Pursuing a Cure

Bending the Arc of the AIDS Epidemic

July 1, 1981: On Paul Volberding, MD’s first day as chief of oncology at San Francisco General Hospital (now Zuckerberg San Francisco General, ZSFG), he saw a young man with Kaposi’s sarcoma, a rare cancer. “It just didn’t make sense that this 22-year-old, otherwise healthy person had a cancer that should only happen to men in their 80s,” said Volberding.

He and his colleagues were at the forefront of caring for patients struck by this terrifying new disease, HIV, which now affects more than 36 million people worldwide.

Thirty-five years later, many UCSF Department of Medicine faculty members are leading efforts to end the epidemic. They received a huge boost from the Foundation for AIDS Research (amfAR), which recently made a $20 million gift to establish the amfAR Institute for HIV Cure Research. It is directed by Volberding, who also serves as director of UCSF’s AIDS Research Institute, co-director of the UCSF-Gladstone Center for AIDS Research, and associate chair for global health in the Department of Medicine.

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From the Chair

Leading the AIDS Response

My introduction to AIDS came in 1982, when I was a third-year medical student at Penn. I was on my internal medicine rotation, and our team admitted a young gay man with hectic fevers, profound shortness of breath, weight loss, and diffuse infiltrates on chest X-ray. My attending physician had recently read about similarly unusual cases reported by the Centers for Disease Control. “This thing,” he said gravely (the syndrome had not yet been named), “is changing the way we practice medicine.”

When I came to UCSF a year later for internship, I had landed in the epicenter of this once-in-a-generation health crisis. While many organizations scrambled to decrease their exposure to AIDS patients, UCSF and our department quickly rallied around the patients, their communities, and the scientists and clinicians working to address the epidemic. Thirty years later, this response stands as one of our proudest moments.

World-class researchers like Jay Levy retooled their laboratories to focus on the new pathogen. Young clinical leaders, led by Paul Volberding, developed innovative care models, ranging from a dedicated inpatient AIDS ward to a new paradigm for academic-community partnership known as the “San Francisco Model.” Some of our trainees even became internationally prominent experts. One of them, Julie Gerberding, became interested in needlestick transmission of HIV during her residency, and established a needlestick hotline and widely used prophylaxis protocols. Twenty years later, Gerberding would become director of the CDC.

Our leadership in HIV continues today, and some of today’s giants, including Diane Havlir, Monica Gandhi, and Steve Deeks, are profiled in this issue, along with Levy, Volberding, and Gerberding. There is more work to do, and our faculty, staff, and trainees are doing it.

AIDS not only taught us lessons about the science of virology and the immune response, it also taught us about clinical trial design, health policy, activism, community partnerships, and patient-centered care. It has provided us moments of satisfaction and pride, while offering far too many others of unspeakable pain and disappointment. The lessons we have learned from the AIDS epidemic have helped us grow, not only in our care of HIV patients, but in everything we do.

While no one in 1981 could have predicted the nightmare of AIDS, at the height of the epidemic no one could have predicted that today’s AIDS patients would be living for decades, some retiring from long careers and even doting over grandchildren. Nor could anyone have predicted that in 2016 we would be within sight of a cure. Through the long and tragic history of this remarkable epidemic, our department has led, boldly and passionately. Reading these stories is ample evidence that we are continuing to do so.

Sincerely,

Robert M. Wachter, MD
Professor and Chair, Department of Medicine
Holly Smith Distinguished Professor in Science and Medicine
Lynne and Marc Benioff Endowed Chair in Hospital Medicine
Julie Gerberding, MD, MPH, began her medicine internship at UCSF in 1981, just as the HIV epidemic emerged. “My cohort was the HIV cohort,” she said. “We learned not just the comprehensive medical care of people with complicated immunosuppression, but also about the social, cultural, and behavioral context of illness.”

Her patients were her best teachers. “They knew as much or more about their disease as we did, and often told me what therapy they needed and how they wanted to die,” said Gerberding. “I learned to respect the co-creation of medical solutions, which is something that has stayed with me my whole life.”

At that time, little was known about how HIV spread. “As interns, it was exciting to be blood-covered in the emergency room – it meant we were ‘real’ doctors doing important procedures,” said Gerberding, who contracted hepatitis B after caring for a dialysis patient during her training. Around that time, the Centers for Disease Control and Prevention (CDC) – the agency she would eventually lead – issued a memo stating that HIV was probably transmitted like hepatitis B. “That sent a little shock through my system,” she said. “I became very curious about the risk, and how the virus was transmitted in health care settings.”

After completing her residency, chief residency at Zuckerberg San Francisco General (ZSFG), and a fellowship in clinical pharmacology and infectious diseases at UCSF, she joined the UCSF faculty. To investigate the question of HIV transmission in hospitals more deeply, she earned an MPH degree from UC Berkeley, then took a leading role at ZSFG writing safety guidelines, guidelines that ultimately would be used around the world.

“We gave our best expert guess, based on the limited information we had,” said Gerberding. “In San Francisco, it wasn’t possible to know which patients had HIV the first time we met them, so we assumed that any blood or body fluid could be a hazard.” The approach she and her colleagues recommended became the basis for a new approach by the CDC, dubbed “universal precautions” – for example, using gloves, masks, and gowns to limit contact with all potentially infectious materials.

**Leading the CDC**

In 1998, she took a leave of absence from UCSF to go to Atlanta to direct the CDC’s division of Healthcare Quality Promotion, working to prevent hospital infections and antimicrobial resistance. “I had every intention of coming back to UCSF,” she said. Instead, she was promoted at the CDC, eventually becoming the director of the entire agency, with its expansive mission and multi-billion dollar budget, from 2002 to 2009. She led responses to many crises, including anthrax, West Nile virus, SARS, and Hurricane Katrina.

As a trainee, Gerberding had moonlighted at various emergency rooms to earn money. “Because of my ER experience, when these national crises emerged, I was comfortable making hard decisions where there was inadequate data to be 100 percent sure we were doing the right thing,” she said. “ER doctors are very good at adaptive reasoning, and we tried to apply that model at CDC. We’d say, ‘Today, this is our interim advice, but we’ll know more tomorrow. If we need to do something different, we’ll update you.’”

Her clinical experience also helped her communicate with the public. “I’m an introvert, and the only way I could get through a press conference was to pretend I was talking to a patient,” said Gerberding. “That made it a lot easier to translate the science into something people could understand, and to express the empathy that was in my heart but was sometimes hard to read off a piece of paper.”

Since 2010, Gerberding has worked for pharmaceutical giant Merck, where she is the executive vice president and chief patient officer, focusing on strategic communications, global public policy, and population health. She is particularly proud of working to reduce the manufacturing costs of vaccines for diseases like human papillomavirus (HPV) and rotavirus, thus making these more widely available in developing countries.

Outside of medicine, Gerberding enjoys gardening, Pilates, and hiking with her husband, David Rose.

Gerberding appreciates her training at UCSF, which prepared her well for her non-linear career. “UCSF is just a star,” she said. “People leave extremely well-equipped to take whatever next step they want.”

“I learned to respect the co-creation of medical solutions, which is something that has stayed with me my whole life.”

– Julie Gerberding, MD, MPH
AIDS Epidemic

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“For those of us who watched helplessly as thousands died, the opportunity to try to develop an HIV cure is truly amazing,” said Volberding. “We’re ready to end this epidemic.”

“Establishing an institute dedicated to finding a cure for HIV in a city that was once considered ground zero of the AIDS epidemic brings full circle the outstanding work that UCSF’s researchers have been doing over the past 30 years,” said Kevin Robert Frost, amfAR’s chief executive officer. “We are thrilled to be launching this exciting new venture with such an outstanding team of researchers.”

Pioneering Care of AIDS Patients

Back in 1981, the trajectory of HIV was devastating. “The community of people dedicated to fighting it was truly remarkable, and many of them, like me, had just finished their training,” said Volberding.

As the trickle of patients became a deluge, ZSFG and UCSF quickly mobilized. Dermatologist Marcus Conant, MD, convened a weekly multidisciplinary meeting to discuss the latest Kaposi’s sarcoma findings. At ZSFG, Volberding and internist Connie Wofsy, MD opened the world’s first HIV outpatient clinic in Ward 86, where they were soon joined by hematologist-oncologist Donald Abrams, MD. Soon after, ZSFG opened the world’s first HIV inpatient unit in Ward 5B.

“We had these sick, dying people without conventional families,” said Volberding. In response, he and his colleagues developed the “San Francisco Model” – onsite multidisciplinary care, including specialists in internal medicine, infectious disease, oncology, pulmonology, public health, nursing, and social work, along with community organizations like the Shanti Project and Project Open Hand.

“Nothing like [our program] happened anywhere else,” said Volberding. “It was pretty amazing. My training in oncology was really important, because the early model looked a lot like oncology – taking care of desperately sick people. It’s impossible to overstate how awful this disease was. I frequently had nightmares that I had given it to my kids.”

When an experimental test for HIV became available in the mid-1980s, Volberding was one of the first to be tested. “When I was negative, it was a complete relief,” he said. “Having taken care of so many people with bad disease, I could say ‘This is not easily transmitted’ with total confidence.”

Volberding and his colleagues met regularly with Mayor Dianne Feinstein, who secured some of the first outside funding for Ward 86 and asked ZSFG to partner with community-based physicians. Headed by Abrams, the Community Consortium was born, sharing information and leading community-based clinical trials for AIDS therapies.

ZSFG and UCSF were at the cutting edge of research. Pharmaceutical company Schering-Plough asked Volberding if ZSFG would participate in a clinical trial of recombinant interferon for Kaposi’s sarcoma patients – the first experimental treatment nationally for AIDS. “There was so much despair in the community that people showed up and said, ‘I hear you have experimental treatments – I really want to be part of it,’” said Volberding. “It established us as a place that offered state-of-the-art care.”

In that pre-computer age, Volberding compiled trial results by hand on a roll of butcher paper. Within a few years, Ward 86 was testing AZT, which became the first approved HIV treatment, followed in the mid-1990s by protease inhibitors, which became a building block for the game-changing antiretroviral therapy (ART) cocktails. “People who were on their deathbed in 1996 literally have survived to this day,” said Volberding.

Isolating the AIDS Virus

Volberding originally came to UCSF to work as a post-doctoral fellow with virologist Jay Levy, MD.

As the epidemic emerged, Volberding helped Levy collect blood and tissue samples from AIDS patients to study in his lab. Then one of Levy’s college friends referred a patient whose blood sample showed evidence of a highly active virus.

Toiling in a sweltering lab crammed into a converted 80-square-foot storage closet, in 1983 Levy and his team isolated the virus which they dubbed the “AIDS-associated retrovirus.” This was the first independent identification of what was later named the human immunodeficiency virus (HIV), which had been described by Luc Montagnier PhD, and Françoise Barré-Sinoussi, PhD at the Pasteur Institute in Paris.

In partnership with Cutter Labs, Levy also pioneered heat treatment to inactivate HIV in factor VIII, a blood product for hemophiliacs. Because of his training, Levy realized that although most of the virus would be killed within 24 hours, a fraction would survive. He discovered that it took three days to kill all the virus, a finding that helped end transmission of HIV to hemophiliacs.

Levy also made another interesting discovery. “My wife’s friend, who was a gay man, came to see me because he thought that he should be infected,” he said. Yet Levy’s lab failed to find HIV in the man’s blood sample. When they removed a type of white blood cell called a CD8+ lymphocyte from his blood culture, HIV emerged; when they added CD8+ cells back in, the virus became undetectable.

“Realizing this virus could be suppressed by the immune system was almost as dramatic as when we first isolated HIV. It raised incredible hope of using this as a way of controlling the virus.”

—Jay Levy, MD (pictured above in 1981)
controlling the virus.” His group then found that the CD8+ cells produced an unknown protein they called the CD8+ cell antiviral factor (CAF), whose structure they are still working to identify. They have determined that healthy but untreated HIV-infected individuals, sometimes referred to as long-term survivors/non-progressors and elite controllers, appear to inhibit HIV by continually producing CAF. Levy’s group is also evaluating genes that could be associated with CAF or its production.

“Early in my career, my mentors told me that if you want to learn how to combat a disease, study the people who have survived,” Levy recalled. He hopes they have found that potential secret for naturally controlling HIV.

Pursuing a Cure

Steven Deeks, MD, was a medical resident in the early 1990s, when half of ZSFG’s hospitalized patients were dying of AIDS.

While the inpatient situation was grim, he was inspired by clinic patients in Ward 86. “There was all this positive energy,” said Deeks. “You had a generation of very motivated young men working collaboratively with academics, industry people, insurance companies, and community groups as a team.”

After residency he took a one-year job at Ward 86, partnering with community-based groups on innovative HIV research studies. “That one-year job became a 25-year job,” said Deeks wryly. “Since then I’ve been identifying questions of huge relevance to my patients, and working with my basic scientist friends to help answer those questions.”

Deeks and Jeffrey Martin, MD, MPH, co-founded the SCOPE research cohort, which includes more than 2,000 HIV-infected and uninfected adults who regularly contribute blood samples and complete questionnaires about their medications, symptoms, quality of life, and high-risk behaviors. This rich resource has fueled more than 200 publications from many HIV researchers.

About five years ago, Deeks received a visit from the “Berlin patient,” reportedly the only person ever cured of HIV. The patient, an American living in Berlin, had been taking ART for years when he developed leukemia. His doctors gave him two bone marrow transplants, using donor cells with the CCR5 genetic mutation that is naturally resistant to HIV.

“Activists told me that the Berlin patient had moved here and wanted to see me,” said Deeks. “When he showed up, I said, ‘Listen, we want to figure out whether you have any virus left.’” The patient agreed to undergo numerous studies, including colonoscopies, lymph node biopsies and spinal taps. “He was a very gracious man, and contributed a lot of blood, sweat, and tears,” said Deeks. “That sparked a massive amount of research, not just here but in many places. As far as we could tell, he had been truly cured of his HIV infection. That stimulated an explosion of interest about how we might go about curing someone again.”

With support from the recent amfAR grant and other sources, Deeks and his colleagues are applying insights from the Berlin patient and the SCOPE cohort in an effort to develop a cure. One challenge is developing ways to measure low viral levels to assess whether interventions have successfully eliminated reservoirs of latent HIV that lurk in the blood, gut, lymph nodes, and elsewhere.

The team then plans to pursue a “shock and kill” strategy: finding ways to wake up dormant HIV virus and flush it out of its hiding places, then developing strategies to kill the remaining virus, such as by enhancing the immune system’s innate ability to kill HIV.

“Getting a cure requires a team effort,” said Deeks. “The amfAR grant was designed to support collaborative, focused work. Instead of rushing from deadline to deadline to hit small singles, we now have the resources to go for the home run.”

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Ward 86: Continual Innovation

Monica Gandhi, MD, MPH, was a UCSF medical intern in 1996, just as ART became available. “I watched people rise from the dead during the most formative stage of my training, and it was thrilling,” she said. “Those stories motivate you for a lifetime.” She now serves as medical director of Ward 86’s Positive Health Program, where the latest innovations include:

- **RAPID**: Scientists discovered that receiving ART as soon as possible improves patient outcomes and reduces transmission risk. In 2010, ZSFG pioneered universal treatment for everyone with HIV, rather than waiting for the immune system to fail. Now, ZSFG’s RAPID program gets patients throughout the San Francisco public health system onto ART the same day they receive an HIV diagnosis. By providing transportation, help with navigating the insurance maze, and a team of nurses, doctors, and social workers, RAPID compresses a process that usually takes weeks into one day. “It’s empowering for patients,” said Gandhi. “By evening they are taking a pill and know they’re combatting their disease.”

- **Pre-Exposure Prophylaxis (PrEP)**: This prevention tool allows people at high risk for contracting HIV – such as intravenous drug users or partners of HIV-positive patients – to take a daily pill that can reduce infection risk by 90 percent. In its first six months, the PrEP Clinic at Ward 86 helped 330 patients get on medications. Ward 86 is testing other possible preventive agents, such as a medication that could be injected once every four or eight weeks.

- **HIV and aging**: Remarkably, almost half of Ward 86’s patients are age 50 or older. While ART has changed HIV from a death sentence to a chronic disease, survival comes with new challenges, including increased risk of cardiovascular disease (likely caused by low-level chronic inflammation), memory problems, mood disorders, frailty due to ART’s bone-thinning side effects, and social isolation from losing friends and partners to AIDS.

  With support from this year’s AIDS Walk San Francisco, Ward 86 plans to open its Golden Compass Program in 2017. “We hope to help people with HIV navigate their golden years, living both longer and well,” said Gandhi. In addition to Ward 86’s existing services, the new program will likely include onsite audiology, ophthalmology, cardiology, psychology, psychiatry, and geriatrics specialists, as well as fall prevention and fitness classes, treatment for neuropathy-associated pain, and a bone density testing machine.

- **Women and HIV**: For years, Ward 86 has held a weekly women’s HIV clinic, which welcomes women to bring their children and provides breakfast, transportation vouchers, and intensive case management. The sense of community is so strong that patients sometimes come just to share information with each other in the waiting room.

  About 25 percent of Americans living with HIV are women, and poor women are at especially high risk of contracting HIV. “Many people in San Francisco believe that HIV is an epidemic of gay men, but many women go undiagnosed because they don’t think they are at risk – and that’s why they don’t get on PrEP,” said Gandhi, who is working to improve prevention and treatment of HIV in women. There is a particular need for gender-specific research, such as identifying optimal medication dosages for women, since many HIV studies mostly enroll men and extrapolate their findings to women.

  Gandhi is passionate about training, leading “mentoring the mentor” workshops to build skills such as conflict resolution and team-building. “Many pioneers in HIV are now nearing retirement age,” she said. “We hope to partner with donors to continue training the next generation of HIV physicians.”

“Many people in San Francisco believe that HIV is an epidemic of gay men, but many women go undiagnosed because they don’t think they are at risk – and that’s why they don’t get on PrEP.”

— Monica Gandhi, MD (pictured at left outside Zuckerberg San Francisco General)
Blueprint for Ending the Epidemic

As a UCSF medical resident in 1984, Diane Havlir, MD, was both fascinated and sickened by AIDS. “I wanted to fight this disease and be part of the solution to beat AIDS – the suffering and social injustices,” she said. Havlir now serves as chief of the ZSFG Division of HIV, Infectious Diseases, and Global Medicine, leading ambitious efforts to end the HIV epidemic.

She co-founded San Francisco Getting to Zero, a multisector consortium working towards zero new infections, zero HIV deaths, and zero stigma. “Despite all our advances, we still have one infection a day in San Francisco,” said Havlir. Getting to Zero’s three pillars include increasing availability of PrEP, expanding RAPID, and enhancing patients’ retention in care.

Across the Atlantic, Havlir and her colleagues launched the Sustained East Africa Research in Community Health (SEARCH) study of 340,000 people in rural Uganda and Kenya. “If we can identify all persons living with HIV and offer them treatment, how far does that take us in shutting down new HIV infections?” said Havlir. Half the participating villages are randomized to receive their country’s standard care, and half receive state-of-the-art treatment. To reduce the stigma associated with getting tested or treated for HIV, SEARCH works to improve overall community health. It offers deworming for children, bed nets, and screenings for high blood pressure, diabetes, malaria, and HIV. Participants with any of these diseases receive treatment through their local public health clinic, including ART for HIV.

SEARCH, which was recently profiled on the PBS NewsHour, solicits community input to make its interventions more effective. For example, the study began offering screenings at football matches and at night to increase participation rates among men. SEARCH also streamlined access to medications, giving patients three months’ worth of ART, thereby obviating the need for monthly appointments.

They also provide counselors to help patients disclose their HIV diagnosis to others. For example, polygamy is common in Kenya, and one patient buried her medications in a field because she was afraid her status among her husband’s other wives would decline if they knew her HIV status. The counselor helped her tell her husband that she had HIV, and he said, “I’m HIV-positive, too – that’s no problem! You don’t need to hide your medicines.”

SEARCH employs high-tech tools to follow participants who use multiple, changing names and live in villages without street signs or house numbers. The study uses biometric fingerprint imaging to confirm participants’ identity and GPS coordinates to identify patients’ homes. Patients who miss appointments receive home visits from staff. Researchers also use machine learning algorithms to predict which patients are at greatest risk of HIV infection; in the study’s newest phase, such patients will be offered PrEP.

After two years, 97 percent of participants in intervention communities were tested for HIV, 94 percent of those with HIV started ART, and 90 percent of those were virally suppressed – results that surpass any achieved in the US so far.

“Big problems like the HIV epidemic require a partnership between science, policy, and community,” said Havlir. “With 36 million people living with HIV worldwide, this epidemic is far from over. This is the time to put our foot on the gas pedal! We hope San Francisco will ultimately be seen as the blueprint of how a city responds to, addresses, and ends an epidemic.”

Learn more at:
- hiv.ucsf.edu
- tinyurl.com/LifeBeforetheLifeboat
- searchendaids.com
2016-17 Master Clinicians
Recognizing Clinical Excellence

Each year, the Department of Medicine recognizes outstanding physicians who have exceptional knowledge, superior teaching and communication skills, and an ability to provide compassionate, appropriate, effective, and high quality patient care. The newest members of the Council of Master Clinicians are profiled here.

Rheumatology Sleuth

“Diseases have personalities – they each behave and look a certain way,” said rheumatologist Jonathan Graf, MD. “I encourage trainees to get to know human diseases as they would know their patients. Getting to know a disease’s personality and when a set of symptoms does or doesn’t fit can often be more helpful in diagnosing and treating patients than memorizing lists.”

This approach helped him when he saw a patient in the Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG) rheumatology clinic with an unusual combination of skin lesions and autoantibodies. By piecing together symptoms, patient history, lab results, and medical literature, Graf and his colleagues landed on the likely cause: levamisole, a livestock deworming agent sometimes used to cut cocaine. They developed a urine test for levamisole, subsequently identified many other patients with this condition, and published several papers about this new disease.

Graf is interested in translational research, moving laboratory discoveries into the clinic to help patients. He directs the UCSF Rheumatoid Arthritis (RA) Observational Cohort, which has enrolled more than 830 patients at UCSF and ZSFG. The cohort collects clinical information and blood samples from participants, making this information available to researchers at UCSF and beyond and jump-starting investigations that seek to improve treatment of patients with RA.

His own research focuses on cardiovascular risk in RA patients. “The inflammatory response is great if you’re bitten by a tiger, but becomes maladaptive if it persists beyond an acute crisis,” said Graf. RA patients have chronic inflammation, which damages the body, including the lining of blood vessels – which is linked to increased risk of heart attack and stroke. Even RA patients whose joint swelling is well controlled appear to be at increased risk. He and his colleagues are testing whether offering advanced therapies to patients currently on standard medications leads to improved blood vessel function.

Graf is an outstanding diagnostician and teacher. “His ability to pick up on key points, draw upon his grasp of clinical medicine, and reason his way to the correct diagnosis is uncanny,” said John Imboden, MD, chief of the ZSFG Division of Rheumatology, Alice Betts Endowed Chair for Research in Arthritis, and a Master Clinician himself. “He also has a remarkable ability to make complicated issues intelligible to others.”

Dr. Jonathan Graf
Professor of Clinical Medicine, Division of Rheumatology
Director of UCSF Rheumatoid Arthritis Observational Cohort

Family Man

As a child, oncologist Thierry Jahan, MD, remembers that his mother was always tired. After doctors diagnosed her with pancreatitis and performed surgery, she was able to climb to the top of the Statue of Liberty with her children. “As an eight-year-old, I said, ‘I want to do what those doctors do – I want to give another kid his mom back.’”

Jahan grew up in France, Venezuela, and New York, and started medical school in Paris. The competition was cutthroat – less than 10 percent of first-year students advanced to the second year, and troublemakers threw dead lab mice at one professor to disrupt her lecture. Jahan enthusiastically transferred to the American educational system, where he got hooked on hematology/oncology in medical school. “It was an extraordinary emotional and intellectual challenge, and the field was starting to move in a good direction,” he said.

Soon after joining the faculty in 1994, Jahan and thoracic surgeon David Jablons, MD, co-founded the UCSF Thoracic Oncology Program, building it into a leading program for lung cancer, mesothelioma and other thoracic malignancies.

“Dr. Jahan has a gift for balancing the realities of the delivery of treatment options with an impeccable, warm, engaging bedside manner,” said Eric J. Small, MD, FASCO, chief of the Division of Hematology and Oncology, Stanford W. and Norman R. Ascherman Endowed Chair, and Doris and Donald Fisher Distinguished Professor in Clinical Cancer Research. “We offer solutions and possibilities,” said Jahan. “I tell patients, ‘This is what the average patient can expect, but I’m shooting for the good side of the bell curve.’ I empower them to make decisions about how they want to face their disease.”

Graf enjoys providing comprehensive care for patients. “Our medicines have gotten really good, so we can often help with their pain, fatigue, and other symptoms,” he said. “I also make sure that they’re getting sleep, exercise, physical and psychological therapy, and home support. As they go through life, we’ll be there for them, too.”

Graf is married to Jessica Graf, a rabbi. Together they have two young children, Arielle and Zachary, and enjoy hiking and traveling.
When his own father was diagnosed with mesothelioma, Jahan suggested a recently approved drug that did not increase survival but helped reduce symptoms. His father savored one last holiday season with his children and grandchildren, then died two weeks later. “That experience was painful but extraordinarily informative,” said Jahan. “I have a pretty good idea of what patients and families go through, and it helped shape how I do things.”

In addition to leading many clinical trials, Jahan helped draft the National Comprehensive Cancer Network guidelines for lung cancer treatment, used by Medicare and most insurance companies to make coverage decisions. He also served on the UCSF Committee on Human Research and the Data Safety Monitoring Committee, helping ensure that clinical trials are conducted safely and ethically.

Jahan is the rare physician who enjoys conducting research audits, poring through patient charts in windowless rooms. “Rather than telling people, ‘You’re doing a bad job,’ I see it as a teachable moment – ‘Here’s what you’re doing well, and here’s how you can do better,’” he said.

Jahan enjoys playing ice hockey and attending the San Francisco Symphony, and is married to pediatrician Valerie Jahan, MD. They have three grown children: Kenneth, Lillian and Robert.

**Embracing the Story**

“The final years of life often come with difficulties, including physical or cognitive decline,” said geriatrician Helen Kao, MD. “I try to help my patients live rich lives, make their disabilities more tolerable, and prepare them for the last step of their journey.”

Growing up, Kao loved stories and dreamed of becoming a writer. But after college, she worked at the Harvard School of Public Health for a doctor who encouraged her to become a physician. As a medical student and resident at UCSF, her fascination with life stories drew her to geriatrics, which she describes as “very story-driven.”

“What I do is 50 percent medical and 50 percent everything else,” said Kao. For example, for a dementia patient with balance problems who loved to bowl, she found a disability bowling league near his hometown. “Just like I need to understand what a medication does, I need to know what’s available in someone’s community to optimize their well-being,” said Kao. “I really like digging into that.”

She has a particular interest in dementia, which affects a growing number of seniors and impacted her own grandparents. “If the patient is not disturbed by their hallucinations, we encourage caregivers to be in their loved one’s reality,” said Kao. “It’s much less distressing than constantly telling them, ‘No, it’s not 1942;’ or ‘There are no airplanes in the house.’”

Her accomplishments include co-founding the UCSF-UC Hastings Medical Legal Partnership for Seniors, which trains law students how to handle legal issues affecting elders’ health, such as end-of-life treatment. She also served as medical director of the UCSF Housecalls program and founded the UCSF Geriatric Transitions program (later reconfigured into UCSF Bridges).

These programs provide primary, transitional and palliative care to homebound patients, and mobilize quickly if a team member notices a potential health crisis brewing. “I can ask my nurse practitioner to do an urgent visit, get my patient care coordinator to reach out to the home health agency, and have my social worker initiate an intervention – all of which seamlessly unfolds within 24 hours and averts the patient having to go to the emergency room,” said Kao.

“Dr. Kao possesses exceptional skills as a compassionate and caring clinician and is a pioneer in health systems innovation, working tirelessly to improve how we care for our frailest, most vulnerable patients,” said Louise C. Walter, MD, chief of the Division of Geriatrics.

One piece of advice has been particularly helpful in building these programs: do things in series when you cannot do them in parallel. “Don’t try to do everything at once,” said Kao. “Do things sequentially if that’s the only way to accomplish them.”

She is now applying that advice in a new arena. In July, she moved to Corvallis, Ore., to join her new husband, emergency room physician Gabriel Ledger, MD; they are expecting their first child. Kao continues to serve as a UCSF volunteer faculty member, works part-time at Oregon Health and Science University, and hopes to build a geriatrics and dementia care program in the Corvallis area.
Faculty Awards

Congratulations to the faculty in the Department of Medicine for their achievements and contributions during 2015–16. They include the following awards and honors:

Public Service Committees, Societies, Associations, and Publications
Doug Bauer, MD
Appointed to the FDA Review Panel: Bone, Reproductive and Urologic Drugs Advisory Committee
Kirsten Bibbins-Domingo, MD, PhD, MAS
Appointed Chairperson, US Preventive Services Task Force
Trever Bivona, MD, PhD
Pew-Stewart Scholar for Cancer Research
Valy Fontil, MD, MAS
John A. Watson Faculty Scholar
Eric Goosby, MD
Appointed Chair, Global Health Sciences, MacArthur Foundation
Sarah Schaeffer, MD, MPh
John A. Watson Faculty Scholar
Michelle Schneidermann, MD
National Excellence in Medical Respite Care Award, National Healthcare for the Homeless Council
Karen Seal, MD, MPh
Federal Employee of the Year, San Francisco Bay Area – Technical or Scientific Category
Ariane Teherani, PhD
Faculty Climate Action Champion – San Francisco UCSF Teaching and Mentoring Awards

UCSF Teaching and Mentoring Awards
Jennifer Babik, MD, PhD
Excellence in Teaching Award, Haile T. Debas Academy of Medical Educators
Academic Senate Distinction in Teaching Award
Vincent G. Pons Award for Excellence in Clinical Infectious Diseases Teaching

Anna Chodos, MD
Excellence in Teaching Award, Haile T. Debas Academy of Medical Educators

Lukejohn Day, MD
Resident Research Mentoring Award
Denise Davis, MD
Elected, Haile T. Debas Academy of Medical Educators

Gurpreet Dhaliwal, MD
Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award, Association of American Medical Colleges

Jessica Eng, MD, MS
Excellence in Teaching Award, Haile T. Debas Academy of Medical Educators

Mitchell Feldman, MD, MPhil
Elected, Haile T. Debas Academy of Medical Educators

Emily Finlayson, MD, MS
Excellence in Teaching Award, Haile T. Debas Academy of Medical Educators

Claire Horton, MD, MPH
Elected, Haile T. Debas Academy of Medical Educators

Meshell Johnson, MD
Floyd C. Rector, Jr., Housestaff Teaching Award

Susan Kegeles, PhD
Academic Senate Distinction in Mentoring Award

Andrew Leavitt, MD
Essential Core Teaching Award for Commitment to Teaching

Annie Luethkemeyer, MD
Meg Newman Teaching Award from the ZSFG Division of ID, HIV and Global Medicine

Edgar Pierluissi, MD
Resident Research Mentoring Award, Haile T. Debas Academy of Medical Educators

Sumant Ranji, MD
Elected, Haile T. Debas Academy of Medical Educators

Josette Rivera, MD
Elected, Haile T. Debas Academy of Medical Educators

Justin Sewell, MD, MPh
Elected, Haile T. Debas Academy of Medical Educators
Alpha Omega Alpha Honor Medical Society, elected by UCSF Medical Student Class of 2016

Dean Schillinger, MD
Hal Luft Health Services Research Career Mentoring Award

Sheri Weiser, MD, MA, MPh
Academic Senate Distinction in Mentoring Award

Endowed Chairs and Distinguished Professorships
Francesco Boin, MD
Robert L. Kroh Chair in Rheumatic and Connective Tissue Diseases I

Laura Koth, MD
Robert L. Kroh Chair in Rheumatic and Connective Tissue Diseases II

Gregory Marcus, MD, MAS
Endowed Professorship in Atrial Fibrillation Research I

Steven Pantilat, MD
Kates-Barnard & Hellman Distinguished Professorship in Palliative Care

Charles Ryan, MD
Thomas Perkins Distinguished Professorship in Cancer Research

George Rutherford, MD
Salvatore P. Lucia Chair in Preventive Medicine

Anthony Shum, MD
Robert L. Kroh Chair in Rheumatic and Connective Tissue Diseases III

Zian Tseng, MD, MAS
Murray Davis Endowed Professorship I

Jinoos Yasdany, MD, MPh
Robert L. Kroh Chair in Rheumatic and Connective Tissue Diseases IV

Julie Zikherman, MD
Robert L. Kroh Chair in Rheumatic and Connective Tissue Diseases V

UCSF Honors
Donald Abrams, MD
Elliott Rapaport Award for Dedication and Commitment to Zukanberg San Francisco General Medicine & Dedication to the Humanitarian Mission of ZSFG

Ann Bolger, MD
John F. Murray Award for Academic Excellence in Internal Medicine

Peter Chin-Hong, MD
Alpha Omega Alpha Honor Medical Society, elected by UCSF Medical Student Class of 2016

Malcolm John, MD
Selected as one of the UCSF School of Medicine Dean’s Diversity Leaders

Mitchell Lunn, MD
2015 UCSF Chancellor Diversity Award for Gay, Lesbian, Bisexual, and Transgender (GLBT) Leadership in the postdoc/student/trainee category

Joseph Mike McCune, MD, PhD
2016 Holly Smith Award for Exceptional Service to the School of Medicine

Carmen Peralta, MD, MAS
UCSF Pepper Center Genius Award for research in Geriatrics

Binh An Phan, MD
Henry F. (Chip) Chambers, MD Medicine Subspecialty Consultant Award at ZSFG

Jae Sevelius, PhD
2016 Early Career Research Excellence Award for Social/Behavioral Science, UCSF Glade Institute for AIDS Research

Gina Solomon, MD, MPH
UCSF Sustainability Award

Larissa Thomas, MD
Performance & Quality Improvement Award, ZSFG

Louise Walter, MD
Alpha Omega Alpha Honor Medical Society, elected by UCSF Medical Student Class of 2016

Margaret Wheeler, MD
Inaugural Distinction in Medical Education Award at ZSFG

Professional Organizations
Michelle Albert, MD, MPh
Inducted into the Association of University Cardiologists

Mark Anderson, MD, PhD
Elected, Association of American Physicians

Kamran Atabai, MD
Elected, American Society for Clinical Investigation

Kirsten Bibbins-Domingo, MD, PhD, MAS
Elected, National Academy of Medicine

Trever Bivona, MD, PhD
Elected, American Society for Clinical Investigation

Andrew Bindman, MD
Elected, National Academy of Medicine

Rebecca Brown, MD
American Geriatrics Society Outstanding Junior Investigator of the Year Award

Lukejohn Day, MD
CAPHI/SNI Quality Leaders Award

R. Adams Dudley, MD, MBA
Elected, Association of American Physicians
Appointments and Promotions

Andrew Gross, MD, was appointed associate chair for ambulatory care and population health for the Department of Medicine, executive medical director for Department of Medicine ambulatory practices within UCSF Health, and the inaugural holder of the Ken Sack, MD Endowed Chair in Rheumatology. He leads efforts to ensure that patients receive the best, most satisfying care at the lowest cost, and works directly with each ambulatory practice to ensure that they meet organizational goals for improvement.

Gross received his medical degree from Tufts, completed internal medicine and rheumatology training at Tufts-New England Medical Center, was a microbiology and immunology postdoctoral fellow at UCSF, and joined the UCSF faculty in 2003. A practicing rheumatologist, Gross has a special interest in rheumatoid arthritis, lupus, and scleroderma, a strong interest in clinical research, and has led the rheumatology practice since 2008.

Sumant Ranji, MD, was appointed chief of the Division of Hospital Medicine at Zuckerberg San Francisco General Hospital and Trauma Center. His work focuses on improving the quality and safety of care for hospitalized patients and educating residents and medical students. Ranji served as the associate program director for quality and safety programs for the UCSF Internal Medicine residency program for nine years, and is an associate editor of both AHRQ Patient Safety Network and BMJ Quality and Safety.

Ranji earned a medical degree at the University of Illinois at Chicago, completed internal medicine residency at the University of Chicago Hospitals, and was chief resident at Cook County Hospital in Chicago. He completed a fellowship in hospital medicine and clinical research at UCSF, and joined the UCSF faculty in 2004.

In Memoriam

Richard Havel, MD, a pioneer in the field of lipoproteins and former director of the UCSF Cardiovascular Research Institute (CVRI), died on April 9. He was 91.

Havel received a bachelor’s degree from Reed College and a master’s degree in chemistry and a medical degree from the University of Oregon. He completed internal medicine residency at Cornell, and initiated his research on lipoproteins and lipid transport at the National Heart Institute in Bethesda, Md. He joined the UCSF faculty in 1956 as one of the founding members of the CVRI, serving as its director from 1973 to 1992.

Among other discoveries, Havel refined and optimized the methodology for separating good cholesterol (HDL) from bad cholesterol (LDL), and conducted one of the first studies demonstrating that lowering LDL cholesterol led to a reduction of atherosclerosis. His paper on lipoproteins in human serum published in the Journal of Clinical Investigation remains among the most cited publications in the field of lipid biology.

Hibbard “Hib” Williams, MD, the first chief of the UCSF medical service at Zuckerberg San Francisco General Hospital, died on July 26. He was 83.

Williams, an endocrinologist and expert on kidney stone disease, received his medical degree from Cornell and completed internal medicine residency at Massachusetts General Hospital. At UCSF, he served as chief of the Division of Medical Genetics, vice chair of the Department of Medicine, and executive chief of staff. He later became chair of the Cornell University Department of Medicine, then became the dean of UC Davis School of Medicine, where he guided the rapid growth of UC Davis into a major medical research facility.

Williams was a caring physician who held the highest standards for patient care and teaching. He had tremendous enthusiasm for medicine, an infectious laugh, and encyclopedic knowledge of internal medicine.
Robert M. Wachter, MD, an internationally known expert in patient safety, quality, and information technology who is also widely considered the academic leader of the hospitalist field, was appointed chair of the UCSF Department of Medicine in October. Wachter, who served as interim chair since 2015, will also become the Holly Smith Distinguished Professor in Science and Medicine; he already holds the Lynne and Marc Benioff Endowed Chair in Hospital Medicine.

Wachter graduated magna cum laude from the University of Pennsylvania, where he studied political science and was Penn’s school mascot (the Quaker) his senior year. He then attended Penn’s Perelman School of Medicine; the school named him its alumni of the year in 2015. He completed residency and chief residency in internal medicine at UCSF, followed by a Robert Wood Johnson Clinical Scholar fellowship at Stanford.

Author of 250 articles and six books, he coined the term “hospitalist” in 1996 and is generally considered the father of the hospitalist field, the fastest growing specialty in the history of modern medicine. He is past president of the Society of Hospital Medicine and past chair of the American Board of Internal Medicine.

Wachter also edits the United States government’s leading website on patient safety and has written two books on the subject. In 2004, he received the Eisenberg Award, the nation’s top honor in patient safety. His 2015 book, *The Digital Doctor: Hope, Hype and Harm at the Dawn of Medicine’s Computer Age*, was a *New York Times* science bestseller. He recently chaired a group advising England’s National Health Service on its digital strategy.

In 2015, *Modern Healthcare* magazine ranked him as the most influential physician-executive in the U.S., his ninth consecutive year in the top 50. At UCSF, Wachter served as internal medicine residency program director, then as founding chief of the Division of Hospital Medicine and chief of the Medical Service at UCSF Medical Center. His local honors include the Academic Senate Distinction in Teaching Award and the Holly Smith Award for Exceptional Service to the School of Medicine.

Wachter, who enjoys golf, piano, and tweeting (@Bob_Wachter), lives in San Francisco with his wife, *New York Times* journalist and author Katie Hafner. They have three grown children, Doug, Benjy, and Zoë, and a miniature poodle, Newman.