EXECUTE FALL 2020 • VOL 17 / NO 1 A publication for alumni, donors, faculty and friends of UC Davis Health

From treating the nation's first community spread patient to testing therapies and vaccines, UC Davis Health is in the thick of the coronavirus response



Q&A: Minimally invasive cardiac surgery page 14 Alumni on the front lines page 24 Students personify resilience page 32 Remembering William Blaisdell page 38

Some of the ways we're keeping patients safe



Screening every person entering our care facilities, including employees



Enhanced cleaning, especially of hightouch surfaces



Masking policies



More telehealth video appointments



Limiting the number of visitors and caregivers



Keeping patients separated from others





Social distancing practices

More information

Coronavirus general and patient safety: health.ucdavis.edu/coronavirus

Coronavirus for health professionals: health.ucdavis.edu/coronavirus/health-professionals

Physician referrals: health.ucdavis.edu/referrals

Physician Referral Liaisons: health.ucdavis.edu/referrals/physician-referral-liaison

UCDAVIS HEALTH

FALL 2020 • VOL 17 / NO 1

A publication for alumni, donors, faculty and friends of UC Davis Health

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Since treating the nation's first known case of community-transmitted COVID-19, UC Davis Health has played important roles in clinical, research, and publichealth responses to the pandemic.

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'I'VE NEVER SEEN IT LIKE THIS'

From New York City emergency rooms to Kenyan hospitals to governor's press conferences, UC Davis Health alumni worldwide are part of the coronavirus response.

32 INSPIRATIONAL STUDENTS

Meet three nursing and medical students – all children of immigrants or refugees – who exemplify resilience during a time it's in high demand.

On the cover: Transmission electron micrograph of novel coronavirus SARS-CoV-2 virus particles, isolated from a patient. Image captured and color-enhanced at the National Institute of Allergy and Infectious Diseases Integrated Research Facility (IRF) in Fort Detrick, Maryland. Credit: NIAID.

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Improving health during times of challenge

UC Davis Health is looking at the opportunities created by the challenges of the last few months, and finding ways to step up our delivery of world-class care and the discovery of lifechanging knowledge for our patients and communities. This sense of humanity and discovery defines everything we do as an academic medical center as we confront this global health challenge and fight against other disparate health equity outcomes in communities.

This issue of the *UC Davis Health* magazine spotlights some of those COVID-19 results and equity efforts. For example, we've partnered closely with Sacramento County Public Health to provide our testing and resources to support outreach in Black and Latinx communities (which are among the hardest hit population groups in this crisis), and within group-living facilities

This is a time to deeply listen to each other, as health practitioners must do when they first talk to a patient to learn about what ails them. (which have accounted for as much as 40% of COVID-19 deaths nationally). Other articles look at interesting alums, such as a New York City emergency room doctor, and California's surgeon general Nadine Burke Harris. This issue also includes inspiring student

profiles — all children of immigrants — and a memorable tribute to the late F. William Blaisdell, founder of modern trauma care and namesake of our library on the Sacramento campus.

Our teams across UC Davis Health have worked hard to be at the forefront of our nation's efforts to understand and deal with COVID-19. We treated the first hospitalized case of communityspread COVID-19 in the United States. What we discovered in those early days led to the Centers for Disease Control changing its testing protocols, and to UC Davis Health becoming one of the first large-scale rapid testing hubs designated by the state.

We're pushing research forward to find more effective patient treatments to better manage the pandemic and ultimately, we're working to find a vaccine. We recently started collaborating in a significant nationwide clinical trial for a COVID-19 vaccine. UC Davis Health is uniquely positioned to help with a possible breakthrough due to our clinical trials expertise, ability to recruit for clinical trials quickly, and historic track record of outreach to minority communities. Our concern for the less-privileged among us is central to our mission at UC Davis Health. In the past several months, we've



witnessed as a nation the profound problem of racial injustice unfolding all around us in the wake of George Floyd's death. Here at UC Davis Health, we've seen firsthand the tragic outcomes of these wrongful social dynamics in our hospital, emergency rooms, and clinics. We mourn the lost lives and violence against minorities, and we strive to heal the physical, emotional, and spiritual wounds of racial injustice in all that we do as an institution.

We have a strong research track record on examining the inequities brought about by social determinants such as poverty, food scarcity, and lack of educational opportunities in underserved neighborhoods. As an Anchor Institution, we will focus on our surrounding community and create new economic, educational and job opportunities related to our organization. We have big plans to invest in this mission's health services connections, which is critical for our adjacent neighborhoods.

This is a time to deeply listen to each other, as health practitioners must do when they first talk to a patient to learn about what ails them. We must first understand the hurt and anguish – and then we must act to address this with determination, consistency, and love. Our quest is to confront racism honestly and strive relentlessly for health equity and justice for all.

A core belief at UC Davis Health is that each person who walks through the doors of the medical center is a very special and unique person. Equitable access to quality health care is an important yardstick of an advanced, democratic society.

Our "uplifting" as a health system is manifested in our patient-focused care as we all work together to create a healthier and better world. We have so much to look forward to, as this issue compellingly demonstrates.

Yours in health,

Ny

David Lubarsky, M.D., M.B.A. Vice Chancellor of Human Health Sciences Chief Executive Officer, UC Davis Health

Schools of medicine and nursing listed among nation's best

#7_{in} America f

The UC Davis School of Medicine continued its rise this year as one of the nation's top medical schools, improving from 9th to 7th for primary care in *U.S. News & World Report's* 2021 graduate school rankings. Primary care has been the most popular career path at the school since its founding 50 years ago,

nerica for primary care training

and more than half of the Class of 2020 chose primary care residencies at Match Day this year.

The School of Medicine also ranked 9th in family medicine, and broke into another spot, ranking 24th for its surgery program. The School of Medicine also ranked 40th for research. The master's degree nursing programs at the Betty Irene Moore School of Nursing at UC Davis also rose in rankings to 40th, up six spots from last year and tied with four other programs. *U.S. News* has rated the fast-growing nursing school among the nation's best since its first year eligible for inclusion in the survey.

9 departments among TOP 20 for NIH research funding

The School of Medicine continued its medical research leadership in 2019, with nine departments ranking in the top 20 - including two in the top 10 - for research funding from the National Institutes of Health (NIH).

The rankings by the nonprofit Blue Ridge Institute for Medical Research, published each year in early February, place UC Davis among the nation's leading medical schools for NIH funding. The School of Medicine ranked 35th nationally for NIH funding in 2019. In the last three years, the school has maintained steady levels of NIH-funded research grants and number of principal investigators who received awards to conduct innovative research.

UC Davis Health reached \$315 million in overall external research funding in 2019, making up 37% of all research funding at UC Davis. Over the last 10 years, external research funding for the School of Medicine has grown more than that of all other UC Davis colleges combined.

School of Medicine departments in Top 20 for NIH funding in 2019:

Public Health, 7th Dermatology, 8th Neurology, 11th Surgery, 13th Anatomy/Cell Biology, 15th Psychiatry, 15th Emergency Medicine, 17th Microbiology, 17th Physiology, 18th In Brief

3 of 2019's top-10 autism studies from MIND Institute

Autism Speaks, the largest autism advocacy organization in the U.S., named three studies from the UC Davis MIND Institute's Collaborative START Lab among its top 10 of 2019. The selection came from more than 2,000 autism research reports.

- In the Journal of the American Academy of Child and Adolescent Psychiatry, Sally Rogers, Ph.D., and colleagues compared the effectiveness of the Early Start Denver Model (ESDM), an evidence-based early intervention, to community interventions.
- A study by Allison Nahmias, Ph.D., Aubyn Stahmer, Ph.D., and colleagues at the University of Pennsylvania, published in the *Journal of Child Psychology and Psychiatry*, pointed to large gaps in outcomes of early intervention programs.
- A study by Stahmer and Peter Mundy, Ph.D., highlighted the need to develop "systems of support" to guide students with autism and their families through new school transitions, and identified three effective strategies.





Ramsey Badawi and Simon Cherry with EXPLORER, the world's first total-body PET scanner that they developed at UC Davis.

24 researchers among **top 10%** for NIH research funding

Twenty-four principal investigators from the UC Davis School of Medicine ranked in the top 10% of their respective fields for 2019 National Institute of Health (NIH) funding, according to the Blue Ridge rankings.

Biochemistry Kit Lam Chengji Zhou

Dermatology Yoshihiro Izumiya William Joseph Murphy

Internal Medicine Nipavan Chiamvimonvat Primo Lara Julie Sutcliffe Theodore Wun

Microbiology Andreas Baumler Dennis Hartigan-O'Connor Janine Lasalle

Neurology John Morrison

Pediatrics Alice Tarantal *Pharmacology* Donald Bers

Physiology Oliver Fiehn Vladimir Yarov-yarovoy

Psychiatry Leonard Abbeduto David Amaral Cameron Carter

Public Health Diana Miglioretti Irva Hertz-Picciotto Kumar Rajan

Radiology Ramsey Badawi

Surgery Kent Lloyd

Nationally ranked in adult and pediatric specialties







NATIONALLY RANKED IN NINE ADULT SPECIALTIES

U.S. News & World Report ranked UC Davis Medical Center among the nation's best hospitals in nine adult medical specialties for 2020–21, including:

- cancer care
- cardiology and heart surgery
- ear, nose and throat
- geriatrics
- nephrology
- neurology and neurosurgery
- orthopaedics
- pulmonology and lung surgery
- urology

The hospital also earned "high performing" acknowledgement in gastroenterology and gastrointestinal surgery.

HIGH-PERFORMING IN COMMON ADULT PROCEDURES

U.S. News & World Report also released ratings for common types of care and procedures, with "high-performing" considered the highest level of recognition. UC Davis Medical Center earned that rating in:

- abdominal aortic aneurysm repair
- chronic obstructive pulmonary disease (COPD)
- colon cancer surgery
- heart failure
- lung cancer surgery
- transcatheter aortic valve replacement (TAVR)

The hospital met expected standards of care for aortic valve surgery, heart bypass surgery, hip replacement and knee replacement.

NATIONALLY RANKED IN FOUR PEDIATRIC SPECIALTIES

U.S. News & World Report ranked UC Davis Children's Hospital among the nation's best in four pediatric medical specialties for 2020–21, including:

- neonatology
- nephrology
- orthopaedics
- urology

Orthopaedics and urology rankings were received in collaboration with Shriners Hospitals for Children – Northern California, UC Davis' longstanding partner in caring for children with burns, spinal cord injuries, orthopaedic disorders and urological diseases.

Lubarsky elected to **California Medical** Association board



UC Davis Health CEO and Vice Chancellor of Human Health Sciences David Lubarsky, M.D., M.B.A., was elected to the California Medical Association (CMA) Board of Trustees to better represent the University of California health systems' 6,000 physicians and all California physicians in academic practice. His three-year term began in April. The board leads the CMA on its patient and physician advocacy agenda and strategic plan. In his seat representing the Academic Practice Forum of California, Lubarsky is also responsible for bringing forward the experiences and views of physicians in academic practice or affiliated with major university systems, including UC Health.

New chief strategy, experience, and ambulatory operating officers for UC Davis Health



Ron Amodeo is the new Chief Strategy Officer for UC Davis Health, responsible for formalizing and operationalizing strategic planning processes and identifying new business opportunities for the entire clinical enterprise. He previously served as an expert advisor with Dorsey Health Strategies, a health care consulting firm affiliated with international law firm Dorsey & Whitney LLP.



Jennifer Baron is the new Chief Experience Officer (CXO) for UC Davis Health, Officer of Ambulatory responsible for building a culture of excellence in patient and family experience and an engaged working environment. Baron will help define service excellence goals and objectives, and develop and implement programs that foster a patient-centric culture. She previously served as executive director of Experience Design for Indiana University Health.



Michael Condrin is the new Chief Operating Care for UC Davis Health. The newly created position is responsible for all of the health system's outpatient care including at 70 clinics in 25 locations – and is a peer of UC Davis Medical Center's Chief Operating Officer, who is responsible for all inpatient care. Condrin most recently served as executive director of outpatient clinics.

BRASHEAR JOINS STEM CELL AGENCY BOARD



School of Medicine Dean Allison Brashear, M.D., M.B.A., has joined the board of the California Institute for Regenerative

Medicine (CIRM). The agency was created in 2004 when voters approved state stem cell research funding, and its 29-member board includes researchers, biotech industry leaders and patient advocates. CIRM has funded 59 of the university's stem cell research projects, totaling more than \$143 million, and UC Davis has 41 ongoing clinical trials related to potential stem therapies.

TIRADO APPOINTED TO THE MEDICAL BOARD OF CALIFORNIA



Cinthia Tirado, M.D., associate clinical professor in the Department of Anesthesiology, has been appointed by Gov. Gavin Newsom

to the Medical Board of California. The board works to protect health care consumers through proper licensing and regulation of physicians, surgeons and other health care professionals, and enforcement of the Medical Practice Act.

NURSING SCHOOL NAMES NEW EQUITY AND DIVERSITY DEAN



Piri Ackerman-Barger, Ph.D., R.N., C.N.E., F.A.A.N., has been appointed to the newly created position of associate dean for Health Equity, Diver-

sity and Inclusion for the Betty Irene Moore School of Nursing at UC Davis, where she will lead efforts to create a diverse and welcoming setting. Ackerman-Barger is an associate clinical professor, director of Faculty Development for Education, co-director for the Interprofessional Teaching Scholars Program, and researcher in the Center for a Diverse Healthcare Workforce.

HOWELL PRESIDENT OF ASSOCIATION OF PATHOLOGY CHAIRS



Pathology and laboratory medicine chair **Lydia Pleotis Howell, M.D.**, was recently named president of the Association of Pathology Chairs

through 2022. Howell is a past president of the American Society of Cytopathology (ASC), former chair of the ASC's foundation, and the 2017 recipient of the Papanicolaou Award, the ASC's highest honor. She is regarded as a pioneer in breast and cervical cancer screening.

NIH MERIT AWARD FOR DANDEKAR'S HIV RESEARCH



For her critical work on mechanisms of HIV and viral persistence, medical microbiology and immunology chair Satya Dandekar,

Ph.D., has received a MERIT award from the NIH National Institute of Allergy and Infectious Diseases (NIAID). Her research was the first to show the impact of HIV on the gut and its ability to establish permanent residence. Findings from her lab were also the first to show the benefit of initiating anti-retroviral therapy in early stages of infection, and helped to change treatment protocols.

MIGLIORETTI HONORED FOR TRANSLATIONAL BREAST SCREENING WORK



Diana Miglioretti, Ph.D., division chief of biostatistics in the Department of Public Health Sciences, was honored with the

Distinguished Investigator Award from the Association of Clinical and Translational Science (ACTS). The award recognizes achievement in applying translational findings into effective public policies. Miglioretti's research focuses on improving the effectiveness of breast cancer screening, and has influenced national guidelines.

Three emergency medicine physicians recognized



The Society for Academic Emergency Medicine (SAEM) and the Academy for Women in Academic Emergency Medicine (AWAEM) recognized three UC Davis physicians for excellence and contributions:

- Angela Jarman, M.D.,
 M.P.H., assistant clinical professor of emergency medicine,
 received a AWAEM
 Catalyst Award for
 raising awareness of
 the roles sex and
 gender play in acute
 care medicine.
- Garen Wintemute,
 M.D., M.P.H., director of UC Davis' Violence
 Prevention Research
 Program (VPRP),
 received the Public
 Health Leadership
 Award for his
 pioneering work on
 firearm violence.
- Austin Johnson, former assistant
 professor of emergency
 medicine and K12
 scholar, received a
 SAEM Young Investigator Award for
 research on novel
 approaches for early
 resuscitation.

Farmer awarded APSNA Champion Award



Diana Farmer, M.D., chair of the UC Davis Department of Surgery and chief surgeon of UC Davis Children's Hospital, has been awarded the Champion Award by the American Pediatric Surgical Nurses Association (APSNA). The organization shapes pediatric surgical nursing through

advocacy, collaboration, mentorship and leadership.

Hwang recognized for research



The American Skin Association recognized dermatology chair Samuel Hwang, M.D., Ph.D., with a 2020 Research Achievement Award in Psoriasis for helping to advance the field. Hwang's research includes skin cancers and immunological diseases, and his most recent published study investigated how the Western diet may lead to skin inflammation and psoriasis.



New Aging Initiative

Ernest E. Tschannen Eye Institute coming in 2022

UC Davis held a virtual groundbreaking in June to celebrate construction on the new Ernest E. Tschannen Eye Institute building, and to honor donors whose contributions have supported the UC Davis Eye Center. The 67,000-square-foot institute on UC Davis Health's Sacramento campus was specifically designed for patients and specialists and will be completed in 2022. It will also house the new Center for Ocular Regenerative Therapy, a clinic to assess genetic causes of eye disease and ultimately provide gene therapy approaches for patients with disorders that, until now, have had no effective treatment. Tschannen has donated more than \$38 million in gifts and pledges to the Eye Center and its Center for Vision Science.

With the number of U.S. adults 65 or older expected to more than double by 2030, UC Davis Health has launched a new effort to promote healthy aging through an integrated approach — both across the lifespan and across all care settings. School of Medicine Dean Allison Brashear and School of Nursing Dean Stephen Cavanagh lead the Aging Initiative, which builds on existing UC Davis Health strengths to provide age-friendly care, support family caregivers, leverage technology for independent living, and teach future providers. Plans include a new integrated outpatient clinic, additional geriatrics-focused experts, a fellowship and more.

New adolescent and young adult oncology program

The UC Davis Comprehensive Cancer Center launched a new Adolescent and Young Adult (AYA) oncology program through a partnership with Teen Cancer America. The program provides cancer patients coordinated services such as psychosocial and supportive care, fertility preservation, genetic testing and survivorship support.



New telehealth services for 14 counties

UC Davis Health has entered into a new agreement to provide pediatric telehealth services to the 14 Northern California counties that Partnership HealthPlan of California (PHC) serves, from Del Norte to Yolo. The nonprofit, community-based public health organization contracts with the State of California to administer Medi-Cal benefits through local care providers. The new arrangement offers more than 15 subspecialties as part of a goal to create a "virtual children's hospital" for Northern California children.

A *Newsweek* Best Maternity Care Hospital

UC Davis Medical Center is one of *Newsweek's* Best Maternity Care Hospitals in 2020, according to rankings released in July. Its maternity care program was ranked among the best in the U.S. as verified by the 2019 Leapfrog Hospital Survey administered by The Leapfrog Group, an independent national health care watchdog organization. The Leapfrog Group uses data voluntarily submitted by health care facilities to the annual Leapfrog Hospital Survey and Leapfrog Ambulatory Surgery Center (ASC) Survey. Leapfrog also deploys teams of experts and analysts to review available data and identify high performers.



One of '100 Great Hospitals in America'

UC Davis Medical Center has again been named one of the "100 Great Hospitals in America." The annual honor by *Becker's Hospital Review* identifies excellence, leadership and innovation in the hospital and health care sector. Becker's selected hospitals for its 2020 list based on analysis of several ranking and award agencies, including *U.S. News and World Report's* 2019–20 rankings, CareChex, Healthgrades, CMS star ratings, Leapfrog grades and IBM Watson Health top hospitals. The publication also sought nominations. Among UC health systems, UCLA Medical Center, UC San Diego Health-Jacobs Medical Center and UCSF Medical Center were also named to the list.

CERTIFIED AS A COMPREHENSIVE STROKE CENTER



and the stroke center.

UC Davis Medical Center has been certified as a Comprehensive Stroke Center, the highest recognition possible from The Joint Commission. The certification recognizes the medical center's complete range of expertise and

resources necessary for improving survival and outcomes for stroke patients. **Kwan Ng, M.D., Ph.D.**, is UC Davis Health's director of vascular neurology

TCAR CENTER OF EXCELLENCE

The UC Davis Vascular Center was named a TCAR Center of Excellence by Silk Road Medical for its highquality care team and patient outcomes for transcarotid artery revascularization (TCAR). **Matthew Mell, M.D., M.S.**, director of the vascular center, and a national leader



Matthew Mell

in defining health policy for managing and treating aortic disease, leads the TCAR program.

Highest accreditation for epilepsy program

UC Davis Medical Center's Comprehensive Epilepsy Program earned accreditation as a level 4 epilepsy center, the highest rating awarded by the National Association of Epilepsy Centers (NAEC). The program is recognized as providing more complex forms of intensive neurodiagnostic monitoring, as well as more extensive medical neuropsychological and psychosocial treatment.

Baby-Friendly Hospital designation

UC Davis Medical Center has earned the highly prestigious Baby-Friendly designation by Baby-Friendly USA, demonstrating adherence to the highest standards of breastfeeding care built on evidence-based practices recommended by the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF).





Program tackles shortage of mental health providers

With California facing an urgent and growing shortage of mental health professionals, three UC schools of nursing (UCSF, UC Davis, and UCLA) are launching a unique new online post-master's certificate program to prepare 300 psychiatric mental health nurse practitioners by 2025. The move is expected to nearly double the state's current pipeline of PMHNPs - specialized providers authorized to prescribe medications and treat severe disorders — between now and 2025, with graduates slated to serve as many as 378,000 patients over the next few years. A \$1.5 million California Health Care Foundation grant helped support design and launch.

Nursing school selects inaugural nurse leader fellows

The Betty Irene Moore School of Nursing at UC Davis announced the 11 members of the inaugural cohort for the Betty Irene Moore Fellowships for Nurse Leaders and Innovators in June. The new program supports approximately 10 fellows each year for the next five years, funded by a \$37.5 million grant from the Gordon and Betty Moore Foundation announced last December. Fellows are early- to mid-career nursing scholars and innovators with high potential to accelerate leadership in nursing-science research, practice, education, policy and entrepreneurship, and are required to take part in an innovative project or study.

AMERICAN MEDICAL INFORMATICS ASSOCIATION FELLOW



Katherine Kim

Katherine Kim, Ph.D., M.P.H., M.B.A., an associate professor for the Betty Irene Moore School of Nursing at UC Davis, has been named a fellow of the American Medical Informatics Association (AMIA). Kim is a prolific research team leader and co-leads the UC Davis arm of the NIH All of Us Research Program.

Distinguished gerontological educators

Three faculty from the Betty Irene Moore School of Nursing at UC Davis have been named distinguished educators in gerontological nursing by the National Hartford Center of Gerontological Nursing Excellence Recognition Program. **Debra Bakerjian**, **Ph.D.**, **A.P.R.N.**, **F.A.A.N.**, **F.A.A.N.P.**, **F.G.S.A.**, is a clinical professor, and **Fawn Cothran**, **Ph.D.**, **R.N.**, **G.C.N.S.-B.C.**, and **Kathryn Sexson**, **Ph.D.**, **A.P.R.N.**, **F.N.P.-B.C.**, are assistant professors and part of the school's Family Caregiving Institute, with Sexson serving as its lead educator.

Surgical oncology Young Investigator Award



Sepideh Gholami

UC Davis Health surgeon and cancer researcher **Sepideh Gholami, M.D.,** is the 2020 recipient of the Society of Surgical Oncologists Young Investigator Award, granted for innovative ideas designed to improve patient cancer care. Gholami, an assistant professor of surgery, was given the award for a project that investigates new tools for treating patients with colorectal liver metastases.

New game-changing treatment for liver tumors

UC Davis Medical Center is currently one of the few hospitals on the West Coast, and the only in Northern California, to offer hepatic artery infusion chemotherapy (HAI). The procedure involves placing a small pump under the skin to deliver chemotherapy directly to the liver through a catheter, feeding the main artery to the liver. **Sepideh Gholami, M.D.**, uses the treatment for patients with colorectal cancer that has spread to the liver, and for bile duct cancers.

Honored for environmental excellence

UC Davis Health was honored by the nonprofit Practice Greenhealth for its progress on environmental performance and sustainability. Accolades include The Emerald Award; The Greening the OR Recognition Award; Circle of Excellence on Food; and the Circle of Excellence in Green Building.



Calendar

October 24

The EYES of a CHILD Symposium. Matsui Lecture Hall, UC Davis Education Building. Info at 916-734-7781 or email klchavez@ucdavis.edu.

November 6-7

Pediatric Critical Care Colloquium 2020. Presented by UC Davis Children's Hospital. Betty Irene Moore Hall, UC Davis Health Sacramento Campus.*

Ongoing

Self-study modules for CME credit are available on web-based learning resources.

- Adult Occupational Lead Poisoning in California
- COVID-19 Training
- E-Cigarettes and Your Patients
- Limb Salvage
- Pain Management Care and Treatment
- Pediatric Conditions
- Preventing Firearm-Related Injury and Death
- Stroke and Neurological Conditions

Info at **916-734-5773** or **gvwelsch@ ucdavis.edu**. *Courses provided in partnership with California Department of Public Health.

Date-certain events are in Sacramento unless otherwise noted. For more information about upcoming educational courses, please visit **health.ucdavis.edu/cme**. Or contact the Office of Continuing Medical Education at **916-734-5352** or **cmereg@ucdavis.edu**.

Important note: Before making travel arrangements, please call the Office of Continuing Medical Education at **916-734-5352** to confirm there are no changes to dates or locations printed in this calendar.



ALUMNA TO LEAD L.A. COUNTY MEDICAL ASSOCIATION

UC Davis School of Medicine alumna **Diana Shiba (M.D., '05)** has been elected president of the Los Angeles County Medical Association (LACMA), making her the first Asian American woman to lead the organization in its nearly 150-year history. The Kaiser Permanente executive, an ophthalmologist by training, is also a trustee of the California Medical Association and teaches courses at UCLA.

Diana Shiba

Notable quotes

"When there is something like a pandemic virus that sweeps across all of our communities and we see that black and brown folks are dying at a greater rate, it's something that we should all be concerned about, right, about what it says about whether we're adequately meeting the needs of our entire population."

California surgeon general and UC Davis School of Medicine alumna **Nadine Burke Harris**, **M.D.**, **M.P.H.**, in a *Los Angeles Times* story about the increased risk that communities of color face as a result of underlying health conditions.

"There's a lot of delays, a harder time getting medications. If it was a struggle before, it is so much more exacerbated by closing down or pulling back on a lot of those resources."

Emergency medicine physician Aimee Moulin, M.D., a principal investigator for a statewide ER-based opioid treatment program, in a *CalMatters* article on how the coronavirus pandemic is disrupting efforts to stem the opioid epidemic.

"There aren't a lot of respiratory viruses that go both upper and lower, and this is one of them."

UC Davis pulmonologist **Michael Schivo**, **M.D.**, **M.A.S.**, in a *NPR* story on how the novel coronavirus hijacks our defenses.

"Within minutes our physicians are able to see the child and talk with the family members and help assist in the care that way."

James Marcin, M.D., M.P.H., director of the Center for Health and Technology, in an *NPR* article explaining how using telehealth for primary care can break down barriers for patients living in rural communities.

"I'll get them to deliberately use an iPad or a phone or mobile device, and I'll have them show me around the house and walk me out in the garden. I'll talk to them about their pictures or what they're having for supper. I'll get to see their pets."

Telehealth pioneer and UC Davis Health Chief Wellness Officer **Peter Yellowlees**, **M.D.**, **M.B.B.S.**, in a *Psychiatric Times* story on the nuances of telepsychiatry during the coronavirus pandemic.

"All the characteristics of farm workers are risk factors."

Marc Schenker, M.D., M.P.H., public health professor and founder of the Western Center for Agricultural Health and Safety, in a *Politico* story about the vulnerability of ag laborers as essential workers during the coronavirus pandemic. "This is a different world than taking a pill, because if you take a pill, you can stop taking a pill. But if someone injects you with a billion living cells, some of those cells are never going away, and you don't really have control over them."

Stem cell researcher **Paul Knoepfler, Ph.D.**, in a *USA Today* article on the emergence of unproven private stem cell treatments for COVID-19.

For updates on UC Davis research related to SARS-CoV-2, please see the center feature section starting on page 16.

A summary of recent findings in clinical, translational and basic-science research at UC Davis

Body of Knowledge

The immune responses of a female mouse before pregnancy can predict how likely her offspring are to have behavioral deficits if the immune system is activated during pregnancy, UC Davis

researchers reported in the journal Brain, Behavior, and Immunity. The findings could help resolve what role serious infections during pregnancy play in conditions such as autism and schizophrenia in offspring, they said.



UC Davis researchers have found a link between traffic-related air pollution and an increased risk for changes in brain development relevant to neurodevelopmental disorders. The Translational Psychiatry study, based on rodent models, corroborates previous

epidemiological evidence showing this association.



Arteries respond in opposite ways for males and females, with a protein known to expand blood vessels having different functions in each sex, according to UC Davis research published in

the Proceedings of the National Academy of Sciences. Conducted using arterial cells from mice, the study is the first to identify sex-based distinctions in how the protein - Kv2.1-works. The ultimate goal is to help inform tailored hypertension treatment strategies for men and women.

Autism severity can change substantially during early childhood, with girls tending to show greater reduction and less rise in symptom severity than boys, MIND Institute researchers reported in the Journal of Autism and Developmental Disorders. Previous studies indicated inconsistent results in terms of childhood changes, with a general sense that severity at diagnosis would last a lifetime.

Q

A new technique developed by UC Davis researchers offers a significant advance in using magnetic resonance imaging to pick out even very small tumors from normal tissue, thanks to

a new dual-contrast nanoprobe and special imaging analysis software. The research, reported in Nature Nanotechnology, could help detect very small early-stage tumors if translated for clinical use.



Homocysteine levels in the blood are a biomarker that can predict the severity of damage to small vessels from sickle cell disease, UC Davis researchers reported in the British Journal of

Haematology. The research is the first to link homocysteine an amino acid found in the blood and a risk factor associated with heart disease and stroke – with complications of sickle cell disease. It also is the first to offer a noninvasive approach to assess vessel damage in patients as young as four years of age.

Q&A: Minimally invasive cardiac surgery

UC DAVIS HEALTH RECENTLY WELCOMED BOB KIAII, B.SC., M.D., as our new chief of cardiothoracic surgery. The internationally acclaimed clinician and researcher is currently president-elect of the International Society for Minimally Invasive Cardiothoracic Surgery, and known for several surgical firsts and advancements in the field.

Before joining UC Davis Health in January from Western University in Ontario, Canada, Kiaii performed a number of pioneering procedures, such as:

- North America's first combined surgical and percutaneous procedure for multi-vessel coronary artery disease on the beating heart
- The world's first robotic-assisted surgeries for aortic valve replacement for aortic valve stenosis, right atrial perforation repair and left atrial appendage ligation for atrial fibrillation
- The world's first aortic valve bypass using the Correx apical conduit.

At Western, he served as chair of cardiac surgery at the Schulich School of Medicine and Dentistry – consistently ranked among Canada's top medical schools – and as chief of cardiac surgery at one of the country's largest acute-care teaching hospitals, London Health Sciences Centre. He was also a founding member of the Canadian Surgical Technologies and Advanced Robotics (CSTAR) of the highly ranked Lawson Health Research Institute.

Why did you decide to come to UC Davis Health?

I really liked the overall team approach to surgery at UC Davis, and that all of our surgeons are leaders in their respective fields. I also liked the fact that the institution has invested in robotic technology, which is the future of heart surgery.

You've performed several robotic and minimally invasive firsts – why your interest in pushing the frontier?

I believe that the advancement of technology has enabled us to accomplish procedures less invasively and more accurately. As procedures undergo their evolution, there are always better ways to perform them in order to promote quicker recovery and return to normal activities of daily living. There has never been a better time to translate the developed research into novel procedures to improve the delivery of care, specifically in heart disease. Hence, my passion to push the frontier and provide less-invasive procedures for appropriate patients.

You recently completed the university's first minimally invasive videoscopic mitral valve procedure, as a new option between open surgery and clipping via catheterization.

We now screen all mitral valve patients for minimally invasive videoscopic repair approaching the heart using the between-the-ribs approach. Younger, healthier individuals usually benefit greatly, and return to normal quality of life much more quickly than via a conventional sternotomy. Hospital stays can generally be reduced by 2–3 days, and return to normal activity after 3–4 weeks post-procedure. We do perform transcatheter mitral clip procedures, but reserve them for patients who are not good surgical candidates, such as patients at high risk of surgery.

In general, I'm committed to using the tools that are best suited for each patient. If less-invasive robotic surgery could be an option, I always provide that as an option of treatment for the patient, because it can also reduce the patient's recovery time from weeks to days.

Could you share some thoughts on current trends in the field?

Presently the trend in the field of cardiovascular medicine is heart team approach to delivery of care. The fields of interventional cardiology and cardiac surgery are merging more and more together. Transcatheter technologies in conjunction with computer-assisted minimally invasive surgery will provide the option of hybrid cardiac intervention for patients with cardiovascular disorders, in order to deliver much-improved and lessinvasive care.

How else are these trends and advancements coming into play at UC Davis?

UC Davis already has a very well-accomplished and renowned transcatheter structural heart team. In addition, the university has access to leading-edge robotic technology, including the state's



first da Vinci SP robotic surgery system and a very well-accomplished robotic surgical program. These entities together will enable us to develop the roboticassisted, multi-vessel hybrid bypass/ revascularization program for coronary artery disease. The hybrid team approach treatment will also be applied to other procedures such as ablations for cardiac arrhythmia, lead placement, and treatment of valvular disorders.

This is an addition to other recent initiatives at UC Davis, such as development of the aortic program for the treatment of complex aortic disorders.

To help expedite recovery, you developed a rapid-discharge strategy with anesthesia and nursing teams at your prior institution, and you're introducing it here. What should we know?

I firmly believe that patients recover more quickly in the comfort of their own homes. Hence the development of Enhanced Recovery After Surgery (ERAS), which will allow suitable patients post-minimally invasive hybrid cardiac procedures to discharge sooner than the typical length of stay of 7–10 days. The protocol involves things such as extubation in the operating room, advancement in pain management, and early ambulation.

What are some heart surgery research initiatives at UC Davis Health?

I think that the research in comparative outcomes has demonstrated the advantages of the less-invasive hybrid approaches. For instance, one of my studies showed that a combination of traditional percutaneous coronary revascularization plus less-invasive roboticassisted surgical coronary intervention improved outcomes for some patients with complex coronary artery disease, rather than using just one or the other.

What kind of experience can referring physicians and their patients expect from your division?

Timely assessment of the patients being referred by the referring physician, and suitable patients being offered the less-invasive/hybrid procedures with our post-operative ERAS pathway.

Bob Kiaii, B.Sc., M.D., F.R.C.S.C., F.A.C.S.

(pronounced KEY-eye) Chief of Cardiothoracic Surgery Professor

Fellowships

Minimally invasive and robotic cardiac surgery

Cardiac transplantation

Board Certifications

Cardiac surgery, RCPC General surgery, RCPC

Special interest areas

Minimally invasive procedures, such as for:

- Atrial fibrillation
- Mitral and aortic valve problems
- Coronary artery revascularization
- Robotic cardiac surgery

Referrals

- Cardiothoracic Surgery referrals/appointments: 916-734-2680
- (8 a.m. to 5 p.m., Monday Friday)
- Additional referral questions and assistance: UC Davis Health Physician Referral Liaisons

hs-physicianliaisons@ucdavis.edu

THE PATIENT WAS AN OTHERWISE HEALTHY WOMAN

in her 40s, who transferred to UC Davis Medical Center after a community hospital was unable to slow her respiratory infection. Within 24 hours, her status deteriorated more.

Chest imaging suggested community-acquired pneumonia, but UC Davis clinicians immediately suspected something else – a potential COVID-19 infection.

At that time — early-to-mid February — the novel coronavirus was picking up steam, fast. In January, the World Health Organization had declared a global health emergency after thousands of cases and more than 1,000 deaths in China. And as cruise ships locked down and outbreaks emerged in Europe and the Middle East, UC Davis infection prevention specialists in Sacramento began surveilling their own patients for possible cases.

But at that point the virus was still considered largely an international affair by several governments, with travel warnings or restrictions a cornerstone of their infection control. And because UC Davis Health's patient had not traveled to China or other high-risk countries, or had known contact with high-risk individuals, she didn't meet criteria for testing by the

U.S. Centers for Disease Control and Prevention.

Over the next several days, UC Davis clinicians proceeded to eliminate other potential causes of her acute respiratory distress syndrome and septic shock. But the viral panel and respiratory, blood and bronchoscopy cultures still failed to indicate a clear infectious source, too. So with all other options ruled out, the CDC authorized a COVID-19 test.

It came back positive two days later. The case would now be the nation's first apparent example of community spread, and one of its first COVID-19 hospitalizations. And when UC Davis announced it on Feb. 26, it made headlines around the world (including in a CDC statement, which noted "This case was detected through the U.S. public health system — picked up by astute clinicians.")

UC Davis Health and UC Davis have remained in the thick of local, national and even global pandemic responses ever since, long after discharging that index patient. UC Davis teams are using their collective experience in health, virology, engineering, and zoonotic diseases to tackle the crisis at all levels – administering clinical care and trials; defining paths for transmission; bridging gaps in testing and equipment; providing safety guidance to the public; highlighting the importance of socioeconomic disparities; and more.

"Since that first day, every person at UC Davis Health has played a vital role as we confronted this unprecedented crisis," said David Lubarsky, M.D., M.B.A., UC Davis Health's CEO and the Vice Chancellor of Human Health Sciences for UC Davis. "They've shown the utmost grace under pressure, while serving our patients and collaborating with our community partners in the interest of public health – for everyone."

Since treating the nation's first known case of community-transmitted COVID-19, UC Davis Health has played important roles in clinical, research, and public-health responses to the pandemic.













Clockwise from top left: Nurses on the front lines; messages to and from the community; expanding testing capacity; 81-year-old COVID-19 patient Suren Vaniyev is discharged after 50 days.



Highlights: Responding to the novel coronavirus

2019

2020

December

An outbreak of acute respiratory illness, linked to a novel coronavirus, emerges in China

Jan. 21 The U.S. confirms

its first travelrelated COVID-19 case

Jan. 30

The World Health Organization (WHO) declares a global health emergency had to coalesce the strength of our world-class research expertise across disciplines, to tackle this historic public health threat."

"We knew that we immediately

ALLISON BRASHEAR DEAN OF THE UC DAVIS SCHOOL OF MEDICINE

Feb. 26

UC Davis treats the first U.S. community spread case

Feb. 29

The first suspected U.S. death is reported near Seattle

UC Davis Health announces it is treating the first apparent case of COVID-19 acquired by community spread, making headlines around the world and driving changes to national testing guidelines. UC Davis clinicians had initially suspected their transferred patient's mystery illness was COVID-19, but were unable to confirm immediately due to the strict federal testing criteria of the time. In its wake, the CDC allows any hospitalized patient with severe symptoms to be tested, and allows national testing capabilities to expand to state and local health labs.









As the main tertiary referral center for a 33-county area, UC Davis Medical Center prepares for a potential surge in COVID-19 patients — while also adapting operations in order to continue essential procedures, such as breast cancer surgeries. After a string of 12-hour days, pathology staff create the tests needed to greenlight several deceased-donor kidney transplants.



Mar. 11 The WHO declares a global pandemic Mar. 13 The U.S. declares a national emergency Mar. 16 California issues a sweeping stayat-home order Mar. 23 Sacramento County issues a stay-at-home order

....

Mar. 26 The U.S. takes over the world lead in reported cases

UC Davis joins two worldwide clinical studies

UC Davis Health becomes one of 75 sites worldwide evaluating the investigational antiviral remdesivir, and one of 50 in the U.S. assessing sarilumab, which blocks acute inflammatory response. With emergency FDA approval, UC Davis clinicians had used remdesivir in February to successfully treat the nation's index case for community-acquired infection.



UC Davis Health faculty help to set comprehensive standards for pandemic-related patient care and workforce safety. Examples:

- Cardiothoracic surgeon David Cooke, M.D., F.A.C.S., assists in writing national COVID-19 guidelines for triage of thoracic surgery patients, through the American College of Surgeons (ACS) and thoracic societies.
- Surgery chair and ACS regent Diana Farmer, M.D., helps develop COVID-19 best practices and safety standards for surgeons.
- Otolaryngology chair Gregory Farwell, M.D., F.A.C.S., helps establish an American Head and Neck Society best-practices repository.
- Burn surgeons David Greenhalgh, M.D., and Tina Palmieri, M.D., and nurse manager Len Sterling, R.N., M.B.A., N.E.A.-B.C., help U.S. burn centers plan for continuous burn care during ICU surges.
- Pediatrics chair Satyan Lakshminrusimha, M.D., neonatology chair Mark Underwood, M.D., M.A.S., and pediatric infectious disease professors Elizabeth Partridge, M.D., M.P.H., and Jean Wiedeman, M.D., Ph.D., help co-author COVID-19 guidelines in the American Journal of Perinatology.



David Cooke

A Santa Clara County resident who died in early February becomes the nation's new earliest known victim

Apr. 28

U.S. coronavirus deaths exceed those from the Vietnam War

Mar. 30

Sharing lessons from our index case



UC Davis Health clinicians publish a case study about their index patient in the journal **Clinical Infectious**

Diseases. Multiple journal papers published about the index patient's successful treatment help to educate providers - and save lives - at hospitals across the U.S. UC Davis hematopathologists reported leukemia-like blood test results from the case, for example, and advised fellow clinicians to order COVID-19 testing instead of cancer screenings for certain symptom sets.







Apr. 6

Boosting California's testing capacity After steadily increasing its own testing, UC Davis Health is named to California Gov. Gavin Newsom's COVID-19 Testing Task Force, a public-private collaboration to more quickly increase statewide capacity. The health system can already run up to 400 tests per day, and is working to expand into a high-volume hub with its Roche Diagnostics cobas 6800 robot.

Angela Haczku and Michael Schivo

Reporting the first trial of a promising Preliminary results

Stuart Cohen

trial of the antiviral therapy remdesivir, conducted at UC Davis Health and hospitals worldwide. Nearly two thirds of the severely ill, hospitalized COVID-19 patients who received the drug on a compassionate-use basis improved, with no new safety concerns. *WebMD's* Chief Medical Officer interviews site principal investigator Stuart Cohen, M.D., about the results, published in the New England Journal of Medicine. Larger, controlled trials follow, and remdesivir emerges as one of the most promising in the early field of potential treatments.

Apr. 16

antiviral

emerge from the

first small clinical



Apr. 29

Testing begins on a potential vaccine



Biopharmaceutical company Verndari, Inc. announces the start of preclinical testing at UC Davis' Mouse Biology Program to evaluate a potential vaccine and dermal patch delivery system for COVID-19. The Napa-based company had joined the university's START support

program for UC Davis-affiliated entrepreneurs and startups in 2016.

The testing collaboration "illustrates one of many ways that UC Davis is leveraging our unique expertise and established platform, built on previous research for HIV, Zika and human cytomegalovirus, to advance knowledge and solutions specific to COVID-19," says Prasant Mohapatra, Ph.D., the university's vice chancellor for research.

May 14

Panel examines pandemic disparities

The UC Davis Health Office for Health Equity, Diversity and Inclusion hosts a panel to explain reasons for health disparities related to COVID-19, and what can be done about them. Physicians at "COVID-19: Addressing Health Disparities in the African American Community" say that social determinants of health are a major reason African Americans and Latinos in California are infected with COVID-19 at rates higher than whites. African Americans are dying at rates disproportionate to their population.

An illustration of the swab test distributed by UC Davis Health trended nationally in the early pandemic, ranking high on search engines.

> ©2020 MediVisuals, Inc

May 21

10,000th molecular test

Apr. 29

Plasma transfusions for COVID-19 Two UC Davis Health patients with COVID-19 receive transfusions from a blood donor who recovered from the virus, as part of a national initiative investigating the potential benefits



of convalescent plasma. It's hoped the treatment may boost a sick patient's ability to neutralize COVID-19 and its effects.

May 19

Tracking a troubling syndrome in children

UC Davis Children's Hospital becomes part of an international group researching multisystem inflammatory syndrome in children (MIS-C), a new form of COVID-19 likened to toxic shock syndrome and Kawasaki disease. UC Davis Health faculty helped establish a pediatric research group (PECARN) in the U.S., and serve as principal investigators for the international Pediatric Emergency Research Networks (PERN). Clinical pathologists perform their 10,000th test of COVID specimens from UC Davis patients and staff, as well as residents at nursing homes, local community hospitals and other long-term facilities that lacked testing capabilities. UC Davis is able to test all hospitalized patients at UC Davis Medical Center to help ensure safety at the regional tertiary and quaternary care facility. The health system also processes tests gathered at community sites — activity which helps identify that working-age Latinos are getting infected and dying in disproportionately high numbers.

May 26

Highlighting policy challenges — and opportunities

In the *Journal of Gerontological Nursing*, nursing professor and aging expert Heather M. Young, Ph.D., R.N., F.A.A.N., summarizes a series of temporary, pandemic-related public policy changes that improve care access for older adults – and urges their permanent consideration. In an earlier editorial, she described in detail how COVID-19 underscores the unique needs of older adults and caregivers.



There were **38** novel coronavirus studies underway at UC Davis as of mid-August, with 14 clinical trials underway at UC Davis Health.

July 20

Testing a monoclonal antibody cocktail



UC Davis Health announces a federal grant to help test a new antibody combination as a possible therapy for reducing viral shedding and disease progression. The clinical trial seeks to evaluate efficacy and safety of REGN-COV2 – a combination of REGN10933+REGN10987 antibodies – in hospitalized adult COVID-19

Timothy Albertson

patients. Trial sponsor Regeneron Pharmaceuticals developed the combination to bind to the SARS-CoV-2 spike protein and block its interaction with the host receptor. The adaptive phase I, II and III study is randomized, double-blinded and placebo-controlled.

U.S. summer surge

May 28 U.S. COVID-19

deaths exceed 100,000

Early June Post-Memorial Day surge begins

June 18–20 WHO and NIH halt trials of hydroxychloroquine

Expert advice for stressed family caregiver

The Family Caregiving Institute at the Betty Irene Moore School of Nursing continues to provide actionable advice for Americans caring for aging spouses



Terri Harvath

or parents during the pandemic. Director Terri Harvath, Ph.D., R.N., F.A.A.N., F.G.S.A., offers road maps for supporting older relatives during social distancing, reducing their transmission risk, recognizing infection, and providing or obtaining care. The institute also helps distribute pandemic resources from the AARP as part of an ongoing collaboration.



July 7 U.S. withdraws from WHO

Jttly 23 A new ICU partnership in a hotspot county

UC Davis Health and Adventist Health Lodi Memorial partner to launch a 24/7 telehealth link between the Lodi hospital's intensive care unit — which has been caring for many COVID-19 patients in highly-impacted San Joaquin County — and university pulmonology and critical care physicians.

Aug. 12 Part of a major vaccine trial

UC Davis Health announces a partnership with Pfizer Inc. and Germanybased BioNTech SE to participate in a global study of an investigational vaccine against COVID-19, with the first of the university's 200 vaccine candidate participants receiving their shots a week later.

The phase II/III trial, which involves 120 sites and roughly 30,000 people worldwide, seeks to determine the efficacy and side effects of a single nucleoside-modified messenger RNA candidate from the pharmaceutical companies' BNT162 mRNA-based vaccine program. The novel modified mRNA includes a piece of the genetic code of SARS-CoV-2, and is cited as the first time mRNA-based vaccines are used against an infectious disease.

The trial is designed as a 1:1 investigational vaccine candidate to placebo, randomized, observer-blinded study to obtain safety, immune response, and efficacy data for regulatory review. UC Davis Health site principal investigators include internal medicine chair Timothy Albertson, M.D., M.P.H., Ph.D., and Angela Haczku, M.D., Ph.D., associate dean for translational research.

July 30





Clinical guidance for providers everywhere

A primer on coronavirus and diagnostic error becomes the latest COVID-19 clinical guide released on the widely known safety clearinghouse website AHRQ Patient Safety Network (PSNet), co-edited since fall 2019 by internal medicine professor Patrick Romano, M.D., M.P.H., and nursing professor Debra Bakerjian, Ph.D., A.P.R.N., F.A.A.N., F.A.A.N.P., F.G.S.A. The two safety experts use their expertise to curate rapidly emerging information for busy clinicians, health academics and other stakeholders.

Aug. 28 Contact tracing for community health workers

AUGUS

UC Davis Health and two other universities receive a \$2.3 million NIH grant to train and empower community health workers in research best practices such as contact tracing, which could help reduce disparities related to the pandemic.



SEPT

Sept. 10 Telehealth for at-risk Valley residents

Nursing and medicine professor Katherine Kim, Ph.D., M.P.H., M.B.A., co-leads the newly launched ACTIVATE initiative, a public-private pilot to bring telehealth services to underserved rural residents - such as pandemic-hit ag workers in Merced County. The project, run through UC's Center for Information Technology Research in the Interest of Society & the Banatao Institute (CITRIS), will also develop a roadmap for postpandemic sustainability of health system reforms that incorporate telehealth.

Keeping the public informed



Throughout the pandemic, experts like pediatric infectious diseases chief Dean Blumberg, M.D. (shown) and public health sciences chair Brad Pollock, M.P.H., Ph.D., share context about the latest numbers, research, and prevention measures through news and web stories. Mental health professionals like Peter Yellowlees, M.B.B.S., M.D., and psychiatry chair Helen Kales, M.D., perform similar roles for related anxiety and depression.

In the roughly six-month period after announcing the nation's first community-spread COVID-19 patient, UC Davis Health registers more than 4 million views to its pandemic-related web content, and appears in more than 6,000 coronavirus-related media mentions. As of late Sept. (press time)

200,000+ U.S. coronavirus deaths

215,000 U.S. Civil War battle deaths*

291,557 U.S. WW2 battle deaths*

675,000 U.S. 1918 influenza deaths

*VA data

"I've never seen it like this"

As an attending emergency physician at a hard-hit Brooklyn hospital, **Lawrence Haines (M.D., '05)** has cared for hundreds of COVID-19 patients during the pandemic's initial U.S. surge and beyond.

Lawrence Haines (M.D., '05) in personal protective gear in the emergency department at Brooklyn's Maimonides Medical Center. At times, his hospital was caring for 600 coronavirus cases at once.

IN THE PHOTO ON THE FRONT PAGE

of *The New York Times* city section, **Lawrence Haines (M.D., '05)** examines two children in the emergency room at Brooklyn's Maimonides Medical Center, including one wearing an oxygen mask. The headline reads " 'Underlying Conditions' May Add to Flu Worries."

That was during the previous global pandemic in 2009, for a novel strain of H1N1 influenza that caused an estimated 12,000 American deaths during its first year.

When Haines again appeared in the news again this April, during a weeklong national news report inside hard-hit Maimonides, the novel coronavirus had caused nearly as many U.S. deaths in just two months — including more than 700 in a single Big Apple day.

Haines, an attending emergency physician and ultrasound division director in the Maimonides emergency medicine department, was willing to be explicit and bravely, publicly vulnerable — on camera about what he experienced, in order to highlight the gravity of the situation and the threat to the unwary.

At times, his hospital in the virus epicenter was caring for 600 coronavirus cases at once. "I've never seen it like this, Haines told the reporters from *ABC's World News Tonight* program. "It's like a mass-casualty event. It's like war.

"I had a birds-eye view of the ER, and saw all the people struggling to breathe, and all of the monitors with low oxygen, and I broke down crying," he said. "It's been like a bad dream."

'We have each other to lean on'

Haines himself has provided care for hundreds of COVID-19 patients, and intubated dozens. He and his wife Christine, also an attending emergency medicine physician at Manhattan's Lenox Hill Hospital, sent their young son and daughter to stay with family early in the surge, to protect them from risk of parent-to-child transmission.

When interviewed by ABC, the couple hadn't seen their kids for three weeks.

"We have each other to lean on and hug and talk about our experiences, and it's been really consoling" Lawrence told the camera crew. "What also really lifts my spirits is at 7 p.m., when we open the window and hear the cheering. It brings tears to our eyes."

The Maimonides physicians and nurses feted in those cheers have also been some of the many thousands of health care workers nationwide to become infected themselves. One was Maimonides' chair of medicine and



virus from any of my patients, or my colleagues who may be asymptomatic."

There have also been heartwarming moments as well – such as the day a 30-year-old patient went home after roughly 70 days hospitalized with COVID-19, including a month on extracorporeal membrane oxygenation or ECMO.

Firsthand triage insights

When interviewed in early July, the overall situation had greatly improved in New York City, with the number of Maimonides ER COVID-19 patients "a slow trickle, rather than the tsunami we experienced in April." After 8 weeks living apart, Lawrence and Christine were finally able to reunite with their children on Mother's Day.

"It was incredibly hard to be without them for 2 months," Lawrence said. "We missed two teeth falling out and changes in shoe size. Not witnessing milestones like this was the hardest part."

"It's like a mass-casualty event. It's like war."

Emergency medicine physician Lawrence Haines (M.D., '05), speaking to national news reporters during the pandemic's first U.S. wave.

pulmonary clinical care, who at age 72 had helped orchestrate a doubling of the hospital's capacity during the pandemic. He became a COVID-19 patient in April, and two months later was one of the providers to die from the virus.

"It continues to weigh heavy on all of our minds," Lawrence said. "I still don the PPE before every shift with the knowledge that I can still contract this Both Lawrence and Christine are directors of emergency ultrasound at their respective institutions, and set policy for use and decontamination of the technology during the pandemic. With CT scans difficult to employ *en masse* during surges, Haines is one of several clinicians from epicenter areas worldwide who have suggested that lung ultrasound might play a significant

Lawrence Haines' wife Christine Haines, M.D., is also an attending emergency physician on the front lines of the pandemic. She practices at Manhattan's Lenox Hill Hospital.

role in care going forward during the pandemic.

"It's hugely helpful in the undifferentiated dyspneic patient," he said. "COVID-19 patients have been described having a typical pattern on lung ultrasound, and it has the potential to help identify these patients in a triage-type setting. I eagerly await some real data on the sensitivity and specificity for identifying COVID-19 with ultrasound."

Meanwhile, as other states dealt with their own surges, he encouraged diligence in both social distancing and use of personal protective equipment.

"Christine and I find a lot of ongoing strength in the bravery of all essential workers who soldier on in harm's way, and do their jobs despite the risks," he said.

Lawrence and Christine Haines sent their children to stay with relatives for two months to prevent any chance of parentto-child transmission. They were reunited on Mother's Day.



'It has been clear for decades'

During a turbulent spring and summer, California Surgeon General Nadine Burke Harris (M.D., '01) has worked to highlight the links between mental health, health equity and systemic racism.

"As a doctor and a policymaker, I often hear the question 'what it is about black and brown people' that makes us more vulnerable to the virus?" California's inaugural surgeon general **Nadine Burke Harris, M.D., M.P.H., F.A.A.P.,** wrote in an essay titled "George Floyd's Death Is Killing Me," published in June on the online platform Medium.

"That question infuriates me." "The science makes clear how powerfully our experiences and environments shape our biology," she wrote. "It has been clear for decades. Our daily experiences activate cascades of biological pathways... Racist oppression ensures that black and brown children bear a disproportionate burden of dehumanizing and traumatic experiences. Science shows it is sickening them and killing them."

Like many UC Davis School of Medicine alumni, Burke Harris (M.D., '01) has dedicated her career to closing gaps in health disparities, especially in regard to the intersection of emotional stressors and physical health. During the pandemic and the aftermath of George Floyd's death, she has played a vocal role in California and beyond highlighting how pandemic stress can be of harm to all of us — and, when intertwined with the effects of systemic prejudice, especially so for communities of color.

Since founding a nonprofit health center serving San Francisco's impoverished Bayview neighborhood in 2007, the pediatrician has emerged as a national expert on the lifetime health impacts of toxic childhood stress and the phenomenon of Adverse Childhood Experiences, or ACEs. Research suggests that people of color, of lower incomes, and LGBTQ identity are more likely to experience ACEs, which range from parental divorce to household substance and domestic abuse. Expanding screening for ACEs, and advancing the science around them, has been a declared priority for Burke Harris since being appointed surgeon general by Gov. Gavin Newsom in January 2019. He also commissioned her to assist with the state's response to pandemic-related mental health issues this spring; among other activities, her office created a sharable playbook of evidence-based resiliency tools to help with stress and emotional well-being, shared in outreach efforts and highlighted at an April pandemic news conference.

The role of racial disparities

In speaking about the importance of looking at racial disparities in health care, Newsom called Burke Harris to the podium while announcing, "This has been, quite literally, the cause of her life." She stated that historically there has been medical mistreatment of African Americans, and emphasized the importance of identifying trusted messengers to communicate truthful messages.

At another point, she explained why the health effects of coronavirus go beyond infection: "It is important to recognize that stress related to the pandemic that many are feeling right now – compounded by the economic distress due to lost wages, employment and financial assets, plus school closures and sustained physical distancing – can trigger the biological stress response which also has an impact on our health and well-being," she told Californians.

People who experience too much stress can be associated with changes in sleep patterns, appetite, mood, risk of substance abuse and family violence, she said. Physical symptoms can also include headaches, stomach pain,



increased blood pressure and asthma.

People of color are already highly impacted by stress-related chronic conditions like hypertension, asthma and diabetes, Burke Harris has noted in media interviews, and she has expressed concern that new diagnoses or exacerbations caused by pandemic stress will likely impact those communities the most. They'd also be in line for a "doublewhammy" effect: besides causing physical harm in and by themselves, the conditions serve as additional risk factors or "core comorbidities" for COVID-19 complications as well.

As of late July, recent national data from the CDC showed that COVID-19 hospitalization rates for Indigenous and Black people were five times higher than for white people, and rates for Latinos are about four times higher than that of white people.

Full circle

And evidence shows that several kinds of chronic or comorbid conditions can be linked back to Adverse Childhood Experiences, Burke Harris has stressed both during the pandemic and throughout her career. Studies suggest the more ACEs a child has gone through, such as observing violence or being raised by a parent who abuses alcohol, the more likely that individual will suffer health risks later in life.

Children already exposed to ACEs are at increased risk of struggling during and after the pandemic, she told *The New York Times* in a May article "How to Keep Children's Stress From Turning Into Trauma," one of a number of related appearances in national media. And kids who were not at risk before COVID-19 may face new risks, because past safety nets and support networks may become overwhelmed or disappear.

California has passed legislation requiring that all Medicaid recipients be screened for ACEs, and in January began offering provider training and payments through the tobacco tax-funded ACES Aware initiative. Such screening will become even more important in the wake of the pandemic, Burke Harris told the *Times*, to guide both the delivery of prevention resources at the community level and also pragmatic coping mechanisms to individuals ("While dose matters, buffering matters, too," she said).

But after Floyd's death on a Minneapolis street a few weeks later, she wrote in her Medium essay that much, much more will also be needed.

"What this moment makes clear... is that addressing health disparities in America through changes to medical practice alone is not enough," she wrote. "It requires us to address the systemic racism that profoundly hurts our children and our health by immersing them in sustained, dehumanizing trauma...

"It is our collective responsibility to acknowledge and take steps to mitigate the enduring harms of these wrongs."

The ACES Aware website at www.acesaware.org includes provider resources to help patients and populations mitigate toxic stress during the pandemic. Example: see the blog entry "COVID-19 and Preparing for Secondary Health Effects."

Fighting the pandemic



Nam Tran and Kristin Grimsrud in calmer times before the pandemic.

A powerhouse couple

Married couple Nam Tran and Kristin Grimsrud put previous research on hold to play prominent roles in COVID-19 testing and vaccine development.

Married researchers **Nam Tran (B.S., '03, Ph.D., '08, M.S., '11)** and **Kristin Grimsrud (B.S., '06, D.V.M., '12, Ph.D., '15)** are leaders in efforts by both UC Davis Health and California to combat COVID-19.

Tran, an associate professor of pathology and laboratory medicine, is the senior director of clinical pathology overseeing COVID-19 testing at UC Davis Health. He consults on pathology around the world and has served California during the pandemic as a member of Gov. Gavin Newsom's COVID-19 testing task force.

Grimsrud, an assistant clinical professor in the same department, is a recipient of a prestigious K award research grant from the National Institutes of Health, as well as a UC Davis veterinarian and lead scientist in the Mouse Biology Program. It's here that she's worked on a collaboration to develop a COVID-19 vaccine and dermal patch delivery system that could enable the vaccine to be sent by mail.

"Early stage animal research for vaccine efficacy is pivotal in expediting human studies," she said. "These studies previously would have taken years, but we are working diligently to significantly shorten that time frame thanks to the early pilot studies in the rats."

Grimsrud had been working with Verndari Inc., a biopharmaceutical company, for more than four years to develop a vaccine patch for influenza. The team quickly put that work on hold to focus on the coronavirus SARS-CoV-2 when the pandemic hit.

Tran's work also changed suddenly, and his team went to work creating COVID-19 testing capacity from the ground up that didn't exist before March 19.

He guides a team that works with novel testing techniques and analytical tools, including machine learning, to provide data to researchers at UC Davis and scientists around the world. They also provide leadership for testing practices at the local, regional and state levels.

"Our continuing goal is to increase testing capacity for COVID-19 to sustain our institutional and community needs," he said, "and to identify innovative means to better diagnose and manage the condition."

A well-being toolkit for nurse leaders



As a nurse scientist for Utah's largest health system, Intermountain Healthcare, **Perry Gee (Ph.D. '14, R.N.)** is frequently asked to

conduct research in areas outside of his own expertise. And he said that was true when he was asked to study burnout, resilience, compassion fatigue and its impact on nurse well-being.

When the COVID-19 pandemic struck, leadership asked Gee — who serves as an adjunct assistant professor for the University of Utah, Arizona State University, and UC Irvine — if he could accelerate his intervention and research work to support the Utah system's more than 10,000 nurses who could be potentially impacted by the disease.

Networking with colleagues and several national nursing organizations, Gee and team identified evidence-based well-being strategies to implement immediately during the pandemic, and built research methodologies to evaluate impact. The team ultimately rolled out a well-being toolkit for nurse leaders that was informed by frontline nurses.

"Just months later, examples of our COVID-19 nurse well-being response can be seen in not only my health system, but also in facilities across the nation," Gee said earlier this year. "My education at the Betty Irene Moore School of Nursing gave me the knowledge and confidence to tackle scholarly topics outside my comfort zone — and this work has transformed me to an expert who can positively impact the lives of my fellow nurses."

Also see updates from Jason Nesler and other alumni in Class Notes on p. 43 (School of Nursing) and p. 40 (School of Medicine).

Parking garage triage

When the novel coronavirus reached the Bay Area, Sutter Health family physician **Maryam Dolatshahi (B.S. & B.A. '09, M.D. '14)** and colleagues had to adjust their practices rapidly for shelter-in-place.

Their medical group soon created a drive-up respiratory clinic in the basement parking garage, where symptomatic patients would be seen in their cars by physicians in full protective gear. Dolatshahi — who had just returned from maternity leave, and had an asthmatic husband at home— was one of them.

"It reminded me of scrubbing into surgery," she said. "We decked out in gowns, double gloves, face shields, masks and surgical caps to take vitals and conduct exams. The medical assistant who was 'clean' would drop instruments into our hands without touching us, we would use them and drop them into a tray to be immediately sanitized and returned by a designated 'cleaner.'

"It was certainly strange at first, especially since the last time I took my own vitals was in medical school! But only one person could go near the patient, and that was me" due to her enhanced PPE.

Compared to an exam room, Dolatshahi said the intricate, anxious (and drafty) experience was also naturally somewhat frustrating from a bedside-manner perspective.

It was certainly strange at first, especially since the last time I took my own vitals was in medical school! But only one person could go near the patient, and that was me."

"People were scared and anxious... I was peering over them in their cars, and they seemed so vulnerable!" she said. "I normally sit with patients to be at the same physical level as them, and I couldn't do that here. And I couldn't use a comforting facial expression or body language to help. Nor could I reassure them verbally, because I didn't know for certain if they had the virus or not.

"I felt helpless other than being able to offer a test — and even that wasn't for "I have definitely felt discouraged at moments, and wondering whether I should have returned to work or not which is natural as a new mother, but it was amplified going back to work in the pandemic," she said in June. "We've all been slowly adjusting, and doing our best with the circumstances. But overall, I am so grateful for the opportunity to have studied medicine, and to be able to provide essential care during these difficult times."

everyone, since kits were limited and we were only testing specific populations." As health providers everywhere learn

more about the virus, practice is continu-

ously improving, Dolatshahi said this

summer. She's grateful to be a part of a

large physician group, and imagines a

hasn't always been easy on a personal

level due to her unique circumstances.

more isolating and unsettling experience

at smaller practices. Still, she admits it still

Helping Nairobi prepare

When the last international flight left Kenya in late March, **Sarah Ashley** (**M.D. '14**) wasn't on it. The 31-year-old a former global health and leadership fellow at the University of North Carolina, and a surgeon with the U.S.

Army Reserve 450^{th} Civil Affairs Battalion – had decided to stay.

Not only because she volunteered as an ER oversight physician at Nairobi's busy Kenyatta National Hospital, and was helping to set up the country's first emergency medicine residency. Ashley was also part of a team working to find more PPE



for the pandemic's arrival in earnest. "It seems the place for me to be right now," she told communicators in April at UCSC, where she's an '08 grad in health sciences.

During Ashley's first year of med school, she traveled to Kenya as part of

an HIV-AIDS project. The next year she came back to ride along with Nairobi's EMTs — who worked in a chaotic system with little infrastructure or funding — and was inspired by their commitment. This January she moved to Kenya to help create the resi-

dency, teach at medical school, and coordinate UNC research.

Since March, she's transitioned from Nairobi's national hospital to volunteering at a busy public county hospital with limited PPE, testing and critical care capacity. Staff initially made their own face shields and used reusable cloth gowns to cut costs, she said; N95 masks are still scarce.

"The biggest challenge is being able to continue emergency care for very sick patients, in a small space with limited staff and resources, without knowing whether they have COVID or not," Ashley told UC Davis in late July. "Before COVID there were already a lot of barriers and delays, such as not being able to get blood quickly, or no access to a CT scan, monitor or ventilator. Now everything's even more difficult."

Outside, she said the pandemic has caused huge strain, with people out of work and struggling to pay for food, isolation centers and critical care units at capacity — and cases still increasing.

"There's a feeling things can't continue like this, but we don't have any other choice," she said. "The emergency medicine community has really been leading the response, and it looks like they will continue to do so for a long time." – Partially adapted from a story by UCSC's Peggy Townsend

Reflecting on a year of resilience and innovation, and reimagining our future



Allison Brashear shares her vision to build upon the School of Medicine's national leadership in the year ahead

As I look back at my first year as dean of the UC Davis School of Medicine, I am proud of the dedication, resilience and determination of our students, faculty, staff, and alumni.

In the face of historic challenges and opportunities, the School of Medicine proved itself to be a community of leaders, research innovators and collaborators that are pushing the boundaries of knowledge. This year, we also elevated our national ranking by *U.S. News & World Report* to 7th (up from 9th) in primary care and 40th in research.

Our culture of collaboration has been invaluable during the pandemic bringing together our Betty Irene Moore School of Nursing partners, multidisciplinary physicians and researchers to provide the best education and patientcentered care possible.

However, the pandemic also brought to the forefront the unacceptable inequities in health care and our society at large. It has reaffirmed our commitment to advancing equity and creating an inclusive, positive learning environment for everyone.

Since our health system treated the nation's first apparent case of community-acquired COVID-19 in February, the School of Medicine has been at the forefront, convening cross-campus research that resulted in high-profile COVID-19 clinical trials and treatments, highcapacity testing, prominent medical journal publications, and extensive national and global media coverage.

Another important milestone that our school achieved this year was faculty approval to adopt the new I-EXPLORE curriculum, which takes effect August 2021. The leading-edge I-EXPLORE curriculum emphasizes cross-disciplinary collaboration and focuses on the pillars of biomedical science, clinical science and health system science, and will enhance the excellent medical education our school provides.

In the upcoming year, preparing for our reaccreditation will be a top priority. The I-EXPLORE curriculum implementation is foundational to preparing our students for practicing medicine in a rapidly changing world, and preparations are well under way for this two-year process.

Importantly, increasing diversity and inclusion will continue to be a key area of focus. While we have made important strides in the diversity of our medical students, we will work to significantly expand diversity in our faculty and leadership. Combining research with patient care is what academic medicine is all about. Looking ahead, we will continue to increase clinical trials to offer more patients new, potentially life-saving treatments for COVID-19, cancer and in neuroscience, among others.

We are committed to sharing our stories of excellence in patient care, research and education with you, and in the coming year will accelerate our communication to alumni and the larger community.

I continue to be inspired by and grateful to you for your dedication to serving your communities and for generously supporting our mission in this challenging and rapidly changing pandemic environment — helping us provide the safest and best medical education, innovative research and optimal patient-centered care.

For alumni who would like to learn more about upcoming events and opportunities to become more involved, please contact M.L. Farrell, director of alumni engagement at the School of Medicine, at mlfarrell@ucdavis.edu.

Thank you for your support and partnership in our vital work to advance health equity and the well-being of everyone in the communities we serve.

Challenge, change and collaboration



Stephen Cavanagh leads nursing school into its second decade, in midst of greatest health challenge of our time

What a year it's been since I arrived at Betty Irene Moore School of Nursing! Together, we've navigated new pandemic-induced realties, reaffirmed our commitment to anti-racism, and continue to identify and enact opportunities to ensure optimal health and health care equity for all.

I can attest to the reality that what lured me here continues to energize me. I have witnessed incredible resiliency and adaptability of alumni, students, faculty and staff to manage environments no one could anticipate.

The flexibility and accommodation of colleagues at the School of Medicine and UC Davis Medical Center enable our nursing, nurse practitioner and physician assistant students to stay on track to complete their programs. This summer and fall we welcomed more than 140 new students to our physician assistant, family nurse practitioner, master's entry program in nursing and doctor of philosophy programs. Through carefully planned online and in-person instruction, we prioritize safety, ensure high-quality learning experiences, and continue to prepare the next generation of health professionals in the midst of the greatest health challenge of our time.

We've deepened our commitment to grow a school that reflects the diversity of our community as well as fostering an inclusive learning environment. We took a big step toward realizing these goals with the recent appointment of Piri Ackerman-Barger as our school's associate dean for health equity, diversity and inclusion. Over her career, she has combined her expertise in nursing and education to advance inclusive learning environments, education equity and workforce diversity. With her leadership, we will continue to work toward our ultimate goal of ensuring that all people have equitable access to health care.

A new fellowship program launched this year presents an opportunity to increase awareness of Betty Irene Moore's vision for health and to scale our alumni impact to a national level. I'm grateful to the Gordon and Betty Moore Foundation for the \$37.5 million grant to launch the Betty Irene Moore Fellowships for Nurse Leaders and Innovators. Under the leadership of Dean Emerita Heather M. Young, it aims to nurture and advance earlycareer nursing scholars who have the potential to accelerate nursing-science research, practice, education, policy and entrepreneurship. We are proud to be educating the next generation of nursing

leaders prepared to address some of the most complicated challenges for nursing and health care. They, along with the great work you are doing in clinics, classrooms and communities, will amplify our mission and grow the School of Nursing's reputation further.

I am inspired by alumni like you, whose leadership and compassion improves lives, communities, health care settings, research and education. I wish to express my gratitude for all who engage in myriad ways to support students in achieving their greatest potential. From your words of encouragement to our new graduates during their remote celebrations, to sharing your time and expertise as preceptors and giving generously to initiatives such as the Student Hardship Fund, you are essential in all that we do.

In 2021, we will embark on our school's second decade. I invite you to grow your involvement with us as we prepare UC Davis' next generation of nursing and physician assistant professionals. Learn more about events, volunteer opportunities and how to connect with fellow alumni by contacting Sarah Mentze, director for alumni engagement at smentze@ucdavis.edu.

Thank you for your partnership and all you do to optimize health and health care equity for all!



A unique bond

would meet somebody and make that connection."

Nguyen was taken aback when she learned her patient was married to Walter Rohrer, who the scholarship was named after.

"When I realized who Ms. Smoley was while I was on her care team, it was a beautiful realization that my education had come full circle," Nguyen said. "I am so appreciative for Ms. Smoley and her husband for investing in my future, and I hope the care I provided was a small way for me to say thank you."

The patient and student met when Smoley was hospitalized in early March

School of Medicine student Pauline Nguyen learned one of her patients was the philanthropist who funded her scholarship.

The patient was a retired nurse who went on to become California's Secretary of Health and Welfare, and, later, a philanthropist.

The medical student who spent meaningful time at her bedside was the daughter of Vietnamese refugees who struggled to pay for her studies.

And as they got to know each other during the patient's time earlier this year at UC Davis Medical Center, they came to realize they shared an incredible bond: The student, Pauline Nguyen, was the recipient of a scholarship started by the patient and her late husband.

"I helped raise money for her education, and now she was taking care of me as a patient," said Sandy Smoley. "I just thought it was so unique that you for a bacterial infection; she was released days later. But during her stay, Smoley noticed that Nguyen, in her final year of medical school, kept returning to the room to chat about their lives.

They had a lot to talk about. Smoley graduated from the University of Iowa's nursing school in 1959 and moved to California two years later, where she got involved in local politics, first by serving as a Sacramento County Supervisor for 20 years. She was appointed California's health secretary by Gov. Pete Wilson. Her husband, Walt Rohrer, was a well-known local architect and founding chairman of the Leadership Council of UC Davis Health, a philanthropic organization. Nguyen, born in Orange County, was an aspiring primary care doctor. Her father wanted to be a physician after high school in Vietnam, but instead got sent to a re-education camp in 1975 when Saigon fell to the communist government. During Smoley's hospitalization, Nguyen was in the home stretch of her threeyear-medical school program, known as Accelerated Competency-based Education in Primary Care, or ACE-PC.

In one of their conversations, Smoley told Nguyen about her philanthropic work, how she and her husband helped found a scholarship to benefit several UC Davis medical students each year, funded by a \$1 million endowment. The scholarship took on her husband's name after he died in 2008.

"Oh my gosh, I got that scholarship!" Smoley remembers Nguyen saying. "She was so taken by that, she kept coming back in and saying, 'I need to hold your hand, I just want to thank you again.' "

The \$6,750 grant "allowed me to focus on my career goals of providing primary care for underserved communities," said Nguyen, who graduated in May and is now a UCLA family medicine resident. "My interaction with Ms. Smoley also reminded me to pay it forward in the future."



Hospital patient Sandy Smoley, a philanthropist, helped start a scholarship long ago that had benefitted her care team member, medical student Pauline Nguyen.



Success through resiliency

Edgar Velázquez navigated daunting obstacles before enrolling at UC Davis School of Medicine

His story begins in Mexico, where a ruined economy forced his parents to move to the U.S. As a pre-teen, he crossed the border in a heart-pounding effort to reunite with them in San Francisco, where nine family members lived in a tiny apartment. He started high school unable to speak English. In college, he financed his undergraduate education by washing dishes late at night in restaurants.

Now in his second year at the UC Davis School of Medicine, Edgar Velázquez is determined to become a primary care physician.

But despite making it this far, he faces one more obstacle, unrelated to the rigors of school: Velázquez is among at least 650,000 young undocumented immigrants known as DACA recipients who have temporary protected legal status until officials in Washington, D.C., decide the fate of the politically controversial program.

Velázquez, who describes himself as being "in a constant struggle for survival," is scared and anxious about his future if the federal government eliminates the Deferred Action for Childhood Arrivals program.

"I have to worry about whether I'll be able to continue medical school moving forward," he said. "I worry about my future in residency; if DACA gets taken away, I cannot become a doctor, and I cannot fulfill my dream of going back to my community and serving the underserved."

Whenever he's anxious about DACA, his place of comfort is studying.

Before college, Velázquez excelled in math ("because I didn't need English for

it") but also was drawn to science. In a UCSF summer research program, he noticed that scientists hailed from all over the world, "and their accents are thicker than mine!" Lying on the floor of the apartment each night, which had no beds, he began to envision himself as one.

Yet, a question kept nagging him: How can science help people in his underserved neighborhood, where the homeless slept outside his building?

Velázquez applied to 20 universities, including Ivy League schools he didn't realize were prestigious, and gained acceptance to nearly all. Being undocumented, however, limited access to grants, scholarships or jobs.

So he became a dishwasher, like his father.

Velázquez also enrolled at San Francisco State, and in a scholarship program met UCSF professor Sharad Jain, the primary care residency director at Zuckerberg San Francisco General Hospital. Jain became a mentor and invited Velázquez to shadow him there.

The young man also worked up to 18 hours a day in kitchens to pay for his studies, while somehow finding time to volunteer as an interpreter in community clinics. Then in 2012 the Obama Administration created DACA, which provided Velázquez with a work permit, allowing him to apply for work more meaningful for his career.

At UC Davis he's now a member of a highly competitive, three-year compressed medical school program known as ACE-PC, short for Accelerated Competency-based Education in Primary Care. Jain, now associate dean for students at UC Davis School of Medicine, calls Velázquez "a true example" of the type of student the school values.

"Edgar inspires me because, to me, he has entered the profession for all of the right reasons: He is committed to service, to health equity, and to improving the health of his community," Jain said. "He has shown resilience and commitment to this journey."

Determination and heart power a young nurse

Lourdes Cueva surmourded challenge after challenge to become an ICU nurse

Lourdes Cueva is one of 12 master's degree graduates from the Betty Irene Moore School of Nursing Class of 2019 now working at the UC Davis Medical Center.

Make a list of career obstacles. There's a good chance Lourdes Cueva, M.S.N., R.N., has faced many of them.

She began working in high school to support her immigrant family as she tried to find a path into health care. Her father was laid off when she was a high school senior, so she added more work hours as she studied. Then there was the moment as a Sacramento City College student when she learned she did not have the requirements to enter the nursing program. "I said to myself, 'OK, next route. Keep going forward. Just don't give up. Don't give up.' "

"I was working full time," Cueva said. "I come from a very low-income family. My father had a hard time getting a job. I said to myself, 'OK, next route. Keep going forward. Just don't give up. Don't give up.'"
This spring, Cueva, Betty Irene Moore School of Nursing 2019 graduate, began working full-time at the UC Davis Medical Center, starting with rotations in three intensive care units as part of her months' long orientation.

She is a monument to resilience and her story demonstrates the value of pathway programs. She offers hope for others who face obstacles, and applies her understanding of overcoming challenges to delivering compassionate care at the bedside.

"To be a good nurse, you have to be able to connect with people," said Cueva, 26. "I've seen so many people here who do that so naturally. When you're a nurse, you're at your patient's bedside. You get to make a difference when people are at their most vulnerable."

A heart for nursing

If Cueva's road was filled with obstacles, her compass was locked by high school. She discovered the possibility of a health care career when she was at Fern Bacon Middle School and heard a presentation from teachers at Arthur A. Benjamin Health Professions High School, a small public Sacramento school that is a pathway program toward medical professions.

"I knew right away," Cueva said. "This is the school I want to go to. This is what I want to do."

Her teachers there saw the kind of person who belongs in health care.

"She always had the beautiful blend of compassion and intelligence," said Deborah Meltvedt, a medical science teacher. "She faced a lot of hardships but managed to balance work and school, and she still found time to do volunteer work to give back to her community."

Meanwhile, Cueva's parents, Juan and Rosa, struggled to find something more than seasonal work. The high "Even though I was born here and spoke English, I always felt one step behind because we were low-income. I had to try a little bit harder."

school found her a paid summer internship at La Familia Counseling Center in Sacramento, and when that ended, Cueva began working regular jobs at age 16. By the time she entered the Allied Health program at Sacramento City College, she was working full time. That was also where she decided nursing would be her path in health care.

"I've always wanted to help people, and when I meet someone, I'm always the one who just starts talking," she said. "Nursing is about caring and connecting. It just seemed so right for me."

But she didn't have the requirements at Sacramento City College, so her steps forward took her to a degree in health science at Sacramento State University. While she was there, she still worked full time.

"I got financial aid for some of registration and school, but I worked to help my family pay bills," Cueva said.

Entering Betty Irene Moore School of Nursing

She finally stopped working when she entered the Betty Irene Moore School of Nursing in July 2018. The timing wasn't perfect, however. Cueva and her partner had a seven-week-old daughter named Valeria.

"Oh man, it was a big transition to the School of Nursing. And Valeria was a big transition, too," Cueva said. "Everyone there is so smart. It was really hard. The thing was, because it was hard, I tried even harder. I did very well academically because I tried so hard. I guess I had that imposter syndrome where you say, 'Oh, I don't belong here.' " All her work made Cueva very

resolute about time management. "I said no to everything but school and baby," she said. "That's what got me through."

She graduated with honors and as a member of the Sigma Theta Tau International Honor Society of Nursing. She is also in the UC Davis nurse residency program, and has more classes ahead of her.

Her next milestone

For Juan and Rosa Cueva, the achievements of their daughter did seem a possibility. But they watched her carve paths forward, refuse to give up, and become someone wholly unexpected.

"My parents wanted something more for me than they had. They were always at a disadvantage and couldn't get jobs because they were immigrants," she said. "Even though I was born here and spoke English, I always felt one step behind because we were low-income. I had to try a little bit harder. It makes me happy that they're proud of me and that they love who I've become and the path I've chosen."

Cueva looks toward the future with confidence and optimism as her path unfolds.

"The School of Nursing has a doctorate program I want to look at, but I want to stay bedside, too. And I want to be a role model for my daughter so she doesn't have to take those extra steps," Cueva said. "There are so many more things I want to do." Alumni, students and friends

The School of Medicine's virtual commencement ceremony has been viewed more than 13,000 times worldwide.

Virtual sendoffs mark big accomplishments and new adventures for UC Davis Health students

POMP UNDER UNUSUAL CIRCUMSTANCES

"Medical school graduation 2020: Some pomp under unusual circumstances" is how the Association of American Medical Colleges described the virtual commencement ceremonies in May that helped launch over 20,000 new medical school graduates nationwide.

At UC Davis Health, ceremonies unlike any other in our history allowed medical and nursing students to participate in virtual celebrations from their homes, surrounded by friends and family.

School of Medicine Commencement

In May, the School of Medicine conferred 114 Doctor of Medicine degrees to its first class to graduate during a global pandemic. Thousands watched live on Zoom and Facebook Live, and social media ultimately carried commencement-related content to nearly 90,000 around the world.

"There is no more important time to be entering medicine," Dean Allison Brashear told the students. "We know you will make a difference, some at the bedside, some at the lab, and some will bridge the two."

Keynote speaker Jann Murray-García, M.D., M.P.H., health sciences clinical professor at the School of Nursing, implored graduates to stay connected and never lose sight of the vast health inequities that permeate society. And student speaker Tyler Carcamo, a soon-to-be surgery resident at UC Davis, expressed gratitude for the village of friends and family who raised him in Belize and Bakersfield.

The virtual ceremony also gave a quick glimpse into one of the medical school's greatest strengths – diversity – as it opened a door into homes where students were hooded by generations of family members, often speaking in different languages. A recorded compilation video showed nearly 90 graduates reciting the physician's oath in English and 12 other languages.

"We used our leadership skills to not only adapt to our circumstance, but to step up to the challenge."

School of Nursing Virtual Celebration

In June, the School of Nursing lauded the accomplishments of 151 master's-degree students and eight doctoral candidates during its own virtual celebration. The event included recorded comments from UC Davis and UC Davis Health leaders, as well as directors of the school's five graduate-degree programs and student-nominated speakers.

"The fact that (our students) have remained focused and on track during the coronavirus pandemic is a great testimony to the dedicated practitioners, clinicians, researchers and leaders they have become," School of Nursing Dean Stephen Cavanagh told the virtual audience.

Master's-degree leadership program grad Kristina Rodriguez said: "I know that in the past few weeks, many things have changed. We used our leadership skills to not only adapt to our circumstance, but to step up to the challenge."

The Nursing Science and Health-Care Leadership Graduate Degree Programs include master's degrees in leadership, family nurse practitioner, physician assistant studies and entry-level nursing, as well as a doctoral program.

COVID-19 had threatened to derail health professions students from graduating on time, when health systems that offer clinical experiences told them to steer clear until the worst had passed. But Cavanagh and the School of Nursing's education team reached across campus to the School of Medicine, and within a few weeks future advanced practice providers – physician assistants (P.A.) and family nurse practitioners (FNP) on track to graduate this summer – reported for rotations at UC Davis Health clinics and departments.

School of Medicine Match Day 2020

The School of Medicine also hosted its first-ever virtual Match Day in March, uniting hundreds of students and supporters on Facebook Live to celebrate where soon-to-be-doctors would be headed for residency.

The traditional "envelopes" came in the form of individual emails sent to 115 students on their smartphones, tablets and computers. As they were opened en masse at 9 a.m., a seemingly endless stream of comments scrolled onto screens for everyone to see, as students and supporters celebrated where they were watching from.

"Garrett John: UC Davis – Internal Med / Psychiatry."... "Brian Jeff: Orthopedic Surgery at the University of Washington! GO HUSKIES!" followed by emoji of three dogs... "Angie Marrufo: UC Davis Surgery."... "Replying to Tynisha: Angie Marrufo YES YES YES YES!!!!!"

Students also received congratulatory messages from Brashear, Vice Dean for Medical Education Mark Servis and faculty.

As usual, a large number – 77% – will stay in California for residency. A total of 19% will be with UC Davis Health. And 59% of all residents matched into primary care fields. The top six specialties included, family medicine; internal medicine; emergency medicine; pediatrics; obstetrics/gynecology; and psychiatry.

Archived videos are available on our Facebook channels.

Snapshots:

SEEN AND HEARD DURING THE SCHOOL OF MEDICINE VIRTUAL COMMENCEMENT:

- Mayra Carrillo, with a small child on screen, thanked her parents, husband, "and everyone else," then blew a kiss into the camera.
- Ernestine Chaco, from her home in New Mexico, appeared in front of a background completely covered with photos of people important in her life.
- Estelle Dolan's mom and wife were so excited during the hooding that they accidentally bumped the cap off Dolan's head.
- Colton Soudan, with a U.S. flag covering a plain white wall, thanked his hometown, Oroville, about 90 minutes north of Sacramento.
- Someone on Walid Sherif's microphone was heard shouting, "My brother's a doctor, wooooo!"
- Speaking in Spanish, Angelica Juarez saluted her "familia en Guatemala.
- Young II Kang greeted his parents in the Philippines, where it was 3 a.m.

By the numbers:

School of Medicine virtual commencement ceremony video:

34,000+ People reached

13,000+ views

2,600+ people engaged in comments

The former UC Davis surgery department chair was a founder of modern trauma care, and a medical education innovator.

Remembering F. William Blaisdell

he UC Davis community is remembering **F. William Blaisdell**, who led the UC Davis Department of Surgery in its formative years and is widely considered the founder of trauma care as a surgical specialty. Blaisdell died of natural causes in April at age 92.

At UC Davis, Blaisdell chaired the Department of Surgery from 1978 through 1995, and established the comprehensive trauma center that is still the region's only level I trauma center. He was board certified in general, thoracic, vascular and critical care surgery.

Under his direction, his UC Davis department became nationally recognized for innovative treatment approaches and research productivity. He launched a unique surgical education program to train military and civilian surgical residents side-by-side. He advanced principles of post-surgical treatment that revolutionized patient care nationwide. He also diversified the field of surgery by welcoming, training and advancing women. Because of Blaisdell's dedication to medical education, the health sciences library on UC Davis' Sacramento campus is named in his honor as the F. William Blaisdell, M.D., Medical Library. His extensive personal papers and research are available in the library's archives and special collections, and his personal collection on Civil War medicine is available by appointment.

"We are deeply grateful for Dr. Blaisdell's vision and lasting legacy," said Allison Brashear, dean of the UC Davis School of Medicine. "His passion for training world-class doctors and finding new, innovative ways to save and improve patients' lives is central to our ongoing mission."

A career dedicated to world-class patient care and physician training

Blaisdell was born in 1927 in Santa Barbara and raised in Watsonville, Calif. He earned bachelor's and medical degrees from Stanford University, where his grandfather, father and an uncle earned medical degrees as well.

His training included two years of service as a medical officer in the Korean War and a fellowship in cardiovascular surgery at Baylor University, where he worked with world-renowned heart surgeon Michael DeBakey. These experiences gave him expertise in bleeding control that is key in trauma care, and inspired him to advance trauma as a unique surgical specialty.

He did so to fill the growing need to treat injuries due to accidents, gunshots, riots and substance use that became more common in the 1960s. He established the nation's first dedicated, 24/7 trauma program at San Francisco General Hospital before doing the same at UC Davis Medical Center.



Blaisdell set new standards in surgery and critical care medicine that improved wound and fracture treatment and reduced post-surgical infection, lung failure and DVT risk. He also invented new approaches for cardiac compression, liver and kidney trauma, and bypass procedures.

Leadership throughout his field

Blaisdell's leadership extended throughout his field and includes serving as president of the Society for Vascular Surgery, American Association for the Surgery of Trauma, Michael E. DeBakey International Surgical Society and Uniformed Services Medical School Surgical Society. He published hundreds of research papers, books and book chapters. He has been recognized with several awards, including distinguished service awards from the American College of Surgeons and State of California, and a Distinguished Alumni Award from Stanford University.

"Our field has lost one of its leading spirits and minds who was known as

"We are deeply grateful for Dr. Blaisdell's vision and lasting legacy. His passion for training world-class doctors and finding new, innovative ways to save and improve patients' lives is central to our ongoing mission."

Allison Brashear, dean of the UC Davis School of Medicine

much for his warmth as he was for his expertise," said Diana Farmer, current chair of the surgery department at UC Davis. "One of the reasons I wanted to lead the surgical team at UC Davis was because of the program Dr. Blaisdell started here, the incredible doctors he trained and inspired, and his focus on putting patients before all else."

In addition to his time at UC Davis, Blaisdell held surgery leadership positions at two Northern California VA hospitals and San Francisco General Hospital.

Blaisdell is preceded in death by his wife, Marilyn, and survived by their six children. Donations can be made in Blaisdell's honor to a medical student scholarship fund named for him. The Dr. F. William Blaisdell endowed scholarship fund was established by UC Davis alumni to honor Blaisdell and his impact on surgical education and training for an entire generation of physicians.

UC Davis School of Medicine Alumni Updates

1970s

1972

David M. Freeto

I have finally retired, ending my practice in Napa last December. My son Brian continues to practice orthopedics here in Napa, my son Michael just moved his ER practice to Houston, and my daughter Jill works as a hospitalist in Santa Rosa. My seven grandchildren are all healthy but too young to attend UCD.

Geoffrey A. Smith

This is the first year in 25 years that I am not doing volunteer medical work in



Southeast Asia... also the first in 20 years that I am not teaching 4th graders for the GIA Junior gemologist program. Needless to say I am not pleased

with the COVID-19 virus and hope things get back to normal by 2021... and back to seeing kids and grandkids in person not FaceTime... I continue (masked) consulting three half-days each week.

1973

Paul Wilson Cosby

Emergency Medicine Lifetime Fellow. Worked my entire career in over 40 different permanent and locum tenens locations throughout Pennsylvania, Ohio, and upstate New York. Now retired in Honesdale, Pennsylvania. Planning to relocate to live aboard a boat at a marina in Key West.

1977 William B. Jones II



Finally retired completely in mid-December 2019. I'd like to say that I had a premonition of COVID-19, but it was just the feeling that it was time to hang it up. Nancy and I took a nice long cruise last year and at the end spent two weeks on the South Island of New Zealand. Absolutely beautiful country.

Anthony G. Terrace

AKA: George Johnson. Well, I worked totally in Emergency Medicine for 28 years in the Long Beach, CA area, acquiring board certification in



Emergentology. Upon retirement in 2006, I have bought and sold several residential properties in SE Florida, currently living lakeside in a gated 55+ community in Palm Beach County. I have traveled for decades to six continents and learned five additional languages. For the last four years prior to COVID-19, I volunteer at a local assisted living facility, and am planning upon returning my services there whenever declared safe to enter again. I only have glaucoma, under control, and people unanimously tell me I still look in my upper forties; no brag! I am truly blessed.

1978

Praveen Prasad

Greetings to everyone. Well, I finally hit 65 and suddenly have to face decisions on how long to work. Still healthy,



practicing neurosurgery full time at Dignity Health in Sacramento, Chief of Neurosurgery, Director at Dignity

Neurosciences Institute. Daughter finished MBA at Columbia, now at BCG consulting, one son already doing management consulting in San Francisco, and the other still exploring. No grandkids yet, dang it. The recent COVID-19 slow-down has made me realize NOT working 60 hours a week feels just fine! Friends and colleagues all agree: there will be a wave of retirements soon. So, here is to the next phase of life! Look forward to hearing from old friends.

1979

Linda Copeland

My husband and I have followed the California stay-at-home order while tending to our garden and three dogs.



Fortunately, I'm able to do my independent contracting jobs from home by phone. I volunteer with the Sacramento Medical Reserve Corps at the Sacramento Public Health Department and completed online training from Johns Hopkins for contact tracing. I and a

colleague submitted our manuscript to OSF Preprints: Spearow, J. L., Ph.D., & Copeland, L., M.D. (2020, May 16). Review: Improving Therapeutics for COVID-19 with Glutathione-boosting Treatments that Improve Immune Responses and Reduce the Severity of Viral Infections. https://doi.org/10.31219/osf.io/y7wc2. Additionally, I work with HealO Medical LLC, a company founded by longtime friend, Dr. Ed Lin, He is a Yale-trained anesthesiologist with award-winning technologies that include the high efficacy oxygenator SentriO system currently under acquisition review by U.S. Special Operations Command (USSOCOM) that will improve oxygenation in COVID-19 infection.

James Macon

I am close to the end of a satisfying career as a pediatrician in the state of Washington, where I have been practicing since 1982. And I am also a published author of a fantasy series with a touch of mystery. The first book in the series is titled *Purveyors and Acquirers*. Like all of you, the COVID-19 pandemic is impacting life. Fortunately, it has not taken the life of anyone close to me. I want everyone to stay safe and healthy. I am sure that you are aware of the importance of taking care of yourself. Take care.

1980s

1981 D. Malcolm Shaner

See Angeli Agatep – 1986

1983 Randall D. Reed

We're doing well after losing our Paradise home to the fire 11/08/18, and have relocated to a much smaller home in Sonoma. We love the town of Sonoma and have found the people quite welcoming and understanding. Being closer to our son Grant and daughter-in-law Anna has been wonderful and they are pregnant with our first grandchild, nicknamed "the Bean" for her lovely look on the first ultrasound. Her arrival in late July is anxiously awaited by eager grandparents on both sides. COVID-19 has been a terrible societal strain made worse by the [president - Ed.], but this country will survive both. Be well!

1986 Linda Davis-Reed See Randall Reed – 1983

Angeli Agatep

Hi everyone in the classes of 1981 and 1986!!! Malcolm and I are doing well in our sheltered, almost monastic, actively disinfecting life! Kids are in grad school and if we're lucky, graduating by 2023. We expect that the Zoom experience will not come close to our UCD graduation excitement. Malcolm was given a one-day learning experience of how to function as an internal medicine hospitalist and ER physician for surge planning. Eight hours of dogging an internist and the neurologist struts around proclaiming he's good-to-go. As a retired hospitalist, I find this irritating! Luckily, so far he has not been called to action :) Angeli and Malcolm ... Love to all and stay safe!



Drs. Malcolm Shaner and Angeli Agatep

1987

Dawn Motyka

Wow, what a strange, unexpected turn of events we find ourselves in. Reminds me of HIV in the early 1980s at medical school. Here's my adventure story: I was on vacation in Morocco and left two days before the king shut down the borders, trapping many U.S. citizens there. Spent the night at an airport hotel in Madrid on March 12 but alas I'm still IgM negative. Seeing about half my patients via videoconference and the rest in a breezy covered patio with masking. Ventilation is KEY and it's not discussed enough. I continue my podcast – AskDrDawn (askdrdawn.com) and was recently in the news in Argentina https://www.revistameta.com.ar/covid-19-dra-dawnmotyka-hay-que-limitar-las-noticias-abreves-aportes-diarios-de-una-fuenteconfiable. I have a concierge Functional Medicine Family Practice in Santa Cruz incorporating acupuncture and have a "lifestyle first, pharmaceuticals second" approach to chronic disease. Check out my website for a science-based guide to Neutriceuticals and COVID-19 and a YouTube video on this.

Class Notes as of summer 2020

Alumni, students and friends

1990s

1990

Barbara Klencke

After more than 25 years in San Francisco, Doug and I moved to Lake Tahoe (Incline Village) in 2017 as I began to work remotely as head of R&D for a biotech company. While there is much to be missed in SF, Tahoe is such a great place to recharge. I love the physical beauty and being able to regularly hike, ski, snowshoe, bike, and, especially, swim. That said, work has always been (and remains) a big part of my life. I was an oncologist at UCSF for many years and have more recently specialized in oncology drug development in various biotech companies. Despite the long hours and the emotionally heart wrenching aspects of oncology, I absolutely love my chosen career, and have always realized how privileged I am to get to do what I do.

1996 Jason Giles



Hello to my classmates, co-workers, and teachers from UCD and the Medical Center. I hope you are all well and healthy. I'm busy with new

behavioral health tech startup aimed at substance abuse and other habits. Fortunately, there's a great team of professionals. Together we will change how addiction is perceived and treated. You can find us at vhab.com.

My 24-year update: after anesthesia residency, I also earned boards in addiction medicine. I've been in private practice since 2005, helping people get sober, like I did twenty years ago. I wrote a book and it is due for release this summer. I live in Malibu with Rebecca (M.D., '99). Our son is pursuing undergraduate studies in economics and history (sophomore). His sister is working toward a career in classical ballet (HS senior). Sad news about Dr. Blaisdell. May he rest in peace. Warm regards and best wishes.

1999 Rebecca Giles

See Jason Giles – 1996

2000s

2006 Radha Raman



I did a rotation at a grassroots makeshift clinic in New Orleans months after Katrina, during my last year of medical school. The devastation and lack of care in the Deep South reminded me of India, and is in unparalleled to anything I've seen in the U.S. There was no choice, I was going to be a PCP in Louisiana. After residency here, I worked in a Medicaid clinic for years. After trying to improve conditions there, butting heads with admin, I was fired. If I wanted to give the care every human deserves, I was going to have to do it myself. I opened up my own family practice clinic. It is successful, and I am able to treat COVID-19 patients the best way I can.

2007 Mihal Emberton

I recently published the accumulation of 20 years of study on learning and leadership with my manuscript, "Learning in Humans versus Hierarchies." https:// www.thepermanentejournal.org/ issues/2020/winter/7351comm.html

This work came about as I began to recognize that the patterns of engagement have been described by thousands of years of human observations in disciplines such as education, social science, psychology, medicine, political science, business, art, literature and music. Albert Einstein noted: "A theory is the more impressive the greater the simplicity of its premises, the more different kinds of things it relates, and the more extended its area of applicability," which describes my framework as it applies to all hierarchies such as parent-child, teacher-student, physicianpatient, supervisor-subordinate, legislator-constituent, and it is not bounded by culture, discipline, or time. I am also excited to be collaborating with organizations and academic institutions to implement my framework to drive innovation and learning, and to obviate the global problem of burnout and unconscious bias.

RESIDENCY/ FELLOWSHIP ALUMNI

1986

Ross Leighton

Fellowship – Orthopedics I remain in Canada and doing much like everyone else — nothing except saving the world by staying home!! We are of course taking calls and fixing fractures as people still fall and trauma continues to happen despite all the pleas to stay at home. It is always nice to hear from UC Davis and remember my fellowship year there. One of the best years of my life??? Great people, wonderful mentors and a fantastic experience. I hope this finds everyone making it through this very unreal COVID time of our lives. Warm regards, Ross

1987

Praveen Prasad Residency – Neurosurgery See M.D. 1978

Betty Irene Moore School of Nursing Alumni Updates

Pamela Salgado, P.A.-C. '10, B.S. '06

I've worked as a physician assistant for 10 years in pediatric otolaryngology, head and neck surgery at Rady Children's Hospital in San Diego. The pandemic brought me a temporary furlough and an amazing opportunity to discover my second calling of becoming a chaplain. I saw visiting restrictions during COVID-19 lead to more hospitalized patients feeling alone and afraid. As a chaplain, I hope to offer spiritual comfort to patients during their most difficult times. I begin my master's degree program in pastoral studies at Loyola Marymount University this fall, while returning part-time to peds ENT.

My husband Moses and I celebrated our 10-year wedding anniversary in May. He is a 2011 UC Davis otolaryngology, head and neck surgery residency graduate and a 2005 UC Davis School of Medicine alumnus. In our free time, we enjoy raising our three young daughters, sailing, scuba diving, Brazilian Jiu Jitsu, golf and supporting our colleagues in the ICU. We are proud UC Davis alumni! Feel free to reach out to us any time!

Daniel Aquino, M.S.-L. '13, C.S.S.G.B., R.N.-B.C.

I recently accepted a professional development specialist position at UC Davis Health's Center for Professional Practice of Nursing. It seems like I hit the ground running the moment I graduated from the Betty Irene Moore School of Nursing back in 2013. Shortly after graduating, I taught clinical nursing education at California State University, Sacramento and became a new graduate nurse residency program facilitator at UC Davis

Health. My graduate degree definitely led to more opportunities I didn't anticipate!

Perry M. Gee, Ph.D. '14, R.N. See page 28

Rebecca Lash, Ph.D. '15, R.N.

I recently accepted a tenure-track assistant professor position with the Indiana University Fort Wayne School of Nursing.

Sara Marchessault, M.S. '15, F.N.P., P.A.-C.

COVID-19 brought a challenging landscape for everyone to navigate, with ever-changing perspectives, politics and rules. Working in Modoc County, Calif. as a health care professional in a primary care setting, my greatest concerns are adverse effects of isolation on our older adult population, including physical and behavioral health changes. Three months into the stay-at-home order, we still have no recorded positive cases in our county, but we know it's only a matter of time. As the pandemic progresses and we continue to measure the fallout, I believe it is our professional duty to advocate for the health of our patients and become even more proactive, encouraging them to be healthy while reassuring them of what is safe. As I wear my mask today and continue to see patients, I know we all continue to watch out for our patients in any way we can. I applaud the efforts of all my colleagues in health care as we continue to take care of our people.

Jason E. Nesler, M.H.S. '18, P.A.-C.

As a student in 2018, I completed an emergency medicine rotation in Lake County near the Mendocino Complex Fire. Working and learning in this environment led me to pursue a career in urgent care and fulfill my passion as a volunteer first-responder.

Yet, I can't say that my first couple of years as a PA were what I expected. I didn't anticipate a pandemic, record unemployment and lost health insurance for millions. I didn't anticipate the civil rights movement that would take roots in my city (Minneapolis) and expand into massive protests across the country.

Quarantines, telemedicine, riot injuries, national mental health decline, public confusion, medical misinformation from our country's leaders, and daily changes in guidelines were a lot to chew on as a new grad. It quickly became overwhelming.

I found myself naturally gravitating back towards several of the Betty Irene Moore School of Nursing's values. Community connection: In a chaotic world, what problems can I alleviate in my immediate community? Collaboration and diversity: How can I bring a wide range of people and experience from my community to build strong and healthy neighborhoods? These ideas strengthened my resolve and helped me serve as a more focused provider in unsettling times.

Ultimately, I decided to volunteer providing first-aid to protesters during the Black Lives Matter movement here. These experiences have been incredibly rewarding as a PA and a citizen.



Iason E. Nesler

Melissa Johnson-Camacho, M.S.-L. '19, R.N.

When I go to meetings with management, as a union leader, I'm able to understand how systems change work. It's been so helpful!

In memoriam

SIMON COHN, M.D. '75 passed away on November 21, 2019 from glioblastoma multiforme. Cohn was an emergency physician and national leader in the fields of electronic health records, clinical data/health information and payment policy. In the 1980s he wrote Chartwriter, an early program designed to mitigate the disaster that is a doctor's handwriting (his own included).

At Kaiser, he continued working in medical informatics, rising to become the Associate Executive Medical Director for Health Information and Payment Policy at Kaiser Permanente. He worked on Kaiser's first clinical information systems strategy, helped implement HIPAA and national medical records standards, and served as chair of the National Committee on Vital and Health Statistics from 2005–2008.

He received a great deal of recognition for this work, becoming a Fellow of the American College of Emergency Medicine in 1988; winning a Leadership in Technology Award and the President's Award by AMIA; and being named a Distinguished Alumnus of the UC Davis School of Medicine in 2011.

After medical school, he spent two years working with a branch of the U.S. public health service providing care in a coal mining region of West Virginia.

He is survived by Janet, their two children, Jonathan (Jamie Baron) and Rebecca, grandchildren, Kai and Audrey, his sister, Sara, and many other beloved family, friends, and colleagues.

Excerpted from Legacy.com/The San Francisco Chronicle, Nov. 2019

DAVID HAGER, M.D. '94 died on September 7, 2019 after a six-year battle with pancreatic cancer.

JAYUM E. STARKS, M.D. '80 passed away on August 24, 2020 in San Francisco, where he had devoted his professional life as a staff physician to serving underserved minority populations. He served for many years as medical director of Southeast Health Center in the Bayview-Hunter's Point neighborhoods. On Friday nights he used to rent Castle Lanes Bowling Alley on Geneva Street for the entire clinical staff.

Later he worked at Laguna Honda Hospital, and at West Berkeley Family Practice. For decades Jay was also an assistant clinical professor at UCSF's Department of Family and Community Medicine, supervising and precepting residents, nurse practitioners, and medical students. He was an old-time physician who made house calls, was always professional and is loved and respected by patients and colleagues alike. He loved being a doctor, doing important work that fully engaged his brilliant mind and desire to be of service to others.

Beginning in 2006, and progressing until his death, Jay dealt with the ravages of oculopharyngeal muscular dystrophy, a genetic disorder which ultimately robbed him of his ability to talk, walk and eat. Jay is predeceased by his parents, Elmanus and Sara Starks of Seaside. He is survived by his spouse Guia; sons Eugene and Winchell, and siblings Cynthia, Steven and Kevin. GEORGE H. SUTHERLAND, M.D., FAAOS, '77, died at San Ramon Regional Medical Center in June 2020 after a sudden and unexpected illness. He is survived by his wife of 40 years, Anne, their son McGarrett, George's daughter Mandy, brothers Kenneth and John, and the other usual suspects.

George was deployed to Vietnam in 1969 and served as an artillery captain, where he was on call 24/7 for almost 12 months and received numerous commendations, including two Bronze Stars. His exposure to M.A.S.H. units inspired him to become a physician, and he was able to complete his schooling thanks to the G.I. Bill.

Sutherland received honors in internal medicine at UC Davis, apprenticed at the VA Hospital in Martinez, and was accepted into an orthopaedics residency at UC Davis. There he met Anne, who was an anesthesiology resident. He received the resident teaching award while at UC Davis and ran the spine service for a year. George and Anne then practiced at John Muir Medical Center, where George was appointed orthopaedics chair.

Sutherland himself suffered nerve damage during back surgery, resulting in 25 years of pain and ending his career. Despite this tragedy, he began writing two books, took up woodworking, and was able to travel with Anne 4 months before his death.

Excerpted from a submitted newspaper obituary.

Excerpted from The San Francisco Chronicle

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The Year of the Nurse

A nurse tends to a COVID-19 patient in UC Davis Medical Center's Medical Intensive Care Unit during the early days of the novel coronavirus pandemic. In honor of the 200^{th} birthday of Florence Nightingale, the World Health Organization designated 2020 the Year of the Nurse. And as part of the worldwide observance, UC Davis Health created a Year of the Nurse blog with short, StoryCorps-style audio interviews delving into the work life and accomplishments of nurses. To listen, visit health.ucdavis.edu/nurse-stories.

