



# In the Department's First Decade, Emergency Medicine Thrives

The UC San Francisco Department of Emergency Medicine

ANNUAL AND  
10TH ANNIVERSARY REPORT

2018

# Letter from the Chair

This year's annual report offers highlights from 2018 and celebrates this department's first decade – one of remarkable growth and achievement. Our positive impact on the careers of our residents and fellows, on medical education across UCSF and on patient care from San Francisco to sub-Saharan Africa fills me with pride.

Ten years is a blink of an eye in academia, which makes the vision and execution of the team that made our transition happen all the more impressive. Led by inaugural Chair Michael Callahan, MD, a group of dedicated physicians managed to overcome numerous challenges to merge two distinct emergency departments into one unified academic department. Consider just a few of the outcomes that emerged from their vision.

In response to a period of significant growth in patient volumes, a more complex patient mix, clinical advances and changes in health care delivery, our faculty today delivers outstanding care at five hospitals – two of them dedicated children's hospitals. Everywhere we practice, we've fostered a culture of data-driven improvement, rooted in lean principles, which allows us to tailor best practices and produce innovative models of care that are extremely

responsive to our particular patient populations and systems of care.

We've added services and expertise in airway management, ultrasound, toxicology, emergency medical services (EMS), pediatric emergency medicine and social medicine; created a Clinical Decision Unit to avert unnecessary hospital stays; been instrumental in developing new protocols for emergent treatment of stroke; and forged affiliations with Bay Area urgent care facilities. Our growing Division of Pediatric Emergency Medicine (PEM) has opened UCSF Benioff Children's Hospital San Francisco, collaborated through our affiliation with UCSF Benioff Children's Hospital Oakland and opened the embedded pediatric emergency department at Priscilla Chan and Mark Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG).

In research, our Divisions of Health Policy Studies and Clinical Research have tapped new funding sources, forged new collaborations and made us a site for numerous clinical network trials in both adult and pediatric emergency medicine, even as we disseminate our studies in the leading medical journals.

Perhaps our finest achievement is creation of a residency that has evolved into one of the best training programs in the country for emergency medicine. Our 56 residents – 34 percent from racial and ethnic populations that are traditionally under-represented in medicine (UIM) and 43 percent women in 2018 – are an integral part of everything we do. The program's success – along with the success and growth of our fellowships, highlighted on page 12, our teaching of 22 courses at UCSF School of Medicine and the prominent role of our faculty in the Bridges Curriculum – has garnered us recognition as being among the finest educators at an institution that has earned its reputation as one of the finest educational institutions in the world.

Our people – including the successful recruitment of more than 50 full-time faculty members in the last five years, with experience and skill sets that complement an already impressive roster of physicians – are the heart of our success. I am particularly proud of our ongoing efforts to build a culture of inclusion. The diverse backgrounds and perspectives of our faculty and trainees have improved our care and made it more equitable, expanded the lens for our research, broadened the educational experience for our

residents and fellows and enhanced our contributions to the entire university; in short, enriched the lives of everyone in our department – and of our patients.

I'm especially grateful to those faculty members who took on leadership roles through the years. They have built a department where everyone believes what we do is important and where we deliver outstanding care that we are continually working to improve. Our department's leaders have been remarkably effective at asserting the value our unique understanding of health systems – from our vantage point at the crossroads of the inpatient and outpatient settings – brings to care delivery.

Last year, we created a strategic plan that sets the course for our next round of improvement and growth, as we try to anticipate how things such as a changing patient mix, new treatment modalities and a planned new hospital and emergency department (ED) at Parnassus Heights will change what we do. The challenges will keep coming, but what we've accomplished in our first decade instills confidence that we are more than up to the task.



**PETER E. SOKOLOVE, MD**  
CHAIR AND PROFESSOR OF EMERGENCY MEDICINE



“Ten years is a blink of an eye in academia, which makes the vision and execution of the team that made our transition happen all the more impressive.”





# A Decade of Departmental Growth

Department Milestones

“We have made huge leaps in making diversity a focal point of our department and of the entire university. There’s still a lot left to do, but we’ve nearly tripled the number of UIM faculty and residents in this department and have had a number of Watson Scholars [John A. Watson Faculty Scholars] – a dynamic program that helps recruit and retain our UIM faculty members.”

“We tackle many research topics that used to be under the sole purview of other specialties, such as cardiology [resuscitation] and neurology. People now recognize that we are uniquely positioned to look at some of these clinical challenges in the ED.”

**ROBERT RODRIGUEZ, MD**  
PROFESSOR AND  
ASSOCIATE CHAIR FOR  
CLINICAL RESEARCH



“With growing attention from groups such as the World Health Organization, more people understand that emergency care is a basic necessity for all populations – and can be extremely cost-effective. Our department was named the first World Health Organization/Pan American Health Organization Collaborating Centre for Emergency and Trauma Care – and, at present, is the only Collaborating Centre for comprehensive emergency care in the world.”

**RENEE HSIA, MD, MSc**  
PROFESSOR AND ASSOCIATE CHAIR  
FOR HEALTH SERVICES RESEARCH

Department  
and residency  
program  
established

Michael  
Callahan, MD,  
appointed  
inaugural chair

2008

Emergency  
Ultrasound  
fellowship  
begins

EMS and  
Disaster  
Medicine  
fellowship  
begins

2009

Over 50% of  
full-time faculty  
have research  
funding

2010

Department  
reaches  
over 50 active  
research  
projects

2011

“Changes in emergency care over the last 10 years have focused on determining what treatment, testing and strategies actually have an impact on outcomes. Sometimes less is more when we weigh the value of picking up a disease versus the harm of testing for it.”

“Creating a department has made us more strategic in our thinking. For example, we are building out our vision with new directorships for Diversity and Inclusion and Faculty Development, a ramped-up mentoring program and a Women in Emergency Medicine group, among other innovations.”

**JEFFREY TABAS, MD**  
PROFESSOR AND DIRECTOR OF  
FACULTY DEVELOPMENT



“With the recognition that hospitalization is often not beneficial and extraordinarily expensive – plus with access to advanced imaging, subspecialty consultation and appropriate use of our Clinical Decision Unit – we can safely avoid inpatient admission in many cases.”

“The value of academic emergency medicine is that we have faculty with expertise in analyzing researching and advocating on behalf of patients who seek emergency care. We can study changes and understand better how to respond, whether it’s to more crowded emergency departments, opioid addiction, adolescent suicide or ways to safely reduce imaging. It’s how we make progress in medicine.”

**STEVEN POLEVOI, MD**  
CLINICAL PROFESSOR



Inaugural  
residency  
class  
graduates

2012

Medical  
Education  
fellowship  
begins

Peter  
Sokolove, MD,  
appointed  
new chair

2013

Number of  
residents  
expanded to  
14 a year

First tenure  
track faculty  
appointed

2014

Global  
Health  
fellowship  
begins

Pediatric  
Emergency  
Medicine  
Division  
established  
in the  
department

Opening of  
Mission Bay  
Children's  
Emergency  
Department

ED observation  
unit opened  
at Parnassus

2015

“With the creation of the UCSF Division of Pediatric Emergency Medicine, PEM at UCSF has changed dramatically over the last decade. We opened a dedicated, 24/7 Children’s Emergency



Department at Mission Bay – the only freestanding children’s hospital in [the City and County of] San Francisco. We opened and staff San Francisco’s only pediatric trauma

center at ZSFG. Sixteen fellowship-trained PEM faculty are at the core of this growth, and they bring the most current, evidence-based clinical care to the bedside for children at both locations.”

“Our division’s PEM expertise has improved the care of pediatric patients in measurable ways, from improved care for patients with asthma and sepsis through improving antibiotic delivery to febrile cancer patients and conducting universal suicide screening.”

**STEVEN BIN, MD**

CLINICAL PROFESSOR AND MEDICAL DIRECTOR,  
CHILDREN’S EMERGENCY DEPARTMENT,  
UCSF BENIOFF CHILDREN’S HOSPITAL  
SAN FRANCISCO

“Our research has had a wide-ranging impact. Studies on ED utilization and closure of hospitals have shown that the most vulnerable patients are disadvantaged by closures of emergency departments. We have shown that most patients being seen in the ED need to be there. We’ve contributed to decision making on the use of high-cost and invasive tests, as well as social issues, such as firearm safety.”

“The role of the emergency department has become central to our health care system. We are currently the place where the majority of outpatient visits occur, and in most hospitals we account for the majority of inpatient admissions.”

**ELLEN WEBER, MD**  
PROFESSOR EMERITA



New Emergency Department opens at ZSFG, including pediatric ED

Medical Toxicology fellowship incorporated into the department

Pediatric Emergency Medicine fellowship formally affiliates with the department

Research fellowship begins

Department of EM at UCSF designated a WHO Collaborating Centre for Emergency and Trauma Care

Pediatric Emergency Ultrasound fellowship established

Department celebrates its 10th anniversary

2016

2017

2018



“I’m amazed at all the work my colleagues do. There is so much mutual respect for each other’s accomplishments, knowledge, work ethic and compassion – I would have any one of them take care of my family and me.”

**RACHEL CHIN, MD**  
PROFESSOR

“Within these 10 years, we built a residency – and then fellowships – with a national reputation, starting from scratch. We’ve created a very high-quality education program for physicians whose career interest is emergency medicine, and the reputation of our residency program has also significantly expanded and improved our role within the School of Medicine.”

“The two administrative departments [Parnassus and ZSFG] were completely separate, and we had to create one academic department from them. We completely reorganized the two departments to have the same rules, reporting oversight, pay scales, expectations and goals for everybody.... Yet two years after its creation, at our second annual faculty retreat, for the first time we saw faculty from both hospitals sitting mixed together at the dinner tables, exchanging ideas and plans with great enthusiasm. That had never happened before and was one of the most satisfying moments for me of being chair.”

**MICHAEL CALLAHAM, MD**  
PROFESSOR EMERITUS AND FOUNDING  
CHAIR OF THE UCSF DEPARTMENT OF  
EMERGENCY MEDICINE

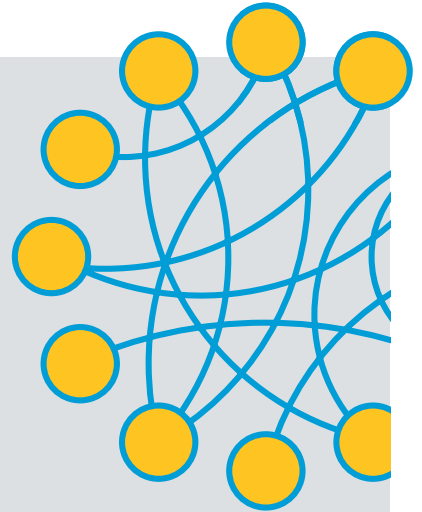


# Strengthening Health Care's Safety Net Improves Emergency Care

Emergency care demands a commitment to take care of all comers – not just those with heart attacks, stroke or trauma, but also those with complex social needs, whose growing numbers dramatically impact the ED in ways that ripple throughout the hospital and far beyond. Effectively serving these patients involves strengthening collaborations with specialties, systems, agencies and service providers that have not traditionally been part of emergency care. “We need to use the entire care system as a clinical instrument,” says Clement Yeh, MD.

James Hardy, MD, agrees. He says, “If we can cut the return rate to the ED for people with substance use disorders by getting them help in a more appropriate setting, it probably means that we have improved their health. It also means I have more time to help my critically ill patients. That’s why connecting systems is so important.”

It’s also what the projects and programs described on these pages aim to do, as part of an increasingly coordinated effort to make the system work better for all. As Hemal Kanzaria, MD, says, “We won’t solve these problems working within the four walls of the hospital alone. Good health depends on a lot more than good health care. We need to move further upstream, and some emergency departments, like ours, understand that.”



## Project FRIEND

Kathy Vo, MD, and Mary Mercer, MD, are principal investigators (PIs) for a four-year interventional study funded by the Substance Abuse and Mental Health Services Administration. Project FRIEND (First Responder Increased Education and Naloxone Distribution) aims to reduce overdose deaths for people with opioid use disorders. Faculty who serve as base-hospital physicians for the San Francisco Emergency Medical Services Agency train EMS providers, so when they arrive at the scene of an opioid overdose and administer naloxone to reverse it, they can train

family members or staff at community organizations on proper use of the medication. The paramedics can then safely leave behind an appropriate naloxone dose.

“More EMS calls are related to opioid overdose than cardiac arrest. Project FRIEND allows 911 responders to open a conversation with patients about treatment options,” says Mercer.

**KATHY VO, MD**  
ASSISTANT CLINICAL PROFESSOR

**MARY MERCER, MD**  
ASSOCIATE CLINICAL PROFESSOR AND EMS AND  
DISASTER MEDICINE FELLOWSHIP DIRECTOR







Clement Yeh, MD,  
training community  
paramedics

## EMS-6

Clement Yeh, MD, is medical director for the San Francisco Fire Department (SFFD) and leads EMS-6, which began in 2016 as a collaborative effort among the SFFD and the San Francisco Departments of Public Health and Homelessness and Supportive Housing. The goal: to optimize care for frequent users of emergency services by linking them with medical, behavioral and social resources. For the 2,200 referrals EMS-6 received in 2018, a specially trained team of community paramedics – under the supervision of department faculty and sometimes accompanied by an outreach worker or behavioral health clinician – provided intensive, on-the-spot case management, including coordination with primary care physicians, behavioral health, housing, social support resources and the Social Medicine team and Whole Person Care project at ZSFG. In 2018, EMS-6 began working with California’s Office of Statewide Health Planning and Development and the California Emergency Medical Services Authority to expand and enhance the project.

“While we continue to deliver outstanding traditional emergency care for things like heart attacks and stroke, we are developing expertise in care coordination to offer the same level of support to patients with social and behavioral issues,” says Yeh.

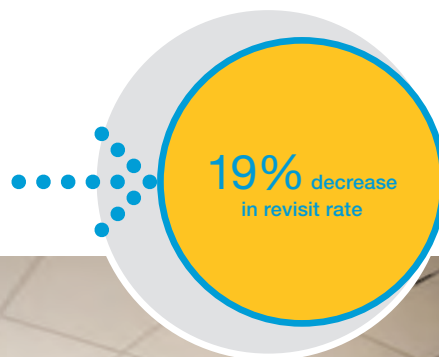
## Linking Upstream Thinking and Quality Improvement

Beginning in 2015, as they anticipated increased volumes at a new hospital, ED staff at ZSFG – led by Malini Singh, MD, MPH; Mary Mercer, MD; and Hemal Kanzaria, MD – used value-stream mapping to pinpoint potential problems and where resources were most needed. This led to creation of a fast-track system that in just six months halved the “left without being seen” (LWBS) rate – a project described in a 2018 publication in *JAMA Performance Improvement*. Since then, daily huddles and data tracking, along with leadership buy-in, have fostered a robust improvement culture that has enhanced the timeliness and quality of care for all patients, including those who arrive with minor medical complaints exacerbated by social needs. It’s this work that led to creation of the interdisciplinary Social Medicine program.

## Social Medicine

When ZSFG ED providers found that treatment of patients with low medical acuity and high social complexity contributed to impaired patient flow and provider burnout, they created a novel Social Medicine program, with Hemal Kanzaria, MD, at the helm. The provider team – which includes physicians from different specialties, pharmacists, patient navigators, social workers and care coordination nurses and community partners – works to reduce hospitalizations driven by social needs and improve care for these patients. The program includes a consult service, new discharge protocols, case conferences for frequent ED users and, where appropriate, direct linkage for ED patients to transitional housing. In 2018, the Social Medicine team served more than 2,000 patients and averted more than 330 admissions and readmissions – work that correlated with a 19 percent reduction in the ED revisit rate and improved wellness for patients.

“Our work was recognized with the 2018 Quality Leaders Award from the California Association of Public Hospitals and Health Systems, was instrumental in new philanthropic contributions for individuals with mental illness and earned grant funding through the San Francisco Health Plan, the San Francisco General Hospital Foundation and Battery Powered,” says Kanzaria.

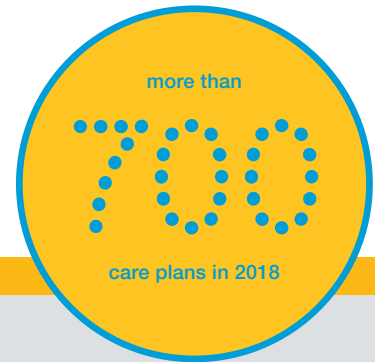


From left: Hemal Kanzaria, MD, April Bassett and Elvira Miyahira discuss a patient care plan.



## A Social Medicine Case Study

Jane is an elderly woman who had been homeless for over 15 years, mostly living on BART trains or sleeping on the street. Frequent calls to BART police resulted in Jane making more than 60 visits to the ZSFG ED in 2018 – and many more to other EDs in the area. Once Jane was referred to the Social Medicine team, they built trust by addressing her most immediate self-identified social needs. They addressed her food insecurity, helped her secure her belongings and gently introduced the idea of her moving indoors. The team then contacted a Department of Public Health case manager from a local housing agency, who arrived and helped Jane enroll in various entitlement programs. Her wounds from having lived in soiled clothes have healed. She found a communal living situation, formed relationships and has now moved to long-term residential housing with social support services. Since February 2018, her ED visits have been reduced to fewer than five.



## EDIE

The Emergency Department Information Exchange, or EDIE, is a technology platform that improves transparency for emergency providers, so they can better coordinate care for their patients. As noted in last year's report, Maria Raven, MD, MPH, and Hemal Kanzaria, MD, championed the platform at Parnassus and ZSFG, respectively, and co-chaired the Bay Area Consensus Committee on EDIE. When patients reach a defined metric for frequent emergency department use, EDIE prompts an alert in the patient's electronic health record (EHR), which allows providers to quickly view dates and diagnoses from other EDs, as well as services these patients already have. In turn, the provider can enter any new care guidelines and link patients with social workers hired specifically to help with this population.

"Through 2018, at Parnassus alone, ED teams have completed more than 700 care plans, with a preliminary data analysis showing ED use down by 18 percent," says Raven.

## Whole Person Care

As co-PIs, Maria Raven, MD, MPH, and Hemal Kanzaria, MD, are evaluating the Whole Person Care Initiative at ZSFG – a five-year, multimillion-dollar Medi-Cal waiver program awarded to the City and

County of San Francisco to improve outcomes for adults experiencing homelessness and high users of urgent and emergent health care services. In their evaluation, Kanzaria and Raven targeted the 100 highest-need, highest-cost users of city services and established that the ED is used more than all other emergency and urgent medical, behavioral health or social care services available in San Francisco. The work has enabled the two faculty members to play a leading role in making recommendations to city leadership about how to most effectively coordinate the various services.

"Vulnerable individuals have to be able to access services via the ED, so that when we see them and realize, for example, they have not been assessed for priority housing, we can help connect them to the process," says Kanzaria.

"Vulnerable individuals have to be able to access services via the ED, so that when we see them and realize, for example, they have not been assessed for priority housing, we can help connect them to the process."

**HEMAL KANZARIA, MD**  
ASSOCIATE PROFESSOR AND MEDICAL DIRECTOR  
OF CARE COORDINATION AT ZSFG

## Exploring Telehealth Addiction Services in the ED

Maria Raven, MD, MPH, is leading an effort to provide online telehealth consults in the ED for patients with substance use disorders. Along with colleagues in the UCSF Department of Psychiatry, addiction medicine experts in the UCSF Department of Medicine and Bright Heart Health, a private telemedicine service, Raven hopes to pilot the program in 2019.

**MARIA RAVEN, MD, MPH**  
ASSOCIATE PROFESSOR AND  
(AS OF 2019) CHIEF OF  
EMERGENCY MEDICINE AT UCSF  
HELEN DILLER MEDICAL CENTER  
AT PARNASSUS HEIGHTS







**JAHAN FAHIMI, MD, PhD**  
ASSOCIATE PROFESSOR

## Bringing Gun Violence to the Medical Realm

The medical effects of firearm violence are viscerally real for ED physicians, and Jahan Fahimi, MD, PhD, is on a mission to give providers the tools to address the problem. He's completed studies on adult and pediatric ED patients that established firearm injury exposure as an important predictor of death within five years. He's played an instrumental role in an American College of Emergency Physicians (ACEP)-developed matrix that identifies types of violence patients experience and ways providers can speak with patients about these concerns. He is developing an educational curriculum for practitioners on firearms, with a grant from the research collaborative AFFIRM (American Foundation for Firearm Injury Reduction in Medicine), in the hope of developing a consensus on educational priorities for medical schools, residents and continuing medical education. The curriculum can also inform his work as topics steward for violence and trauma at UCSF Medical School.

"If our duty is to care for patients and alleviate suffering, we should be prepared to ask about exposure to violence, access to firearms and safe storage," says Fahimi.



**James Hardy, MD**  
(second from left), joins  
DeJuan Redwood,  
Angel Carter and David  
Pierce of Harbor Light.

## Harbor Light

James Hardy, MD, spearheads a novel partnership with The Salvation Army Harbor Light Center that enables on-the-spot transfers of willing patients with complex social needs from the Parnassus ED to Harbor Light, which offers needy individuals wraparound psychosocial services. UCSF Medical Center's Caring Wisely and Value Improvement programs cover the cost of implementation as well as a patient's stay at Harbor Light; in turn, Harbor Light streamlines the transfers rather than having the patient wait for a day or more – a period of time in which too many patients fall through the gaps.



"So far, people who receive the intervention appear to have half the return admission rate, which reduces costs to the system – and the concept is beginning to spread as we build alliances with other city services, including HealthRIGHT 360 and Langley Porter's psychiatric emergency services," says Hardy.



## The Behavioral Health Task Force

Concerned that ED boarding of patients with psychiatric illness was a factor in ambulance diversions, the Hospital Council of Northern and Central California commissioned a multidisciplinary Behavioral Health Emergency Task Force to study the problem. The department's Susan Lambe, MD, who at the time was co-president of the San Francisco Emergency Physicians Association, co-chaired the task force and was one of two emergency physicians on the team along with the department's Maria Raven, MD, MPH. In late 2017, the group recommended (1) expanding the capacity of lower-acuity psychiatric facilities, including the number of inpatient psychiatric beds, and (2) increasing community-based mental health services that can intervene in a developing crisis before the need for acute ED intervention.

"In the last year, we have seen some expansion of inpatient mental health beds and psychiatric emergency services – and, anecdotally, some reduction in psychiatric patient boarding," says Lambe.



**SUSAN LAMBE, MD**  
ASSOCIATE CLINICAL PROFESSOR



**JACQUELINE GRUPP-PHELAN, MD, MPH**  
CHIEF AND VICE CHAIR FOR  
PEDIATRIC EMERGENCY MEDICINE

## Suicide Prevention

Suicidal ideation in teens and children can often appear first in the ED. That's why Chief of Pediatric Emergency Medicine Jacqueline Grupp-Phelan, MD, MPH, is co-PI on a PECARN (Pediatric Emergency Care Applied Research Network) study that is validating an adaptive ED screen for suicide risk in children and adolescents. It's also why, in 2018, the ED at UCSF Benioff Children's Hospital San Francisco implemented universal, confidential suicide screening for all patients above the age of 10. The new protocols, in which targeted

questions are part of an iPad or paper intake form, offer a clear pathway for what clinicians should do when the screen detects a suicide risk, including reporting to parents and psychiatric services. The protocols are informed by another Grupp-Phelan study, which looks at the value of a warm handoff to a behavioral health clinician for a brief therapeutic intervention, depending on the level of risk.

"Systematic screening is necessary because it eliminates what are often unconscious biases about who to screen. Our staff was remarkably open to implementing the screens, because we know that the underlying problems that families bring to the ED can get in the way of us being able to deliver great care for kids," says Grupp-Phelan.

## Child Injury Prevention

Carol Chen, MD, MPH, is part of a team crafting and implementing a child injury prevention initiative in pediatric emergency medicine at UCSF Benioff Children's Hospitals and ZSFG. The goal is to create interdisciplinary collaborations to prevent common health crises in children, including accidental ingestion and unintentional injuries. The initiative is beginning with a focus on child passenger safety, which will include piloting a novel educational app for parents, and a car seat event that will use certified technicians at UCSF to provide advice, answer questions and ensure that every child who leaves one of the hospitals is properly restrained in a child passenger safety seat.

**"We have a ton of capacity to study how to move the needle on child safety because we straddle the clinical and research worlds and can partner with others to make sure prevention happens."**

**CAROL CHEN, MD, MPH**  
ASSISTANT CLINICAL PROFESSOR

# Fellowships Exemplify Department's Rapid Rise and Impact

Over the past decade, the growth of the department's fellowship programs exemplifies the impact of establishing an academic Department of Emergency Medicine on emergency care, research and training.



**CHRISTOPHER FEE, MD**  
PROFESSOR OF CLINICAL  
EMERGENCY MEDICINE,  
RESIDENCY PROGRAM DIRECTOR  
AND ASSOCIATE CHAIR FOR  
EDUCATION

## Putting the Pieces in Place

“When we became a department, two of the fellowships were already running and under the purview of others, though we did go from zero to 60 pretty quickly to establish new fellowships and assume leadership of existing programs,” says Christopher Fee, MD, the department’s associate chair for education.

The Accreditation Council for Graduate Medical Education (ACGME)-accredited Pediatric Emergency Medicine and Medical Toxicology fellowships predate the department and are now a highly regarded example of Emergency Medicine’s educational offerings. In addition, the department has added six new fellowships to date, all of which reflect the expertise of the faculty and meet important community and academic needs.

Emergency Medicine’s fellowships:

- Emergency Ultrasound
- EMS and Disaster Medicine
- Global Health
- Medical Education
- Medical Toxicology
- Pediatric Emergency Medicine
- Pediatric Emergency Ultrasound
- Research

## Looking Ahead

The 2017 strategic plan was instrumental in spurring new ideas for the fellowships, some of which we have already acted upon. The fellowships are increasingly integrated in department activities, including, for example, becoming part of the advisor-family structure. Fellows are also involved in training residents in the fellow’s subspecialty area of expertise. “It’s a win-win for both groups,” says Fee.

In addition, many of the fellowships require or offer a second year, during which fellows can earn a master’s degree in a related field by leveraging opportunities at UCSF or other Bay Area institutions. Fellowships that aren’t already doing so are now considering adding a second year.

## A Powerful Learning Experience

Robert Goodnough, MD – the department’s chief fellow, a position created in 2018 to represent the needs of the fellows with the UCSF Office of Graduate Medical Education (GME) – began at UCSF as a resident in emergency medicine in 2013.

“I had a strong interest in academic emergency medicine, and the program and mentors I had during my residency only increased my interest,” says Goodnough, in explaining why he decided to apply for the Medical Toxicology fellowship. He was especially appreciative that Fellowship Director Craig Smollin, MD, was honest about both the challenges and benefits of completing the program. “He was clear that if I decided not to go into academic medicine, at the very least, the fellowship would make me a stronger clinician,” says Goodnough.

He has found that to be the case, as he’s learned a tremendous amount doing everything from bedside toxicology consults at all hours through participating in a department-wide toxicological disaster simulation – all with Smollin as a generous mentor. In addition, Goodnough has taught residents, engaged in research and attended the fellowship training series, which presents workshops on topics ranging from personal finance and contract negotiation through effective teaching techniques.

In the spring of 2019, Goodnough and his wife, Karla – also a graduate of the UCSF Emergency Department residency – will assume faculty positions at Baylor University, in Texas, which is where she is from and her family still lives. Noting that numerous faculty members went out of their way to help him find a position that could meet both his wife’s and his needs, Goodnough says, “The faculty here was very generous, and while I’m excited for the new opportunity, it’s also hard to leave a program that has been so interested in my growth.”



“I had a strong interest in academic emergency medicine, and the program and mentors I had during my residency only increased my interest.”

**ROBERT GOODNOUGH, MD**  
MEDICAL TOXICOLOGY FELLOW AND  
CHIEF FELLOW FOR EMERGENCY MEDICINE

## Where Are They Now?

Forty-five (45) fellows have entered our fellowship programs since they came under ED purview.

To date, 23 have remained in academic emergency medicine, 18 at UCSF, with others at institutions that include George Washington University, Loma Linda University, NYU, Stanford University and the University of Chicago.

**Our former fellows now hold numerous titles, including:**

- EMS fellowship director or associate director
- Base hospital associate medical director
- Hospital medical director
- Medical student director
- Assistant residency director
- Emergency Ultrasound fellowship co-director
- Resident ultrasound education director
- Emergency and trauma care program lead at the World Health Organization (WHO)



### Emergency Ultrasound

(began 2008)

#### Elizabeth Kwan

(2008-2009)  
UCSF Emergency  
Medicine faculty

#### Teri Reynolds

(2009-2010)  
WHO/UCSF

#### Manish Asaravala

(2010-2011)  
Kaiser Permanente  
Santa Clara Medical  
Center (Stanford affiliate)

#### Starr Knight

(2011-2012)  
ZSFG faculty and  
Emergency Ultrasound  
Fellowship Co-Director

#### Pedro Campos

(2012-2013)  
Sutter Santa Rosa  
Regional Hospital

#### Adrian Flores

(2013-2014)  
California Pacific  
Medical Center and  
UCSF per diem

#### William Shyy

(2014-2015)  
UCSF faculty and  
Emergency Ultrasound  
Fellowship Co-Director

#### Brad Ching

(2015-2016)  
Mills Peninsula Hospital

#### Kavita Gandhi

(2016-2017)  
UCSF faculty and  
Resident Ultrasound  
Education Director

#### Nancy Anaya

(2017-2018)  
UCSF faculty

#### Joseph Brown

(current fellow, 2018-2019)

### EMS and Disaster Medicine

(began 2009)

#### Evan Bloom

(2011)  
Adventist Health Clear Lake

#### Mary Mercer

(2012)  
UCSF/ZSFG faculty  
and EMS and Disaster  
Medicine Fellowship  
Director

#### Katie Tataris

(2014)  
University of Chicago,  
EMS Fellowship Director

#### Brian Savino

(2016)  
Loma Linda University,  
EMS Fellowship  
Associate Director

#### Eric Silverman

(2017)  
UCSF/ZSFG faculty and  
Base Hospital Associate  
Medical Director

#### Melody Glenn

(2017)  
Alameda Health System,  
Alameda Hospital  
Medical Director

#### Nicole D'Arcy

(2018)  
Santa Clara Valley Medical  
Center, Base Hospital  
Medical Director

#### Sammy Hodroge

(current fellow)  
Alameda Health System  
and ZSFG pool physician

### Global Health

(began 2014)

#### Aaron Harries

(2014-2015)  
UCSF/ZSFG faculty and  
Medical Student Director

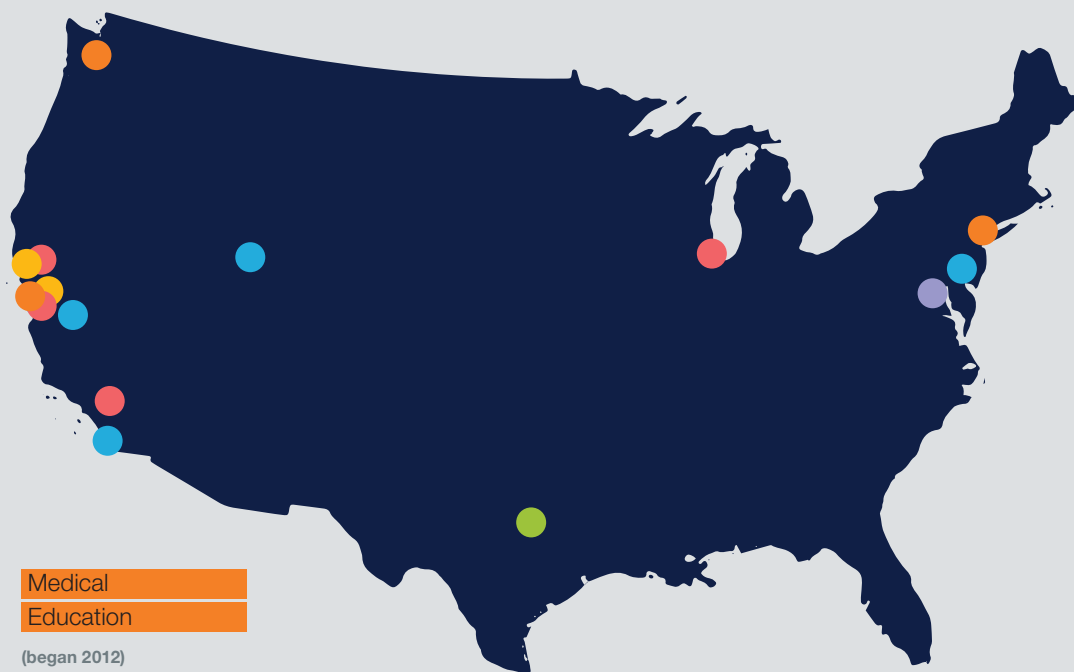
#### Scott Fruhan

(2015-2016)  
UCSF/ZSFG per diem

#### Kevin Davey

(2016-2017)  
George Washington  
University





Medical  
Education

(began 2012)

**Bonnie Lau**  
(2012-2013)  
Kaiser Permanente  
Santa Clara Medical  
Center (Stanford affiliate)

**Meghan Schott**  
(2013-2014)  
Swedish Hospital  
(Tacoma, Washington)

**Gary Green**  
(2014-2015)  
Kaiser Permanente  
Oakland Medical Center

**Virat Madia**  
(2015-2016)  
NYU Langone Health  
faculty and Assistant  
Residency Director

**Rosny Daniel**  
(current fellow, 2018-2019)  
UCSF faculty

**Nicole Munz**  
(current fellow, 2018-2020)

Medical  
Toxicology

(began 1984; transitioned  
from Internal Medicine  
to Emergency Medicine  
in 2016)

**Kathy Vo**  
(2015-2017)  
UCSF faculty

**Kai Li**  
(2016-2018)  
Kaiser Permanente San  
Leandro Medical Center

**Robert Goodnough**  
(2017-2019)  
Baylor College of Medicine

Pediatric  
Emergency  
Medicine

(began 1987 at Children's  
Hospital Oakland; formally  
affiliated with UCSF in  
2015, with fellows starting  
at UCSF in 2016)

**Cornelia Latronica**  
(2009-2012)  
UCSF Benioff Children's  
Hospital Oakland faculty

**Eva Delgado**  
(2010-2013)  
Children's Hospital  
of Philadelphia

**Michelle Fleurat**  
(2012-2014)  
California Pacific  
Medical Center

**Sara Leibovich**  
(2013-2015)  
UCSF Benioff Children's  
Hospital Oakland

**Aaron Kornblith**  
(2013-2015)  
UCSF/UCSF Benioff  
Children's Hospital  
San Francisco faculty

**Ashkon Shaahinfar**  
(2014-2017)  
UCSF Benioff Children's  
Hospital Oakland

**Bryan Cooper-Sood**  
(2015-2018)  
Valley Children's  
Hospital, Madera

**Tatyana Vayngortin**  
(2015-2018)  
Rady Children's  
Hospital, San Diego

**Katharine Osborn**  
(current fellow,  
2016-2019)  
Accepted position at  
Primary Children's  
Hospital, Salt Lake City

**Thomas Dalton**  
(current fellow,  
2016-2019)  
Accepted position  
at California Pacific  
Medical Center

**Jennifer Rosin  
Wiebelhaus**  
(current fellow,  
2018-2021)

**Mahnoosh Nik-Ahd**  
(current fellow,  
2018-2021)

Pediatric  
Emergency  
Ultrasound

(approved 2018; first  
fellow to start 2019)

None (yet)

Rese  
(began 2016)

**Juan Carlos Montoy**  
(2016-2017)  
UCSF/ZSFG faculty

**Charles Murphy IV**  
(current fellow,  
2018-2020)

# 2018 Year in Review

In our 10th anniversary year, the UCSF Department of Emergency Medicine continued to grow rapidly and spread our commitment to excellence for the benefit of trainees, clinical colleagues and patients in the Bay Area and around the world.



Shruti Kant, MD  
(rear right),  
observes doctors  
taking part in a  
pediatric acute  
care simulation.

## Patient Care

At UCSF Helen Diller Medical Center at Parnassus Heights – which sees a growing population of complex, highly acute patients – we undertook numerous initiatives to improve the timeliness and quality of our care. These included expanding the number of nurses on duty; initiatives to foster teamwork and communications and address flow, including twice-daily huddles; and a new “Green Zone” to expedite low- and moderate-acuity patients, as well as those appropriate for the Clinical Decision Unit. The result was that we cut in half the median door-to-provider time and reduced length of stay for discharged

patients by almost two hours. At the same time, the Clinical Decision Unit volume has also grown by 5 percent. In addition, new interventional treatments have enabled us to expand our window of care for strokes to 24 hours.

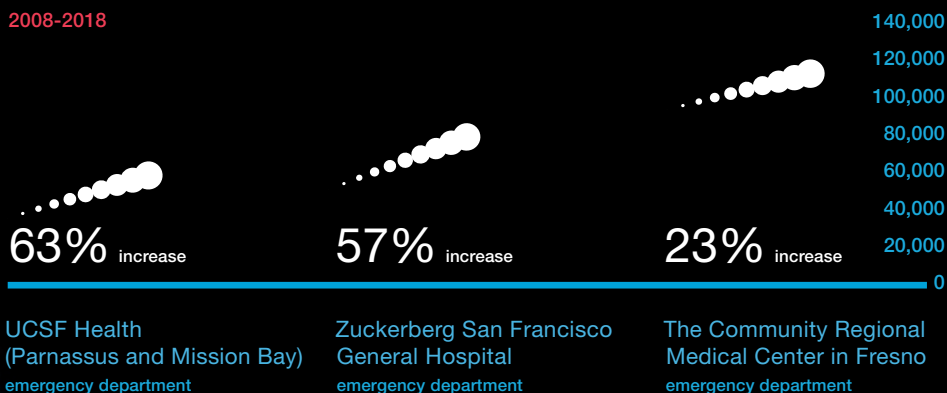
Similarly, at ZSFG, we implemented CareStart, which brings more providers to the front of the ED, helping to cut our LWBS rate in half (below 4 percent), while also getting more lower-acuity patients to settings that include urgent care, primary care or home. The ZSFG team also continued to improve door-to-vessel-opening time for stroke patients, while a new sepsis alert process reduced sepsis

mortality from over 15 percent to less than 8 percent.

As noted earlier in this report, at UCSF Benioff Children’s Hospital San Francisco we implemented our confidential suicide screening initiative for every patient above the age of 10 who arrives in the ED. Shruti Kant, MD, led implementation of our Improving Pediatric Acute Care Through Simulation (ImpACTS) program. A multi-center collaboration that includes many of the nation’s finest children’s hospitals, ImpACTS works with emergency departments across the Bay Area to improve pediatric readiness and ensure that all acutely ill children receive appropriate and timely care wherever they present.

## A Decade of Rising Volumes

2008-2018



## 2018 by the Numbers

UCSF Helen Diller Medical Center emergency department

45,802  
patient visits

30% by ambulance

UCSF Benioff Children's Hospital San Francisco emergency department

16,320  
patient visits

7.5% by ambulance

Zuckerberg San Francisco General Hospital emergency department

82,438  
patient visits

29% by ambulance

The Community Regional Medical Center in Fresno emergency department

116,562  
patient visits

39.4% by ambulance

+

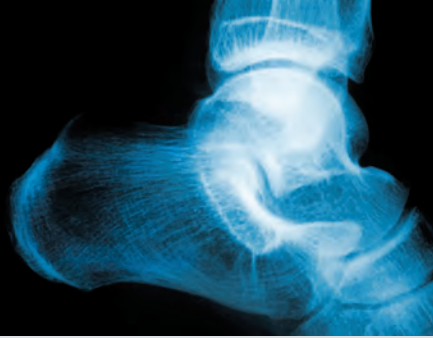
medical direction for over  
6,000 high-risk calls  
in their capacity as the  
EMS base hospital for  
the City and County of  
San Francisco and northern  
San Mateo County

## Education

Our residency program continues to be one of our crown jewels. Since our first class in San Francisco, in 2012, we have graduated 83 residents. Thirty of those residents have pursued fellowship training, and nearly 28 percent are in academic faculty positions at leading medical schools. In the academic year 2017-2018, 43 percent of the 54 residents were women and 33 percent were from UIM groups. In addition, UCSF Fresno expanded its 2019 residency class from 10 to 12 through a Proposition 56-funded CalMedForce grant, even as it earned a 10-year ACGME accreditation.

Our Emergency Medicine fellowships – highlighted in the preceding pages – continue to thrive. We also taught 22 courses in the School of Medicine, with four student coaches in the UCSF Bridges Curriculum: Steven Polevoi, MD; Eric Isaacs, MD; Christopher Peabody, MD, MPH; and William Shyy, MD. Our dedication to all aspects of our teaching mission is reflected in the recognition our faculty members and trainees receive. In 2018:

- Esther Chen, MD, received the UCSF Excellence and Innovation in Graduate Medical Education award and became GME site director for UCSF at ZSFG.
- Cortlyn Brown, MD, received the 2018 Chancellor Award for Dr. Martin Luther King, Jr. Leadership for her outstanding commitment to diversity, equity and inclusion.
- John Brown, MD, and Christopher Peabody, MD, MPH, received an Education Innovations Funding Grants Award for the 2018-2019 academic year from the Haile T. Debas Academy of Medical Educators, in collaboration with the UCSF Program for Interprofessional Practice and Education and the UCSF Library. Peabody also received the 2017-2018 Medical Student Bridges Curriculum Foundations 1 and 2 Teaching Award for Outstanding Coach.



**DAN SAVAGE, MD**  
CLINICAL INSTRUCTOR

At UCSF Fresno, the Emergency Department initiated a partnership with the Family HealthCare Network, a Federally Qualified Health Center (FQHC), wherein physicians and advanced practice practitioners see patients for walk-in and urgent care. In partnership with Community Medical Centers, Dan Savage, MD, helped spearhead a project that incorporates software to build and insert interactive clinical pathways directly into the EHR, enabling clinicians to access clinical decision support tools and order entry from the same screen. To date, the team has built eight clinical pathways, covering topics from neutropenic fever through body fluid exposure and pediatric acute bronchiolitis. The year's quality improvement (QI) projects focused on decreasing computed tomography (CT) turnaround times, implementing femoral nerve blocks for hip fractures and decreasing opiate prescriptions in the ED. Notably, Fresno's LWBS rate is down to 1.8 percent; its median door-to-provider time is 28 minutes.

## A Fresno Giant Retires

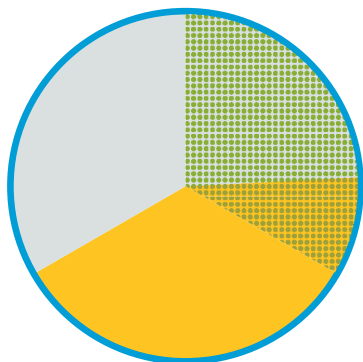
Gene Kallsen, MD, former chief of Emergency Medicine at UCSF Fresno for 23 years, officially retired after 40 years of service to UCSF Fresno. His contributions to the specialty of emergency medicine, medical education in the San Joaquin Valley and the development and stewardship of a coherent EMS system were invaluable.

**40**  
years



**GENE KALLSEN, MD**  
FORMER CHIEF OF EMERGENCY  
MEDICINE AT UCSF FRESNO





## 2017-2018 Academic Year Residents

Men: ■ Women: ■ UIM: ■

- Shruti Kant, MD; Jillian Mongelluzzo, MD; and Dina Wallin, MD, received the 2018 Excellence in Teaching Award from the Haile T. Debas Academy of Medical Educators. Mongelluzzo was also one of 16 faculty members to graduate from the 2017-2018 Teaching Scholars Program, while Kant led a team that received the Best Innovation Award for the ACEP Simbox from the Society for Simulation in Healthcare, Pediatric Section.
- Nicolaus Glomb, MD, MPH, received the 2017-2018 Maxine Papadakis Award for Faculty Professionalism and Respect at UCSF School of Medicine.
- Starr Knight, MD, was chosen by the School of Medicine class of 2019 Alpha Omega Alpha Honor Medical Society to be inducted into its UCSF chapter.
- Ellen Weber, MD, professor emerita of Emergency Medicine, received the 2018 Dickson Emeritus Professorship Award, which she will use to support her teaching and mentoring of emergency medicine research in Tanzania over two years.
- Sonny Tat, MD, received the Chancellor's Fund for Faculty Enrichment Award. It will be used to expand a program for clinical case discussions.
- Charles Murphy, MD; Daniel Repplinger, MD; and Rosny Daniel, MD, won the 2018 UCSF Emergency Medicine Outstanding Medical Student Educator Awards.

- Juan Carlos Montoy, MD, and Brenda Oiyemhonlan, MD, MHSA, MPH, received Dean's Diversity Fund awards from the School of Medicine and join the 2018 class of John A. Watson Faculty Scholars.
- Eric Isaacs, MD, was selected as the new Bridges Curriculum site director at ZSFG.

- Carol Chen, MD, MPH, received a 2018-2019 Hellman Family Award for Early Career Faculty.
- Clinical faculty member Ingrid Lim, MD, won the 2018 Charlotte Baer Memorial Award from the UCSF Volunteer Clinical Faculty Advisory Board.

## Research

In 2018, our faculty, fellows and residents published 101 articles in peer-reviewed journals, including nearly every prominent journal for emergency medicine, as well as articles in *BMJ Open*, *Circulation*, *Health Affairs*, *JAMA Internal Medicine*, *JAMA Network Open*, *New England Journal of Medicine* and *PLOS Medicine*.

### Among the year's highlights:

Associate Chair for Health Services Research Renee Hsia, MD, MSc, became the first emergency medicine specialist in the nation to be elected to the American Society for Clinical Investigation. To date, her work has resulted in more than 140 original research publications, which have been cited more than 4,400 times in peer-reviewed articles.

Associate Chair for Clinical Research Robert Rodriguez, MD, is co-investigator on a project to develop the UCSF Latinx Center of Excellence, which aims to improve the health of Latino populations and decrease health care disparities by promoting the academic careers of Latino medical students, resident physicians and faculty.

Michael Darracq, MD, MPH, received the UCSF Fresno Faculty Research Award.

The Division of Pediatric Emergency Medicine recognized its first recipients of the Harleen Dimarco Research Award, which provides seed funding for research studies. Katharine Osborn, MD, and Carol Chen, MD, MPH, will use their award to conduct the study "Evaluation of a Novel Child Passenger Safety App in Acceptability and Increasing Caregiver Knowledge in the Emergency Department." (App shown at right.)



**KATHARINE OSBORN, MD**  
UCSF PEDIATRIC EMERGENCY  
MEDICINE FELLOW



**CAROL CHEN, MD, MPH**  
ASSISTANT CLINICAL PROFESSOR



# Selected Publications

In 2018, department faculty, fellows and residents had 101 peer-reviewed publications, which speaks to our growing influence on the practice of emergency medicine. What follows is a small selection of our most impactful publications.

**A US national study of the association between income and ambulance response time in cardiac arrest.**

**Hsia RY**, Huang D, Mann NC, **Colwell C**, **Mercer MP**, Dai M, **Niedzwiecki MJ**. *JAMA Network Open*. 2018 Nov 2; 1(7):e185202.



**Prospective countywide surveillance and autopsy characterization of sudden cardiac death: POST SCD Study.**

Tseng ZH, Olgin JE, Vittinghoff E, Ursell PC, Kim AS, **Sporer K**, **Yeh C**, Colburn B, Clark NM, Khan R, Hart AP, Moffatt E. *Circulation*. 2018 Jun 19; 137(25):2689-700.



**Clinical pharmacy services in the emergency department.**

Morgan SR, Acquisto NM, **Coralic Z**, Basalyga V, Campbell M, Kelly JJ, Langkiet K, Pearson C, Sokn E, Phelan M. *American Journal of Emergency Medicine*. 2018 Oct; 36(10):1727-32.



**Triage: making the simple complex?**

**Weber EJ**. *Emergency Medicine Journal*. 2019 Feb; 36(2):64-5. Epub ahead of print October 16, 2018.



**Factors associated with emergency department use by patients with and without mental health diagnoses.**

**Niedzwiecki MJ**, Sharma PJ, **Kanzaria HK**, McConville S, **Hsia RY**. *JAMA Network Open*. 2018 Oct 5; 1(6):e183528.



**Policies that limit emergency department visits and reimbursements undermine the emergency care system: instead, let's optimize it.**

**Raven MC**. *JAMA Network Open*. 2018 Oct 5; 1(6):e183728.



**How disruptive innovation by business and technology firms could improve population health.**

Stey A, **Kanzaria HK**, Brook R. *JAMA*. 2018 Sep 11; 320(10):973-4.



**Association of legal intervention injuries with race and ethnicity among patients treated in emergency departments in California.**

Mooney AC, McConville S, Rappaport AJ, **Hsia RY**. *JAMA Network Open*. 2018 Sep 7; 1(5):e182150.



**Frequent emergency department users: a statewide comparison before and after Affordable Care Act implementation.**

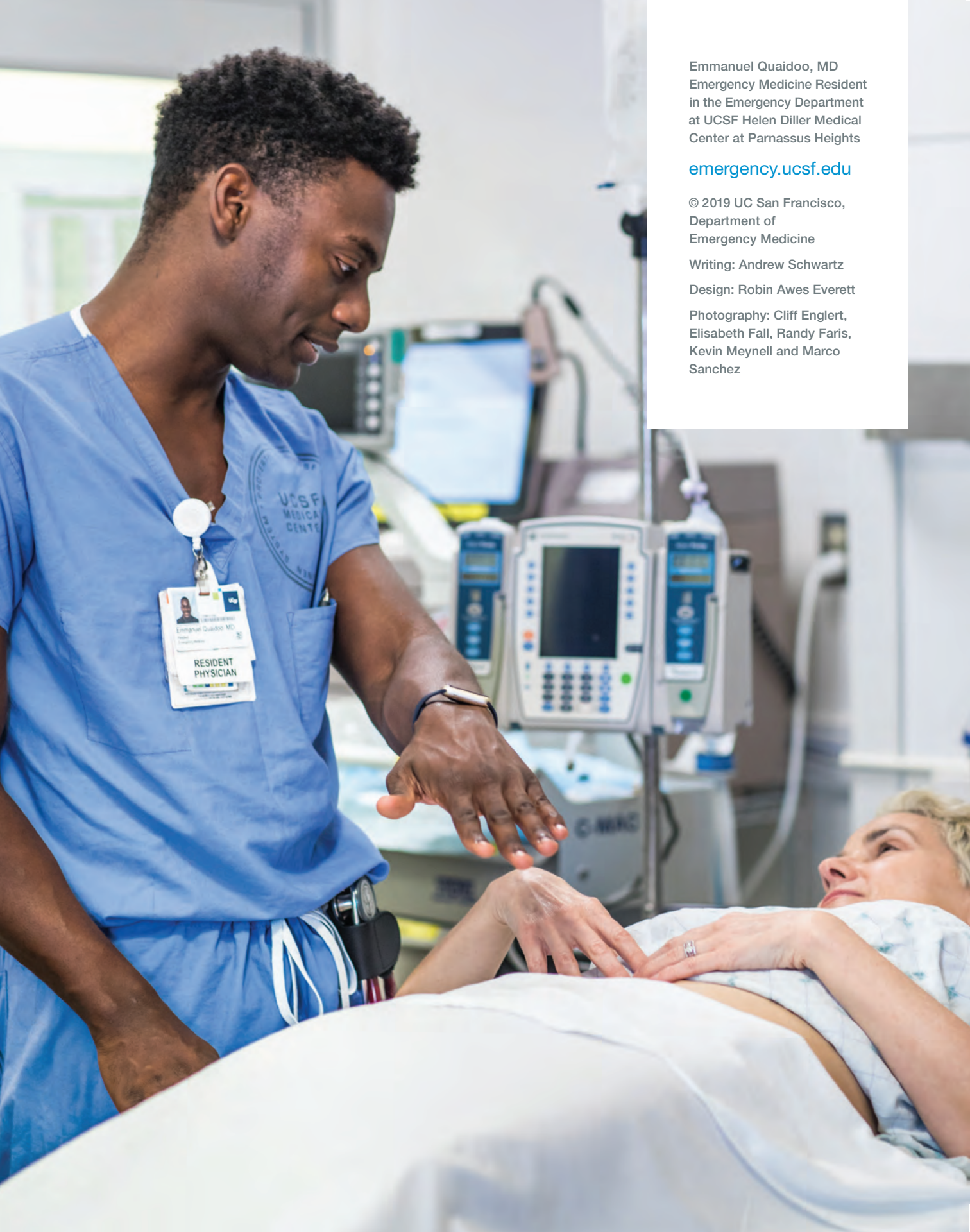
McConville S, **Raven MC**, **Sabbagh SH**, **Hsia RY**. *Health Affairs (Millwood)*. 2018 Jun; 37(6):881-9.



**Cannabis intoxication case series: the dangers of edibles containing tetrahydrocannabinol.**

**Vo KT**, Horng H, **Li K**, Ho RY, Wu AHB, Lynch KL, **Smollin CG**. *Annals of Emergency Medicine*. 2018 Mar; 71(3):306-13.





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Center at Parnassus Heights

[emergency.ucsf.edu](https://emergency.ucsf.edu)

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