

Dr. Derek Newcomer  
Behind the Mask  
June 25, 2021

Lyons: Hi, I'm Michele Lyons with the Office of NIH History and Stetten Museum, and today is June 25, 2021. I'm talking with Dr. Derek Newcomer who's the Deputy Director of the Division of Occupational Health and Safety (DOHS) at the NIH. He's also a captain in the Public Health Service Commission Corps, so please tell us a little bit about your education.

Newcomer: My undergraduate degree is in environmental and hazardous waste management. I remember in high school receiving a pamphlet from the university and it had this picture of this worker with this firefighting gear on it on a hazardous waste site, it was an appealing idea of serving, protecting the environment while working in the front line of hazardous waste management. So that was my undergraduate degree. Later I pursued a graduate degree in environmental management. As I crossed over some different career paths, I was exposed to worker protection or occupational health, and I ended up pursuing a graduate degree in industrial hygiene. That brought me here to NIH and after serving along with the research community, I ended up pursuing a doctorate degree in public health and I graduated in 2018 with that degree.

Lyons: Thank you. And so when, why did you join the Public Health Service?

Newcomer: So I commissioned with the Public Health Service {PHS} in 2007. I learned about the PHS while pursuing graduate degree in industrial hygiene. I vividly recall sitting in the classroom, and one of my classmates was a Coast Guard officer and I had asked him who provides your occupational health services, and he said, "Well it's a commissioned officer from this little-known group called PHS." So shortly after being introduced to them I had found a recruiter and after talking with that recruiter I had an application in and several years passed, you know the application is a lengthy one. Circumstances eventually proved to be the right ones and I was offered an opportunity at NIH and that is the time that I began my career with the Public Health Service.

Lyons: So with your background as an environmental health officer you had a particular emphasis on air quality issues, for instance, in 2020 you won an Outstanding Service medal for developing a method to measure the efficiency of portable air filtration devices used during building construction. Construction which we're always doing at NIH! So what were your duties as the Deputy Director of DOHS before the COVID pandemic; what kind of environmental hazards do you run into at NIH usually?

Newcomer: So my responsibility as the Deputy Director is to provide leadership and support to the division staff. DOHS is a very diverse operation having five branches, staff located in Baltimore; Frederick, [Maryland]; North Carolina; and Hamilton, Montana, with the core of our group being here in Bethesda. So operationally I manage a number of contracts including the Occupational Medical Service clinic. When I tell people or describe NIH to those who may not have been familiar [with it] or not stepped foot on a campus, I compare it to a small city. You know we have a police department; a fire department; hazardous material response team; a world-renowned hospital; laboratories performing

chemical, biological, physical research; power generation; steam generation—it's really relative to a small city. So when I think about the hazards that one encounters, I think about the life cycle of a city. From the construction/renovation you have hazardous noise exposure, you have employees working around heavy equipment. When we finish in the buildings, you have chemicals that off-gas from the building components, and then once we have the spaces occupied, we have the laboratory environment where chemicals may be present, lasers may be in operation, biological agents are researched on. Then we have the office environment where we have ergonomic concerns. And then the hospital, of course. Working with patients, our clinicians may be exposed to bloodborne pathogens. So it's very diverse and as an industrial hygienist I can't think of a better place to work, just because the diversity and the challenges are so unique. Yeah, every day is an exciting and a new challenge.

Lyons: That's an awful lot of stuff to cover. If NIH were a city, you would be several different city departments probably.

Newcomer: Correct.

Lyons: And not only are you doing all of the oversight and making sure that things are safe and healthy, but it sounds like you also do research too as well. I was going to ask you about your deployment during the Ebola outbreak in Sierra Leone where you did do some research. If you would tell us a little bit about that?

Newcomer: So let's talk a little bit about the deployment. So that was during the Ebola outbreak. I served as a safety officer in Monrovia [Liberia] where we had a field hospital set up. And this hospital is in a rural setting, so if you think about, I don't know if M.A.S.H. comes to mind—the TV show M.A.S.H. You know our power is provided by generators, food was served and prepared from a trailer. We had dust, heat—it's truly a rural field hospital with a lot of environmental health and occupational concerns. Also my job there predominantly was to provide infection control support to the clinicians who were caring for volunteers, who were suspect or had confirmed Ebola virus disease. And this was somewhat of a, at least for me, a novel setting. So there was a lot of opportunity to collect data or make observations to bring back to share with my profession.

One of the projects that we worked on it was about heat load, or the exposure and stress that one experiences working with all this personal protective equipment in that field setting under the sun or in these tent environments where you may not have a climate-controlled environment, where it may be hot and humid and yet you have to wear all the garments to ensure that you don't become sick. So we had studied the burden individuals may be exposed to the duration that they were working in these environments. Hopefully it's not something that we would experience again, but in the event that we are in such a challenging environment, we have some experience and some data to prepare to ensure that the people will be safe.

Lyons: What did you discover? Were people able to stay in those outfits very long or...?

Newcomer: You know, It's factors as far as the temperature and humidity, how long, what is the type of gear that they could work in. So we could create a risk matrix to look at the temperature and heat at

this threshold, then we can provide recommended work periods based upon the type of personal protective equipment that they were wearing. So it just gave us a guideline on how long they can work so that we can minimize the risk of heat stress or heat-related illness.

Lyons: That was your first deployment with the PHS?

Newcomer: It wasn't. I've served in several prior deployments, maybe another notable one was a humanitarian effort that was with Military Services. Where we spent some time in the Dominican Republic providing clinical care. That was probably one of my first deployments that really stands out, Ebola being another memorable experience.

Lyons: Sounds like you'd gotten lots of deployments tucked in your experience kit before March of 2020. And so when NIH was shut down what was the first thing you were involved in doing? I'm sure it was pretty much that you had your finger everywhere.

Newcomer: Yeah. Early on it was providing some guidance and brainstorming with leadership as far as how we should, the workplace should, respond. Should we keep employees [coming to campus]? If so, who? We obviously had researchers who are going to be key at resolving the pandemic, either through treatment or finding a vaccine for prevention. So early on it was just strategizing as far as how we can operate safely. As guidance from CDC and other public health authorities came forward, we were able to transition and start focusing on the working environment—developing guidance and policies for cleaning and disinfecting spaces should someone become sick. Providing guidance and training for staff so that they're aware of good risk management practices. And then later on, [we] provided some support for the COVID car test line. This is a facility that was set up on campus for employees that had symptoms that justified testing to see if they had COVID or not. So that was my early efforts to support the agency's response.

Lyons: So did you, were you telecommuting at that time or were you also coming in or how is that working?

Newcomer: So I was on campus up until the April time frame. I have two small children that were in daycare and once the community started to close down, once the state started to enact some closures and the daycare was included in that, I joined my wife at home, becoming being a parent/employee as many of our colleagues also experienced. But that was somewhat short because I then deployed with the PHS to set up an alternate care facility in downtown [Washington] DC. And after that was established and ready for support if needed, I was sent down to Florida, and at that time Florida had some high case rates, where we were able to support long-term care facilities on their infection control procedures.

Lyons: So in DC, you were helping the hospital, but in Florida, you were helping out, say, nursing homes or things like that?

Newcomer: Correct. So the alternate care facility in DC was set up for to provide surge capacity to the hospital networks and fortunately it was not used. And the Florida mission was to provide training, to teach support staff proper infection control practices and to do surveys and assessments of the nursing homes to help reduce their case counts.

Lyons: Yeah, that would be that would be very, very important to train people because they're not going to get the training anywhere else that's for sure.

Newcomer: It was very meaningful work, yeah, it was. I was glad to be able to support that. It was something that was needed. The CDC and others have provided guidance, but having someone, actually there to provide that the hands-on training, kind of on-the-job practice, was very meaningful.

Lyons: I think probably they felt hands-on learning is always better, but it's probably also very reassuring to have an expert come and show you in person what to do.

Newcomer: Agreed.

Lyons: When did you get involved in the screening at the [NIH] Clinical Center too?

Newcomer: No, the Clinical Center Epidemiology Department, their infection control department was responsible for setting up that operation. Although I was a participant passing through the Clinical Center, our office was not responsible for that operation.

Lyons: Instead you were responsible for the Vaccination Center?

Newcomer: Right. So the Vaccine Clinic was in the cafeteria of the Clinical Center. I got to pass through the Clinical Center screening booth every day as I made my way down to the Vaccine Clinic.

Lyons: Tell us about how the Vaccine Clinic was set up. When did you all start thinking about it—was it before the vaccines were approved? And how did you choose to have it in the cafeteria and how to set it up?

Newcomer: Our office was invited to be involved or asked to take a supporting role late December [2020] or early January [2021] and it was a quick response once a supply of vaccine was identified, or the possibility was determined that NIH would be a recipient of vaccine doses. We quickly scouted out areas around campus that we could provide it on a mass scale and to do it safely being that disinfection practices were still being followed. We wanted a place that could easily be cleaned had the open floor space to accommodate a procession of people moving through it. And the cafeteria—after we scouted out a number of locations—has food safety and sanitation requirements, you know, it has some similar characteristics of a sanitary setting. It became what we agreed upon was the right spot to hold the clinic. So doors opened, let's see, early January when we started to see our first patients.

Lyons: Now, did you vaccinate people before Dr. Fauci and Dr. Collins got theirs, or they were the first group of people who went that day?

Newcomer: Right. So that was outside of the cafeteria. That was, you could say, that was the kickoff of the NIH'S vaccine effort to show to the community, not just the NIH community or the workforce, but the public, about their belief in the safety and the efficacy of it. They went on stage in front of a live environment on camera to show their vote of support for the vaccine. The Vaccine Clinic as we know it then materialized shortly thereafter.

Lyons: And of course you were all the next bunch of people to get vaccinated, I hope.

Newcomer: We were. So there is a tiered system. NIH leadership identified a priority for people and since a lot of the Vaccines were being administered by clinicians, the clinicians were part of that first tier. Yes, our staff or the volunteers that were administering [the vaccines] were one of the first groups also to receive them.

Lyons: So could you tell us a little bit about running the Vaccine Clinic because there it wasn't just NIH people who were working, it was a lot of different people.

Newcomer: It was. That was really an impressive show of support. The backbone of the Clinic was OMS (Occupational Medical Service) and Public Health Service, so we had a cohort or a cadre of officers and OMS staff that initially stood it up. And then as the vaccine inventory grew, we were able to expand the number of booths and that's where the IC [NIH institutes and centers] volunteers came forward in impressive numbers to man the booths and administer the vaccines.

Lyons: And so were you involved in the day-to-day coordinating or the day-to-day running of it?

Newcomer: I served as the Officer-in-Charge. I'm not a clinician by trade; as I mentioned earlier, I'm an Environmental Health Officer and Industrial Hygienist, but as a member of DOHS we were identified as the lead organization. So I helped and I was more of a supporter; while I served in a leadership role, I found my job to be most effective in a support role to help ensure that we had a number of staff present, that the right PPE (personal protective equipment) was available to minimize infection risk, to ensure that the right type of staff was present, that we had systems and operating procedures in place to have a safe and efficient Clinic. I think for me the value was just being there to support and provide resources as the clinicians and the volunteers raise their hand and ask for help.

Lyons: Did it go through different configurations as you figured out how things worked better or as the number of people coming through changed?

Newcomer: It did. Again the cafeteria was the right place because it was scalable. We started off with maybe a handful of booths and as the inventory or availability of vaccines increased, we were able to add additional booths to accommodate the additional patients as we went over time. We had some lessons and learned from those, and we rearranged the flow through the Clinic so that it's more efficient time wise, but also so that it was maybe a one-way path or that there was less interaction between

patients to maintain that social physical distancing that was so important. So yes, the operation evolved. Over the course of the life of the Clinic, we expanded the observation area to increase it—that was at one time a limiting factor. We wanted to ensure that the patients didn't have any reactions, so we had an observation area and dependent upon the patient's self-described risk they were there for 15 minutes or 30 minutes. So we had to ensure that we had enough seats available, we had to make sure that the seats were properly spaced. Of course, we were concerned about infection or contamination, we had to have processes there to wipe down and disinfect seats between patients. It clearly evolved over time, and we had a number of visitors pass through and a shared theme from the among them was that was a model clinic—very efficient and safely performed.

Lyons: That's good; I'm not surprised. I heard that you were working pretty much 24/7 at parts of the Clinic when it was up. How did you maintain any kind of balance or were you able to?

Newcomer: So days were long. It was a six-day-a-week operation. Sometimes on the seventh day that was an opportunity to catch up on normal work because normal work did continue. For some it may have been longer days than others. Sometimes it probably felt 24-hours-a-day, although there were some reasonable hours. But as far that balance, I think there wasn't much of a work-life balance, but that was understood; it was a pandemic, and it wasn't just our Clinic that was working long days. There were many within the community that were doing all they could to support and to maintain agency operations. I was fortunate that I had family that was able to come into town, my parents and in-laws, were able to come in and [they could] support my wife and the kids while I was able to work the Clinic.

Lyons: That's good to have that support so you don't have to worry about it.

Newcomer: Yes, it was very much of a relief and allowed me to stay somewhat focused on work. Again, it was a trying time, but I think we also had a sense that it was for a finite time and I think there was a sense that the sooner that we could accomplish the desired vaccination rate, the sooner that this would all be done with.

Lyons: So now that you've learned all of these lessons how are you going to package it so that the people coming after you don't have to learn them all over again?

Newcomer: I was able to draw upon my experiences from the Ebola deployment in this pandemic and I think some of those lessons would carry over for future. There's just a lot of uncertainties with both scenarios and I think what I came away with is that there's some frameworks, some risk management practices, that I learned during Ebola, and I was able to build upon during the pandemic. Even though you may not have the solution, at least [experience] gives you a path to operate, a path to work safely, a path to go to work towards your objectives. So I think going forward, that should a similar [situation] or another uncertainty come across, I think I would pursue that risk management framework on how to assess hazards, how to anticipate and identify mitigation strategies, and then keep working with others on solutions to implement. So that was my approach during Ebola. It's a common practice within the profession and clearly something that we adopted during the pandemic.

Lyons: It sounds like it would be a great article for the Journal of Public Health.

Newcomer: Some time maybe.

Lyons: [Laughter] A little more time. So what piece of equipment or personal item proved to be really important during this time—what should we collect from any of the things that you were involved with to represent your pandemic story?

Newcomer: I mentioned that early on in the response about preparing the agency by developing policies and procedures for cleaning and disinfection. Early on in the pandemic, fomite contamination was thought to be a lead mode for transmission of the disease. As the science evolved and we developed a better understanding, face coverings became important and stand out in my mind as that artifact that should be collected to represent the pandemic. Whether you're watching the news or just out in the community, a face mask is what stood out; whether that would include the N95 respirator for the healthcare provider or those who are really in that higher risk setting or just the face covering that you bought from ETSY or from EBAY or was handmade by a parent, the face covering became a necessary strategy as we learned more about the aerosol transmission of the virus. So that is what I would think is going to probably be in my packet for my memorabilia to share with some future generation.

Lyons: Thank you and as a person who worked through the pandemic and as a father and a husband who lived through the pandemic, do you have anything else you would like to add?

Newcomer: Dealing with uncertainties is very stressful. I'm not quite sure if I found the right coping mechanism or not during the pandemic, but I did find a lot of confidence in the scientific community and I've found some ease in knowing that there was a collective effort among the global community for a common goal. I found trust in science and that teamwork matters, so I think that's probably something that stands out to me. And that dealing with a future setting similar to this, we would just to have trust in the scientific community.

Lyons: It really was kind of the first pandemic in human history where humans have had the technology and the knowledge to actually fight back effectively and, yeah, that is a good feeling.

Newcomer: It's a great feeling and you know it's not quite there, but think about it that within 12 months, the period of time of the pandemic taking hold and to where we are today of having vaccines that are widely available now within the community, it's amazing what science has accomplished.

Lyons: Yeah, it really is. Thank you for keeping us all safe and getting as many people vaccinated on campus as possible so that hopefully we'll be able to come back to work at our offices all the time.

Newcomer: Well, thank you for the opportunity to share my story.