

Dr. Jessica McCormick-Ell

Behind The Mask

October 26, 2021, and November 4, 2021

Barr: Good afternoon. Today is October 26, 2021. My name is Gabrielle Barr, and I'm the archivist at the Office of NIH History and Stetten Museum. Today I have the pleasure of speaking with Dr. Jessica McCormick-Ell. Dr. McCormick-Ell is the director of the Division of Occupational Health and Safety (DOHS), which is in the Office of the Director (OD). Today, she is going to be speaking about all the activities and responsibilities the Division of Occupational Health and Safety performed in regard to COVID-19. Thank you very much for being with me.

McCormick-Ell: You're welcome. Thanks for asking.

Barr: Briefly, can you give an overview of all the jurisdictions, programs, and initiatives that fall under the Division of Occupational Health and Safety? It really ranges from wellness activities to "Foil the Flu" programs.

McCormick-Ell: I sure can. As you've alluded, our division is a broad-reaching group of folks with a lot of different backgrounds. You can really think of us as your workplace safety and community health experts. We have five different branches in our division.

One of them is the Technical Assistance Branch (TAB). They are industrial hygienists. They focus on a lot of the compliance with Occupational Safety and Health Administration (OSHA) regulations. They also perform a lot of the direct safety for our colleagues in the Office of Research Facilities (ORF). They've been leaders in the COVID-19 pandemic when it comes to support for worker safety at the car line, guidance on safe work practices, disinfection protocols, as well as all the assessments for hundreds of functions at the NIH to [be] perform[ed] safely. They are also key whenever a new group returns to campus. They go out and do those assessments.

Another branch is our Safety Operations and Support Branch (SOSB). This is a group of laboratorians, general health and safety folks, and chemists. They provide the boots on the ground support to all the different institutes and centers, in terms of their safety committees, laboratories, and any additional safety risk assessments. They also provide direct support to all the animal programs. You see a lot of them on campus a lot, and they're typically the front-line point of contact for the different stakeholders we have.

We also have our BioRisk Management Branch (BMB). This group is a lot of biosafety professionals. It oversees the different high containment and maximum containment—also known as biosafety level 3 and biosafety level 4—facilities we have across the United States. These folks help them stay in compliance. They also do a lot of training, outreach, guidance, and assistance with standard operating procedures and activation protocols day-to-day. Most of these staff never teleworked or did minimal

telework. As soon as the pandemic hit, they pivoted quickly to allow the research staff in these areas to obtain viral samples and start researching within less than weeks of the initial discovery of the virus. That branch also administers what's called our Institutional Biosafety Committee, which reviews all work with pathogens and recombinant synthetic nucleic acid at any of the NIH sites. There's two of those committees, one out in Montana and one in Maryland. Those committees would have to review all the research that's happening with SARS-CoV-2 as well as the "normal" research that is happening at the NIH. They also review all the inactivation procedures, so if somebody wants to bring a sample out of the containment lab for additional analysis, there's a really strict set of protocols that needs to be followed. They saw a huge uptick in all kinds of research at the start of the pandemic. They were able to pivot their normal process to speed up the approvals for the researchers to help support those efforts. We also have our Export Control Group and Import Control Group within that branch. They help move these materials around. You can't just send viruses to different institutions without permits or bring them in from other countries. We have staff that help to oversee bringing samples in, exporting samples out, what kind of permits are needed, and all that training and oversight. We also have a really robust Biological Surety Program (BSP). That program is aimed to ensure that staff working in biosafety level 3 and biosafety level 4 are trustworthy and reliable. There's a lot of different elements that go into that kind of program. We have over 350 people enrolled in that program, and the staff in the Biorisk Management Branch really help keep that moving and supporting those staff. Working in those environments during a pandemic can be especially stressful, so they've been super busy. They're kind of our silent heroes a lot of times.

Barr: What are some specific things they do within this group?

McCormick-Ell: They do a lot of training, which is hands-on. When you're working in biosafety level 3 and 4, a really critical component is hands-on training. They teach you how to put on the different items you wear to help protect yourself. That could range from a Tyvek coverall suit to an N95 respirator. But in the BSL4 environment, they teach staff how to use the suits that you see—they kind of look like big bubble suits. They teach the staff how to plug into their air; because in the BSL4, you have to have breathing air connected to you. They teach people how to come in and out of the laboratory, and how to work in the laboratory safety. The research techniques are all very similar to what you would see in a lower biosafety level lab, but there's very strict ways on how you handle materials to decrease aerosols and ensure that you can prevent needle sticks. How do you handle animals, how do you move the samples around safely preventing spills, minimizing all these different things that can cause someone to be exposed to these high-risk agents? My staff do some classroom training and then a lot of hours of hands-on support and training. We have specific biosafety level 3 and biosafety level 4 hands-on training sessions that occur throughout the year. They also teach the laboratorians about the facilities. The facilities are really unique spaces that are designed to keep you safe and designed to keep the materials inside. There's a lot of alarms to signal pressure and security features to keep those items secure from people who don't have permission to be in there. There are background checks required for these spaces. Our staff help to navigate the really complex regulatory requirements and the facility design. They work closely with staff within the Office of Research Services (ORS), in the Division of Police (DP), in DPSAC [Division of Personnel Security and Access Control], in Division of Emergency Management (DEM), running exercises with the Office of Research Facilities (ORF) to keep the facilities up to date or if there's any maintenance required—there's a lot of filters and fans and airflow testing—as well as

decontamination. In order to go in and change a light bulb in some of these facilities, you need to sterilize it, so that way people can go in safely. My staff are the ones who do that sterilization and run the assays to make sure people can go in and do those facility maintenance requirements in a safe way.

Barr: That's far more intricate than I think a lot of us on the outside could ever imagine.

McCormick-Ell: Yeah, it really is. They're really excellent at what they do. It's actually one of the things I did before I joined the NIH. I did very similar work to the folks in virus management.

I haven't even told you about two of my branches yet! I should probably get there before we run out of time.

Our Community Health Branch (CHB) is the group that does a lot of wellness and community health support. This is where the Nursing Mothers Program lives. [It also includes] Our integrated pest management, which really provides a lot of support to our buildings—the Clinical Center, but also a lot of support to the animal program—to ensure we don't have pests that enter in those spaces. We provide a lot of support in terms of water safety and food inspections. We have a sanitarian on our staff who does all the cafeteria and food truck inspections. You've probably seen all those wonderful posters around campus. We have a graphic artist who works closely with Medical Arts. She helps to design posters and training materials. We have a training manager in that branch as well.

Finally, last but not least, is Occupational Medical Service (OMS). You've really seen them a lot in the pandemic, but they also have a lot of other jobs to do. They clear staff working in the clinic with baseline exams, to ensure they have all the right vaccines for working with patients. They medically clear staff wearing respirators. They do respond to injuries and illness as well as tuberculosis skin testing for staff and animal workers. They do a lot of specialized support for people working with pathogens and for people working in the containment labs. They have a huge role in the biosurety program—lots of vaccines and other trainings for staff working with exotic and high-risk micro-organisms. They've been doing all the COVID items. Plus, they created a deployment medical program with all the voluntary deployments we saw this year for the Unaccompanied Children mission and the Afghan refugee mission. The staff are truly experts at vaccine clinics, as you mention with "Foil the Flu". We utilized that expertise to do our COVID clinics and soon boosters. They established a contact tracking program and all the support in a public health space, guiding on isolation, quarantine, and that kind of thing.

Barr: That is quite a lot. How many people fall under your division?

McCormick-Ell: If you include our employees and contractors, there's approximately 150 of us. Of late, the number has exploded close to 200 at times. It really is kind of ever-changing as we bring on new contractors to support COVID and our per diem staff to support the vaccine program.

Barr: What has been the Division of Occupational Health and Safety's role in shaping NIH policies around COVID-19, such as how and when NIH employees should return to in-person work and the new safety procedures and how they should be put in place? What were some of the considerations that your division discussed and put forth to the larger administrative conversation?

McCormick-Ell: Great question. We sit on a few different committees. Dr. Mike Bell and, before him, Dr. Heike Bailin—they really swap out—participate in the Coronavirus Response and Recovery Team, which is with Dr. Francis Collins, talking about the different coronavirus cases and trends we're seeing at the NIH. I sit on the Coronavirus Tactical Team, which is a lot of different staff at the NIH looking at the operationalization and troubleshooting some ideas before they go to the Response and Recovery Team. We also have an Incident Management Team (IMT) through the Office of Research Services (ORS), where we're helping to guide Colleen McGowan, the director of ORS, as to recommendations for leadership. That said, there were a lot of best practices going on or different items in the field of safety that started to flood our profession soon after the pandemic started. We're fortunate that we could just take all our knowledge of what we do every day supporting high-risk operations and just pivoting it towards a public health response. We were quickly able to make recommendations about disinfection. Shortly after I joined the NIH, we started writing the first draft of the safety guidance. We would be in the different committees I mentioned discussing the different risk scenarios, what we knew about the data, what we knew about safety, and making recommendations to those groups about the policy. They would make some comments or recommendations based on what they knew from the science. Then it would get approved and then messaged to the community. Over time, we've been continuing to lead in that discussion. The Office of Human Resources has really decided and been the leaders on when people come back to campus, but as always, I find that throughout this whole experience it's been a team collaboration and a lot of discussion—an open dialogue is probably the best way to put it—with the different concerns and risk. There have been times where, throughout the pandemic, my staff are reading papers and I'll ask them to deep dive into the literature and provide me a briefing just to frame the masking conversation or the distancing conversation—where we are at now with the data and what we should be doing about disinfection, what papers support that, what we do have in our arsenal to support this. That's really how the safety guidance has evolved. It's really been a collaboration, not just with my own division, but we partner closely with my colleagues down in North Carolina at NIEHS [National Institute of Environmental Health Sciences] and their safety branch, as well as our colleagues at Leidos Biomedical Research, Inc. because they are the safety staff for NCI [National Cancer Institute] in Frederick. A lot of our conversations in my senior staff meeting were around the different literature, what we should do, and recommendations to be made. We would send those up to the Response and Recovery team.

There are times where we have made recommendations that might be different than CDC policies, and we have various reasons for that. Sometimes it's because of our patient population, the presence or absence of data, the way we interpret risk, and the fact that we're always looking at it through a lens of risk mitigation and layering protections; a one-size-fits-all [approach]. A good example is a couple of months ago after vaccines were more widely spread, a lot of groups—and the CDC even—recommended that vaccinated folks didn't need to wear masks anymore and they didn't need to socially distance. Our data from our contact tracing indicated that maybe we didn't want to pull all those layers at the same time. Maybe we'd want to pull masking or maybe it's distancing. What do we do? We were a rarity in HHS and actually in the government. We kept our masks on. I still remember sitting at my computer on a weekend reading hundreds of papers and synthesizing a briefing for Dr. Collins and advocating to him that we stay the course and don't reverse, and that the Delta strain hadn't hit the United States yet, but this is what we're seeing—here are the unknowns with that, and I just can't justify changing. That was

the right call. My team unanimously supported that. It's also, I think, important listening to the other voices in the room who know things that you don't know. Leadership has always asked our opinion and for us to shape [policy] from what we know, from contract tracing and our expertise as safety professionals, to shape the way we move forward.

Barr: What was your policy on reuse of PPE? I know you did a little bit at Rutgers before you got to NIH, but that was a serious issue at some point in the pandemic and possibly could be again.

McCormick-Ell: I was hoping when I was leaving Rutgers—I accepted the position before the pandemic happened—that I could wind down and be able to say goodbye to staff and people I worked with for almost two decades in some places. That didn't happen. Instead, the last day I was at Rutgers, I was helping the staff there, and my colleagues there, to finalize a plan to decontaminate respirators. Rutgers has two medical schools—the faculty work in two different hospitals, and both of them are level one trauma centers on the inside of inner cities. I saw firsthand the spike that happened in New Jersey and New York in the very early days of the pandemic. I had friends working in those settings, and I had colleagues whose safety I was in charge of. I worked closely with the researchers at Rutgers, getting them [prepared for] the virus, setting up their BSL3, pivoting over to SARS-CoV-2 research—doing all the things that my staff here at NIH are doing. We did the same there, but they were at one point burning through 1000 to 2000 respirators a day. We took an old biosafety level 3 facility—it was empty mainly because the researchers had moved to a different building—and harnessed the fact that we had this really great facility and we knew how to decontaminate it. We got a system set up. There are actually two papers that came out of that effort. One of them was a wonderful partnership between some graduate students whose work got put on hold and the industrial hygienists looking at the fit factor of reusing respirators, and really starting to quantify the limitations of that. You have to be really careful. I remember those early days when the clinicians were calling. These are people seeing thousands of patients in the ER. There was a time where I drove into work and saw the refrigerator trucks in the parking lot where they were putting people who had passed away. [I was] trying to find guidance for the infectious disease docs and all the other clinicians in those spaces, as to how often we should reuse, how can we support them—fit testing thousands of people every day. We wanted to make sure they had a respirator that fit, but at the time you were just getting respirators you could buy, so they'd have to be refit tested.

The same thing happened at the NIH. Our staff fit tested over and over again. Our team at NIH actually created a new process to fit test, to be innovative and move from a quantitative version—where you actually end up destroying a respirator—to a qualitative version but creating some of their own supplies because you couldn't even buy them anymore. At the NIH, they sourced a lot of personal protective equipment [PPE] from different institutes and centers and created a pod to help support the fire department, the symptomatic car line, the asymptomatic testing program, the screeners, and other staff that had no choice but to stay on campus and keep working. I think we all felt it. Fortunately, now PPE is in better supply, but it [the shortage] also led us to some really wonderful partnerships with the Division of Logistical Services—talking about how we market these items, making sure researchers are buying what is appropriate and safe for them, and understanding the limitations. Not everybody needs an N95 respirator. Then when got to the vaccine program and we needed certain kinds of syringes, and certain kinds of needles, we already knew these folks. We had standing meetings so we were able to tell them

we needed X, Y, and Z needle to optimize my doses in the vaccine vial. The different relationships we've developed have just been really powerful in this whole response.

Barr: That's great to hear. How did you guys convey and publicize the updated regulations and messaging from NIH leadership and provide guidance on training on the new recommendations?

McCormick-Ell: There was a lot of different approaches. I'm sure you've seen the emails that come out from Dr. Collins. Right now, they're every other week, but they were every week for a while. The Office of Communications and Public Liaison (OCPL) lead that effort and source information from all over. They really helped us communicate. We hung posters, created signs, and updated the signs. I was here less than two months before I was invited to the main town hall. I was shaking in my boots while I was doing that. Again, it was reinforced by NIH leadership that safety was important, and they would message it in many different arenas. We were invited by executive officers to come to town halls and staff meetings, but it wasn't just me—it was all those safety specialists I mentioned to you. They would get invited and they would go. They would pass the message. They would walk the buildings, get questions asked of them. We'd create guidance and then blast it out through our different safety committees and through global emails as well as boots on the ground kind of outreach.

I'm not sure if we can continue the conversation because I have to jump off for another meeting actually. There's been a healthy dialogue and I'd be happy to answer that question in a better, more comprehensive way next time we speak.

Barr: Good afternoon. Today is November 4, 2021. My name is Gabrielle Barr and I'm the archivist at the Office of NIH History and Stetten Museum. Today we are here for part two with Dr. Jessica McCormick-Ell, who is the director the Division of Occupational Health and Safety (DOHS). She will continue speaking about how her division handled the COVID-19 crisis. Thank you very much for being with me again.

McCormick-Ell: Nice to be here. Thanks for asking.

Barr: We were speaking earlier about how your division dealt with some of the pushback from NIH employees over some of the regulations you suggested.

McCormick-Ell: Over time, our recommendations have changed a lot as the pandemic has changed. When we first started to roll out our safety guidance, we would be coming to campus and masks were new and things kept changing. I have to say in general we didn't experience a lot of pushback. We experienced questions or requests for clarifications. In some cases, we would receive papers or suggestions from researchers on data that we just didn't know existed. Then we would dive into that data and discuss and make recommendations. My team is staying pretty close to new recommendations and how things are evolving—sometimes we are more conservative, sometimes we're more liberal. I think, in general, our approach over time has shown that we keep people safe at work. We have not had mass cases due to workplace transmission. We may have had one or two clusters here and there based on very concrete situations, but we've fostered communication and allowed for that feedback. Leadership may ask questions or push and say, "I need people in this room" and "I need to do this."

Under those situations, we work really closely with them on hazard assessments to make a compromise to help the mission move forward.

Barr: How did you all continue to monitor the labs during the pandemic, and have you engaged in more assessment of the BSL3 and BSL4 labs since the pandemic began?

McCormick-Ell: That is a great question. I'm at home today, but this week I will be on campus three times. I have some folks who are on campus every day. They never telework. My staff who oversee the biosafety level 3 and 4 facilities have been on site every day, so at least one of them is there—or two of them depending on the situation. They'll take turns teleworking. In the early part of the pandemic, we were actually on scheduled shifts, so some of them never overlapped. That was done on purpose in case of an exposure they may have had or if they got sick, then we wouldn't take out the rest of the team for continuity and safety. Those areas actually saw an increase in research to support COVID, and my team has been there, working extra hours, supporting the training, onboarding, and turning over the labs. We have a team of employees, contractors and fellows within the division who also support some of their operations, so it's really been all hands-on deck. We don't necessarily go in there more frequently, but we're doing the same job we always did, just with increased work and turning over those research protocols and training new staff—moving things forward. We did pivot some things to telehealth or tele-environments. One of those things is our biosurety program. Some of the visits for that became phone calls or Zoom, versus an in-person conversation. In terms of support and ensuring that we meet those regulatory obligations and the mission of the NIH. In our other laboratory spaces, again, my team has gone to most of them. We did change how we surveyed labs and we went to part virtual, part on-site, so we minimized the amount of time that we were in the space. For the safety guidance, we worked closely with our laboratorians to support their research needs. A lot of times you can't stand six feet apart from each other, so we created different appendices with different protection matrix recommendations as well as lots of risk assessments. My team has done, at this point, probably thousands of them for various work sites and research procedures.

Barr: Did you receive a lot more questions about safety and training with labs during the pandemic or was it normal?

McCormick-Ell: I've never been here before [the pandemic], so I don't know what normal looks like. I would say that in general, before the pandemic a lot of folks didn't know what DOHS did. The pandemic has really elevated safety and has shown what we do—and what we can do—and our partnership with the NIH community. We receive a lot of questions now, but I'd rather get the questions because it just shows that people truly want to have a safe environment and they take it really seriously, and that the culture we wanted to build in that space—which was a culture of responsibility and community and taking care of each other—has really been built. It's not built by just saying the words, it's built by these conversations and the feedback and the challenge. "This is really what I need to do, can't I put 10 extra people, what kind of room do I need?" Really understanding. Our training them. Them telling us what they need to do and us understanding it as to how they do a risk assessment. What does that look like? Why does it matter? What elements increase risk? What decreases risk? Also, us being very open and communicating how we are assessing their risk—if we don't tell them what we're doing then it's like this

black hole, but if we say how we decided that this is what's safe, then there's a lot more understanding. It's all been data driven.

Barr: Interesting. What was it like for you and your team to put together the COVID-19 Safety Reporter Tool and monitoring the constant stream of data that came in?

McCormick-Ell: Initially it was busy. It's not as busy as it used to be. That was probably one of the things that had the least amount of lift. We put together the questions, and our folks helped build something pretty quick. Then we assigned staff to help review it and then determined who should actually help enforce. A lot of times they want the safety folks to enforce, but then that really puts us in a bad predicament, so it was decided the executive officers would receive the reports. Leadership then receives a compilation of a summary of the reports—now it's on a monthly basis. Myself and my deputy have the ability to see if somebody put their name in there, so if there was something egregious, we could follow up. Typically, we see more reports as we have different groups return, because they might not be used to things or might see something they don't understand—or something just happens. Over time, we've actually seen the reports go down and we really do see good compliance with the safety requirements.

Barr: Have you all been involved in tracking NIH vaccination status, creating forms for those who receive their doses in the community and other ways of tracking? Can you expound on this task?

McCormick-Ell: That's also evolved. With the rollout of the vaccines, we would have loved to have been able to offer vaccines to everyone at the NIH, but supply chain issues don't always allow for that—as well as time. We had limited staff and the vaccine program was really an all-hands-on deck kind of situation. We had hundreds of people across the NIH helping us do that program. We had very little time. We planned the vaccine program in less than a week.

Barr: Oh my gosh.

McCormick-Ell: Yes. Less than a week. As we started to vaccinate, we started hearing a lot of folks asking whether they should tell us they got vaccinated, because they wanted us to know. We created a voluntary form at the time, and it had a lot of information. It was really a helpful risk tool for us. It wasn't required, but at the time, we had about 76% at the top telling us they were vaccinated. That was really good for us—just knowing that. We had a pretty good understanding that our population was safe. We also knew kind of where our pockets were in terms of unvaccinated staff or who might be hesitant to be vaccinated. We did a lot of outreach while we were doing the vaccine campaign and collecting that data. We were trying to get people who weren't vaccinated, asking if they want it from us or what we can do to support them and how we could answer their questions.

Barr: How did you do the outreach to these particular groups that were hesitant?

McCormick-Ell: Lots of ways. Initially, we did a lot of Zoom all-hands meetings—a lot of them. Sometimes just a 30-minute question and answer [session]. We would send out the slides. I would do a very large Office of the Director training session. We sent staff to some of the different work



populations, talked to them directly and answered their questions during a Q&A kind of situation. We also did a lot of posters and communication materials. The Office of Communications and Public Liaison brought together a trans-NIH group to discuss how to reach people who weren't wired, so they did a lot of two-way radio scripts, posters in buildings and break rooms, and on all the TV screens. They basically just got a bunch of people who volunteered to mass walk the campus. Word-of-mouth, individual conversation in hallways—lots of boots on the ground kind of outreach.

Barr: Did you feel that it made a dent?

McCormick-Ell: I go back to the days when I was a teacher—a professor. If you reach one, it made a difference. I really think that a lot of the hesitancy is [because] there's so much noise; there's so much data. It's all portrayed through a lens that sometimes lacks context. People need to feel heard, and I hope that in some of the opportunities—where I just ask them to send me their questions and I will answer them to the best of my ability and provide them the data and the appropriate resource—that I can give them a realistic scientific answer that I know is vetted, peer-reviewed, and rooted in real experiments. I don't know if it's helped, I don't know if it's changed their mind, but I hope it has. Some of the efforts my staff like setting up a tent to help people load their vaccine cards a couple of weeks ago at 6:00 in the morning. People came and were happy—it was one or two [people]—but it was helpful to them.

Barr: That is a big challenge for some people.

McCormick-Ell: We are getting hundreds of emails where people are having issues uploading their cards. I have a team of people on that. Basically, our voluntary form had to change into a required form. We were missing some fields. Being new here, I didn't realize all the requirements of getting a form approved. I learned a lot about privacy act notices, privacy approvals, privacy impact assessments, OMB [Office of Management and Budget] clearance, how to work an emergency process in a long-term process, how to write a policy in a manual chapter—all while communicating the research of the vaccine and planning a booster clinic, as well as doing the verifications for the employees. A lot of tweaking! Things have been kind of rolling—sometimes being a little bit ahead of the game is not always a good idea, because then it presents a different kind of challenge down the line. There's always a lesson to be learned. The process is not perfect but, again, basically we were working on this form from start to finish. We had about a month, but it changed six times in that month, based on requirements that came down to us. At the end of the day, we ended up having a week to finalize it and get it done. Based on the tight timelines that we've had to work on a lot of this stuff, I'm really proud of what we've been able to accomplish.

Barr: Definitely. Do you think that before November 22nd deadline, you'll have another tent to get some of the last cards in by the deadline for people who are having technical or language issues or whatever other obstacles they're facing?

McCormick-Ell: We're probably not going to have another tent, but somebody did reach out to us today, and we made mention of the very innovative information technology person, Marquette, who created a cool scanner system. We recommended that he go to that work group [so they could] assist them. Right

now, I've got a team of 15 people reviewing cards and emails. We didn't have a lot of people come to the tent. I think it's better if we start to find those work groups or [find] those people some assistance in their own area. Sometimes nobody wants to go places, or they feel more comfortable if it's somebody they know.

Barr: That's true. Can you speak a little bit about your division's role in determining who got priority for getting vaccinated in the beginning, your contributions to setting up the vaccine clinic in the Clinical Center, and what the transition was like for OMS for both the regular vaccine and now the boosters?

McCormick-Ell: Sure. In terms of getting priority, it was a really complex conversation. There were a lot of people at the table. It ended up being decided by the Response and Recovery Team with a recommendation that came from my division, HR, and a lot of other groups—a few institutes and others. We were really going based on the approvals under the emergency use authorization and the phasing recommendations that were set out by the Centers for Disease Control's Advisory Committee on Immunization Practices—the ACIP. They listed out who should get priority, so we took that list and operationalized it to the NIH environment. We have teachers here, we have daycare teachers, we have clinicians, patient care providers, and administrative people. You also have folks who are in those environments all the time—essential workers—so they were all broken down into phases, and then NED [NIH Enterprise Directory] records updated. It wasn't perfect and was based on availability of vaccine. Also, knowing that we had a vaccine that was pretty reactogenic, you didn't want the entire sixth floor of the Clinical Center to be at home because they had fevers from a vaccine, so you had to stagger them. The staggering and not being able to just floodgate open, brought a lot of anxiety, so we prioritized them as best we could. It was random order, in terms of number, in some cases. We worked with all the IC's [Institutes and Centers] to put together their clinical population, which went first.

In terms of the Clinical Center and the vaccine clinic being in the Clinical Center, my team ran it from start to finish. It never fully transitioned to OMS, but it was always an OMS-led operation. It just required a lot of support from volunteers. Nothing is ever done by yourself. OMS was part of it, but we had a huge presence in terms of safety officers, which come from my other branches. They understand how to run a site safely—and we were running a vaccine program when we had really high cases and no vaccinated people. We had to keep our workers safe, too. You have to balance it: we know logistics and we know emergencies. We also had a lot of PHS [Public Health Service Commissioned Corps] officers. We were really fortunate to have a core base of PHS officers for weeks in the clinic providing support, tweaking lessons learned, and best practices.

Then we opened up. Because we had so many staff and so many hours, we were running the clinic six days a week, late into the afternoon—early mornings, and of course, Saturdays. We did appointments, but then it took an hour and a half to set up and an hour to clean up. The days were 12 hours long for some of our staff, so we had a volunteer pool from the Clinical Center. They supported us and helped coordinate for the clinicians that could give some time to support the vaccination program. We worked really closely with the Clinical Center Health Information Management department—I hope I'm saying their department correctly—as well as DCRI [Department of Clinical Research Informatics] to do all the programming for the system. We meet all the time. It's like the "vaccine family", but we troubleshoot together and challenge. We worked with the pharmacy in the Clinical Center because they're the ones

who hold all the doses. We ran some impact studies and worst-case scenario assessments in terms of what happens when you run them together, how you do the different doses when you're doing dose one and dose two. We first started with Moderna and then we got Pfizer, then added J&J [Johnson & Johnson]. A lot of communication all the time. Then we would ramp up and ramp down based on demand and based on number of doses on hand. We transitioned from getting doses from Maryland to a group through HHS [U.S. Department of Health and Human Services], which I helped to coordinate, run, and order doses for. It's really been one of the most valuable experiences in my entire life, and mostly because of the people I get to work with.

We started talking about boosters. Worst case scenario, we're going to be running flu and boosters. I take the plan to leadership, and they bless it, but then hearing all the concerns or things that could pop up or limitations on staffing budget, we ended up carving out what we're capable of [when it comes to] doing boosters and what our restraints are. This is what we recommend: you can get a vaccine now widely, it's not as restricted as it was in the beginning. It's really always evolving. Anytime you think you're prepared; you get a wrench. We meet at least once or twice a week even now, but during the height of the vaccine clinic, we were meeting five days a week at 5:00 at night.

Barr: How long did you get to prepare for the vaccine clinic initially?

McCormick-Ell: One week at Christmas. We did the VIP event—I believe it was December 22nd—and my vaccine clinic opened Monday morning. I sent out invitations for the first vaccines on Christmas Eve and on the 23rd. We received our first doses on the 22nd. We had prepared and had the system ready to go. We had ordered booths and they were set up and we were running wires the week of the 21st. My team was doing the safety assessments, but we really had a week.

Barr: That's a lot in one week. That is very impressive.

McCormick-Ell: Yeah. The first day was just some tables, barely any signs. They were mostly handwritten [with] arrows pointing. We had a team setting up emails and helping to guide, and then that team, because they worked together, they would have morning safety huddles before clinic started for 20 minutes. They trained on different kinds of sharps devices that we were able to get, optimized wastage, and tons of inventory control. I came in a couple of days later. There were beautiful signs all over the clinic, operation flow, and cards. They met every day and just continued to improve and operationalize it. [They] really ran a best-in-class clinic for about eight months in the Clinical Center.

Barr: Very impressive. What have you found most rewarding about all your work during the pandemic?

McCormick-Ell: I think it's the people. Every so often after you are in it so deep, you just check it off—one thing, [then the] next thing, but it's pretty amazing to get to be sitting in the chair I'm sitting in during a global pandemic. My husband reminded me yesterday that all the years of safety and research prepared me for this, although there's no book, there's no lesson. You just have to go with what you think is best. This is the approach; this is how I do my job. I work with a wonderful team. They have my back and I have theirs. I am so lucky that when I continue to ask for more, they keep raising their hand, but that they also tell me when they need a break. Then I raise that up and our leaders hear us when we

say we need a break. I know we've been able to keep research moving and clinical care moving, and I hope and know that research has contributed to the betterment of society. I vaccinated over 16,000 "NIHers".

Barr: That's a lot. That's an accomplishment.

McCormick-Ell: We test a lot of them and provide a good service in terms of what to do if you test positive. We have a testing program which thousands have taken advantage of. In general, it's all been rewarding, but the people that I've gotten to meet are, I think, the best part of it.

Barr: Yeah. What do you feel like you've learned over the course of the last year and a half or so?

McCormick-Ell: Do you have a week?! [laughs] I've learned a lot. I've learned that I need boundaries sometimes. I've learned that I must model. Even though I'm working really hard, I have to also be a model for what my team should do. Like today, it's just a long day, so I went for a walk. Somebody reached out and asked if I had time, and I said they could call me if they don't mind that I was power walking. I just needed some fresh air. I've learned how the NIH works—but like a sliver, enough to know what I don't know and then I get myself in trouble because I didn't know. I never worked in the federal government before and had a different impression. I've learned a lot about process and why some things are the way they are and how to try to get something done, although I'm still learning.

Barr: Academia is very different.

McCormick-Ell: It really is. It doesn't seem like it on the surface—the NIH is very academic—but yeah, it's different. I think every day we learn something, but that's also my job. Safety is that way, and you are always evolving and having to learn. I can't really pinpoint one thing.

Barr: Okay. That definitely makes sense. What was it like for you to transition from Rutgers to NIH at the beginning of the pandemic in April of 2020? You jumped right into it!

McCormick-Ell: Yeah. It was scary. I had been hoping that I would have this sort of transition down and then a ramp up. That didn't happen. We were very busy at Rutgers overseeing clinicians who worked in two different emergency rooms and two medical schools using thousands of respirators a day. I was helping the team develop a respirator reuse and decontamination program and lots of research studies. Very similar type of constant, relentless hours, and pivoting. It kind of prepared me for what I was stepping in, but nothing really can prepare you. It was scary and it was hard, and it was lonely. Some days I didn't think I was succeeding or really doing what I was supposed to be doing, but my team immediately embraced me and would send me positive notes welcoming me and were just so graceful, so that helped a lot. Also, people—I don't know if it was pity, I don't think so—helped guide me through certain things. I had to do a town hall with Dr. Collins, and I'd been here less than two months.

Barr: That's scary.

McCormick-Ell: But also awe inspiring! I don't know if I remember it. It was just very busy. I never got that chance to read novels and watch Netflix. I do that at night after [work] just to decompress, but it took months for me to be able to just relax enough to read a novel.

Barr: Definitely. We're going to actually get to that. In addition to being an NIH administrator and scientist, you're also an individual who's been living through this pandemic like everyone else. What have been some personal challenges and opportunities that COVID-19 has presented for you as a person, and what are some ways that you have coped with the situation?

McCormick-Ell: I think on the positive side about coming to Maryland. We love it here. I'm married and I have a young son. We love animals. I have two cats and we also have a dog who's now a year and a half old. We got him last summer because our dog before had passed away and we waited until we moved. That has been joyful. We love our area. We have met neighbors that are friends. I think in all the challenge is also the opportunity. We did some work on our house and slowly but surely planted a garden. I've never had a garden. We take walks in the woods and play with the dog and talk to the neighbors outside. My son has autism and so he was home a lot. I didn't feel comfortable sending him to school because he couldn't have his care support with him. We prioritized his in-home therapy, so that was really hard. But I got to see my kid more than I ever got to see him before—and he can run upstairs. Yesterday in a call we were talking about all the fun times that Bennett has interrupted a Zoom meeting and totally embarrassed me, but I think many parents have felt that way. I also think that my humanity helps my team. When I was doing the all-hands meeting, which is like 70 folks, they could hear him roaring from the first floor because he's playing dinosaurs. He came in and showed them all his drawings. I have a lot of staff with young kids, so we all talk about them and share their stories and they wave to each other on Zoom. A lot of the things I like to do as an individual I don't do, because I have a kid who's not vaccinated, so I prioritize him. We found ways to enjoy our house. We joined a pool this year, so that was fun, and my son learned to swim. I got to go watch him learn how to ride a bike and skateboard.

Barr: That's exciting! That's nice!

McCormick-Ell: Frankly, even though I didn't do it as much as I would like, during the day I could go outside and play for half an hour and then come back and do work. Or we could go for a walk or a bike ride and eat lunch together—really simple things that are really important. I think the NIH is special in that they supported that and give you balance—as much it felt like wasn't balanced and it's not always, but tried, and value it and value that humanity. I'm hopeful I can start to explore the coffee shops. I finally found a hair salon so that's good, but we are hopeful to visit some more zoos and museums and just keep enjoying what Maryland has.

Barr: Definitely. There's so much for him to do once he gets vaccinated.

McCormick-Ell: Now he's in school which has been great, so that's helpful. The other challenge was having two parents who work full-time jobs. My husband decided to leave his to become a stay-at-home full-time dad, so that's been a reward also. We've tried to find the opportunity in our challenges, and that gives me more time to focus on the important stuff I'm doing and also lets my son have a parent

who can go to school for volunteer time. I think they went fishing today because they have the day off. There's a lot we would never have been able to experience in New Jersey if we were still there.

Barr: That is nice. Your son and you all will treasure these memories.

McCormick-Ell: I think so. Yeah. I also try to show my team. There have been times where we talk about pausing and taking a break. I'll show them pictures with the time stamp of 10:00 in the morning on Tuesday of me playing in the back yard with the dog. Get up and go breathe, get some fresh air for 15 minutes! I'm not always good at it either, but if you can carve it out, try. That goes to that modeling and just trying to find some kind of joy in the hard part of the pandemic.

Barr: I think that's great because your team must have felt a lot of stress. They're responsible for people's safety and now it's heightened and a lot of them are on-site. Did you do a lot of morale boosting amongst those you work with?

McCormick-Ell: I try. Also, as part of that I have an FEVS [Federal Employee Viewpoint Survey] champion team that really helped to provide feedback on what was really effective. Just talking about it, giving different tips, the permission of it, and a reminder in my last all-hands meeting, knowing everybody's really stressed about this vaccine stuff. Our EAP [Employee Assistance Program] reports up to me as well, so one of our EAP counselors did a presentation on selfcare and stress and led us all in a two-minute meditation, which was wonderful. I also do "coffee chats" or "hang out with the director" type of things. Not as much as I would like, but just to give the opportunity to chat. I visited most of my sites in person at least once to see them, because I have folks all over the country. I'm not so good at virtual parties; I feel awkward in that space, but we've tried. I know my chiefs are trying to do morale, but I also think just being transparent in the conversation has helped them as well. I also try to get special guests. One of my favorite memories was the first week of the vaccine clinic. I was able to get Dr. Fauci to come and say hello on a Saturday. I reached out to Dr. Grady, who I had known from other projects, and asked. I know Dr. Fauci is very busy, but he came on a Saturday morning and surprised the team. I can still see their faces' joy. He talked to them and said hello to the people who were there getting their shots. Dr. Collins came and did his gratitude tour with a lot of our folks in various ways. That was really special because they gave us an hour of their time and that's a lot of time for them. Those little things hopefully add up, showing some thank you and gratitude to them.

Barr: That's really special. Do you have anything else you would like to share about your COVID-19 operations you've overseen or your experiences? I tried to cover everything, but I feel like maybe I didn't because your division is responsible for so many things.

McCormick-Ell: I think maybe just to finish by saying that we've done all of this plus our normal jobs. We've had some support from resources, but probably not nearly what some folks would think we'd need. I think that brings a lot of lessons, and it's good that we're being asked to participate and to give the feedback. There's been a lot of focus on the public health aspects, but the safety aspects and activity hazard assessments—they've been done for hundreds of operations at the NIH. Every time they open a cafeteria, or a food truck, or an office area, or the Music in the Atrium in the Clinical Center, our team is there helping to provide guidance on how to do that safely. It takes a lot of work—classrooms, fitness

centers, all of it. They've been behind the scenes quietly helping guide, as well as dealing with their normal jobs of floods, mold, monitoring, training, keeping the utility plant folks safe, and research support. There are so many things that we're doing. They're really some silent heroes for sure.

Barr: Definitely so. On that note, I wish you and the rest of your team continued success and health as the virus is still out there. Thank you for all your service.

McCormick-Ell: Thanks. You too, Gabrielle. Thanks so much for all the nice questions and the time!