

# UTAHMED

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THE ALUMNI MAGAZINE FOR THE UNIVERSITY OF UTAH SCHOOL OF MEDICINE  
WINTER 2020

## THE SEARCH FOR TYLER

By age 10, Tyler had lost his ability to walk, see, and hear. Scientists searched his DNA for clues. What they found led to a groundbreaking discovery.



# THE PLAN

VOL 1 // 2020

**SMALL TOWN DOCTORS HAVE TO BE JACKS OF ALL TRADES — PRIMARY CARE PHYSICIANS, EMERGENCY ROOM DOCTORS, SPECIALISTS, AND MORE. IT'S AN EXCITING AND REWARDING PATH.**

— KELSEY TOLBERT '21



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KIM RAFF

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**Kim Raff** is a freelance documentary, editorial and reportage photographer based in Salt Lake City, Utah. Kim specializes in documentary photojournalism, seeing stories in her own back yard and capturing intimate portraits of the human experience. Her craft has drawn her into people's living rooms, pulled her onto mountain tops, and humbled her at gravesides; from the Deep South to the American West. She is a frequent contributor to *The New York Times* as well as many other national and international editorial publications.



**Edmon de Haro** is a graphic designer and illustrator whose work focuses on concept illustration and visual communication. His projects include editorial illustration, book covers and magazine covers. His images always search for a quick viewer's understanding by combining unexpected objects and meanings. His work has been awarded and exhibited by the Society of Illustrators, American Illustration, and *3x3 Magazine*.

# UTAHMED

WINTER 2020

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## LETTER FROM THE PRESIDENT OF THE ALUMNI ASSOCIATION

# A Turn of the Page

*As the School of Medicine and its alumni community are evolving, so too does our magazine.*

IN CHOOSING TO SERVE AS THE PRESIDENT OF the University of Utah School of Medicine Alumni Association this past year, I have been motivated by three things. First, I feel gratitude for the impact this school has had on my career as a physician and the path my life has taken. Second, I am deeply inspired by the remarkable achievements of our fellow graduates and want to elevate our work and continue to knit our community together. Third, I recognize the responsibility we have as alumni to pay our success forward, to stay connected to the university and help current students who will become the next generation of physicians, researchers, and health care providers.

To that end, we wanted to look at the ways that we engage you — our alumni. There are currently nearly 15,000 alumni of the School of Medicine. At one time, the vast majority of our graduates stayed in Utah. Today, we are spread throughout the US, working as scientists, educators, surgeons, anesthesiologists, primary care doctors, administrators, and so much more.

At the same time, the University of Utah has been rapidly evolving. This academic year, U of U Health is opening three new major centers including the Craig H. Neilsen Rehabilitation Hospital, and soon we expect to be breaking ground on a long-awaited new building for the School of Medicine.

Since the U and its alumni are evolving, we felt the time was right to evolve how we communicate. Over the course of the past 18 months, we have engaged in a number of thoughtful discussions with alumni, faculty, administrators, care providers, and students to learn more about how we like to communicate and the topics that interest us. Our conversations were thought-provoking, often frank, and always informative.

One of the results of these efforts is now in your hands. In many ways, this is not a new publication. For decades *Illuminations* has been the flagship means of communication amongst our graduates. We continue its tradition of excellence, with news from campus, stories on research, and updates from alumni with a new look and feel. We have added a dozen pages to offer a broader view of our community while also diving deeper into some key stories.

For the first of our redesigned issues, we feature an in-depth interview with Dr. Michael Good, the new CEO of University of Utah Health, senior vice president for Health Sciences, and the 31st dean of the School of Medicine, who shares his history, talks about his management style, and offers a glimpse of the future direction for the institution.

You will also learn about the latest from the school, including breaking news about the Huntsman family's history-making gift to establish a new institute for mental health, the futuristic "Luke Arm" that allows patients to "feel" an artificial prosthetic

through a brain interface, and an intriguing faculty essay about why patients lie about their health to physicians. We feature four medical students who host a podcast about the experience of attending the U as women of diverse backgrounds.

You will meet a number of exceptional alumni such as Richard Price, MD '60, this year's recipient of the Distinguished Alumni Award at Alumni Weekend. Price is widely credited with helping to establish trauma services in the state of Utah. You will learn how graduates are supporting students through the Alumni Association's 5-for-5 scholarship. And of course, we still feature news about this year's matches and personal connections in Class Notes.

**THERE ARE CURRENTLY NEARLY 15,000 ALUMNI OF THE SCHOOL OF MEDICINE. AT ONE TIME, THE VAST MAJORITY OF OUR GRADUATES STAYED IN UTAH. TODAY, WE ARE SPREAD THROUGHOUT THE U.S., WORKING AS SCIENTISTS, EDUCATORS, SURGEONS, ANESTHESIOLOGISTS, PRIMARY CARE DOCTORS, ADMINISTRATORS, AND SO MUCH MORE.**

These are just some of the stories we are excited to bring you, with contributions by a variety of writers, photographers, and artists. We took a little extra time and care to produce this issue, but we believe it to be worthwhile. In addition to print, we will be offering digital versions on a new accompanying website with additional digital content.

As we launch this refreshed publication, it felt appropriate to christen it with a new name, one that encapsulates our story, is recognizable to alumni, students, their families and friends, and could appeal to existing and new readers alike.

I am proud to introduce the first issue of *UtahMed*, the alumni magazine for the University of Utah School of Medicine.

TERESA OTA, MD '88  
PRESIDENT  
Alumni Association  
University of Utah School of Medicine





○ SNAPSHOT

## A New Hope

Keven Walgamott had a good “feeling” about picking up the egg without crushing it.

What seems simple for nearly everyone else can be a Herculean task for Walgamott, who lost his left hand and part of his arm in an electrical accident 17 years ago. But he was testing out the prototype of a high-tech prosthetic arm with fingers that not only can move, they can move with his thoughts. And thanks to a biomedical engineering team at the University of Utah, he “felt” the egg well enough so his brain could tell the prosthetic hand not to squeeze too hard.

That’s because the team, led by U biomedical engineering associate professor Gregory Clark, has developed a way for the “Luke Arm” (so named after the robotic hand that Luke Skywalker got in *The Empire Strikes Back*) to mimic the way a human hand feels objects by sending the appropriate signals to the brain. Their findings were published in a new paper co-authored by Clark, U biomedical engineering doctoral student Jacob George, former doctoral student David Kluger, and other colleagues in the latest edition of the journal *Science Robotics*.

“We changed the way we are sending that information to the brain so that it matches the human body. And by matching the human body, we were able to see improved benefits,” George says. “We’re making more biologically realistic signals.”

*Read more about the Luke Arm in the first issue of the new University of Utah Magazine.*



# The **Pulse**

○ INITIATIVE

## A New Future for Mental Health

*\$150 million commitment from the Huntsman family will establish a new mental health institute.*

**I**N NOVEMBER, THE UNIVERSITY OF UTAH ANNOUNCED A COMMITMENT OF \$150 million from the Huntsman family to establish the Huntsman Mental Health Institute. The institute is expected to become a nationally-recognized leader in research, care, education, and community outreach—and a model for other states to follow.

“All families are impacted by the effects of mental illness. This is the first step in positioning Utah as a national leader in identifying, caring for, and

seeking new treatments for families facing the difficult challenges that come with mental health,” said Karen Huntsman. “Our family invites the community to join us in supporting this important work.”

As part of the grant agreement, the university will work closely with the Huntsman family to raise additional funds to support the institute and to increase awareness in the community about mental health. More information about the fundraising initiative is available online at [hmhi.utah.edu](http://hmhi.utah.edu).

The gift will provide financial support to the University of Utah Health’s Department of Psychiatry and full-service psychiatric hospital known as UNI (University Neuropsychiatric Institute). In addition, the donation will be used to support mental health services and screenings for the university’s 32,000 students, as well as in rural areas across the state. The funding also will support university research aimed at identifying genetic risks and other factors that cause or contribute to mental illness. The university plans to seek approvals to rename UNI in recognition of this gift, identifying it as the Huntsman Mental Health Institute.

“This grant is the culmination of years of interaction between the Huntsman family and UNI. This is a unique opportunity to bring together an immensely talented university with superb leadership and a philanthropic, generational commitment that we hope will only expand over time,” said Peter R. Huntsman, CEO, Huntsman Foundation. “It is past time to change the stigma and misperceptions about mental health.”

**“IT IS PAST TIME TO  
CHANGE THE STIGMA  
AND MISPERCEPTIONS  
ABOUT MENTAL HEALTH.”**

— Peter Huntsman  
CEO, HUNTSMAN FOUNDATION

**75**

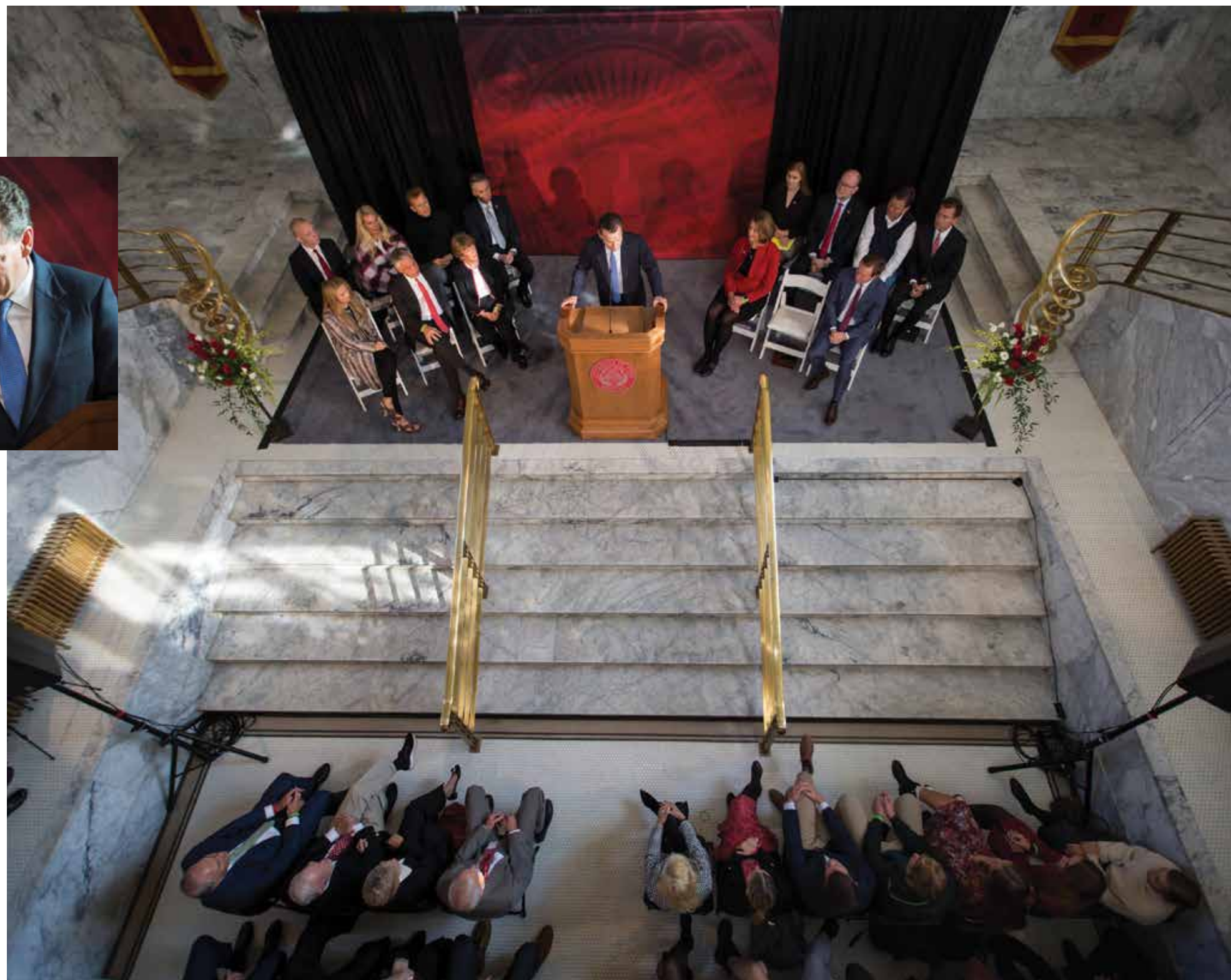
**Department  
of Internal  
Medicine  
Celebrates  
75 Years**

This past year, the Department of Internal Medicine celebrated its 75th anniversary. Founded in 1943 with Dr. Maxwell Wintrobe as chair, the department secured the first-ever grant from the National Institutes of Health. The grant was renewed annually for 23 years and paved the way for the department to emerge as a national leader in patient care, research, and education.





**RIGHT:** The Huntsman family makes the announcement of a new gift for mental health at a press conference on Nov. 4. **ABOVE:** Karen and Peter Huntsman embrace following the announcement.



**Cracking the Code**

In January, the Department of Psychiatry was awarded a \$2 million, four-year grant from the CDC to study children at various ages for signs of autism. Results will inform strategies to improve early identification and treatment.

“The Huntsman family has once again stepped forward to lead the way on a serious public health issue,” said University of Utah President Ruth V. Watkins. “We share a dedication to addressing the mental health needs of our campus and the greater community. We are grateful to Karen and her remarkable family for this transformational gift. Together, we will work to increase positive outcomes, destigmatize the perception of mental illness and enhance the quality of life for families across Utah.”

The university will recruit a new chair of the Department of Psychiatry who will also serve as the CEO of the institute. The search for that leader will be led by Randall J Olson, chair of the U’s Department of Ophthalmology and Visual Sciences and

CEO of the John A. Moran Eye Center. The position will play a vital role in partnering with faculty and community members in using funds to develop a center of excellence in mental health at the university. The chair will also be instrumental in planning a national mental health symposium to be held in Utah next year.

“As we face a nationwide psychiatrist shortage, this gift will allow us to support enhanced training for mental and behavioral health professionals and allow us to re-imagine care models to better address mental health needs across the state,” said Michael Good, CEO of University of Utah Health, senior vice president for Health Sciences, and dean of the School of Medicine. “Over the past 30 years the Department of Psychiatry and UNI have

positioned the University of Utah as a regional leader in the treatment and research of mental illness. This historic donation builds on that legacy and provides the resources to scale both our clinical outreach and our research efforts.”

The Huntsman family has a long tradition of funding programs at the university, including the nationally acclaimed Huntsman Cancer Institute (HCI), which was established in 1995 with a \$100 million donation. The institute now includes a state-of-the-art cancer specialty hospital as well as additional research facilities.

“This commitment in no way diminishes our ongoing financial support to continue to build and promote the Huntsman Cancer Institute,” said Peter Huntsman.

**The Demand for Mental Health Care in Utah**

Close to

**1/5**

adults experience poor mental health

**Suicide**

is the leading cause of death for Utahns age 10-24

**33,000**

people in Utah have Alzheimer’s Disease, the highest incidence per capita in the nation

The rate is predicted to increase by

**30%**

by 2025

**Veteran Suicides**

account for at least 13% of all suicides in Utah

Almost

**40%**

of Utah’s depressed youth age 12-17 did not receive treatment for depression

About

**15%**

of new mothers experience postpartum depression symptoms

The percent increases to

**21%**

for low-income mothers

Over

**100,000**

adults in Utah experience Serious Mental Illness

Source: Utah’s Mental Health System, report from the Kem C. Gardner Policy Institute and the Utah Hospital Association, August 2019



**Top 10 in Quality for 10 Years**

**Running**

For ten consecutive years, Vizient Inc. has ranked University of Utah Health in the nation’s top 10 for quality health care among leading academic medical centers. In 2019, U of U Health ranked fourth in the nation and achieved the No. 1 ranking among academic medical centers in 2010 and 2016.

Among public institutions, *U.S. News and World Report* ranked the School of Medicine

**15th** in Medical Research  
**14th** in Primary Care  
**2nd** in Physician Assistance programs

LAB REPORT

# Bundle of Hers

Four students take to the airwaves to discuss their shared experiences, challenges — and optimism for the future.

**S**INCE AUGUST 2017, FOUR UNIVERSITY of Utah School of Medicine women from diverse backgrounds — Bushra Hussein, Harjit Kaur, Margaux Miller, and Leen Samha — have come together to record *Bundle of Hers*, a podcast about the challenges they face as med students and how their backgrounds affect their experiences.

“We wanted to create a platform in which voices that often go unheard or are dismissed have the opportunity to be heard,” Samha said. “There is an ingrained image among society of what a medical student should

look and be like. We wanted to show that there are definitely different people among the crowd.”

With the help of U of U Health’s Scope Radio and producer Chloé Nguyen, the four students have recorded 55 episodes over the past two academic years and have covered topics such as the connection between environmental issues and health, coping with failure, weight bias, leadership, and more. We asked the team to share a bit of their conversations with alumni.

**ON THE QUIRKS OF BEING A MEDICAL STUDENT**  
**MILLER:** Half the time, I feel like we’re ducks. Baby

**“WE’RE ALL DIFFERENT PEOPLE. SO, WE’RE ALL GOING TO BE DIFFERENT TYPES OF DOCTORS. YOU HAVE TO FIND THOSE QUALITIES THAT WILL MAKE YOU THE BEST DOCTOR POSSIBLE FOR YOUR PATIENTS.”**

— HARJIT KAUR '20

ducks just following the mama resident around wherever they go. You get into the habit of always keeping an eye on your resident. So, when they get up you just go wherever they do, because they’re not going to ask you. There’s actually been a few times I’ve followed a resident to the bathroom.  
**HUSSEIN:** [laughs] Into the bathroom?  
**MILLER:** Almost! You’re not paying attention. You’re just on autopilot. I followed her right up to the door.

The resident turned around and said, “Uh, you don’t have to come in with me.”

**MILLER:** I feel like I’m always playing catch-up. My first day in labor and delivery was rough. The mother was 10 centimeters and crowning, and I had just gotten there. I was trying to put on sterile gloves, which is kind of a difficult thing. You have to unfold the paper and maybe 90 percent of the time your fingers don’t go in the right holes. So here I am, my first delivery and I’m fumbling to put on the sterile gown and these gloves...then I turned around, and the attending’s already holding the baby.

**KAUR:** But you had the gloves! Those moments feel mortifying. But honestly, the residents really help you get through them. I’ve had many say to me, “I used to do that, too.”

**ON DIVERSITY, EQUITY, AND INCLUSION**

**SAMHA:** The residents, especially those who came from the same background as me, really helped. They understood that this little hot mess is eventually going to be a doctor one day.

**KAUR:** It’s incredibly meaningful to see someone with the same background.

**HUSSEIN:** When you don’t, you can feel isolated. I’ve actually had classmates suggest, directly or indirectly, that I got into medical school because of the way that I look, my skin color, being a woman. So, everything that I do needs to prove that I’m here on my own merit.

**SAMHA:** What you’re describing is essentially tokenism — the idea that just by adding someone from an underrepresented group, you’ve achieved inclusion. But it’s not the same thing.

**KAUR:** It’s not. Inclusion, for me, means that not only am I a part of this group but that my voice and my ideas are being turned into actions.

**HUSSEIN:** That’s a perfect definition.

**KAUR:** One barrier is standardization. We live in a time where to be efficient, we have to standardize so much. Unfortunately, that sometimes means creativity or individuality can’t be fully expressed.

**HUSSEIN:** I think that the U is making genuine efforts to address this, but there are still a number of challenges. We need to work to overcome them.

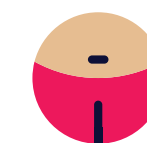
**ON LESSONS LEARNED**

**SAMHA:** One of the biggest lessons for me is that no piece of information is not worth learning. The first two years, you often find yourself saying, “Oh, that’s so obscure. We don’t need to memorize that.” Then it comes up, and it haunts you. You think, “I remember the lecture, I remember the slide, but what is it?” What hurts the most is your patient is waiting for you to benefit from that information, and you just didn’t study it.

**KAUR:** In the end, we’re all different people. So, we’re all going to be different types of doctors. You have to find those qualities that will make you the best doctor possible for your patients.

**HUSSEIN:** Even our failures are helpful. We all know we have imperfections, but to be able to pinpoint exactly where they are and then try to make them better, that’s a huge thing.

**MILLER:** It’s no surprise that medical school is hard, so I’ve learned to pay attention to self-affirmation. It’s important to remember the positive things like, “I helped a patient with a problem today” or “I adapted to that patient interview really well.” There is a tendency to shove those thoughts back in an effort not to be cocky. But when it goes well, we should feel good about doing good for others. That’s why we’re here.



**Could Bacteria Keep You Slim?**

June L. Round, PhD, along with fellow researchers in the university’s College of Health and the SOM’s Department of Biochemistry and Division of Microbiology and Immunology, published new research demonstrating that T cells regulate certain types of bacteria to protect against obesity. Their findings were published in *Science* and reported in *The Atlantic*.

# DAY IN THE LIFE OF...Marja Anton, MD Chief Resident, School of Medicine



8:15 A.M.

Just 30 minutes before clinic starts and we've got 30 patients on the board. It's going to be busy! I need to grab my coffee and a quick bite to eat before the craziness starts.



10:00 A.M.

So many patients to see! How am I going to fit in teaching during this block? It's definitely not as easy as I thought it would be.



12:00 P.M.

Dr. Alghamass's patient has severe dementia based on this cognitive test. I'm really concerned about his safety. How am I going to discuss this without the patient feeling like I'm taking away his independence? There are some things that residency can't fully prepare you for.



1:30 P.M.

Teaching time! I love this part of my job. Showing residents how to read CT scans and apply it to their patients' clinical history is something we do every day as physicians — almost like riding a bike.



2:30 P.M.

Finally, time to check emails. Unfortunately I've neglected my inbox for too long and now I've got 20 emails to respond to. Oh look, Lululemon is having a sale! I'd better get on that.



3:30 P.M.

Oh man, I've been putting off these evaluations for a long time. Guess I should do them now. Also, what's my schedule for tonight? Hit the gym first at 5, eat dinner at 7, then I can be in bed by 9 and asleep by 10. Perfect, that will get me my eight hours of sleep.



ILLUSTRATION BY BROWN BIRD DESIGN

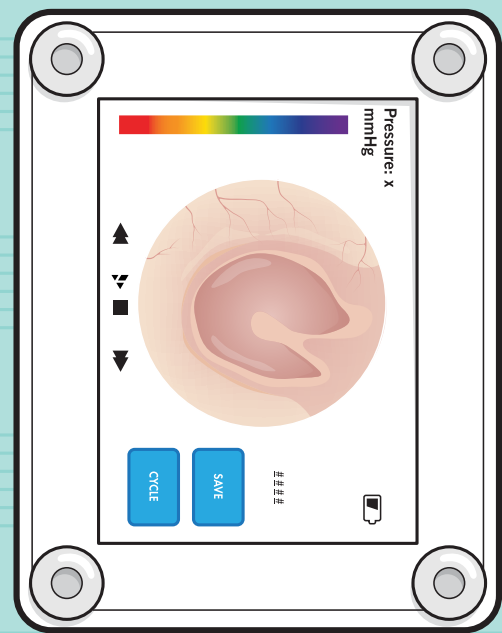
STUDENT INNOVATION

# Speedy Sound Check

The most common reason for a visit to the pediatrician is an ear infection (otitis media). But making that diagnosis with an upset toddler isn't easy. Most physicians use a pneumatic otoscope — an intrusive flashlight-like instrument that takes time and can be painful. As a result, while most children get ear infections before age three, data shows that nearly half are misdiagnosed.

**The Mapping Otoscope** may change that. This invention of four students — Tarek Marrouche, Suzette Mastrangelo, Nicholas Witham, and Allison Kachel — took the grand prize at the 2019 Bench to Bedside competition. More than 1,000 students, forming 238 interdisciplinary teams, have participated in the Bench to Bedside program, now heading into its 10th year. Sixty-five of those teams have gone on to commercialize their creations. "It was a great experience," said Marrouche. "With biomedical innovation, you can merge different skills into a single team. There were students pursuing MBAs, art degrees, and future physicians. It changes your mind about how things work."

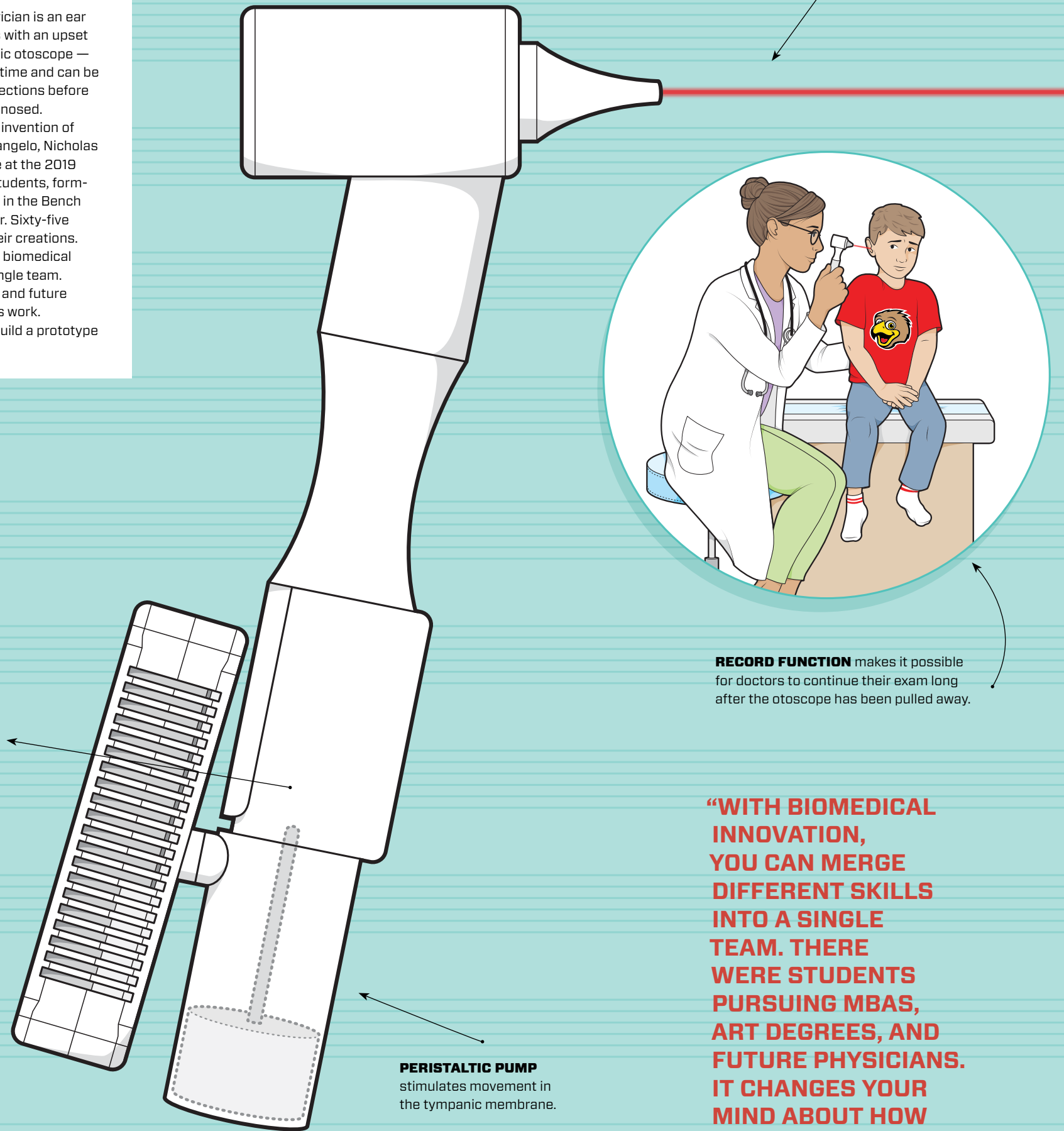
The students are using the \$25,000 award to build a prototype of the device.



**MORE SIGHT ON SOUND**

The screen provides three features:

1. Color display
2. An overlay illustrating tympanic-membrane movement
3. A topographic map that allows doctors to see where fluid is located



**OPTICAL LASER** measures the movement of the tympanic membrane in response to air.

**RECORD FUNCTION** makes it possible for doctors to continue their exam long after the otoscope has been pulled away.

**PERISTALTIC PUMP** stimulates movement in the tympanic membrane.

**“WITH BIOMEDICAL INNOVATION, YOU CAN MERGE DIFFERENT SKILLS INTO A SINGLE TEAM. THERE WERE STUDENTS PURSUING MBAs, ART DEGREES, AND FUTURE PHYSICIANS. IT CHANGES YOUR MIND ABOUT HOW THINGS WORK.”**

— TAREK MARROUCHE

[ NEWS & NOTES ]



**FIRST MARKER FOR MYSTERIOUS VAPING ILLNESS IDENTIFIED**

U of U Health doctors identified a type of cell — known as lipid-laden macrophages — containing oily deposits in the lungs of patients with vaping illness. The discovery may allow doctors to more quickly diagnose and treat patients. The discovery was published in the *New England Journal of Medicine* in September.

**RESEARCHERS AWARDED GRANT TO STUDY THE IMPACT OF ARTS IN MEDICINE**

In May the National Endowment for the Arts awarded Gretchen Case, PhD, MA (School of Medicine), and Sydney Cheek-O'Donnell, PhD (College of Fine Arts), grants to investigate the value and impact of the arts in health. The researchers developed a unique approach to helping health-care providers communicate by using coaches trained in theater arts. "Explorations like these are helping us understand how art can profoundly shape our healing," said John W. Scheib, PhD, dean of the College of Fine Arts.

**“Providers at all levels of training deserve innovative support to communicate effectively and compassionately.”**



**Sydney Cheek-O'Donnell, PhD**  
College of Fine Arts  
Department of Theatre



**Gretchen Case, PhD, MA**  
Chief of Program in Medical Ethics and Humanities,  
School of Medicine

**“I’M CERTIFIED AS A SURGEON AND PHYSICIAN IN TWO COUNTRIES BUT NOT HERE. I HAD TO START FROM ZERO AGAIN, BUT MEDICINE IS MY PASSION. I DON’T CARE ABOUT TITLES. I HAVE DEVOTED MY LIFE TO HELPING PEOPLE, AND I WON’T GIVE THAT UP.”**

– RANA HABBOUSH



○ PROFILE

# Grit and Hope

**I**N 2003, RANA HABBOUSH CONTEMPLATED A brand-new world order — turbulent but one that offered fresh opportunities for herself and her new family. The Iraqi native had just completed her medical degree the year before, was married and pregnant with her first child, and in the first year of her new career as a surgeon when the US invasion of Iraq took place.

Shortly after the fall of Baghdad, Habboush gave birth in the city’s only working hospital. “It was the first reported birth in the city after the US arrived,” Habboush said. “The media dubbed my son, ‘the child of liberty.’”

Now in a new country, Habboush had to again take her medical exams to recertify as a physician and spend four years in residency with the Jordanian Royal Medical Services in Amman. Upon earning her degree, she then served as a physician and medical supervisor for a nonprofit serving refugees from Iraq and Syria.

“The experience of working with refugees transformed me,” Habboush said. “When you’re in a new country, having left everything behind, finding proper medical care can be a challenge. I knew what that was like and felt passionate about helping others.”

But without permanent residency in Jordan, Habboush and her family eventually decided to move again, this time to San Diego. Once more, she found herself unable to practice medicine.

“I’m certified as a surgeon and physician in two countries, but I had to start from zero again,” she said. “Medicine is my passion. I don’t care about titles. I have devoted my life to helping people, and I won’t give that up.”

In 2018, she joined the physician’s assistant program at the University of Utah.

“Rana’s active engagement, wealth of life experience, and past medical knowledge has really enriched the entire class,” said Jennifer Coombs, PhD, PA-C, MPAS, associate professor in the physician assistant program. “She is a leader.”

“I love the mission of the U,” Habboush said. “Everyone here has been so supportive. We are all focused on helping people, regardless of their background. This has been one of the best education experiences I have ever had.”

Currently back in San Diego for her second year of clinical-field training, Habboush said that she still intends to work with refugees in the US. Her first son, “the child of liberty,” is now 17 and on track to graduate at the top of his class. She is proud of the numerous possibilities before him.

“I tell my kids to work hard, to help others, and to always stay optimistic,” Habboush said. “I’ve had a number of challenges in life but — with grit and hope — I turn them into opportunities for myself and others.”

[ FACULTY NOTES ]



**JEFFREY P. ROSENBLUTH, MD**

The University of Utah recognized Rosenbluth, the Craig H. Neilsen Presidential Endowed Chair of Spinal Cord Injury Medicine, with its Distinguished Innovation Award for his decades of visionary work to promote health, independence, and an active lifestyle for individuals with spinal-cord injuries.



**MICHAEL DEININGER, MD, PHD**

Deininger, professor and chief of the Division of Hematology and Hematologic Malignancies, was awarded the 2019 Rowley Prize by the International Chronic Myeloid Leukemia Foundation for groundbreaking research targeting “on-off switches” inside affected blood cells.



**WENDY HOBSON-ROHRER, MD, MSPH**

Hobson-Rohrer was appointed associate vice president of health sciences education. In this new role, she will focus on educational programs and initiatives across the health sciences, identify and leverage the university’s distinct strengths, and build engagement and educational integration among colleges and schools.



**Protein Origami**

Peter Shen, PhD, and Chris Hill, DPhil, both from the SOM’s Department of Biochemistry, determined the structure of Cdc48, a protein that unfolds other proteins inside living cells, and published the results this past summer in *Science*. “Cdc48 is like a Swiss Army knife of the cell — it can interact with so many different substrates,” said Shen. “Until now we didn’t have an understanding exactly of how it works.” Their discovery could lead to new approaches for treating a form of amyotrophic lateral sclerosis (ALS).



## O ESSAY

## When Patients Lie

*As many as 8 in 10 patients conceal significant information from their providers. A patient-physician communication expert reveals the truth — and consequences — of patient coverups.*

**A** FEW MONTHS AGO, I WAS ABOUT to go under anesthesia when I remembered that I'd drunk two glasses of wine the night before. I started to panic about whether that was a mistake. Yet I also dreaded trying to reschedule given how tough it had been to squeeze the procedure into my crazy calendar. I seriously considered concealing the information.

Then I contemplated two facts. One, you don't mess around with anesthesia. Two, my colleagues and I had just conducted a study on patient prevarication, and I'd extolled the virtues of being honest

with providers. I decided to confess to my drinking, was grateful to hear I didn't need to worry, and then shared a good laugh about the difficulty of being honest with health care providers.

But patients' misleading physicians is no laughing matter.

Physicians can't accurately diagnose, treat, and advise patients unless the patients share information openly and honestly. Yet our study discovered that a large number of patients — more than 80 percent — have concealed relevant information from their physicians. Why is that? And what can we do about it? These are questions with serious, potentially life-threatening implications.

In our study, we asked nearly 5,000 adults if they ever withheld information from their physicians on a range of topics, from taking someone else's medication to not having understood the doctor's instructions. Whenever participants admitted to concealing information, we asked them what motivated their dissembling.

It turns out that the vast majority of our subjects — nearly 82 percent — said they didn't want to be judged or lectured about their behavior. Wanting to avoid hearing how bad the behavior is came in second, at nearly 76 percent. The third most common response, at 70 percent, was feeling embarrassed. Not wanting to be seen as a difficult patient came in fourth, at around 50 percent. And nearly half of patients surveyed said they didn't want to take up more of their provider's time. Although motivations for hiding the truth range widely, the options for addressing them are connected by one basic concept: a collaborative physician-patient relationship.

Communications that take a top-down approach are not likely to succeed. Instead, it makes sense to get alongside a patient to problem-solve together. Say a physician suspects that a patient who is already taking several medications doesn't plan to take a new one. Rather than reiterating the need for the new medication, the physician could ask ques-

**“BECAUSE SO MANY PEOPLE TOLD US THEY WANT THEIR PROVIDERS TO THINK HIGHLY OF THEM, PHYSICIANS NEED TO FIND WAYS TO MAKE PATIENTS MORE COMFORTABLE ADMITTING EMBARRASSING BEHAVIORS.”**

tions that acknowledge the patient's reality. She might try, “Will taking another medicine overwhelm you?” or “Will it add stress to your family budget?” Armed with an answer, the physician could assess which of the meds the patient could possibly skip, a much better outcome than the patient omitting the last medicine prescribed — which could be the most important one.

Another great way to open up communication, especially around complex issues, is to apply the “teach back” method. After a complicated or lengthy conversation, a physician could say something like this: “I know that was a lot of information, and I want to make sure I explained it clearly. Can you please tell me what you got from our discussion?” Asking patients what they heard is much more compassionate — and effective — than expecting them to admit that they didn't understand the information.

A healthy dose of self-revelation also can help connect providers and patients. Compare “how many fruits and veggies do you eat?” with something like this: “I don't know about you, but I find it hard to stick to a healthy diet as much as I should. How have you been doing lately?” By showing their own vulnerability, physicians help patients feel more comfortable admitting to less-than-ideal behavior, whether that's eating too much or not exercising enough.

Finally, because so many people told us they want their providers to think highly of them, physicians need to find ways to make patients more comfortable admitting embarrassing behaviors. Patients may be more willing to open up if their providers start the conversation by assuring the patient that they aren't here to judge. For example, a physician could say, “I know sometimes people worry about telling doctors certain things. But please know that I just want to understand all I can about you to make sure I'm helping with your health in the best possible way.”

To be clear, conversations about patients' health behaviors are not easy. What's more, medical students and residents rarely get specific instruction in class settings or clinical training on how to handle them. But given the seriousness of a physician not knowing vital information about a patient, we have an obligation to expand the lines of communication.

Of course, physicians need to find approaches that feel most comfortable to them, and it may take some significant trial and error to figure out how to encourage patients to reveal sensitive information. But if we can create more trusting, collaborative relationships, we may see healthier and more engaged patients. And if we don't, we could be endangering the lives and well-being of those in our care.

*This article first appeared in AAMCNews and has been reprinted with permission from the Association of American Medical Colleges (AAMC).*



**Angela Fagerlin, PhD**

is a professor and the chair of the department of population health sciences at the University of Utah and a research scientist for the Salt Lake City VA. Her research focuses on the communication between health providers and patients and how it informs decision making in seeking care and treatment.

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# WHEN TYLER TEUSCHER WAS SIX, HE STARTED TO LOSE HIS HEARING. THEN HIS VISION BEGAN TO FAIL.

Eventually, he could no longer walk. At age 12, he fell headlong into a downward spiral of a disease some of the best doctors in the US could not identify. Thinking that nothing more could be done, they put Tyler on palliative care.

His mother, 40-year-old August Teuscher, fought to not lose her sanity in the face of her child's impending death. She kept having the same nightmarish vision over and over again: She and Tyler are driving on a winding road up Utah's towering Wasatch Mountains. It's familiar enough that she knows exactly how long it takes. The road curves, and in her desperation, she imagines rushing over the edge with her at the wheel and Tyler beside her, the two of them falling to the bottom of the canyon.

"I felt like life without Tyler wasn't worth living," August said. "If he was going to die, I wanted to die, too."

August laid bare her torment while sitting in her living room. She was surrounded by curtains to prevent being distracted by the film equipment recording her conversation with Ross Kauffman, an Oscar-winning filmmaker and co-director of University of Utah Health's short documentary, *One in a Million*. Kauffman, a master at connecting with his subjects, had a long conversation with August — first about life before Tyler's diagnosis

by the Penelope Program at U of U Health, and then after, when a treatment vastly improved his quality of life.

Released last February, the film was a product of a multi-step vision by Joe Borgenicht, strategic communications director for health sciences. As part of a sponsorship of the 2018 Sundance Film Festival, U of U Health hosted a panel discussion between researchers and artists about working together to tell science stories that can make a difference. The event attracted the attention of Geralyn Dreyfous, an accomplished movie industry veteran and co-founder of Impact Partners Film, which supports independent filmmaking to explore societal issues. Intrigued by the powerful narratives coming out of U of U Health, she brought in Kauffman and Emmy-winning filmmaker Jeremiah Zagar, who all signed on with Borgenicht.

Heather Kahlert, vice president of the Kahlert Foundation, which specializes in improving quality of life, saw the film as a unique opportunity to bolster support for meaningful science. She recognized the artistic medium has an unparalleled power to captivate and inspire, and funded the project as soon as she was given the chance.

Half a year after the film's release, the impact of the film is evident: Seven film festivals, 13 awards, more than 104,000 views on YouTube, and a rare disease bill passed in the Utah Legislature. Along with the attention it brought to the Penelope Program, it also gave August a new purpose in life — and Tyler renewed medical help.

"When we heard about the Penelope Program, something just clicked," Kauffman said. "For me, this film was about exploring the idea of hope — of finding some hope within the sadness."

## THE QUEST

Last May, as Kauffman and Zagar sat at a long table surrounded by physicians, geneticists, specialty nurses, and data scientists, they knew they were onto something. The team that makes up the Penelope Program, a collaboration between U of U Health, ARUP Laboratories, and the Utah Center for Genetic Discovery, meets face-to-face, something that rarely happens anymore. By blending hard data with decades of clinical experience, they focus their collective wisdom on solving some of medicine's most challenging mysteries.

"It is a passion for a lot of us is because it is hard," said Lorenzo Botto, MD, director of the program. "Many of these families have gone through long, distressing diagnostic odysseys and are losing hope. We don't want to give up on them."

Contrary to the term, rare diseases are somewhat common when added together: nearly 10 percent of Americans have one. However, by definition, each disease affects fewer than 1 in 200,000, meaning that little is typically known about them. Approximately 80 percent of these conditions originate from a change in our genes, opening the possibility that scientists can find the root cause by scrutinizing a patient's DNA code.

Launched in 2015, the Penelope Program has found an answer in nearly half of the patients seen so far. For fewer than 10 percent of them, understanding the underlying defect revealed a specific treatment that could improve quality of life. Finding a treatment is still uncommon but the significance of naming the unknown cannot be underestimated. It marks the journey's end and the beginning of new solutions.

Tosh Bingham's limbs giving out at 9 months old was the first of a list of symptoms that grew each year — intellectual disability, speech delay, lack of muscle coordination — but testing turned up nothing. Three years ago, when he was 4, the program found that disruption of the gene *KCND3* was the cause. "Before, we couldn't sleep at night because we were afraid," his mother Shauna said. "After, we couldn't sleep because we were excited." There was no treatment but the search was finally over. Given what was known about the gene, his parents now had an idea of what the future held.

Marley Eliason, a cheerful 11-year-old with severe cognitive delay, was diagnosed by the program last year. With the name of her disease in hand, her parents connected to families worldwide through Facebook, finally finding others who understood exactly what they were going through. Through these new-found networks, they recently learned of a European clinical trial testing a drug that could help Marley, changing the prospects of her future in an instant.

Stories like these were enough to convince Kauffman and Zagar to make the documentary, but they needed something more. Even the best tale falls flat without finding just the right character who will captivate an audience. Then they heard about Tyler.

On a June day over Skype, it didn't matter that Tyler couldn't hear or talk. His personality spoke volumes. Sporting his trademark 1930s-era newsboy cap, the



then 15-year-old was rarely without a smile. "We look at Tyler and he's beautiful," August remarked while speaking with disarming candor about her family's six-year search for answers. "I could never look at that face and give up hope." After finishing, she paused to "talk" with Tyler.

Watching the two communicate is to witness a language of love. Her hands softly pressed sign language onto his body Helen Keller-style, an "I love you" expressed by caressing his chest with the sign of a heart.

"This is it," typed Zagar in an email immediately after the video call. "This is magic."

## THE TRANSFORMATION

When an entire film hinges on a single moment, the stakes are high to get it right. But how is it possible to convey all that went into finding Tyler's diagnosis in just a few short minutes?

Zagar's answer was to create scenes that mirrored the energy of the search. He transformed ordinary building space at the U into a high-tech wonderland, sending production assistants scrambling across town to find large slabs of shiny glass and specialty lighting. Reams of DNA code were loaded onto rows of computers so he could shoot

BELOW: August Teuscher (left) discusses Tyler's (center) treatment progress with Lorenzo Botto, MD, director of the Penelope Program.



TOP: EMILY MKRITCHIAN; BOTTOM: CHARLIE EHLERT

TOP: Director Ross Kauffman (second from left) films August speaking to Tyler. Because her son cannot see or hear, August developed a contact sign language to communicate.

BOTTOM: (left to right) Producer Geralyn Dreyfous discusses the film with directors Ross Kauffman and Jeremiah Zagar, August Teuscher, Lorenzo Botto, producer Heather Kahlert and geneticist Lynn Jorde during the 2019 Sundance Film Festival.

“IT WOULD BE A TRAGEDY FOR ME NOT TO CONTINUE TO SHARE TYLER’S STORY AND REPRESENT OTHER FAMILIES THAT ARE IN THE SAME BOAT WE ARE.”

— AUGUST TEUSCHER



several workers scanning through them. At the film’s inflection point, a geneticist flips through pages of Tyler’s DNA, circling in red the single mutation that caused his illness.”

With these techniques the viewer is transported to a place as we imagine it to be,” Zagar said. “The goal is not to change reality but to enhance it.”

The Penelope Program learned that the error caused a condition called Charcot Marie Tooth type 5. More importantly, the discovery allowed the Penelope team to analyze the biochemical pathway involved and connect with the few investigators worldwide who had tried therapies. As a result, under Botto’s guidance, August started giving Tyler an inexpensive nutritional supplement called S-adenosylmethionine (SAM-e), thought to restore levels of essential nucleotides that were depleted from his body.

Knowing that sometimes there is no substitute for reality, Zagar and his crew sorted through piles of home movies and snapshots from the Teuschers, to capture Tyler’s transformation. The boy went from constant exhaustion to playing outside, from being unable to use his legs to walking with assistance. Before, he signed daily, “Something is wrong with Tyler.” Within weeks of taking SAM-e, he never made those motions again.

“When you talk about having impact and being able to reach millions of people...nothing else like film has the capacity to do that,” Kahlert said. Her support for the film was rooted in the belief that an initial investment would pay back larger dividends. She was right.

Through social media, film festivals, and word of mouth, the movie has reached audiences nationwide, raising awareness of the challenges facing people like Tyler and building the reputation of the program. Among these audiences are the medical and scientific communities who watched the film at National Institutes of Health Rare Disease Day last spring and who will see it at the American Society of Human Genetics meeting this fall. No less significant are the ripple effects on the Penelope team, who feel a sense of pride and renewed energy.

“My approach is purely to make the best film that I can,” Kauffman said. “When the stars align, the

emotion of the story will resonate with the audience and it will change them.”

## THE FUTURE

Beyond generating exposure, *One in a Million* has altered the lives of the very people that inspired it. After his diagnosis two years ago, lack of health insurance prevented Tyler from getting follow-up care. Last November, when he and Botto reunited on the movie set, the doctor gave Tyler an impromptu consultation — right there at the mock clinic.

It wasn’t until three months later at the film’s premiere that they met again, and during that time, Tyler’s health declined. The Penelope Program proceeded with additional testing, revealing yet another condition, a mild form of muscular dystrophy. After increasing his dose of SAM-e and adding a new supplement, Tyler stabilized, regaining his energy. But the relapse was a stark reminder that his struggles are far from over. The program continues to monitor him and search for novel solutions to make his life even better.

The film has changed August, too. “It would be a tragedy for me not to continue to share Tyler and represent other families that are in the same boat we are,” she said. She has become a voice for those who don’t have one, speaking to the media and in public forums while advocating for policy changes to support her community.

“It is humbling to see that this film is reaching the audiences that will truly benefit from it,” Kauffman said. “That is the driving force behind why we make them.”

Despite all the good, August admits that on occasion, she is still haunted by the dark visions from before Tyler’s diagnosis. But she makes it clear she would never carry them out. Now she knows she has a wealth of support behind her: from her family, the rare and undiagnosed disease community, and the Penelope Program.

“They are still trying to make his life better. He is still thought about and cared about, and that is amazing to me,” August said. “It continues to give me hope.”



SEE THE FILM  
**One in a Million**

Directed by Jeremiah Zagar (**We the Animals**, nominated for five Independent Spirit Awards) and Ross Kauffman

(**Born into Brothels**, winner of an Academy Award®). Co-produced by award-winning documentary filmmaker GERALYN DREYFOUS, the Kahlert Foundation, and University of Utah Health.

UTAHMEDICINE.ORG/  
TYLER

## Broader Impact

Advances in technology and expert organizations like the Penelope Program are making diagnostic odysseys a thing of the past in some cases. But accessing this specialized care remains out of reach for many because it is seldom covered by insurance. This could mean the difference between despair and hope—and save on health care costs in the long run.

Steve Eliason, a member of the Utah House of Representatives, had never given the issue a thought until his own daughter Marley was born with a mysterious condition. At age 9, the Penelope Program found the cause of her disease, leading to improvements in her quality of life. While the program absorbs some of the costs of diagnosis and care, it can’t do the same for Utah’s hundreds of undiagnosed disease families.

Having experienced the closure and improvements that can come with an answer, Eliason grew frustrated that lack of insurance coverage prevented other families from getting the same care. So he did what he does best and sponsored a bill. Informally called Marley and Tyler’s bill (for his daughter and Tyler Teuscher) the legislation expands insurance coverage for DNA (exome) sequencing Utah children with undiagnosed diseases.

“Hopefully this legislation will give many more families hope as they have an opportunity to open



the book of life,” Eliason said while announcing the bill at *One in a Million’s* premiere last February. Less than two months later, with Tyler and August in attendance, legislators watched the film and passed the bill—a gift of hope for many.

**ABOUT THE AUTHOR**  
Julie Kiefer, PhD, was co-producer of *One in a Million* and is associate director of science communications at University of Utah Health Marketing and Communications.

Photograph by  
**Ramin Rahimian**

# The Systems View

An Interview with  
**Michael L. Good, MD**



In August of 2018, **MICHAEL L. GOOD, MD**, arrived to take the role of CEO of U of U Health, senior vice president for Health Sciences, and the 31st dean of the School of Medicine. One year into his term, we spoke with Dr. Good about his career, the state of health care today, and his outlook for the future of University of Utah Health.



**UNDERSTANDING THE SYSTEM'S IMPACT**  
 Left: Good meets with patients at the Maliheh Free Clinic, which provides quality medical care to low income and uninsured families. Right: Good speaks with Richard Craig, MD during a tour of the university's Redwood Health Center in South Salt Lake.



"I WAS AT BATTING PRACTICE HITTING BALLS PITCHED BY A MACHINE. THE LIGHT BULB WENT OFF. SHOULDN'T WE BE ABLE TO CREATE AN ARTIFICIAL PATIENT SO ANESTHESIOLOGISTS CAN LEARN THEIR SKILLS?"

**WHY DID YOU DECIDE TO PURSUE A CAREER IN MEDICINE?**

Medicine was in my family. My father was a pharmacist, my uncle a general surgeon. For as long as I can remember, I've always wanted to be a physician. I attended the University of Michigan as an undergraduate and for medical school. I found myself interested in a whole range of subjects. My wife joked that I'd do a pediatric rotation and come home and say, "I want to be a pediatrician." Then I'd do a surgery rotation and say, "I want to be a surgeon." I was interested in everything. I eventually settled on anesthesiology.

**WHAT DREW YOU TO ANESTHESIOLOGY?**

I think the numbers and mathematics appealed to me. While pursuing pre-med, I majored in computer science. It was the late 1970s, a fascinating time for computers. I started programming with punch cards that were fed into large mainframe computers. In 1979, Michigan tore out the third floor of the undergraduate library and installed 50 Apple IIe machines and 50 IBM XTs, and away the microcomputer revolution took off. As I continued in medical school, I kept my coding skills sharp, programming medical office applications and business jobs. It helped give me another perspective.

I find that there's a strong correlation between anesthesiology and programming. If you've ever looked at an anesthesia record, it's a mathematical graph. While most physicians write narrative prose for their medical records, anesthesiologists tell the story through numbers, charts, and lists. Anesthesiology combines physiology and pharmacology, which are the subjects I enjoy the most.

So in a sea of things that I liked, anesthesiology rose to the top.

I was accepted to the University of Florida, which has one of the top-five anesthesiology training pro-

grams in the country. I told my wife we'd be in Gainesville for three years. She likes to point out that I was only off by about three decades.

**WHILE IN RESIDENCY IN FLORIDA, YOU DEVELOPED THE IDEA FOR A PATIENT SIMULATOR TO HELP IN ANESTHESIA TRAINING. HOW DID THE THOUGHT OCCUR TO YOU?**

That idea came about because I wanted to practice more. I wanted to master anesthesiology skills more quickly.

Administering anesthesia is a little like flying an airplane. The takeoff and landing are usually the most intensive. The in-flight analogy, which is the surgery, is often a more stable or calm time for the anesthesiologist. When I first started my training at Florida, we did about three surgical cases a day. But I wanted to do 20 or more — to learn and really master and perfect the techniques required for anesthesia "takeoff and landing."

My wife Danette and I were on our church softball league at the time. One night I was in a batting practice cage hitting balls pitched to me by an automatic machine. That's where the light bulb went off. I said, "I'm basically practicing softball with an artificial pitcher. Shouldn't we be able to create an artificial patient so that anesthesiologists can similarly learn and practice their skills?"

This appealed to my programming capabilities, but I knew right away that I would need help. The University of Florida's engineering school was just three doors over from the medical school. Quickly, I was able to recruit colleagues from engineering. We used a 1963 *Journal of Physiology* publication from Arthur Guyton in which he laid out the cardiovascular system as an analog circuit. I turned the analog circuit into digital code and was able to make it work on a desktop computer.

**HOW SOON DID YOU KNOW IT WOULD WORK?**

Pretty quickly. An early study showed that we could help residents acquire necessary skills faster than they could in the operating room on real patients. The project just took off from there. I continued to work on the simulator for the next eight years.

By 1994, we patented a prototype and licensed the technology to an aerospace company, which eventually turned it over to a new start-up company called Medical Education Technologies Incorporated [METI], created by Louis Oberndorf. METI would go on to become the world's leading producers of patient simulators. Recently, METI was purchased by CAE Healthcare, which now produces and sells the human patient simulator. Today, there are all kinds of patient simulators to train for a vast array of medical scenarios, including trauma, pediatrics, birthing, and more.

I'm very proud of that work, not just because of the novel technology, but for the impact it has had on the training of health-care providers worldwide. I'm gratified to know that there is a generation of anesthesiologists now practicing who started learning on — and I'd like to think are better because of — the human patient simulator.

**WHY DID YOU CHOOSE TO REMAIN IN ACADEMIC MEDICINE?**

The University of Florida was so supportive of our work developing the simulator that it was just natural to join the faculty. As the simulator project began to wind down in the mid-to-late '90s, I became interested in leadership. I took a position as chief of anesthesia at Malcom Randall VA Medical Center, which served northern Florida and southern Georgia. That led to a job as the chief of staff for the hospital and then medical director of the entire health system. I enjoyed working as a physician leader in

the VA system, but to advance further in the VA required relocation to Washington DC. To focus on my family, I transitioned back to the University of Florida full-time and devoted myself to teaching and clinical care for several years. The call to serve in leadership kept presenting itself, however. One thing led to another, and eventually, I applied for and was appointed as the ninth dean of the University of Florida College of Medicine, serving from 2008 to 2018.

**DO YOU ENJOY LEADERSHIP?**

I do. I'm often asked how an anesthesiologist winds up with this type of career. It comes down to systems. As a clinical anesthesiologist, my job is to keep a patient's organ systems working together under anesthesia. If I overpressurize the lungs, the blood pressure will drop. If I don't infuse enough intravenous fluid in the vascular system, I may injure the kidneys.

When I became chief of the VA anesthesia service, it was another system. I now needed to keep surgeons, patients, nurses, blood, and equipment operational and working together in a coordinated fashion. As chief of staff, it was a hospital system. Now I had to coordinate the efforts of nurses, internists, pharmacists, and many other departments. Then as dean of the medical school, it was a much larger entity, but still a system.

I'm proud of my decade leading University of Florida's College of Medicine. We advanced all missions. Clinical growth was robust, with ambulatory-practice visits, hospital admissions, surgical procedures, and emergency-department visits all increasing 70 percent or more. Research and education programs saw similar advances, and NIH research funding increased from \$61 million to \$102 million annually. We completely revised the medical curriculum,



then built a \$46 million state-of-the-art medical-education building that drew national attention.

**HOW DID YOU COME TO BE INTERESTED IN THE UNIVERSITY OF UTAH?**

We were always watching Utah because of the many years of outstanding quality performance. We wanted to learn the approach. I also had some personal connection and awareness. I served under Bernie Machen, who became president at Florida after serving as the president here at Utah. Machen helped to connect me to former Senior Vice President Lorris Betz, who would become an important mentor to me. In late 2017, Dr. Betz encouraged me to look at the Utah SVP position. The more I learned about the University of Utah, the more excited I became about the opportunity and the possibilities.

I began to understand why the quality rankings were so high, why the institution was a leader in patient satisfaction, why the research programs were excelling, the disease-causing genes that have been discovered here. Great work was happening in basic, translational, clinical, and population science. Plus additional advantages: an integrated health plan, retail pharmacy, and geography that's very supportive of its academic medical center. The more you looked into the story, it just got better and better. So I decided this would be a great place for the next chapter of my life and career.

**NOW THAT YOU ARE ONE YEAR INTO YOUR ROLE, WHAT ARE YOUR INITIAL OBSERVATIONS?**

Academic health care in the US exists at the very dynamic and complicated intersection of health care and higher education.

How do you move forward during such rapid and fluid change? My approach is to work hard to continually improve. Experiment. We have to be courageous to try new things, then agile and responsive to shift as new opportunities present themselves.

But while the currents are shifting rapidly, we also have a North Star.

We are a mission-driven organization. Our vows start and end with patient care, education, research, and community engagement.

As we look forward, our strategy needs to be built around excellence in our missions.

How do we further improve the world-class care that we provide to patients? How do we keep our researchers on the front lines of discovery and innovation across the full spectrum of health care? How do we make sure we're preparing the next generation of health professionals, physicians, nurses, pharmacists, dentists, physical therapists, and occupational therapists? How do we translate these elements into our community and make sure we are listening to their needs and feedback?

I don't pretend to have all of the answers, or that it will be easy. But I do know that we will work hard and actively participate.

**YOU HAVE SEVERAL TITLES. NOT ONLY ARE YOU THE CEO OF UNIVERSITY OF UTAH HEALTH, BUT YOU ARE ALSO THE DEAN OF THE SCHOOL OF MEDICINE. WHAT ARE YOUR THOUGHTS ABOUT THE SCHOOL?**

The School of Medicine is exceptional. The first way I became aware of that was at the University of Florida, where we commonly accepted graduates from the U into our residency programs. I noted how well qualified and well prepared the students from

Utah were. The curriculum here is very contemporary. A number of our initiatives are particularly forward-thinking — such as our focus on rural and underserved areas, global health, and an exceptional Physician Assistant program, just to name a few. The fact that two-thirds of all doctors in the state of Utah were trained here speaks to our societal impact.

I arrived here at an exciting time. You need only drive onto campus to see the rapid expansion that is already underway. This past fall, we opened Area E, a new acute care center at the hospital, followed by the advanced Sugar House Health Center and a number of other facilities. This coming spring, we will open the Craig H. Neilsen Rehabilitation Hospital. We have strong partnerships, including Intermountain Health Care, the Veterans Administration, Shriners Children Hospital, and so many others.

Taken together, these expansion efforts and strategic partnerships will significantly impact the services we can provide to our patients and in our community. U of U Health is very much an organization on the rise.

The biggest challenge we face is the School of Medicine building itself. The 521 building is, unfortunately, decaying in front of us. The facilities are significantly outdated. This has long been identified as a need, and several plans had been prepared in the past, but they weren't successfully completed. So in the fall of 2018, I asked leaders to take another careful look at the building and plans that were in

place and develop a strategy to make them a reality. Very soon, we will be able to announce those plans and communicate them to the entire community. I think that you will be tremendously excited by what we have in store.

**WHAT GIVES YOU JOY IN YOUR CAREER?**

Helping others. I remember one patient who had gone many years with excruciating knee pain because he was afraid of anesthesia. Not of knee replacement surgery, but the anesthesia. I spent a great deal of time with him to build his confidence, then performed the anesthesia for his surgery. He did just fine and returned to an active lifestyle and church work that was so important to him. A few months later, he brought me a beautiful wooden rocking horse for my children that he had carved by hand in gratitude. Similarly, I think the greatest joy in being a teacher is when you help a student understand something they previously did not.

I describe my leadership style as an upside-down pyramid. If each of us works every day to make someone else successful, we'll unleash unbelievable organizational energy and power that will make this university the best place for people to work, learn, and be.

President Ruth Watkins likes to say that we are not just the University of Utah, we are the University for Utah, and I strongly agree. We are the only major academic medical center in the Mountain

**“ACADEMIC HEALTH CARE IN THE US EXISTS AT THE INTERSECTION OF TWO VERY DYNAMIC SPACES... HEALTH CARE AND HIGHER EDUCATION. BOTH ARE ENGAGED IN A GREAT DEAL OF SOUL-SEARCHING. WE ARE BEING CHALLENGED TO DEMONSTRATE OUR VALUE.”**

West, serving people in 10 percent of the landmass of the continental United States. We have tremendous responsibility to help people of this great state and throughout the region.

As the national debate about health care continues to unfold, our job is to ensure that we're providing the best possible care to each and every patient. To do that, we need to be at the leading edge of best treatments, find cures when we can, and preventing diseases from even occurring. Wouldn't it be great if a U of U faculty member discovered a new drug, new device, new diagnostic test, or new medical procedure that becomes the standard of care in America?

We do all of this for one purpose — we want better health for our citizens. My role is to help ensure that the University of Utah continues on its path of excellence well into the future. I'm honored to be a part of this exciting team and meaningful journey. ■



**BUILDING A FUTURE**

“The biggest challenge we face is the School of Medicine building itself. The 521 building is, unfortunately, decaying in front of us. So I asked leaders to take another careful look at the plans that were in place and develop a strategy to make them a reality.”

# Rural Exposure

ACROSS THE COUNTRY, AND PARTICULARLY IN UTAH,  
THE SMALL TOWN DOCTOR IS DISAPPEARING. THE SCHOOL  
OF MEDICINE IS WORKING TO CHANGE THAT.

BY ROB LUBKE



“I LIKE MY JOB SO MUCH THAT I DON’T REALLY THINK TOO MUCH ABOUT THE DIFFICULTIES. WHEN I TALK TO MEDICAL STUDENTS AND RESIDENTS ABOUT MY JOB, THEY SEEM VERY INTERESTED IN IT BECAUSE THEY THINK OF IT AS A SPECIES OF DOCTOR THAT IS EXTINCT — TO BE PRACTICING FULL-SPECTRUM MEDICINE. IT KIND OF PLANTS THE SEEDS OF, HEY, THIS IS SOMETHING THAT I COULD DO.”

—KELLY JEPPESEN, MD

Originally from Cedar City, medical student Spencer Lindsay describes himself as a “smaller-town person at heart.” So when the opportunity to complete his family-medicine rotation in rural Utah arose this past summer, he took it.

“I thought I would get the best education, hands-on,” Lindsay says.

He spent six weeks in Monticello and Blanding under the guidance of Kelly Jeppesen, MD, a family physician who’s practiced in those towns for seven years. From early morning surgical procedures to late-night baby deliveries, he got a good taste of the life of a rural doctor. And he was impressed by the way Jeppesen managed his patients and the “salt-of-the-earth people” he served. So much so, Lindsay can see himself becoming a rural doc.

“I wasn’t sure if I could ever see myself doing something like that,” he says. “After being immersed in the program...my perspective changed. Rural medicine is absolutely more of an option.”

Lindsay’s experience was part of the Rural & Underserved Utah Training Experience (RUUTE). This program of the University of Utah School of Medicine strengthens medical-education opportunities in rural and underserved areas and works to increase the number of new physicians who practice there.

Benjamin Chan, MD, the program director and associate dean of admissions at the School of Medicine, got the idea for RUUTE while speaking about the medical school to students in Utah colleges and universities. Physicians in the audience would often tell him how they’d like to see medical students from their communities return home for rotations.

“There was this yearning to have them go back,” says Chan. “That’s where this idea really came from.”

There’s no question rural Utah communities need more doctors.

The American Association of Medical Colleges predicts a shortage of 120,000 physicians in the US by 2032. Most locations will likely feel the pinch. But shortages are likely to be more acute in rural and historically underserved areas, where physician-to-patient ratios are already lower than urban areas. According to the National Rural Health Association, there are roughly 5 active primary care physicians for every 10,000 people in urban areas, but only 4 in rural locations.

A lack of physicians can be especially detrimental to rural areas, where doctors are often the lifeblood of the community. But RUUTE is working to fix the doctor drought.

“Fifteen percent of all Utahns live in a rural or underserved community, and with the growing population, we predict there will be an increased short-

age of providers,” says Kylie Christensen, RUUTE’s program manager.

RUUTE is the first step in getting upcoming physicians interested in a rural practice.

#### WHY ARE THERE SHORTAGES?

There are many reasons for the scarcity of rural physicians. For starters, when compared to urban areas, rural areas usually have a higher proportion of older adults. Older people tend to have more health problems, need more care, and require more-frequent doctor appointments than younger people.

New doctors may not be accustomed to living in rural locations and think the lifestyle there will be unappealing with few opportunities for career advancement or a lack of career opportunities for their spouses. Physicians may also assume — often incorrectly — that rural doctors make less money.

Yet another reason rural areas get fewer physicians: Most medical campuses are centered in urban areas,

and students often stay in familiar places. According to Chan, approximately one in three students will practice medicine within 100 miles of their medical school. But they are more than twice as likely to practice in the area of their medical residency.

“If we can increase the number of residency opportunities in rural areas,” Chan said, “then more physicians may choose to stay.”

#### OPTIONS FOR ALL

Working with schools of higher education, Utah hospitals, and Area Health Education Centers (non-profits that focus on improving care in medically underserved areas), Chan set out to help students get familiar with rural Utah. Thanks to funding from the Utah legislature in 2018, RUUTE was born.

The program currently allows students to do full or partial rural rotations in general surgery, family medicine, and OB-GYN, and plans to add more options soon. and plans to add more options soon. It’s also



“After being immersed in the program...my perspective changed. Rural medicine is absolutely more of an option.”

—SPENCER LINDSAY



**COMMUNITY FOR THE CAREGIVER:**  
As part of the RUUTE program, Kelsey Tolbert '21 sees patients at the San Juan Clinic Monticello. "I was surprised at how I was welcomed into the community. The patients I saw at the clinic I then saw at the store, in restaurants, at the park... It was wonderful. And when you live, work, and play with the patients you see, you have a far richer baseline to work from to offer care."

laying the foundation for an optional graduate certificate in rural medicine and rural residencies.

"We're hoping that if we expose our students and residents to these communities, they will want to go back and practice there, or even the community they grew up in," says Christensen.

Part of RUUTE's focus is to spur interest in medical careers among young rural students. While it now partners with the College of Pharmacy, it hopes to involve other health disciplines in the future. Building on efforts of the School of Medicine's Office of Inclusion and Outreach, the program plans to create a collection of health-science materials that students will present to grades K-12 in rural areas.

The program is also creating varied opportunities for physicians to work with medical students. They may speak to students about rural practice, spend time with them on the job, or seek their help with rural research projects. Doctors have different ideas about how they can contribute and are encouraged to share their thoughts.

"We're hoping that if we expose our students and residents to these communities, they will want to go back and practice there, or even the community where they grew up."

"We're trying to meet and match those expectations by having a wide variety of different experiences — a buffet if you like," says Chan.

About 60 percent of medical students participate in RUUTE activities. Just a sample of rural medicine could nudge them to a career in a rural or underserved area.

#### VERONICA'S STORY

Third-year medical student Veronica Urbik grew up "all over the place" but nowhere rural. Still, she knew of the challenges facing underserved areas.

"I used to volunteer at a children's hospital," she says. "We would get a lot of patients who would drive eight, nine, 10 hours for their care, and then they'd have to stay at the hospital for a really long time because there was nowhere closer they could get care. That was heartbreaking."

While attending a medical-school panel on rural health, Urbik's interest in RUUTE was piqued. She completed three weeks of her family-medicine rotation in Moroni with Eileen Jackson, MD, '03 this July. And she found the experience exhilarating. "It was just a really special place with really kind people," she says.

Of all her experiences, what stands out most in Urbik's mind is Jackson.

"Even though there were really long days, and things were difficult, and there were challenges, she never let that get in the way of caring for her patients," Urbik says. "I was just so inspired."

Like Lindsay, Urbik doesn't know for certain where she'll end up practicing medicine, or in what specialty, but now thinks becoming a rural physician is a real possibility.

"Rural health is not something I would have considered before doing this rotation, but I had such a

SHARA LYMAN

## Rural Roots

BY STEPHEN DARK

FOR NEARLY TWO decades, the School of Medicine has been sending its students into rural high schools to encourage pursuits of careers in small-town medicine.

When 15-year-old Kade Shumway Lyman told staff at San Juan High School in 2004 that he wanted to be a doctor, their response was not the verbal high five he expected.

It had been 10 years since a student from the Blanding, Utah, high school had gone to medical school, they'd said, and it was an expensive and demanding career.

A small town midway between Moab and the desolate beauty of Monument Valley, Blanding struggles with poverty and isolation. Teen Lyman had to drive 90 minutes to Cortez, Colorado, just to buy socks. A serious medical problem still requires an AirMed flight to the University of Utah.

Two years after Lyman shelved his physician plans, several University of Utah medical students visited Blanding to meet with juniors and seniors. They were volunteers with the Utah Rural Outreach Program (UROP), which recruits medical students to crisscross the state during the winter and spring breaks. Their mission is to address a long-standing dearth of doctors in rural counties by encouraging local high schoolers to consider the rewards of health care careers and recruit rural physicians to be mentors.

In 2017 the program, which is 17 years old and runs on an \$8,000 annual budget, sent volunteers to 40 high schools in 15 different counties, accumulating more than 70 hours of classroom presentations to reach a total of 1,566 students.

Lyman, MD '16 went on to med school at the U, returning to Blanding himself as a UROP representative to



promote the idea of medical school with students there.

Lyman currently lives with his family in Los Angeles, where he is a third-year resident at a Level 1 trauma center. He plans to return to Blanding as an orthopedic surgeon. "I want my children to grow up in the same close-knit and supportive community I did," he says.

*Read more about Utah Rural Outreach Program in the Spring 2019 edition of Continuum Magazine.*

“Rural health is not something I would have considered before doing this rotation, but I had such a wonderful time, I was really sad to leave.”

—VERONICA URBİK



wonderful time, I was really sad to leave,” she says. “It is definitely something that will be a consideration for me.”

#### PHYSICIANS ARE KEY

The fact that doctors like Jackson and Jeppesen have such an impact on their students isn’t lost on RUUTE leaders.

“Our rural providers are a very big part of the core of our program,” says Christensen. “We could not continue to send our students to these communities if the physicians were not willing to precept and educate them.”

They’re community pillars who assume many responsibilities for their patients, adds Chan, noting how they singularly manage health problems that a host of different specialists would oversee in

a larger community. Even without ideal resources, they enjoy their jobs and they inspire others.

#### EVERYONE WINS

Ultimately, rural residents will reap the rewards when RUUTE-trained physicians choose to work in their communities. But anecdotally, rural residents are already enjoying having students on their care team during rotations, and patient-satisfaction scores are consistently high when students are involved, according to Chan.

Patients benefit, physicians benefit, and students benefit, and those upcoming physicians express appreciation for the experience.

“I’m just really thankful for the opportunity,” says Urbik. “It’s one of those things that I really love about the University of Utah and the breadth of my education here.”<sup>14</sup>

# FollowUp

ALUMNI NEWS

“I love to push myself. It’s all about taking advantage of what I have while I can. When I can’t do it, I’ll seek something else.”

**Nina Grewal, MD '03**



“The U is incredibly challenging but also very humane. Professors, caregivers, and students alike all share a common goal: to help people. I found that to be deeply influential.”

**Nina Grewal, MD '03**

VASCULAR SURGEON, SAN DIEGO

**I** BELIEVE STRONGLY THAT THE COURSE OF your life is determined by how you respond to the challenges before you, and how you take the opportunities,” says Nina Grewal, MD '03. She is quick to point out the numerous opportunities that led to her successful career and practice as a vascular surgeon in Southern California.

Indeed, the search for new opportunities drove Grewal's parents to immigrate to the US from India in the late '70s, when she was three years old. “Like many parents, they wanted a better life for my sister and me. They felt that the choices in India were limited and that they could build a new future here.”

The family moved just north of Seattle, where they settled into a suburban lifestyle. “I can't imagine how challenging it was for them — to move to a place that felt completely alien.” Both sisters grew to have a passion for the sciences. After graduating from the University of Washington, Grewal sought options that could combine her academic pursuits with her interest in people. “Medicine seemed to be the right fit for me.”

Grewal credits the University of Utah School of Medicine for shaping her career. “The U is unique amongst medical schools,” Grewal says. “It's incredibly challenging but also very humane. A great deal of credit goes to the surrounding culture and faith communities for instilling an ethos of service. Professors, caregivers, and students alike all share a common goal: to help people. I found that to be deeply influential.”

A fitness enthusiast, trail runner, hiker, and mountain climber, Grewal eagerly continues to seek new challenges. “I love to push myself. It's all about taking advantage of what I have while I can. When I can't do it, I'll seek something else.”

She brings the same ambition, joy, and infectious smile to her practice as a vein specialist. “I find it very rewarding. A patient may come in with leg pain, and with a fairly straightforward procedure I can make their lives a little bit better.”

Grewal established an endowed scholarship this past year to support tuition; she is the youngest graduate to do so.

Her advice to current and future medical students is simple: “Take every chance you get.”



DEAN'S ROUNDTABLE

# A Global View

*DeVon Hale, MD '69 reflects on his career in infectious disease and where he sees future opportunities.*

**I**n April, Wayne Samuelson, MD, vice dean for education, spoke with DeVon Hale as part of the annual Dean's Roundtable series with medical students.

**Samuelson:** What interests you about infectious diseases?

**Hale:** I find that there are three good reasons to go into the field. First, it's diagnostic. A lot of your time is spent trying to solve a mystery, to figure out what people have, and it's fantastic when you're able to do that. Second, it's a diverse field. It interacts with all specialties, even surgery. In fact, surgeons keep making infections, so it's great to have those guys around. Finally, and perhaps most importantly, once you make a diagnosis, there's a good chance that you can treat it.

**Samuelson:** You have a great deal of global experience. What brought that about?

**Hale:** My entry into global health can be credited to two cases from The Church of Jesus Christ of Latter-day Saints. The first was in Chile, where the church had a number of missionaries who were experiencing an outbreak of typhoid fever. I was sent to investigate. We gathered a great deal of data about not just the missionaries but of the prevalence of typhoid fever amongst the local population, which could be as high as 43 percent in some areas.

The second case was related to missionaries who were eating home-cooked meals in South America. If you know anything about infectious disease, you know that home-cooked food can be some of the most dangerous in regard to infections.

We wanted to create an information pack so that any missionary could find great health care in any



**DeVon C. Hale, MD '69** joined the School of Medicine faculty in 1984, retiring in 2014 after serving as assistant dean of Global Health, dean of Idaho Affairs, and vice president of ARUP. Hale is credited with developing the U of U Global Health Initiative. Hale is also a past president of the School of Medicine Alumni Association ('99-'01) and a recipient of the SOM's 2006 Distinguished Service Award.

assigned country. This took me to more than 50 missions in 25 different countries to look for the best health-care providers. When I finished, I think I knew more about the state of international health care than just about anyone in the nation.

**Samuelson:** When you came to the University of Utah, students eventually began to seek you out for information on other countries.

**Hale:** That's right. A number of students asked me, "Could I do an overseas rotation in medicine?" So we set up rotations. [The rotations] weren't very good at first. We didn't know what experiences our students would have. We took a lot of chances.

One young student was sent to South Africa with the Cleveland Clinic, but once she arrived, her supervisor from Cleveland didn't show up. The local hospital administrators took her to an HIV ward with about 30 patients and just said, "You take care of them." She refused at first but then thought, "If I don't, who will?"

So, a fourth-year medical student attempted to run a ward of 30 HIV patients. She's to be commended for her bravery, but it's not good for the patients or the student. We eventually realized we would have to really get our arms around these experiences.

**Samuelson:** What did you do?

**Hale:** We looked at other programs that were doing well, such as Indiana. We partnered with other medical schools within the host countries. When we visit another nation, we try to model the best of our own programs here.

In Rwanda, for example, we found that their students had terrific textbook knowledge, but they were on a kind of European model — rewarded for memorization. On rounds they could be reticent to

participate because if they got the answer wrong, they were criticized. So, we tried to model critical thinking — we'd get them to ask questions and process their knowledge to treat patients. It was a terrific experience.

I feel that the most important thing you can do in a foreign country is help with education: learn what they do and model what we do.

I'm incredibly proud of our work to set up our programs and deeply impressed by how Ty Dickerson [assistant dean of Global Health Education] has elevated it.

**Samuelson:** What are some of the biggest challenges facing global health today?

**Hale:** Antibiotic-resistant organisms are one large challenge. Again, Rwanda is an interesting case study. A German group there conducted a study on extended spectrum beta-lactamase [bacteria that have the ability to break down antibiotics] and found a prevalence of 60–80 percent of admitted patients [who] had been colonized by the bacteria. The problem is that they are limited on medications and heavily rely on one — ceftriaxone. So, we desperately need to work on this.

**Samuelson:** What advice do you have for people wanting to explore global health today?

**Hale:** Much of what I learned was through first-hand experience, but today there are more options for formal training. I would encourage anyone really interested in global health to seek out programs such as those offered by the Centers for Disease Control. It is a fantastic way to experience the world and learn about other cultures, while at the same time working to help improve lives. I have found it to be a noble and deeply rewarding calling.

GIVING

# Paying it Forward

*Don and Rebecca Reese establish a 5-for-5 Scholarship.*

BY KRISTIN ANDERSON

**D**ON REESE, BS '73, MD '77, MET his wife, Rebecca, while attending the University of Utah, and they married in 1975 after Don's sophomore year of medical school. Their memories of the U reflect a time of not only a lot of activity and hard work but also a time of great satisfaction, with their first child being born just before graduation.

Don excelled in school, he was accepted into the honors internal-medicine program and inducted into Alpha Omega Alpha, the national medical honor society, during his third year at the School of Medicine. He describes the education received in medical school as excellent, crediting professors like Drs. Maxwell Wintrobe, George Cartwright, Frank Tyler, John Ward, Jim Williams, Tom Caine, and John Holbrook. He especially appreciated his time working with Gerald Krueger, MD, which eventually led him into the field of dermatology.

After graduation, he completed an internal-medicine internship at LDS Hospital followed by a three-year residency at University Hospitals in Minneapolis, Minnesota. Upon returning to Salt Lake City in 1981, he began private practice while also seeing patients at the University of Utah as a clinical assistant professor. Most of his 33 years of clinical medicine were in the vicinity of St. Mark's Hospital. Rebecca worked in her husband's practice, giving her a better appreciation for the field of medicine while also getting to know many of the patients personally.

Don and Rebecca have been longtime patrons of the University of Utah, including KUED, the University-owned PBS station, and the College of Fine Arts; moreover, they have provided scholarships for undergraduates in chemistry and science majors who plan to teach in secondary schools within the state. They have been supporters of the Crocker Science Building and the Don L. Reese Floor for Advanced Undergraduate Laboratories and Teaching in the Thatcher Building for Biological and Biophysical Chemistry. In addition, Don currently serves on the University College of Science Advisory Board.

This past year they felt it was also important to give back to the School of Medicine in recognition of the opportunity it provided to Don. After learning of the 5-for-5 Scholarship, Don contacted the School of Medicine Alumni Association to establish a pledge,

and it was awarded for the first time in August 2019.

The 5-for-5 Scholarship is a pledge of \$5,000 a year for five years for an incoming student or students. With the average debt for a medical-school graduate exceeding \$170,000, Don and Rebecca felt compelled to reduce that burden for a few students. They have received notes of appreciation from the two students who are recipients of their pledge and look forward to meeting them at the annual Health Sciences Scholarship dinner next spring.



With the average debt for a medical-school graduate exceeding \$170,000, Don and Rebecca felt compelled to reduce that burden for a few students.

In retirement Don volunteers at the Maliheh Free Clinic in South Salt Lake, as well as spending time with Rebecca and family at their cabin in Bear Lake. Don and Rebecca continue to find tremendous enjoyment in their association with the University of Utah and the School of Medicine, and the community is especially grateful to the Reeses for their decision to pay it forward.

GOT A CASE?

Want to share an interesting case for the next issue? Tell us about it at [utahmedicine.org/case](http://utahmedicine.org/case)

CASE LOAD

## Case 81

Can you diagnose the case?

Dr. Herbert Fred began his medical career as a resident at the University of Utah in the 1950s. He eventually went on to the McGovern Medical School at the University of Texas Health Science Center at Houston, where he served as a professor from 1971 to 2016. During his six decades in medicine, Dr. Fred wrote hundreds of journal articles and six books.

"Using one's mind and sensory faculties to make diagnoses has become a lost art," Fred wrote in the preface to *Images of Memorable Cases*. With only an image and a brief

description, he presented each case as an unknown, "the way patients typically show up in the hospital."

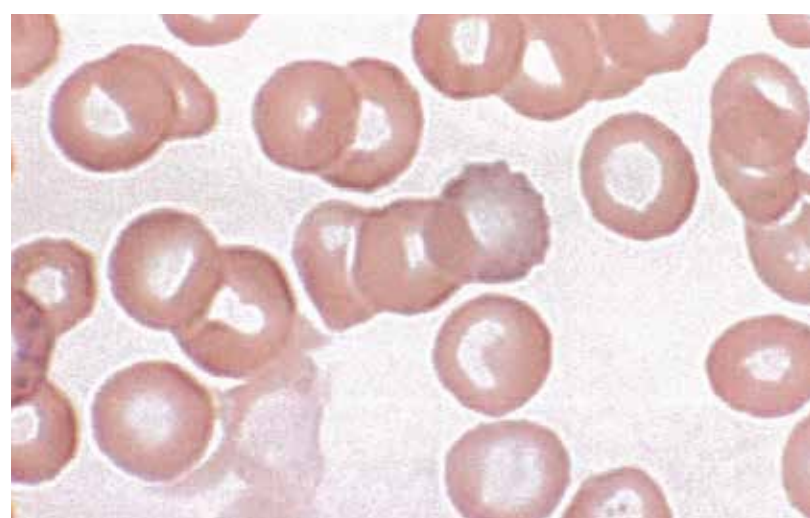
Fred passed away in January of this year. Throughout his life, he

remained in regular touch with many in the University of Utah medical community. To celebrate his contributions, we present "Case 81" from *Images of Memorable Cases: 50*

*Years at the Bedside.*

Based only on the slide and the description, can you deduce what the issue is?

For answer, see page 54



Peripheral blood film from an anemic, 53-year-old geophysicist who complained of fatigue and constipation. The blood film of his asymptomatic wife showed similar changes, but that of his 12-year-old son was normal.



New treatment rooms with shelved space for additional inpatient and outpatient services, as well as modular space that can easily shift to accommodate changes in demand.



“Facilities like this make it possible for us to have a greater impact on our patient’s lives and on the lives of the community.”

—Bernadette Kiraly, MD



BUILDING

# Expanding Care into the Community

*Two new facilities expand access for University of Utah Health patients and opportunities for School of Medicine students.*

**T**HIS PAST FALL, UNIVERSITY OF Utah Health opened two new state-of-the-art care centers, Area E and the Sugar House Health Center. Area E, a new extension of the hospital, is a nearly 300,000 square foot, \$131.5 million facility that will create more convenient access for patients who require world-class expertise for their care, but for whom a hospital stay is unnecessary. Area E will also enable students and recruits to train interprofession-

ally in what is arguably the best clinical care environment in the nation. “Area E is an important piece of our growth strategy,” says Alison Gaffney, executive director of U of U Health services lines, ancillary and support services. “This new wing will encompass clinics, operating rooms, inpatient units, as well as a plethora of support services in a new convenient and well-thought out building that serves our patients, faculty, and staff very well.” In Sugar House, a new 170,000 square foot facility brings a wealth of primary and specialty services



LEFT: HEY CREATIVE; RIGHT: MITCH DAVIS (2)

covering everything from pediatrics to internal and family medicine to geriatrics. The new center is also home to urgent care facilities, as well as infusion, oncology, and radiation oncology providers from the Huntsman Cancer Institute.

Now patients in the Sugar House community and surrounding areas can find more of what they need close to home, instead of braving the traffic to get up to University Hospital. In order to simplify patients’ visits, ample parking and childcare services are available. In addition to excellent patient care, education, and research, a core part of the mission at U of U Health is engaging the communities we serve, and with the opening of the Sugar House Health Center, U of U Health has 12 neighborhood health centers embedded in neighborhoods across the Wasatch Front.

“Facilities like this make it possible for us to have a greater impact on our patients’ lives and on the lives of the community,” added Bernadette Kiraly, MD, primary care medical director for the Sugar House Health Center.

“University of Utah Health has a vested interest in making our communities safe, vibrant, healthy, and stable,” said Michael L. Good, MD, CEO of University of Utah Health, dean of the School of Medicine, and senior vice president for Health Sciences. “Serving our communities is fundamental to our mission, and the new Sugar House Health Center makes it possible for patients to be seen where, how, and when, and when, and when, they want to be seen.”

◀ **PRIMARY AND SPECIALTY SERVICES**  
The Sugar House Health Center will offer a range of services covering everything from pediatrics to internal and family medicine to geriatrics. The new center is also home to urgent care facilities, as well as infusion, oncology, and radiation oncology providers from the Huntsman Cancer Institute.

# 2019 Distinguished Awards

Honoring caregivers for their outstanding service to the field of medicine.

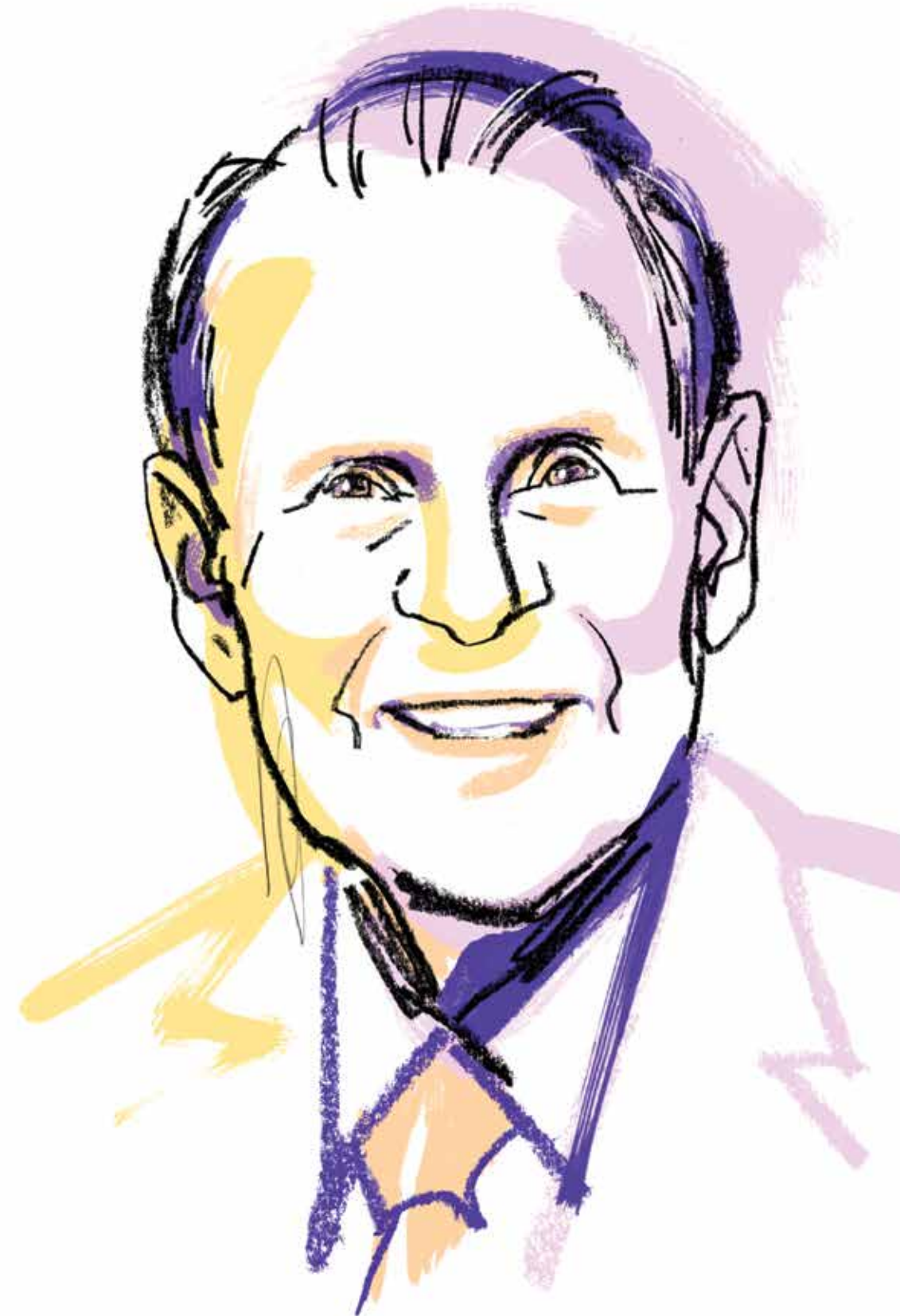
**F**IRST PRESENTED IN 1991, THE UNIVERSITY OF Utah School of Medicine Alumni Association awards recognize caregivers who have made a particular achievement, a series of such achievements, or a career of noteworthy accomplishment in care, research, education, and service.

“The four recipients of this year’s awards represent the very best of our profession,” said Teresa Ota, MD, president of the School of Medicine Alumni Association. “They have had a profound effect in advancing medicine for Utah and the Mountain West in trauma services, treatment for addiction, immune deficiencies, and medical education.” —RICH POLIKOFF

“He was one of the fastest and one of the best. When other surgeons needed surgery for themselves or their families, they often turned to him. He’s a surgeon’s surgeon.” —DR. MARK STEVENS

## Richard Price, MD '60, FACS

**DISTINGUISHED ALUMNI AWARD** FOR HIS EXCEPTIONAL LEADERSHIP AS A SURGEON, MEDICAL DIRECTOR, AND TEACHER.



### PIONEER IN TRAUMA CARE IN UTAH

In 1972, barely one month after returning from his tour of service in the Air Force, **Richard Price** received a call that would change health care in the Mountain West. The voice on the other end said there was a teenage gunshot victim in the hospital and asked Dr. Price to come in. Although he wasn't on call that night, he rushed in and saved the teenager's life.

The experience left him dismayed. While in the Air Force, Price had done tours in Europe and throughout the US and was involved in the care of hundreds of casualties returning from the Vietnam War.

So when Price arrived at the hospital to care for his gunshot patient, he was surprised to learn the hospital was ill prepared.

Price soon realized that the deficiencies extended well beyond the hospital. In his estimation, the entire state of Utah did not have adequate services to deal with a large-scale trauma. Among other issues, he saw no medically trained first responders, no surgeons trained in trauma care, and no protocols or organization for trauma care in emergency rooms.

“I thought it was unacceptable,” Price said. “I went to the leadership of the hospital and the medical director at LDS. They all said, ‘Hey, if you think we ought to do something, why don't you go ahead and do it?’”

Price did. Over the course of his four-decade career, he played a key role in the development of trauma and critical care throughout the state. He established new trauma service for Intermountain Healthcare at LDS Hospital and Primary Children's Medical Center, as well as the IHC Life Flight air-transport program. Price's leadership resulted in the LDS Hospital trauma service being officially recognized as a Level 1 trauma center.

Price is the recipient of the University of Utah School of Medicine's 2019 Distinguished Alumni Award.

“Everybody would acknowledge Dick Price is the father of trauma care in Utah,” said Dr. Mark Stevens, who succeeded Price as the director of trauma service at Intermountain. “He's also a very good technical surgeon. He was one of the fastest and one of the best. When other surgeons needed surgery for themselves or their families, they often turned to him. He's a surgeon's surgeon.”

“Textbooks cannot tell us what a patient wants, what makes most sense for them given the context of their life, and in what order to prioritize their issues. I love helping trainees to work through these puzzles.”

**Karl Sanders, MD**

**THE M. PAUL SOUTHWICK PRIZE FOR EXCELLENCE IN CLINICAL MEDICINE AND TEACHING**, FOR HIS EXCEPTIONAL TALENT AS ONE OF THE TOP EDUCATORS IN THE DEPARTMENT OF INTERNAL MEDICINE.

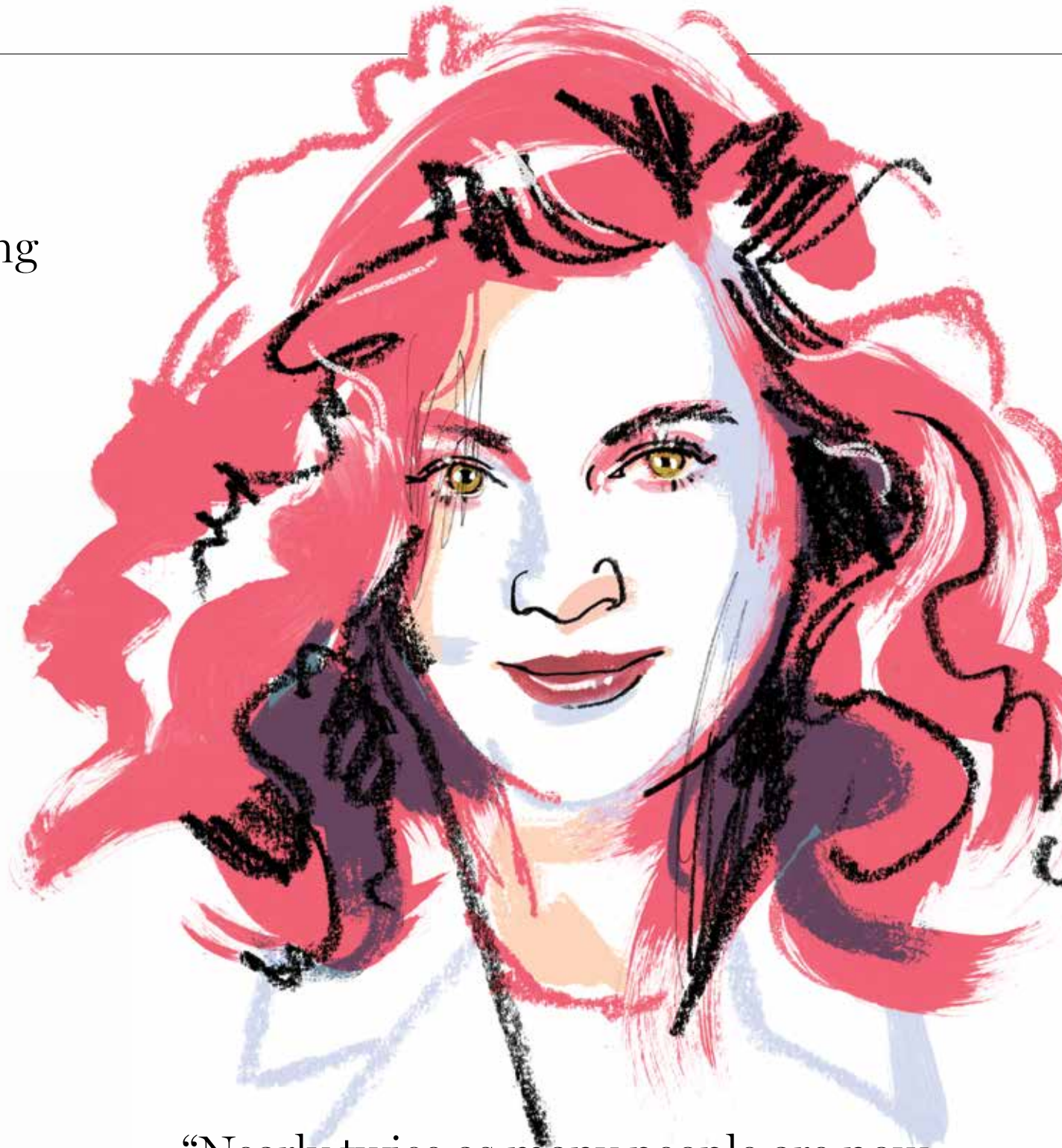
**MAKING THE COMPLEX CLEAR**

“I remember the teachers who treated every question as important,” says **Karl Sanders**, a physician and educator in the Division of Respiratory, Critical Care, and Occupational Pulmonary Medicine.

He now strives to be like those teachers. He is the recipient of the U of U School of Medicine 2019 M. Paul Southwick Prize for Clinical Excellence and Teaching. The biennial award “emphasizes the importance of clinical observations and clinical investigation among the contributory sources of advancement in medical knowledge.”

Sanders also serves as the director of the Pulmonary and Critical Care Medicine Fellowship Training Program, through which he prepares fellows for careers as pulmonary and critical-care clinicians, investigators, and educators.

“What sets Karl apart from other educators is his inquisitive nature, thoughtfulness, and dedication to trainee development,” said Emily Beck, MD, an assistant professor in pulmonary medicine who was mentored by Sanders as a fellow. “His genuine curiosity motivates learners to push the boundaries of their own knowledge and understanding through conversation. Karl models what it truly means to be a lifelong learner.”



“Nearly twice as many people are now showing up in ERs after an opioid overdose. We quickly realized that thanks to naloxone, they are surviving long enough to get to us.”

**Dr. Jennifer Plumb, MD '00**

**HUMANITARIAN SERVICE AWARD**, FOR HER WORK IN ESTABLISHING THE UTAH NALOXONE PROGRAM AND EDUCATING LAW ENFORCEMENT, FIRST RESPONDERS, AND THE PUBLIC ON THE DISEASE OF ADDICTION AND A LIFE-SAVING MEDICATION. HER WORK HAS HELPED SAVE THOUSANDS OF LIVES AND LOWERED THE DEATH RATE IN UTAH FROM OPIOID OVERDOSES.

**TURNING TRAGEDY INTO HOPE**

**Jennifer Plumb** is certain that naloxone would have saved her brother's life. When Andy Plumb overdosed on heroin in 1996, his friends panicked and abandoned him. By the time he was found, it was too late. Today, thanks to her work, thousands of Utah families have been spared the pain her family endured.

Dr. Plumb and her brother Sam are the cofounders of Utah Naloxone, a program that gets life-saving rescue kits into the hands of people throughout the state and provides training on how to administer the medication, which reverses the lethal effects of opioid overdoses in just a few minutes.

Since starting the program in 2012, Plumb's work and advocacy have been instrumental in changing our state. In 2014, Utah had the fourth-highest rate of opioid death in the US. Just three years later, the most-recent year for which data is available, Utah's deaths from opioids had plummeted to 22nd in the nation. Most impressively, Utah was one of only seven states that saw deaths from opioid overdoses decrease from the previous year.

“Dr. Plumb's dedication has saved lives,” said Ed Clark, MD, chair of the Department of Pediatrics from 1996 to 2018. “She transformed a personal tragedy into a program that profoundly benefits our community.”



“They can be so terribly sick with severe recurrent issues. When we get them on the appropriate therapy, they become practically cured. They come back smiling and so happy. There’s nothing better. I love this line of work.”

**Harry Hill, MD**

**DISTINGUISHED SERVICE AWARD**, FOR HIS CONTRIBUTIONS TO RESEARCH AND EDUCATION ABOUT IMMUNE DEFICIENCY DISORDERS AT THE UNIVERSITY OF UTAH SCHOOL OF MEDICINE AND THROUGHOUT THE WORLD.

**SOLVING MEDICAL MYSTERIES**

When **Harry Hill** arrived at the University of Utah in 1974, there were no services for people with primary immune deficiencies in the state. Nor were there options for care in the surrounding states. In fact, only a few existed anywhere in the US.

“You’d see kids and adults who had three pneumonias,” Dr. Hill said. “We would keep treating the pneumonia, but the patients wouldn’t get better. Nobody at the time knew what was wrong. They weren’t trained to think of an immune deficiency.” As a result, many patients either left the area to seek answers and treatment or they died without receiving the specialized care they needed.

Hill changed that. He established a clinical immunology clinic and then later a clinical immunology laboratory, the first of their kinds in the state. He offered care to hundreds of patients with primary immunodeficiency diseases, many of whom have survived and even thrived in the face of once-mysterious ailments.

Hill also helped to found ARUP Laboratories, the national esoteric reference laboratory owned by the University of Utah.

“Harry is one of a very select group of physicians who has consistently excelled, at an extremely high level, in all aspects of academic medicine including research, clinical service, and education,” said Carl Kjeldsberg, one of ARUP’s cofounders and former ARUP president.

“Over the course of my career, I’ve seen nearly 500 seriously immune-deficient patients,” Hill said. “When we are able to get them on the appropriate therapy, they become practically cured. There’s nothing better. I love this line of work.”

# ClassNotes

## 1965

**Jovanka Radivojevic, MD '65**, spent her career in family medicine in Southern California. In 1973 she joined the Los Angeles County Health Department and remained there until her retirement in 2002. She is widowed and lives in Seal Beach, CA. She enjoys traveling, spending time with her stepchildren and grandchildren, reading, volunteering, and keeping up in medicine. She has kept track of the School of Medicine and is proud to see so many more female medical students.

## 1969

**James R. Babcock, BS '66, MD '69**, still remembers fondly his anatomy group and their cadaver, “Haywood Green.” He feels very fortunate to have been part of the class of 1969, who were a supportive group. He worked as a general surgeon specializing in GI disorders. He introduced the flexible endoscopy and GI-stapling to Idaho in 1974 and did the first laparoscopic inguinal hernia repair in the state. He says he married well and has five children and 15 grandchildren.

**Robert Barham, BS '64, MD '69**, is a retired urologist living in Portland, OR. He started in a small

three-person group, then founded the Oregon Clinic with 21 MD specialists. The membership is now about 2,000 physicians from all specialties. He served on the credentialing committee of Providence Portland Medical Center for 18 years, was chief of urology for 15 years, and served two years as chief of surgery. He retired in 2012 and plays basketball and cycles.

**Robert P. Belihar, MD '69**, specializes in anti-aging medicine, ophthalmology, and aerospace medicine. He had a successful career in the US Air Force, was a command surgeon under General H. Norman Schwarzkopf, and retired with the rank of brigadier general. He loves flying and travel, logging flying time in 213 different models of aircraft, and visiting 73 countries. He currently is the medical director of the CareHere HealthSigns Center in Brentwood, TN.

**William T. Brown, MD '69**, trained in radiology and nuclear medicine at the Long Beach VA Medical Center. As chief of nuclear medicine, he taught radiology to fellows and scores of UC Irvine residents until he retired in 2009. He found teaching to be very rewarding. He and his wife, Emily, have been married for 52 years and have four

surviving children and 19 grandchildren.

**Craig Davis, BS '66, MD '69**, practiced plastic and reconstructive surgery in Salt Lake City for 30 years. He’s made multiple trips with Operation Smile to the Philippines to repair cleft lips and palates. He enjoys many sports, including running, cycling (including the 209-mile Logan-to-Jackson ride), and triathlons. He has competed in the Huntsman World Senior Games for 25 years with medals in five categories and is a national bronze medalist in pickleball.

**Gordon M. Dickinson, MD '69**, lives in Miami with his wife, Brucha, who is also an MD. He works at the Miami VA Medical Center as an infectious-disease doctor. He volunteered in Port-au-Prince, Haiti, in an emergency hospital after the 2010 earthquake. He has competed in marathons, including the New York City Marathon in 2005.

**Douglas D. Grose, MD '69** worked as a general practitioner in Salt Lake City, serving patients who had trouble finding other care. In the early '90s he obtained his master’s degree in public health and a board certification in occupational medicine. He then worked for the US Postal Service as the associate medical

director of the western United States. He has enjoyed sailing both on the ocean and on the Great Salt Lake, as well as skiing, running, yoga, and piano.

**DeVon C. Hale, BS '65, MD '69**, served four years in the US Air Force in Japan and then returned home to Idaho, where he practiced internal medicine and infectious disease from 1976-83. He then moved to ARUP and worked in pathology until 1989. He served as the School of Medicine’s assistant dean for Global Health from 1999 until his retirement in 2014, during which time he established programs in Kenya, Ghana, India, Peru, China, and Rwanda, which are still active.

**Harvey R. Hatch, MD '69, Res '74**, enjoyed his medical career as a radiologist. He fondly remembers rooming with classmate Max Iverson. He served twice as area medical advisor for the Church of Jesus Christ of Latter-Day Saints in Russia and Germany alongside his RN wife. He loves to travel and has done an around-the-world trip.

**J.P. Hughes, MD '69**, completed his colon-and-rectal-surgery training at the Ochsner Clinic in New Orleans. He spent a 40-year career in solo surgical practice at St. Mark’s Hospital in Salt Lake City. He and his wife, Elaine, have been

actively engaged in medical mission work around the world. He enjoys writing poetry and photography and treasures the good SOM friendships he has maintained.

**Max Iverson, MD '69**, practiced orthopedic medicine in Marina del Ray, CA, for 16 years, then moved to Montana, where he worked until he retired in June of 2019. He has two cattle ranches, which have given him reprieve from the demands of daily medical practice, and he enjoys opportunities to travel around the world.

**Clark E. Jaynes, MD '69, Res '72**, trained in neurology and electrodiagnosis at the U and Mayo Clinic. He has very fond memories of faculty members Leonard Jarcho, Patrick Bray, Jack Petajan, and Louis Goodman. He and his wife, Maxyne, live in Ammon, Idaho. He enjoys spending time with family, golfing, reading, hunting, fishing, trapshooting, and working in his yard.

**Kent W. Jones, BS '66, MD '69**, practices cardiovascular surgery at Intermountain Medical Center in Salt Lake City. He completed his residency and internship at Duke. In 1980, he performed cardiac surgery in Nanjing, China. As a confirmed Ute fan, he was the Crimson Club Board of Directors’ president from 1990-96. He and his wife, Cappey, have three grown children.

**Sherman Bennion Johnson, MD '69**, spent the first part of his career in pediatric practice with the US Air Force, followed by 20 years in Ogden,

where he established a preventive, nutrition-based practice. Since 2003, he provided hyperbaric-oxygen and wound-care treatment throughout Davis, Salt Lake, and Utah counties until retiring in 2019. He and Janis have seven children and are currently serving a mission in Columbus, Ohio.

**Stuart Kagen, MD '69**, specialized in pediatric cardiology during the first half of his career and served in the Navy, both in the active reserves and in active duty until 1975. He continued to earn a degree in electronics and public health. From 1988 until 2012 he worked in occupational medicine as a national medical-review officer. He currently works three mornings a week with Con-

centra health-care centers. He enjoys gardening, construction, jogging, making dream catchers, and bird-watching.

**D. Douglas Kohler, MD '69, Res '72**, worked as a surgeon in Provo, UT, for 33 years. He has been married for 54 years and has four children and 12 grandchildren. For relaxation he enjoys reading, golfing, riding his motorcycle, and going to the gun range to practice shooting.

**Dr. Roger B. Lewis, MD '69**, worked in family medicine most of his career in Orem, UT, delivering 1,859 babies. He received transactional-analysis training in California with Dr. Eric Bern, who invented the program. He was very involved in scouting, receiving the

Silver Beaver Award. An avid runner, he participated in three marathons including the Boston Marathon in 1979. He attended three Pro Bowls and the Super Bowl and 25 NFL games when his son Chad played for the Philadelphia Eagles.

**Michael R. McFadden, MD '69**, trained as a urologist at St. Louis University, served in the Army Reserve, was deployed to Operation Desert Storm in 1991, and then practiced in Salt Lake from 1994 until retiring in 2012. He was a physician for the US downhill team in the '80s and served as a giant-slam-gate judge for the 2002 Olympics. He and his wife, Julie, now live in Park City and enjoy traveling, skiing, biking, cooking, wine pairing, and reading.

**John C. Nelson, MD '69, MPH '93**, is a "fairly" retired ob-gyn who sees patients one day a week in the Health Clinics of Utah, while also serving as the medical director for the Utah Department of Health's Early Hearing Detection and Intervention Program and consulting for a local biotech company. He has served in numerous medical-society leadership roles, including as president of the American Medical Association and chair for the Finance and Planning Committee of the World Medical Association.

**Richard H. Odell, MD '69**, retired from his Salt Lake City dermatology practice in 2018. He enjoys flying and has logged 2,000 hours in his Cherokee 235 Piper. He has hiked the Grand Canyon rim-to-rim 55 times.

**John P. Owens, BS '65, MD '69**, trained at Harvard University as a pediatric cardiologist. He worked at Stanford and UCSF during his career and says the U of U is the best of all of them. He enjoys bicycling, skiing, snowboarding, writing, and travel and has logged 6,000 hours flying, using up eight of his nine lives doing so.

**Gary Petersen, MD '69, Res '75**, worked most of his career as a cardiologist in Ogden, UT; Texarkana, TX; and St. George, UT. He retired in 2008 and began volunteering with Healing Hearts Northwest, providing medical care to patients in Rwanda. In his spare time, he's a serious fly fisherman, bowler, and world traveler. He and his wife, Patty,

also ran a successful horse-breeding business for more than 15 years.

**Alan R. Pratt, MD '69, Res '73**, spent the majority of his career as an anesthesiologist at the VA Medical Center in Reno, NV. He loves the mountains and the desert and has enjoyed traveling around the world with his wife. He valued serving his patients and felt very privileged to be a part of the class of 1969. Medical life wasn't the easiest, but he has few regrets.

**Michael Preece, MD '69, Res '72**, practiced interventional cardiology at Salt Lake Clinic and LDS Hospital from 1975 until retiring in 2000. He served seven years in the Church of Jesus Christ of Latter-Day Saints' humanitarian project Neonatal Resuscitation, teaching care providers in developing countries techniques to resuscitate apneic newborns. He is currently serving as the area medical advisor for the LDS Church in Southern California.

**Jack Rampton, BS '66, MD '69**, completed a medical-surgical internship at the U and then a residency in diagnostic radiology. He spent the majority of his career at Intermountain Medical facility hospitals. He's been married for 53 years and has traveled to Europe, Asia, and Antarctica since he retired in 2011. He's still a golf addict, enjoys duck hunting, dog training, reading, and spending time with his grandkids.

**Terry Rich, MD '69, Res '73**, whose

specialty is clinical and anatomic pathology, worked as the medical director of laboratory services at Cottonwood and Alta View hospitals for many years and served in state and national professional pathology organizations. He and Marylynn have seven children, 33 grandchildren, and one great-granddaughter. He enjoys gardening, playing the piano and organ, studying religious texts, cooking, swimming, and running.

**David L. Scott, BA '64, MD '69**, worked as a pediatrician in Bountiful, UT, with a special emphasis on newborn intensive care. He has taught and volunteered in numerous developing countries around the world, including China, the Philippines, Nepal, and Haiti, where he cared for severely malnourished children. He was the area medical advisor for the Church of Jesus Christ of Latter-Day Saints in Mexico (2006-08), West Africa (2013-14), and Spain (2016-18).

**Robert B. Smith, MD '69**, served in the Air Force after his surgical internship, spending three years as a flight surgeon followed by a mini-family-medicine residency. Following a career in family medicine in Tucson, AZ, he retired in December. He has participated with Flying Doctors on several trips to Mexico. He and his wife, Ann, have visited all seven continents. He enjoys hiking, particularly in the Grand Canyon, and desert gardening.

**Lyman Brimhall Stevens, MD '69, Res '73**, worked as an anesthesiologist for 38 years in Logan, UT, during which time he saw his group grow from two to 15 specialists. He and his wife, Kathryn, who passed in 2016, had 11 children. He remarried in 2018 to Geraldine Dale Gardner, and the melding of their families includes nearly 150 individuals. He and Geraldine are currently serving as a medical advisor and nurse specialist in the South Korea Mission.

**David N. Sundwall, BA '66, MD '69**, specialized in internal and family medicine. He began his career in public health teaching at the U of U and recently retired as an emeritus professor in public health. Most of his active career was spent in the field of public health and health policy, both on the national level in Washington, DC, and in Utah as the executive director of the Utah Department of Health. He still works part-time at the Health Clinics of Utah and volunteers at the Maliheh and Midvale Community Clinics.

**Stephen D. Taylor, BS '64, MD '69**, specialized in emergency medicine and was a founding member of Wasatch Emergency Physicians in Murray, UT. He was the area medical advisor for Western Europe in Madrid, Spain, a volunteer physician at Maliheh Free Clinic, and the medical director of the Hope Charity Clinic since 2014. He and Shirley have traveled all over the world.

**John M. Thueson, BA '65, MD '69**, served in the US Army as a surgeon. During the Vietnam War, he worked in the Guam tent hospital to evacuate boat people when Saigon fell. He then served for 15 years as a general surgeon, and after that he switched to ER medicine. He retired in 2007 to serve as an area medical advisor for Latter-Day Saints in West Africa, and for the past 10 years has provided minor surgery services at the Hope Free Clinic.

**H. James Williams, BA '66, MD '69**, spent his career as an internist/rheumatologist at the University of Utah School of Medicine. His interests included clinical care, research, and teaching. He is a Master of the American College of Rheumatology, was chief of the Division of Rheumatology for nine years, and associate chair of the Department of Medicine for 26 years. He served as mission president and later temple president in the Copenhagen Denmark Temple. He and Janet have seven children and 28 grandchildren.

## 1989

**Tamara Sheffield Lewis, MD '89**, completed an internal-medicine residency with a specialization in public health and preventive medicine. She is the medical director of Community Health and Prevention at Intermountain Healthcare in Salt Lake City and records Intermountain's Healing for Life shows weekly on KSL radio. She has seven children and 19 grandchildren.

## In Memoriam

*We mourn the loss of the following members of our University of Utah School of Medicine alumni family.*

George A. Kromhout, Res '50  
Louise B. Kramer, Res '52  
Robert T. Ferguson, MD '55  
Herbert L. Fred, Res '55  
Farrell M. Calton, Res '60  
Dennis W. Christensen, MD '60  
Thomas H. Ross, MD '60  
William T. Black, MD '61  
David A. Kimball, MD '62  
Thomas H. Caine, MD '63  
Donald T. Reay, MD '63  
Paul Geniec, MD '64  
Odell F. Rigby, MD '64  
Ronald F. Hilding, MD '65  
James M. Steel, MD '65  
Stephen H. Maurer, MD '68  
Delbert G. Ririe, Res '68  
John R. Hawkes, MD '72  
Steven E. Kammeyer, MD '72  
Edward C. Lewis, Res '75  
Robert C. Richards, MD '77  
Gary L. Lovell, MD '78  
James M. McGreevy, Res '78  
Larry D. Stoddard, MD '81  
Edwin J. Neil, MD '82  
Welby N. Jensen, MD '87



**Sarah Hawley, MD**

In January of 2019, the SOM campus community mourned the tragic loss of Sarah Hawley, MD, a first-year resident who was focusing on family and preventive medicine. "Dr. Hawley came to University of Utah Health from UC San Francisco to continue her passion of providing care to women and children in underserved communities," said Kolawole Okuyemi, MD, MPH, chair, Department of Family & Preventive Medicine. "Her adventurous spirit and love of learning will be missed by all those who knew her."

### The Sarah Hawley Memorial Fund

*has been established to support an annual lecture focusing on her interests in women's health, pediatric care, and wilderness medicine.*

*For more information, call 1-800-716-0377.*

## CASE LOAD Case 81

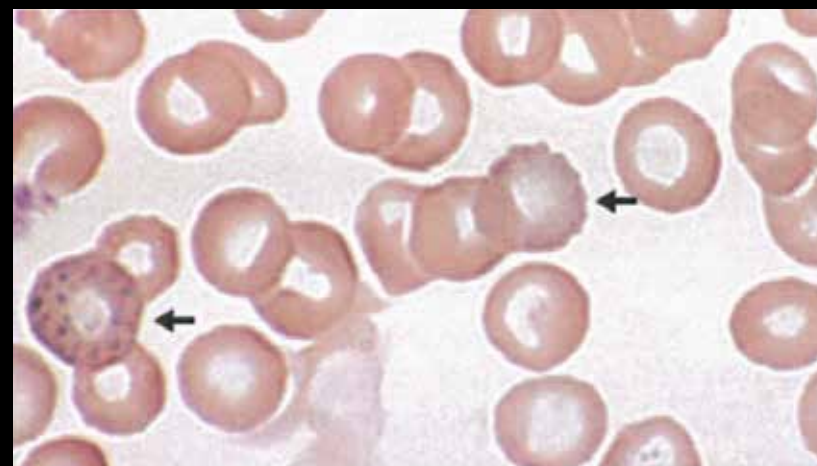
### ANSWER Lead poisoning

Basophilic stippling of this patient's red cells (image below, arrows) suggested lead poisoning. Despite repeated inquiry, however, no source for such poisoning emerged.

The plot thickened when blood lead concentrations were substantially elevated in both the man and his wife but normal in their son. Continued sleuthing ultimately unveiled the culprit — cocktail glasses decorated with lead-based paint. The husband and wife drank from these glasses daily, but their son never drank from them.

Washing the glasses by machine presumably caused leaching of lead salts. Chelation therapy for the two adults returned their hematologic findings to normal, and the patient became asymptomatic.

**MORAL**  
Basophilic stippling of red cells can be the first, best, or only clue to lead poisoning.



## ANESTHESIOLOGY

**Richard Alexander**  
Loma Linda University

**David Carroll**  
University of Texas

**Marcus Chen**  
University of Utah  
Affiliated Hospitals

**Annalese Neuenschwander**  
University of Alabama  
Medical Center

**Maziar Nourian**  
Vanderbilt University  
Medical Center

**Jonathan Rich**  
Barnes-Jewish  
Hospital

**Brian Ta**  
Case Western /  
University Hospitals  
Cleveland  
Medical Center

**Marcus Vranes**  
University of Utah  
Affiliated Hospitals

**Vanessa Wall**  
University of Texas  
Medical School,  
Houston

**Suzanne Wendelken**  
Maine Medical Center

**Jacob Whittle**  
University of Utah  
Affiliated Hospitals

**Joshua Winegar**  
University of Florida  
College of Medicine –  
Shands Hospital

**Dean Withroder**  
Virginia Mason  
Medical Center

## EMERGENCY MEDICINE

**Sam Hawkins**  
Penn State Hershey  
Medical Center

**Patrick Kamba**  
WellStar  
Kennestone Regional  
Medical Center

**Jason Tanner**  
Yale University,  
New Haven Hospital

## FAMILY MEDICINE

**Jordan Albrich**  
PeaceHealth  
Southwest Medical  
Center

**Alexys Allen**  
Forbes Family  
Medicine

**Maryana Boulos**  
Contra Costa Reg  
Medical Center

**Quinn Cannon**  
McKay-Dee Hospital  
Center

**Gabriela Cash**  
Harrison Medical  
Center

**Brian Espiritu**  
Memorial Hermann  
Hospital

**Cooper Feild**  
Indiana University  
Health Ball Memorial  
Hospital

**Zachary Flinders**  
Utah Valley Regional  
Medical Center

**John Maret**  
HealthONE –  
Colorado

**Jacob Mitchell**  
Utah Valley Regional  
Medical Center

**Andrew O'Farrell**  
Northern Remote  
Family Medicine

**Daniel Payne**  
Utah Valley Regional  
Medical Center

**Chad Roberts**  
St Mary-Corvein  
Medical Center

**Diana Thai**  
Creighton University  
Affiliated Hospitals

**Marcos Valdez**  
Idaho State  
University

**INTERNAL MEDICINE**  
**Neysi Anderson**  
UC San Diego Medical  
Center

**Andrew Breivik**  
HealthONE

**Natalie Channell**  
Maine Medical Center

**Chansong Choi**  
Mayo Clinic School  
of Graduate Medical  
Education

**Jonathan Downie**  
Massachusetts  
General Hospital

**Guinn Ellen  
Dunn**  
University of Utah  
Affiliated Hospitals

**Zachary Gardner**  
University of  
Mississippi Medical  
Center

**Peter  
Hendrickson**  
Duke University  
Medical Center

**Ryan Hirschi**  
Barnes-Jewish  
Hospital Boise VA  
Medical Center

**Nahel Kapadia**  
Kaiser Permanente –  
Santa Clara

**Andrew Kithas**  
University of  
Maryland Medical  
Center

**Catherine Lindsay**  
UCLA Medical Center

**Chad Mears**  
Penn State Hershey  
Medical Center

**Daniel Orme**  
Rush University  
Medical Center

**Johanna Purdy**  
Oregon Health &  
Science University

**Cody Sanders**  
Rhode Island Hospital  
/ Brown University

**Nadine Sbaib**  
University of  
Louisville School of  
Medicine

**John Schell**  
Massachusetts  
General Hospital

**Troy Teeples**  
University of  
Colorado School of  
Medicine

**Chelsea  
Thompson**  
McGaw Medical  
Center of  
Northwestern  
University

**Julie Weis**  
University of  
Washington Affiliated  
Hospitals

**Cody Wiensch**  
Providence Health  
Science University

**Jason Winward**  
University of Iowa  
Hospitals and Clinics

**Taryn Young**  
University of Utah  
Affiliated Hospitals

**INTERNAL MEDICINE/  
PEDIATRICS**  
**Brian Coburn**  
UC San Diego Medical  
Center

**Jorgen Madsen**  
University of  
Cincinnati Medical  
Center

**Trevor Smith**  
University of Arizona  
College of Medicine

**INTERNAL MEDICINE/  
PSYCHIATRY**  
**Luke Mirabelli**  
University of Kansas  
School of Medicine

**NEUROLOGY**  
**Ketevan  
Amirkhanashvili**  
Montefiore Medical  
Center

**Paul Crane**  
University of Utah  
Affiliated Hospitals

**Christopher Orlando**  
University of Texas  
Medical School

**Whitney Wright**  
University of Utah  
Affiliated Hospitals

**Yajing Xiong**  
University of  
Pittsburgh Medical  
Center, Mercy

**OBSTETRICS AND  
GYNECOLOGY**  
**Erin Gavin**  
University of  
Kentucky Medical  
Center

**Mary Indart**  
University of Arizona  
College of Medicine  
**Simranvir Kaur**  
Stanford University  
Programs

**Evangelia Lazaris**  
University of Utah  
Affiliated Hospitals

**Bradley Meyer**  
Baylor College of  
Medicine

**Chelsey Vranes**  
University of Utah  
Affiliated Hospitals

**ORTHOPAEDIC  
SURGERY**  
**James Cardinal**  
University of Iowa  
Hospitals and Clinics

**Joshua Harmer**  
Mayo Clinic School  
of Graduate Medical  
Education

**Evangeline  
Kobayashi**  
University of  
Michigan Hospitals  
**Matthew Philippi**  
University of Utah  
Affiliated Hospitals  
**Mathieu Squires**  
University of  
Michigan Hospitals

**OTOLARYNGOLOGY**  
**Christopher  
Hamilton**  
University of Utah  
Affiliated Hospitals

**PEDIATRICS**  
**Dallin Hubbard**  
Indiana University  
School of Medicine  
**Robert McRae**  
Oregon Health &  
Science University

**Jenna Serr**  
University of Utah  
Affiliated Hospitals

**Frederick Sudbury**  
Penn State Hershey  
Medical Center

**Kajsa Vlasic**  
St Christophers  
Hospital

**Alyxandra Williams**  
Phoenix Childrens  
Hospital

**PEDIATRICS/PSYCH/  
CHILD PSYCHIATRY**  
**Yen Johnson**  
Indiana University  
School of Medicine

**Joanna Tomaszewski**

# MATCH | 2019

University of Utah  
Affiliated Hospitals  
**PHYSICAL MEDICINE  
AND REHABILITATION**  
**James Gardner**  
Vanderbilt University  
Medical Center

**PSYCHIATRY**  
**Topher Andersen**  
San Diego Naval  
Medical center

**Jonathan Broadwell**  
Central Michigan  
University COM

**Miles Christensen**  
Duke University  
Medical Center-NC

**Niaree Davis**  
University of Illinois  
COM-Chicago

**Marcus Hunt**  
Walter Reed National  
Military Center

**Russell Ollerton**  
University of  
Washington Affiliated  
Hospitals

**Michael Pope**  
University of Utah  
Affiliated Hospitals

**Kyle Roller**  
University of Utah  
Affiliated Hospitals

**Dannen Wright**  
University of North  
Carolina Hospitals

**SURGERY**  
**Ravikumar Patel**  
University of  
Utah Affiliated  
Hospitals

**Dallin Hubbard**  
Indiana University  
School of Medicine

**Robert McRae**  
Oregon Health &  
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Think you have a funny caption idea? Send it to us! [utahmedicine.org/lastlaugh](http://utahmedicine.org/lastlaugh)



*“uh... When I said ‘Follow my every move,’ you know I didn’t mean \*Every Move,\* right?”*

**FROM PAGE 10**

“You get into the habit of always keeping an eye on your resident. So, when they get up you just go wherever they do, because they’re not going to ask you. There’s actually been a few times I’ve followed a resident to the bathroom.” — MARGAUX MILLER ’20, *Bundle of Hers*

**Inside:** Wayfinding

# Which Way?

**N**AVIGATING AROUND A HOSPITAL ISN’T EASY. PATIENTS, FAMILIES, friends, and even doctors and staff can get lost in a bustling medical center. That’s where Malory Devries comes in. As the design-standards manager, Devries is part of a team that is constantly thinking about the environment, design, and navigation throughout University of Utah Health.

**How do you help people get to where they’re going?**

If you think about an airport, it’s a complex environment but a familiar one. Most airports are built with similar components: check-in, security, gates, baggage. But no two medical centers are really the same. When patients come here, it may be their very first time. They have no preexisting context to guide them. As we build, we are creating a navigation system so that every room has a discernable address — just like an airport gate number.

**Are wall colors important?**

There is a lot of research to suggest that environment plays a major role in helping patients to heal. Orange, for example, is a strong color that takes more mental energy to process than green. So, we wouldn’t paint a room orange. We carefully evaluate color, natural textures, art images to create an appealing environment that is consistent and promotes healing.

**What do you like best about your job?**

I deeply enjoy the challenge and the opportunity to be a part of helping people. When you are ill or injured and need help, it can be a confusing time. Once a patient makes it to us, I don’t want them to feel lost. I want them to walk through the front door and feel, you’re here. You’re safe. Let’s get you to where you need to be.



**Who’s in charge?**



**Malory Devries**  
Design-Standards Manager

**Biggest Challenge so far:**

“We are creating a navigation system so that every room has a discernable address.”

With two new hospitals and a number of clinics opening this year, Devries is part of a team working to ensure that patients are able to navigate quickly and easily.



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© CREATIVE OUTLET

## TALKING HEADS

A composite sculpture of a dozen of my patients from my inpatient ward's medicine team. These do not convey the identity of any particular person, but are meant to represent the most important body of people — our patients — and the inherent associated responsibility of caring for them. —LILLIAN BOETTCHER '20

