration opportunities there, but the primary thing was being able to do some interesting things around clinical-care delivery, to move away from departmentally focused programs to doing things that were more centered around patient problems and assembling teams to take care of people with those problems. I think transplant is a good example of that.

How challenging was that to do?
Actually, it's a good example of something I say to people who work for me or people who are really concerned about what their title is or what their place in the organizational chart is: 'If you have leadership that shares the same values and is aligned around the same strategy, you can make any structure work. And if you have leadership that is not aligned around the same goals and strategy, you can't fix that with structure or an organizational chart.'

We capitalized on the fact that there was new surgical leadership in transplantation who had a different attitude about team organization and care delivery. The classic view was 'I'm the surgeon. I'm in charge of the show. Everybody works for me.' The work on my part was not convincing him to change. The work on my part was convincing all the people...
in my department that he was different than his predecessor.

What made coming to CU School of Medicine an attractive opportunity for you?

The sense of opportunity and the trajectory of the Anschutz Medical Campus. The challenges in Pittsburgh from a department leadership perspective were different than the challenges here. In Pittsburgh, we had overwhelming clinical market share. We were in an environment where clinical revenues were probably going to go down just because of utilization patterns across the U.S. and because western Pennsylvania has historically been a high utilizing area. As it comes down toward the mean, it means that clinical revenue drops. Because most of the clinical revenue in town was ours, our clinical revenue was going to drop. The NIH is pretty flat. Philanthropy in Pittsburgh wasn't great. So the management challenge there was how to maintain a department that's recognized nationally for its excellence in research and clinical care in the face of shrinking resources. That is an interesting challenge, but it's actually more fun to think about hiring good talent to scale up to meet the demand. It's more fun to hire people than it is to fire people and to be in a position where you can get all the different departments to play in the sandbox together.

Do you think that that combination of declining federal support and the change in emphasis in how providers are compensated by the federal government are going to have adverse effects here?

On the research front, I think there's going to be sort of a Darwinian process in the marketplace and that there will be a much smaller number of research-oriented academic medical centers. You can have a debate about whether it's 25 or 30 or 35 or even 50, but there will be a much smaller number than there are now. The places that currently have a modest or small amount of research will, 10 or 15 years from now, probably be virtually 100 percent clinical. I think the rich get richer, strength begets strength, and if you look at how the historically strong academic institutions have done during research-funding downturns, percentage-wise they tend to lose much less than the average. When the funding starts to get tight, it's the mid- and small-sized places that don't have that critical mass that get disproportionally hit and I think that trend will continue.

On the clinical front, I do think the change in the way the society in the United States pays for health care – away from fee-for-service towards other mechanisms – means that academic medical centers have to think carefully about how they position themselves in that marketplace. In my personal opinion, and I'm far from alone in this, I think the strategy of being a free-standing, independent academic medical center that relies on the community to refer complex cases is not a viable long-term strategy. I think you have to be part of a larger network that includes practitioners in the community and community hospitals so that you're included in the insurance networks that are developing across the U.S. Viewed in isolation, academic medical centers are expensive and therefore are likely to be excluded from narrow network products. The challenge for academic medical centers is to become parts of networks because they are widely publicly recognized for their excellence of care and therefore nobody wants to exclude them from their network products.

One of the things that you've talked about since coming to Colorado is behavioral health. Tell me what you mean by addressing behavioral health at the community level.

It's clear that people with a spectrum of behavioral health diagnoses, ranging from psychosis and serious mental illness to the more common ones of depression and anxiety and substance abuse, are poorly served by the way our health care system is organized. They are put in a different class conceptually, by the general population and by certain aspects of medicine, from people who have 'physical' diseases. They are often high utilizers of health care. I think there is a mission imperative, if our goal as physicians is to improve function, relieve suffering, and increase longevity, to address behavioral health.

There also are some very pragmatic economic reasons, for society and employers and health insurance companies, to address behavioral health effectively because it's less expensive.

At UPMC, we had an insurance company and therefore I had access to claims data. We could look in our general internal medicine practice and find the frequent fliers. Our general internal medicine practice there took care of about 22,000 people and about half of those were people we insured. We took a look at that population to see who the high-utilizers were and then we looked at those patients to see who we thought we could change utilization. We built a practice model where we embedded behavioral health and more robust case management services and home visits and 24/7 access to the clinicians for patients to see if we could change those utilization patterns. We used our data and then built a different primary care model around it. Then I went to our insurer and basically said this is what we're going to do and rather than getting paid fee-for-service for every office visit, I want a cut if we reduce utilization. It's what they call a shared-savings model.

Let's talk a little bit about research priorities for an institution. How should academic medical centers proceed? How do we proceed going forward with regard to setting research priorities?

Well, there are two ends of the spectrum on that. One is to let it function as a natural ecosystem where people pursue their interests and then
you see what comes out of that. A lot of academic medical centers have been built largely in that model. The opposite end of the spectrum is a command-and-control system, where the person with the checkbook has decided that we’re going to have a program in disease X or this particular scientific area. The proponents of a more centralized strategic plan and investment strategy would argue that you can build programs of deeper excellence.

We need an approach that tries to achieve the goals of the central command-and-control system, but also takes advantage of the strengths that we already have. Our strategic plan is to build a small number of programs in which we can invest substantial resources to maximize our chances of assembling a critical mass of talent that will produce first-class science and will give CU a national and international profile. To choose those programs, we will solicit proposals from people on campus and then choose the strongest of those proposals to put substantial resources in.

We are going to balance our portfolio so that not all of our resources are going just into those strategic investments. This effort will not be at the expense of other constituents on the campus. I am in a fortunate position thanks in large part to the stewardship of Dick Krugman and Lilly Marks and the hard work and success of the faculty here. That allows us the luxury of providing the necessary resources for our departments and also to do the kind of program building that we’re talking about.

How important is diversity among faculty, students and staff going forward and how do we address what issues you may see there?

I think it’s very important. There are a couple of reasons. Some are laudable and some pragmatic. If you think our missions here are to be the best educators, the best researchers, and provide the best clinical care, it’s pretty clear that a diverse workforce does that better than a non-diverse one. I think we take better care of patients if the workforce taking care of patients resembles the make-up of the population of patients for whom we’re providing care. In terms of research innovation and creativity, a diversity of viewpoints produces better science and better original work.

It is also the right thing to do. This is a meritocracy, ideally. You could argue that we in the U.S. sometimes fall short of being a meritocracy. But the fact that many people still want to come here for an education and to pursue careers suggests that the rest of the world still views us as a meritocracy and we want the best and the brightest. And the best and the brightest are not all white males. It’s pretty straight-forward. I stayed in academic medicine because I liked working with smart, talented people. I came here with the goal of working with the smart, talented people who are here and attracting more of them to come here, and they come in all sizes, shapes, colors and orientations.
Working Together to Improve Clinical Trials
Shuttered study spurs patient advocate Bray Patrick-Lake

By Tonia Twichell

Bray Patrick-Lake addresses a standing room only meeting of White House and government agency staff, national health advocacy staff and prominent researchers in July with the ease and confidence of a veteran health care advocate, comfortable in her role challenging the byzantine hierarchy and confounding regulations that control clinical trials.

No one would guess that Patrick-Lake, a co-chair of President Obama’s Precision Medicine Initiative advisory committee and founder of a patient advocacy organization, just seven years ago was a jilted research subject, angry and confused that a clinical trial intended to help patients with her heart condition announced to the media that it had closed without telling patients.

Patrick-Lake and other trial participants wanted answers. The Erie resident approached John Carroll, MD, the University of Colorado physician who had inserted a device in her heart as part of the clinical trial. Over the next several months, Carroll patiently helped Patrick-Lake understand the complex world of clinical research.

“It was a very unique thing,” she says. “Most investigators would say ‘I’m not seeing you anymore. You’re not my patient.’ Dr. Carroll had a different mindset. He wanted to know what we could do together to make this situation better.”

Those conversations set the stage for a large-scale career shift for Patrick-Lake, a former police officer and homeless advocate, placing her at the forefront of a national movement that has changed the role of patients in clinical trials throughout the country.

“People don’t know how much one clinician can change things,” Patrick-Lake says. “Of all of the 25 things I’ve worked on since 2008, none of this would have happened, if the first time I went to him and said, ‘I don’t understand,’ he had said, ‘I don’t have time.’”

An Accidental Advocate

Patrick-Lake considered herself healthy and athletic until one day in 2004 when she collapsed at a shopping mall while six months pregnant with her second child.

“I went from being someone who saw the doctor once a year to a person paralyzed and unable to speak,” she says. While the paralysis lasted only about 10 minutes, it was the beginning of life-altering health issues. Diagnosed with patent foramen ovale (PFO), meaning she has a hole between two chambers in her heart, she suffered debilitating pain, migraines and exhaustion. Her symptoms worsened despite the care of a Denver-area cardiologist and neurologist.

“At the age of 37 my doctors put me on oxygen and said they couldn’t do any more for me. My migraines were out of control, I was short of breath and my skin was purple when they sent me home and wished me well.

“So I did what people do now. I went straight to the Internet. Online, I found people like me and learned what was working and what wasn’t.”

Patrick-Lake discovered a clinical trial at University of Colorado Hospital. She was accepted and underwent a procedure in mid-2008, but the trial sponsors did not allow participants to learn if they received an experimental device implant to close the opening.

“I woke up with a 100 percent cessation of migraines,” she says. Unfortunately, she also suffered severe side effects. But she learned who would support her during those dark times.

“When I had complications, Dr. Carroll would be there. He once met me on a Friday night in the emergency room when I was in trouble. And then he followed up to make sure I was OK.”
Within four months the medical device company, citing lack of enrollment, shattered the trial, which was taking place at 30 hospitals around the country. Infuriated that the trial had been aborted without timely notice to patients, she was also upset that federal law prohibited the release of trial results. Additionally, the company that funded the trial was under no obligation to continue providing care or tracking patients.

Patrick-Lake, who at this point knew she’d been given the experimental device, says: “I thought, ‘This should never happen to anyone ever again. I’m not ever going to get the data and I’m going to live with this device the rest of my life.’”

Carroll, director of interventional cardiology at the CU School of Medicine, had not been involved in an aborted study before or since. In time, their patient-physician relationship evolved; they partnered to convene a PFO summit, and co-wrote a paper on the methodology of clinical trials.

“We talked about how these clinical trials could be done better, what’s wrong with some of them and what barriers are there to changing them,” Carroll says. “And she made the evolution from being angry at the company to saying, ‘How can things be improved?’ That was the beginning of the most amazing transformation I’ve ever seen in a patient becoming an activist in the field.”

Soon Patrick-Lake began working with patient groups, researchers and government officials. Along the way, she got a lot of constructive criticism from Carroll.

“Dr. Carroll was honest in saying, ‘If you say it this way it sounds inflammatory.’ He was really a mentor as far as helping me understand how to make systematic changes constructively.”

Carroll knew that tone was critical. “There’s always the danger of being seen as an angry young person who doesn’t know what they’re talking about. I got called early on when she started making national connections from people asking whether she was a reasonable person. I told them ‘She is the real deal. This is someone we need in the field.’”

In 2009, she was invited to Washington, D.C., to a town hall meeting of the U.S. Food and Drug Administration before the transparency task force.

“I was thinking of it like it was some small town meeting. I walked in and it was a panel with Consumer Reports, the Pew Foundation, the Medical Device Safety Institute and me, just off the plane from Colorado, a mom of two kids with peanut butter and jelly on her shirt.

“I had no idea what I was getting into. I never intended to do this. It was a very accidental journey … But there are some things that need to change and not just for me. We need a systematic change in this country, and I think everyone knows it.”

‘A Match that Lit the Fuse’

Patrick-Lake’s advocacy helped lead a change in perspective about the role of patients in research trials.

“This was before the age of patient centricity,” Patrick-Lake says. “Now everyone talks about how to work with the patient and patient-centered research outcomes. Back then, there was no mindset of working in partnership with patients around clinical trials.

“Millions of dollars were wasted, patients got no answers and no new product reached the market. All parties lost.”

She believes that the PFO trial enrolled in might have been successful if patients had been involved from the beginning in designing the study. As a patient advocate who has worked with several organizations including National Institutes of Health, the Patient-Centered Outcomes Research Institute, and the Clinical Trials Transformation Initiative (CTTI), she advocates patient input in the design and conduct of research, and improved communication so patients can make informed decisions about their care.

“Now for many grants you have to have a patient on the team,” Patrick-Lake says.

In earlier trials, patients rarely saw results of research trials, instead trusting researchers to do the right thing with the trial information.

“We think so much deeper now about patient involvement,” says Larry Wood, corporate vice president of Transcatheter Heart Valves at Edwards LifeSciences, who has served on several national panels with Patrick-Lake. “It’s not all because of Bray, but she was the match that lit the fuse.

“She’s the first person who comes to mind when I think about patient advocacy and maybe the last person who comes to mind, too.”

Now patient groups often design and fund clinical trials or develop their own trial networks.

“Patients today want information,” Patrick-Lake says. “If we can’t get it from research or our health care provider we pop up a Facebook group, so you end up with information sharing outside of systems.”

But she believes splintering the system doesn’t work well and that patients and researchers get better results if they collaborate. So she has dedicated herself to making the system more inclusive. The results from a CTTI project she has been leading recently released evidence-based recommendations on effective engagement with patient groups. Now Patrick-Lake is leading work to measure the value and impact of patient engagement in clinical trials.

“It started with me knocking on the door and asking a lot of questions. It was me saying I don’t like these things.’ Had that first door not opened when I knocked, it’s possible none of this would have happened.”
From Emergency Care to Community Service

Student Hot Spotters help thousands of patients

By Mark Couch

An internship program designed by a University of Colorado emergency medicine physician helped more than 3,500 patients address their health needs this past summer and offers a model for improvements that could help the nation’s healthcare system save money.

The Student Hot Spotters were a crew of about 20 undergraduates, recent college graduates and graduate students who worked last summer in the emergency department of University of Colorado Hospital on the Anschutz Medical Campus. They were available 24/7 for seven weeks in the emergency department to help patients with follow-up care needs.

“What we did is a health screening where they asked patients about food insecurity, housing insecurity, insurance, their primary care provider,” says Roberta Capp, MD, MPH, assistant professor of emergency medicine and designer of the program.

“They looked up on the Medicaid website to see whether patients had active Medicaid, whether they were part of the Accountable Care Collaborative program or not and then, depending on their answers, the health screening tool that we developed would tell them what to do.

“If the person said they went hungry for a number of days in a month, they would provide them with food pantry services,” Capp says. “If they said homelessness, the Hot Spotter would connect them with homeless resources. If they said no primary care provider, we would find them a primary care provider and then get them that appointment.”

The service provided by the Hot Spotters made a difference to the care that could be offered in the emergency department.

“The hard part for us is that we don’t have time to sit there and talk about what are the issues and what are the barriers,” says Alexander Ebinger, MD, assistant professor of emergency medicine and attending physician in the emergency department. “Is it that you don’t have a ride, or that you don’t know who to call to get an appointment?”

The Hot Spotters were able to address those concerns.

“They were always there saying, ‘Who can I help?’” says Ebinger. “Can I go see this person and talk to them? So they were pretty proactive. In the event I needed one of them, I would just ask, ‘Would you mind seeing a patient and seeing if you can help them get a primary care appointment?’

The Hot Spotters made getting primary care easier for the patients.

“They got so in tune with the patients and having patients go home with a primary care doctor appointment in their hand was mind-blowing to me as an ER nurse,” said Sandra Fogel, RN, who served as liaison between the Student Hot Spotters and the Emergency Department.

“I’ve done this for almost 15 years and you see cases where we have to tell patients, ‘We didn’t see anything, but if your pain persists, follow up with your primary care doctor.’

“And we know that’s not going to happen because they don’t have a primary care doctor and if they call, the appointment is going to be one to two months away. During the time when the students were here, patients would go home with an appointment the following week, if not the following couple of days, and that was amazing.”

And the service made a difference in the community.

Rich McLean, a leader with Together Colorado and a board member of Aurora Health Access, says: “Often when you go to the emergency room, you get some instructions and it’s over and done. And those instructions may or may not get done. This is revolutionary for our community because it’s not over and done. It’s changing a lot of lives.”

The program started in summer 2014 with a smaller group of interns
“This is revolutionary for our community because it’s not over and done. It’s changing a lot of lives.”

“As I went through school I realized that there are lot of health care access issues that those who live in poverty have to face and it’s not just health care access,” Capp says. “If you don’t have food on the table, that’s going to be your No. 1 priority. If you don’t have a place to live, that’s going to be your No. 1 priority. So it’s not just a prescription that you end up giving the person, it’s understanding where they’re at and how can you get them to that next step.”

Still, medical training doesn’t prepare physicians to help patients facing such challenges.

“That’s what really takes time and a lot of effort and it’s outside of what you learn in medical school,” Capp says. “And we’re never really taught how to address those situations, what do you do. It’s all been pushed toward the public health system when at the end of the day, health is not just about the prescription or health care access, it’s about everything.”

As a fellow at Yale University, Capp was part of the Robert Wood Johnson Clinical Scholars Program and there she focused on “services research,” searching for ways to improve care delivery.

Continued on page 28
DAWN Clinic Offers Integrated Care

CU students working together to meet community needs

By Tonia Twichell

Students from several University of Colorado schools and colleges crowd the back of the student-run DAWN Clinic on an early fall day, just as patients begin arriving.

Before scattering to their stations, the dozens of future doctors, nurses, pharmacists, dentists, physical therapists, physician assistants, and mental health practitioners wrap up the meeting by chanting in unison a precept of Nobel Peace Prize Laureate Bernard Lown, MD: “As much as possible for the patient, as little as possible to the patient,” to remind themselves of the power of providing thoughtful, individualized care.

In the triage area, two students meet 81-year-old Maria Rodriguez, who needs a physical examination to apply for U.S. citizenship. She answers questions from the nursing student who takes her pulse and blood pressure and from the pharmacy student who asks about prescriptions and supplements.

“She lost her Medicaid,” explains her daughter Raquel Rojas, who acts as her Spanish interpreter. “We came to DAWN Clinic because it’s in Aurora and that’s where she lives.”

Designed to provide health care in one of Colorado’s poorest neighborhoods, the DAWN Clinic (Dedicated to Aurora’s Wellness and Needs) also gives CU health science students a rare opportunity to learn how to work as a team to help uninsured patients like Rodriguez.

Unlike more conventional medical settings where professionals often work in isolation from one another, the DAWN clinic is mirroring a national trend to try to bring specialties together – often under one roof. From triage through exam rooms, patients meet with teams of students.

“Someone with chronic disease management might see pharmacy and nursing students,” says Clinic Medical Director Joseph Johnson, MD. “If a diabetic patient comes in with acute complications, medical and pharmacy students might go in. Someone with a medical issue and anxiety or depression or psychological issue will see a CU Denver (behavioral health) student with a medical student.”

Students and faculty say making this revolutionary approach work has required patience, determination and an open mind.

“At first everyone was focused on their own goals,” says Sarah Tietz, a fourth-year medical student and student clinic director. “We’re more cognizant now of what other people do. Now I know pharmacy students. I know PT students. I can call and ask them questions, like ‘What exercise should I give this person with back pain?’”

Once students assess a patient’s condition, they present their findings to a group of preceptors. At least one of the professionals then accompanies students back to the exam room.

“Frankly, this is the way medicine should be taught,” says Alan Feiger, MD, an associate clinical professor and psychiatrist who volunteers at the clinic. “One-stop shopping for a patient is a good thing, especially with the indigent population. Patients are very appreciative and the students are eager to learn.”

The DAWN clinic opened March 1, 2015, in the Dayton Street Opportunity Center, which offers education, job training and counseling in a storefront just south of Colfax Avenue.

Designed to provide health care in one of Colorado’s poorest neighborhoods, the DAWN Clinic (Dedicated to Aurora’s Wellness and Needs) also gives CU health science students a rare opportunity to learn how to work as a team to help uninsured patients like Rodriguez.

An integrated approach works at CU because all Anschutz health sciences students are exposed to integrated health as part of their curriculum.

“The focus on integrated care is one of the main reasons I came to CU,” Tietz says. “In classes, we got to know each other and become friends, but I still didn’t fully understand what
the others do and how to work together. We learned that here."

The clinic, located just two miles from the Anschutz Medical Campus, is open every Tuesday night for general health needs and each Wednesday for physical therapy treatments and mental health service.

Designed to help underserved adult populations, it offers a range of services including dental and ophthalmology care, lab work and EKGs. A close working relationship with University of Colorado Health provides discounted and donated lab and imaging services. But the referrals go both ways. University of Colorado Hospital last summer sent uninsured patients to the DAWN Clinic for follow-up care, via the Hot Spotters program (see page 10).

Initially, urgent care cases were the norm, but now many patients with chronic illnesses have become repeat visitors.

"We had one three-week period, where we had three strokes. All the patients were under 30 years old," says Johnson. "We’ve had patients with extremely fascinating eye cases. One Sudanese man went from normal eyesight to being completely blind in three months. We were able to rally ophthalmology to help him get continuity of care through Denver Health."

CU physicians from specialties as diverse as neurology, radiology, cardiology and rheumatology have donated their services to help DAWN patients.

"It’s mostly a networking among friends," says Tietz. "You know how it is: ‘I have a friend who has a wife whose best friend is in residency in that department. That sort of thing.’"

She said the network reaches outside CU as well. For example, recently a diabetic patient needed a vision correction. "We have students whose dads are optometrists in the community," she says. "People want to help but they just don’t know how."

She’s been so impressed with the interprofessional approach at the clinic that she would like to find a similar situation in her residency.

"It’s really helped with my perspective," says Tietz. "I’ve learned how much I want a program like this. It makes such a difference. It makes for better outcomes."
A Gas Gauge for Glycogen
School of Medicine faculty develop noninvasive measure for depleted muscles

By Lisa Marshall

What do a post-race marathoner and a car accident victim lying in the intensive care unit have in common?

Due to extreme stress, both have depleted their muscles of the glycogen, or sugar (glucose), necessary to fuel energy and stave off further injury and illness. As a result, both have also begun to eat away at their own muscle.

“Your body doesn’t know whether you’re running a marathon or recovering from an accident. The metabolic and physiological response is pretty much identical” explains Iñigo San Millán, PhD, an assistant professor in the CU School of Medicine’s Department of Physical Medicine and Rehabilitation. “The body is fighting for survival and when it runs out of glycogen, the muscle eats itself to feed itself.”

Replenish those muscles the right amount at the right time, and they can bounce back well. But overfeed them or, worse, let them starve and the consequences can be grave. The challenge for coaches, and for physicians grappling with the endemic problem of muscle-wasting in the ICU: It’s nearly impossible to know just how much muscle glycogen a person has at any given time.

That is, until now.

“We have basically developed a gas gauge” for glycogen levels, explains San Millán, describing a new, patented technology, MuscleSound, he believes could revolutionize nutrition and exercise advice for everyone from critical care patients to NFL players to everyday athletes.

Developed in 2010 by San Millán and colleague John Hill, DO, a professor in the Department of Family Medicine, MuscleSound uses ultrasound technology to provide—for the first time ever—real-time, non-invasive measurements of glycogen levels in muscle tissue. Previously, the only way to measure such levels was via a painful muscle biopsy or a costly and complicated MRI.

With this new technology, a technician moves a painless probe across large muscles in the leg or arm, emitting sound waves that bounce off the water that inevitably accompanies glycogen, indicating its presence. On a nearby computer screen, an image of the muscle appears: Dark regions indicate glycogen-loaded muscles; white spots signal a shortfall. Within 15 seconds, a computer algorithm spits out a glycogen score, from zero to 90, which doctors or coaches can use to guide advice.

Hill and San Millán invented and patented the technology in 2010 and now market it under the name MuscleSound. Today, a few NCAA teams, including the University of Colorado Buffaloes, the Dallas Mavericks professional basketball team, and the Colorado Rockies professional baseball team use it.

But some believe its most profound potential lies in helping to improve outcomes for critically ill patients.

“The era of guessing at caloric needs with equations must end,” says Paul Wischmeyer, MD, director of nutrition therapy services for the CU School of Medicine and a vocal advocate for improving ICU recovery rates nationwide. “There is a lot that we could do with this technology.”

Getting nutrition right in the ICU

While the marathon runner and ICU patient have much in common physiologically, they differ in one key way. After crossing the finish line, the runner can go home, rest, and eat up. The ICU patient, metabolically speaking, keeps running.

“The body has not evolved to survive these types of injuries, so it doesn’t know when to turn off this response,” explains Wischmeyer, noting that critically ill patients can remain hyper-metabolic for days, or in the case of burn victims up to two years after the initial trauma. “Being in the ICU is like continuously running multiple marathons.”

Wischmeyer, Hill and San Millán recently used this novel technology to test glycogen levels of nine ICU patients, including cancer patients, burn, and accident victims who had been in one day to five weeks.

The results were even more dramatic than they’d suspected. Six out of nine patients had a score of zero (meaning they had no detectable glycogen in their muscles). The other three scored 5 to 15, far less than the 50 to 70 a health person might score, or even the 15 to 25 an elite athlete might score post-competition. Some patients had lost all glycogen in their muscles within just 24 hours of admission.

That matters because, with glycogen gone, the body starts eating muscle. And the less lean muscle mass a patient has, the poorer the chance of surviving the ICU, notes San Millán.

Even if the patient does survive, it’s hard to gain back lost muscle. And prolonged muscle-wasting, or cachexia, can lead to lasting or even permanent health problems. Studies show 60 percent to 80 percent of ICU survivors suffer functional impairment or “ICU-acquired weakness” post-
discharge. Some can never pick up their children or do their favorite sports again, says Wischmeyer.

“We as ICU providers have to ask the question, ‘Are we creating survivors or are we creating victims?’” he says. “It’s critical that we get it right while they are still hospitalized with us.”

This novel ultrasound technology could potentially help them get it right.

Their initial study findings, presented at the International Symposium of Critical Care and Emergency Medicine in Brussels in March, demonstrate its power as a research tool, says San Millán. He has long suspected that severe glycogen depletion was to blame for muscle-wasting in the ICU and that some patients aren’t getting enough calories via their feeding tube. “Now,” he says, “we have some data to prove it.”

Ultimately, if ICU clinicians could measure muscle glycogen daily, physicians could better calibrate a patient’s nutrition and time any changes appropriately. There comes a time when the muscles move past the acute shock stage, begin to take up glycogen again, have the capacity to rebuild, and more aggressive feeding and physical therapy might become appropriate.

“If we intervene with a lot of calories too soon, we are fighting the body’s needed response and that can cause its own problems,” Wischmeyer says. “We have never been able to know when that transition happens. It’s measurable now.”

Wischmeyer also envisions a day when bedside muscle-glycogen testing could be used alongside ultrasound lean body mass testing to determine if, or when, an ICU patient might need anti-catabolic drugs (like beta-blockers) or anabolic agents (like oxandrolone) to boost muscle growth.

In the meantime, San Millán has already started using this ultrasound technology for a very different purpose.

Several times a week, dozens of CU Buffs football players file into his office at the new CU Sports Medicine and Performance Center in Boulder to determine just how much, or how little, fuel they have in their muscles, and what they should do about it.

If glycogen levels look low, which can leave a player vulnerable to muscle injury, the players advised to lay off. If they look high, they might be advised to eat less to avoid weight gain. The system he and other sports medicine specialists use today is the size of a laptop and costs in the tens of thousands of dollars. But San Millán foresees an affordable, cell-phone-sized device on the market for recreational runners and cyclists.

“It would enable them to dial in nutrition and workload in a way that hasn’t been possible before.”

Iñigo San Millán, PhD, tests an athlete’s glycogen levels. Photo courtesy of Iñigo San Millán.
‘Trying to Build Better Babies’

Researcher Kristen Boyle studies how obesity develops in the womb

By Mark Couch

The children of obese mothers are more likely to become obese themselves in part due to traits they inherit while they are still in the womb, according to research presented earlier this year by a University of Colorado School of Medicine scientist.

Kristen Boyle, PhD, assistant professor of pediatrics, identified some of these traits by studying stem cells from umbilical cords and she hopes that by identifying a cause for greater obesity risk future research could inform ways to break the chain of obesity.

“My goal would be to introduce exercise or dietary interventions during pregnancy in obese mothers to see if there was the capacity to ameliorate any ill effects of the womb environment and hopefully then the trajectory of obesity for the child,” says Boyle.

Boyle and her team took stem cells from donated umbilical cords of babies of normal-weight and obese mothers and grew those cells into fat and muscle cells in the lab. The researchers found a 30 percent higher fat content in both the fat and muscle cells of children of obese mothers compared with the cells of children of normal-weight mothers, and the fat content of the cells corresponded to the fat mass of the babies. Boyle presented the finding at the American Diabetes Association’s 75th Scientific Sessions in summer 2015. It was one of eight abstracts, from more than 3,000 submitted, selected for presentation.

“I think people were excited, but I wouldn’t necessarily say they were surprised because the research in animal models has been leading up to this for a long while,” says Boyle.

“What makes this research exciting is that, by using this infant stem cell model we can begin to address the same questions in humans as have been done in the animals. Using these cells, we may soon be able to define why children born to obese mothers are at increased risk of developing obesity and metabolic disease. In the same vein, we may be able to identify specific characteristics from mom or the intrauterine environment that are contributing to these risk factors in the baby.”

Boyle’s research training began with clinical intervention studies using exercise and nutrition.

“That’s one of the reasons I really wanted to do this,” she says. “The whole impetus for looking at these infant stem cells was so that I could find stem cell markers associated with obesity in mom but also with the outcomes in the children later in life, then maybe we could use them to understand how interventions in pregnancy affect outcomes in the children.”

Boyle earned a BS in exercise physiology and nutrition from the University of Massachusetts at Amherst in 2001, a master’s in exercise physiol-
ogy from Ohio University and a PhD in bioenergetics from East Carolina University.

"Even as an undergrad, I was always interested in scientific research and knew this type of career would be a good fit for me," says Boyle.

"I came to Anschutz to complete my post-doc studying gestational diabetes with Jed Friedman," says Boyle. "He had recently begun work in this field of fetal programming, aiming to understand how the environment in utero affects the disease risk for the child later in life, particularly for diseases such as obesity, diabetes, or cardiovascular disease."

Friedman, PhD, professor of pediatrics, biochemistry and molecular genetics and director of the NIH Center for Human Nutrition Research Metabolism Core Laboratory, says, "We're trying to build better babies." He calls Boyles work "groundbreaking" in its exploration of the pathways for obesity and how they might be modified.

Previously, while at East Carolina, Boyle had studied stem cells cultured from the muscle biopsy tissue of adult patients.

"The interesting thing about these adult stem cells is that they retain metabolic characteristics from their donor," Boyle says. "What we see with obese adults is that their muscle has less capacity to use fats. And we see those same characteristics in stem cells cultured from their muscle. This was a very interesting concept to me. How are these cells retaining metabolic characteristics?

"Did the cells always have these characteristics, providing clues as to why these individuals became obese? Or was there something in the adult stem cells that changed when the individual became obese? We don't really know the answer to this question and I decided that best place to start would be at the beginning."

Obviously that's easier said than done.

"I really didn't have a good way to test cellular metabolism in infants," Boyle says. "We can't take biopsies from babies, so how do we perform these invasive metabolic measures that are not only my expertise, but may be very informative as to the metabolic disease risk of these babies when they grow up?"

"I started by reading some papers from other scientists who were culturing stem cells from umbilical cord tissue of newborn babies. But mostly these researchers were using the cells for regenerative medicine or tissue engineering. No one was really looking at whether these cells were in any way reflective of the baby. So I joined those two ideas together."

At the University of Colorado Anschutz Medical Campus, she found the infrastructure was already in place to help with the research she wanted to do and a group of researchers working on obesity-related issues.

Boyle's research is part of an ancillary project to the Healthy Start study, led by principal investigator Dana Dabelea, MD, PhD, in the Colorado School of Public Health. It is a 10-year study funded by the National Institutes of Health aimed at understanding the contribution of metabolic and behavioral factors during pregnancy to the development of obesity, insulin resistance and inflammatory markers in newborns and infants. The Healthy Start study is following more than 1,400 ethnically diverse pregnant women to assess the impact of intrauterine exposures on neonatal outcomes.

"My research would not be nearly as successful without using the infrastructure of the Healthy Start study," Boyle says. "As a young investigator coming in, there was no way I could have obtained so many samples from such well-characterized moms and babies to really help my research get off the ground."

"Similar types of research are performed at other hospitals and universities around the world, but at these places there may be only a handful of investigators engaged in pregnancy and fetal programming research. Here, I think we have a much larger concentration of investigators performing research in pre-conception, during pregnancy, and in infancy and early childhood—from basic science to clinical intervention to epidemiology. And all of this is done with the goal of improving outcomes for healthier children and healthier families. By working together, the scientists here at Anschutz have created a very collaborative research environment that fosters scientific discussion, which in turn fosters better science."

Kristen Boyle, PhD, is studying stem cells from umbilical cords to determine obesity risk. Photos by Glenn Asakawa.
The Disgust Diet
Using repulsive pictures to change food choices

By Mark Couch

Can a picture of a cockroach on a piece of pizza—flash- ing by so fast that your brain registers the image but you don’t realize that you’ve seen it—change your food choices?

University of Colorado School of Medicine researcher Kristina Legget, PhD, assistant professor of psychiatry, is exploring that question with experiments that test a process called “implicit priming.”

“We were thinking about the way we are bombarded by food cues and manipulated with what we choose to eat,” Legget says. “Thinking of the ads that we hear and see—Heidi Klum with a big burger that she’s eating—we were thinking, ‘Is there a way to combat that at a visceral level’ rather than having to think all the time, ‘No, I shouldn’t have a doughnut even though that sounds really good.’”

In other words, can a person’s brain be trained to associate high-calorie food choices with repulsive images? Call it the disgust diet.

“My main field is obesity neurobiology,” says Legget. “I study the neurobiology of food-intake behaviors and obesity. We look at a number of different interventions and I’m particularly interested in cognitive approaches.”

Legget and her colleagues wondered if it was possible to sneak an image into a person’s memory so that they might be deterred without having to think so hard about the consequences of bad eating habits. And if such an approach worked, how long would that connection between a repulsive image and a food choice last in the person’s memory?

“There’s an interesting study that investigated product placement on TV,” says Legget. “They showed episodes of ‘Seinfeld’ and asked people to complete a simulated shopping test afterwards. The items that were obvious product placements—like Jerry saying, ‘ooh, this is a good Coke,’—were chosen less often because they felt like they were being manipulated.

“But if it was really subtle, such as Tide in the background, the Tide was chosen more frequently, because it was primed, but not in an obvious way. That’s one reason why we thought it would be more interesting to see if we could influence preferences on a subconscious level.”

The study by Legget and her colleagues, published this past summer in The American Journal of Clinical Nutrition, found evidence that implicit priming alters high-calorie food preference and that the change in preference persisted for three to five days after the implicit priming.

The experiment took 42 people through a process of viewing images of food spliced with millisecond bursts of other images to test whether those flashes—so fast that the test subjects had no conscious memory of seeing them—would influence food choices.

Ten test participants were shown disgusting images of food, such as a broken bone protruding from a body, a cockroach on a pizza, or vomit on an unclean toilet. They were also shown images of low-calorie foods, like salads or fruit, paired with flashes of positive images, such as kittens, a smiling baby and a butterfly on a flower. The other 20 participants were shown the same food images, but they were not shown the priming images.

Participants were told they would see food pictures, preceded by a brief presentation of images with emotional content. Immediately after the task, participants rated the foods on a desire to eat them. Those who were flashed the disgusting images were less likely to prefer the subsequent high-calorie foods they were shown. And when those participants were re-tested three to five days later, they still showed reduced interest in the high-calorie foods.

Legget concluded that the implicit priming “could be a successful tactic to combat the onslaught of food cues that promote unhealthy eating by conditioning automatic food preferences in a way that promotes better choices in the absence of focused cognitive effort.”

Investigating the behavior is just a first step in a deeper inquiry for Legget and her colleague, Jason Tregellas, PhD, associate professor of psychiatry.

“The behavioral finding is great,” says Legget. “It’s great that we’re seeing behavioral results, but the next key is to see whether it affects the brain the way we think it does. In addition changing ratings of food pictures, is it going to change how your brain responds to those food pictures?”

They have received a grant from the National Institutes of Health to look at neuroimaging in this context. They have also recently acquired a new MRI scanner though a National Institutes of Health high-end instrumentation grant to use in the next round of testing and are beginning the new round of experiments.

The goal is to help people eat better foods and lead healthier lives, says Legget.

“It’s very hard to avoid the cues that are coming at you,” Legget says. “They’re all automatically processed, including how things are placed in the grocery store, how things look on a menu, how they make things smell. There are all kinds of manipulations to make you eat what people want you to eat. That’s what they do. We like to see our research as a weapon to combat this onslaught of food cues telling us to eat those yummy doughnuts.”
Anatomy of a Surgeon

Photos highlight the Department of Surgery

Richard Schulick, MD, MBA, chair and professor of surgery, and the Department of Surgery hosted a photography exhibition at the Fulginiti Pavilion for Bioethics and Humanities on the Anschutz Medical Campus this summer. The exhibit featured photographs by Bryce Boyer, who took images for the department’s annual report published earlier this year. On this page, we select a few favorites.
Pregnant Teens Go to CAMP
Program offers medical and social support for young moms and babies
By Jessica Ennis

When pregnant young women enter the Colorado Adolescent Maternity Program clinic (CAMP), they don’t have to worry about how their swelling bellies will be perceived.

“This is a no-judgment zone,” said CAMP Co-director Stephen Scott, MD, associate professor of obstetrics and gynecology and pediatrics at the University of Colorado School of Medicine. “We emphasize a supportive environment and an environment based on trust.”

The 25-year-old program, a partnership between the School of Medicine and Children’s Hospital Colorado, treats pregnancy as much more than a medical event for young mothers.

“Our young women want to be good moms but don’t have a lot of opportunities, so we provide an obstetric medical home and bring other services together,” Scott says.

Many of the 250 pregnant young women—some younger than 13 years old—who come to CAMP each year have experienced personal traumas in their lives: abusive relationships, unstable home environments or homelessness. So the CAMP clinic staff includes certified nurse midwives, an obstetrician, case managers, social workers, dietitians, psychologists and psychiatrists.

The first contact is always with a case coordinator, who also sees the young women at nearly every visit.

“We build rapport and trust; we’re not stuffy. I love getting to know them throughout their prenatal care,” says Lisa Wilcox, a CAMP case coordinator.

Because of the relationships they foster, case coordinators along with the social workers often pick up on issues that need to be addressed but might otherwise go unnoticed.

“In a traditional medical model, there is a hierarchy of positions and medical providers are expected to recognize problems and refer them out,” Scott says. “Here we flatten out the pyramid model, giving everyone an equal opportunity to see the patient and bring their expertise.”

After delivery, the relationship with CAMP doesn’t end; it extends to the baby. CAMP offers primary care for mothers through age 22 and their children at their Young Mothers Clinic.

Case coordinators visit new moms before they are discharged from the hospital and bring diapers and a gift for the baby. They also schedule the first postpartum appointment right there in the room.

“We see mom and baby together allowing for twice the opportunity to interact,” Scott says. “Teens aren’t proactive about their health but we can improve that through multiple touch points.”

Kenia Perez was just 16 when she gave birth to Joshua, now 5, at University of Colorado Hospital. Though she didn’t know about CAMP before his birth, she was referred to their Young Mothers Clinic for his primary care. After moving to California, she returned to Colorado and to CAMP while pregnant with her second child.

“When I was pregnant with Isabella, I was scared to have two,” she says. “How was I going to start school? But CAMP helped me with everything.”

“Bringing baby into the fold

Research is another key component of CAMP and has been since the program’s inception.

Jeanelle Sheeder, PhD, MSPH, associate professor of obstetrics and gynecology, is the program’s researcher. She has served in the role since CAMP began collecting data in 1991 and has since published more than 75 papers.

Studies have included weight gain in pregnancy to predict child outcomes, stress and depression, what types of contraceptives have or haven’t been used—everything from basic biological studies to psychosocial.

“This is going to really age me, but we started out with a DOS database,” she says. “Now we’re in the modern age and have a giant online data set. Participants now do surveys and assessments online or on iPads so we can monitor in real time.”

Sheeder says the data has clearly shown CAMP is successful, and now they’re building out other parts of the program.
One example is Pregnancy and Parenting Partners (P3). The biweekly group care takes 10 young women around the same gestational age from pregnancy through early infancy.

They participate in group medical visits, go through parenting classes and even learn how to check their baby's heart rate.

Graduates of P3 have gone on to do well. Many continue their personal growth by coming back to other groups as peer mentors. In addition, the moms find support in each other.

Sheeder tears up when she talks about how one group of graduates planned a Halloween party complete with baby costumes. When one mom could not afford to buy a costume, the others chipped in to get one.

“It’s these unanticipated values that are so meaningful. It was so rewarding for these young women to be able to help,” she says.

There’s also a dedicated effort to ensure these moms don’t quickly become pregnant again. Through a partnership between Children’s Colorado and University of Colorado Division of Family Planning in the Department of Obstetrics and Gynecology, new moms are offered IUDs or implantable contraceptives before discharge. It has reduced the rate of second pregnancies within the first year after delivery dramatically. For those who initiated contraceptive implants prior to discharge, the rate was 2.6 percent compared to 18.6 percent in those who did not.

On the horizon is improving education for fathers and creating a program for successful co-parenting since 80 percent of CAMP participants are single parents.

“For me, I don’t even see the bad,” Sheeder says. “They all want to be good moms and we focus on helping them do that. If they need help with getting back into school, housing, co-parenting, we can help them with that.”

Perez says she’s been inspired by the care and encouragement she and her children have received at CAMP. She is living on her own and is seriously considering studying to become a nurse.

“I want do my own thing. I want to do nursing,” she says. “The [care team] gave me the info to help me take the first step. They seem to be happy for me and cheering me on.”

Cynthia Covell, one of two licensed social workers on staff, visits with Kenia Perez at the Young Mothers Clinic with Kenia’s daughter, Isabella, and son, Joshua. Photo by Tia Brayman, Children’s Hospital Colorado.
Treating the Body and the Mind

Three federal grants will support improved behavioral health care

By Tonia Twichell

Nearly one in five Americans suffers from a mental illness each year, and one in 12 has a substance abuse problem, according to U.S. Substance Abuse and Mental Health Services Administration.

But when these patients visit a primary care doctor, half will not be diagnosed with the condition; if they are, most will not pursue recommended mental-health treatment, according to Colorado State Innovation Model.

For the past three decades, studies have shown that coordinating patients’ behavioral and physical health care pays off by catching problems early and avoiding costly crisis intervention later, resulting in lower overall health care costs, healthier communities and happier patients and doctors.

But converting that information into widespread practice in Colorado has proved to be elusive. Until now.

Colorado is poised for a transformation of its health care system thanks in part to three large-scale projects that will help blend services by 2019. The largest, a federal Centers for Medicare and Medicaid Innovation (CMMI) $65 million award, will help 400 primary care clinics around the state coordinate services by 2019. About $20 million of that Colorado State Innovation Model project will come to University of Colorado Anschutz Medical Campus, where faculty and staff from the School of Medicine, the College of Nursing and the Colorado School of Public Health will help lead the integration.

The second grant, from the Agency for Healthcare Research and Quality (AHRQ), was awarded to CU in June and will reach 260 small, independent practices in Colorado and New Mexico. The $14.8 million Evidence NOW Southwest grant will be used for quality-improvement services to reduce cardiovascular risk factors.

A third project, the Transforming Clinical Practice Initiative awarded by the CMMI in late September, will provide $11.7 million to support 2,000 Colorado primary care and specialty clinicians in redesigning their care to prepare for emerging payment models.

Health Care Extension Service

The grants allow CU faculty and staff to provide training, expertise, research data and access to resources for health care providers and communities. The Colorado Health Extension System is a broad collaborative supporting practices, clinicians and communities to improve health and health care across Colorado. CU will coordinate training and will field a staff from approximately 20 statewide organizations to work with providers.

“We’ll assess where the practice is, see how much work they’ve done in terms of implementation and present different options that can move them along the continuum so they can move into the changes that are coming,” Perry Dickinson, MD, professor of family medicine, says. He is project director for the practice transformation aspects of the CMMI-sponsored projects and primary investigator for the AHRQ grant.

Implementing team-based care will be a priority, he says.

“Practices can deliver better and more comprehensive care by expanding the team with folks like behavioral health specialists and care managers,” Dickinson says.

Behavioral integration has been happening on its own for several years with some practices already adopting team-based approaches for disease management and behavioral health care. CU will also encourage specialty practices and mental health centers to work with primary care providers to help coordinate all patient care.

“Comprehensive care is not about your mind. It’s not about your body. It’s about you,” says Ben Miller, PsyD, a national expert on health care integration, clinical psychologist, and director of the Eugene S. Farley Jr. Health Policy Center in the CU Department of Family Medicine. “How can I give you comprehensive care in the setting that you go to most often to receive your care.”
The Payment Conundrum

A broad array of Colorado private and public insurance carriers have signed on in principle, if not in detail, to an integrated health concept, says Colorado State Innovation Model Director Vatsala Pathy, MPA.

Currently, doctors get paid for face-to-face visits with patients, Dickinson says. Payment for behavioral health services, care coordination and types of care outside clinic visits is mostly lacking.

“Everyone has agreed that something has to change,” says Mark Gritz, PhD, associate professor of medicine and associate director of business development in the Division of Health Care Policy and Research Colorado Health Outcomes Program. “No one would say the system is great. The status quo is not sustainable.

“Timing is what makes it so challenging right now—getting providers to sign on to transform before the payers make any type of decision. It’s one of those cases where all pieces have to fall into place. But we cannot wait for the perfect situation.”

Gritz believes the shift can happen before changes in the payment model because most providers want what’s best for their patients.

“As long as what happens is for the well-being of the patient, and it is financially sustainable for them, I think they’re happy to do that,” Gritz says. “The tension comes in when you ask them to do what would improve the quality of care but those changes don’t allow for a viable practice.”

Despite challenges, integrated health will succeed in Colorado, Gritz predicts. “We have enough of a foundation in this state that if it’s going to work anywhere, here’s one place where it has a fighting chance.”

Miller agrees, saying a cultural shift has already occurred.

“It used to be, years ago, that we had to stand on stages and talk about why it mattered to integrate,” Miller says. “We don’t do that anymore. People get it. They know the data. Now it’s about implementation.”

Pathy has noticed the same change.

“One of the things about behavioral health is that it touches all of us in some way,” she says. “Whenever I go out and speak, every person is affected—either it’s a loved one or a friend who has struggled with substance abuse or mental health issues. It’s so commonplace. All of us know how difficult it is to get the services we need when we need them.”

---

Shandra Brown Levey, PhD, (left) with Crickett Davis at A.F. Williams Family Medicine Center. Photo by Tonia Twichell.

Treating the whole patient

By Tonia Twichell

Crickett Davis’ right knee was acting up again.

A veteran of multiple knee surgeries including a recent left knee replacement, Davis was also dealing with asthma and a new diagnosis of chronic obstructive pulmonary disorder on top of family and work troubles.

When she arrived at A.F. Williams Family Medicine Center in Stapleton for her regular appointment, her doctor offered a service she didn’t expect.

“Dr. Kim (Insel, MD) asked me if I felt I needed some counseling,” Davis says. “She felt I might need more than she could help me with so she suggested Shandra.”

More than two years later, Davis and Shandra Brown Levey, PhD, the clinic’s director of behavioral health integration, are still meeting.

“We clicked right away,” Davis says.

A.F. Williams had already been providing integrated health services when Deb Seymour, PsyD, the clinic’s former director of behavioral health education, joined the practice more than 20 years ago. Then, it was a one-woman effort, but the value of counseling in a primary care setting became obvious quickly.

“In my 20 years at A.F. Williams there were at least 200 times I prevented someone from unnecessarily going to the emergency room,” says Seymour, who is now the Foundations of Doctoring Associate Director for Communications Skills in Undergraduate Medical Education. Patients suffering from anxiety, depression, panic and suicidal thoughts can often be treated in a primary care setting, where they can get immediate help, Seymour and Brown Levey say.

A staff of counselors including doctoral and post-doctoral students also provides support for a range behavioral of issues including exercise and weight loss, alcoholism, drug addiction, and pain, disease and medication management.

“Anxiety and depression are one set of symptoms that can be detected and addressed but at least a third of the integrated primary care services pie is health behavior assistance,” Seymour says. “At least half of the reasons for illness and even death are attributable to behaviors. In integrated primary care settings, people can get the support they need to change behaviors that put them at risk.”

Continued on page 28
Medical Alumni Association Honors Four Distinguished Alumni

Each year, the Medical Alumni Association bestows awards to alumni who perform outstanding research, fill positions of significance, and serve their communities in extraordinary ways. This year, the Association recognized pioneers in philanthropy, research, alumni engagement, and service to community.

Silver & Gold Award

William Maniatis, MD ‘65

The Silver and Gold Award, the highest honor bestowed by the Medical Alumni Association, recognizes a graduate who demonstrates excellence in humanitarianism, citizenship, and professionalism, outstanding service to the community, and contributions to the art and science of medicine.

William Maniatis, MD ’65, was selected this year for his contributions to Colorado’s medical community, unwavering commitment to the School of Medicine, and ongoing work to build a dynamic, vibrant, nonprofit sector throughout the Centennial State.

Maniatis has given back to the School of Medicine since the 1980s when he was President of the Board of Directors for the Medical Alumni Association from 1986 to 1987, and serving again as the board president in recent years. He also served as the associate dean, a clinical instructor in urology surgery, and a member of the University of Colorado Foundation’s Board of Directors for nine years.

Maniatis co-founded Advanced Urology, P.C., in Aurora, where he was in private practice from 1972 until his retirement in 2014. He was the youngest president of the Medical Advisory Board at Presbyterian Hospital in Denver. Maniatis served on the development committee of the University Research Corporation, joined the board of the Urologic Network of Colorado, and was chief of surgery at Columbia Aurora Hospital. He served on the Medical Executive Committee of Columbia Aurora North Campus; for ten consecutive years, he was on the board of the Prostatic Seed Center, and for seven years, on the board of the Brachytherapy Center, Inc.

Distinguished Service Award

Edward Kinzer, MD ‘52

Edward Kinzer, MD ’52, had a solo general practice in Johnstown, Colorado, from 1954 to 1992. Before establishing his practice, he pursued an interest in missionary medicine and providing care in war-related conditions. He cared for patients at Chicuque Rural Hospital in Mozambique and his curriculum vitae includes a statement in memory of three School of Medicine graduates who survived the Bataan Death March. U.S. Army and U.S. Marine Corps survivors of that tragedy have invited him to attend their POW reunions in northern Colorado, Montana, and New Mexico.

Kinzer has served on Colorado Medical Society grievance and rural health committees, been president of the Weld County Medical Society, been president of the Johnstown/Milliken School Board, and has been on staff and served on committees at North Colorado Medical Center. In 1999, Kinzer and four classmates established the Class of 1952 Endowment Fund to honor their upcoming 50th reunion. Kinzer and his classmate, Cal Oba, MD ’52, each gave $5,000. Kinzer offered a specific instruction that the distributable earnings of that $10,000 be reinvested until 2032–100 years after he and his classmates graduated. At that point, annual distributions should be used at the direction of the Dean and Alumni Board of Directors, to advance the mission of the school.

Last fall, Kinzer established a second “100-year Endowment” for the School of Medicine: the Class of 2019 Endowment Fund, in honor of his 1952 classmates. That fund will begin distributing in 2119. and, like its 1952 counterpart, will provide unrestricted funds to the School of Medicine. His vision is to establish new 100-year endowments each year, for the remainder of his lifetime.

Distinguished Achievement Award

Robert Grover, MD ’55

The Distinguished Achievement Award recognizes outstanding service benefiting the community, the practice of medicine, and the provision of health care. With this award, the Alumni Association honored an icon in the field of pulmonology, Robert Frederic Grover, MD ’55.

Early in his career, Grover recognized that little was known about pulmonary circulation and the impact of atmospheric hypoxia in high-elevation communities. In 1960, he was the first person to document the existence of significant pulmonary hypertension in normal, healthy, high-altitude residents in Colorado.

When Grover heard about cardiologists in Peru who observed pulmonary hypertension in the Andean natives living at 15,000 feet, he traveled there to examine data from heart catheterization and he wondered if this same phenomenon might exist in Leadville, Colorado, the highest-elevation city in the United States. Grover shared the Peruvian data with the head of cardiology at the School of Medicine, and recommended a clinical investigation of residents in Leadville. Grover and his colleagues documented that pulmonary hypertension was a normal response to ambient atmospheric hypoxia at Leadville’s altitude.

From 1965 to 1982, Grover trained some 60 research fellows from...
around the world, including cardiologists, internal medicine specialists, pediatricians, engineers, pulmonologists, even anthropologists. Since 2000, the American Thoracic Society has annually awarded the Robert F. Grover Prize for outstanding contributions to the study of the effects of hypoxia and high altitude on the pulmonary circulation. When Grover retired 30 years ago, his colleagues established The Grover Conference on the Pulmonary Circulation, a biennial five-day conference.

Humanitarian Award
Max Bartlett, MD ‘54

The Medical Alumni Association this year introduced the Humanitarian Award to recognize lifelong service to society and honors those who have provided extraordinary service to their community, demonstrating leadership through global, national, or local service. The award will honor deserving alumni, faculty, or staff members who have fulfilled the obligations of their education through creative citizenship, and exemplary service in uniquely extraordinary ways. The initial recipient is Max Bartlett, MD ‘54, who died earlier this year.

Bartlett was a physician who is remembered as kind, compassionate, honest, and funny. After medical school, Bartlett went to Nashville for a rotating internship and residency at Baptist Hospital; he then came back to Denver to establish an obstetrics and gynecology partnership. He later opened a private practice with two physicians, a nurse midwife, and a nurse practitioner.

He served on the charity boards, including Accelerated Medical Services, a home health care company in Denver, and on committees of the Heart Association, the Food Bank of the Rockies, The Parkinson’s Association, the Colorado Neurological Institute, Arapahoe House, which helps those struggling with substance abuse, on the board of the Medical Alumni Association, and on the boards of the Arapahoe, Douglas and Elbert County Medical Societies.

Bartlett enjoyed giving out white coats and stethoscopes at the School’s Matriculation Ceremony. At one of those ceremonies, he told a medical student he had delivered, “I was the first person to hold you in my arms and present you to the world. Now I’m presenting you to the world of medicine.”

This summer, Diane Bartlett established the Max and Diane Bartlett Stethoscope Endowment Fund in honor of her husband, who died in January 2015.

Medical Alumni Association Elects New Officers

The Medical Alumni Association Board of Directors unanimously adopted a new set of bylaws and established various policies and procedures that will position the association for long term success. This new, enhanced governance structure was fully realized in July 2015, when the Board elected its inaugural slate of officers under the new bylaws.

• Wagner Schorr, MD ‘63 | President
• Jan Kief, MD ‘82 | Vice President
• Dennis Battock, MD ‘64 | Secretary/Treasurer

Their terms began on July 1, 2015, and will continue through the end of this fiscal year, June 30, 2016. We extend our profound appreciation to William Maniatis, MD ‘65 for his energy, enthusiasm, and steadfast commitment during his years of service as President of the Medical Alumni Association.

Save the Date: University of Colorado School of Medicine Alumni Reunion

Join your classmates and other CU School of Medicine alumni for the 2016 Alumni Reunion scheduled for Thursday, May 26 - Friday, May 27.

The 2016 Reunion celebrates graduates from class years ending in 6 and 1 and will honor the class of 1966 as it celebrates its 50th class reunion. Activities include a class dinner, the Annual Silver & Gold Alumni Banquet, tours of the Anschutz Medical Campus, and other opportunities to connect with your friends, classmates, and colleagues. The Medical Alumni Association can always use your help to plan a successful reunion for your medical school class. To serve as a Class Ambassador, please contact our office at healthalumni@ucdenver.edu or call (303) 724-2518. Registration begins Monday, Jan. 25, 2016.
CU Receives $10 Million Gift for Depression Center

The University of Colorado Depression Center has been renamed the Helen and Arthur E. Johnson Depression Center in honor of the foundation that made a $10 million grant to support the center’s work.

The Denver-based Helen K. and Arthur E. Johnson Foundation’s gift is one of the largest program gifts in the history of the University of Colorado Anschutz Medical Campus and it will help build an endowment to provide stable and perpetual funding for the center.

“The Helen K. and Arthur E. Johnson Foundation has created new possibilities for the University of Colorado to provide mental health services and conduct critical research in our state and beyond,” said Bruce Benson, president of the University of Colorado. “CU has had a relationship with the Johnson Foundation since 1979 and we cannot thank them enough for recognizing and increasing the potential for the Depression Center to support a better quality of life for the citizens and communities CU serves.”

The Depression Center at CU Anschutz is at the forefront of increased national recognition of mental health as a major concern for individuals, families and communities. More than 1,000 Coloradans commit suicide each year, and the World Health Organization asserts that depression is the leading cause of disability worldwide, affecting 350 million people.

Yet the severe impact of depression, which a recent Journal of Clinical Psychiatry study estimated costs the U.S. economy more than $210 billion a year, has been under-recognized due to historical stigma and incomplete understanding of the science of mental health, which Depression Center research, outreach and clinical care aims to rectify.

“The exceptional work being accomplished at the Depression Center is critical to the health and wellness of the people in our state, and the center’s efforts to eliminate the stigma and improve access to high-quality mental health services are commendable. Our family foundation is honored to help elevate the conversation about mental health in Colorado, and we hope this gift inspires greater giving and understanding,” said Lynn Campion, chairman of the Helen K. and Arthur E. Johnson Foundation Board of Trustees.

Buttrick named Senior Associate Dean for Academic Affairs

Peter Buttrick, MD, professor of medicine, has been named senior associate dean for academic affairs for the School of Medicine.

The senior associate dean for academic affairs at the School of Medicine is responsible for research development, faculty affairs, space and facilities, and oversees the Medical Scientist Training Program and the Office of Professionalism.

“We are very fortunate to have Peter joining the senior leadership team of the School of Medicine,” said Dean John J. Reilly, Jr., MD. “He brings a critical understanding of the School and a depth of experience that will help guide us through the many important decisions we will make in the coming years.”

In addition to serving as head of the Division of Cardiology, Buttrick has also been the cardiovascular disease fellow program director and co-director of the University of Colorado Cardiovascular Institute. While maintaining an active clinical practice, Buttrick is a distinguished researcher and educator.

In the laboratory, Buttrick has been the primary investigator or co-primary investigator on multiple recent and current grants from the National Institutes of Health. Buttrick’s research interests have focused on the molecular and biochemical adaptations that characterize and drive pathologic cardiac hypertrophy.

Buttrick is the author of more than 140 peer reviewed and invited manuscripts. He serves on the editorial boards of several academic journals and has also served as an elected member and president of the Association of University Cardiologists. He was elected to membership of the American Association of Physicians in 2009.

Buttrick earned his medical degree from the State University of New York at Stony Brook in 1979 and completed his internship and residency at the Michael Reese Hospital in Chicago. He later was a fellow in cardiology at the Montefiore Medical Center, Albert Einstein College of Medicine in the Bronx. Buttrick joined the University of Colorado School of Medicine in 2006 and serves as the S. Gilbert Blount Professor and Head of the Division of Cardiology and as professor of physiology and biophysics.
CU Scientists Help Discover New Species of Hominin

A scientist from the University of Colorado Anschutz Medical Campus and another from the University of Colorado Denver were part of an international team that in September announced the discovery of a new species of hominin, a small creature with a tiny brain that opens the door to a new way of thinking about our ancient ancestors.

The discovery of 15 individuals, consisting of 1,550 bones, represents the largest fossil hominin find on the African continent.

“We found adults and children in the cave who are members of genus Homo but very different from modern humans,” said CU Denver Associate Professor of Anthropology Charles Musiba, PhD, who took part in a press conference near the discovery inside the Rising Star Cave in the Cradle of Humankind World Heritage Site outside Johannesburg, South Africa. “They are very petite and have the brain size of chimpanzees. The only thing similar we know of are the so-called ‘hobbits’ of Flores Island in Indonesia.”

Caley Orr, PhD, an assistant professor of cell and developmental biology at the School of Medicine, analyzed the fossil hands.

“The hand has human-like features for manipulation of objects and curved fingers that are well adapted for climbing,” Orr said. “But its exact position on our family tree is still unknown.”

The new species has been dubbed Homo naledi after the cave where it was found – naledi means ‘star’ in the local South African language Sesotho.

One of the most intriguing aspects of the discovery is that the bodies appear to have been deposited in the cave intentionally. Scientists have long believed this sort of ritualized or repeated behavior was limited to humans.

The team of 35 to 40 scientists was led by Lee Berger, research professor in the Evolutionary Studies Institute at the University of Witwatersrand in South Africa. It was supported by the National Geographic Society and the National Research Foundation. The October issue of National Geographic magazine featured the discovery as its cover story. It was also the subject of a NOVA/National Geographic Special that aired in September.

Alumnus on board International Space Station

Kjell Lindgren, MD ‘02, became the University of Colorado School of Medicine’s first alumnus in space when he launched to the International Space Station in July. The mission was supposed to launch in May, but was delayed after a Russian resupply spacecraft malfunctioned and flights were temporarily halted. Lindgren is a flight engineer on Expedition 44/45.

While on the International Space Station, Lindgren has participated in spacewalks, conducted experiments, done media interviews and answered questions for schoolchildren in a live broadcast at the Denver Museum of Nature and Science. He was also scheduled to participate in a live video conference, “Emergency Medicine in Space” Grand Rounds, at University of Colorado Hospital.

Lindgren has been posting images and tweeting from space @astro_kjell.
A virtue of the Student Hot Spotters program was that it offered a model that could be deployed quickly in other locations, says Jennifer Wiler, MD, MBA, associate professor and vice chair of emergency medicine at the School of Medicine and adjunct associate professor at the University of Colorado Denver Business School.

“It was an opportunity to demonstrate that high-utilization patients could benefit from care coordination from interprofessional teams,” says Wiler, who helped Capp build the Emergency Department infrastructure for the Student Hot Spotters program. “And we could quickly train people from disparate backgrounds in an effective and cost-effective way.”

The Student Hot Spotters program complemented another initiative, called Bridges to Care, aimed at helping high-utilizing patients of the emergency department in Aurora find primary care that would be cost effective and more appropriate for those with longer-term, chronic health needs.

The Bridges to Care project is modeled on an effort developed by Jeffrey Brenner, MD, in Camden, N.J. It is funded primarily by the Center for Medicare and Medicaid Innovation to test whether the processes pioneered by Brenner can be applied in other locations.

Some patients who rely on emergency departments for care have needs beyond the immediate medical issue that brings them to the emergency department. Some have mental-health needs or substance-abuse problems. Others lack insurance or need housing and food. And while the treatment needs can vary widely, the payment system for emergency care doesn’t compensate staff for assisting patients with such needs.

On a panel sponsored by the Brookings Institution last spring, Wiler reported that the Bridges to Care program has shown some signs of success, with 550 patients enrolled since 2012. Six months after a Bridges to Care intervention, about 90 percent of the patients seek primary care services, rather than emergency department/inpatient care, for their health-care needs. This assistance helps reduce emergency department and inpatient visits by these patients and, according to Wiler, showed a $2 million cost savings to the health care system.

Still, the Bridges to Care program is aimed at a group of patients who frequently rely on emergency departments to provide care that could be provided by a primary care practice. The Student Hot Spotters was intended to catch all who need support, not just those considered “high utilizers.”

“The students are reaching out to all patients because you don’t have to wait until they come in three times to help them,” Capp says. “You should be able to help them the first time so you don’t have so many who are here two or three times. So the dream program would really be to replicate this not just with students, but with staff, 24/7 in the emergency department, to be able to provide these services and to help save a substantial amount of money.”

Many people would never seek out these services if they weren’t offered in primary care, says Brown Levey, an assistant professor at the School of Medicine.

“There is still some stigma associated with mental health issues so making the leap of going to a mental health center or a psychologist can be too much for some patients,” she says.

Davis, 67, says she appreciates being able to see Brown-Levey at her primary care clinic, and credits her support for helping her through some rough times.

“She always made me feel like I could talk to her about anything, and she inspires me not to give up.

“I feel like she likes me.”

Food Truck Wednesdays

On most Wednesdays, the Anschutz Medical Campus hosts food trucks to promote community interaction during the lunch hour.
`Debt of gratitude’ inspires Schorr family’s $1 million estate commitment

By Tim Skillern

Wag Schorr, MD ’63, says he grew up as a “ranch-raised kid” on the Mexican border in Arizona in the 1940s. After finishing medical school at the University of Colorado, he figured he’d return to his roots in small-town Patagonia, Ariz., to serve as a family practice physician.

But, near the end of his CU medical training, the course of his life changed when he assisted in the care of one of the first kidney transplant patients and worked on transplant programs in England.

“I decided that was the world I wanted to live in,” Schorr says.

That world, filled with what he calls “an extraordinary explosion of medical science,” drew him back to Colorado for a career in medicine. In the meantime, Schorr and his wife, Annalee, sprinkled their time with impressive accomplishments. They hiked in the Himalayas and summited Mount Kilimanjaro. He helped advance dialysis treatment. He served in the U.S. Army. They raised two children who themselves now practice medicine in Colorado.

Among these achievements, Schorr’s lifelong relationship with the University of Colorado resonates most strongly.

“I feel a debt, a debt of gratitude,” he says.

So the Schorrs established the Schorr Family Medical Scholarship Fund in February with a $1 million estate commitment that will support students seeking medical degrees.

Schorr says CU left an indelible mark on his life. He earned his medical degree in 1963 and returned for his residency and first year of fellowship and then joined the medical school faculty. He established the renal unit at Denver General Hospital, created a private practice and later served on the school’s admissions team.

There he encountered bright, accomplished young students and saw some students struggle financially. As a result, he and Annalee considered how they could support the university, its students and future doctors.

“All these bright young people that I’d been interviewing for medical school come from a great variety of backgrounds, some of them pretty challenging,” Schorr says. “They are able to change themselves, recreate themselves. I think it’s an extraordinary opportunity. And that’s why we feel the need to support this.”

Schorr, who is president of the CU Medical Alumni Association’s board of directors, hopes his family’s philanthropy will encourage others.

The Schorrs’ generosity is a “full-circle gift,” says Scott Arthur, vice chancellor for advancement at the Anschutz Medical Campus. “The whole notion of giving back to what gave him so much is special. It’s really about giving them the opportunity to give joy to themselves and also to future students.”

Schorr says his time at CU was more than joyous. It was transformational.

“The CU School of Medicine—apart from my marriage—was perhaps the key event and driver of where I ended up,” he says. “Thank you, CU.”

‘A very easy thing to do’: IRA giving is simple, savvy

When Wag and Annalee Schorr examined their retirement finances, they learned their IRA would be subject to hefty taxes if inherited by their children and grandchildren.

So in February, they established the Schorr Family Medical Scholarship Fund, which they are endowing with a $1 million bequest through their IRA and funding now with a $5,000 gift each year.

“It’s structurally a very easy thing to do,” he says.

The Schorrs can use their retirement as they want to now and when they have passed on, a remainder of their IRA will benefit CU with no tax repercussions.

“We don’t want this gift to occur too quickly,” Schorr says, laughing.
A gift of real estate can make a real difference.

Support CU
A gift of real estate today can save you the hassle and expense on a property you no longer want. You can also make a difference tomorrow by giving your property through a bequest. Either way, your gift will have real impact, and you may avoid capital gains.

Have an Impact
So before you sell, think about making a real difference with a real estate gift. To find out more, visit cu.planmygift.org or contact the Gift Planning Group, 303.541.1229 or giftplanning@cu.edu.