



EMERGENCY MEDICINE

ANNUAL NEWSLETTER 2020



THE YEAR OF COVID



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LETTER FROM THE CHAIR

UCSD DEM Family, Staff, Alumni, and Friends –

This year’s annual newsletter reflects back on a truly unprecedented year that transformed the work we do and uprooted many of our lives in ways unimaginable just one year ago. It is hard to believe that it was only in early February when UC San Diego Health began caring for patients who had been transported by our government out of China and quarantined at Miramar Marine Corps Air station infected with the novel SARS-CoV-2 strain. As this “once in a century” pandemic rapidly spread across the globe and throughout our communities, I was incredibly inspired by our physicians, fellows, residents, nurses and staff who risked their own health and safety every shift to provide care with compassion, grace, and selflessness.



Ted Chan, MD

And as the “essential” clinical work continued through patient surges and new advancements in COVID management, our other “essential” work in teaching and research evolved to meet the challenge. Our education leaders and program directors quickly pivoted to online and virtual teaching (as well as socially distanced small group learnings) as zoom became a ubiquitous part of the lives of our students, residents, fellows and faculty. UCSD and our EDs in Hillcrest, La Jolla, the VA, and El Centro (the latter becoming the national hotspot for the outbreak in the Summer) were amongst the earliest research sites for trials studying the role of steroids, convalescent plasma, and monoclonal antibodies to name a few, in confronting this scourge.

As the end of the year approached, and despite a third and possibly worst surge particularly in California, there appears to be renewed hope with the arrival of the vaccine. I am proud that our frontline staff – from housekeepers to faculty, clerical staff to residents, EMTs to nurses– all stepped forward in December to be vaccinated. Our staff have overcome all the challenges this year with compassion and humanity. And while we couldn’t celebrate the holidays physically together, we did share a few laughs, perhaps some tears, and a few good times via zoom “Jingle Mingles”.

This will no doubt be a year that none of us will ever forget and I am truly honored to be part of such a remarkable and inspiring team and family. Here’s to a brighter 2021 -

2020 JINGLE MINGLES





Rick Clark, MD
Vice-Chair, Academic Affairs

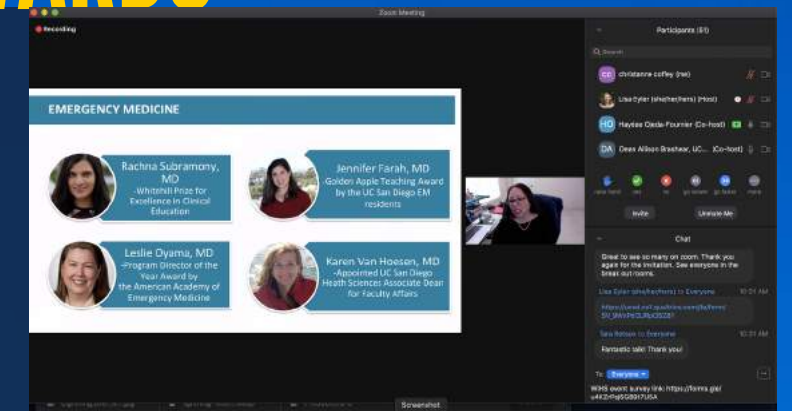
ACADEMIC AFFAIRS

The UCSD DEM has grown to include 60 full-time attending faculty with 29 academic clinical faculty, 7 clinician/scholars, and 2 research faculty. Each of our Divisions has excelled at teaching and scholarly work, and continue to be highly regarded by medical students and trainees for electives. We continue to expand our presence with teaching and leadership roles at the VA Medical Center and El Centro Regional Medical Center, where an increasing complement of residents rotate. Dr. Andrew Lafree, resident class of 2015, is now ED Medical Director at El Centro, and Dr. Jesse Guittard, resident class of 2019, Assistant ED Medical Director at the VA San Diego. The Department has been well represented in the UCSD School of Medicine leadership for some time with Dr. Kama Guluma Associate Dean for Admissions and Student Affairs, and the recent appointment of Dr. Karen Van Hoesen as Associate Dean for Faculty Affairs (see separate article). Our ongoing DEM Academic RVU program is distinguished within the institution for its innovative recognition of academic activity. Our faculty mentorship program continues to mature, and we are now developing a faculty wellness initiative to promote well-being of our members.

DEPARTMENT AWARDS

WOMEN IN HEALTH SCIENCES

Emergency Medicine faculty members Drs. Rachna Subramony, Jenny Farah, Leslie Oyama and Karen Van Hoesen among UC San Diego faculty recognized at the annual Women in Health Sciences ceremony.



JIM DUNFORD

Department of Emergency Medicine Emeritus Professor, Dr. Jim Dunford, has been awarded the UC San Diego Edward. A. Dickinson Award for outstanding contributions and service as an Emeritus faculty member.



MEET OUR NEW FACULTY

ACADEMIC

Dr. Noste completed her EM residency training at Carolinas Medical Center and followed up with EMS and Operational and Disaster Medicine Fellowships also at Carolinas. As a core faculty member at Carolinas Erin also worked with Team Rubicon USA, an NGO dedicated to providing disaster and humanitarian relief throughout the world. Upon arriving at UCSD 2 years ago, Erin joined our ED as well as EMS core faculty and transitioned into being our EMS fellowship Program Director 6 months ago. With her background and experience, Dr. Noste is poised to lead our EMS fellowship into the future.



Erin Noste

CLINICAL



Jessica Brice

- Medical School: University of Washington
- Residency: UC San Diego



Frannie Rudolf

- Medical School: Northwestern University
- Residency: UC San Diego
- Fellowship: Medical Education, UCSD

JORGE FERNANDEZ

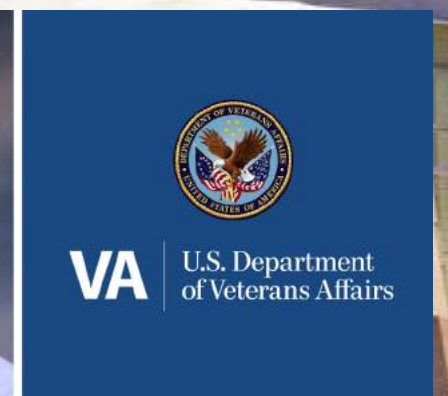
Congratulations to DEM Professor Dr. Jorge Fernandez who was elected to the 2020-21 Board of Directors for California American College of Emergency Physicians.

Additionally, Dr. Fernandez was promoted to Associate Professor in 2020.



JESSE GUITTARD

Dr. Jesse Guittard, UCSD DEM Faculty and alumni, appointed Associate Director of the Emergency Department at VA San Diego Medical Center.



CLINICAL CARE

Clinical Operations at the UCSD Department of Emergency Medicine continues to function at a high level despite the challenges of the Covid-19 Pandemic. Emergency medicine faced an unprecedented challenge in 2020 to both care for complex patients, sudden changes in patient volumes, and ensuring staff and patient safety as we learned more about the SARS-CoV-2 virus. Very early in the pandemic, we adopted a universal masking policy, ensured adequate PPE supplies and drafted policies that allowed us to maintain use of N-95 and other appropriate PPE. We also ensured a broad testing strategy and created a surge plan that allowed for cohorting patients, based on the likelihood of covid-19 disease and acuity. Part of this plan was rapidly implementing fully functional surge tents outside both of our EDs allowing lower-risk patients to remain outside and get rapid assessment and treatment. We also developed care protocols regarding airway management, safe use of aerosol-generating procedures, and initiating therapeutics. Our operations team led a county and statewide emergency medicine taskforce to ensure best practices were being shared and adopted. Lastly, we have engaged with and led a number of clinical trials as it pertains to advancements in care for Covid-19 patients. Through the numerous challenges of the pandemic, we had a zero hospital-based transmission rate for ED physicians and have continued all our collaborative efforts to improve the patient experience and maintain excellence in patient care.



*Allyson Kreshak, MD
Associate Medical Director*



*Vaishal Tolia, MD
Medical Director*



*Gary Vilke, MD
Vice-Chair, Clinical Operations*

VA SAN DIEGO



*Jesse Guittard, MD
Associate Director,
ED, VA San Diego*

Our department continues to expand its educational presence at the San Diego VA, with R2s beginning a month-long rotation in the 2020-21 academic year. This experience supplements resident training by offering an early introduction to department management and operations with dedicated triage and fast track shifts focusing on rapid assessment, patient flow and disposition. R1s continue to work in the main ED and currently have 1:1 pairing with an attending, which offers a unique on-shift mentoring experience early in the training program. These months are capped by dedicated ultrasound, simulation and procedural training modules that residents continue to rate as high-quality experiences. We look forward to building upon our strong relationship with the VA to enrich resident training and provide high-quality care to our veterans.

EL CENTRO

UCSD DEM physicians at El Centro Regional Medical Center (ECRMC) have played an integral role in Imperial County and its response to the COVID pandemic, where the region has had one of the highest per-capita COVID-19 infection rates in the country and placed us in the national spotlight, highlighted in the Washington Post, NY Times, CNN, Good Morning America, and CNBC. The ED has cared for nearly 3,000 COVID patients, and at one time our small rural hospital had 190 admitted COVID patients with 45 on ventilators with expanded ICU capacity from 8 to 60 beds. Our Emergency physicians were critical to this effort, assuming responsibility for all the hospital's out-of-ED cardiac arrests, intubations, and central lines. To accommodate the high volumes we set up three adjunct tents to the ED and a series of med-surg tents with a 50-bed capacity. In an unprecedented move, UCSD DEM physicians were asked to provide in house hospitalist coverage as well for these patients. At the county level, UCSD physicians have played central roles in helping to orchestrate the EMS response. This included an enormous number of out-of-county transfers and the organization of state and federal resources brought in to the county to assist. Our physicians helped to create and operate a fully functional field hospital at the local Imperial Valley College Throughout, our doctors have coordinated on a daily basis directly with state leadership on pandemic response and resource allocation. Enormous kudos go to our physicians whose tireless work throughout the summer and winter surges allowed us to continue to provide quality patient care through the worst of this crisis. Heading into 2021, we will continue our efforts to bring an end to this pandemic, and further our long-term goals of providing excellent patient care and a high quality rural medicine training environment for our residents and trainees.



*Andrew Lafree, MD
Associate Medical Director,
ED, El Centro Regional
Medical Center*



CNN reports about our El Centro site where COVID cases are still rising and our team members are working hard to serve the community in triple digit heat.



DEM faculty, Drs. Andrew Lafree and Chris Tomaszewski featured in a Fortune magazine commentary by Dr. Carolyn Barber regarding the COVID challenges and response in Imperial County, CA.

EDUCATION

At the risk of understating, the world has changed dramatically since our last newsletter in January of 2020 B.C. (before COVID). The pandemic has altered both our professional and personal lives. We now greet our friends, family, patients and colleagues in a more sanitized fashion:

- welcoming smiles are now hidden behind masks...
- eye contact now occurs through fogged spectacles...
- handshakes are replaced by elbow bumps...
- hugs are largely reserved for our immediate families

Despite these challenges, our Department remains resolute in our mission to care for our community and to educate our medical students, residents, and fellows. We have had to adjust all of our educational offerings to comply with the continually changing public health guidelines to keep everyone safe. Previously the word “zoom” was vocabulary reserved for communications with my boys as they played with their toy cars and planes but it is now a way of life with most meetings and educational conferences being held virtually for the past 10 months of the pandemic.

To limit travel and virus spread, medical schools nationally placed a moratorium on “away” rotations preventing our students, residents, and fellows from visiting and experiencing other programs. Fortunately, our Department’s numerous fellowship programs in Undersea and Hyperbaric Medicine, Pediatric EM, Medical Toxicology, Clinical Research, Ultrasound, EMS, Clinical Informatics, Wilderness Medicine, and Critical Care Medicine have provided a robust infrastructure for us to be able to pivot and offer educational experiences.

Students have been able to develop more meaningful relationships with faculty and residents, collaborating in many more community outreach, research, and educational projects with these students. On the other hand, we were challenged with conducting residency and fellowship recruitment for the first time without actually meeting in-person with applicants. Like the educational conferences, recruitment activities were also transitioned to into the virtual realm. One can only imagine the stress related to making a major life decision without ever visiting the educational site or meeting with the faculty. But we are emergency physicians, hardwired to make decisions when decisions need to be made. I tip my hat to our residency and fellowship program directors for yet another successful recruitment season despite the logistical challenges presented by the pandemic. Our fellowships matched applicants from our own and other top tier EM programs nationally like: UCLA/Olive View, Harbor UCLA, UCSF/Fresno, Highland General, Northwestern University, Cleveland Clinic, University of Arizona, Henry Ford, and Madigan (US Army.)



Binh Ly, MD
Vice-Chair, Education

PAUL ISHIMINE, MD

I would like to recognize Dr. Paul Ishimine for his 12 years of service at the helm of the Pediatric Emergency Medicine Fellowship Program. Paul is a recognized national figure in Emergency Medicine and Pediatric Emergency Medicine and has transformed this fellowship based at Rady Children’s Hospital from a fellowship that largely trained pediatricians prior to his arrival into a fellowship that now enjoys recruiting from top notch EM programs and many of his 37 graduates have gone on to become leaders at major EM and Pediatric EM programs regionally and nationally. As a long-standing member of the Graduate Medical Education community at UCSD, Paul has mentored not only residents and fellows but also numerous faculty and leaders. In fact at a recent committee meeting, the current Assistant Dean for Graduate Medical Education thanked Paul for his many years of service on the committee but also lauded Paul as a mentor for numerous faculty educators including the Assistant Dean himself. Although Paul’s time as Program Director for the Pediatric EM fellowship has sunset, he will continue to serve as the Chief of the Division of Pediatric EM in our Department and also continue in his national role in medical education as a member of the ACGME Residency Review Committee for the specialty of Emergency Medicine and providing ongoing service and leadership for years to come.



CONGRATULATIONS TO OUR GRADUATING RESIDENTS



CLASS OF 2020

(top row) **Aaron Lee** (Sharp Memorial), **Matthew Correia** (OHSU Tox Fellowship), **Jack Storey** (Pioneers Hospital), **Vishnu Parthasarathy** (Hawke's Bay District Health Board-New Zealand), **Sam Frenkel** (Scripps Health)

(bottom row) **Megan Tresenriter** (Pioneers Hospital), **Jessica Brice** (UCSD Faculty), **Claire Wang** (Kaiser SD), **Samantha McGlone** (Sharp Memorial)

SPECIAL KEYNOTE FOR OUR GRADUATING RESIDENTS



Bill Walton

During COVID this year, we unfortunately had to change our resident graduation celebration from in-person to virtual on June 26, 2020. Fortunately, thanks to faculty Dr. Sukh Singh, our graduates were toasted by special guest, NBA Hall-of-Famer, Bill Walton! Click here to watch his very special message to each of our graduates and their families, friends and loved ones.

MEET OUR FELLOWS



TIFFANY CASTELLANO
Hyperbarics
University of Arizona



ANDREW GOODRICH
Critical Care
Central Michigan University



HEIDI HUTCHISON
EMS
Mercy St Vincent



AMMAR MANDVI
Clinical Informatics
PIH Hospital Whittier



CHARLES MURCHISON
Ultrasound
SUNY-Downstate



PAOLINA PANTCHEVA
Hyperbarics
USF Health/MPM



MIGUEL PINEDA
Wilderness Medicine
University of Arizona



GARRET WINKLER
Toxicology
University of Arizona



NATHAN YUNG
Clinical Informatics
Loyola University

RESIDENCY

Our UCSD Department of Emergency Medicine Residency Program's mission of offering a top-notch breadth and depth of experiences to the best and brightest EM doctors and future leaders in our field continues! Our clinical experiences span from our home institution with exposure to numerous EM specialties, to the Gary and Mary West Senior Emergency Care Unit at La Jolla, two community experiences at Palomar and Tri City, a rural experience at El Centro Regional Medical Center, a longitudinal Pediatric EM experience at Rady Children's hospital, and the Veteran's Administration hospital in San Diego. The diversity of these experiences offers a rich exposure to the breadth of different practice settings, affording our residents the opportunity to explore the variety of what EM offers while in residency.

We are very pleased to announce the newest member of our Residency Leadership Team, Dr. Frannie Rudolf. Frannie served as a former EM Chief Resident and is a graduate of our Education Fellowship. We are delighted to have her on the team!

The COVID 19 pandemic affected many areas of our Residency. Our curriculum, designed with modern teaching techniques including paired faculty/resident core lectures, flipped classrooms, interactive lectures, small group learning, escape rooms, and gameology, converted to a largely virtual platform. Despite this, we still managed a few small group, masked, distanced simulation and cadaver sessions. Our Class of 2020 was celebrated with a virtual toast and a YouTube graduation ceremony, with the keynote speech given by former NBA basketball legend and Hall of Fame inductee Bill Walton.

A new academic year brought the arrival of our new interns, from states all across our nation. With the restrictions of COVID, we virtually embraced them and welcomed them into our new family. The pandemic also brought significant changes to the recruitment of our future resident Class of 2025, a 100% virtual recruitment season. Our Equity, Diversity and Inclusion (EDI) Task Force began our multidisciplinary Social Justice EM Journal Clubs, expanding our curriculum in healthcare disparities, and addressing equity and diversity challenges.

In response to COVID, we adjusted the number of residents in the Department to match patient volume early on in the spring in order to reduce potential COVID+ encounters, maintained a stable supply of PPE, and kept our team healthy. The pandemic has not slowed our residents down with their community outreach efforts, including a homeless clothing/toiletries drive and interdisciplinary teams focused on domestic violence and trafficking (in San Diego and El Centro). Despite all the pandemic-induced changes, we have done our best to stay connected with each other via zoom and by continuing to hold our wellness activities (women in EM, men in EM, and families in EM) on a virtual platform. We enjoyed small group "Jingle Mingle" virtual holiday parties complete with gift meal cards for our participants, "Topsy Trivia Zoom Night," and a New Year's Eve virtual dance party for our families with children.

Follow us!

We have increased our social media presence by our newly formed social media team with accounts on Instagram (@ucsdemres), Twitter (@UCSDEMResidency), and Facebook (@residents.emucsd).



Leslie Oyama, MD
Residency Program Director



Peter Witucki, MD
Associate Program Director



Kristy Schwartz, MD
Assistant Program Director



Frannie Rudolf, MD
Assistant Program Director

RESIDENT AWARDS & HONORS

Many of our residents have received recognition on a local, regional, and national level. recent resident awards, honors, presentations and publications are listed below. My apologies if I missed anyone!

Awards & Honors

- PGY4 Emily Sbiroli: CPC Presentation Resident Runner Up – CORD Conference 2020
- PGY3 Bryan Bisanz: UCSD Great Catch/Speak Up Winners – Patient Safety Committee
- PGY2 Matt Mason: UCSD Great Catch/Speak Up Winners – Patient Safety Committee

Presentations

- PGY4 Craig Kutz: Undersea & Hyperbaric Medicine Society National Conference 2020: Closed circuit rebreather diving: FiO2, PO2, EtCO2 and EtO2 during normobaric hypoxic hypoxia exposure.
- PGY4 Craig Kutz: Undersea & Hyperbaric Medicine Society National Conference 2020: Hypoxia Signatures in Closed-Circuit Rebreather Divers.
- PGY4 Ben Liotta: ACEP 2020; Virtual; 10/26-29, 2020; Urine Testing is Associated with an Increase Length of Stay in Discharged Emergency Department Patients; Abstract
- PGY3 Morgan Carlile: ACEP 2020, Virtual, 10/26-29, 2020; Deployment of Artificial Intelligence for Radiographic Diagnosis of COVID-19 Pneumonia in the Emergency Department
- PGY3 Morgan Carlile: ACEP 2020, Virtual, 10/26-29, 2020; Use of Transfer Learning to Improve External Validity of a Machine-Learning Algorithm to Predict Septic Shock in the Emergency Department
- PGY3 Morgan Carlile: Undersea & Hyperbaric Medicine Society National Conference 2020: Closed circuit rebreather diving: FiO2, PO2, EtCO2 and EtO2 during normobaric hypoxic hypoxia exposure.
- PGY3 Ben Supat: ACEP 2020; Virtual; 10/26-29, 2020; The Effect of Rapid COVID-19 Testing on Emergency Department Throughput
- PGY2 Nico Kahl: CORD Conference; New York, New York; 3/2020; Simulation First 5 for Emergency Medicine Interns: Critical Actions in Managing Unstable Patients
- PGY1 Alexis Johnson: ACEP 2020; Virtual; 10/26-29, 2020; Spontaneous Coronary Artery Dissection in the Emergency Department: The Elusive Dissection; Abstract



RESIDENT SCHOLARLY WORK

- PGY4 Dennis Liu: Lactate in the Emergency Department. *Ann Emerg Med.* 2020 Feb; 75(2): 287-298
- PGY4 Michael Self: Lactate in the Emergency Department. *Ann Emerg Med.* 2020 Feb; 75(2): 287-298
- PGY3 Morgan Carlile: Deployment of artificial intelligence for radiographic diagnosis of COVID-19 pneumonia in the emergency department. *JACEP OPEN*, 05 November 2020. <https://doi.org/10.1002/emp2.12297>
- PGY3 Morgan Carlile: Predicting progression to septic shock in the emergency department using an externally generalizable machine-learning algorithm. *Ann Emerg Med.* 15 January 21. <https://doi.org/10.1016/j.annemergmed.2020.11.007>
- PGY3 Morgan Carlile: Development and prospective validation of a deep learning algorithm for predicting need for mechanical ventilation. *CHEST.* 17 December 2020. <https://doi.org/10.1016/j.chest.2020.12.009>
- PGY2 Alex Anshus: Bedside Craniostomy and Serial Aspiration with an Intraosseous Drill/Needle to Temporize an Acute Epidural Hemorrhage with Mass Effect. *World Neurosurg.* 2020 Oct;142:218-221. doi: 10.1016/j.wneu.2020.06.215. Epub 2020 Jul 4. PMID: 32634633

MEET OUR NEW RESIDENTS



TOP ROW:

- Kyle Rourke | Univ of Wisconsin
- Adam Hryniewicki | UC San Diego
- Alexis Johnson | Mayo Clinic
- Jason Mallett | Texas A&M Univ
- Navneet Dhillon | UC Davis
- Ryan Korn | Univ of Rochester

BOTTOM ROW:

- Irvan Bubic | Oregon Health & Science Univ
- Megan Jackson | Univ of Michigan
- Anna Baillie | Univ of New Mexico
- Rima Dilbariva | Drexel Univ
- Arnav Gupta | Florida International Univ

Learn more about our residents by visiting: emergencymed.ucsd.edu

DIVISION UPDATES

CLINICAL INFORMATICS

Clinical Informatics has had a fantastic 2020, despite COVID-19! The clinical informatics fellowship continues to innovate in the domains of healthcare technology, research, education, and care delivery. Central to this mission is the close integration between our fellowship and UCSD Health's Information Services, where our fellows rotate in various domains across the enterprise. Brian Kahn, our second year Internal Medicine fellow has been very busy. He has created training modules and optimizations for our Clinical Integrated Network (CIN) Providers throughout San Diego County. As he completes his fellowship in June, he has already accepted a position in Washington at Adventist Health optimizing value-based care. Our two first-year fellows are Nathan Yang who joins us from Chicago in Internal Medicine and Ammar Mandvi from Los Angeles in Family Medicine. Nathan's interests lie in education and media creating our first Informatics Podcast, we look forward to his fantastic interviews he has lined up. Ammar has partnered up with our Family Medicine leaders to revamp old workflows and optimize both ambulatory and inpatient processes. Our project successes this year includes the continued expansion of senior-focused education and our UC-wide Senior Registry to assist and learn how to better care for our seniors. Our partners from the Mary and Gary West Health Institute have been key drivers in its creation. We continue to optimize our video visits for both our providers in the ED and ambulatory setting to create a safe and comfortable environment for our patients.

Our alumni, Christian Dameff and Jeremy Bass are busier now than when they were fellows. Christian continues his research on healthcare cybersecurity publishing several manuscripts including one on defining the emerging field of Cyber Disaster Medicine in the Annals of Emergency Medicine. He is also focusing on deploying an Emergency Medicine telehealth program to respond to the COVID-19 pandemic. He has become our newest core faculty and is teaching current Clinical Informatics fellows. Jeremy has joined the Department of Psychiatry and assumed the inpatient lead. In the trenches, he is optimizing inpatient psychiatry from top to bottom.

We look forward to July when our two new fellows join us creating our first full complement of Informatics fellows. Brian Kwan will be joining us in Emergency Medicine from the Alameda Health System in Oakland CA and William "Scott" Ogan in Internal Medicine from Baptist Memorial in Arkansas. These two are *truedata drivers!!*



Jim Killeen, MD
Clinical Informatics
Division Director

INFORMATICS NEWS



- (above) Dr. Jim Killeen helps UPS to launch drone program
- Dr. Christian Dameff featured on NPR nationwide radio story on health care cybersecurity and attack simulation conducted at UC San Diego.

HYPERBARIC MEDICINE & WOUND CARE

Wow! What a year it has been. At the end of the last academic year, we graduated our largest fellowship class to date of four Undersea and Hyperbaric Medicine fellows. Then we immediately turned around and welcomed our new class of two fellows to UCSD. We also welcomed a new faculty member to our division, Dr. Leo Tanaka.

This year has seen a number of challenges as well as several amazing opportunities for our division. As the COVID-19 pandemic turned everyone's world upside down, our division responded in an incredible way. We were able to modify our treatment protocols on numerous occasions to follow the most recent CDC and UCSD Infection Control guidelines in order to continue treating patients throughout the pandemic. I am extremely proud of how our staff adapted, and that we were able to continue treating patients safely and effectively throughout the course of the pandemic.

Dr. Peter Lindholm and Dr. Charlotte Sadler continue to lead our division's research efforts. Dr. Sadler was a co-author on an NIH funded study looking at hyperbaric oxygen therapy as a treatment option for hospitalized patients with moderate to severe ulcerative colitis flares. This study had positive results, was published this past year, and received excellent reviews from the NIH. Currently, Dr. Lindholm and Dr. Sadler, along with several of our other faculty are studying the effects of COVID-19 on divers. Additionally, we are developing a research protocol to determine if hyperbaric oxygen therapy might help patients who were severely affected by COVID-19 or may have prolonged symptoms due to COVID-19. We continue to participate in the HOBIT trial which is a study looking at the early use of hyperbaric oxygen therapy in the critically ill, traumatic brain injured patient.

We are proud to be part of the Dartmouth Hyperbaric registry. This will provide valuable information regarding hyperbaric treatment indications and patient outcomes. Dr. Leo Tanaka is leading this research effort.

Many of our faculty have taken on new roles at our institution and nationally. Dr. Anthony Medak assumed the role of Assistant Fellowship Director for the Undersea and Hyperbaric Medicine Fellowship here at UCSD. Dr. Pete Witucki was recognized nationally when he was elected president of the Undersea and Hyperbaric Medical Society. Now the UCSD Hyperbaric Medicine and Wound Care Division has three voting members on the UHMS Board of Directors (Dr. Pete Witucki, Dr. Charlotte Sadler, and Jay Duchnick, RN). As we navigate these uncharted waters of the COVID-19 pandemic, we continue to look forward to an in person UHMS Scientific Meeting in New Orleans later this year.

HYPERBARIC NEWS

- (right) Dr. Charlotte Sadler has been awarded a grant from the UC San Diego Academy of Clinician Scholars to investigate the safety of scuba diving after COVID 19.
- Peter Lindholm, PhD, Professor and Gurnee endowed chair of hyperbaric and diving medicine research has been awarded a grant from the Office of Naval Research, USN to image nitrogen gas during diving and decompression. The study will be in collaboration with Professor David Vera, Department of Radiology, UCSD.
- Dr. Peter Witucki has been elected President-elect for the Undersea and Hyperbaric Medicine Society



Ian Grover, MD
HBO Division Director



EMS/DISASTER MEDICINE

The Division of EMS and Disaster Medicine has been hard at work in 2020. Division faculty provide medical direction for the cities of San Diego and Chula Vista, Mercy Air, the North County Dispatch Joint Powers Authority, Team Rubicon, the US Coast Guard (through San Diego Fire-Rescue), the National Park Service (Cabrillo National Monument), and the US Forest Service (Cleveland, San Bernardino, and Angeles National Forests). We also serve as base hospital medical directors for UCSD-Hillcrest and El Centro Regional Medical Center, provide medical direction for paramedic education with Palomar College and San Diego Fire-Rescue, and lead San Diego's Disaster Medical Assistance Team (CA-4).

As with most of the medical world, the Division devoted extraordinary efforts to the fight against COVID this year, with significant work being done everywhere from our own hospital to the Pan-American Health Organization and beyond. A few of these activities include:

- Field deployments to the Grand Princess, Imperial Valley, Santa Clara, the Navajo Nation, MCAS Miramar, and more to provide direct patient care, health system augmentation, and quarantine expertise while supporting the National Disaster Medical System, State of California EMS Authority, and other agencies.
- Political advocacy/advising with local cities/counties and state agencies to provide medical guidance for governmental responses
- Ongoing surveillance activities to inform protocol development and modification
- Standing up alternate care sites and providing ongoing oversight
- Development and support of vaccination programs

While COVID was a major focus, we continued to fulfill our mission in providing top-tier EMS and Disaster Medicine education to our fellows, residents, and students, including provision of course direction for the Emergency Department's Global Health emphasis and the UCSD School of Medicine's Global Pandemics course. Faculty lead national committees on topics such as international affairs, global emergency medicine, pediatric EMS, and EMS advocacy, and provided lectures at the annual meetings of our national emergency medicine organizations. Despite the distraction of COVID, 2020 was a productive academic year, with over two dozen manuscripts published!

UCSD's EMS and Disaster Medicine Division continues to be respected as a national and international leader in our subspecialty. We are excited to provide excellent prehospital medicine and disaster medicine training to our students, residents, and fellows, and to play an active role in researching, developing, and implementing evidence-based policies and protocols to provide optimal medicine to every person seeking prehospital care.



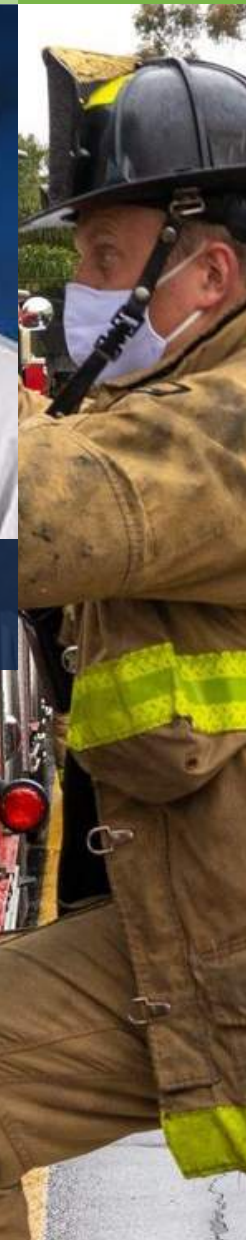
JAKE JACOBY

Professor Emeritus Irving "Jake" Jacoby received the 2020 ACEP Disaster Medical Sciences Award, recognizing individuals who have made outstanding contributions of national/international significance of impact to the field of disaster medicine. Jake has been a force for disaster preparedness, mitigation, response, and recovery for decades, and his influence has been felt not just all across the world, but also quite locally. He has advised the State of California, the San Diego Unified School District, the National Disaster Medical System, and many more organizations both large and small throughout his career, while remaining active as an emergency

physician, hyperbarics physician, aeromedical physician, and infectious diseases physician. Locally, Jake is beloved as the team leader of Disaster Medical Assistance Team CA-4, which he founded in 1991. In that time, he has been the team leader or unit commander for at least 19 deployments, including several major catastrophes such as Hurricane Katrina, Hurricane Sandy, and the World Trade Center attacks in 2001. Jake remains an active and vital member of the UCSD DEM Division of EMS and Disaster Medicine, teaching residents, serving as the editor of a major disaster medicine textbook, and being a leader in disaster response efforts across the globe.



Chris Kahn, MD
EMS Division Director



EMS/DISASTER MEDICINE NEWS

On April 10th 2020, San Diego First Responders salute our ED staff and heroes during the COVID-19 pandemic



DEM faculty Chris Kahn and Eddie Castillo along with Dr. Joelle Donofrio-Ödmann have been awarded a grant from the University of California Firearm Violence Research Center (UCFC) on EMS data modeling to identify patients at high risk for firearm-facilitated suicide.



MEDICAL TOXICOLOGY

The Division of Medical Toxicology continued to set high standards of teaching and research for the DEM this year. Dan Lasoff maintained grants for opioid dependence treatment totaling more than \$300,000. This innovative approach provides funding for buprenorphine initiation and management and sponsors a substance use navigator to guide individuals into therapy. His grants also promote X-waiver training for members of the Department and supplies naloxone from ED supplies to those in need.

Faculty and fellows continue to publish manuscripts and present abstracts at national meetings such as the North American Congress of Clinical Toxicology, the American College of Medical Toxicology, and the Society of Academic Emergency Medicine. The Division continues to be fortunate to have many outstanding teachers, and the Toxicology resident and student elective rotation remains one of the most highly rated within the School of Medicine.



Rick Clark, MD
*Toxicology Division
Director*

PEDIATRIC EMERGENCY MEDICINE

The Division of Pediatric Emergency Medicine (PEM) continues to play an active role in clinical care, education, and research. In addition to providing direct patient care in the UCSD emergency departments, division faculty are involved in the creation of department and hospital guidelines for the care of pediatric patients at UCSD.

PEM faculty also helped plan the largest, regularly scheduled pediatric emergency medicine educational conference in California, the San Diego Regional Pediatric Emergency Medicine Conference, held in November 2020. This fall's conference was the largest to date, attracting over 130 participants. The faculty conduct monthly pediatric simulation sessions for the residency program and annual PEM education and training for the EM faculty. The

Division also continues to support the pediatric emergency medicine fellowship (now administered by the Department of Pediatrics), and faculty members are helping their pediatric emergency medicine colleagues prepare for the care of adult patients who will now be seen in the Rady Children's Hospital ED as a result of the COVID-19 pandemic.

The division faculty also continue to participate in important research collaborations. The largest of these research studies is a multi-year, multi-center study seeking to validate the PECARN head and abdominal CT imaging rules in children who sustain traumatic injuries. Division faculty are also participating in the National Emergency Airway Registry (NEAR) research collaborative.



Paul Ishimine, MD
*Pediatric EM Division
Director*

ULTRASOUND MEDICINE

Our passion for Ultrasound began in 1999 and continues to grow today. We have nine dedicated full-time faculty with expertise in many areas of point-of-care ultrasound. We have a strong interest in the International applications and look forward to continuing in these teaching endeavors in 2021.

Our ultrasound research endeavors continue to grow with projects studying sterile vs. non-sterile gel, abdominal pain in the geriatric population, echogenic needles in central line placement and examining obstacles to usage of bedside ultrasound in both community and academic settings. Our efforts encompassed using ultrasound in hyperbarics, in resource-limited settings and here at home. We were rewarded with an ACEP presentation of the sterile gel study, and a publication in Undersea and Hyperbaric Medicine Journal; "Point-of-Care Ultrasound in a Multi-place Hyperbaric Chamber." We also had case reports accepted in JEM regarding diagnosis of Covid at home using point of care ultrasound.

Drs. Anthony Medak and Sukhdeep Singh have deftly adapted our medical school curriculum to maintain its in-person format while ensuring safety during the pandemic. With students in grouped in smaller pods, they are able to continue with the very popular Ultrasound Curriculum, cementing their knowledge of applied anatomy and pathology for so many organ systems.

For residents and fellows, we have scanning shifts available at Rady Childrens Hospital, the San Diego VAMC, and El Centro Regional Medical Center, in addition to our main campuses of UCSD at Hillcrest and La Jolla. With our faculty at all locations, we are happy to offer a wide variety of ultrasound pathology in these diverse patient populations. Our journal club is both relaxing and informative on San Diego bay while enjoying time on the boat, bringing it all home with a sunset.

This past year, we have expanded our use of regional blocks with the help of our regional pain expert and Emergency Medicine physician, Dr Jessica Oswald. We have incorporated the Erector Spinae block into our armamentarium for abdominal pain, back pain and rib fractures.

Our fantastic website, has continually grown through the years. All core curriculum lectures are included here, as well as interesting cases and journal club review of articles. This year, we have started a new section, Rapid Fire Ultrasound with five minute training sessions on various topics. From basic to advanced topics, we offer comprehensive ultrasound training. Check it out!

<https://emultrasound.sdsc.edu>



Colleen Campbell, MD
U/S Division Director



Eddie Castillo, PhD

Director, Research Operations



Chris Coyne, MD

Director, Clinical Research

RESEARCH

The UCSD DEM has continued to be productive in the research arena despite the challenges of COVID-19. The Strategies to Innovate EmeRgENcy Care Clinical Trials Network (SIREN) projects continue to move forward, with our Hyperbarics Division continuing to screen and enroll for the Hyperbaric Oxygen Brain Injury Treatment (HOBIT) Trial. We are one of the top enrolling sites in the nation for the Influence of Cooling Duration on Efficacy in Cardiac Arrest Patients (ICECAP) trial, led by Dr. Gabriel Wardi (EM/CC). Additionally, we are also one of the top enrolling sites for the Convalescent Plasma in Outpatients (C3PO) trial, led by Dr. Christopher Coyne. Over the next year, the UCSD DEM will participate in two additional SIREN studies including the KETOSIS trial, investigating the influence of ketoacidosis on refractory status epilepticus, as well as the SPEED trial, which will evaluate the use of rapid EEG monitoring in the ED to detect subclinical seizures and status epilepticus.

Since the start of the COVID-19 pandemic, the UCSD DEM has been heavily engaged in COVID-19 research, including multiple publications focusing on coinfections, effectiveness of symptom screening, impact on provider stress, and the development of artificial intelligence for diagnosing and predicting outcomes. In the coming weeks, we will also be rolling out two very exciting COVID studies. The first, entitled *Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV-2)*, is a multicenter, 5 arm, randomized, double-blinded, placebo controlled trial investigating novel agents in the treatment of outpatients with COVID-19. We are very excited to be able to offer these promising therapies to our UCSD patient population! The second trial, entitled *Improving Real-Time COVID-19 Monitoring through Smartphone Voice Analysis*, is a multicenter randomized clinical trial, which aims to identify how respiratory function is conveyed in aspects of a person's voice when they have COVID-19. Additional collaborations include assessing the extended use and reuse of N95 masks in the ED and a national registry of patients evaluated for COVID-19.

RESEARCH GRANTS FOCUSING ON COVID-19

- Chris Coyne, MD, MPH and Edward Castillo, PhD, MPH received a grant derived from the UC National Laboratory Fees Program to utilize machine learning to assist emergency physicians in the treatment and disposition of patients with COVID-19.
- Edward Castillo, PhD, MPH, in collaboration with Aladdin Shadyab, PhD from Family Medicine and Public Health, received funding from the University of California Office of the President to assess outcomes in older COVID-19 patients with comorbidities in a senior emergency care unit.
- Christian Tomaszewski, MD, MS, MBA is assisting an effort lead by researchers at Indiana University to develop a national COVID-19 registry to better understand the clinical presentation and outcomes of COVID-19 patients

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FACULTY SPOTLIGHT

Q&A WITH KAREN VANHOESEN

On a personal note, how is your son Christophe?

As many of you know, Christophe was diagnosed with leukemia in 2019. He underwent a successful bone marrow transplant 1 year ago and he is cancer-free, healthy and off all medications. He is working on his private pilot's license and will attend college this fall to pursue his dreams of becoming a commercial pilot. We are grateful for everyone's love and support!



Congratulations to longstanding DEM faculty member and HS Clinical Professor, Dr. Karen Van Hoesen, who is now the new Associate Dean for Health Sciences Faculty Affairs at the UCSD School of Medicine! In her new role, Karen will oversee the Office of Faculty Affairs in the School including numerous programs and initiatives regarding academic and career development for faculty throughout the School. We had a chance to sit down with Karen to discuss her role and plans:

Tell us a little bit about your new position and the Office of Faculty Affairs at UCSD? (ie. what you do, what the office does, etc)

I am the new Associate Dean for Faculty Affairs in the Health Sciences Office of Faculty Affairs (OFA). OFA facilitates faculty career success and growth through professional development activities, mentorship and leadership training. OFA also collects and analyzes faculty data to assess climate, demographics, and equity and to develop evidence-based effective programming and initiatives to enhance success, recruitment and retention of an engaged diverse and inclusive faculty.

As the Associate Dean, I serve as an advocate for faculty. I am assuming the role of faculty director for NCLAM, the National Center of Leadership in Academic Medicine, which is the longest running professional development program (over 20 years) within OFA. I also serve on the Gender Equity Committee.

How do you think your EM background, training and years as faculty at UCSD prepared you for this role?

I started at UCSD in 1989 as an intern and then was in the first EM residency class at UCSD. I joined the faculty in 1993. As a faculty member at UCSD for over 25 years, I believe I have a good sense of the many issues on the clinical side of Health Sciences regarding faculty equity and engagement and satisfaction. Working in the ED has allowed me to establish relationships with many faculty in other departments and with leaders within Health Sciences. My EM background has positioned me well to step into this leadership role.

As the new Associate Dean for Faculty Affairs, what are your long-term goals and vision for the Office of Faculty Affairs?

I strongly believe that we need clear, uniform and transparent policies for everyone in Health Sciences. I want to be a champion for faculty at UCSD, whether it is helping others navigate the academic system, or deal with behavioral issues and inequity concerns. I am committed to excellent faculty development programs and working towards continued recruitment, retention and leadership for women and underrepresented minority faculty. I hope to work with faculty across all of Health Sciences to help promote career advancement and leadership training.

How is your Office helping to address the challenges facing clinicians and faculty during the COVID pandemic?

We have continued all of our high-level programs and trainings during this pandemic and transitioned to zoom like everyone else. For many of our workshops, zoom has been very effective with high attendance rates since faculty do not have to drive across town and hassle with parking. We have had record numbers of participants at some of our workshops and been able to figure out ways to still network.

Our office is working closely with Academic Affairs realizing that the COVID pandemic is affecting both research and clinical work and the potential impact on promotion and advancement, particularly for women faculty who often bear more childcare responsibilities during this time.

Do you have any advice for new junior faculty (or even more senior faculty)?

Take advantage of the wonderful programs that our office has to offer. The NCLAM program I mentioned above is a very successful professional development program for junior faculty. We have monthly faculty workshops on topics such as getting promoted, UC compensation and retirement. Senior faculty should consider the Faculty Mentor Training Program as well as Leadership Training.

Outside the Deans' office and Emergency Department, how do you like to spend your free time?

My passion has always been nature and the ocean. You can find me paddleboard surfing at Cardiff reef or ocean swimming at La Jolla cove. I still enjoy scuba diving when I can and telemark skiing in the winter. I enjoy playing music, particularly ukulele and mandolin. Once the pandemic has passed, you might find me back at Zel's in Del Mar playing music with my friends again.

ALUMNI

WHERE ARE THEY NOW:



20 YEARS AGO

CLASS OF 2000

SAM TORBATI

Medical Director, Emergency Department, Cedars-Sinai Medical Center, Los Angeles, CA

TAMI GASH-KIM

Medical Director, Emergency Department, Marin General Hospital, Greenbrae, CA

JIM SCHMITT

Cox Medical Center South, Springfield, MO

GENE MA

Chief Medical Officer, Tri-City Medical Center, Vista, CA

ALLEN MARINO

Medical Director, Advisory Board Management and Consulting, Nashville, TN



10 YEARS AGO

CLASS OF 2010

GUY BIZEK

Sharp Memorial and Scripps Mercy, San Diego, CA

KEVIN BUFORD

Ochsner Health, New Orleans, LA

JAMILA DANISHWAR

Palomar Medical Center, San Diego, CA

ALLEN HANSEN

Medical Director, Emergency Department, Palomar-Pomerado Medical Center, CA

DAN MORRIS

Kaiser Permanente Vacaville Medical Center, American Canyon, CA

ARASH SOROUDI

Pioneers Memorial Hospital, Brawley, CA

MIKE WILSON

Assistant Professor, Emergency Medicine, University of Arkansas

PHILANTHROPY

GARY & MARY WEST HONORED WITH CHANCELLOR'S MEDAL

Since its founding in 1960, the University of California San Diego has made waves by actively redefining what it means to be a world-class public research university. Through the creative, forward-thinking efforts of its students, faculty, staff and alumni, UC San Diego has built a legacy of sparking discoveries that advance society and drive economic impact.

UC San Diego recognized the 2020 recipients of the esteemed Chancellor's Medal in November 2020. Conceived in 2000, the Chancellor's Medal is presented annually to select community leaders and philanthropists whose longstanding contributions and involvement have supported promising students, furthered meaningful research and helped the campus and local region grow and prosper. The 2020 awardees of this medal, one of the highest honors given by UC San Diego for exceptional service in support of the university's mission, include: Elaine Galinson, Rebecca Moores, Herbert and Nicole Wertheim, and Gary and Mary West.

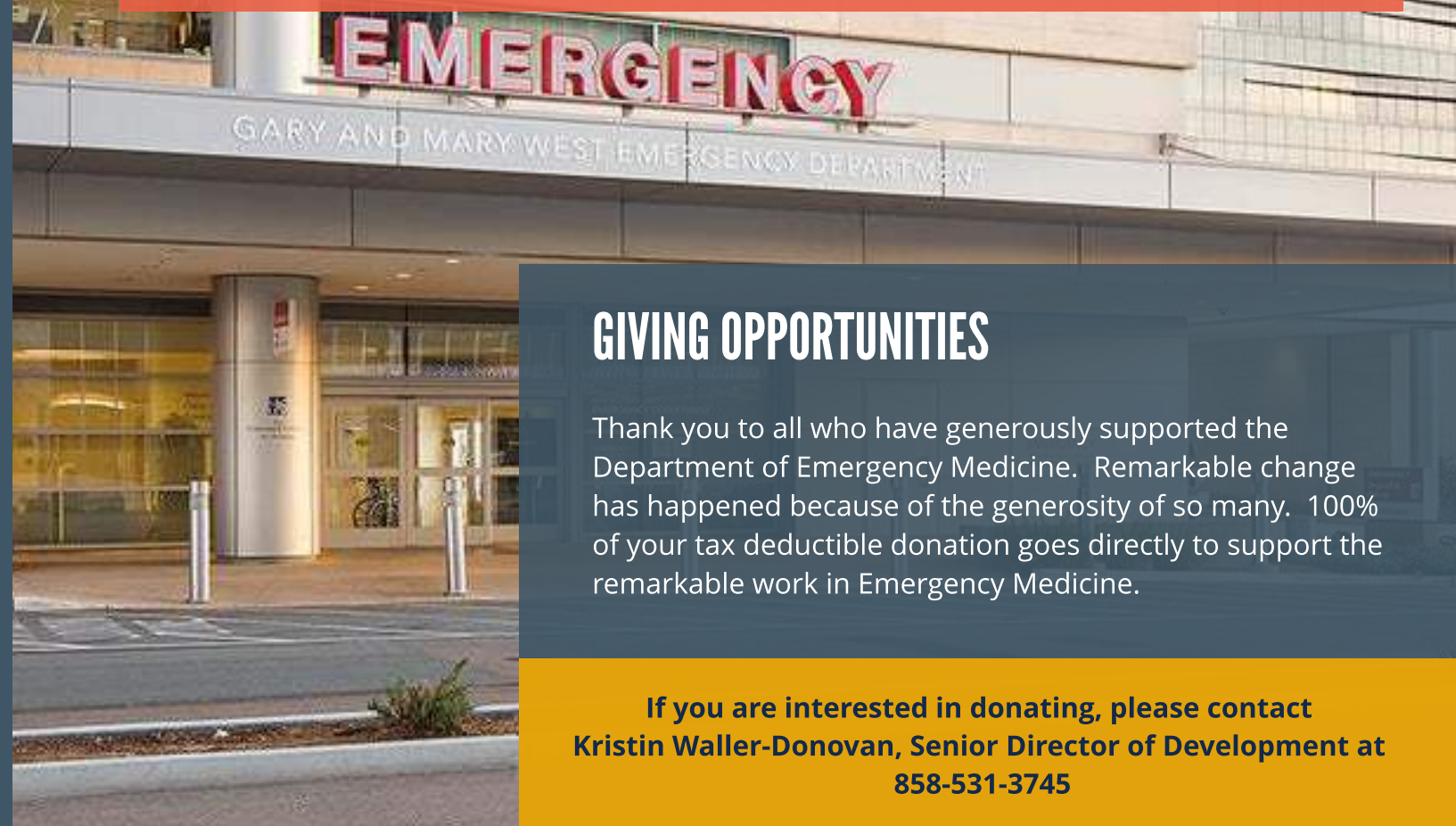
Gary and Mary West – Local successful entrepreneurs turned pioneering philanthropists, Gary and Mary West have been loyal UC San Diego supporters for over a decade. The Wests have established West Health, a family of three nonprofit, nonpartisan organizations with a singular mission of lowering healthcare costs to enable seniors to have access to high-quality, affordable health and support services that preserve and protect their dignity, quality of life and independence. They have recently supported the university with a capital grant to create the Gary and Mary West Senior Emergency Care Unit at UC San Diego Health, which opened in 2019. Additional funding from the West Health Institute is being used to conduct multi-year medical research for developing, evaluating and disseminating innovative care approaches for geriatric patients. The couple continues to set the standard for senior emergency care through the Gary and Mary West Emergency Department at UC San Diego Health.



Mary & Gary West

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Thank you to all who have generously supported the Department of Emergency Medicine. Remarkable change has happened because of the generosity of so many. 100% of your tax deductible donation goes directly to support the remarkable work in Emergency Medicine.

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A photograph of the UCSD Medical Center Emergency Department building at night. The building is a modern, multi-story structure with a prominent glass facade. A large, illuminated sign in red letters reads "EMERGENCY" above the entrance. The building is lit up from within, and the sky is a deep blue. In the foreground, there is a glass railing and a sign that reads "UCSD MEDICAL CENTER EMERGENCY".

EMERGENCY