



UCSF Department of Medicine ZUCKERBERG SAN FRANCISCO GENERAL

DOS LARGOS AÑOS: REFLECTING BACK, LOOKING FORWARD

Last month marked two long years (*dos largos años*) since the World Health Organization declared COVID-19 a global pandemic. The ZSFG Department of Medicine rose to this unprecedented challenge – discovering more about this mysterious new disease, caring for the patient populations hit hardest, and pioneering new treatments and approaches to care delivery that helped San Francisco achieve among the lowest mortality rates of any American city. This was an enormous team effort, and every person at ZSFG continues to play a vital role in caring for our patients and communities. We invited four members of our Department to reflect on lessons learned, how they can be applied in the future, and what the road ahead might look like.



Courtesy of UCSF News. Photo by Mike Kai Chen

Communication is Key

“In a time of crisis and great uncertainty, ZSFG and the Department of Medicine really came



Lukejohn Day, MD

together to communicate, use data to drive and adjust decisions, and be proactive rather than reactive,” said Lukejohn Day, MD, Chief Medical Officer at ZSFG and Professor of Medicine in the ZSFG Division of Gastroenterology.

ZSFG used the “four Cs” – cohorting, care teams, capacity, and containment – to develop its surge plans and guide daily operations for the influx of patients with COVID-19. The surge plans were based on a phased, five-tiered approach; ZSFG reached the second-highest surge activation level in both January 2021 and January 2022.

“In addition to caring for patients using dedicated care teams, we thought about how to ensure capacity to care for all our other patients and contain the spread of COVID,” said Dr. Day. That develop-

ment of robust, data-driven plans for everything from masking, coming to work, and how meetings were conducted to visitor policies and vaccinations. “We had operational plans that fed into one centralized plan, so everyone knew what to do once we reached certain [hospitalization] levels.”

The pandemic crisis spurred an evolution in communicating large amounts of information in a clear, succinct, and useful way. For example, the Hospital Incident Command System launched a daily, highly structured 15-minute meeting attended by about 100 leaders at ZSFG. A commander facilitates updates about national, state, and ZSFG COVID positivity rates, followed by reports on key operational areas and discussion of current issues. Smaller committees are formed to address particularly challenging topics, such as staff screening or visitors. “We try to be as consensus-driven as possible,” said Dr. Day. “That’s helped us get buy-in from everyone across campus.”

ZSFG uses multiple modalities to keep the entire organization informed. Key leaders send daily

emails with COVID updates and links to resources such as the latest public health orders or how to make an appointment with Occupational Health. This same information is shared via daily huddles in each operational area, and staff feedback is routed back to leadership. ZSFG also hosts periodic town halls about important changes to share information and next steps, and provide a forum for staff to voice questions and concerns. “I think people felt we were forthcoming and honest, and had avenues to give back information,” said Dr. Day. “It was a two-way street of communication. That helped people feel like they were part of a system and could contribute to it.”

Dr. Day is also proud of the work that ZSFG has done to further improve care coordination across primary and specialty care. For example, if a patient comes in for an appointment with a specialist, the team can offer them a COVID vaccine or flu shot on the spot, as well as schedule other needed appointments. “When we see a patient, that may be the only time they are entering the

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health care system,” he said. “We want to take full advantage of having direct engagement with the patient by interconnecting siloes. We tried to do a lot of care coordination before, but the pandemic really accelerated that.”

“Epic was foundational, providing a single integrated platform to communicate amongst various providers and document care across all areas,” said Dr. Day. “It also provided a rich, robust source of data to inform us operationally. For example, we were able to see hotspots, outbreaks, and which communities were being most impacted by COVID-19 early on. That helped inform decisions around community outreach and partnering with community-based organizations.”

“My hope is that we’re moving towards the endemic stage of COVID-19, where we can return to some sense of normalcy and get to a point where it’s at the back of our minds, but not the forefront,” said Dr. Day. “We’re thinking about what we’ve learned over the last two years, and re-evaluating our plans to help ensure that we can keep all our operations open moving forward. We’re also thinking about how to address all the traumas people have encountered. They are tired. It’s going to take a long time to heal from the pandemic. How do we ... ensure that everyone’s well-being is taken care of?”

Dr. Day is in awe of the exceptional work that everyone at ZSFG has done to help the community. “The way that everyone came together to protect one another and our patients, despite the many challenges, is a testament to the innovation and mission-driven nature of our staff,” he said. “It’s inspiring, and reaffirms why I went into medicine and wanted to work in the safety net.”

Engaging and Partnering

When the pandemic first hit, Carina Marquez, MD, was alarmed by how many COVID patients in the ICU were Latinx essential workers. “We knew that was probably just the tip of the iceberg, and we needed to develop community partnerships to understand the drivers of this new infection,” said Dr. Marquez, Associate Professor in the ZSFG Division of HIV, Infectious Diseases, and Global Medicine.

She and her colleagues joined forces with the

Latino Task Force, which had coalesced in response to the pandemic and is led by a grassroots group of activists with decades of experience in community-based organizations. In April 2020, the Latino Task Force, UCSF, UC Berkeley, and the Chan Zuckerberg Biohub established Unidos en Salud (United in Health), conducting one of the first community-based prevalence studies of COVID-19. “We expected disparities, but in the Mission District census tract we tested, Latinos who could not shelter in place had a risk of COVID infection that was 20 times higher compared with non-Latinx residents,” said Dr. Marquez. “We saw early social drivers of disparities in action, and it was heartbreaking.”

That data was foundational to developing an effective response. Unidos en Salud worked with Supervisor Hillary Ronen to establish San Francisco’s Right to Recover Program, which provides financial support to COVID-positive adults without sick pay or unemployment insurance, regardless of citizenship or immigration status. “That was one of the most exciting things, to see what can happen when physician-scientists are in true partnership with the community,” said Dr. Marquez.

Unidos en Salud also piloted and refined low-barrier testing at 24th and Capp Streets, and has provided more than 82,000 COVID tests. They offer convenient, friendly services in English and Spanish, which are open to everyone regardless of insurance status – providing critical access to the 40 percent of participants who are uninsured.

They also developed a novel “test-to-care” model,



Antonio Gomez, MD, Division of Pulmonary and Critical Care, became the first person in San Francisco to receive the COVID-19 vaccine on December 15, 2020.

Courtesy of UCSF Pulmonary, Critical Care, Allergy and Sleep Medicine

which offers extensive support for those who test positive for COVID. “Promotores de salud, also known as community health workers, call the patient, disclose the test result, give information about isolation and quarantine, and provide referrals to therapeutics, the Right to Recover Program, and food support,” said Dr. Marquez. They can also call every day or two to check in, coordinate food delivery and other services, triage care if symptoms worsen, and deliver home tests to re-test at Day 5 or test other household members who can’t get to a testing site.

Dr. Marquez recalled one patient in his 80s who tested positive for COVID early in the pandemic and worried about infecting his family. “He told us, ‘Oh, I’m just going to stay at my friend’s house,’” she said. After numerous follow-up calls, a community health worker learned he was staying in an abandoned building. “Because of the trust she had built with him, she quickly got the patient into a DPH isolation and quarantine hotel, and had food delivered to him and his family,” said Dr. Marquez. “Moving forward, we need to think about how to sustainably integrate community health workers into the health care system.”

Unidos en Salud applied many lessons from low-barrier testing to developing its community vaccination programs, which have now administered more than 47,000 vaccines. “In surveys, many people said that someone they trusted rec-



Carina Marquez, MD



commended our site, or that they told their friends about us,” said Dr. Marquez. “That trust spreads through word of mouth, and is one of the reasons we’ve had such a high vaccination rate among Latinos in San Francisco.”

Unidos en Salud now also provides onsite HIV and diabetes testing, as well as linkages to Healthy San Francisco and primary care. By partnering with the lab of Joe DeRisi, PhD, Professor of Biochemistry and Biophysics at UCSF and Co-President of the CZ Biohub, they also sequence positive tests from consenting patients, which has helped detect the arrival of new variants in San Francisco and shed light on their impact. And with the advent of therapeutics such as Paxlovid and monoclonal antibodies, Dr. Marquez is excited to build out a “test-and-treat” model of care for COVID, incorporating lessons from HIV in which newly diagnosed patients receive therapeutics immediately, when they are most effective.



Chesa Cox, Division of HIV-ID-Global Medicine, (right) at United in Health COVID test site in 2020.

As a Spanish-speaking infectious disease expert, Dr. Marquez was ideally positioned to help lead the community response to COVID. She is also working to diversify the workforce as Equity Lead for the Center for AIDS Research and Director of Diversity, Equity, and Inclusion for the UCSF Infectious Diseases Fellowship. “It’s not only the right thing to do – it’s also a key component of addressing disparities,” she said. “It’s important for a community to see physicians and scientists who speak their language and look like them. I’ve had people tell me, ‘I decided to get the vaccine because we had that conversation, and I trusted you as a Latina doctor.’ Representation matters.”

Building relationships based on trust – on both individual and community levels – is essential to this effort. “The Latino Task Force is a central

partner, and we’d be nothing without them,” said Dr. Marquez. “Like any marriage, it takes work. Really listening to the community and engaging in true partnerships is critical to addressing disparities.”

Everything Is Interconnected

“I’m really proud of the way that people and teams at the General came together in such an incredible way over the last two years,” said Vivek Jain, MD, MAS, Co-Medical Director of the ZSFG Infection Prevention and Control Program, Director of the ZSFG Infectious Disease Clinic, and Associate Professor in the ZSFG Division of HIV, Infectious Diseases, and Global Medicine. “Together we were able to create new systems of care, knock down barriers, take care of patients, and stay current in a rapidly shifting landscape.”

As soon as the pandemic hit, Dr. Jain and his colleagues established daily multidisciplinary hospital rounds to review the care of every single patient hospitalized for COVID, every day during the surges of January 2021 and January 2022 that included upwards of 70 patients. In addition to Dr. Jain, the team includes his colleagues from the ZSFG Infection Prevention and Control Program – Co-Medical Director Lisa Winston, MD, and Program Manager Elaine Dekker, RN, BSN, CIC – as well as infectious disease expert Annie Luetkemeyer, MD, surgeon Lucy Kornblith, MD, and nurse leader Tanvi Bhakta, MSN, RN, CNL.

“These multidisciplinary rounds have been transformative, because it’s linked people from Internal Medicine, Pediatrics, Surgery, OB/GYN, and a number of other departments, all collaborating on COVID care,” said Dr. Jain. Attending physicians from each area call in at scheduled times, and the team reviews each patient’s clinical status and gives therapeutics advice. “These rounds are comprehensive, yet fast and efficient,” said Dr. Jain. “It enables us to ensure that really high-quality, guideline-driven care is given to every patient in a uniform way.” That has contributed to excellent patient outcomes: for ZSFG patients hospitalized with COVID-19, the mortality rate was 4.8 percent, lower than observed at several other urban centers. “That’s a testament to the outstanding



COVID test site in the Mission District of San Francisco in 2020

multidisciplinary care that we have been able to provide at ZSFG,” he said.

The clinical trials teams also participate in these rounds. They learned about each newly hospitalized COVID patient, screened them for clinical trial candidacy, and offered them the opportunity to participate in studies of the latest therapeutics. “The vulnerable patients we care for at ZSFG are historically quite underrepresented in clinical trials, and our system allowed them to have access to emerging new treatments,” said Dr. Jain.



Vivek Jain, MD

Another major innovation was building a large outdoor COVID-focused plaza in what had been the parking lot between Building 80 and the Avon Breast Imaging Center. ZSFG started constructing the space in March 2020, and throughout the pandemic it has been adapted to provide COVID testing, Occupational Health Services, research studies, and vaccinations. “Building that plaza was a big undertaking, but it happened quickly and has been a big part of our response here on campus,” said Dr. Jain. “It showed that if we work together, we can move mountains quickly.”

The pandemic also underscored the need to design integrated systems of care. “We’ve always known this, but COVID emphasized the importance of not seeing the hospital, outpatient clinics, and community as separate zones, but instead as fundamentally linked domains,” said Dr. Jain. “That’s never been truer than during an infectious disease pandemic. A lot of focus during COVID has cen-

tered on the hospital side, but the outpatient and community teams have done enormous amounts of COVID work, including diagnosing and treating patients, talking with their family members, and developing policies and protocols. The whole system rises and falls together.”

That interconnectedness extends beyond ZSFG to the whole city. Dr. Jain talks nearly every day with colleagues at hospitals across San Francisco, sharing innovations and cross-pollinating ideas. “I’m proud of the General’s role in helping San Francisco achieve some of the lowest case and death rates of any major metropolis in the world,” he said. “We’ve played a big role in the overall systems of San Francisco that have achieved those metrics.

“I’m very optimistic about 2022 and the road ahead,” said Dr. Jain. “We have better diagnostic tools, much more availability of rapid tests, far more therapeutic options than ever before – including antibody treatments and oral drugs for COVID – and vaccines and boosters which have been very successful in reducing disease. With all of that, we have to maintain progress. We may very well have intermittent case waves, and we need a different model for health care funding so we can weather these waves without our system going in and out of emergency mode. We also have a lot of medical care to deliver that’s been delayed by the pandemic. I’m excited to tackle a lot of work in my field of HIV, including globally.”

“I also think it’s important to reconnect with patients and others, live our lives, revitalize our bonds, and rekindle connections,” said Dr. Jain. “People need to see each other, and we can do that safely, even if COVID is persisting.”

Support in Many Ways

In her role as ZSFG Department of Medicine Research Administration Manager, Raeni Miller supervises a group of six post-award analysts who help faculty navigate the complex world of grants management. These include contracts from the National Institutes of Health and other government agencies, as well as private foundations, industry-sponsored clinical trials, gifts, and endowments.

In March 2020, Ms. Miller and her team transitioned overnight from working together in one

office to working distantly from home. “We had new systems that rolled out that everyone had to learn remotely,” she said. “It was very challenging.” In response, she set up three Zoom meetings per week for the team to share information, policy updates, and tips in a rapidly changing environment.

The silver lining was that four additional post-award analysts who are based in various divisions throughout the ZSFG Department of Medicine could also participate in these meetings. “Before COVID, we’d see each other every couple of months in the hall,” said Ms. Miller. “But during the pandemic, we became an even bigger and better team, sharing things we figured out with the whole group, all at once. To this day, we still have weekly meetings, and it’s been really nice to strengthen those relationships.”

There was also a huge upswell in COVID-related research. “When the pandemic hit, all the faculty dropped everything and swiveled over to COVID,” said Ms. Miller. “The Infectious Disease, Cardiology, Pulmonary, and other groups just pivoted



Raeni Miller

with lightning speed.” The grant application process, particularly for government funds, is notoriously slow and filled with red tape. But COVID was a different story. “I’ve never seen anything move so fast,” she said. “The government quickly crafted calls for proposals specific to COVID, and was issuing awards left and right. Grants were submitted and funded within four days, then got set up in our system within two or three days. Everyone came together so they could get boots on the ground and just start their research.”

Ms. Miller appreciated the communication and updates from department leadership. “Dr. [Neil] Powe and Laurae Pearson were very transparent and vulnerable by saying, ‘This is what we know; this is what we don’t know,’” she said. “We got a lot of intel about what was going on at the hospital, and that made the pandemic really tangible.”

She also valued the informative Friday UCSF town halls. “There was so much conflicting information in the media, but we got to hear from people like



George Rutherford, Monica Gandhi, and Peter Chin-Hong, who are some of the smartest people in the world,” said Ms. Miller. “It’s why I love my job. I work with a lot of these people. They’re in it for the public health mission, not money, fame, or glory. All the faculty work so hard, behind the scenes and in front of the camera. Their stamina is amazing! They expect 110 percent of themselves, and that makes me expect 110 percent of myself as well, so they can do their incredible work.”

Even though there was a Herculean amount of work, Ms. Miller slowed down to better understand how she could best support her team. “The pandemic gave me the opportunity to think about how manager-employee relationships should be, instead of just being absorbed in how busy everything is,” she said. “I tried to have an ongoing dialogue with each member of my team: ‘Do you want to do Zoom? Phone calls? Let’s talk about work, but also about your mental health...If you don’t want to talk about personal things with me, that’s perfectly fine, too. I can share resources if you want to talk to someone else.’ I tried to help people feel like this wasn’t just work – it’s their community, and they can share their problems and know there’s support for them.”

Ms. Miller is proud of how well her team flexed in response to the pandemic and maintained their high standard of work. “The whole world shut down for a while, but the researchers kept going,” she said. “I hope my team feels pride knowing that they supported proper management of these research grants. I hope they can use this experience to say, ‘I didn’t think I could do this, but I did it – and now I can do anything.’”

Elizabeth Chur

Editors: Neil Powe, Laurae Pearson, Brooks Bigart



ZSFG DOM Physician COVID-19 Clinical Service Recognition Awards

The ZSFG Department of Medicine Physician COVID-19 Clinical Service Recognition Awards honor excellence for outstanding service, extraordinary dedication in clinical leadership, direct delivery of care, deployment from regular duties, or other services in COVID-19 clinical care. Division Chiefs were asked to nominate providers in their divisions who contributed exceptional service during the pandemic.



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Lung Biology Center



Katie Brooks MD
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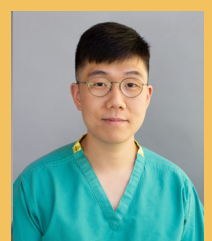
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