

## **Intro**

Hi listeners! Welcome to Carry the One Radio: the science podcast. I'm Maggie, and I'm here with an exciting interview we conducted as a part of a collaboration with the Institute of Global Health Science at UCSF. This is the first of another Global Health in the Time of COVID miniseries, where we speak to health experts at UCSF to learn more about them, their work, and how the COVID-19 pandemic has changed their practice and research.

In this episode, we talk about a subject that almost all of us are newly familiar with, contact tracing. CTOR executive producer Ben Mansky spoke to Ramses Escobedo, Jess Celentano, and Mike Reid September of last year about their new found roles as contact tracers, what contact tracing entails, how its been conducted in San Francisco, challenges in the process, and their ideas for how to fix these issues. Stay tuned!

## **CTOR Tag**

### **Introduction to interviewees by Ben**

Ben: Just to start off, could each of you give me a quick introduction, your name, your title or position and what institution you're affiliated with?

Ramses: Yes, my name is Ramses Escobedo, currently I'm a contact tracer team lead with the San Francisco Department of Public Health. My day job though it's, I'm a library and I'm a branch manager. I manage the Excelsior Branch in San Francisco.

Jess: I'm Jess Celentano, and in my previous life, I was the deputy director of the Center for Global Health Delivery, Diplomacy and Economics. That's a part of the Institute for Global Health Sciences at UCSF, and in my current life, and I co direct the contact tracing team in close collaboration with the San Francisco department of Public Health.

Ben: Mike?

Mike: Yeah, I am... So in my pre COVID life, (laughs) I was at... I am an infectious disease doctor, and worked with Jess in the Center of a Global Health Diplomacy Delivery doing hand wavy policy analysis related to tuberculosis, HIV, et cetera. and now I help sort of coordinate, and provide sort of subject matter expertise in contact tracing for San Francisco Department of Public Health, and then help run the California wide contact tracing program in collaboration with California Department of Public Health.

Ben: Great. Well thank you all for taking the time to talk. I'm sure you're incredibly busy right now, but I think this is a really important thing that honestly, not many people understand too much about.

## **What is contact tracing**

Ben: What exactly is like contact tracing? What would you say that the term itself encompasses? And then maybe what does it actually look like to do it when you're on the proverbial ground?

Ramses: So the main role is to contact individuals, which were in close contact with a confirmed positive case of COVID-19 virus. And then we connect it with appropriate resources, whether that's a testing site, isolation and quarantine units in case they can't quarantine on their own, or isolate on their own, food assistance, cleaning housing services, like supplies, mental health access, even pets' needs prescription d-drugs, and other miscellaneous needs, such as... like if somebody needs help with errands or picking up groceries, and also emotional support. That's, that's the main scope of it.

Ramses: But I think we do a little more than that. We do not only do what I just mentioned, but we're able to listen to them to offer an empathetic ear to provide moral support and alleviate some of the concerns they have, and show that we care and we're there for them during their time of need.

Ben: That's pretty amazing. That's, that's also significantly more than I think, I realized it goes into contact tracing. Mike, you had something you wanted to add?

Mike: Well, I mean, I think Ramses has sort of eloquently described what we do. The, the frame for this, from an epidemiological point of view is important though, so you know, we know that the, the virus that causes COVID, has a profound proclivity for spread, as I mentioned before, and, and there's this term, the reproductive number that you may be familiar with, which is that the number of individuals in a susceptible population that can be infected by somebody who has COVID, or any other disease. And so for COVID, we know that that number is between 2.5 and three, which means that over 10 rounds of replication, somebody with COVID, could potentially lead to 59,000 other people being infected.

Mike: So, exactly what Ramses said if you can reach out to those cases and say, "Hey, you need to isolate so that you don't transmit the virus to anybody else." And if you can reach out to all of their close contacts that people are at greatest risk for transmission and say, "Hey, you need to stay at home, you need to quarantine." Then, then that's our best way of preventing that transmission. You can't expect anybody to isolate or quarantine without providing them with the resources to do that. Right? You know, and, and particularly given that we know that this is a virus that disproportionately affects the, the economically disenfranchised or socially marginalized, the most vulnerable members of our community. So, providing those wraparound services that Ramses mentioned being that sort of compassionate ear on the phone is absolutely critical.

Jess: Just wanted to add it kind of just emphasize a couple points that have now had the pleasure of speaking to so many of our contact tracers, doing interviews on a weekly basis, checking in with them really getting to understand the workforce. And there's just so much that surprises us about contact tracing, I think, you know, it, it does sit in this like EPI (epidemiological) frame and it's a public health response, but it's like a community response too and the amount that people feel appreciative, and really open to talking and, and, and, you know, that it's not just our team, as Ramses said, that's calling to talk.

Jess: And they're calling to listen, as one of our colleagues pointed out and, and the amount of love that comes back to us from the community saying, like, "thank you" like, "No one has ever done something like this for me," like the city, it feels like the city really, like is doing, you know, their part and looking after me like that means so much to me, and one of our tracers called a

mutual appreciation fest where the tracer says, "thank you" and then the contact says, "No, thank you."

### **How did Ramses, Jess, and Mike get involved in contact tracing**

Ben: How... I guess long ago for how long have you all been sort of shifted into these new roles? how long was it between, like, everything getting shut down and contract, contact tracing programs springing up?

Ramses: The libraries closed mid March. And by mid April, I had been recruited by Jess. To, join the program.

Jess: So it's hard to remember Ben, but I think if my memory serves me correctly, and you know, I think in, in about late February, early March, our team had started to, to kind of gain, gain traction and a collaboration with SFDPH (department of public health) much in part to Mike's kind of legwork with the team kind of demonstrating that a group of us from IGHS had some skills to offer.

Jess: So a group of us in about, in mid March kind of took on the role of just doing contact tracing, all kind of people who had worked in Global Health, and, you know, had backgrounds in public health and kind of understood at some level what contact tracing was, but didn't really know the ins and outs of it. And since March have kind of grown from just people piecing scopes of work and standard operating procedures together to running a platform that has, you know, over 200 people involved in it now.

Mike: Quite early on, I was asked to help out at the pub-public health even before sheltering in place, while this was just kind of emerging. I think I had a sort of a useful role in, in highlighting the, the need that department public health had for experts who knew how to rapidly scale programs, and the Institute for Global Health Sciences is unique in San Francisco insofar as, you know, it's a bunch of people that, that do that for a living, there was a recognition that if we were to respond to COVID in San Francisco, one of the things we needed to do was, was to implement a contact tracing program, all the scale and magnitude not previously, you know, seen

Ben: Yeah. It sounds like you were on it maybe, unsurprisingly, earlier than a lot of, sort of what the general public has been thinking of as the critical period for when COVID started to really picking up

Mike: I mean, I think that reflects a couple of things. One is that, you know, in San Francisco, there was fairly decisive leadership very early on from the mayor and the Director of the Department of Public Health, recognizing that like, you know, emergency measures when needed. And so contact tracing was, was up and running right from the get go. Like even those first cases, March 5, I think, was the first San Francisco case was, was appropriate contact traced.

Mike: I think people realized, "Holy shit, this is a disease that moves fast." We looked at, like other parts of the world, and how they were already responding. So in Wuhan, China, they

mobilized, I think, 11,000, contact traces for a population of eight, nine million. And we were like, well, if we're going to replicate anything of that sort of robustness and magnitude, then we needed to think in terms of a scale that was much bigger than had previously imagined.

Jess: It's really just about connection, and doing what we can in a landscape that feels like there's not much to do, it, it really changes that up, I think.

Ben: Yeah. Would you say that it... obviously, there's a lot of work that goes into making this sort of community based process that it is. Would you say that, at the start, there was this same feeling? Or do you think it's grown sort of, as you've developed the program together?

Jess: I think so much has grown out of this, like I, I would never have known back in March, you know, what this community would be capable of. And also that, you know, it wasn't just about mobilizing a bunch of disaster service workers, about a bunch of people in public health, it was about kind of creating a moment in time for people to provide in a time when it felt like you couldn't do anything, and that you were isolated, and that you are alone.

Jess: And this has really provided I think, by and large, an opportunity for people to, to feel useful. And we definitely capitalize on that as a team too, to keep people going. 'Cause the other side of the beautiful mutual appreciation fest is that this work is extremely hard. And that it does take an emotional and physical and mental toll on the people that do it day in and day out. So, with the rosy picture with the lovely feelings that I'm giving out, I also wanna really highlight that, you know, it's it, we don't take for granted, like the amount of energy that this takes from our workforce.

Ben: Yeah. Definitely.

Ramses: There's a lot of appreciation, mutual appreciation, but there is a toll, there's... it's taxing mentally, physically and emotionally. No, but at the same time, the level of satisfaction and pride like contact tracers feel doing this job and serving the community, and bonding with them, because it is a bonding experience, far, far outweighs any negativi... negative aspects of the job. And we're all just been advocating to remain here until we have completely halted the spread of the virus and defeated it.

### **How does contact tracing work**

Ben: I'd imagine it's really important to keep in mind while doing this work. To take another sort of look at the big picture. I wanted to ask sort of how are you measuring, how you're doing with your contact tracing work and what does sort of like the ideal outcome look like at least on the San Francisco scale?

Mike: Yeah, so, so you know, there are a few metrics that we're looking at. The ones that, like, are on the website that you can look at are that the proportion of, of cases that we're reaching, and, and sort of recommending for isolation, and then the proportion of contacts of cases that we're reaching that we're, we're recommending at quarantine, and now sort of the targets in our site is that we reach 90% of cases in San Francisco. Reach them and recommend that they isolate and then of their contacts, we reach 90% of them.

Mike: So, there are, there are other things that we look at from a sort of public health point of view in terms of like the number of contacts that test positive, because that's a sort of an indicator of secondary transmission.

Mike: I think the other piece is again thinking through the health equity lens, we're very focused on trying to reach those communities that have been most impacted. And, and so in San Francisco, that's the Latinx community. And, and, and we can look at that based on whether an individual sort of identifies as Hispanic or Latinx.

Mike: And, and based on their language preference, and whether we're effectively reaching them with somebody who speaks the same language, 'cause we're really keen to ensure that the, the contact tracer is speaking the same language as the individual to sort of minimize the microaggressions that, that come from, like using a translator service or not being able to communicate effectively.

Ben: Yeah. Definitely. And about how many, I guess, contact tracers have been, have been mobilized at this point in the city?

Jess: So, we have over 200. We have a lot of people working at, you know, different levels of effort. And these are people who are disaster service workers. So, they're from the library, the city attorney's office, the assessor's office, you know, tax collectors, public defenders, we have students from UCSF med school from CCSF staff from San Francisco State.

Jess: We have, you know, folks from IGHS, and we have, you know, several people from the Department of Public Health. And then very importantly, we have mobilized community based organizations as part of our CI and CT workforce. So, (laughs) so, it's a massive endeavor.

### **Barriers to contact tracing**

Ben: We've talked a little bit about the sort of things that are required to make a contact tracing interaction supportive and successful. What are some potentials or barriers to reaching contacts or making that a successful sort of interaction that does build community?

Ramses: Well, I mean, it depends on a household for sure and their background. Obviously, I'm a Spanish speaking contact tracer. And with Hispanic, with Latino families there are a lot of barriers obviously, one of the main ones is language, right? But we have recruited a lot of Spanish speaking contact tracers. Additionally, we have a translating service at our disposal every day. but from the, from the household perspective, from the families, you know, they're afraid of their immigration status that may be questioned. Obviously, language, sometimes there's a little bit of ignorance in regards to what COVID-19 is, and how it affects you and, or a little reluctance, I think that's a little more kinda cultural.

Ramses: One of the issues that I have encountered when speaking to especially the, the main the person who earns that income at home that, you know, they're the only person earning, and they feel that if they're asked to stay at home, they won't be able to provide for their families. So, there's a lot of education going on, in these calls, about the resources available and about what the employers must do to allow employees to stay safely at home and ride out potential infection or that actual infection, that... those are some of the things I've encountered. The vast majority

of calls that I've made, or now that my team makes people are really receptive to our guidelines, and just our attempts to help. And additionally, they're always willing to provide me even more information, like identifying other potential contact... close contacts, et cetera.

Mike: If there was another sort of secret to our success it's sort of a recognition of the importance of training around cultural humility. And helping people to understand the implicit biases that they bring into all of their engagements, but particularly around contact tracing. So that when we're reaching people, we're client centered, we're sort of empowerment based.

Ben: Definitely. The health system isn't known for having the best record in terms of cultural humility. So, it's really cool and very important. That This is an integral part of the contact tracing process.

Mike: This is one thing which I think is really exciting about this Unfortunate tragic moment in our society, I think for a moment, we have an opportunity to kind of rethink how we deliver health care in a way that addresses structural violence, and the profound inequities that COVID has sort of shone a light on. And I think sort of our lofty optimistic vision is that contact tracing can in some ways be a catalyst for more transformative change within our health system.

Jess: What an incredible time to have like a whole new influx of enthusiasm and excitement, into the field of public health and, and people feeling like it's not a specialized skill, it's actually something that like everyone has within them, and the ability to, like contribute to public health from where they stand already It's pretty cool.

Ben: This relates to something that had actually come up earlier is, I don't think I and I would guess many of our listeners aren't aware of sort of what it means to be a disaster worker, or someone who sort of gets tapped in the case of something like this. What exactly does that mean? And who falls under that category?

Mike: You know, at the start of the epidemic, there were many civil servants that were furloughed, because they couldn't do their work, from across city government, not just in San Francisco, but across the state and, and nation and so, you know, what the city sought to do was try and mobilize some of the, you know, those folks that were willing to do this work, 'cause they couldn't do that their existing work. Hence, the term disaster service worker. I like to think that there is a more optimistic version of the DSW, an acronym that often gets used these, these are people who are doing something wonderful, rather than just being disaster service workers.

Ramses:

Yes, so when we closed the libraries, I knew that they let us know that a lot of us were going to be activated as disaster service workers. And so we did our interest forum, just to let them know I was available. And like, I would say, about three days later, I got an email saying, "Hey, would you be interested in becoming a contact tracer?" And I said, "absolutely, absolutely."

Ramses: Some of the characteristics in the person that make a good contact tracer will be, you know, somewhat tech savvy, being able to relate to people, to multitask, just self managing your own time, just keeping up with the constant updates on guidelines and software. And I mean, I think, you know, in, in my experience, like librarians are a perfect match, just because in our

regular in our day job, we already are interacting with the community every day, we're already making, doing reference interviews, for instance and trying to get to the bottom of what they need. We already do outreach, we already connect people with resources. And we have to know how to create that rapport with the community because we do that every single day.

Jess: We were trying to think of how many people we would need, like, if the epidemic was 100 cases a day, or 200 cases a day, or heaven forbid, 500 cases a day. And what does that really mean to staff? And how many managers do you need? And team leads do you need? And shifts do you need? Like, it was really intense, you know, and then bringing people into that intensity, and kind of being like, "Welcome, you're entering the unknown,"

Jess: And what I've just been so heartened by is like, not only did they come along for the ride, they shaped it, you know, like Ramses and his colleagues from... the, you know, the how all become team leads, like, they took what we had available, and they up to the ante, like every aspect of it, they were like, "Oh, that seems nice. But like, how about we do it this way and this much faster and with like, these bells and whistles," and so you know, and now like, we've built something that's been replicated, and you know, we train state workers, and it's been replicated on a national scale, like, it's just unbelievable the pace that this has gone from, like a bunch of people just trying to make, you know, the situation and what was handed to them better. Yeah. Really been a privilege of a lifetime to kind of see that play out in real time.

### **The current state of contact tracing**

Ben: I wanted to talk a little bit about the national scale, since you mentioned it. I think we know San Francisco's Public Health Department, and you know, from the, the city level, was pretty proactive at the very start of the pandemic, but that isn't necessarily true of the rest of the country. Do you know, sort of what is happening in terms of contact tracing nationwide?

Mike: I think there are seven states that have gotten, a contact tracing workforce at, of the level that the CDC are recommending, and they're, you know, their recommendations are informed by your population density, et cetera. But the vast majority of states have not been able to, to scale a contact tracing program, for a number of reasons, I think one is that departments of public health have been chronically underfunded for many years, and there's a big, you know, both lack of resources, and then a lack of technical capacity to be able to stand up a program. I think there are some models where this is working really effectively outside of San Francisco.

Mike: I think Maryland extremely done a really good job and, and, and New York City as well have, have moved very quickly to mobilize the workforce but I think, several thousand contact traces. But unfortunately, you know, the vast swathes of the US have not moved fast on contact tracing. And, and, and, and It's think is seeing the sequelae of that, you know, given that they don't have the sort of infrastructure to be able to control the disease.

Ben: Yeah. And this is something that I also wanted to ask a little bit more about in a previous episode of this, this mini series about global health and COVID-19. We talked a little bit about how contact tracing is not a new concept. It's been, you know, used with great success to get a handle on, on a whole variety of epidemics, perhaps most notably, the TB epidemic. Is there anything that you want to add about sort of maybe why it feels so new here when it's something that's been so practiced elsewhere?

Mike: I think there's a couple of epidemiological characteristics of COVID, that, that, that sort of informs why contact tracing is so different now compared to other diseases. One, one is that like the speed of transmission, and, and as I mentioned before, that, you know, that the fact that this disease can move very quickly through a population [inaudible 00:35:43] every five days, another round of replication, et cetera.

Mike: And then the second is that the scale, the fact that this is a disease that can impact and infect so many people so quickly, demands a workforce of a magnitude that we haven't needed to consider for other diseases.

Ben: I also wanted to ask a little bit more about the resources that, the state or city or county provide for people to, to appropriately quarantine when they can, when they are contacted for contact tracing. That's actually not something I knew anything about. And I think it would be good to let people know that, you know, it's not just forcing people to randomly quarantine without any support

Mike: Up until about a week ago, the city of San Francisco was able to offer a reasonable sum of money to individuals that were infected cases so that they are able to isolate I think \$1400 for the period that they needed to isolate. That money is now run out. So, I think there's a there, there, there is a an important need to lobby local governments to re-up those funds 'cause I think they're absolutely critical.

Mike: We should be providing more resources for the most vulnerable within our society. Given that, you know, we're asking them to carry the biggest burden in, in the COVID moment. And, and, you know, we should be outraged that, like billionaires like Jeff Bezos have made billions of dollars during the last few months, right? And yet, he runs like, an internet grocery store, that, that could provide resources to all of our, our you know, contacts and cases so that they could safely isolate and quarantine.

Mike: I think the absence of like, big philanthropy to make a substantial difference in this moment is tragic. And you know, I, I have sort of fairly modest expectations of what the federal government is willing to do as well. And I, you know, and those two things make me quite sad, because there is an opportunity to really like radically rethink how we support the most vulnerable members of our society in this moment. And I don't think we've done enough, despite all that we've done, and despite the fact I think San Francisco is doing a hell of a lot more than elsewhere. You know, we should be outraged by the lack of philanthropy and, and, and funding to support, you know, folks to isolate or quarantine.

Ben: I mean, maybe this is an even deeper issue with the philanthropy model, where it depends on individuals to... yeah, but that's a bigger question about the role of, of government and what has or hasn't been done to support people.

Ben: I mean, maybe this is an even deeper issue with the philanthropy model, where it depends on individuals to... yeah, but that's a bigger question about the role of, of government and what has or hasn't been done to support people.

Ramses: Can I just add, one of the aspects that sometimes we don't talk about as often is the access to mental health. So, we have resources to provide that, for instance, emergency psychiatric services, we have comprehensive crisis, crisis services, crisis services. We have a psychiatric emergency services available, we have a San Francisco suicide prevention hotline available, as well.

Ramses: And just speaking to, to just family members throughout the country. I've noticed that in other places, the lack of such services, it's not just, mental health access services, but just in general is... doesn't nothing compare to what we have here. Yes, but I think philanthropists could do more everywhere, not just here.

Ben: So, to hear that there's at least something here to support quarantine is good. Do you think that the contact tracing structure in terms of, you know, being a being in touch with people will help facilitate things like vaccine distribution once that's developed?

Mike: I'm definitely like a relentless optimist Ben, my hope is yeah, my hope is that we're like, we're building something sustainable, that will have, you know, have an impact beyond this moment. And so yeah, in the short term, I think there's a like, there's a really, there's a great opportunity to sort of promulgate vaccine promotion activities, and whether they're related to influenza in the very short term, 'cause we want to get everybody vaccinated against influenza, and then maybe, you know, a COVID with vaccine. But I think then the other thing is, like we, you know, we're, we're potentially mobilizing it, you know, a, a cohort of community health leaders outside of the department of public health who could have substantive impact.

Mike: I'm really hopeful that this is an opportunity for us to kind of rethink how Community Health is done more generally, and how we can leverage community health workers who are doing contact tracing now across the city, to do other health promotion related activities. And I think people will see that, like, at a societal level, there is a profound dividend from investing in public health

Mike: Whilst COVID I hope goes away, I hope that some of the investment isn't redirected elsewhere at the end of all this.

### **Music Break**

Ben: Yeah. Definitely. Is there anything that I missed that any of you would, would specifically like to, to discuss a little bit?

Mike: One thing I would say is like, is around technology and exposure notification applications, contact tracing applications, which I think some people have thought of as, like, you know, the, the solution to this problem. And I think, you know, our strong sentiment and, and sort of emerging evidence suggests, actually, you need human contact, you need people like Ramses and Jess and I to get on the phone and speak to you and offer compassion. And like a Bluetooth enabled application on your phone is, isn't going to offer that. I think, like my other lens for thinking about this is that this is not the last Coronavirus pandemic that we will see in the US.

Mike: And I think, climate change and urbanization and zoonotic spread of other diseases will probably lead to more pandemics with increasing frequency in the coming years. And I think we can learn lessons now to prepare us for those. And I think some of those lessons include investing in public health infrastructure, so that we're better able to anticipate and respond to those pandemic threats coming down the pike in, you know, five, 10, 15 years.

Ben: Yeah. That makes a lot of sense.

Ramses: Just wanna share that this has been like a life changing experience, really just, the of things and the collective effort it's taking to, you know, take on the spread of the virus. It's, it's, it's impressive, it's impressive. And, as Mike said, I think these... it won't be the last time but we will be better prepared, I think in the future and, and not just in terms of knowledge and how but also I hope we can develop some kind of collaboration, not just you know, in city but like what we're learning something we can, we can share with others and we can assist in other places, another country, even globally every... all librarians I speak to... yeah, it's just a life changing experience. And I hope that what we have learned can positively impact, future efforts, not just here, in the country, but you know, globally.

Jess: One, one of the most like unlikely, things that I would have ever imagined to come out of this time is like, how many people I feel close to, in this community, that I never would have had the fortune to meet, et alone work alongside, from DPH to all of the other contact tracers. If we talk about, you know, what success looks like. And for me, down the line, if we've been able to do our job, well, I... success looks like having a huge party in the park, you know, Golden Gate Park and inviting, like, all the people that I've been on zoom calls(laughs), and been you know, on these endless draining, you know, trainings, you know, and we're all just gonna, like, have a toast and be able to just say, like, thank you and give each other big hugs, and it's so silly, but like that is honestly like, what keeps me going is just this vision of being able to like, come together and appreciate one another for all that we've collectively put into this time.

Ben: That's kind of beautiful. Well, thank you all so much for your time and all the work that you're doing. It's, obviously really essential. And I learned so much talking about it.

Jess: Thank you for giving us the opportunity.

Ramses: Thank you.

Mike: Yeah. Thanks, Ben. Lovely chat.

### Short Music Break

Narrator: Wonderful, it's so nice to have an optimistic take on what the future holds as we all try to brace COVID-19. I certainly hope you learned a lot from Ben's conversation with Ramses Escobedo, Jess Celentano, and Mike Reid. If you'd like to learn more about contact tracing efforts at the Institute of Global Health Sciences, be sure to check out the links in our show notes for more information on contact tracing and the resources that are available for people impacted by the pandemic.

### Credits

This episode was produced by Stella Belonwu, Maggie Colton and Ben Mansky with help from the rest of the team at Carry the One Radio. Thank you so much to Ramses Escobedo, Jess Celentano, and Mike Reid for their time. Special thanks to the Institute of Global Health Sciences for partnering with us to provide this content, and of course to you for listening.

This episode wouldn't have been possible without the enormous, generous support of our Patreon supporters. So, I'd like to thank this episode's science producers, Sama Ahmed, Carly Van Orsdel, Jeannine Cuevas, Samantha Ancona Esselmann, and David Cabral, for supporting us financially through our Patreon.

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### **Resources**

<https://oewd.org/employees-impacted-covid-19#Paid%20Sick%20Leave>

<https://globalhealthsciences.ucsf.edu/>

<https://www.cdc.gov/coronavirus/2019-ncov/php/principles-contact-tracing.html>

<https://globalhealthsciences.ucsf.edu/covid-19/contact-tracing>